ANNUAL REPORT 2024

INSTITUTE OF TROPICAL MEDICINE ANTWERP

INSTITUTE OF TROPICAL MEDICINE ANTWERP

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Board of Governors, 5 May 2025

General Council, 26 May 2025

Scope of the report

The focus of this annual report is to report as fully as possible to the various authorities, focusing on quantitative and qualitative reporting in function of the objectives of the ITM policy plan 2020-2024. This annual report has been prepared in accordance with the provisions of the management agreement and the EWI covenant between ITM and the Flemish government. The activity-specific reports and/or annual reports referred to in the text of this report are available on ITM via intranet and can be requested if required.

This report is available in Dutch and English. For the many (inter)national stakeholders, a short video explains the highlights of the past working year. All annual reports are available at https://www.itg.be/en/annual-reports

INSTITUTE OF TROPICAL MEDICINE ANTWERP

Introduction

The Institute of Tropical Medicine (ITM) is a leading international institute in terms of, teaching, research, and scientific and medical services. ITM is recognised worldwide for its commitment to improving health, especially in places with limited resources and for vulnerable populations, wherever they are. Our **objective** as set out in our statutes is:

To conduct and promote scientific research, professional and academic education as well as scientific and social services in the field of tropical diseases and global health, with a particular focus on low- and middle-income countries.

With regard to its patrimony, ITM wishes to anchor its activities in Antwerp, and strives for a performing and sustainable use of its current building patrimony. This objective is also set out in the statutes:

Given its valuable patrimony, the Institute also aims to preserve and valorise its buildings and surrounding garden located at 155 Nationalestraat and 43 Sint-Rochusstraat in Antwerp, which are directly materially and effectively used for its social purpose.

Our **vision** is that everyone, everywhere in the world, should have equal opportunities to live a healthy life.

Our **ambition** is to be a globally rated centre of excellence in the fields of tropical medicine and international public health.

We value:

- Excellence & Relevance: We strive to be among the international leaders in our science domains and go for the highest quality in research, teaching and service with the ultimate goal of solving pressing health problems.
- Integrity: we aim to comply with international ethical standards and strive for critical insight, honesty and transparency in all our activities.
- Equity and inclusion: We value equality, diversity, solidarity and well-being of our students and staff and in our partnerships.
- Sustainability: We strive for long-term progress without compromising the potential of future generations.

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Strategic Objectives ITM

1. Strategic Objectives ITM

a. Policy priorities ITM 2020-2024

Responsible unit = Director and General Manager

The Institute of Tropical Medicine (ITM) in Antwerp, Belgium, strives for continuous advancement of science and health, focusing on innovative research, cutting-edge teaching, professional services and sharing capabilities with our partner institutions in Africa, Asia and Latin America.

For the policy period 2020-2024, the following strategic objectives were defined at the institute level:

SO1 – Build on our reputation and expertise to expand into new health challenges using new approaches to collaboration and scientific research.

SO2 – Strive to create an open and global campus for students, faculty, alumni, professionals and researchers with a flexible teaching approach.

SO3 – Forge and strengthen synergistic partnerships that increase the impact of our unique expertise and knowledge, further enhancing our academic reputation.

SO4 – Strengthen the overall coherence, efficiency and effectiveness of ITM's policy, support and decision-making processes.

In 2024, ITM again achieved all the proposed KPIs of the management agreement and the EWI covenant.

SO1 – Reputation and expertise

ITM reinforced its top position as an international reference centre on global health.

ITM scientists published 381 papers, of which 104 (27%) in journals with an impact factor above 5, and as many as 49 (13%) in journals with an impact factor above 10. The number of publications with a normalised citation index of more than 1.5 increased significantly. The 20% target was far exceeded in 2024, with an achieved score of 29.2%. The most cited publications deal with the 4 priority areas through which we confirm our reputation in emerging (viral) infections, antimicrobial resistance, disease control and elimination and sustainable health systems.

ITM is successful in obtaining competitive FWO mandates (29 ongoing mandates) and competitively acquired research projects FWO, Horizon Europe, Wellcome, etc.). In 2024, we note 48 ongoing projects, of which 11 were achieved and started in 2024. The Clinical Trial Unit coordinated 28 clinical trials.

Our increasing focus on social and economic valorisation resulted in 13 health policy contributions based on ITM research findings. This is presumably an underestimate and not exhaustive. Data that could be accessed via a trial subscription to the Overton database shows that 292 publications by ITM researchers were cited in **283 sources** published in 62 different countries.

Our expertise in global health and pandemic preparedness was also used to support the Flemish and Federal governments in the organisation of the Belgian EU Presidency, where ITM was a key player or co-host of several events themed "Access to Health" and Pandemic Preparedness".

In the field of emerging infections and epidemics, the Outbreak Research Team was again very active in 2024, both in Belgium and overseas. Researchers from ITM and RD Congo's Institut National de Recherche Biomédicale (INRB) discovered a new variant of the mpox virus (Clade 1b) during field research in Kamituga.

This variant is transmitted mainly through sexual contact, and the risk of a bad outcome is high in pregnant women and people with reduced immunity. The results of the study were published in the leading journal Nature Medicine. The finding that this variant was also beginning to appear in other countries prompted an international response (WHO Public Health Emergency of International Concern). Together with the INRB, ITM researchers are involved in follow-up studies funded by EDCTP and FWO. ITM also received additional funding from DGD to implement a vaccination campaign against mpox in DRC. The mpox outbreak in DRC is not yet under control and the number of cases continues to rise. The resources now being deployed against the mpox outbreak should also be used structurally to strengthen health and surveillance systems. As ITM, we are also involved in preparations for mpox vaccination studies in Europe in consultation with HERA.

Another epidemic that involved the expertise of ITM was an outbreak of brain pig tapeworm infection in some Belgian schoolchildren, a condition that can cause epilepsy. The results of this study were published in the Lancet.

The tiger mosquito, an invasive species that is increasingly common in Belgium and can spread viruses, is a growing problem. ITM researchers were the first in Europe to investigate whether the water predatory beetle is a natural enemy of the tiger mosquito. This native beetle appears to be an effective hunter of tiger mosquito larvae and could be a sustainable and environmentally friendly ally in the fight against mosquito infestations. Doctoral researcher, Adwine Vanslembrouck presented her research at the Day of Science in the ZOO of Antwerp and could count on many enthusiastic reactions from budding young scientists.

In the field of sustainable health systems, ITM researchers from the Socio-Ecological Health Research Unit empirically investigated the use of AI-generated visuals in Global Health communication and developed a methodology to systematically analyse biases in AI-generated visuals. Their findings revealed how AI often perpetuates harmful stereotypes, such as exoticising Africa and associating specific diseases with racial identities. This research continues thanks to a Marie Skłodowska-Curie Actions postdoctoral fellowship awarded to Dr Arsenii Alenichev in collaboration with Prof Koen Peeters. The fellowship was awarded with an exceptional score of 98%, out of a record 9,303 MSCA PF applications.

The Reproductive and Maternal Health Unit launched the 4-year FWO project Discontinu_Cities in Conakry Guinea with partner institute CEA-PCMT at the Gamal Abdel Nasser University of Conakry. The unit also consolidated work on urban maternal health with 3 partner institutes in the UrbanBirth Collective. Peter Macharia started as an FWO postdoc in 2024, and numerous PhDs.

ITM and the University of Western Cape are proud to announce the establishment of the Centre of Excellence for Pharmacovigilance in Southern Africa (CEPSA). This centre focuses on improving the safety of medicines and vaccines in South Africa. With support from the European Commission, DG International Partnerships (INTPA), and in collaboration with DG Research (RDT), this initiative marks an important step towards safer and more accessible medicines in the region.

CEPSA, a joint project of ITM and UWC, encompasses and unites research, education and capacity building. By supporting research, regulation and production, the centre contributes to local vaccine and drug production capacity.

We were also successful in the field of disease elimination and control.

Following good results from the PEOPLE study on post-exposure prophylaxis for leprosy, published in Lancet Global Health in June 2024, the Mycobacterial Diseases and Neglected Tropical Diseases Unit together with the Biomedical Sciences Department's Mycobacteriology Unit and the Clinical Trials Unit of the Clinical Sciences Department have completed the first intervention round of the new BE-PEOPLE study. The BE-PEOPLE study, funded by Janssen Pharmaceuticals, is taking place in Comoros.

SO2 – Open and Global Campus

In 2024, ITM professors supervised a total of 476 students, including 102 doctoral students and 69 master's students. Within the group of PhD students, the 'Global Campus' is clearly reflected: 36% are from Africa, 14% from Asia, 6% from Latin America, 40% from Europe (of which 20% from Belgium) and 4% from other regions. Master's students also come from 72 different countries (Africa 34 countries, Europe 14, Asia 16, North America 4 and South America 3 and Oceania 1).

Of the ITM professors in 2024, 55% have Belgian nationality, 41% are from the EEA (excluding Belgium) and 4% from outside Europe. Fifty-nine percent of postdoctoral researchers have Belgian nationality, 19% are from the EEA (non-Belgium) and 22% from outside the EEA. Fifty-three percent of junior researchers have Belgian nationality, 11% are from the EEA (non-Belgium) and 36% from outside Europe.

In the coming years, we want to further focus on the attractiveness and visibility of ITM as a 'Global Campus' to attract excellent researchers through the Marie Curie programmes and ERC, among others.

During the academic year 2023-2024, a total of 131 national and international guest lecturers were invited in the master and postgraduate programmes as well as in the specialised short courses. Of these 131, 21 international guest lecturers were from EEA countries (16%) and 60 from non-EEA countries (45.80%), of whom 57 were alumni. This is a slight increase compared to 2023, where 42.76% international guest lecturers were from non-EEA countries.

In 2023, we started the Marleen Boelaert Study fund. In 2024, we welcomed Richard NDayisaba, first scholarship student Marleen Boelaert Study Fund, to ITM.

Several alumni meetings were organised and 23 travel grants awarded to alumni to attend lifelong learning conferences. They aim to contribute to alumni's capacity to act as 'agents of change'.

In January 2024, the Call 2024 was launched as part of the FA5 Alliance Strategy 2022-2026 to support the internationalisation of education initiatives in FA5 country programmes and networks. This annual call funds the mobility of ITM staff, alumni and staff from partner institutions to teach courses at ITM and Alliance partner institutions.

A total of 17 inward and outward staff mobility initiatives were supported under this call. By 2024, 41% of mobility grants were awarded to women.

The ITM master's programmes received a positive assessment from an external review panel guided by the VLUHR in 2023-2024. This resulted in renewed NVAO accreditation until September 2030. In addition, the review process led to the decision to abolish the graduation tracks of the Master in Tropical Medicine, giving students more flexibility in their study programme.

In May 2024, the second season of the podcast *Transmission*, which covers important international health topics, followed. The podcast, which won the Belgian Podcast Award and the Best of Content Award, had a total of 41,175 downloads by the end of 2024.

In 2024, ITM took part in Nerdland Festival (20,000 visitors), Antwerp Pride and the Day of Science. We also brought people together on our own campus: we offered the city to host the Liberation Festivities at ITM, resulting in hundreds of guests, including the mayor, visiting ITM. We also regularly bridged the gap with culture and opened our buildings to a wide audience, including through room rental, for events such as deSingel's Dear Antwerp Festival, Zuiderzinnen and Salons Curieux.

Although the ITM Colloquium 2024 was postponed to 2025, 2024 continued to feature a balanced mix of virtual and physical networking opportunities and alumni activities. These activities contribute to the ITM Open and Global Campus.

SO3 – Partnerships

ITM aims to strengthen and expand its international partnerships. ITM mostly collaborates with top European research institutions with complementary expertise in the framework of joint competitive research projects such as London School of Hygiene & Tropical Medicine, Karolinksa Institute, Utrecht University, University of Oxford and Institut National de la Santé et de la Recherche Médicale (INSERM). There are also intensive collaborations with top international health organisations such as the World Health Organisation and Médecins Sans Frontières, which testify to the structural link between ITM research and the health situation on the ground. Our expert role under Global Health EDCTP3 also enabled us to support the entry of some partner countries in SSA into the EDCTP association.

ITM has a long history of fighting gambiense human African trypanosomiasis (gHAT or sleeping sickness) in the DRC. This intervention contributes to Belgium's international commitment to help eradicate sleeping sickness by 2030, in partnership with the Bill & Melinda Gates Foundation (BMGF). At the end of 2023, the Belgian government renewed the agreement with the Bill and Melinda Gates Foundation. This renewal is in recognition of the results submitted so far, by ITM, the national sleeping sickness programme (PNLTHA) and our partner institution Institut National de Recherche Biomédicale (INRB) and strengthened the operation in 2024.

ITM is strengthening ties with Nagasaki University. Since 2008, we have collaborated with the School of Tropical Medicine and Global Health at Nagasaki University to address global health challenges. With the signing of a new Memorandum of Understanding on 19 November 2024, we confirm our commitment to promoting joint research projects, facilitating staff exchanges, mentoring master's and doctoral students, and sharing expertise through guest lectures and seminars.

Not only internationally, but also domestically, new collaborations were established. As an associate member of the VLIR, ITM can join various consultation forums with representatives of Flemish universities with expertise within (the part of) the policy domain in which the respective consultation forums are set up. The exchange with colleagues in various fields, contributes to a stronger connection to the Flemish academic landscape. In early 2024, ITM renewed the institutional framework agreement with the Catholic University of Leuven. Furthermore, the Joint Pump Priming Projects awarded under the 2023 ITM/UAntwerp joint call started in 2024.

INTERNATIONAL COOPERATION

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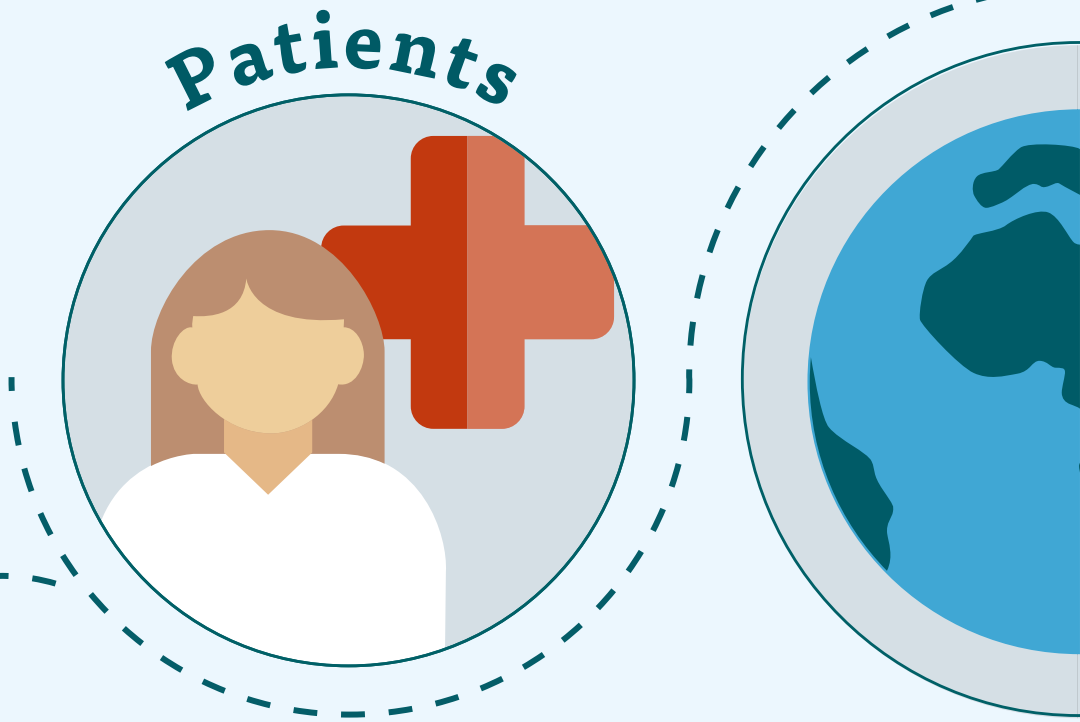
institutional partners



MEDICAL SERVICES

52,824

patient consultations

RESEARCH

381

scientific publications

Populations

Pathogens

EDUCATION

476

students

SO4 – Coherence, efficiency and effectiveness

From the beginning of April 2023 until the end of December 2024, Prof Dr Lut Lynen fulfilled the role of director. The search for a new director began in 2023 and resulted in the appointment of Prof Dr Özge Tunçalp, who took up her mandate on 1 January 2025.

In 2023, the articles of association were amended to bring them into line with the new Companies and Associations Code. This opportunity was used to make improvements and other changes deemed useful during the process, in addition to the (minimal) adaptation to the new legislation. Strategic changes were not considered but will be examined in the context of a forthcoming amendment to the articles of association that is being prepared.

After the reorganisation of the clinic in 2023, 2024 was dominated by the further elaboration of the new unified clinic structure. Several steps were taken to better align activities, and a process was launched to give the new clinic leadership more autonomy within the Department of Clinical Sciences.

In 2024, several improvements were made to internal business applications. For instance, *Archie* (student and course administration) and *KRYSS* (research and project monitoring) received new functionalities, and the *Test2Know platform* for STI and HIV self-testing became operational.

In our continued growth towards a culture of supportive feedback and strong leadership within the organisation, we took significant steps in 2024. The intensive leadership programme, launched in 2023 for all executives, was further rolled out, strengthening the development of inspiring and effective leadership.

In close cooperation with staff representatives, the implementation of the new salary policy was further developed, with the successful introduction of bicycle leasing in 2024 as well. In addition, a mixed working group took a close look at the evaluation procedure for both academic and technical staff in 2024, resulting in further professionalisation.

Together with the Quality unit, Part I of the new Code of Conduct was finalised, an important milestone in our efforts to create a transparent and supported working culture. Within the framework of the ITM 'Functiehuis', a thorough reweighting of the job classification of our nurses took place, keeping in mind their crucial role within the organisation.

From HR, the migration to the new social secretariat (Acerta) was successfully implemented, an essential step in the further optimisation of our administrative processes.

In 2024, energy costs were again higher than in the 2016-2020 period. The target of 20% less consumption compared to the previous six years was exceeded by 8%. Total energy consumption increased by 4% due to increased gas use for heating, as a result of increased indoor temperatures requested by staff. Despite the commissioning of the immunology labs, energy consumption remained stable, thanks to energy-saving measures.

To ensure our operations and encourage innovation, we plan ahead through the Masterplan Buildings for ITM. This plan focuses on three main challenges: (1) a building heritage that matches current and future activities; (2) sustainability of the building heritage; and (3) respect for heritage. The Masterplan Buildings lays the foundations for ITM's future and examines what infrastructure is needed to realise our ambitions. To maintain its pioneering role, ITM is investing in modernising and expanding its facilities. The Communications unit ensures regular communication on progress and actively involves the neighbourhood. In 2024, we worked with the local press, residents' groups and distributed residents' letters to keep our neighbours informed.

b. Strategic Indicators

Responsible unit = General Manager and Quality

Global science for health worldwide

The core objectives of ITM are scientific advancement and the right to good health for all through innovative research, continuing education, professional services and capacity building of our partner institutions in the South.

Our operation can be summarized in hard numbers by presenting our income and expenses, with linked to them the direct impact on scientific publications, number of degrees delivered and figures on our services. For ITM, however, direct impact does not stand alone and is linked to its social responsibility and impact of our activities on the environment. Direct impact, social dimension and environment form a triangle where ITM strives to balance these three elements. Each dimension comes into its own only when all three are fully integrated into the day-to-day operations of ITM.

Figure 1. Presentation of the "Direct Impact," "Social Impact" and "Environmental Impact" of ITM's activities in 2024.

Environmental impact

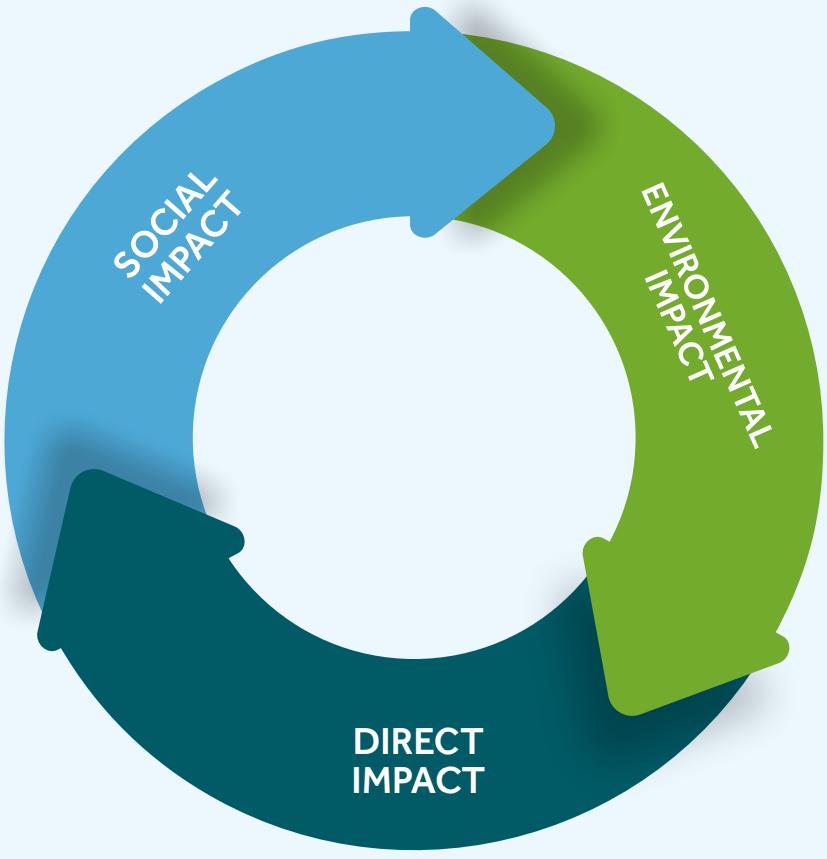
- CO_2-emission: 3868 ton
- Energy use: 4,533 MWh
- Commuting : 90% Public transport, Bike/Foot, 10% by car
- Correct processing of 111 tons of waste (domestic, chemical and biological)
- Laboratories: high-security laboratories and insectary

Social impact

- 485 employees: 68% women, 32% men
- Guidance from CTU in 28 studies
- Contribution to health on the move via app WANDA
- Worldwide Alumni Network

Direct impact

- 71.7 million EUR in / 70.1 million EUR out
- 476 students
- 381 publications, of which 140 with JIF ≥ 5
- 48 research projects with competitive external funding
- 26 institutional partners in 19 countries >52,000 consultations in the clinic
- 1,8 milion diagnostic tests produced



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Education

2. Education

a. Reporting policy priorities Education 2020-2024

Responsible unit = Education Office

SO1 – Expand and strengthen educational offerings in tropical medicine and international public health in accordance with evolving needs and scientific advances.

SO2 – Provide ITM's international staff, students and alumni with the most interesting and meaningful teaching and learning experiences.

SO3 – Strengthen the position of ITM's education at the national and international level.

The strategic goals for education in the 2020-2024 policy plan focus on the development of the offering, the qualitative experience of students, faculty and alumni, and (inter)national anchoring and collaboration. A number of indicators (KPIs) were established to monitor these strategic goals.

1. Education and digitization

Additional investments in audiovisual infrastructure were made in academic year 2023-2024 to enhance hybrid education opportunities. While ITM is a campus where students primarily attend classes physically, online attendance, under certain conditions, has become a structural option for students and/or faculty.

In addition, in the context of digitalisation, the Artificial Intelligence Working Group, which previously focused primarily on education, was reformed and expanded with the goal of discussing AI applications, possibilities, pros and cons for all core ITM activities.

2. Growth credit certificates (KPI: 10% over 3 years)

After a decline in the number of credit certificates issued in 2019-2020 due to the COVID-19 crisis, the figures for the 2020-2021 academic year were representative (165) for a "normal" academic year. For academic years 2021-2022 and 2022-2023, we saw an increase in the number of credit certificates issued. However, the largest increase occurred in the 2023-2024 academic year, in which we reached the limit of 200 credit certificates issued. We note a growth of 20.7% over the past three academic years.

3. Student satisfaction

ITM student satisfaction remains high to very high. This is evident from course evaluations and student feedback during the semester-long "participation meetings" with representatives of the various courses and ITM management. Based on the course evaluations, we can state that the vast majority of the students evaluate the attended course as good to very good, and this for the different aspects (content, methods, framework). In 2023, the reformed postgraduate certificate programme was launched in order to respond even better to the changing learning needs of students and developments in the international health landscape. We are closely monitoring the progress of the new postgraduate programmes.

4. Student and faculty diversity (KPI: 30% international and no more than 75% from the same continent in master's programmes)

The diversity among students in master's programmes (and the same applies to short courses), after the assessment of admission criteria, is monitored through the selection process and through the allocation of scholarships. In the MSc in Public Health (MPH), the highest percentage of students starting their studies in academic year 2023-24 from the same continent (Africa) is 72%; for the MSc in Tropical Medicine (MTM) the percentage is 58%; and for the MSc in Global One Health (MScGOH) it is 44%. For the three master's programmes combined, the percentage of African students is 61%. The percentage of European students is 17% and Asian students make up 16% of the master's student population. The predetermined KPI was achieved.

In the workforce of ITM, and more specifically the lecturers (this category includes not only lecturers and senior lecturers but also (ordinary) professors, scientific experts, researchers, specialists, educational coordinators), 35.5% are of foreign origin. Of this 35.5%, 62% are from EEA countries and 38% from non-EEA countries. The latter figure is a slight increase compared to 2023, where 34% were from non-EEA countries.

During the academic year 2023-2024, a total of 131 national and international guest lecturers were invited in the master and postgraduate programmes as well as in the specialised short courses. Of these 131, 21 international guest lecturers were from EEA countries (16%) and 60 from non-EEA countries (45.80%). This is a slight increase compared to 2023, where 42.76% of international guest lecturers were from non-EEA countries.

In line with previous years, an effort was made to involve more alumni in teaching (out of 131 guest lecturers, a total of 57 were alumni, i.e. 43.50%). This is an increase compared to 2023, where 35.22% of the external guest lecturers were alumni.

Of the total number of alumni who taught, 37 (64.91%) were from EEA and non-EEA countries. This is an increase compared to the number of international alumni invited as guest lecturers last year (57.14%). Furthermore, alumni and staff from partner institutions also participated as jury members of the master's thesis defences (in total, there were 15 external jurors of which 10 were international alumni from non-EEA countries and 2 were Belgian alumni). Compared to 2023, the number of alumni jurors is the same. Only the number of international alumni from non-EEA countries decreased slightly, from 12 to 10.

5. Cooperation agreements and joint certification

ITM has cooperation agreements with the Flemish universities, an agreement with the University of Pretoria (among others in the context of the development of the renewed curriculum in "Global One Health") and with tropEd network for credit mobility (increasingly under the form of virtual mobility) between members of the network. TropEd unites higher education institutions worldwide in a learning network for education in international and global health. Through the renewed cooperation agreements, guest lecturers are exchanged, doctoral students are jointly supervised, and trainees are supervised as part of their master's projects. ITM has participated in the interuniversity certificate in clinical infectiology and medical microbiology (in collaboration with KULeuven, UA, VUB and UGent) since 2022. It was revised in 2024 and the renewed version will be signed in 2025. In addition, a working group ITM–UAntwerp was created in 2024 to strengthen and concretise cooperation on education.

6. Projects with partners (KPI: 3 new collaborative education projects /3y)

In 2024, a Memorandum of Understanding (MOU) was signed with the new Alliance partner, the University of Zimbabwe, at Harare. This MOU is the result of discussions prior to and during the ITM Alumni meeting in Harare (December 2023).

The focus is on educational collaborations, such as strengthening MSc programmes, staff and knowledge exchange. Long-term research collaborations may also be explored. Central to this is the Zimbabwe ITM Alumni network. An ongoing activity is establishing an active Zimbabwe Alumni Chapter and facilitating participation in alumni activities, as well as creating a pool of Zimbabwe ITM Alumni who contribute to capacity building in education and research.

In the last quarter of 2024, the first Alliance staff mobility initiative was supported within this collaboration. More info can be found in the section on the Alliance for Education. The targeted KPI was achieved.

7. Erasmus+

The Erasmus+ pilot funding awarded to ITM for individual learning mobility under the Call 2022 (KA131), was further rolled out during the 2023-2024 academic year. A total of eight mobilities were awarded under the Erasmus+ Call 2022 for Individual Learning Mobility (KA131): five student mobilities (two for studies, three for internships) and three staff mobilities for training. Most mobilities took place within Europe, with some exceptions (e.g. Ethiopia), due to budgetary rules regarding the 'international' dimension under the E+ Call KA131. The participant reports show that the mobilities have had an impact for both participants and institutions, by promoting academic and professional excellence and international cooperation. This project contributes to ITM's mission to advance science and health worldwide through innovative research and advanced education.

In 2024, ITM applied for Call 2024, with 15 mobility grants for students and staff, from June 01, 2024 to July 31, 2026.

b. Indicators Education

1. Education input indicators

Table 1. Summary of input indicator results for education (students per course) for academic years 2019-20, 2020-21, 2021-22, 2022-23, 2023-24.

Students by programme	2019-20	2020-21	2021-22	2022-23	2023-24
Post-initial programs (masters)					
Master of Sc. in Public Health (all majors)	42	29	35	42	32
Master of Sc. in Tropical Animal Health/ Global One Health	19	25	24	20	18
Master of Sc. in Tropical Medicine (all majors)		18	15	17	19
Postgraduate courses					
Tropical Medicine and International Health (30c)	45	33	32	27	
Tropical Medicine for Bachelors in Nursing and Midwifery (20c)	0	75	61	27	
Introduction à la Médecine Tropicale et Défis en Santé Internationale*					18
Médecine Tropicale Approfondie et Défis en Santé Internationale*					2
Advanced Tropical Medicine and Challenges in International Health*					13
Introduction to Tropical Medicine and Challenges in International Health*					7
Research Approaches and Challenges in International Health*					2
Tropical Medicine and International Health*					6
Specific training					
Specialised short courses (5-6c)**	121	169	171	187	201
Short continuing education courses*** (incl. individual students and trainees)	35	105	84	149	165
PhD courses	2020	2021	2022	2023	2024
Starting PhDs	18	28	18	22	23
Total number of ongoing PhD tracks	80	101	102	97	102

* New master's programme started in September 2020.

** Short courses leading to academic credit certificate.

*** These short courses do not lead to a credit certificate.

2. Explanation of the training programmes

The master programmes and postgraduate certificates follow the decree provisions from the Codex for Flemish Higher Education. In 2024, the three master programmes were re-accredited for a period of six years (until September 2030).

Master's programmes are master-after-master programmes (60 credits) aimed at early- and mid-career health professionals and scientists. The largest age range for students in the MSc. programmes is 35-39 years. Exceptional admission is possible for holders of a bachelor's degree based on previously acquired competencies and/or qualifications. In 2023-2024, 2 students were admitted through this procedure.

Master's programmes offer the opportunity to study part-time. In the MScGOH, all students are part-time and spread their studies over two or more years. MScGOH students start on January 1 and follow South Africa's academic calendar. The output table (see below) includes all MScGOH students who graduated in the period September 2023 to September 2024, thus including cohorts still starting in the former Master in Tropical Animal Health. In 2023-2024, five part-time students enrolled in MPH; for MTM, 12 students for both orientations combined. Part-time students who enrolled earlier and graduated in 2023-2024 were included in the output table (see below).

The attractiveness of the MSc. programmes (see table) allows for a selection ratio below one to two. Notice, however, that some candidates filed for more than one master's programme, so the number of files filed is higher than the number of effective candidates (605 versus 587). For the three master's programmes combined, the intake rate for the 2023-2024 cohorts was 11.8% (the number of students who actually started a master's programme divided by the total number of applicants).

Table 2. Attractiveness master's programmes: number of students entering vs. number of applications, 2019-20 to 2023-24.

Candidates and admitted students by programme (masters)		**2019-20**	**2020-21**	**2021-22**	**2022-23**	**2023-24**
Master of Sc. in Public Health (all majors)	Number of candidates	224	174	193	162	210
	Number of students admitted	42	29	35	42	32
	Percentage of students admitted	19%	17%	18%	26%	15%
Master of Sc. in Tropical Animal Health/Global One Health	Number of candidates	61	121	113	154	309
	Number of students admitted	19	25	24	20	18
	Percentage of students admitted	31%	21%	21%	13%	6%
Master of Sc. in Tropical Medicine (all majors)	Number of candidates		90	77	58	86
	Number of students admitted		18	15	17	19
	Percentage of students admitted		20%	19%	29%	22%

3. Educational offerings 2023-2024

a. Origin students master's programmes, postgraduate programmes and short courses.

In 2023-2024, students came from 72 (compared to 66 in 2022-2023) different countries (Africa 34 countries, Europe 14, Asia 16, North America 4, South America 3 and Oceania 1.). See table for number of students by continent.

Table 3. Origin students academic year 2023-24.

Origin of students academic year 2023-24	Europe	Africa	N-America	S-America	Oceania	Asia	Total
Post-initial courses (masters)							
Master of Sc. in Public Health	5	23	0	1	0	3	32
Master of Sc. in Tropical Animal Health/ Global One Health	1	8	1	1	0	7	18
Master of Sc. in Tropical Medicine (all majors)	6	11	0	1	0	1	19
Postgraduate courses							
Introduction à la Médecine Tropicale et Défis en Santé Internationale	18	0	0	0	0	0	18
Médecine Tropicale Approfondie et Défis en Santé Internationale	2	0	0	0	0	0	2
Advanced Tropical Medicine and Challenges in International Health	13	0	0	0	0	0	13
Introduction to Tropical Medicine and Challenges in International Health	7	0	0	0	0	0	7
Research Approaches and Challenges in International Health	2	0	0	0	0	0	2
Tropical Medicine and International Health	5	1	0	0	0	0	6
Specific training							
Specialised short courses (5-6c)	45	109	7	6	0	34	201

The programme components of the masters are offered as specialised short courses (see lower an exhausitive list of of short courses).

b. Gender and age of students

Table 4. Student numbers academic year 2023-24; distribution by age group and gender.

	M	V	X	20-29	30-34	35-39	40-44	45 and <
Post-initial courses (masters)								
Master of Sc. in Public Health	17	15	0	7	12	10	3	0
Master of Sc. in Tropical Animal Health/Global One Health	4	14	0	9	6	1	2	0
Master of Sc. in Tropical Medicine (all orientations)	10	9	0	10	3	4	2	0
Postgraduate courses								
Introduction à la Médecine Tropicale et Défis en Santé Internationale	4	14	0	12	5	0	0	1
Médecine Tropicale Approfondie et Défis en Santé Internationale	0	2	0	2	0	0	0	0
Advanced Tropical Medicine and Challenges in International Health	6	7	0	10	3	0	0	0
Introduction to Tropical Medicine and Challenges in International Health	1	6	0	4	2	1	0	0
Research Approaches and Challenges in International Health	0	2	0	1	0	1	0	0
Tropical Medicine and International Health	2	4	0	4	1	1	0	0
Specific training								
Specialised short courses (5-6c)	96	105	0	42	41	61	35	22

c. Overview of educational offerings including specialized short courses leading to credit attestation

Table 5. Annotated overview of educational offerings 2023-24.

Educational offer 2023-2024	
Title	**Credits**
Post-initial courses (masters)	
Master of Science in Public Health	60
Master of Science in Tropical Medicine - orientation Biomedical Sciences	60
Master of Science in Tropical Medicine - orientation Clinical Sciences	60
MSc in Global One Health: Diseases at the human-animal interface	60
Postgraduate courses	
Postgraduate Certificate - Advanced Tropical Medicine and Challenges in International Health	25
Postgraduate Certificate - Introduction to Tropical Medicine and Challenges in International Health	20
Postgraduate Certificate - Research and Challenges in International Health	20
Postgraduate Certificate - Tropical Medicine and International Health	30
Certificat de Postgraduat - Introduction à la Médecine Tropicale et Défis en Santé Internationale	20
Certificat de Postgraduat - Médecine Tropicale Approfondie et Défis en Santé Internationale	25
Specific training (specialised short courses)	
Achieving Universal Health Coverage by 2030: The Health Financing and Social Protection Challenges	5
Challenges in International Health	15
Clinical Decision-Making for Drug-Resistant Tuberculosis	5
Data for Action	5
Défis en Santé Internationale	15
Design & Evaluation of Health Programmes	5
Global Health in times of crises	5
Health Policy & Governance	5
Health Policy and Systems Research Methodology	5
Health Systems Performance Analysis	5
Health Systems Strengthening	5
Hospital-based Interventions to Contain Antibiotic Resistance in Low-resource Settings	5
Introduction à la Médecine Tropicale	5
Introduction to Tropical Medicine	5
Molecular Data for Infectious Diseases	5
Multivariable Analysis	5
Non-communicable Diseases	5
Outbreak Investigations and Research	5
Pharmaceutical policies in health systems	5
Qualitative and Mixed Methods in International Health Research	6
Research Approaches in International Health	5
Sexual & Reproductive Health and HIV: beyond Silos	5
Short Course in Clinical Research and Evidence-Based Medicine	9
Sustainable Approaches to Infectious Disease Control and Elimination	5
Tropical Medicine and Clinical Decision Making	10
Write your paper based on Demographic and Health Survey (DHS) data on reproductive and child health	0

d. Overview of courses that do not lead to a credit certificate

Continuing education offerings for health professionals are explained below.

Table 6. Annotated summary of continuous formations at ITM in 2023-24.

Continuing education offer	Duration	Number of participants	Target audience
Travel advice for pharmacists (in collaboration with IPSA)	2 evenings	session 1: 587 session 2: 494	Pharmacists
Travel advice for general practitioners	7 evenings (including exam)	25	Belgian general practitioners, general practitioners in training and other health professionals
Online module 'Travel medicine-case: On an adventure in Thailand'	30 minutes	28	Belgian general practitioners, general practitioners in training and other health professionals
Good Clinical Practice certificate (GCP)	1 week	10	Belgian and international researchers and health professionals
Under a collaboration with WHO-TDR: SORT IT AMR en SORT IT NTDs (Ethiopia)	3x1week coaching over 1 year - ITM staff participation in modules 1,3 &4		Young researchers, international

Table 7. Individual training contracts and internships: origin and number of students 2023-24.

	Europe	Africa	N America	S America	Oceania	Asia	Total
Individual students	12	49	4	5	0	4	74
Trainees	53	1	0	1	0	1	56
Pre-doctorate	0	7	0	0	0	0	7

Of the 56 students who did an internship at ITM, 16 internships were linked to a master's thesis.

e. Tuition and DGD scholarship programme

In 2023-2024, tuition fees to ITM remained unchanged. Tuition fees distinguish between registration fees and credit fees on the one hand and between EU/EEA nationals and non-EU/non-EEA nationals on the other. The new fees were applied to formal course offerings from September 2020. For continuing education, the registration fee was set in 2022-2023. Finally, a separate registration fee was set for online courses, which is lower than that of on-campus courses, to allow admission of students from low- and middle-income countries.

In December 2024, the Board of Governors declared its agreement not to index tuition for academic year 2025-2026.

f. Education output indicators

Table 8. Summary of education output indicators (degrees and certificates) for academic years 2019-20, 2020-21, 2021-22, 2022-23 and 2023-24.

Diplomas and certificates	2019-20	2020-21	2021- 22	2022-23	2023-24
Diplomas post-initial education					
Master of Sc. in Public Health (all majors)	43	31	32	31	31
Master of Sc. in Tropical Animal Health/Global One Health	19	14	17	7	20
Master of Sc. in Tropical Medicine (all majors)		12	11	18	12
Postgraduate cetificates					
Tropical Medicine and International Health (30c)	45	33	33	27	
Tropical Medicine for Bachelors in Nursing and Midwifery (20c)	0	75	60	27	
Introduction à la Médecine Tropicale et Défis en Santé Internationale					18
Médecine Tropicale Approfondie et Défis en Santé Internationale					2
Advanced Tropical Medicine and Challenges in International Health					13
Introduction to Tropical Medicine and Challenges in International Health					7
Research Approaches and Challenges in International Health					2
Tropical Medicine and International Health					5
Postgraduate education/specific courses					
Credit certificates issued	104	165	169	179	204
PhD preparation	2020	2021	2022	2023	2024
Number of promotions (on 31/12)	16	5	13	21	14

Success rates are high, mainly due to a rigorous selection process that precedes admission to the programme. The number of doctorates defended in 2024, at 14 doctorates, is lower than the previous year. Fluctuations in the number of doctorates defended are not uncommon; it is advisable to analyse the figures over a five-year period. However, when interpreting the numbers in recent years, we must take into account a notable drop in 2021, which can be explained, among other things, by the retirement of some professors and the appointment of new professors, who need time to build a team of doctoral students.

4. Education impact indicators

Table 9. Summary of education impact indicators (alumni impact) for the years 2018, 2019, 2020, 2021, 2022, 2023 and 2024.

Alumni network	2018	2019	2020	2021	2022	2023	2024
Total number of members (31/12/2024)	3513	3783	4006	4306	4647	4926	5343
New members (new students):							
Master programmes	40	50	53	64	69	66	59
Postgraduate certificates	123	103	67	108	93	54	42
Specific courses	98	92	89	26	126	154	185
PhD	16	10	7	1	3	5	10

The table above shows, by programme type, the number of new members joining the network/alumni database in 2024. Since alumni regularly rejoin ITM to further specialize, the number of new members is lower than the number of students. Of the 318 students who took a master's, postgraduate or short course during the 2023-2024 academic year, there were 286 students (90%) who were studying at ITM for the first time ("new" students). This is a slight increase compared to last year.

5. 2024: the ITM Alumni

ITM Alumni Connect

In 2024, the online alumni platform was further developed, with 2,600 active members. Active member engagement on the platform increased slightly. This is partly due to the creation of a private group with members of the Thematic Global Network on "Climate Change, Urbanization and Health," facilitated by ITM alumni, staff and partners. This acts as an online Community of Practice – COP.

The weekly newsletter was actively read and appreciated by alumni. This is evidenced not only by the click-through rate, but also by the initial results of the alumni survey sent out in July 2024 (four years after graduation, as part of the developed longitudinal survey).

In addition, the platform published academic information, lifelong learning activities, job openings and news about alumni, ITM and partner institutions.

In figures:

- 275 new members registered on the platform
  (2637 members in total compared to 2362 members in 2023)
- 179 job openings were published
- 80 events (including webinars, conferences, trainings) announced
- 168 news campaigns published

Alumni travel scholarships and webinars

In 2024, a total of 23 DGD travel grants were awarded to ITM alumni and staff from partner institutions to participate in the Emerging Voices for Global Health training 2024 (EV4GH). EV4GH is an online and F2F training programme, including participation in the Health System Research Symposium (HSR) 2024, organised in November 2024 in Nagasaki. Of the 23 Emerging Voices (EVs) who participated in the online training, 20 had been alumni who participated in the F2F training in Japan.

As part of the HSR Symposium, an **alumni meeting** was hosted by Nagasaki University on 19 November 2024, signing a new Memorandum of Understanding. A total of 45 ITM alumni, Emerging Voices and staff gathered. This alumni meeting focused on the theme "Climate Change and Health: the Role of Alumni," and was organised in collaboration with colleagues from the EcoHub (FA5 Thematic Global Network on Climate Change, Urbanization and Health).

A second session of the alumni meeting focused on exploring ways to leverage the ITM Alumni Network more for impact locally, nationally, regionally and internationally. Key findings included the importance of supporting the establishment of national/regional alumni chapters and the development of a mentoring/twinning programme for ITM students involving alumni. This will be further incorporated in 2025.

In February 2024, an **informal Meet & Greet** was organised by colleagues Lenka Benova and Anteneh Asefa for Ethiopian Public Health alumni in Addis Ababa. This was a perfect opportunity for ITM academic staff to connect with alumni and go deeper into the impact of ITM studies on their future career development.

On 27 and 28 May 2024, ITM together with VLIR-UOS and ARES, organised the 'Academics 4 Impact' event in Lima, Peru, as part of the HE4SD Joint Strategic Framework (JSF). The event was organised in collaboration with the Instituto de Medicina Tropical "Alexander von Humboldt" (IMTAvH) at the Universidad Peruana Cayetano Heredia. The event stimulated fruitful discussions on the positive impact of international academic cooperation in Ecuador, Bolivia and Peru. The highlight of the first day was the **alumni meeting** with graduates of ITM and Belgian universities from the Andean region. Their contributions to sustainable development in their countries were highlighted, as well as the added value of their studies and academic cooperation on their personal growth and institutional progress. Dionicia Gamboa, an ITM alumna working at Universidad Peruana Cayetano Heredia, highlighted the impact of her ITM doctoral studies on her personal and professional trajectory.

At the request of several alumni, 2024 supported the establishment of 'informal' **local alumni chapters** in Zimbabwe and Nepal. To date this has mainly consisted of approaching alumni in these countries to join the local 'chapter' and participate in its activities. Ways to further support and implement this in the future will be explored.

A total of 9 **ITM Alumni webinars** were organised in 2024 with a high number of participants. A new series of four alumni webinars featuring the ITM winners of the Province of Antwerp's 2024 Prize for Global Research was also organised this year. Five other alumni webinars took place as part of the International Day for Women and Girls in Science, International Women's Day, World Malaria Day, International Day against Violence against Women in Conflict. In total, these webinars were attended by a broad international audience of mostly ITM alumni, students and ITM staff (697 people in total). Webinar polls and alumni surveys show that these alumni webinars are highly valued by ITM alumni and staff.

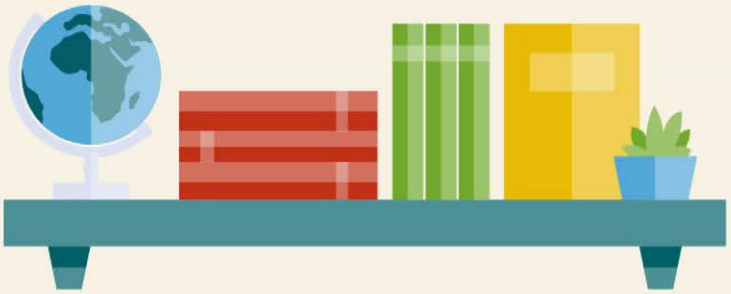
Furthermore, alumni also continued to teach as **external guest lecturers** in ITM courses through both physical and virtual mobility (cfr. point 4. Student and faculty diversity).

Despite the fact that the ITM Colloquium 2024 was moved to 2025, resulting in fewer alumni travel and formal alumni meetings, the year 2024 was also characterised by a balanced approach in organising both virtual and face-to-face networking opportunities and alumni activities. This is essential for a global network such as the ITM Alumni Network.

116
Belgian students

69
EU students

291
non-EU students



40
interns

16
master's thesis students

201
short courses

102
PhDs

48
postgraduates

69
master's

2024: the Alliance for Education

In January 2024, the **Call 2024** was launched as part of the **FA5 Alliance Strategy 2022-2026** to **support the internationalisation of education initiatives in FA5 country programmes and networks**. This call funds the mobility of ITM staff, alumni and staff from partner institutions for teaching courses at the ITM and Alliance partner institutions (N-S-S). In addition, context-specific case studies were developed by ITM alumni. The mobility initiatives supported not only promoted the internationalisation of ITM education but also strengthened academics as agents of change.

In 2024, **17 virtual staff mobility initiatives** were **supported**, with 27 ITM staff, alumni and staff from partner institutions teaching and/or taking the role of coach in courses at ITM or partner institutions. 41% of the grants went to women.

Most involved NS or SN mobility, and the south-south exchange was made possible through the support of ITM alumni who participated as coaches/facilitators in the blended Emerging Voices for Global Health training 2024.

Joint Alliance initiatives were also further developed and organised:

Joint educational projects in collaboration with a new Alliance partner:

As mentioned earlier, an MOU was signed with the University of Zimbabwe (UZ) in 2024, focused on educational cooperation, such as strengthening MSc programmes and staff and knowledge exchange. One of the activities is the creation of a pool of alumni who contribute to capacity building in teaching and research at UZ and ITM. For example, in the last quarter of 2024, two Zimbabwean colleagues and alumni participated in the "Health Systems and Health Policy" course of the Master in Public Health (CC1), where they presented a self-developed case study on the Zimbabwean health system. In addition, meetings were organised with ITM colleagues to discuss possible future educational collaboration and exchange. And this within various fields such as non-communicable diseases, outbreak research, maternal and child health, and clinical decision making.

Technology Enhanced Learning (TEL) and curriculum development education initiatives, e.g.:

- Contribution to the development of training on systematic reviews and meta-analysis in collaboration with the partner National Institute of Public Health in Cambodia;
- Pedagogical support to improve the quality of the blended EV4GH training: focus on a thorough analysis of the coherence between the online training and the F2F part; of the meaningful interactions between the participants (peer feedback and feedback between trainers & trainers), as well as of the most appropriate training methods and learning resources.

Alliance joint education professionalisation and support workshops (e.g. an online workshop on the challenges and experiences in the use of Artificial Intelligence (AI) in education – by colleagues from UPCH, Lima (Peru). Furthermore, Alliance partners were invited to attend two ITM seminars on the challenges of and experiences with AI in education and research – organised by the AI Working Group – online.

6. Education impact evaluation: follow-up actions management response

The management response to the recommendations formulated by Syspons as part of the FA4 mid-term evaluation "Social, developmental and professional impact of ITM's educational activities and scholarship programme" was approved and published on the ITM website in March 2022. Regarding the follow-up of this management response, a series of actions were initiated and/or further followed up. Thus, the working group worked on a longitudinal survey consisting of 4 survey moments of the students/alumni (at the start of the studies, just after the completion of the studies, 1 year after the studies and 4 years after).

c. Education policy and organisation

1. Education Regulations

In addition to course specific agreements shared with students through the learning platform (ITM Moodle), teaching is primarily regulated through the following 4 documents:

- Education regulations and NL version
- Examination regulations and NL version
- Scholarship regulations and NL version
- Doctoral Regulation

2. Quality assurance (Codex HO – art. II. 122)

The master's programmes of ITM received a positive evaluation from an external review panel in 2023-2024, under the guidance of the VLUHR, leading to renewed NVAO accreditation until September 2030. The evaluation process also led to the decision to merge the orientations of the Master in Tropical Medicine, thus giving more study flexibility to students.

3. Educational organisation and role Education Office

The role of the Education Office was formally incorporated into the Education Regulations in January 2018. This role has since been further concretised. Within the further development of the student information system, the Education Office incorporated the collection and processing of educational data into a data warehouse in 2023-2024. Monitoring quality assurance of educational programmes is also now organised from the student information system. In addition, the Education Office has increased its presence in education-related networks, including in LNO² (*Learning Network for Education Supporters*), as an observer at the VLIR, as a member of the VLUHR Strategic Advisory Council on Quality Assurance, within, tropEd and the AUHA-STUVANT platform for student-related information.

4. Quality assurance for education and students (Tutoring, student services, etc.)

A harmonised quality assurance tool for course evaluation at ITM was approved and implemented within ITM. Since 2023, all queries, within the whole quality assurance cycle are sent and followed up by the Education Office.

5. Student legal status regulations

Students, and alumni, are represented in the ITM General Council. A "participation meeting" that generally takes place twice a year is a consultation opportunity between student representatives, the director, the chairs of the Academic Council and the Education Policy Committee, and Education Office. Student representatives on the General Council are also invited. The purpose of these meetings is to get feedback from students about studying at ITM and discuss policy decisions.

6. Policy decisions

The teaching and examination regulations clarified the conditions for the use of ChatGPT and other AI applications within learning and assessment activities.

The graduate programmes of the Master of Tropical Medicine were merged to allow more study flexibility to students.

The Board of Governors gave the green light to not index the registration fees, and to introduce a separate registration policy for online courses.

In order to increase the visibility of the ITM's educational offerings, more effort is being put into marketing and presence of ITM on study platforms and fairs.

3

Research

3. Research

a. Reporting Policy Priorities Research 2020-2024

Responsible unit = Research Office

The 2020-2024 institutional policy plan defined four strategic objectives.

SO1 – Pursuing excellence and relevance in ITM research [IDEAS].
This means pushing the boundaries of knowledge and its applications by developing new ideas of original research and deepening existing lines of inquiry.

SO2 – Attract and nurture excellent researchers [PEOPLE].
This means researchers from around the world with a proven or potential track record in excellent, relevant research, specialised in an ITM area of expertise and who share the values of ITM.

SO3 – Forge and strengthen synergistic partnerships [CONNECTION].
This means maximising synergy within ITM and consolidating and expanding collaborations and networks with partners in research and industry in Flanders, Belgium, Europe and worldwide.

SO4 – Conducting research in an 'open culture' [OPENNESS].
This means that ITM supports "open science": open access publications and open data within the boundaries of ethical, legal, contractual obligations and intellectual property.

In the covenant 2020-2024 between the Flemish Region and ITM, SO3 and SO4 were merged into the strategic objective (SO) "Connection": To stimulate synergies and cooperation within ITM, Flanders, national, European and international, including by actively supporting open science, open access and open data.

The Strategic Objectives were translated into Operational Objectives (ODs) measured by Key Performance Indicators (KPIs):

At SO IDEAS

OD1. Departmental and institutional research plans and follow-up systems are operational and result in scientific and societal impact. (KPI 1, 2, 3, 4, 5, 6)

0D2. The EWI grant realises leverage to increase external competitiveness and attract external research funding. (KPI 7)

At SO PEOPLE

OD3. Investment is made in attracting, circulating and fostering talent. (KPI 8)

At SO CONNECTION

OD4. Investment is made in establishing synergies between Flemish, Belgian, European and international partners. (KPI 9)

OD5. Efforts will be made to share scientific data widely, within the research community, with stakeholders and with the general public, in an open and transparent manner, within the rules of confidentiality, protection of intellectual property and value-added communication requirements, according to the principle of "as open as possible, as closed as necessary. Monitoring and reporting will be done through FRIS. ITM will actively participate in (the working groups of) the Flemish Open Science Board (FOSB).

The achievement of objectives is measured by a set of Critical Performance Indicators or Key Performance Indicators (KPIs). The KPIs relate to the entire research of ITM, not just the part of the research funded by the EWI grant. Table 10 shows that in 2024 the predetermined targets were met albeit with some nuance for KPI-7. The summary lists that substantiate the value of the KPIs in 2024 can be found in annex.

In 2021, the Flemish government decided to structurally allocate 1 million euros above the annual EWI subsidy of 3,946,00 euros to ITM to invest, on the one hand, in research professors and, on the other hand, in a "Global Population Data Sciences Hub. In the addendum to the covenant between the Flemish Community and ITM, it was agreed to increase the Critical Performance Indicators (specifically KPI-1 to 85, KPI-4 to 20, KP-6 to 12 and KPI-8 to 18). Reporting on the increased KPIs and the additional "qualitative" indicators, was expected from 2023. The increased targets for the relevant KPIs were met in 2024.

In 2024, the government awarded €550,000 to ITM to prepare for the establishment of the Health Innovations for All ('HI4A') and pilot the HI4A innovation portfolio for structured embedding in the next policy period. Health Innovations for All (HI4A) aims to advance societal and technological impact by transforming results from research into inclusive health innovations that are accessible, affordable, relevant and scalable, in order to advance global equity in health. HI4A aims to fill a critical gap in the current innovation landscape – valorising research results that provide substantial societal benefits but do not necessarily align with mainstream economic investment models.

Table 10. Overview of Critical Performance Indicators, 2020-2024.

SO 1			IDEAS						
	OD	KPI		Value	Value 2020	Value 2021	Value 2022	Value 2023	Value 2024
	1	1	ISI-publications with JIF>=5	Base 2020: 60, increasing annually by at least 2 to75 (85)	74	149	167	140	104
		2	Fraction of peer-reviewed publications that are 1.5 x more cited than the world average of all publications of the same type, published in the same year and within the same research domain[1]	Minimum 20%	12.10%	20.60%	20.00%	23.4%	29.2%

1. This KPI is based on determination of the "Category Normalized Citation Impact" (CNCI), an indicator developed by Clarivate Analytics that can be consulted for any publication indexed in Web of Science through Clarivate Services. The CNCI is a neutral indicator that allows the scientific impact of a publication to be measured in the year of publication and normalized by discipline and document type.

SO 1			IDEAS						
	OD	KPI		Value	Value 2020	Value 2021	Value 2022	Value 2023	Value 2024
		3	Number of clinical trails coordinated by ITM – CTU*	Base 2020: 13, increasing annually by at least 1 tot 18	26 (12+8+6)	29 (16+6+7)	32 (18+6+8)	27 (18+2+7)	28 (20+1+7)
		4	Number of ongoing competitively awarded research projects, incl. FWO, H2020, Horizon Europe, NIH, ... (cumulative)	Base 2020: 12, increasing by at least 1 every 2 years up to 15 (20)	59	51	54	50	48
		5	Number of ongoing ORT studies	Base 2020: 8, increasing by at least 1 every 2 years up to 10	28	32	30	37	38
		6	Number of publicly accessible policy documents, guidelines and recommendations based on ITM research and expertise	Base 2020: 8, every 2 years minimum by 1 increasing to 10 (12)	14	17	14	22	13 (283)
	2	7	EWI grant (excluding investments) as lever: EWI budget ratio relative to total annual research budget	Base 2020: at least 85% non-EWI funding (for research) increasing to 90% average by end of convenant	9%	12.90%	13.80%	13.10%	13.40%
			Ratio of EWI budget to total annual research budget						
SO2			**PEOPLE**						
	3	8	Number of ongoing (cumulative) ITM FWO aspirants and mandates, MSCA (personal grants), HSFP, EMBO or ERC grants, seal of excellence, ...**	Base 2020: 12, increasing every 2 years by at least 1 to 15 (18)	20	23	21	21	29
SO3			**CONNECTION**						
	4	9	Number of productive (>10 joint publications per year) collaborations with international partners	Base 2020: 15, increasing annually to 17	19	21	21	21	28

JIF Journal Impact Factor

* Clinical trials further divided as: clinical studies - interventional studies - observational studies

** Minimum 50% active in ITM

Summarised in light of strategic objectives:

SO1 – IDEAS
Pursuing excellence and relevance in ITM research

In 2024, ITM researchers published **381 publications**, an 18% increase over the previous year (322 publications). **27.30% (104)** of 2024 peer-reviewed output was published in journals with an **impact factor of 5 or higher**, this is a significant decrease from 2023 (43%). **12.86% (49)** of 2024 peer-reviewed output was published in journals with an **impact factor of 10 or higher**. The decrease is partly explained by changes in impact factors within the infectious disease and medical sciences disciplines. During the COVID-19 pandemic, the impact factors of many journals in these disciplines increased significantly due to an exceptionally high number of citations of COVID-related research. Now that these citation patterns are normalising, the impact factors of these journals are falling back to their pre-pandemic levels. As a result, some journals that were previously above the threshold of 5 now fall below it again. This year we comfortably met the target for KPI-2, with **29.2%** of publications having a **normalised citation index > 1.5** (target =20%).

The number of ongoing **competitively awarded research projects in 2024 was 48** (well above target). ITM research and expertise resulted in 2024 in **13 publicly available policy documents, guidelines and recommendations**. This is presumably an underestimate and not exhaustive. Data that could be accessed via a trial subscription to the Overton database shows that 292 publications by ITM researchers were cited in **283 sources** published in 62 different countries.

SO2 – PEOPLE
Attract and nurture excellent researchers

By 2024, ITM had a total of 29 ongoing competitive mandates. For an overview of the mandataries and their research projects, see overview list KPI-8. Three new FWO PhD fellows started their doctoral research with ITM as additional host institution and UGent, UAntwerpen and UHasselt as main host institutions, respectively. In addition, three candidates with University of Antwerp as the main host institution and ITM as an additional host institution received a Special Research Fund (BOF) mandate (1 or 3 years) through UAntwerpen based on the ranking of the reserve list from the FWO evaluation. Candidates with 1-year BOF host funding are invited to reapply in the next FWO round. Three new FWO postdoctoral fellows started with ITM as the main host institution. A fourth FWO postdoctoral fellowship was postponed by one year with the permission of FWO. Furthermore, a postdoctoral researcher started in 2024 with a prestigious HORIZON MSCA Postdoctoral European Fellowship partially co-funded from the EWI PEOPLE/co-funding excellence programme.

Furthermore, in 2024, ITM welcomed new research professor of "virus ecology" Joachim Mariën, professor of "Health Policy" Gorik Ooms and professor of Tropical Bacteriology Liselotte Hardy.

SO3 – CONNECTION
Forge and strengthen synergistic partnerships

ITM is committed to strengthening and expanding its international partnerships. KPI-9 reflects that, by 2024, we will again have had 'productive collaborations' (> 10 joint publications per year) with **more than 25 institutions (n=28)**. These are mainly top European research institutions with complementary expertise. ITM mostly collaborates with institutions such as University of London, London School of Hygiene & Tropical Medicine, University of Antwerp, Ghent University, KU Leuven, University of Cape Town, Université de Montpellier, Utrecht University, University of Oxford, and Institut National de la Sante et de la Recherche Médicale (INSERM). Notable for 2024 is that collaborations with African partners are more prominent than before, we have productive collaborations with University of Cape Town, University of Witwatersrand, Université de Kinshasa, Kenya Medical Research Institute, Institut National de Recherche Biomedical, Makerere University, University of the Western Cape, and University of Lagos. In addition, KPI-9 also shows the intensive collaboration with public health institutions and international health organizations such as nationally Sciensano and internationally the World Health Organization, which attest to the structural connection between ITM research and the health situation in the field. And finally, KPI-9 also shows that the partner institutions with which ITM has or has had long-term (>10 years) structural

collaborations in capacity building do not necessarily lead to 'productive research collaborations'. We had however 'productive collaborations' in 2024 with Universidad Peruana Cayetana Heredia in Peru, Université de Kinshasha and Institut National de Recherche Biomédical in DRC and University of the Western Cape in South Africa.

b. Indicators Research

Input indicators

Table 11. Summary of input indicator results for 2020-2024.

Researchers	2020	2021	2022	2023	2024	2024 *(target)*
Number of ZAP[2]	26	28	26	26	27	30
Number of postdoctoral researchers	28	33	33	41	46	/
Number of junior researchers	27	34	31	39	36	/
ATP lab technicians	75	72	76	76	75	/
PhD courses						
• starting PhDs • total number of ongoing PhD tracks	18 80	23 101	18 102	23 97	16 102	/ /
Number of ongoing (cumulative) individual mandates from: FWO (pre- en postdoc); MSCA; HSFP; EMBO; ERC; Seal of Excellence, ...	20	23	21	21	29	Minimum 15 (18)

2 For ZAPs, postdoctoral researchers, junior researchers, invited researchers, ATP lab technicians situation on reference date 31/12 (as in the sections on personnel, see below). The figures in the 2023 report for the years 2020, 2021 and 2022 differ slightly from those of previous reports because there the specific reference date 31/12 was not systematically taken. This was corrected in the current 2023 reporting.

Brief explanation of the various statutes of the researchers

The ZAP (professor) category includes the various echelons of the academic track. Of the 27 ZAPs in 2024, 12 are women (44.4%).

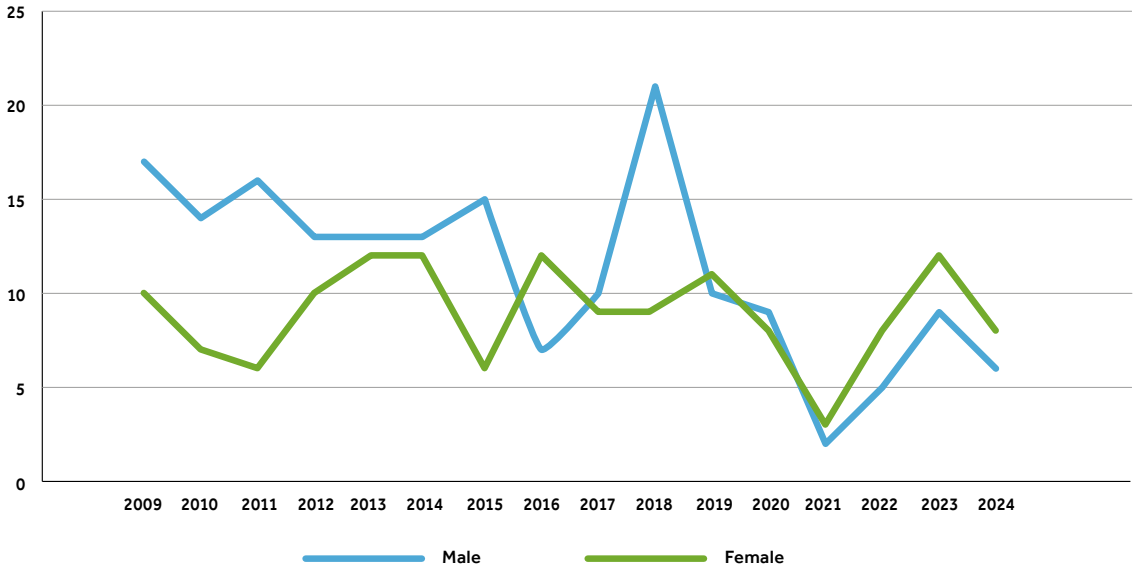
In the postdoctoral researcher category, the job descriptions 'doctor assistant' (N= 1, female), 'researcher' (N=35 of which 23 are female, 66%) and 'senior researcher' (N=10, of which 4 are female, 40%) are included (i.e., only the academic track and the expert track 'research'). The junior researcher category includes both the 'junior researcher' position and the 'academic assistant' position (unfilled in 2024). In 2024, there were 36 junior researchers, 27 of whom were women (75%). These are staff members only, so doctoral students who are not ITM staff are not included in these figures. There is a partial overlap between the categories of junior researchers and doctoral students ('total number of ongoing PhD tracks), i.e. junior researchers (payroll ITM) who are at the same time also enrolled as doctoral students at ITM.

The ATP category includes all ITM laboratory technologists 1 and 2. Sixty-nine percent of the 75 lab technicians are women.

Time-to-degree for PhD students (goal is < 4.5 years);

After the sharp drop in the number of PhDs in 2021 to 5[3], an upward trend has resumed since 2022. In 2024, there were 14 doctorate defenses. An overview of doctoral defenses can be found on the ITM website under 'events'. The average time from doctorate to defense was 3.5 years for the 2024 defenses, although there is a lot of variation with some candidates taking longer than 4 years and candidates arriving at a doctorate via a shortened pathway or enrolling later as doctoral students. The median was 39 months. Forty-three percent of doctoral students in 2024 had Belgian/EU nationality. The number of newly started doctoral students in 2024 was 16, well above the target of 8 mentioned in the management agreement.

Figure 2. Number of doctoral defenses 2009-2024 according to M/F distribution.



3 For explanatory factors see 2021 report: professors not taking on new doctoral students in light of their emeritus status, delayed replacement of retired professors and new professors needing time to build a team. COVID may also have played a role.

Critical mass formation, specific niches, international positions;

The specific research niches of ITM are located in the four research priorities set for the period 2020-2024: (1) emerging diseases and outbreaks, (2) antimicrobial resistance, (3) disease elimination, (4) sustainable health systems and strategies.

HR policy: personnel management and communication (at the start of the agreements) regarding the expected career path of doctoral students and postdocs;

For personnel policy, we refer to Chapter 7 of this report. ITM does not have a "career centre" as at Flemish universities. The Research Office advises PhD students and postdocs on career paths within and outside ITM (and corresponding funding opportunities). As in past years, the Research Office organised the 'Transferable Skills programme' in February 2024 together with colleagues from other units and departments. This programme is open to doctoral students, junior researchers, postdocs, ZAPs and the broader ITM research community.

Table 12. Summary of revenues for research for the years 2019-2024

Revenue for Research*	2019	2020	2021	2022	2023	2024
Section A						
Basic allowance Flemish Ministry of Education (33.44%)	3,663,000	3,686,745	3,742,784	3,930,439	4,134,623	4,237,802
Section D						
Defiscalisation funds & RSZ ristorno	4,659,158	4,735,605	4,998,329	5,610,787	6,505,212	6,970,918
Flemish government science policy (EWI)	3,103,785	3,026,202	4,783,500	5,246,400	4,888,800	5,621,200
Section E						
Diagnostic tests	1,684,334	1,508,662	1,571,130	1,416,825	1,061,637	2,058,594
Section F						
Valorisation medical service provision (20%)	967,672	942,916	970,340	1,117,435	1,175,970	1,139,295
Section G						
DGD programme (20%)	3,192,735	3,257,303	3,568,625	2,800,000	2,800,000	3,674,314
Section H						
Research projects & operating funds	9,358,722	16,595,968	17,432,626	17,931,822	16,875,776	18,359,057
Total	**26,629,706**	**33,753,402**	**37,067,334**	**38,053,707**	**37,442,019**	**42,061,180**

* Revenues: incl. overheads and partners for Section A, D-EWI, G & H

KPI-7 Ratio of EWI budget to total annual research budget 2024 was calculated by relating EWI 2024 revenue to the total 2024 research budget. The EWI budget does not include the grant under the Open Science policy, FOSB. The ratio is thus 13.4% in 2024. It is important to note that the 'externally acquired' FWO PhD fellows and FWO postdocs are not contained in Section H because they are not on the ITM payroll, and these are not recorded as 'revenue' (see below). The KPI target of achieving at least 90% non-EWI funding on average by end of covenant is unrealistically high, given the calculation of the research budget. Nevertheless, the target is almost met.

One-third of the basic funding (grant) from the Flemish Ministry of Education was allocated to research (equal distribution across the academic triad: teaching, research and service).

Of the DGD scientific capacity building programme, 20% was allocated to budget research (we are thinking here of the PhD sandwich programmme and the scientific capacity building under the country programmes). In light of the research valorisation of medical services, 20% of NIHDI is also taken into account for the "research budget" of ITM.

Section E refers to the income from CATT tests (Card Agglutination Test for Trypanosomiasis/diagnostic tests for sleeping sickness) which can be counted as valorisation income under research income.

Table 13. Number of research projects by type for 2020-2024 along with the 2024 target.

Research projects (detailed description, cf. PURE/FRIS)	2020	2021	2022	2023	2024	2024 *(target)*
Number of ongoing, competitively acquired research projects, incl. FWO, H2020, HorizonEurope, NIH, ... (cumulative)	59	51	54	50	48	Base 2020: 12, increasing every 2 years by at least 1 to 15
Number of current ORT studies	28	32	30	37	38	Base 2020: 8, increasing by at least 1 every 2 years up to 10
SOFI projects*	7 (2+5)	12 (2+5+5)	10 (5+5)	16 (5+5+6)	15 (4+5+6)	/
PPP*	12	11 (2+7)	10 (8+2)	8 (1+7)	5 (2+3)	/

* A list of the SOFI projects and PPP projects can be found under the 'use EWI grant' section.

Brief on research funding and projects (balance of fundamental, translational, clinical and applied research);

Table 14 shows a breakdown of research expenditures by cash flow for the period 2019-2024. The figures for the 2nd money stream[4] do not include FWO mandates (PhD fellows and postdocs). In 2024, there were 15 FWO PhD fellows and 9 FWO postdocs. This represents an amount of 2,103,750 euros: for the FWO PhD fellows counted at the salary of a junior researcher with an average of 2 years of seniority (77,250 euros) and for the FWO postdocs counted at the salary of a postdoc with an average of 4 years of seniority (105,000 euros).

Table 14. Research spending by cash flow, 2019 -2024.

Total expenditure		2019	2020	2021	2022	2023	2024
Government contribution to basic fundamental research	2nd flow of funds	397,642	841,997	1,590,645	1,369,464	1,860,571	1,653,852
Government contributions to applied scientific research	3rd flow of funds	5,750,712	7,557,105	6,291,316	7,179,954	5,850,070	8,338,610
Contract research with the private sector and scientific services	4th flow of funds	8,048,658	7,311,133	6,178,275	7,732,967	8,577,537	10,150,392
Other revenues linked to education, research and services	Other revenues linked to education, research and services	1,504,497	1,221,958	825,897	837,710	1,169,891	1,272,158
Total		**15,701,509**	**16,932,193**	**14,886,133**	**17,120,095**	**17,458,069**	**21,415,012**

4 FWO SBO and TBM are placed by Flemish universities under the 3rd money flow. Until 2023 we reported FWO SBO and TBM under the 2nd flow of funds and from 2024 under the 3rd flow of funds. The list of ongoing FWO projects can be found in annex (KPI-4).

28

clinical trials coordinated by ITM

48

research projects running with external competitive funding

381

articles in top scientific journals

Cooperation with Flemish universities and research institutions with a view to valorisations (economic – social)

The ITM policy plan 2020-2024 expresses a commitment to actively seek further synergies and complementarity with Flemish actors. Specifically, ITM aspires to (i) expand vaccination research within Belgium and Europe together with university vaccination centres, (ii) innovate medicines and diagnostics with Flemish biotech and pharma companies, (iii) engage digital technologies and AI together with strategic research centres for predicting disease outbreaks and developing faster, more accurate medical interventions.

In 2024, the cooperation agreement with KU Leuven was signed in which both institutions expressed their willingness to develop complementary cooperation in the interfaces between the two institutions. Like UAntwerp earlier, KU Leuven also agreed to have the doctoral defense of ITM/KU Leuven doctoral students at ITM. Furthermore, Joint Pump Priming Projects awarded under the 2023 ITM/UAntwerp joint call (see below) started in 2024. Talks with UGent continued in 2024. In October 2024, VIB presented its core facilities to the ITM researchers. ITM can get access to the core facilities under the same conditions as the universities as the Flemish universities. Further collaborations will be discussed on an individual basis.

Brief explanation of services in the broad sense: training, consulting, lab services, expertise, etc.

See chapter 4 Services

Output indicators

Table 15. Overview of research output indicators (number of publications and projects) for 2020-2024 along with the 2024 target.

Publications & projects	2020	2021	2022	2023	2024	2024 *(target)*
Total number of publications	406	422	397	322	381	/
Share of Open Access publications	333 (82%)	355 (84.1%)	341 (85.9%)	285 (88.5%)	309 (81.1%)	80%
Number of clinical studies coordinated by ITM-CTU	26	29	32	27	28	Minimum 18
Number of productive international collaborations per year measured through joint publications (>10/year)	19	21	21	24	28	Base 2020: 15, increase annually to 17
Number of new patent applications	1	0	0	1	1	/ [5]

5 A target number of patents has not yet been defined. However, ITM is committed to strengthening its valorisation potential, including economic valorisation and patents.

Impact indicators

Table 16. Overview of Research impact indicators (number of publications and projects) in 2020-2024 along with the 2024 target.

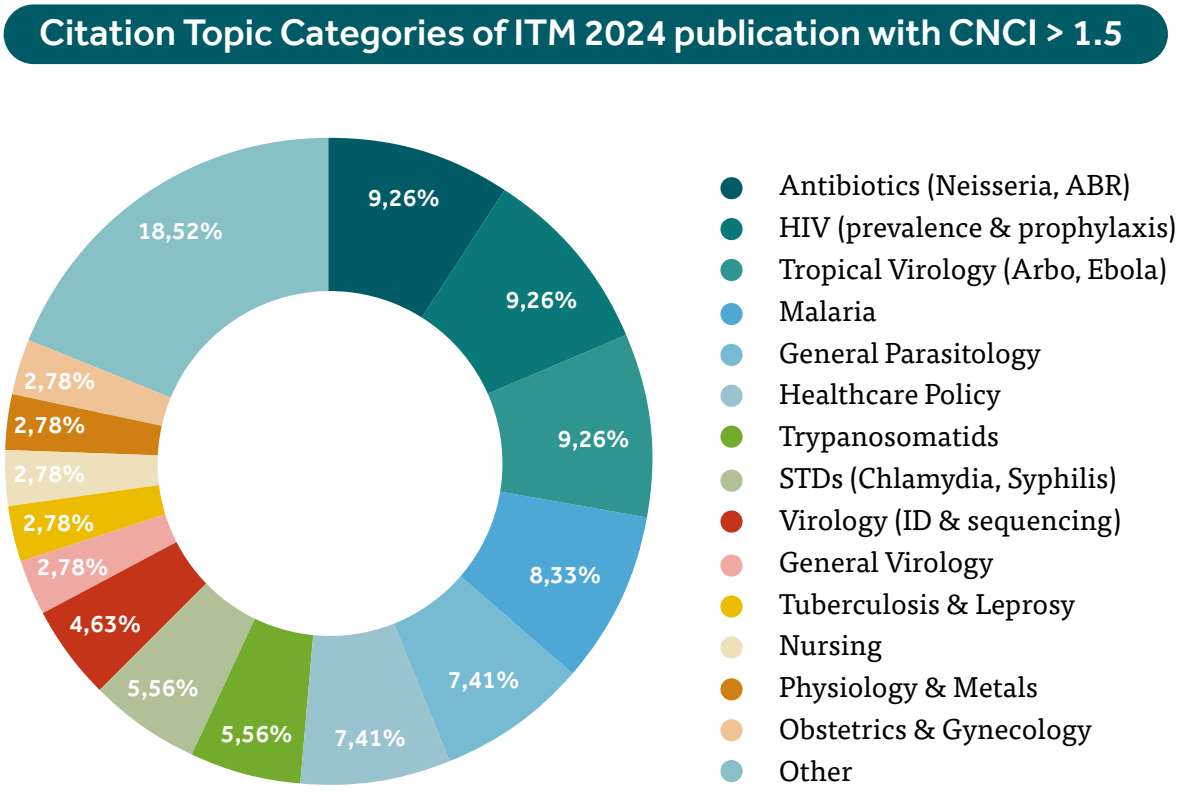
Publications & projects	2020	2021	2022	2023	2024	2024 *(target)*
ISI-publications with JIF ≥ 5	74	149	167	140	104	Base 2020: 60, increasing annually by at least 2 to 75 (85)
Share of publications in CSS class 3 and 4 (class with highest citations)	ECOOM via EWI	ECOOM via EWI	ECOOM via EWI	ECOOM via EWI	ECOOM via EWI	
Fraction of peer-reviewed publications cited 1.5x more than the world average of all publications by same type, published in the same year and with the same research discipline	12.10%	20.60%	20.00%	23.4%	29.2%	Minimum 20%
Number of publicly accessible policy documents, guidelines, recommendations,... based on ITM research and expertise	14	17	14	22	13 (283)	Base 2020: 8, increasing by at least 1 every 2 years to 10 (12)
EWI grant as leverage funding: ratio of EWI budget to total research budget	9%	12.90%	13.80%	13.10%	13.40%	Base 2020: at least 85% non-EWI funding (for research) increasingly to 90% average by end of convenant

Quality, relevance and impact of international exchanges & impact stories

Scientific Impact: In 2024, ITM researchers published 381 peer-reviewed publications, an increase as compared to previous years. This output consists of 83% original research articles, and the remaining 17% are reviews, editorials and letters; a similar ratio to 2023. 13% or 49 publications were published in journals with an impact factor of 10 or higher, and a total of 27% were published in journals with impact factors higher than 5. The decrease in percentage is partly explained by changes in impact factors within the infectious disease and medical sciences disciplines. During the COVID-19 pandemic, the impact factors of many journals in these disciplines increased significantly due to an exceptionally high number of citations of COVID-related research. Now that these citation patterns are normalising, the impact factors of these journals are falling back to their pre-pandemic levels. As a result, journals that were previously above the 10 or 5 threshold now fall back below it. However, the scientific impact of the 2024 publications is unambiguously reflected in the citation index, with nearly 1 out of 3 publications (29.2%) achieving an above-average number of citations (CNCI > 1.5, KPI-2) by the 17 March 2025 reference date. Web of Science labelled 1 ITM publication from 2024 as "Highly Cited" (17/03/2025)[6].

6 1 publication labeled as 'Highly Cited' in Web of Science on 17/03/2025: Erazo D. et al. In Nature Communications – Contribution of climate change to the spatial expansion of West Nile Virus in Europe.

Figure 3. Research topic of publications with high scientific impact 2024 (KPI-2, n=107). Publications were categorised based on the Web of Science meso citation topics categories.



Furthermore, Figure 3 also shows that ITM scores high scientific impact with the research topics priorities in the ITM Research Policy Plan 2020-2024 *"Global Science for a Healthier World"*.

1. (Re-)emerging viral diseases and the emergence of associated vectors under the influence of climate change (16.67%) this research fits under research priority 1 'Emerging diseases and outbreaks'. (research categories virology (id & sequencing), general virology and tropical virology)
2. Drivers and biological basis of antibiotic resistance and treatment failure in bacterial and myco-bacterial infections (17.6%) these frame in research priority 2 "Antimicrobial resistance. (research categories antibiotics, tuberculosis & leprosy, and STDs)
3. Research on protozoa and the diseases caused by these pathogens remains a unique strength of ITM in which the three departments are active (21.3%), a cross-cutting objective of this research is to better understand the pathogens and disease and thus accelerate their intended elimination, research priority 3. (research categories malaria, trypanosomatids, general parasitology).
4. Research on how health systems can be better informed and designed, with HIV research remaining strong with research on prevention medication (PREP) in Flanders and now in low-income countries, but also rapidly growing new research lines in (i) maternity care in low-income countries and (ii) prevention and management of non-communicable diseases (25%), all in line with research priority 4 'Sustainable health systems and strategies. (research categories HIV, nursing, health care policy, obstetrics & gynecology and physiology & metals)[7].

7 18.52% are categorized as "Other"

Social impact: For KPI-6, we asked ITM researchers to manually provide publicly accessible policy documents, guidelines and recommendations based on ITM research and expertise in 2024. From this information, we can document that ITM research and expertise resulted in 13 publicly accessible policy documents, guidelines and recommendations in 2024 (see Appendix). This social impact of ITM research largely stems from the research priorities set for the 2020-2024 period: (1) emerging diseases and outbreaks (4 papers), (2) antimicrobial resistance (5 papers), (3) disease elimination (2 papers), and (4) sustainable health systems and strategies (2 papers). Presumably this number is an underestimate and not exhaustive. We also had trial access to the Overton database, a research intelligence platform designed for organisations that want to track the impact of their research and expertise on policy documents, guidelines and recommendations. Overton's data show that 292 publications by ITM researchers were cited in 283 sources published in 62 different countries. 75.5% of these publications were cited multiple times in different policy documents. 5 publications[8] were even cited by 13 policy papers in 2024. The most common topics: infectious diseases (90 publications), public health, environmental and occupational health (89 publications) and health policy (43 publications). The Overton report is available upon request.

In addition to the 13 publicly available documents prepared on behalf of governments or international organisations reported under KPI-6, ITM researchers also regularly contributed to discussion forums by and with policymakers, unpublished opinions for the Federal Ministry of Foreign Affairs (through policy support Directorate General for Development Cooperation) and to several policy recommendations published by non-public third parties.

Success, attraction and visibility of the 'Global Campus'

Of the ITM professors in 2024, 55% have Belgian nationality, 41% are from the EEA (excluding Belgium) and 4% are from outside Europe. Fifty-nine percent of postdoctoral researchers have Belgian nationality, 19% are from the EEA (non-Belgium) and 22% from outside the EEA. Fifty-three percent of junior researchers have Belgian nationality, 11% are from the EEA (non-Belgium) and 36% from outside Europe. Of the ATP lab technicians, the vast majority have Belgian nationality (91%).

Among the group of doctoral students, the "Global Campus" is most evident with 36% doctoral students from the African continent, 14% from Asia, 6% from Latin America, 40% from Europe (20% of which are from Belgium), and 4% from elsewhere.

8 Kessel J, Rosanas-Urgell A, Dingwerth T, Goetsch U, Haller J, Huits R, et al. Investigation of an airport-associated cluster of falciparum malaria in Frankfurt, Germany, 2022. Eurosurveillance. 2024;29(5):8.
Fassinou LC, Nkeunang DS, Delvaux T, Nagot N, Kirakoya-Samadoulougou F. Adherence to option B plus antiretroviral therapy and associated factors in pregnant and breastfeeding women in Sub-Saharan Africa: a systematic review and meta-analysis. BMC Public Health. 2024;24(1):22.
Mbala-Kingebeni P, Rimoin AW, Kacita C, Liesenborghs L, Nachega JB, Kindrachuk J. The time is now (again) for mpox containment and elimination in Democratic Republic of the Congo. PLOS Global Public Health. 2024;4(6):5.
Wawina-Bokalanga T, Akil-Bandali P, Kinganda-Lusamaki E, Lokilo E, Jansen D, Amuri-Aziza A, et al. Co-circulation of monkeypox virus subclades Ia and Ib in Kinshasa Province, Democratic Republic of the Congo, July to August 2024. Eurosurveillance. 2024;29(38):6.
Vakaniaki EH, Kacita C, Kinganda-Lusamaki E, O'Toole Á, Brosius I., Vercauteren K., Liesenborghs L et al. Sustained human outbreak of a new MPXV clade I lineage in eastern Democratic Republic of the Congo. Nature Medicine. 2024; 30(2791-2795).

In the coming years, we want to work further on the attractiveness and visibility of ITM as a 'Global Campus' in order to attract excellent researchers among others through the Marie Curie programs and ERC. In 2023, 4 Marie Curie postdoctoral individual fellowships were submitted with ITM as host institution (and co-funding through the EWI grant in case of award) of which 1 fellowship was awarded in 2024 (see earlier). In 2024, 1 ERC application was submitted by the new research professor 'virus ecology' and 1 ERC Synergy Grant application (Socio-ecological Health Research unit with researchers from UK and the Netherlands).

c. Research Policy and Organisation

In March 2018, the institutional "Research Office" (RO) started with 2 FTE senior staff (Ann Verlinden & Saskia Decuypere) and 0.5 FTE management assistant support (Nathalie Brouwers). Since then, the service was strengthened to 5.5 FTE in 2024 including the library which since 2022 is also under the Research Office. The RO supports the institutional research policy, monitors the EWI instruments and research fund, advises on strategic partnerships and institutional cooperation agreements, monitors academic access to the predoc/PhD/postdoc programme, the launch of HI4A, supports the 'strategic external research funding', the DGD FA5 Synergy Programme, the ITM Research Information system (PURE) and data delivery to FRIS, organisation Transferable Skills programme and workshops/trainings/seminars. Furthermore, in 2024 Saskia Decuypere of the Research Office also took up the coordination role for Belgium in the framework of the Global Health EDCTP3 Joint Undertaking. The RO's "multivalence matrix" listing specific tasks is available upon request. The RO also works closely with the three departments including the departmental research managers appointed in 2021, with the Education Office, Development Office, Quality Assurance unit, 'Contract & Reports office', QA, Human Resources unit, IT and the Communications unit.

d. Financial Report

The following is the financial summary for the spending period 01/01/2024-31/12/2024 of the (i) structural EWI grant as awarded in the 2020-2024 agreement including the increased grant since 2021 as governed by the addendum to the 2020-2024 agreement and (ii) the investment grant instrumentation and (iii) the Health Innovations for All ('HI4A') grant. Spending detail is available upon request.

Table 17. Structural EWI grant agreement 2020-2024 including increased grant since 2021/addendum agreement 2020-2024, spending period 01/01/2024-31/12/2024.

	SOFI	CTU 2024	ORT 2024	JPPP	Biobank	Bio Informatica	OAPub	People Program	Research-Infrastructure	GPDataHub/ Research ZAP	IDEAS workshops	Research Compliance	Expenditures 01/01/2024-31/12/2024
Row Labels													
1. Personnel costs	**855,003.37**	**783,961.64**	**548,664.32**	**21,156.95**	**52,756.69**	**363,832.40**		**227,540.75**		**1,083,430.34**		**54,696.52**	**3,991,042.98**
2. Operational costs	**643,464.04**	**17,075.24**	**43,084.64**	**43,760.17**	**0.00**		**40,111.87**	**24,321.33**	**855,197.29**	**37,212.22**	**20,731.96**		**1,724,958.76**
02200									1,106.06				1,106.06
02585					0.00								0.00
02809			0.00										0.00
03001				125.84									125.84
03168										793.76			793.76
03437										0.00			0.00
03532		18.18											18.18
03595									161.26				161.26
03785										30.07			30.07
03791									39,192.76				39,192.76
04085	0.00												0.00
04387	5.28												5.28
NA	643,458.76	17,057.06	43,084.64	43,634.33			40,111.87	24,321.33	814,737.21	36,388.39	20,731.96		1,683,525.55
3. Partner contracts	**130,470.00**												**130,470.00**
Expenditures 01/01/2024-31/12/2024	1,628,937.41	801,036.88	591,748.96	64,917.12	52,756.69	363,832.40	40,111.87	251,862.08	855,197.29	1,120,642.56	20,731.96	54,696.52	5,846,471.74
4, Organisation costs													
Overhead current year (10%)	162,893.74	80,103.69	59,174.90	6,491.71	5,275.67	36,383.24	4,011.19	25,186.21	85,519.73	112,064.26	2,073.20	5,469.65	584,647.17

	SOFI	CTU 2024	ORT 2024	JPPP	Biobank	Bio Informatica	OAPub	People Program	Research-Infrastructure	GPDataHub/ Research ZAP	IDEAS workshops	Research Compliance	Expenditures 01/01/2024-31/12/2024
TOTAL EXPENSES 2024	1,791,831.15	881,140.57	650,923.86	71,408.83	58,032.36	400,215.64	44,123.06	277,048.29	940,717.02	1,232,706.82	22,805.16	60,166.17	6,431,118.91
Budget 2024 (including OH)													5,630,000.00
Remaining balance 2023													800,684.22
Total budget 2024													6,430,684.22
BALANCE BUDGET 2024													-801,118.91
BALANCE (including transfer 2023)													-434.69
% EXPENDI-TURE 2024 (excluding transfer)													114.23%
% EXPENDI-TURE 2024 (including transfer)													100.01%

Table 18. Investment subsidy instrumentation, spending period 01/01/2024-31/12/2024.

	Insectarium	Expenditures 01/01/2024-31/12/2024
1 – Operational costs		
600000 - FARM. SPEC. AND REAGENTS	221.48	221.48
610120 - MAINTENANCE & REPAIR OF BUILDINGS/TD	26.68	26.68
610180 - SMALL EQUIPMENT/CONSUMABLES	70,047.27	70,047.27
610190 - WASTE COLLECTION	29.14	29.14
612020 - EXPERT FEES	134.48	134.48
612110 - OPERATING COSTS	2,749.40	2,749.40
612510 - TRAVEL COSTS	2,928.10	2,928.10
612511 - ACCOMMODATION COSTS (PER DIEM)	1,296.17	1,296.17
612512 - ACCOMMODATION COSTS (HOTEL)	1,525.66	1,525.66
613010 - ICT HARDWARE	1,493.88	1,493.88
613015 - ICT SOFTWARE AND CLOUD	974.98	974.98
613120 - SHIPPING COSTS	121.36	121.36
657000 - BANK CHARGES, COMMISSION (WR	33.88	33.88
Expenses 01/01/2024-31/12/2024	**81,582.48**	**81,582.48**
2 - Organisation costs		
Overhead current year (10%)	8,158.25	8,158.25
TOTAL EXPENDITURE 2024	**89,740.73**	**89,740.73**

Budget 2020-2024 (OH inclusive)		1,000,000.00
expenditure in 2019		169,040.01
expenditure in 2020		331,852.72
expenditure in 2021		47,981.73
expenditure in 2022		209,596.57
expenditure in 2023		160,806.64
expenditure in 2024		89,740.73
BALANCE OF BUDGET 2020-2024		**-9,018.40**

% EXPENDITURE 2024 (excluding expenditure 2019-2023)	8.97%
% EXPENDITURE 2024 (including expenditure 2019-2023)	100.90%

Table 19. Health Innovations for All (HI4A) grant, spending period 01/01/2024-31/12/2024.

	HI4A	Expenditures 01/01/2024-31/12/2024
Row Labels		
600000 - FARM. SPEC. AND REAGENTS	1,103.24	1,103.24
610120 - MAINTENANCE & REPAIR OF BUILDINGS/TD	111.59	111.59
610180 - SMALL EQUIPMENT/CONSUMABLES	123,935.25	123,935.25
611130 - VEHICLE COSTS	6.58	6.58
612020 - EXPERT FEES	47,771.31	47,771.31
612090 - FEES/CONSULTANCY	400.00	400.00
612091 - FEES/TEACHERS	800.00	800.00
612092 - FEES/TRAVEL COSTS	191.58	191.58
612094 - FEES/HOTEL COSTS	419.37	419.37
612110 - OPERATING COSTS	3,475.28	3,475.28
612380 - TRAINING	8,979.93	8,979.93
612510 - TRAVEL COSTS	2,107.72	2,107.72
612511 - ACCOMMODATION COSTS (PER DIEM)	485.45	485.45
612512 - ACCOMMODATION COSTS (HOTEL)	633.85	633.85
613000 - OFFICE EQUIPMENT	12.59	12.59
613013 - ICT OTHER	203.41	203.41
613015 - ICT SOFTWARE AND CLOUD	180.00	180.00
613040 - PRINTING AND PUBLICATIONS	387.40	387.40
613120 - SHIPPING COSTS	11,035.41	11,035.41
615000 - RECEPTION EVENTS REPRESENTATION	119.10	119.10
615100 - MEMBERSHIP FEES AND CONTRIBUTIONS	1,452.00	1,452.00
620000 - SALARIES ZAP	4,041.30	4,041.30
620010 - SALARIES OAP	59,365.12	59,365.12
620050 - SALARIES ATP	130,042.66	130,042.66
620100 - SALARIES DVG ZAP	625.80	625.80
620110 - SALARIES DVG OAP	12,722.67	12,722.67
620150 - SALARIES DVG ATP	11,368.27	11,368.27
620210 - SALARIESEJP OAP	4,171.84	4,171.84
620250 - SALARIESEJP ATP	7,602.47	7,602.47
620400 - SALARIES VOORZ EVG ZAP	11.85	11.85
620410 - SALARIES VOORZ EVG OAP	-5,039.76	-5,039.76
620450 - SALARIES VOORZ EVG ATP	649.25	649.25
620500 - SALARIES VOORZ DVG ZAP	-291.28	-291.28
620510 - SALARIES VOORZ DVG OAP	-3,479.27	-3,479.27

620550 - SALARIES VOORZ DVG ATP	-257.93	-257.93
620600 - SALARIES VOORZ EJP ZAP	256.53	256.53
620610 - SALARIES VOORZ EJP OAP	-2,458.93	-2,458.93
620650 - SALARIES VOORZ EJP ATP	-806.42	-806.42
621000 - RSZ ZAP	1,096.33	1,096.33
621010 - RSZ OAP	18,410.97	18,410.97
621050 - RSZ ATP	37,098.29	37,098.29
621100 - PATR.RSZ 8,86% op GV ZAP	18.18	18.18
621110 - PATR.RSZ 8,86% op GV OAP	203.82	203.82
621150 - PATR.RSZ 8,86% op GV ATP	756.55	756.55
622000 - GROUP INS. ZAP	205.44	205.44
622010 - GROUP INS. OAP	2,698.53	2,698.53
622050 - GROUP INS. ATP	11,872.88	11,872.88
623000 - OTHER PERS COST.ZAP	60.70	60.70
623010 - OTHER PERS COST.OAP	599.30	599.30
623050 - OTHER PERS COST.ATP	3,370.58	3,370.58
623100 - PATR. CONTRIBUTIONS MC ZAP	45.67	45.67
623110 - PATR. CONTRIBUTIONS MC OAP	1,125.75	1,125.75
623150 - PATR. CONTRIBUTIONS. MC ATP	2,192.04	2,192.04
657000 - BANK CHARGES, COMMISSIONS (WR)	101.64	101.64
738111 - RECOVERY RSZ SALARIES SCIENCE	0.00	0.00
745100 - RECOVERY SALARIES (OPB)	0.00	0.00
Expenditures 01/01/2024-31/12/2024	502,191.90	502,191.90

2 - Organisation costs		
Overhead current year (10%)	50,219.19	50,219.19

TOTAL EXPENDITURE 2024	552,411.09	552,411.09

Budget 2024 (OH included)		**550,000.00**
BALANCE BUDGET 2024		**-2,411.09**
% EXPENDITURE 2024		**100.44%**

e. Utilization EWI Grant

1. Use of structural EWI grant as allocated in the 2020-2024 agreement

The grant from the Flemish Community was used in 2024 to finance the (i) activities of the Clinical Trials Unit (CTU) and (ii) the Outbreak Research Team (ORT), (iii) innovative research at ITM (SOFI), (iv) 'pump priming projects' (PPP), (v) People programme, (vi) small and medium research infrastructure, (vii) supporting Open Access publications, (viii) organization of an IDEAS workshops and (IX) the support in the context of 'Research compliance' external funders, (X) Support Biobanking, (XI) Support bioinformatics (human capital), (XIV), Research professors, (XV) Research starting grant.

2. Clinical Trials Unit (CTU)

ITM established an interdepartmental and interdisciplinary "Clinical Trials Unit" with the support of the Flemish Community on July 1, 2004. The objective was to ensure the coordination, quality assurance, efficiency, compliance and technical support of clinical trials of new drugs, vaccines, diagnostics and/or pesticides against human diseases in developing countries, with a focus on malaria, tuberculosis and HIV.

Since 2007, ITM obtained the legal status of "Sponsor" of non-commercial clinical studies, as published in the Belgian Official Journal of 17 January 2007. Until June 2011, the CTU was an interdepartmental unit guided by a Steering Committee with representatives from the then participating Departments of Parasitology, Microbiology, Public Health and Clinical Sciences, with the head of the CTU responsible for the administration of the Steering Committee. Since July 2011, the CTU has been part of the Department of Clinical Sciences. The Clinical Trials Unit enables ITM to conduct clinical trials according to the rules of the art. This capacity is of increasingly vital importance if we are to continue to conduct independent clinical and epidemiological research; both deontologically and regulatively, we must be able to apply the same standards around the world as we do in Europe. In this sense, it is also important not only to be active in the South in supporting studies, but also to maintain within Belgium/Europe the necessary expertise regarding regulation and implementation of Good Clinical Practice (ICH-GCP) guidelines.

Since 2017, the CTU supports not only studies in the South but also studies in Belgium/Europe, initiated by (or in collaboration with) ITM researchers and with potential relevance for the South.

In late 2020, ITM was invited to participate in a COVID vaccination study organised by Johnson & Johnson (Janssen Pharmaceutica). Johnson & Johnson's COVID vaccination study was just one of several clinical studies in which ITM was asked to actively participate as a clinical site for recruitment and follow-up of study participants. Until recently, however, no specific infrastructure was available within the ITM buildings, and the studies were therefore organised in a temporary setting: part of the ITM cafeteria was transformed into a site for clinical studies using a modular system. Thanks to the 'Flemish Resilience' initiative of the Flemish government, the necessary subsidies were obtained to carry out the necessary infrastructure works in which (part) of the cafeteria was renovated into a fully-fledged clinical site. This site for clinical trials, the Clinical Trial Site (CTS), was officially opened in September 2022 and together with the CTU forms the Clinical Trial Centre (CTC). The CTU focuses on all *trial management* activities (clinical project management & monitoring, data management, statistics) of academic clinical trials. The CTS, on the other hand, focuses on *trial operational* activities, i.e. recruitment and medical follow-up of study participants throughout the entire study. The CTS team consists of study nurses and study physicians who, together with a study coordinator and the ITM's principal investigators, ensure the smooth running of the clinical trials, in consultation with academic partners and partners from the life sciences sector who act as sponsors and provide the necessary funding. The salary costs of the CTS staff are borne entirely by the CTS itself, based on the income the CTS receives from working with these partners. Much of the CTU staff's fixed

salary costs and limited general operating costs are funded by the EWI grant. Part of the salary costs, the operating budgets for the clinical studies themselves, the costs of the participating departments, the support of the South partners and most of the project-specific operating costs of the CTU are paid through other budgets (ITM, DGD Framework Agreement, external project funds including EDCTP, Horizon Europe).

As of 31 December 2024, the CTU team consisted of 14 employees (11.0 FTE):

- Head of Unit (1FTE)
- Biostatisticians (1,3 FTE)
- Clinical Trials Scientists (4,4 FTE)
- Clinical Data Managers (2,5 FTE)
- Clinical Data Reviewers (1,8 FTE)

The CTU provides support to ITM researchers in organising, supporting and coordinating both (1) clinical trials and (2) other interventional studies in humans, as well as support for (3) observational studies.

For clinical trials, the ICH-GCP definition is used:

"Any study in human subjects designed to determine or confirm the clinical, pharmacological and/or other pharmacodynamic effects of an investigational drug(s), and/or to determine any adverse effects of an investigational drug(s), and/or to study the resorption, distribution, metabolism and excretion of an investigational drug(s) for the purpose of determining the safety and/or efficacy of the investigational drug(s)." Thus, according to this definition, a clinical study is one in which a "drug" (drug) is administered and evaluated. Studies in which there is no intervention with a drug are not clinical trials per ICH-GCP definition.

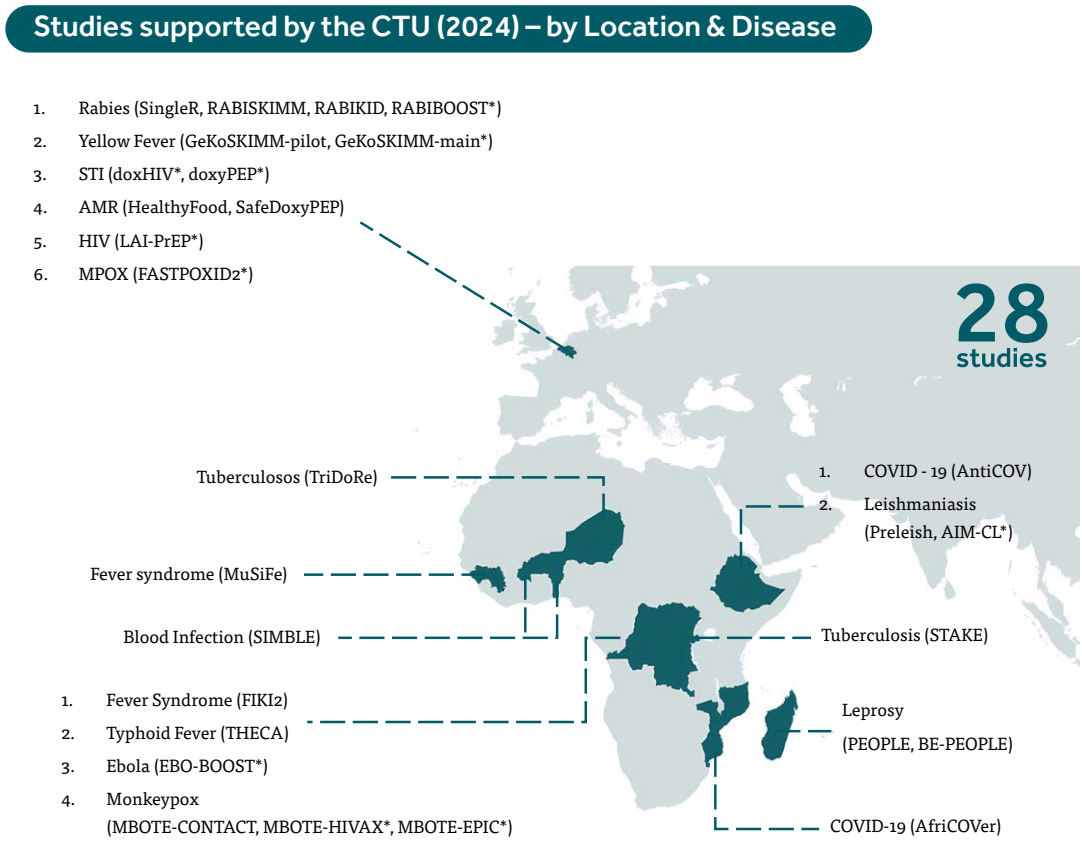
However, if there is some form of intervention (e.g., with a health product that is not recognised as a "drug," with a diagnostic test or other additional procedures that are not part of a standard routine examination, these are interventional studies. In addition to these interventional (clinical) studies, the CTU also supports observational studies. These are studies in humans in which there is only observation; there is no intervention as a result of a study protocol and study participants are only followed up on their routine treatment.

In 2024, the CTU provided support to 28 studies, broken down as follows (see also list KPI-3 in annex):

a. Clinical Studies (i.e., "Clinical Trials" according to ICH-GCP definition): 20
b. Interventional studies: 1
c. Observational studies: 7

A more detailed report of CTU's specific studies and activities is available upon request.
The figure below lists the 28 studies that CTU supported in 2024:

Figure 4. Overview of CTU-supported studies in 2024.



3. Outbreak Research Team (ORT)

Emerging infectious diseases and outbreaks is one of the ITM's research priorities. ITM has long held a leading role in research on disease outbreaks in the tropics. To maintain this international leadership role, and to further develop its own epidemic research with partners in Europe, Africa, Asia and South America, ITM initiated the establishment of an Outbreak Research Team (ORT) in 2017 with support from the Flemish Community.

ITM departments spent the allocated 2024 ORT budget on: (i) salaries of 2-3 core ORT members, (ii) Composition of permanent ORT team:

- Epidemiologist – Soledad Colombe in Department of Public Health
- Entomologist – Wim Van Bortel in Department of Biomedical Sciences
- Epidemiologist – Elise De Vos in Department of Clinical Sciences
- Laboratory expert – Eugene Bangwen in Department of Clinical Sciences
- Clinical researcher One Health – Isabel Brosius in Department of Clinical Sciences
- Molecular Biologist – Philippe Selhorst in Department of Biomedical Sciences
- Social Scientist – Marie Meudec in Department of Public Health

By 2024, there were a total of 38 ongoing ORT projects (KPI-5, list in Annex).

4. SOFI

A total of 15 SOFI projects were supported in 2024. SOFI projects are innovative research projects that aspire to push the boundaries of knowledge and its applications. In 2024, four projects from the 2018 round, five projects from the 2021 round and six projects from the 2023 round were supported.

A list of SOFI projects supported in 2024 is presented below. From the 2023 SOFI round, collaborating FA5 DGD partners could – if the requirements were met – apply for up to €80,000 per project from 'DGD FA5 Synergy Funds' to fund research capacity building activities that were deemed essential to optimally implement the proposed SOFI research. Of the six SOFI 2023 projects, 3 have FA5 DGD Synergy funding.

In 2024, the 8th SOFI call was launched (SOFI 2025). Fourteen applications were submitted, all of which were admissible and sent to the international expert panel for review. The panel recommended 4 projects for funding. The SOFI-2025 projects will start on 1/1/2025. FA5 Synergy Funding was also awarded for 1 of the projects.

SOFI 2018 ZCL Morocco
A systemic insecticide to control zoonotic cutaneous leishmaniasis in Errachidia province – Southeastern Morocco: an intervention trial for an innovative vector control tool
(Epco Hasker)
846.485€
1/11/2018-30/10/2022 + no-cost extension until 31/10/2024

SOFI 2018 SchistoSAM
A proof-of-concept trial to evaluate artesunate/mefloquine as a novel alternative treatment for schistosomiasis in African children
(Manu Bottieau, Katja Polman)
798.609€
1/10/2018-30/9/2022 + no-cost extension until 31/12/2024

SOFI 2018 CHARHAT-DRC
Cryptic human and animal reservoirs compromise the sustained elimination of gambiense-human African trypano-somiasis in the Democratic Republic of the Congo
(Philippe Büscher, Epco Hasker)
983.673€
1/12/2018-30/11/2023 + no-cost extension until 31/5/2024

SOFI 2018 TriDoRe
Novel high-dose tuberculosis retreatment regimens: how to overcome resistance without creating more
(Lut Lynen, Bouke de Jong)
996.039€
1/10/2018-30/9/2024

SOFI 2021 InnoR3TB
Innovate to reduce rifampicin-resistant tuberculosis in Rwanda and beyond- (InnoR3TB)
(Bouke de Jong, Leen Rigouts, Mazarati, JP)
€599,343.00
1/1/2021-31/12/2024

SOFI 2021 VIVAX RES
Mechanisms of P. vivax chloroquine resistance: a transcriptomic/transgenic approach
(Anna Rosanas-Urgell, Eline Kattenberg, Malgorzata Domagalska, Pieter Monsieurs)
€599.226
1/1/2021-31/12/2024

SOFI 2021 Metatropics
Clinical research platform for untargeted RNA virus detection in tropical fever patient populations: construction and application.
(Koen Vercauteren, Philippe Selhorst, Kevin Ariën, Marjan Van Esbroeck)
€599.983
1/1/2021-31/12/2024

SOFI 2021 PRESTIP
PReventing the Emergence of untreatable STIs via radical Prevention.
(Chris Kenyon, Tania Crucitti, Irith De Baetselier, Eric Florence, Patrick Soentjens, Sheeba S Basil)
€527.953
1/1/2021-31/12/2024

SOFI 2021 SNA_Leprosy
Improving leprosy prevention strategies by integrating social network analysis with spatial and molecular epidemiology data of Mycobacterium leprae in the Comoros
(Koen Peeters, Epco Hasker, Bouke de Jong)
€ 590.752
1/1/2021-31/12/2024

SOFI 2023 TRYPTACKLE
Tackling the livestock parasite *Trypanosoma congolense* by targeting invariant surface proteins.
(Jan Van Den Abbeele, Pieter Monsieurs)
€ 600.000
1/1/2023-31/12/2026

SOFI 2023 CLIMB
The impact of rapid CLIMate change on the Biodiversity – health interface.
(Ruth Müller, Kevin Ariën, Marco Brustolin)
€ 599.908
1/1/2023-31/12/2026

SOFI 2023 PrEP roll-out female sex workers
How to optimize the PrEP roll-out and HIV prevention among female sex workers in Burkina Faso?
(Bernadette Hensen, Bea Vuylsteke, Christiana Nöstlinger)
€599.993
1/1/2023-31/12/2026

SOFI 2023 AIM-CL
Antimicrobial adjuvants to revert the Imbalance of skin Microbiotafor improved outcomes of Cutaneous Leishmaniasis treatment in Ethiopia
(Johan van Griensven, Pieter Monsieurs, Myrthe Pareyn)
€599.982
1/1/2023-31/12/2026

SOFI 2023 RABISKIMM
Skin imprinting in intradermal rabies vaccination: a prioritized outcome in vaccine trials?
(Wim Adriaensen)
€599.998
1/1/2023-31/12/2026

SOFI 2023 Prevention strategies of epidemic spread
Improving disease prevention strategies of epidemic spread by integrating socio-spatial characterization of human mobility, environmental typology and mathematical modeling in an urban system of Cuba
(Veerle Vanlerberghe, Maria Eugenia Toledo (CU), Katharina Kreppel, Claudia Nieto, Dennis Perez (CU))
€600.000
1/1/2023-31/12/2026

5. PPP

PPPs are designed to investigate and provide *proof of concept* for new scientific hypotheses. Ideally, the project results in preliminary findings that can be used to develop a project proposal for submission to external funders. Joint PPPs or joint PPPs are PPPs between ITM and other research institutions in which ITM and the partner each contribute 50% financially to the project.

In 2023, the Steering Committee decided to reserve the competitive Joint Pump Priming Calls from now on to calls in collaboration with UAntwerp or other universities that contribute institutional co-funding to the call. The *standing call* mechanism was retained but expanded to an 'upfront' mechanism where the PI(s) identify an external funding call and make a 'case' for a (j)PPP. PI(s) must be receptive proposers for the identified call.

In 2023 a joint 2024 Pump Priming call was launched together with University Antwerp with a reduced budget per project (15K ITM + 15K UAntwerp). Two projects were awarded with start date 15/2/2024. Furthermore, 3 (j)PPP projects were funded in 2024 according to the 'upfront mechanism'.

Table 20. (j)PPPs running in 2024.

Title	Duration	PI ITM	Partner institute (PI)
"2024 jPPP ITG/UA call 'Development of virus-specific anti-NS1 antibodies and expression system for flavivirus recombinant NS1 for use in neuro-tropic flavivirus diagnostic, therapeutics, and vaccination development (Flavivirus_NS1_ project)'"	15/2/2024-14/2/2025	Kevin Ariën	UAntwerp (Peter Delputte)
2024 jPPP ITG/UA call ' First steps in mapping and characterizing Leishmania-specific T cells in lesions of Ethiopian patients with cutaneous leishmaniasis'	15/2/2024-14/2/2025	Thao-Thy Pham & Wim Adriaensen	UAntwerp: Kris Laukens Pieter Meysman
jPPP 'upfront mechanism' A single-cell sequencing approach to understand P. vivax gene regulation at the epigenetic level (PvEpi)	1/2/2024-31/1/2024	Anna Rosanas-Urgell	IS Global (Alfred Cortés)

Title	Duration	PI ITM	Partner institute (PI)
PPP 'upfront mechanism' 'The contribution of genetic susceptibility factors to the high leprosy incidence in a family from Anjouan, Comoros; ANGELE-2	16/05/2024-15/04/2025	Bouke de Jong	
PPP 'upfront mechanism' Integration of pre-exposure prophylaxis and sexually transmitted infection testing in antenatal and postnatal care: a formative study on implementation barriers and facilitators in Lusaka, Zambia	24/7/2024-1/12/2024	Anke Rotsaert	

6. People programme

The People programme supported in 2024:

- Support policy for competitive mandates: awarding a bench fee (18K) to FWO postdocs started in 2024 with ITM as the main host institution.
- 'Safety funding': (i) Dr. Malgorzata Domagalska, leading Leishmania expert in the Molecular Parasitology Unit to bridge to future external funding opportunities/a permanent position as academic leader, (ii) candidates who were admitted to the interviews of the FWO postdoctoral round but were ultimately not awarded a mandate (Aliki Christou & Anke Rotsaert). Safety funding was granted on the condition that they resubmit in the next round.
- Co-funding: (i) finishing PhD mandate from the Dubois Foundation for Adwine Van Slembrouck, (ii) HORIZON MSCA Postdoctoral grant – European Fellowship for Alenichev, Arsenii.

7. Small and medium-sized research infrastructure

The second call for "Small to Medium Research Infrastructure" was launched in 2023. The spending of the selected proposals spans 2023 & 2024. In 2024, these were:

- Investment in 'Geospatial capacity' (hardware, software, data): 'Putting ITM on the map – Consolidating and expanding geospatial capacity across departments to competitively establish ITM in the world of spatial epidemiology';
- Malaria transmission @ITM – climate chambers;
- Illumina Miseq equipment to perform target deep sequencing (and whole genome and RNA sequencing) of Plasmodia and Mycobacteria;
- Only Chromium X;
- Bio-Plex 200 BioRad;
- Refrigerators, freezers, and Ultra Low Temperature freezers;
- 2024 Electronic Lab Notebook (ELN) 2.0 ('SLIMS');
- Calibration costs

8. Supporting Open Access publications

Under SO1 and SO3, Open Access publication costs may be paid with the EWI grant if the following criteria are met: (i) original research paper resulting from a SOFI/PPP project after SOFI funding has expired; (ii) original research paper resulting from an externally funded project whose funding has expired and published in a Q1 *journal* as assessed in the *Clarivate Science Citation Index Expended* (SCIE). Q1, short for *first quartile*, is the top 25% of journals in the topic category in which the journal is classified.

Applications should be submitted to the Research Office for criteria review.

9. Organisation of an IDEAS workshop

The EWI grant is also used to organise "IDEAS workshops". There are 2 types: 1. workshop/conference to identify new research projects; 2. workshop to design a research application for a specific research call.

Were supported in 2024:

- IDEAS workshop Type 1: support 44rd Annual Congress of the European Society of Mycobacteriology (ESM) in Bruges, 23rd-26th of June 2024;
- IDEAS workshop Type 1: support day of the Quality of Care for Chronic Conditions (CCCQ) Network meeting intended 'to identify topics for research, identify (additional) funding opportunities, and jumpstart on proposal-writing';
- IDEAS workshop Type 2 in support of preparation ERC Synergy application.

10. Support Research Compliance

Partial salary support.

11. Support Biobanking

Partial salary support.

12. AI/bioinformatics platform: (human capital)

To strengthen "human capital" in bioinformatics: Salary cost of bioinformaticians in Department of Biomedical and Clinical Sciences.

13. Research Professors

The research position **'(Re) Emerging Infectious Diseases'** has been filled by Prof. Laurens Liesenborghs, former postdoctoral researcher of the ITM Outbreak Research Team, since August 2022. His research interest mainly concerns mpox. Furthermore, in 2023, ITM welcomed the new research professor **'Experimental Immunology'** Maria Luísa Simões (she/her). The original proposed research ZAP 'One Health' was refocused to a research ZAP **'Emerging Viruses'** from February 2024 filled by Joachim Mariën, also former postdoctoral researcher in the ITM Outbreak Research Team.

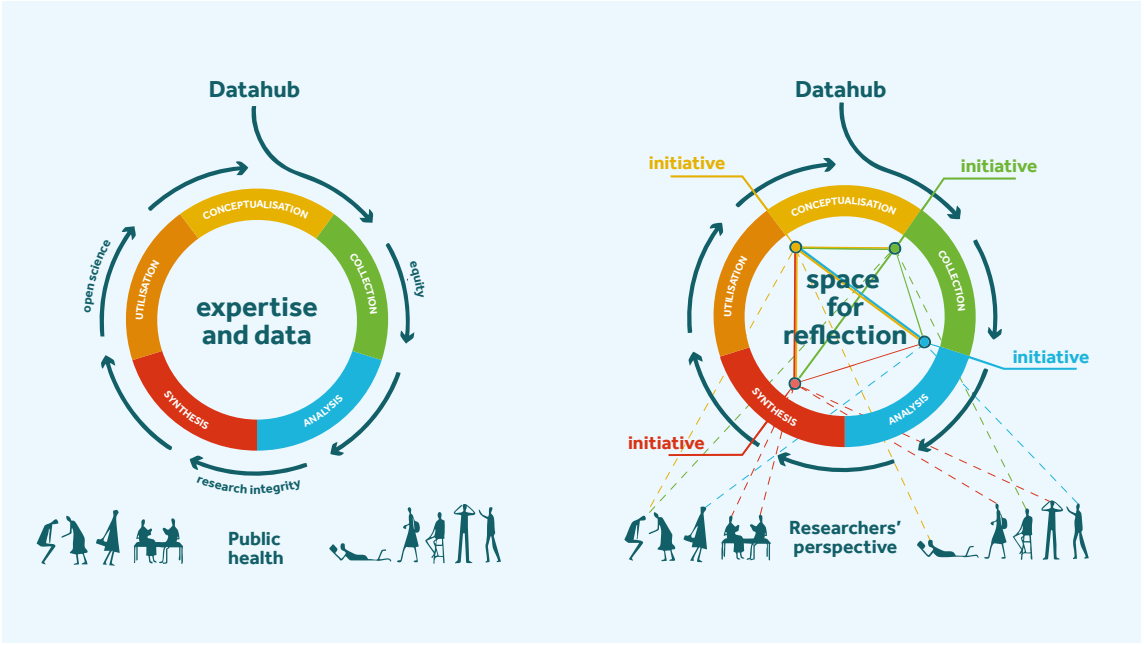
14. Research starting grant

The "Research starting grant" is awarded to newly hired professors to strengthen a research line and/or build a research team. The starting grant is expressed as the equivalent for a postdoctoral salary for 2 years (190,000€). For research professors, the research start-up grant is covered by the EWI grant. For regular professors, the starting grant is half funded by the EWI grant (95,000€) and half funded by the department (95,000€).

15. Datahub

The data hub (https://www.itg.be/en/research/datahub) aims to support researchers and valorise expertise in terms of collecting, exchanging, analysing, integrating, and using data. Thematically, the focus is on how populations in various contexts are affected by and cope with health challenges. The data hub's ambition is to go beyond storing and making available ready-made datasets and aims to screen critical points in the chain of data-related processes and transform them where necessary. The data hub aims to (1) give conscious attention to processes and (2) take insights and learning from one product to another. The operation of the data hub is presented visually below.

Figure 5. Visualisation operation of data hub.



The data hub activities are initiated from the perspective of researchers in the fields of public health and global health. Seven initiatives were started in 2022 and are ongoing, 3 new initiatives were started in 2023 and 2 new initiatives in 2024 (see list below):

1. Develop and share methods that facilitate interdisciplinary research. Contact: Claudia Nieto. Started in 2022. Developed into long-term core theme "interdisciplinarity".
2. Conduct a literature review (systematic search and critical analysis) and formulate guidelines on health research and data on racial groups. Contact person: Marie Meudec; started in 2022.
3. Provide R code for estimates of disease frequency using Bayesian hierarchical spatial approaches. Contact person: Tine Verdonck. Developed into long-term core statistical topic.

4. Making quantitative survey data available for secondary use. Contact person: Lenka Benova. Started in 2022.
5. Contribute to a paper on ethical considerations for sharing qualitative data. Contact person: Mira Schneider. Started in 2022.
6. Write vignettes to share statistical experiences that do not make it into traditional research papers. Contact: Tom Smekens. Started in 2022. Developed into long-term core statistical topic.
7. Collect primary data for quantitative social network analysis using digital tools. Contact person: Claudia Nieto. Started in 2022. Developed into long-term core theme "interdisciplinarity".
8. Host one round of the BRIDGE mentoring programme to promote research integrity and fairness in epidemiological studies in global health. Contact person: Tine Verdonck. Started in 2023.
9. Develop a DHIS 2-based data management system, to be tested for leprosy programmes. Contact person: Epco Hasker. Started in 2023.
10. Map data for urban health: on processes that shape decisions about producing and using data for *evidence-informed* policymaking, and on aggregating, linking and interpreting data into multi-disciplinary *evidence*. Contact: Joris Michielsen. Started 2023.
11. Assess the availability, reliability and usability of datasets related to access to and use of medicines among migrants. Contact: Saleh Aljadeeah. Started in 2024.
12. Document experiences of data hub team members with data sharing platforms. Contact person: Tine Verdonck. Started in 2024.

Below is a summary of the 2024 "products" by initiative.

Table 21. Initiatives and output data hub.

Initiative	Type	Year	Availability
1. Interdisciplinarity	Selected references used for the report [bibliography]	2024	Available via ITM Sharepoint or on request.
1. Interdisciplinarity	Intermediary report [document]	2024	Contains identifiable information – not for public sharing – available on request
1. Interdisciplinarity	Seminars at ITM by guests and staff [videos and materials shared during presentations]	2024	Available on request
1. Interdisciplinarity	Case studies used for teaching	2024	Available on request
1. Interdisciplinarity	Publication [document]	2024	Nieto-Sánchez C, Ochoa TJ, Onwuchekwa C, Ravinetto R, Verdonck K. Will a new pentavalent meningococcal ABCWY vaccine mark a milestone in protecting all those at risk from invasive meningococcal disease? Lancet Infect Dis 2024. Available from: https://pubmed.ncbi.nlm.nih.gov/39647495/

Initiative	Type	Year	Availability
1. Interdisciplinarity	Publication [document]	2024	Nieto-Sanchez C, Dens S, Cisneros J, Solari K, De Los Santos M, Vega V, Silva-Santiesteban A, Otero L, Grietens KP, Verdonck K. From risk factors to disease situations: A socio-spatial analysis of COVID-19 experiences in Lima, Peru. Soc Sci Med 2024. Available from: https://pubmed.ncbi.nlm.nih.gov/39427570/
1. Interdisciplinarity	Summary of interviews of people in the department working with spatial data [Excel file]	2024	Available on request
2. Data and racialised groups	Guidance [document]	2024	Available on request
2. Data and racialised groups	Conference contribution [abstract]	2024	Meudec M, Cosaert T. The use and misuse of race and ethnicity in health research: Developing guidelines for a race-conscious approach in Europe. Presented at the at the 20th Biennial Conference Of The European Society For Health And Medical Sociology. Abstract available from: https://medialibrary.uantwerpen.be/files/1306187/61606528-df8d-41b8-890d-82316f1d1b19.pdf
2. Data and racialised groups	Workshop	2024	Meudec M and Cosaert T. Expert workshop at ITM. Announcement available from: https://www.itg.be/en/events/expert-workshop-towards-racism-conscious-health-research-in-europe-theo-cosaert-marie-meudec
2. Data and racialised groups	Webinar [presentation]	2024	Presentation of The RECoRD method – 5W-H data on racially minoritized groups, Guiding questions for racism- conscious health research in Europe. More information available on request.
6. Statistics	Lecture [video recording]	2024	Available via Youtube: https://www.youtube.com/watch?v=T23rSi7o0Z4
6. Statistics	MSc thesis ITM [document]	2024	Thesis by Victor Vega, available on request
7. Social network analysis	Platforms for interdisciplinary data integration [Miro boards]	2023-2025	Links to the boards are available on request
7. Social network analysis	Abstract submitted as starting point for an MSc thesis of statistics at UHasselt [document]	2024	Available on request; the proposal was selected and the MSc project is ongoing.
8. BRIDGE mentorship	Blueprint [document]	2023-2024	https://zenodo.org/communities/bridge_mentoring/records?q=&l=list&p=1&s=10&sort=newest. An updated version will be uploaded end of March 2025
8. BRIDGE mentorship	Presentation of BRIDGE guidelines [Video]	2024	Available on request (via Youtube)

Initiative	Type	Year	Availability
8. BRIDGE mentorship	Presentation of BRIDGE mentorship initiative [Video]	2024	Available on request (via Youtube)
8. BRIDGE mentorship	Online course [Moodle environment]	2024	Available on request – developed within ITM Moodle environment and Miro
9. Data management for programmes	Report [document]	2024	Available on request
10. Map data for urban health	Lecture [video recording of ppt presentation]	2024	Michielsen J, Marchal B. What is 'evidence for urban health policy making?'. Used in a lecture about ecohealth for students of the Master of Public Health. Available on request.
10. Map data for urban health	Tools for data collection and co-creation activities [documents and ppt files]	2024	- Survey for measuring the data use in the domain of health in city administrations. Author: Cornu T; translation and adaptation: Hegel G. - Interview scripts. Authors: Cornu T and Hegel G. - Actor mapping matrix. Authors: Hegel G & core co-creation team Lima - Ppt files developed to structure the co-creation session
11. Assessment of datasets on medicines for migrants	Study protocol approved by ethics committee [document]	2024	Available on request
Literature review on vulnerability and syndemics	Published review [document]	2024	Hernandez Barrios Y, Perez Chacon D, Molina Gomez Y, Gryseels C, Verdonck K, Peeters Grietens K, Nieto-Sanchez C. Using a syndemics perspective to (re) conceptualize vulnerability during the COVID-19 Pandemic: a scoping review. Trop Med Infect Dis 2024. Available from: https://pubmed.ncbi.nlm.nih.gov/39195627/
Literature review on the assessment of health system resilience	Published review [document]	2024	Tonga C, Verdonck K, Edzoa BE, Ateba OE, Marchal B, Michielsen J. How Is Health System Resilience Being Assessed? A Scoping Review. Int J Health Policy Manag 2024. Available from: https://pubmed.ncbi.nlm.nih.gov/39620538/
Literature review on vector control for Aedes mosquitos in Sub-Saharan Africa	Manuscript of final review submitted for publication [document]	2024	Manuscript currently under peer review – available on request
Literature review on pulmonary tuberculosis	Published review – systematic review and meta- analysis [document]	2024	Vega V, Cabrera-Sanchez J, Rodríguez S, Verdonck K, Seas C, Otero L, Van der Stuyft P. Risk factors for pulmonary tuberculosis recurrence, relapse and reinfection: a systematic review and meta-analysis. BMJ Open Respir Res 2024. Available from: https://pubmed.ncbi.nlm.nih.gov/38479821/

The data hub consists of a core team (n=4) and researchers (n=12) involved in various initiatives. The core team is shown in the table below.

Table 22. Core team members involved in data hub initiatives.

Name	Background expertise	Role in the datahub
Tine Verdonck	MD, epidemiologist, statistician (senior researcher)	Overall coordination
Claudia Nieto	Social scientist (senior researcher)	In charge of the theme "interdisciplinarity"; involved in two specific initiatives
Tom Smekens	Social science statistician (predoc)	In charge of the theme "statistics"; link with statistics (software) training for staff and students; involved in three specific initiatives
Stefanie Dens	Architect, expert in urban development (predoc)	In charge of the content of the website and visualisation of datahub activities in general; involved in two specific initiatives

Team members of the data hub are attached to regular units within the Department of Public Health.

They are also involved in central or interdepartmental committees and teams, namely the Data Access Committee, Institutional Review Board, Stats Group and Open Science Group.

(ii) Use of ad hoc 2024 EWI grant for Health Innovations for All (HI4A)

Key achievements are summarised below. Detailed quarterly reports are available upon request.

- Selection of 4 HI4 Use Cases for 'Bridge funding' (short term promising innovation projects): (1) Collect2Know (C2K): development of a macro self-sampling device of minimum 500 µL of capillary blood; (2) Local production of generic blood culture bottles, (3) Next-Generation Diagnostics for Dengue Virus, (4) UPGRADE-HAT: Upscaling Production and Generation of native Recombinant Antigens for Diagnostic Evaluation for Human African Trypanosomiasis. Detailed progress reports are available upon request.
- Installation of international Innovation Advisory Council (IAC). The installation meeting was held on 1 July 2024.
- Establishing HI4A Atelier: a "makerspace" for prototyping and innovation.
- Revision of ITM IP policy to a "Global Access Policy": assignment was given to Lodewijk Van Dycke and report was submitted for further discussion with ITM Management and IAC.
- Knowledge for Growth 16/05/2024: four HI4A abstracts were accepted for presentation.
- Strategic Plan HI4A 2025-2029 was prepared and proposed as part of the EWI review in 2024.

f. Use of investment grant insectarium

The insect-vector-pathogen-host-environment interaction is still greatly understudied. The insectarium enables pioneering interdisciplinary research to address new global health challenges caused by vector-borne diseases. The core group using the insectarium brings together expertise from basic ecology through virology and parasitology to immunology.

Phase 1 of the insectarium could be fully completed with the investment grant from EWI. This infra-structure is considered one of the hotspots for research at ITM, is an important attraction pole for researchers, and can also help increase public acceptance of science, especially at the forefront of health and biodiversity research.

More explanation at https://www.itg.be/en/research/itg-insectary where a virtual insectarium tour can also be taken.

4

Service

4. Service

a. Scientific services

1. Reference and accredited laboratories

Responsible unit = Quality

ITM houses reference laboratories on the one hand and accredited laboratories on the other. The reference laboratories are recognised both nationally (government, Sciensano, etc.) and internationally (WHO, FAO, etc.) and are directly linked to scientific research and expertise in tropical medicine. These laboratories aim to support both local and international healthcare. The analyses performed in our laboratories meet the highest quality requirements, and our organisation is appreciated both locally and internationally for scientific expertise and advice.

ITM strives to maintain these recognitions in line with our strategic objectives.

Table 23. Overview of the different ITM reference laboratories together with the coordinator and the authority recognising the laboratory as a reference centre.

Reference laboratories	Coordinator	By
BCCM/ITM-mycobacteriecollection.	Leen Rigouts	BCCM-Belspo
TB Supranational Reference Laboratory – Coordination Centre	Bouke De Jong	WHO
Reference laboratories for SURRA	Nick Van Reet en Caroline Rombouts	WOAH
Collaboration Centre for Research and Training in the Diagnostics of Human African Trypanosomiasis	Jan Van den Abbeele en Nick Van Reet	WHO
National Reference Centre for Parasites (Trichinellose, Echinococcose en Anisakiasis)	Famke Jansen	FAVV
National Reference Centre (NRC) for Arboviruses	Marjan Van Esbroeck	Sciensano
National Reference Centre (NRC) for Sexually Transmitted Infections (Treponema pallidum, Chlamydia trachomatis, Neisseria gonorrhoeae, Mycoplasma genitalium, mpox*)	Irith De Baetselier en Dorien Van den Bossche	Sciensano
National Reference Centre (NRC) for Rickettsia and Anaplasma (Consortium with Queen Astrid Military Hospital)	Marjan Van Esbroeck	Sciensano
National Reference Centre (NRC) for Coxiella burnetii and Bartonella (Consortium with ULC-Saint Luc and CODA)	Marjan Van Esbroeck	Sciensano
National AIDS Reference Laboratory	Dorien Van den Bossche	By Royal decree
WHO Collaborating Centre for HIV/AIDS Diagnostic and Laboratory Support	Kevin Ariën Dorien Van den Bossche	WHO
WHO test laboratory	Dorien Van den Bossche	WHO
National Reference Laboratory for Tropical and Infectious Diseases	Marjan Van Esbroeck	By Royal decree

* Mpox was recognised in 2024, but is ongoing with effect from 2025

Clinical laboratories perform many of the analyses under accreditation. This accreditation is granted by BELAC. In 2022, the first follow-up audit of the five-year accreditation cycle (2021 to 2026) took place. Below is an overview of the number of analyses accredited according to the various ISO standards. The accreditation certificate for ISO 15189 applies to analyses on patient samples. The certificate for ISO 17025 applies to evaluation of HIV/STD diagnostic tests, tests for mycobacteriology, and analyses on animal samples (SURRA and Trichinae). The certificate for the ISO 17043 standard applies to the organisation of ring tests for determination of Trichina on behalf of the FASFC. In 2024, the Mycobacteriology lab was awarded accreditation for ISO 17043 for the organisation of ring tests performed for the WHO.

Table 24. Summary of the number of accredited tests for the various accreditation certificates from 2018 to 2024.

Accredited tests	2019	2020	2021	2022	2023	2024	Accreditated by
ISO15189 (certificate 147-MED)	131	135	135	135	135	135	BELAC
ISO17025 (certificate 147-TEST)	7	7	7	7	7	9	BELAC
ISO17043 (certificate 147-PT)	1	1	1	1	1	2	BELAC

ITM is committed to maintaining accreditation of testing in line with its strategic goals.

2. Diagnostics

Responsible unit = Applied Technology and Production – Quality

ITM produces diagnostics for neglected diseases, more specifically for the detection of Trypanosomiasis or sleeping sickness (CATT *T.b Gambiense* and *evansi* and VSG production) and Leishmaniasis (DAT/VL production).

The causative agent of sleeping sickness is Trypanosoma b. gambiense, a parasite transmitted by the tsetse fly. The key to controlling sleeping sickness is early detection, which can be done with the CATT (Card Agglutination Test), a test developed by ITM in the late 1970s and used extensively to detect sleeping sickness in West and Central Africa. Another CATT test can detect infection in animals by *Trypanosoma evansi*, the causative agent of SURRA.

Because CATT production is labour-intensive and of little commercial interest, there is little or no global interest in developing and producing these diagnostics, and availability depends on the production of this test at ITM. A total of 1,719,010 tests for CATT *T.b. gambiense* and 107,898 tests for CATT *T. evansi* were produced in 2024.

Below is a summary of VSG and CATT production numbers over various years.

Table 25. Summary of the number of diagnostic tests produced at ITM from 2019 to 2024.

Product	2019	2020	2021	2022	2023	2024
VSG (mg): Litat 1.3 Freeze Dried	0	0	0	0	0	0
VSG (mg): Litat 1.5 Freeze Dried	0	0	0	0	0	0
VSG (mg): Litat 1.3 Not Freeze Dried	1600	939	618	959	1168	1300
VSG (mg): Litat 1.5 Not Freeze Dried	1524	986	546	1031	1486	855
CATT T.b Gambiense (number of tests)	2,837,807	2,410,168	2,436,756	1,755,597	908,955	1,719,010
CATT T. Evansi (number of tests)	107,853	100,535	95,081	123,260	39,268	107,898
DAT/VL (number of bottles)	1,938	5,035	6,177	2,835	0	181

There were 26 productions of CATT *T.b. gambiense*, of which one production was aborted due to incorrect use of buffer. Of the 1,719,010 tests produced, only 57,040 tests from one production failed quality control. This results in a very high pass rate of 97% in 2024. The pass rate varied between 53% and 91% between 2019 and 2023.

VSG (Variant Surface Glycoprotein) is used as the basis for the production of the diagnostic CATT tests. VSG is currently produced only in non-freeze-dried form. In 2024, 1,300 mg of VSG LiTat 1.3 and 855 mg of VSG LiTat 1.5 were produced. The main customers of VSG are Coris and Standard Diagnostics (SD). SD did not purchase any VSG between 2022 and 2024. The main customers of the CATT *T.b. Gambiense* are the ITM sleeping sickness programme (Department of Public Health), WHO, FIND, and DNDi.

There was still sufficient stock of DAT/VL antigen. This is because an important customer had reduced its order from 3,200 vials to 1,000 DAT/VL vials in 2022 due to the economic crisis, leaving many DAT/VL vials in stock. The shelf life of DAT/VL antigen is five years, so there is no risk of lot expiration for the time being. One production in 2024 was carried out specifically at the request of a customer who needed uncoloured antigen.

3. Biobank

Responsible unit = Applied Technology and Production – Quality

1. ITM Biobank

The ITM Biobank consists of human and animal material, as well as isolates (bacteria, viruses, etc.). Linked to this biobank is a digital Central Register (LIMS), in which all information related to the samples is recorded. The management of the ITM Biobank complies with the applicable legal provisions and has been registered with the FAGG since 2019 under the number BB190041. Another biennial report will need to be submitted to the UZA Ethics Committee in 2025.

In 2024, the policy plan, along with annexes (financial plan and exit committee), for the ITM Biobank was finalised with the departments.

In 2024, Caroline Rombouts (Unit Head of AT&P) was officially appointed biobank manager for the non-human samples. Together with Maartje van Frankenhuijsen (biobank manager for the human samples), they will ensure that the use of all samples at ITM complies with all (inter)national legislation and guidelines in force. Therefore, from 1st January 2024, it is mandatory to register non-human samples in the Central Register (LIMS) of the ITM Biobank. All new samples will be registered by all units in LIMS, and an inventory of older sample collections will be made by a few additional units. This will be further completed in 2025.

In 2024, the digitisation and inventory of the samples and data from Prof. Van Marck's collection continued and is expected to be completed by early 2025. After that, we will begin the data cleansing process and make this collection publicly available.

The collaboration with those in charge of the biobank of the Parasitology Unit of the INRB (Kinshasa, DRC) and the CRUN (Nanoro, Burkina Faso) for the implementation of a digital biobank system continues. As part of this, IT training was undertaken by an IT person from the INRB to further develop and secure the biobank database.

2. BCCM Collection

ITM is part of the Belgian Culture Collection of Microorganisms (BCCM) consortium with its collection of mycobacterial strains. The BCCM consortium was established in 1983 by the federal government to coordinate collections of microorganisms in Belgian institutions.

The BCCM/ITM public collection in the secure ITM laboratories contains 508 strains of non-tuberculosis mycobacteria, but its strength lies primarily in the diversity of 738 tuberculosis (TB) strains, representative of a worldwide diversity of TB variants and TB strains with (a combination of) resistance to common and new antibiotics. Resistance of TB to antibiotics is a major problem worldwide, helping to ensure that TB remains the number one deadly infectious disease. This collection allows scientists around the world to better understand the disease, help discover new drugs and develop diagnostic tests.

BCCM's operations are ISO 9001 certified.

During 2022-2024, the collection was expanded to include 181 new strains, TB strains showing resistance to the new antibiotics such as bedaquiline, linezolid, delamanid and pretomanid. These include clinical isolates as well as in vitro selected or experimentally mutated strains from different continents. To further improve the management of the BCCM collections, a new laboratory information management system (LIMS) was commissioned in 2023-24 and the website revamped. Combined with the further completion of crucial data such as type of mutations, phenotypic resistance, history of the BCCM/ITM strains, the data quality of the collections and storage of biological material was raised to a higher level. Scientists could thus more easily access the variety of strains the collection has to offer through the online BCCM catalogue, and refine their search for the necessary biological material. During 2022-2024, we distributed 724 cultures or derivatives to more than 62 external customers from America, Africa, Asia, Europe, and Oceania.

4. Institutional Review Board (IRB)

Responsible unit = Quality

Medical and non-medical research conducted with human participants, data or samples, should have both scientific and social value, and be framed in an institutional and personal culture of ethics, integrity, and equity. The ITM community is committed to the highest ethical standards, and it subscribes to the Helsinki Declaration, the CIOMS Ethical Guidelines for Health-related Research Involving Humans, the TRUST Global Code of Conduct for Research in Resource-Poor Setting, and other relevant codes, as well as to applicable research regulations such as the European General Data Protection Regulation (GDPR) and the Belgian Human Body Materials (Biobank) Act.

The ITM Institutional Review Board (IRB) reviews all non-commercial research protocols involving the participation of ITM researchers and students, to ensure compliance with appropriate ethical principles and requirements, including a check that researchers seek the needed local regulatory and ethics approvals for collaborative research conducted overseas. In 2024, we received and reviewed 137 submissions, including 95 new protocols and 42 amendments. Most reviews were conducted at the scheduled monthly meetings, but about 11% were accepted for accelerated reviews in-between meetings – this applies to projects related to outbreaks and other public health emergencies and, when requested, to master thesis. In 2024, in an effort to allow a rapid review turnaround for low-risk research, and in concertation with the Data Protection Officer (DPO), we also implemented a new expedited review procedure for secondary analyses of retrospective personal and medical data: proposals are submitted online and processed within 2-4 days. About 19% of all protocols were processed this way, thanks to the excellent collaboration with the DPO.

But beyond (or besides) reviews, our overarching aim is to foster ethics-informed research behaviours among staff and students, with particular attention for fairness and equity (e.g. data and sample governance, fair research partnerships, and engagement with the research communities). We strive to avoid unnecessary formalism, and to engage in a constructive critical appraisal of research objectives, context and implications, through an open dialogue with researchers at ITM and at partner institutions – that includes teaching on research ethics at masters and at some short courses.

Although the IRB works according to a solid quality system, it is not yet a legally accredited ethics committee as stipulated by Belgian law (RD 4 April 2014). If approval by a Belgian accredited ethics committee is legally required, the IRB carries out its review before the accredited ethics committee.

The IRB is chaired by professor Raffaella Ravinetto. It is co-chaired by professor Jan Van den Abbeele, and Professor Wim Pinxten, a bioethicist at University of Hasselt. At the end of 2024, the IRB has 12 members, with an experienced qualitative researcher, dr. Arsenii Alenichev, welcomed as new member during the year. There is a good balance of representation from the ITM's three scientific departments, and good gender balance. A short description of the IRB's operation and contact details is publicly available in the ITM website (https://www.itg.be/E/institutional-review-board).

b. Medical reference care for, as well as prevention of tropical infectious diseases and import pathology (national and/or international)

1. Reporting policy priorities Medical Services 2020-2024

Responsible department = Department Clinical Sciences

SO1 – Providing excellent care and services to patients in Belgium

SO2 – Academic valorisation of medical services

SO3 – The specific situation/needs of medical services in ITM is recognised

After the reorganisation of the clinic in 2023, 2024 was mainly a year where this new unified clinic structure took shape. Several steps were taken to better align activities. A process was also launched to give the new clinic leadership more autonomy within the Department of Clinical Sciences (DCS). Financial pressure on medical services was a major concern. To cope with rising staff and operating costs, efforts were made to further increase the number of consultations in order to increase the corresponding nomenclature revenues.

Outpatient realisations

- The number of consultations continued to increase. By providing additional vaccinators and further expanding nurse-based vaccination, we were able to meet the high demand from travellers.
- Successful renewal of the NIHDI covenant as an HIV reference centre. Through this covenant, we provide multidisciplinary care to our cohort of more than 3,000 HIV patients.
- Through evening seminars, healthcare providers were taught topics on travel medicine. Preparations were also made to relaunch the evening seminars on HIV and STI.
- Several clinical studies were ongoing including on mpox and surveillance of tropical pathologies. The HIV clinic participates in a European project on the implementation of injectable medication in the treatment of HIV infection.
- A new successful campaign to fight the stigma surrounding HIV was launched (https://www.itg.be/en/research/projects/uu-campaign-for-world-aids-day).

Realisations clinical reference lab

- In terms of analysis, the many travel-related consultations also meant another good year of activity for the KRL.
- The renewal audit for accreditation of clinical trials by BELAC was successfully completed. The number of tests under accreditation was maintained.
- Successful continuation of NIHDI covenants as tropical reference lab and HIV reference lab. All ongoing NRC reference agreements with Sciensano were reallocated for the next five years.
- Diagnostic support or (co-)lead in numerous scientific research projects on HIV/STI, COVID-19 or tropical diseases. The laboratory is also involved in several capacity-building programmes in the tropics.

Realisations E-platforms for medical services

- The current Electronic Patient Record (EPD) will no longer be supported within a few years. We therefore launched the tender for a new EPD in 2024 and launched the specifications, with the aim of being able to launch a new EPD by mid-2026.
- The current Laboratory Information System (LIMS) has received a major upgrade, allowing us to connect to the new protocol around laboratory data exchange (FHIR).
- We have re-launched the patient satisfaction survey. Based on the results, it is clear that patients continue to highly value the services at the outpatient clinic.

Realisations regarding the specific status of our polyclinic

- Through affiliation to Zorgnet-Icuro, the Flemish network of healthcare organisations, we have access to information on legal obligations and developments in the sector and can call on specific advice. Zorgnet-Icuro remains an important point of reference for clinic management.
- Discussions with the Public Health Cabinet, Care Department and the NIHDI directorate are ongoing around the specific status of our clinic. With the current statute, we often fall outside the applicable guidelines that are aimed either at GPs or hospitals. Our question is whether a specific status exists or can be created for ITM that meets our needs and allows us to access basic funding for our medical services.

2. Indicators medical services

Responsible department = Department Clinical Sciences

Input indicators

Table 26. Summary of budgets for medical activities in 2019-2024 along with target for 2025.

Budgets for medical activities	2019	2020	2021	2022	2023	2024	2025 *(target)*
Section F (euro)							
RIZIV	4,838,362	4,714,579	4,748,815	5,587,174	5,879,851	5,696,476	5,600,000
Flemish Care & Health Agency	98,037	82,309	90,324	131,777	101,433	109,798	150,000
UZA	119,883	134,778	432,000	184,000	184,000	215,590	250,000
Sciensano	274,975	172,305	110,000	155,050	278,284	479,057	200,000
Nomenclature and other	4,448,235	3,030,922	3,147,150	3,807,679	4,765,397	4,957,542	4,800,000

Output indicators

Table 27. Summary of output indicators for medical services in 2019-2024 along with 2024 target.

	2019	2020	2021	2022	2023	2024	2024 *(target)*
Number of consultations	42,398	28,864	33,029	40,252	46,107	52,824**	40,000
Number of vaccines administered	48,751	15,031	17,098	33,106	45,273	48,617	50,000
Number of lab requests	43,518	41,093	38,211	37,865	41,587	44,547	45,000
Number of lab analyses	594,801	449,244	480,439	507,644	530,995	544,166	600,000
Number of incoming phones	44,599	53,760	28,627	48,577	53,446	54,719	/
Number of page views website	421,434	487,136	263,514	743,334	1,156,349	1,274,970	500,000
Number of user interactions Wanda app	16,271	120,606	92,981	130,326	62,422*	201,211	150,000
Number of new users Wanda app	11,183	19,856	9,436	15,576	9,154	25,109	25,000

* Because of an issue with an app update, there was a problem with tracking for a long time. This problem persisted from mid-April to the end of November 2023.

** This number takes into account the organisational structure and paramedical consultations from 2024.

Impact indicators / quality indicators

Table 28. Summary of quality indicators for medical services in 2019-2024 along with 2024 target.

	2019	2020	2021	2022	2023	2024	2024 *(target)*
Satisfaction surveys	2	0	0	0	0	1	2
Number of complaints	9	8	11	9	11	16	Monitoring KPI
% accredited specialists	73%	85%	81%	83%	86%	94%	90%

We launched another satisfaction survey in 2024, with the intention of repeating it annually. The number of complaints formulated by outpatients was slightly higher than other years. This will be monitored in detail in 2025. Complaints are handled independently by ITM ombudsperson. Where necessary, appropriate actions are taken to prevent the complaints. The percentage of accredited specialists continued to increase, only one specialist who does sporadic consultations is not accredited.

Specific KPIs from the Strategic Policy Plan

Table 29. Summary of KPI results in 2019-2024 for medical services from the Strategic Policy Plan 2020-2024.

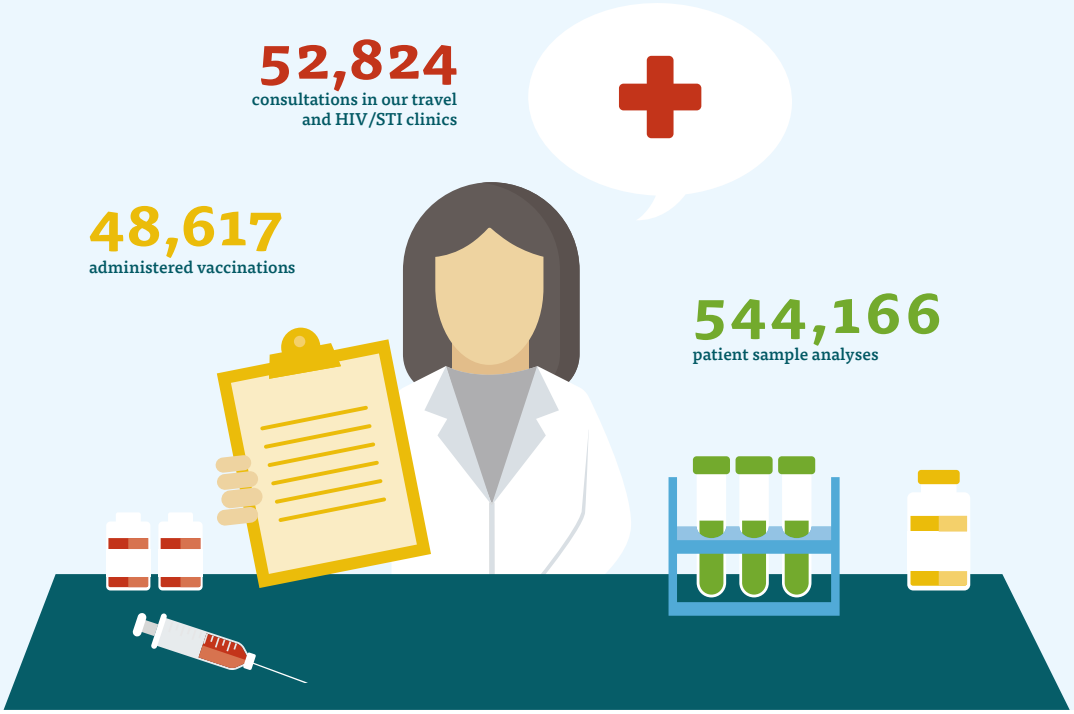
	2019	2020
MS-KPI-1: Number of consultations	42,398	28,864
MS-KPI-2: Number of nurse-based vaccinations	No data-mode of operation was not yet active	Did not go ahead because of covid impact on clinic (very little travel vaccinations)
MS-KPI-3:% of consultations done/supervised by specialists	KPI was not measured	> 50%
MS-KPI-4: Number of visits to the website	421,434	487,136
MS-KPI-5: Number of accredited specialists	73%	85%
MS-KPI-6: A fair remuneration system for clinical specialists is in place	Not yet active	Under development - no data yet
MS-KPI-7: Electronic Medical File is used by 100% of medical providers	New system	100%
MS-KPI-8: All medical staff attend at least 25 continuous professional education sessions	KPI was not measured	> 25
MS-KPI-9: Patient satisfaction survey is conducted twice a year	2	0 because of COVID-pandemic
MS-KPI-10: At least 2 national or international guidelines per year are updated under our leadership	KPI was not measured	> 2 / year
MS-KPI-11: BELAC audit (Belgian accreditation organisation) successfully completed for the Clinical Reference Laboratory	OK	OK
MS-KPI-12: Successful renewal of the main Federal and Flemish health subsidies	-	OK
MS-KPI-13: ZAP succession plan is implemented: (+2 in 2020, +1 in 2021)	2	0 well launched, effective start in 2021
MS-KPI-14: At least 2 ongoing clinical studies in patients attending the outpatient clinic	KPI was not measured	> 2 / year
MS-KPI-15: At least 2 diagnostic test evaluations (WHO, Industry, ...) conducted per year	KPI was not measured	> 2 / year
MS-KPI-16: At least 2 ongoing PhD projects and 2 master student projects embedded in the medical services per year	KPI was not measured	> 2 / year
MS-KPI-17: Case discussions and CME are recycled in educational tools and archived in an accessible way	KPI was not measured	OK
MS-KPI-18: The% of unpaid invoices is reduced to less than 3% of total patients' payments	KPI was not measured	1.90%
MS-KPI-19: Compliance with e-health requirements is 100%	KPI was not measured	100%
MS-KPI-20: At least 3 new IT projects are fully implemented over the next 5 years (registration kiosk, OrderIT, ...)	KPI was not measured	On schedule 1 system implemented, 2 implementations are ongoing

* This figure takes into account the organisational structure and paramedical consultations from 2024.

** Decrease due to many nurses being absent; source: Introlution

Where possible, available results of the 2019 KPIs were shown. Operational KPIs were actively measured from 2020. For most KPIs, the results are in line with the targets set for the policy period 2020 – 2024.

2021	2022	2023	2024	2024 *(target)*
33,029	40,252	46,107	52,824*	> 40,000/year
Did not go ahead because of covid impact on clinic (very little travel vaccinations)	1,022	1,442	985**	Increase of 20% per year
> 50%	> 50%	> 50%	> 50%	> 50%
263,514	743,334	1,156,349	1,274,970	> 500,000 per annum
81%	83%	86%	94%	> 90%
New pay policy envisaged from 2023	New wage policy in force	New wage policy in force	New wage policy in force	Present
100%	100%	100%	100%	100%
> 25	>25	> 25	> 25	25
0 because of COVID-pandemic	0	0	1 / year	2 / year
> 2 / year	> 2 / year	> 2 / year	> 2 / year	> 2 / year
OK	OK	OK	OK	Accredition status has been maintained
Renewal and enhancement	OK	OK	OK	Successful renewal
2	0 (+1 en -1)	-1 (this ZAP is now ITM director, replacement in 2024)	stable (1 ZAP retired and replaced)	Successful implementation
> 2 / year	> 2 / year	> 2 / year	> 2 / year	> 2 / year
> 2 / year	> 2 / year	> 2 / year	> 2 / year	> 2 / year
> 2 / year	> 2 / year	> 2 / year	> 2 / year	> 2 / year
OK	OK	OK	OK	OK
1.20%	0.50%	0.40%	0.40%	< 3%
100%	100%	100%	100%	100% compliance
On schedule 2 systems implemented, 1 implementation is ongoing	3	On schedule	On schedule	> 3 / 5 years



c. International focus: fighting disease and strengthening health care in low- and middle-income countries

1. Reporting policy priorities capacity building 2020-2024

Responsible unit = International Cooperation and Development

SO1 – Pursuing excellence and relevance of ITM's international cooperation and development programme

SO2 – Stimulate international networking and exploit opportunities for cooperation in education and research

SO3 – Promote outstanding long-term institutional partnerships with a perspective of international cooperation and development "beyond aid" and towards "growing together by doing"

Indicators ITM capacity-building activities

International cooperation and development activities within ITM are mainly covered by two programmes: a five-year programme concluded with DGD (2022-2026), and a five-year intervention in 12 countries and an agreement with the Department of Foreign Affairs and Chancellery of the Flemish Government to support the National Institute of Public Health in Mozambique. Reporting on the specific programmes is done according to the guidelines of the relevant agreements.

Annual DGD reporting

We report annually to DGD (Directorate General for Development Cooperation and Humanitarian Aid). The report consists of a narrative and a financial section.

The narrative component consists of annual reporting using performance scores and lessons learned. The performance scores were elaborated with a tool by DGD, offering five OECD-DAC criteria (efficiency, effectiveness, relevance, sustainability and coherence) for evaluation, complemented by the cross-cutting themes of gender and environment.

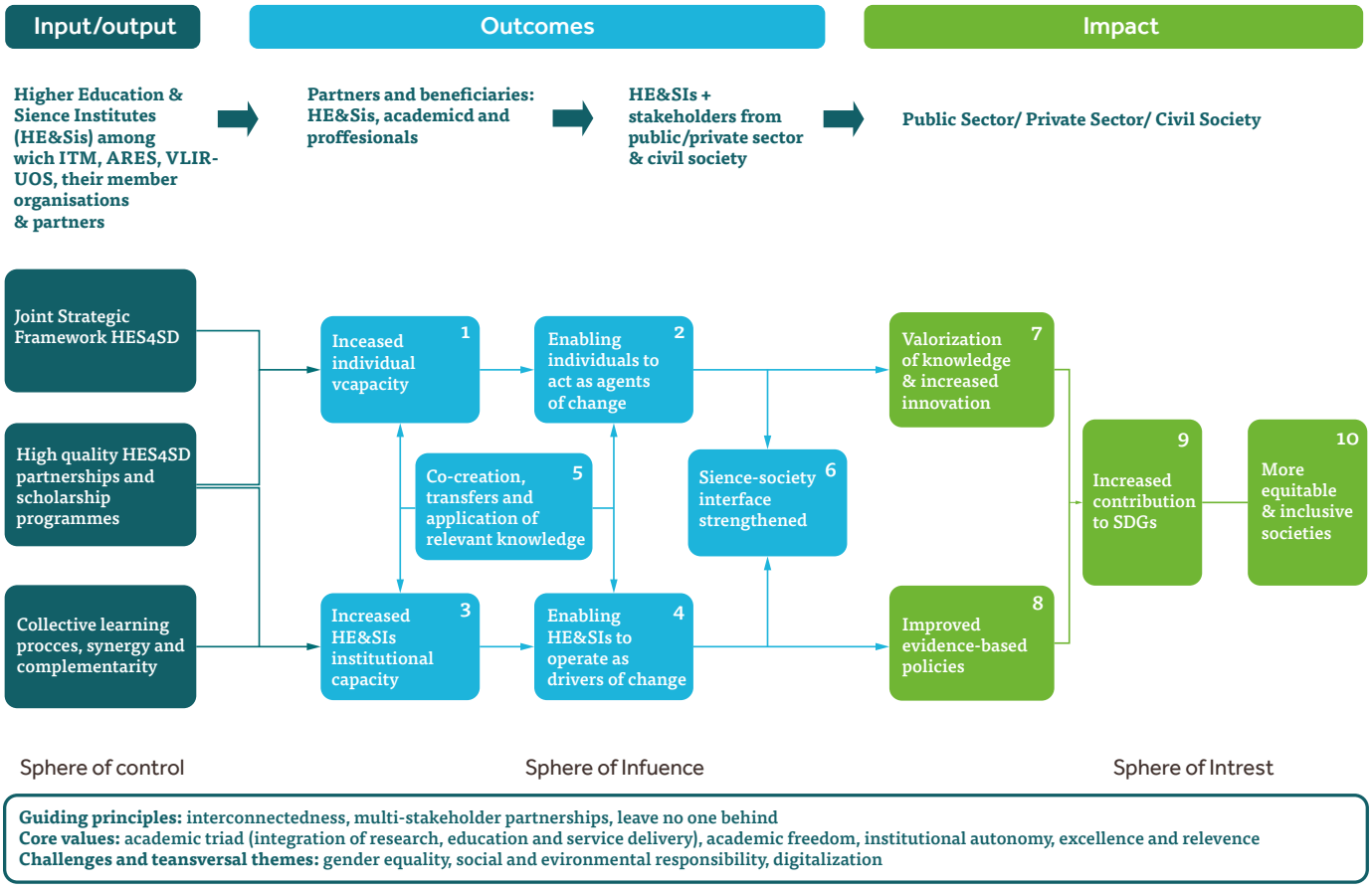
On all dimensions mentioned above, ITM should provide a score from A to D for each outcome (= *the specific objective we wish to achieve in a particular country or within a thematic approach)*, with A being the best, and D being the least score. We provide these scores exclusively to DGD. In 2024, we reported mainly A and B scores (on activities in year 2023 given the deadline is 30 June of year x+1).

Lessons learned is a document of up to two pages noting, for each outcome, the most pertinent lessons learned in the past year. These lessons may be both operational and strategic. They have the finality of promoting learning within the Belgian Development Cooperation sector. We share them on DGD's extranet with VLIR-UOS and Ares, the actors with whom we launched the Common Strategic Framework (CSF) *Higher Education and Science for Sustainable Development (JSF HES4SD)*. This JSF sets overarching objectives that we wish to achieve as academic actors within Belgian development cooperation.

This collaboration with the other academic institutions is increasingly taking shape and culminated in a 'science for impact' event co-organised by ITM with partner Universidad Caeytano Herredia in Lima in May 2024. By setting up common objective with VLIR-UOS and Ares, we make GSK relevant to the academics involved. Since 2023, concrete exchanges in terms of scholarships have taken place. 2024 also saw a start to exchange on gender policy, decolonising higher education and research and "getting research into policy and practice".

In this thematic GSK, we aim to achieve 6 strategic goals – shown in yellow in the figure at the bottom. All outcomes within the new five-year programme contribute to these goals.

Figure 6. Common Strategic Framework (CSF) with objectives for academic actors within Belgian development cooperation.



Half-time reporting indicators and mandatory evaluation

In terms of monitoring and evaluation, DGD imposes additional obligations in year three (2024) and five (2026). In these years, ITM is required to reflect progress in IATI (International Aid Transparency Index) on a number of predefined indicators. These data are publicly accessible via d-portal.org and serve to create greater transparency internationally on funding for international cooperation and aid effectiveness. In addition, ITM is legally obliged to conduct a mid-term review, and develop an evaluation plan within the current five-year programme. These scores will be entered in June 2025 (for the period 2022-2024) and are therefore not yet available for the 2024 annual report.

For the mid-term evaluation, ITM chose to focus on the theme 'Getting Research Into Policy and Practice'. We use a peer-to-peer methodology for this evaluation, in which partners engage in dialogue with each other on their approach to the theme, 'evaluate' each other's approach and learn from each other. In addition, we evaluate the personal competences of the participants in the trajectory through interim questionnaires on the increase of their knowledge about 'GRIPP'. This participatory, learning approach is in line with ITM's vision on monitoring and evaluation in which the learning aspect is at the forefront. The evaluation process runs over 2.5 years. We started in Q4 2022 and completed this evaluation in October 2024. Capacity Development International guided this trajectory as an external expert.

As part of the pilot project around evaluations, ITM implemented a new approach this year. This means that it is no longer mandatory to conduct a final OECD/DAC evaluation for all outcomes within FA5. Instead, the focus is on learning and accountability, with an evaluation plan that allows targeted evaluations to be selected based on informed argumentation. This will make evaluations more relevant and contribute to both current and future programmes. Evaluations will take place between early 2025 and late 2026.

Cooperation with Instituto Nacional de Saude (INS) Mozambique, funded by FDFA

The Instituto Nacional de Saúde (INS) and the Institute of Tropical Medicine (ITM) have a long-term collaboration. The Building Institutional Capacity at INS (BICMINS) project began in 2012 with the aim of strengthening INS' capacity to generate evidence to improve health policy and the health of the Mozambican population. The project, supported by the Flemish Ministry of Foreign Affairs, has guided INS's institutional growth and plays an important role in strengthening INS's capacity, with particular emphasis on human capital development and achieving its institutional mission.

The third phase of the project (December 2017 – December 2023), with a spending rate of 98.3% on the ITM budget, included a highly successful SORT-IT course, with two promising predoctoral students completing a pathway at ITM and two INS staff graduating as Masters in Public Health. In addition, this phase laid the foundation for solid AMR surveillance in Mozambique.

In January 2024 the fourth phase of the project started. The budget of 2 million made available by the Flemish government was divided between the two parties. ITM manages 697,400 euros of the envelope. Priorities under the new programme include reinforcement of INS staff through sandwich-PhD, but also through targeted training for IRB and data specialists. In addition, INS calls for institutional strengthening and support around 'Getting Research Into Policy and Practice'. An assessment and training around research management and ethics and a series of exchanges on project management were part of the 2024 work programme. We also make the link with the Flanders-funded Health System Strengthening programme in Tete province under this new programme.

Specific KPIs from the Strategic Policy Plan

Table 30. Summary of KPI results in 2020 to 2024 for Capacity Building from the Strategic Policy Plan 2020-2024.

	2020	2021	2022	2023	2024
D-KPI-1: Number of international cooperation and development programmes implemented on schedule	69% (11/16)	94% (15/16)	67% (12/18)	72% (13/18)	82% 14/17
D-KPI-2: Number of international cooperation and development partners with special focus on fragile and conflict-affected countries with weak public health systems	82% (9/11)	82% (9/11)	79% (11/14)	85% (11/13)	85% (10/12)
D-KPI-3: Availability of a regular quality assurance mechanism to ensure learning/evaluation	Present: DGD-certificate evaluation system	Present	Present	Present	Present
D-KPI-4: Number of experts participating in development-relevant international fora and conference	No information	No information	No information	No information	No information
D-KPI-5: Number of contributions to policy-related issues	54				
D-KPI-6: Number of awareness and information activities (debates, documentary, newsletter...)	130	96	86	132	108
D-KPI-7: Number of long-term exchanges (>21 days) for PhD students between ITM & partners	8	9	N/A - no separate information available since 2022	N/A - no separate information available since 2022	N/A - no separate information available since 2022
D-KPI-8: Number of long-term (>21 days) academic exchanges between ITM and partners (excluding courses)	10	8	39	13	18
D-KPI-9: Number of relevant networks with active ITM participation or coordination	4	4	6	9	8
D-KPI-10: Number of relevant partnerships with development actors (academic, industry, NGO, non-academic institutions)	22	22	30	30	34
D-KPI-11: Number of inventoried synergy inventoried synergy initiative in development programmes	18	18	31	*	*
D-KPI-12: Number of countries involved in by ITM supported networking intiatives	18	18	19	19	19
D-KPI-13: Number of capcity-building partner institutes recognised at national, regional and/or international level for their scientific or academic excellence	1	1	1	1	1
D-KPI-14: Realised technology transfers (e.g. PCR platform installed and used, ...)	N/A	N/A	N/A	N/A	N/A

	2020	2021	2022	2023	2024
D-KPI-15: Percentage of ITM publications with first/last author from LMIC	27.80%	37%	39.70%	45%	60.4%
D-KPI-16: Number of doctorates realised (from LMIC)	8	4	8	10	14
D-KPI-17: Number of participants from LMIC to masters/short courses at ITM	68	Masters: 53 KC: 127	206	209	185
D-KPI-18: Level of funding from various sources for ITM's international cooperation and development programmes.	3	3	3	3	4

Reporting around the above indicators links ITM to reporting to our donors where possible. For a number of indicators, this is not possible or relevant. Therefore, for a number of indicators we do not have sufficient information to report correctly. As the KPIs are included in this report, we will continue to report on them, but lack of information may result in certain indicators being permanently at N/A.

Because DGD moved the deadline for reporting to 30 June in the current multi-year programme, we do not currently have information available for the indicators where we noted '*'.

2. ITM policy capacity strengthening

In its institutional policy plan 'Global Science for a Healthier World', ITM reflects its vision and ambitions in terms of international cooperation:

ITM's raison d'être is based on scientific excellence, societal relevance and embeddedness in and commitment to LMICs through long-standing collaborations. International Cooperation and Development within ITM is an important part of the academic triad of research, training and service delivery. ITM's overall aim in International Cooperation and Development is to strengthen the rational basis and the country ownership of health care systems, programs and policies in LMICs and to improve the health status of the populations, thereby contributing to the reduction of poverty and inequity. ITM's development actions contribute to the improvement of health for all, based on the provision of evidence and translating evidence into policy.

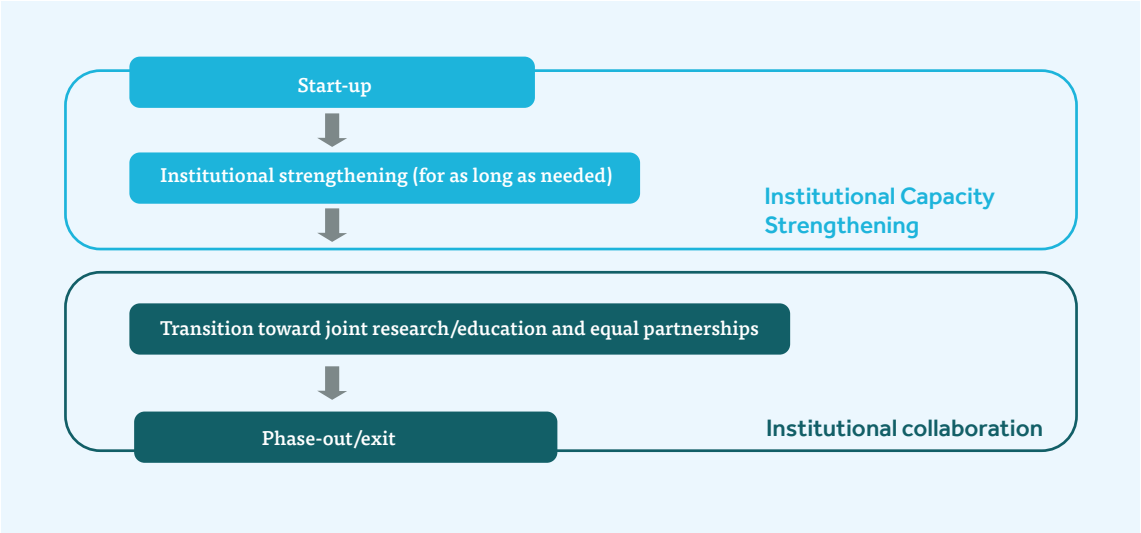
On partnerships, the policy plan states the following:

ITM is gradually reorienting long-standing partnerships in LMIC from "North-South" capacity building to equal partnerships aiming for a shared scientific progress and conducting collaborative excellent science on priority health issues. During a transition period, ITM will diversify its development actions to respond to existing needs for capacity building of partners as well as develop new approaches of equal scientific partnerships.

In order to gradually transform long-term partnerships from capacity support to equivalent scientific cooperation, as indicated in the policy plan (1.3.1), the Development Cooperation Committee (COS) in 2021, following a recommendation from an external evaluation (FA3 – 2020), elaborated a pathway for partnerships that we are still using. The COS made an analysis of the existing partnerships and placed them on a curve from need for capacity-building support to full-fledged scientific cooperation. For this, the COS members used criteria such as the duration of the cooperation, whether or not the country had a DGD priority, where the country stands on the fragile state index, etc. These criteria are in line with the objective in the policy plan.

We incorporated this approach to partnerships as a 'trajectory' in the development of the ongoing framework agreement (FA5 2022-2026) with DGD.

Figure 7. Partner trajectory (Source: Development Committee proposal for FA5).



In the figure above, we illustrate the partnership pathway. Within this trajectory, partnerships gradually evolve from an initial phase focusing on institutional capacity building to a second phase focusing on institutional, academic (research and teaching) collaboration. As indicated in the figure at the bottom of the page, this trajectory should not be seen as a linear model with clearly delineated phases, but rather as a sliding scale in which we incorporate both elements of institutional capacity building and cooperation with certain partners.

The trajectory also implies that cooperation funding should gradually evolve from funds with a development cooperation finality, to more research-oriented funding. In this way, we free up funds for international cooperation that we invest in new partners or partner countries where the demand for capacity strengthening is higher. In the new five-year programme, for example, we added new partners in Rwanda and Nepal.

Through our institutional capacity building, we support our partners to become active *drivers of change* and have a real impact on society. Under institutional cooperation, this role anchors itself even more strongly, through co-creation, transfer and application of relevant knowledge and/or through science-society exchange. In 2024, we will take the very first steps to further sharpen the partnership policy towards a next multi-year DGD plan. In dialogue with partners and ITM promoters, the choice was made to incorporate a more complete and complex model of institutional capacities. This was included in the 2025-2029 institutional policy plan developed during 2024.

Figure 8. Partner trajectory – gradual scale (Source: Development Committee proposal for FA5).

5

ITM Partnerships

5. ITM Partnerships

The overview below is limited to formal collaborations at ITM level. In addition, ITM researchers and professors have established national and international collaborations as part of their expertise. For instance, ITM provides expert advice to national and international organisations, such as the World Health Organisation (WHO), the 'World Organisation for Animal Health (OIE), Sciensano, Risk Assessment Group (RAG), and the Federal Agency for Medicines and Health Products (FAGG). There are also intense teaching and research collaborations between ITM researchers and their (inter)national peers.

a. With partners in Flanders / Belgium

Responsible unit = General Management

- Associate member Flemish Interuniversity Council (VLIR): as an associate member of the VLIR, ITM can join various consultation forums with representatives of the Flemish universities with expertise within (the part of) the policy domain in which the respective consultation forums are established. A VLIR consultation forum formulates opinions and proposals. The exchange with colleagues in various domains, contributes to a stronger connection to the Flemish academic landscape.
- ITM has an institutional framework agreement with universities in Flanders:
  - University of Antwerp (renewed in 2023)
  - KU Leuven (renewed in 2024)
  - Free University of Brussels (renewal scheduled in 2025)
  - Ghent University (renewal scheduled in 2025)
  - Hasselt University (in preparation).
- Cooperation with research institutes in Flanders/Belgium:
  - Flemish Institute of Biotechnology (started)
  - Imec: talks launched as part of the Flemish AI programme
- Collaboration with partners in medical sector:
  - Member of Zorgnet Icuro: Through membership of Zorgnet-Icuro, the Flemish network of health-care organisation, ITM has access to information on legal obligations and evolutions in the sector and can call on specific advice. Especially with regard to the rapidly and frequently changing COVID guidelines, they were an important guide for clinic management in 2020 and 2021.
  - Cooperation agreement with Antwerp University Hospital (UZA) renewed in 2023: The medical services and laboratories fall under the Department of Clinical Sciences. The hospitalisation department has been scientifically and administratively under the management of the UZA since 2018.
  - In 2022, ITM also entered a partnership with ZNA Stuivenberg in which HIV patients are further monitored and treated.
- Cooperation with partners in development cooperation sector:
  - Memisa
  - ENABEL

b. International partners

Responsible unit = General Management and International Cooperation and Development

Figure 9. Map of development cooperation partner institutions (FA5/DGD and Flanders).

International partners under the DGD programme (implementing partners and 'Alliance for Education on Tropical Medicine) and the programme supported by the Flemish Government in Mozambique:

Latin America

- Post-Graduate Medical School, Universidad Mayor de San Simon (UMSS), Cochabamba, Bolivia
- Instituto Nacional de Higiene, Epidemiologia y Microbiologia (INHEM), Havana, Cuba
- Instituto Pedro Kourí (IPK), Havana, Cuba
- Institute of Public Health, Pontificia Universidad Católica del Ecuador (PUCE), Quito, Ecuador
- Instituto de Medicina Tropical "Alexander von Humboldt" (IMTAvH), Universidad Cayetano Herredia, Lima, Peru

Africa

- Laboratoire de Référence des Mycobactéries (LRM), Cotonou, Benin
- Centre de Recherche en Reproduction Humaine et en Démographie's (CERRHUD), Cotonou, Benin
- Clinical Research Unit of Nanoro (CRUN), including Centre Muraz, Burkina Faso
- Institut National de Recherche Biomédicale (INRB), Ministère de la Santé Publique, Kinshasa, DRC
- Program National de Lutte contre la Trypanosomiase Humaine (PNLTHA), Kinshasa, DRC
- École de Santé Publique (ESP), Université de Lubumbashi, Lubumbashi, DRC
- Centre de Recherche Sanitaire de Kimpese (CRSK), Kimpese, DRC
- College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia
- Jimma University, Jimma, Ethiopia
- Armauer Hansen Research Institute (AHRI), Addis Ababa, Ethiopia
- Ethiopian Institute for Public Health (EPHI), Addis Ababa, Ethiopia
- Centre National de Formation et Recherche de Maferinyah, Guinea
- Centre d'excellence africain pour la prévention et le contrôle des maladies transmissibles (CEA-PCMT), Conakry, Guinea
- École Nationale de Santé Publique (ENSP) Rabat, Morocco
- Instituto Nacional de Saúde (INS), Maputo, Mozambique
- Serviço Provincial de Saúde de Tete (SPS), Tete, Mozambique
- Rwanda Biomedical Centre (RBC), Kigali, Rwanda
- Centre Hospitalier Universitaire de Kigali, University of Rwanda (UR/CHUK), Kigali, Rwanda
- School of Public Health, University of Western Cape (UWC), Cape Town, South Africa
- Department of Veterinary Tropical Diseases (DVRD), University of Pretoria (DVTD), Pretoria, South Africa
- School of Public Health (SPH – MUCHS), Makerere University College of Health Sciences, Kampala, Uganda

Asia

- National Institute of Public Health (NIPH), Phnom Penh, Cambodia
- Institute of Public Health (IPH), Bangalore, India
- Center for Tropical Medicine, Faculty of Medicine, Gadjah Mada University, Yogyakarta, Indonesia
- National Health Research Council (NHRC), Kathmandu, Nepal
- B.P. Koirala Institute of Health Sciences (BPKIHS), Dharan, Nepal
- National Institute of Malariology, Parasitology and Entomology (NIMPE), Hanoi, Vietnam

26

institutional partners

19

partner countries

6

Scientific departments

6. Scientific departments

a. Department of Public Health

Responsible department = Department Public Health

SO1 – Improve understanding of biological, environmental, sociocultural and system determinants of the health of the population.

SO2 – Develop, test and implement interventions that support and strengthen the health of the population.

SO3 – Create knowledge and capacity to prevent, detect and address local and global health threats.

SO1

In the Socio-Ecological Health Research Unit Dr. Arsenii Alenichev (SEHR), in collaboration with Prof. Koen Peeters, won ITM's first Marie Skłodowska-Curie Actions-funded Postdoctoral Fellowship with a score of 98% among a record of 9,303 MSCA PF applications. Arsenii Alenichev and Koen Peeters were among the first scholars to empirically examine the use of AI-generated images in Global Health communication and to develop a methodology to systematically analyse biases in AI-generated visuals. Their findings revealed how AI often perpetuates harmful stereotypes, such as exoticizing Africa and associating specific diseases with racial identities.

The Sexual and Reproductive Health Group adapted its educational offerings to remain relevant to key target groups and expanded the number of staff/PhD students in the unit, as well as the breadth of expertise. They also started a population-based study into the prevalence of STIs (chlamydia, gonorrhoea, syphilis, and trichomoniasis) among adolescents and young people with partners in Zambia in the course of 2023/24.

In 2024, the Emerging Infectious Disease (EID) Unit expanded its expertise in antimicrobial resistance (AMR), water, sanitation, and hygiene (WaSH), and epidemiology. The unit runs multiple projects in Belgium and partner countries focusing on emerging diseases such as mpox, scabies, and Dengue. A key research theme was identifying and understanding transmission risks, also in collaboration with the Biomedical Sciences Department on the spread of Aedes mosquitoes in Belgium and rodent-borne diseases in DRC.

In September 2024, the Ecohealth group became a formal research group within DPH, consisting of three units: the Complexity & Health Unit, the Socio-Ecological Health Research Unit, and the Eco-epidemiology Unit. Within this group, one aims to understand and improve health by applying ecosystem approaches to complex health challenges. Thematic areas include Climate change, Urbanisation and Health, Sustainable disease control and elimination, Health system resilience, and Innovations in research methodology. Researchers for the group carried out studies on the use of data in urban health decision-making in Antwerp and Lima (Peru) with a focus on climate change.

The Mycobacterial Diseases and Neglected Tropical Diseases Unit initiated new research collaborations on leprosy in Suriname and Pakistan. Both countries are low endemic for leprosy and want to move towards elimination of transmission of M.leprae. Aim of the collaborations is to identify clusters of ongoing transmission, making use of novel approaches based on geospatial and phylogenetic analyses.
The projects are implemented in close collaboration with the Mycobacteriology unit of the Department of Biomedical Sciences.

The Maternal and Reproductive Health Unit launched the 4-year FWO project Discontinu_Cities" in Conakry Guinea with partner institute CEA-PCMT at the Gamal Abdel Nasser University of Conakry. The unit also consolidated the work on urban maternal health with 3 partner institutes into the UrbanBirth Collective. Peter Macharia started as FWO postdoc in 2024, and numerous PhDs.

SO2

In the Socio-Ecological Health Research Unit, Fatou Jaiteh (SEHR) and her team researched the acceptability and social dynamics of the first R21 mass vaccination trial in rural communities in the Gambia and Burkina Faso (SERVAL). According to preliminary results, presented in a symposium at the ASTMH 2024 in New Orleans, mass malaria vaccination is having a significant impact on malaria cases.

The Sexual Health Unit launched research to optimise the delivery and implementation of injectable and oral PrEP in Belgium and Burkina Faso, respectively; evaluations of community-led HIV responses in Europe and of integrated HIV/NCD services for men in Zambia are also underway in the Sexual Health unit.

The Emerging Infectious Diseases Unit contributed to strengthening population health by participating in collaborative projects on scabies and dengue prevention and control. These efforts included cross-unit collaborations within the Department of Public Health to enhance teaching modules, supervise students, and secure funding for innovative health initiatives.

In 2024, the Kis-Antwerp project came to an end. This project aimed to develop and evaluate the impact of a multi-component health promotion programme to encourage healthy lifestyles among women in Kisantu (DRC) to ultimately prevent the onset of type 2 diabetes and gestational diabetes. A follow-up project [KISAN-2] was launched in mid-2024. This new phase aims to raise awareness and prevent lifestyle-related diseases by focusing on cardiometabolic health among households in Kisantu. Sponsored by the City of Antwerp, this project is a collaboration between researchers from the Department of Public Health (i.e. the former Non-Communicable Diseases Unit, the Eco-epidemiology Unit, the Health Policy Unit and the Education Office), the Kisantu Health District and the Bureau Diocésain des OEuvres Médicales (BDOM) Kisantu.

Together with the interdepartmental H(elminthology)-team and colleagues from the Royal Museum for Central Africa, the Eco-epidemiology Unit started a study on the implications of schistosome hybrids for the epidemiology and control of schistosomiasis in African schoolchildren. Hybridization between Schistosoma species, particular those with zoonotic potential, is considered an emerging public health concern as hybrid forms may exhibit greater virulence and resistance to treatment than their parent species. This study builds on our SchistoSAM trial on anti-malarial drugs against schistosomiasis which was published last year (Bottieau et al, 2023).

The Complexity and Health Unit started a research capacity development project at the School of Public Health in Bujumbura (Burundi) in collaboration with Enabel and a policy support study on health care for internally displaced people and their livestock in Bamako for DGD.

After the successful completion of the PEOPLE trial on post-exposure prophylaxis for leprosy, published in Lancet Global Health in June, 2024, the Mycobacterial Diseases and Neglected Tropical Diseases Unit together with the Mycobacteriology unit of the department of Biomedical Sciences and the Clinical Trial Unit of the department of Clinical Sciences have completed the first intervention round of the new BE-PEOPLE trial. The BE-PEOPLE trial, funded by Janssen Pharmaceuticals takes place in Comoros. It tests an alternative regimen for post-exposure prophylaxis for leprosy, based on a combination of rifampicin and bedaquiline. To date a population of 108,917 have been registered for follow-up, of whom 27,652 received rifampicin plus bedaquiline, whereas 34,254 received only rifampicin. The second intervention round is ongoing, results are expected in 2027.

The Pharmaceutical Public Health unit has a new and highly innovative collaboration with the UWC around the Centre of Excellence for Pharmacovigilance in Southern Africa – CEPSA, an EC-funded project that was awarded in 2024 and will run for three years. It encompasses and brings together research, education and capacity building, with the ultimate objective of strengthening the safety of medical products, including in view of local production in Africa (Raffaella Ravinetto, Carine Dochez).

The unit's role kept on providing policy support to SPF Santé as a member of the UNODC Commission on Narcotic Drugs, for improving access to controlled substances for medical use worldwide. In this capacity, we provided technical support in the negotiations of two resolutions (63/3 and 67/2) sponsored by Belgium. Policy support is linked to our research line focused on access to controlled medicines, which led to the first-ever study on access to opioid painkillers in the DRC (Trop Med Int Health 2023). A second ongoing study is focusing on pediatric medicines (Belen Tarrafeta, Raffaella Ravinetto).

The Maternal and Reproductive Health unit completed the H2020 funded ALERT project (2020-2024) together with the Complexity and Health Unit. ITM led two work packages – realist and economic evaluation.

SO3

In partnership with community-based organizations in Brussels, the Socio-Ecological Health Unit is investigating the neglected burden of louse-borne diseases, including Bartonella quintana (the cause of trench fever and endocarditis), among populations experiencing houselessness. This work seeks to shed light on currently unknown systemic barriers and promotes dignity and well-being through the combination of qualitative research, serologic and molecular diagnostics with medical entomology.

The Emerging Infectious Diseases Unit played a critical role in building knowledge and capacity to address health threats by working closely with local partners in Europe and LMICs. Through joint research projects, student supervision, and teaching contributions, the unit formed institutional partnerships to advance the understanding of emerging infectious diseases. All unit members were heavily involved in providing training across disciplines and departments.

In 2024, the Ecohub – FA5 Thematic Global Network on Climate change, Urbanization and Health (co-led by members of the Ecohealth research group) launched a number of initiatives to support capacity sharing and collaboration among its network partners in multidisciplinary research, education and practice on climate change, urbanization and health. These included calls for proposals on joint small-scale projects, participation in conferences, exchange visits, development of learning sites and other member-driven ideas in line with the Ecohub's objectives. The hub held her annual network meeting at the 8th Global Symposium on Health Systems Research in Nagasaki, including a workshop with ITM alumni on their potential roles in research, education and international cooperation in the field of climate change and health.

In 2024, the second edition of the short course on Sustainable Approaches to Infectious Disease Control and Elimination (SUSTAIN) took place. In this course, one highlights important challenges and discuss sustainable approaches to the control and elimination of Malaria, TB, HIV/AIDS, and NTDs, focusing not only on technical and programmatic factors that can influence sustainability, but also on contextual and environmental factors. Alternative paradigms to current global strategies are discussed, with emphasis on systemic approaches to building and maintaining more resilient and sustainable programmes, health systems and communities to tackle infectious disease threats. The course has been well received and was considered an eye-opener by many students, especially on topics such as ecohealth/systems thinking, which is still in its infancy in the field of infectious disease control and elimination.

In collaboration with WHO, the Health Policy Unit gained further insight on the specificities/underpinnings of quality of care for chronic conditions and financing mechanisms to improve chronic care quality. The work contributed to the OECD / WHO programme "Purchasing for quality chronic care'. The Health Policy Unit further brought this work forward with the founding of an International Research Network on Quality of Care for Chronic Conditions (CCCQ Research Network), composed of research institutions in Africa, Asia, Europe, and Latin and North America. The network is coordinated by the HPU and PPHU and funded by FWO. A highly successful meeting and workshop, featuring research of the members and presentations from WHO, was held in December.

The CCCQ Research Network members will collaborate to produce outputs to be disseminated in scientific journals and international conferences/congresses. It will also form consortia to respond to calls for proposals to improve equitable access to good quality chronic care.

The Health Policy Unit supported and took part in the 8th biennial Emerging Voices for Global Health training programme, held alongside the 2024 Health Systems Research Symposium (HSR2024) in Nagasaki. In 2024, 37 dynamic early-career health systems and policy researchers successfully completed the programme, gaining skills and experience at a major international health systems conference. After a 2-month virtual training stage, participants embarked on an intensive 10-day journey to Nagasaki for face-to-face training (from 5-14 Nov), which ended with a preconference in which they showed off their newly acquired skills and research.

The EV4GH programme was packed with opportunities for growth and networking. Participants sharpened their soft skills (presentations, networking), engaged in thought-provoking discussions with seasoned HPSR experts through 'big talks', learnt how to write blogs (read EV blogs in the HPU's International Health Policies newsletter), and explored the local health system through field visits.

But the learning didn't stop there! As active contributors to HSR2024 (which ran from 18-22 November), EVs made their mark in various ways. For some, it was their first experience as participants in an international conference; for others, it was a chance to reconnect with a global network of peers. They attended HPSR-related sessions, showcased their research through posters and presentations, and participated in satellite/organised sessions. The energy, enthusiasm, and collaboration on display embodied the spirit of EV4GH, and we hope to continue to engage with future generations of health policy and systems researchers. In a world in polycrisis, resilient health systems are more important than ever.

The Pharmaceutical Public Health Unit consolidated its leadership in the research of pharmaceutical systems in conflict settings, a field that has been poorly studied but is gaining importance due to the global context of insecurity. Key milestones include conducting a research on access to non-communicable diseases in conflict-affected areas (funded by King Baudouin Foundation and lead by Saleh Aljadeeah), and securing funding for a research on the resilience of the pharmaceutical systems in the context of conflict (FWO Postdoctoral Fellowship, Saleh Aljadeeah).

The Pharmaceutical Public Health Unit plays a crucial role in providing policy support to the Belgian DGD, contributing to evidence-based guidance on priority topics related to access to quality-assured medical products in global health. This work is often bolstered by our own research. The unit has been instrumental in organising several events as part of the 2024 Belgian Presidency of the EU Council, supporting the Team Europe Initiative (TEI) on access to medicines.

Table 31. Overview of the various services and departments (Dutch and English designation) and the designated heads of service of the Department of Public Health.

Department Public Health		
English Name	Dutch Name	Head of Service / ZAP
Research group: Health systems & Health policy		
Health Policy	Gezondheidsbeleid	Gorik OOMS
Equity and Health	Gelijkwaardigheid en Gezondheid	Karina KIELMANN
Pharmaceutical Public Health	Geneesmiddelen en Gezondheid	Raffaella RAVINETTO
Research group: Sexual & Reproductive Health		
Sexual Health, including HIV	Seksuele Gezondheid, incl HIV	Bernadette HENSEN
Reproductive and maternal health	Reproductieve en Maternale Gezondheid	Lenka BENOVA
Research group: Tropical Infectious Diseases		
Emerging Infectious Diseases	Opkomende Infectieziekten	Kathy KREPPEL
Mycobacterial diseases and NTDs	Mycobacteriële ziektes en Verwaarloosde Tropische Ziektes	Epco HASKER
Research group: Eco-Health		
Socio-Ecological Health Research	Sociaal-Ecologisch Gezondheids-onderzoek	Koen PEETERS
Eco-epidemiology	Eco-epidemiologie	Katja POLMAN
Complexity and Health	Complexiteit en Gezondheid	Bruno MARCHAL
Department Public Health		
Head of Department	Departementshoofd	Raffaella RAVINETTO
Management Public Health	Beheer Volksgezondheid	Jan BOEYNAEMS
Education Coordination	Onderwijscoördinatie	Marjan PIRARD / Veerle VANLERBERGHE

b. Department of Biomedical Sciences

Responsible department = Department Biomedical Sciences

SO1 – As a collective target, we want to tackle some of the most important and neglected pathogens, and their possible vectors, by creating a better scientific understanding of pathogens and the diseases they cause, as well as by developing and evaluating innovative tools to improve diagnosis, surveillance, prevention, treatment and control.

SO2 – We aim to better understand the patterns and underlying biomedical factors that drive the adaptation of pathogens and vectors to changing environments, such as drug pressure, immune evasion, co-infection, colonisation of new hosts, and climate conditions; we also study the influence of these factors on the heterogeneity of pathogens within and between hosts, as well as their impact on transmission and on pathogen virulence.

SO3 – To achieve our objectives, we combine field-based epidemiological and ecological research with innovative experimental biomedical research using state-of-the-art research and analytical methods within the fields of molecular and cellular biology, immunology, entomology, bioinformatics, biostatistics and epidemiological modelling.

SO1 – SO2

In the Department of Biomedical Sciences, 10 new projects started in 2024, including 1 EC project, 1 MRC grant, 1 ITP VLIR-UA project, 3 joint Pump Priming Projects, 1 Leprosy Research Initiative project, 1 project funded by the Flemish Environment Department and 1 project funded by the US Agency for International Development. Furthermore, the European Mosquito Control Association awarded the organisation of its annual congress in 2025 to ITM:

- European Commission – Restoring Ecosystems to Stop the Threat Of Re-Emerging Infectious Disease (RESTOREID)
- MRC – Exploring the adaptive role of genomic instability in Trypanosoma (MRC Cruzi Grant)
- ITP VLIR-UA – Molecular Surveillance: Fighting Malaria Across Borders (ITP VLIR-UA)
- Flemish Environment Department – Development and calculation of the environment indicator "Occurrence of exotic mosquitoes in Flanders" to monitor health impacts of climate change (OMG INDICATOR TROP MUGGEN)
- jPPP:
  - A single-cell sequencing approach to understand P. vivax gene regulation at the epigenetic level (jPP 2024 PvEpi)
  - The contribution of genetic susceptibility factors to the high leprosy incidence in a family from Anjouan, Comoros (ANGELE-2)
  - Development of virus-specific anti-NS1 antibodies and expression system for flavivirus recombinant NS1 for use in neurotropic flavirus diagnostic, therapeutics, and vaccination development (jPP2024 Flavivirus)
- Leprosy Research Initiative – Contribution of drug-resistance and M. lepromatosis to persistent leprosy transmission in parts of Africa (STARLEP)
- US Agency for International Development – Tuberculosis Implementation Framework Agreement
- European Mosquito Control Association – XII EMCA International Conference 2025 (EMCA CONF 2025)

Trypanosoma

- The Trypanosoma Unit further expanded its expertise in the field of sleeping sickness (HAT) diagnostics. In 2024, the unit completed the installation of a sub-national lab in Mbuji-Mayi (DRC) and, in collaboration with INRB, provided training for the necessary lab staff. This lab will now play a key role for serological and molecular HAT diagnostics in the coming years, in support of the ITM sleeping sickness elimination programmes (funded by Bill & Melinda Gates Foundation and DGD). Moreover, in the future, this lab could also be used for the follow-up of other infectious diseases in this region of DRC.
- The Unit invested heavily in 2024 to build expertise in the preparation and purification of recombinant trypanosome proteins, for use in diagnostics and to study their functional biology. We succeeded in synthesising full-length *T. brucei gambiense* antigens, essential in serological HAT diagnostics such as VSG LiTat 1.3 and LiTat 1.5, in *in vitro*-cultured, non-pathogenic animal trypanosomes (EWI-funded HI4A pilot project). This ground-breaking result will allow, in the near future, the production of both the CATT test and the available individual rapid tests for sleeping sickness in an animal-friendly and human-free manner.
- As part of our SOFI-TRYPTACKLE research into a possible vaccine for the main animal trypanosome *T. congolense*, we have characterised and recombinantly synthesised 21 candidate proteins of the parasite. The first *in vivo* immunisation experiments in the mouse model are now scheduled for the first half of 2025. In addition, as part of this project, we have optimised 'single-cell' transcript analysis to unravel the unprecedented biology of the *T. congolense* metacyclic parasite (= the infectious stage injected into the host by the tsetse fly).
- In our research into the underlying mechanism of drug resistance in *T. congolense*, we have identified two proteins that may play a key role in the parasite's resistance to isometamidium chloride, an essential trypanocide used to treat the diseased cattle. We thoroughly characterised one of these proteins (Drug Metabolite Transporter) during 2024, in collaboration with the University of Edingburgh.

Malariology

- In 2024, the Unit submitted several new research proposals, four of which were approved for funding. These projects include:
  - (jPPP (2024) – A single-cell sequencing approach to understand P. vivax gene regulation at the epigenetic level (PvEpi)
  - FWO senior project (2025-2028) – Structure-function relationship and epigenetic regulation of Plasmodium vivax tryptophan-rich antigens during host cell invasion (PvTRAG).
  - FWO-FAPESP (2025-2027) – Mechanisms of Plasmodium vivax chloroquine resistance: a transcriptomic/transgenic approach (PvRESIST) – a bilateral collaboration with Brazil
  - SOFI (2025-2028) – Interdisciplinary Malaria Prevention And Care In Travelers (be-IMPACT).
- The research team grew steadily, helped by the award of two FWO mandates in 2024:
  - FWO junior postdoctoral fellowship to Katlijn De Meulenaere (11/2024-11/2027) for her research on P. vivax gene regulation via single-cell sequencing.
  - FWO PhD fellowship strategic basic research to Witse De Cleene (2024-2027) for his project 'Elucidating the molecular basis for the recognition of human basigin by P. vivax tryptophan-rich antigens'.
- On the publication front, 2024 was a productive year, with 11 manuscripts and 5 preprints. Published studies included several articles on the use of the AmpliSeq tool for molecular malaria surveillance (PMID: 38464169, 38991038, 39009685, 39314390, 39687741, 39748949), the largest compilation of Plasmodium vivax genomes from Latin America (PMID: 38529021), and the application of 'omics for molecular malaria surveillance in travellers (PMID: 38157311, 38304950).

- In addition to scientific research, the team also focused on science communication. In 2024, they designed the board game "Malaria Outbreak", which was presented at Nerdland Festival, the Science Day and the Pint of Science Festival in Antwerp (by Dalia Diaz – FWO PhD).

Molecular Parasitology

- Through its activities in different regions of the world (Peru, Brazil, Ethiopia, Morocco, Nepal and Kenya), the unit further demonstrated the importance of genomic leishmaniasis surveillance. Together with the Public Health Department, Pieter Monsieurs and Malgorzata Domagalska used direct genome sequencing for source tracing of *Leishmania donovani* in emerging foci of visceral leishmaniasis in Western Nepal. The article was published in *Emerging Infectious Diseases* (PMID: 38407178).
- Senne Heeren, PhD student at ITM, UAntwerpen and KULeuven, discovered in Peru that an endosymbiont of *Leishmania* (Leishmania RNA virus, LRV) was transmitted from one parasite to another through sexual recombination of the parasite. Thus, LRV causes a sexually transmitted infection in the parasite. This may have an impact on treatment efficacy and pathogenicity. A new strain of Leishmania braziliensis was found to harbour not a toti but a bunyavirus: published in PLOS Neglected Tropical Diseases (PMID: **39729426**). Senne also published an article in Communications Biology entitled Evolutionary genomics of *Leishmania braziliensis* across the neotropical realm (PMID: 39609617).
- In 2024, Gert Van der Auwera provided operational support to the cutaneous leishmaniasis programme in Nepal, in collaboration with the Public Health Department. He coordinated and supervised the FA5 programme "Better Policies and Less Infectious Diseases in Peru and Latin America". He was the lead organiser of the MID course on the implementation of molecular biological techniques in resource-limited settings. Finally, he coordinated the joint WHO-European LeishMan network database for surveillance, treatment and diagnosis of leishmaniasis in Europe, and in this role he also supported the ITM clinical reference laboratory.
- Allison Aroni will defend her PhD in 2025 and has an important paper in final preparation: multi-drug tolerance in *Leishmania* persister-like cells.
- Gabriel Negreira continues his pioneering research into single-cell biology, including the study of the developmental stages of *Leishmania* in the sand fly. An article is in preparation.
- In preparation of Jean-Claude Dujardin's retirement, a new unit was set up: Experimental Parasitology, headed by Malgorzata Domagalska. This Unit will focus on the biology of *Leishmania* and *Trypanosoma cruzi* and conduct fundamental research on the adaptive abilities of these parasites (including genomic instability, persister cells, drug tolerance and the impact of LRV on *Leishmania* biology).

Virology

- The Virology Unit was involved in the start of a new Horizon Europe project with the aim of developing a polyclonal antibody-based treatment that is broadly active against the beta-coronavirus family for pandemic preparedness against emerging coronaviruses of zoonotic origin. In addition, further research was conducted on the SARS-CoV-2 hybrid immune response after infection and vaccination in several vulnerable and immune-compromised populations. The Unit also further strengthened work on arboviruses, spearheading projects around improved arbovirus diagnostics, identification of prognostic biomarkers for severe dengue infection and research on nanobodies as a new therapeutic application for dengue.

- Together with the Entomology Unit, a study was published showing that Aedes albopictus and Anopheles atroparvus mosquitoes occurring in southern Europe could serve as potential vectors for Mayarovirus when introduced by travellers. This research was made possible thanks to the new Arthropod Containment Level 3 (ALC3) facility that was commissioned in 2023. This infrastructure allows us to experimentally infect exotic mosquitoes to conduct vector competence studies and study novel antiviral strategies in the vector. Several large studies on vector competence, including West Nile virus, are planned for 2025.
- We achieved the first hopeful results with a new innovative strategy in which we can use double-stranded RNA to activate the mosquito's innate immune system to respond very specifically to certain viruses. We received new research funding for this at the end of 2024 that allows us to study the underlying molecular mechanism, as well as to develop new delivery methods that could enable future application as a new vector control method.
- With our partners in Peru, and with the support of Janssen Pharmaceutica and the Belgian Development Cooperation (DGD) programme, the KUNASA study was completed in the Amazon region of Peru to better predict the onset of severe dengue infections using predictive biomarkers and to use innovative metagenomics sequence analysis to map which fever-causing pathogens are circulating in addition to the already known arboviruses such as dengue, zika, yellow fever and chikungunya. Our metagenomic sequence analysis was successfully transferred to Peru and, in a first study, confirmed its added value for diagnosis of acute fever in the tropics. The expertise accumulated in 2024 on adaptive immune receptor repertoire (AIRR) sequencing led to interesting new insights into the immune response to dengue and the potential role of IgA in antibody-dependent enhancement.

Mycobacteriology

- The BE-PEOPLE phase 2 study of bedaquiline-enhanced post-exposure prophylaxis (PEP) for leprosy was published, while the first round of phase 3 was completed. Dr Younoussa Assoumani, local PI, received the Anne Maurer Cecchini Award in Geneva. Leprosy incidence is starting to decline on the highly endemic island of Anjouan, and several ITM staff received a certificate from the Governor of Anjouan for our contributions to leprosy control.
- Phenotypic susceptibility testing (DST) using an automated printer method to fill microtiter plates with specific concentrations of antibiotics to enable rapid determination of the level of resistance (MIC value) was further validated for new drugs, providing a working alternative to the EUCAST reference standard where antibiotics are added manually. In addition, a field-friendly version of DST was optimised and evaluated in collaboration with colleagues in Rwanda, where sputum is inoculated directly onto antibiotic-containing medium, without the need for an intermediate step of positive culture. Since the plates are sealed, the entire test including interpretation can be performed at biosafety-2 level (publication accepted in Journal of Clinical Microbiology). Thanks to the agreement in principle between the national TB programmes in DR Congo and Rwanda, diagnostic services were provided in Kigali for patients from South Kivu, and a doctoral student from Bukavu was trained to implement the rapid DST techniques in Bukavu, which is now interrupted given the deteriorating security situation.
- Evaluation of the rapid molecular test for detection of TB and resistance to rifampicin, the main anti-tbc drug, within the Rwandan national TB programme showed that the new version of this test (Xpert Ultra) still gives false-rifampicin-resistant results for samples with low bacterial loads (publication accepted in Clinical Infectious Diseases). These results call for vigilance and possibly revision of diagnostic flow charts.

- The results of the STAKE clinical trial showed that administering 2 high doses of amikacin – together with lidocaine as post-injection pain relief – in the initial phase of treatment of multi-resistant TB did not cause any adverse side effects (publication submitted). Further studies can now be designed to test whether this amikacin addition can help avoid resistance development to other antibiotics. The AES trial in Niger, starting in April 2025, will use this dosage.
- The results of the endTB clinical trial were published. The results show that various combinations of new and existing TB drugs can safely cure rifampicin-resistant TB, on the basis of which WHO guidelines for the treatment of drug-resistant TB were amended. The endTB-Q study was also completed, for treatment of rifampicin- and fluoroquinolone-resistant TB with oral antibiotics. The FWO-funded deepMTB study builds on the endTB studies, in which we compare direct and indirect sequence analyses for the detection of the earliest signs of (acquired) resistance.
- Comparison of RNA stability in different buffers shows that storing mycobacteria in ethanol at -20C constitutes a relatively field-friendly storage and transport method.
- Using extensive bioinformatics analyses and 3D modelling, we were able to map a number of TB virulence markers, and better predict phenotypic resistance to bedaquiline from DNA sequences.

Entomology

- The Entomology Unit was invited to host the XII Conference of the European Mosquito Control Association and received five mobility grants (Outgoing: FWO travel grant for Isabelle Kramer, Erasmus+ mobility grant for Adwine Vanslembrouck; Incoming: DGD pre-doc grant for Diana Leyva, FWO incoming travel grant for Reshma Tuledhar). In addition, Marco Brustolin was selected as a member of the ARES – Arbovirology European Society (peer-review selection procedure).
- FWO awarded funding to the senior research project "POLSA" on the recognition of polarised light by Anopheles gambiae (PI) and the Service received funding for a pilot study on mass capture of Aedes albopictus in Wilrijk from the Agency for Nature and Forests, Flemish Government, Belgium (PI), and for the SOFI project RIVAC (Co-PI, in collaboration with the Virology Unit). We await decisions on five other submitted proposals (MSCA Doctoral Network, COST Action, FWO postdoctoral fellowship, sub-contract with the Friedrich-Löffler Institute, Germany; consultancy with Goethe University, Germany).
- In 2024, we completed the final phase of three projects (research: MOOD, service delivery: EWI insectarium support, Expert assignment "Indicator study"), while six others continue into 2025 (basic research: SWARM, CLIMB; service / ORT: MEMO+, Bartonella project, MSF Burundi, VectorNet). We accepted leadership for work package 1 of the BE-PIN project, supporting the Emerging Infectious Diseases Unit at the Department of Public Health.
- We continued to invest in capacity building within the FA5 programmes in Nepal, DRC and Peru.
- Members of the Entomology Unit participated in a total of 36 training activities. We presented our research at 10 conferences/workshops, including the International Entomology Conference in Kyoto, Japan, the 6th International Conference on Aedes albopictus: The Asian tiger mosquito in Cambodia, the Annual Conference of the European Society of Vector Control in Montpellier, France and the EPIC11 workshop | North-West Europe 5-Country Exchange Visit in Antwerp, Belgium. We co-chaired the session "Leveraging global perspective in preparedness and outbreak response" at the EU-BE Pandemic Preparedness Conference: Research Perspectives on the Health Impacts of Climate Change in Antwerp, Belgium.

Zöonoses

- In 2024 the unit continued to be involved the follow-up and sample analyses of a neurocysticercosis outbreak in a school in Lier, Belgium. The outbreak was documented in The Lancet (PMID: 39674670).
- The FWO-NAFOSTED-funded bilateral FasciCoM project received a no-cost extension for 2024. This project aims to unravel the emergence of fascioliasis in Vietnam, and involves intense collaboration between experts from different fields (malacology, veterinary medicine, medicine, statistics). The following objectives were achieved in 2024: i) the current knowledge on the epidemiology of *Fasciola* in Southeast Asia was summarised (PMID: 38232120), ii) the prevalence of *Fasciola* in snail, human, animal and plant hosts/carriers was estimated, and the factors that promote transmission were identified (2 medRxiv preprints), iii) a mathematical model for *Fasciola*, which for the first time includes humans as hosts, was developed. The latter will allow us to test *in silico* which strategies are most effective in reducing infection rates. It will also calculate the burden of disease in 2025.
- Under the DGD-ITM 2022-2026 programme, several field missions were organised and coordinated. In DRC we worked around Echinococcus/Taenia, in Vietnam there was a sampling around *Paragonimus*, in Ethiopia we did research on *Echinococcus* and South Africa on *Echinococcus* and *Fasciola*. These field missions provided insights into the local transmission dynamics of these zoonotic helminths. Initial results showed that the parasites are common, but knowledge about their impact and mode of transmission is limited in the general population. Also, high-risk practices that cause the spread of these parasites also appear to be widespread. The samples and data will be further analysed in 2025.
- Pierre Dorny, ITM professor emeritus, and involved in the unit's activities as a volunteer scientist, received the Lifetime achievement award from the Belgian Society for Parasitology and Protistology on 26 November
- Four students successfully defended their thesis for the MSc in Global One Health.
- Famke Jansen was involved in organising the 10de Belgian Wildlife Disease Society in Antwerp (18 October 2024).

Experimental Immunology

- The unit was established in May 2023 and achieved major milestones during the first full calendar year at ITM (January – December 2024).
- We welcomed new members to our lab, including Thais Lemos-Silva, PhD (postdoctoral researcher) and Yarno Valgaerts, MSc (research technician). We were also pleased to welcome several students: Emma De Neef, BSc (MSc student), Luna Dael (MSc trainee), Siem Adriaenssens (MSc trainee) and Bugge Noortje (BSc trainee).
- An important step was the commissioning of our new laboratories at ITM. We also received funding from several organisations, including Kanazawa University (Japan) for an invited speaker, the FWO (travel grant), the Royal Entomological Society (UK) (Small Project Grant) and SOFI (project funding).
- Maria Luísa Simões (MLS, PI) was invited as an invited speaker for several prestigious events, including the Kanazawa University seminar (virtual, February 2024), the Gordon Conference Genetic Biocontrol (Barcelona, May 2024), the Medical Entomology Course for the Public Health Practitioner & Clinician (Tulane University, New Orleans, November 2024), the American Society of Tropical Medicine and Hygiene (ASTMH) Career Grant Seminars (New Orleans, November 2024) and the Beacons International Meeting (New Orleans, November 2024). In addition, MLS actively participated as a speaker and session chair at the ASTMH annual meeting.

- At the institutional level, MLS was also active as a member of several committees, including the American Committee of Medical Entomology (executive council), the Medical Entomology Course for the Health Practitioner and Clinician (course organiser) and the scientific programme committee of the ASTMH annual meeting. Furthermore, MLS acted as a peer-reviewer for Nature and was interviewed by El País (Spain).

Virus Ecology

- Our new research group officially started in February 2024, with a strong focus on infectious diseases, serological analyses and ecological epidemiology.
- We submitted several research projects, including two FWO applications. Although these were not awarded, they achieved good scores, making resubmission possible in the future. In addition, we submitted three SOFI projects, one of which was approved with the Virus Ecology Unit as co-PI. We also submitted an ERC application, the results of which are expected in early March.
- Within the approved SOFI project on mpox (monkeypox) and viral escape, we are coordinating antibody analysis with the Luminex assay. In parallel, we are developing a serological test for mpox, which is being implemented in Kinshasa. Soon, this test will also be used to evaluate vaccination studies in both Antwerp and Kinshasa, in collaboration with the department of clinical sciences.
- In field research, several projects are in full development. Emilie Goossens obtained an FWO-PhD grant and will investigate how changes in habitat affect the presence of helminths and viruses in rodents in the Democratic Republic of Congo (DRC), in collaboration with the Afrika Museum and UHasselt. In addition, fieldwork has been initiated in DRC and Tanzania within the RESTOREID project, with samples being collected and analysed in Belgium. Within an ongoing FWO project, we are also investigating the animal reservoir of mpox in DRC.
- Furthermore, we are modeling serological data to better understand the spread of Lassa fever in Guinea, in collaboration with the Bernhard Nocht Institute in Hamburg. We also analysed and published historical malaria data from the ITM library, with a focus on the link to climate change.
- In addition to research, we are also committed to teaching and academic dissemination of knowledge. We developed and launched a new course at ITM: Ecology, Epidemiology and Control of Infectious Diseases. Moreover, we were active in the scientific community, with a keynote lecture at the 10th Belgian Wildlife Disease Society.
- Finally, we have strengthened our team with the appointment of a new postdoc, Mare Geraerts, from February 2025.

SO3

- The Entomology Unit conducted entomological field studies in Belgium, Germany, Nepal, DRC, Burundi (active surveillance) and was responsible for following up Aedes albopictus notifications in Belgium (via Sciensano), as part of passive surveillance.
- Building critical mass of personnel to conduct studies on arboviral infections has started with the structural training of a technician and a PhD student. Three publications on arboviral infections have been published (the first trial in ACL3 of ITM, the other in collaboration with the Bernhard-Nocht Institute in Germany).
- The renovation of the immunology laboratories started in 2023 thanks to a Flemish Resilience grant. In mid-2024, the Department of Biomedical Sciences commissioned the renovated facilities, with a grand opening in September 2024.
- The department published its research in respected scientific journals, including:
  - Koen Vanden Driessche, Veronique Dermauw, An Sofie Schoonjans, Sarah Gabriël, and Heidi Theeten, Cysticercosis Outbreak Team. (2024) "Neurocysticercosis School Outbreak in Belgium." The Lancet 404(10470):2415-16. doi: 10.1016/S0140-6736(24)02356-0.
  - Vanslembrouck, A., Scheers, K., Vermeersch, X., Hendrickx, R., Schneider, A., De Witte, J., Deblauwe, I., Van Bortel, W., Reuss, F., Müller, R. (2024) Exploring the efficacy of predaceous diving beetles as potential nature-based solution for combating the invasive mosquito Aedes albopictus (Skuse, 1894). ***NeoBiota*** 94: 179-203
  - Vanslembrouck, A., Jansen, S., De Witte, J., Janssens, C., Vereecken, S., Helms, M., Lange, U., Lühken, R., Schmidt-Chanasit, J., Heitmann, A., Müller, R. (2024) Larval competition between Aedes and Culex mosquitoes carries over to higher arboviral infection during their adult stage. ***Viruses*** 16: 1202
  - Leyva, B., Brustolin, M., Müller, R., Yon, F. (2024) Unveiling the sugar diet and associated environmental compounds in the crop of the mosquito Culex pipiens. ***Heliyon*** e26565
  - D'Amato, R., Taxiarchi, C., Galardini, M., Trusso, A., Minuz, R.L., Grilli, S., Somerville, A.G.T., Shittu, D., Khalil, A.S., Galizi, R., Crisanti, A., Simoni, A., Müller, R. (2024) Anti-CRISPR Anopheles mosquitoes inhibit gene drive spread under challenging behavioural conditions in large cages. ***Nature Communications*** 15:952
  - De Kesel W, Vanden Broecke B, Borremans B, Fourchault L, Willems E, Ceulemans A, Sabuni C, Massawe A, Makundi RH, Leirs H, Peeters M, Verheyen E, Gryseels S, Mariën J, Ariën KK. (2024) Antibodies against medically relevant arthropod-borne viruses in the ubiquitous African rodent Mastomys natalensis. PLoS Negl Trop Dis. 2024 Sep 4;18(9):e0012233.
  - Brustolin M, Bartholomeeusen K, Rezende T, Ariën KK, Müller R. (2024) Mayaro virus, a potential threat for Europe: vector competence of autochthonous vector species. Parasit Vectors. 2024 May 4; 17(1):200.
  - Mariën J, Sage M, Bangura U, Lamé A, Koropogui M, Rieger T, Fichet-Calvet R. (2024). Rodent control strategies and Lassa virus: some unexpected effects in Guinea, West Africa. Emerging microbes and infections; vol 13.
  - Mariën J. , Mukomena E, Tevuzula V, Leirs H, Huyse T (2024) A century of medical records reveal earlier onset of the malaria season in Haut Katanga induced by climate chage. BMJ global Health; 9.10.

Achievements in education

- In 2024, the MScGOH obtained re-accreditation from the NVAO after a favourable evaluation by an international panel of experts.
- A colleague from the University of Pretoria visited the Zoonoses Unit on an Alliance mobility grant for the second time, to further discuss and prepare the refinement of the Applied Helminthology module.
- Courses taught at UA in the context of the MSc Biomedical Sciences, are now also recognised as ITM courses. A pilot project (Ecology course) by Prof Mariën, was positively assessed and lays the foundation for extending the "equal partnership" model in the educational offerings of DBS and UA.
- The Department's Educational Coordination Unit fulfilled a pioneering contribution in setting up the SHINY APP server for developing apps using R both in research and teaching. An "introduction to R" interactive course was positively received by MScGOH students, who could now go through the introduction online at their own pace. This basic course was also shared with other departments including for SCREM.
- The Education Coordination Unit also pulls along developments regarding AI use in education at ITM; active contribution in the working group and development of guidelines for students.
- A new tool was developed for the assessment of thesis defences, which for MScGOH are conducted online via Zoom. Judges now cast a vote via an online form in which an automatic basic feedback is generated for the students. This project is a first step towards implementing the panel's recommendations for re-accreditation in particular the recommendation regarding providing feedback to students for assessments in a more structured way, a comment that was also given to the other ITM MSc programmes.

Achievements in service delivery

- The department remains a valuable partner for industry thanks to its expertise and continued to contribute to studies that generated new research opportunities in 2024.
- The department hosts five reference centres and provides expert advice to institutions such as WHO and the FAMHP.
- The Zoonoses Unit organised a training course in Ethiopia on 16-17 April 2024 on analytical techniques for the detection of Echinococcus and Fasciola.
- The Entomology Unit co-organised the workshop "How to contain insects" for the European Biosafety Agency and we gave theoretical and practical courses on vector biology (FA5 Peru, University of Antwerp). We also provided individual training in mosquito identification, arbovirology, vector biology and vector control (Individual mosquito ID entomological training (Bioprotect).
- The Zoonöses Unit performed services within the framework of the cooperation agreement with Brussels Environment for wild animal disease surveillance in the Brussels Capital Region. This year, 94 foxes were screened for Echinococcus, fortunately all with a negative result. Furthermore, the department invested heavily in capacity building for research on zoonotic helminths. As part of the DGD-ITM 2022-2026 programme, the unit organised a training in Ethiopia on 16 and 17 April 2024 on analytical techniques for the detection of *Echinococcus* and *Fasciola*. The unit also coordinated field missions in DR Congo, Vietnam, Ethiopia and South Africa.

Organisation of the department

- 2024 centred on the transition to the new policy period 2025-2029, with major reviews by the Department of Education and the Department of Economics, Science and Innovation (EWI). The Department of Biomedical Sciences strengthened its professorial cadre with the appointment of Joachim Mariën as Research Professor of Virus Ecology (from February 2024), Malgorzata Domagalska as Professor of Experimental Parasitology (from January 2025), and Ciaran McCoy as Professor of Helminthology (from March 2025).
- After more than a decade, the department revamped its on-premise data storage in 2024, together with the IT department. The structure was future-proofed, with a particular focus on adequate data protection.

Ambitions and challenges

- Sustainable balance between opportunity/need-driven research and the strategic focus on neglected diseases.
- Strengthen critical mass for research and teaching.
- Guarantee adequate support for all departmental units.
- Strengthening our capacity to attract external funding, including through the further strengthening/digitisation of the pre-award process and collaboration with the institutional fundraiser.
- Infrastructure:
  - Housing the entire department 'under 1 roof' in state-of-the-art research infrastructure – ensuring business continuity pending implementation of the building master plan.
  - Further investment in cooperation with other research institutes and universities at home and abroad
  - Urgent need for investment funds to achieve a healthy investment rhythm for basic laboratory infrastructure
- Strengthening institutional support for valorisation and technology transfer
- Biobanking: efficient management of samples
- Need to further streamline support processes:
  - Financial services:
    - Compliance of purchasing processes combined with efficiency and smoothness (evolution towards online purchasing)
    - Smoother processing of purchase invoices

Table 32. Overview of the different units and departments (Dutch and English designation) and the designated heads of unit of the Department of Biomedical Sciences. (status 31.12.2024)

Departement Biomedical Sciences		
English Name	Dutch Name	Head of Service / ZAP
Mycobacteriology	Mycobacteriologie	Bouke DE JONG
Virology	Virologie	Kevin ARIËN
Experimental Immunology	Experimentele Immunologie	Maria Luísa SIMÕES
Molecular Parasitology	Moleculaire Parasitologie	Jean-Claude DUJARDIN
Malariology	Malariologie	Anna ROSANAS-URGELL
Trypanosoma	Trypanosoma	Jan VAN DEN ABBEELE
Zoonoses	Zoönoses	Véronique DERMAUW*
Entomology	Entomologie	Ruth MÜLLER
Virus Ecology	Virus Ecologie	Joachim MARIËN**
Experimental Parasitology	Experimentele Parasitologie	Malgorzata DOMAGALSKA***
Department Biomedical Sciences		
Head of Department	Departementshoofd	Kevin ARIËN
Management Biomedical Sciences	Beheer Biomedische Wetenschappen	Nadine VAN PEER
Education Coordination	Onderwijscoördinatie	Mieke STEVENS

* Head of department ad interim. In March 2025, Ciaran McCoy will start as ZAP Helminthology and the Zoonoses Department will be renamed the Helminthology Department.

** Joachim Mariën started on February 1, 2024, as ZAP Virus Ecology.

*** Malgorzata Domagalska will start on January 1, 2025, as ZAP Experimental Parasitology

c. Department of Clinical Sciences

Responsible department = Department Clinical Sciences

SO1 – Conduct outstanding clinical and laboratory research on HIV, tuberculosis, STI, tropical infectious diseases, including vaccine-preventable diseases, in order to answer questions on the best prevention, diagnosis and treatment practices to reduce individual suffering due to infectious diseases;

SO2 – Contribute to improved patient management by strengthening capacities for research, education and reference services in LMICs;

SO3 – Provide scientific and medical services for the benefit of patients in Belgium (Europe), in support of global health security and outbreak preparedness, and national and international health organisations.

Achievements regarding SO1

- Following the retirement of the professor of Tropical Bacteriology, one of the department's most successful academic units, we have appointed a new professor to succeed him in 2024. A vacancy was also launched to replace the professor of HIV & Tuberculosis, who will retire in spring 2025. This will allow us to perpetuate these important lines of research.

- Several, competitive external funds were acquired within the niche domains and activities of the department both in Belgium and the South. These funds were obtained in a wide range of national and international competitive grant programmes (HorizonEurope, EDCTP, FWO, KCE, Vlaio, etc.) on various topics such as emerging infectious diseases, alternative testing strategies, bacterial infections, antibiotic resistance, tuberculosis and neglected tropical diseases, etc. Especially within the EDCTP programme, we have been very successful this year in winning several grants around the mpox outbreak, TB and NTD research and the expansion of our master's programme, among others. For two of these grants, ITM is taking the lead role within the research consortium.

SO2 realisations

- The accreditation of our Master in Tropical Medicine was reconfirmed by the NVAO this year, which is an important recognition for this relatively new master's degree at ITM.
- WikiTropica as an open access platform on tropical infectious diseases was further optimised. It offers e-learning tools and information that can be used worldwide by students, staff and healthcare professionals.
- Activities around capacity building in DRC were significantly strengthened with a clinical component in close cooperation with the DRC office. Collaboration with the other partner institutions is also continuing to achieve the objectives within FA5.

SO3 realisations

SO3 is about 'Medical reference care' on the one hand, which is mainly implemented by the Department of Clinical Sciences. These achievements are explained in detail under 4.2. ITM remains the national reference institution in Belgium in the field of tropical treatment & diagnostics and is among the major national reference centres and laboratories in the field of HIV & STIs.

Ambitions and challenges 2024

- Addressing key areas of focus within the medical services, such as further fleshing out the new structure, providing continuity within the various disciplines, further integrating activities & processes and responding to new policy developments. The medical services are the core of the department and proper functioning within clinic and KRL is the basis for further shaping research and education.
- Recruit the new ZAP according to the ZAP plan and embed them within the existing research lines in the department and across ITM to generate more critical mass academically.
- Further development of the clinical trial site. After a difficult year, including the loss of some important studies, we and the steering committee are taking full steps to develop another full year of activities.
- Coordinate the full Master in Tropical Medicine and integrate the NVAO recommendations. Take further steps in the digitalisation strategy within education and capitalise on opportunities around new short courses or evening seminars, or WHO initiatives under the SORT-IT.
- Further sustainable anchoring of clinical activities under the new FA5 framework agreement.
- Maintain or further develop the reference role to our various partners, such as UZA, RIZIV and WHO.

Table 33. Overview of the different services and departments (Dutch-language and English-language denomination) and the designated heads of service in the Department of Clinical Sciences.

Department Clinical Sciences		
English Name	Dutch Name	Head of Service/ ZAP
Research group: Klinische Tropische Geneeskunde/ Clinical tropical medicine		
Clinical Trials Unit	Clinical Trials Unit	Yven VAN HERREWEGE
Tropical Diseases	Tropische Geneeskunde	Emmanuel BOTTIEAU
HIV & Tuberculosis	HIV & Tuberculose	Tom DECROO a.i.
Sexually Transmitted Diseases	Seksueel Overdraagbare Infecties	Chris KENYON
Neglected Tropical Diseases	Verwaarloosde Tropische Ziekten	Johan VAN GRIENSVEN
Travel Medicine	Reisgeneeskunde	Patrick SOENTJENS
Emerging Infectious Diseases	Opkomende Infectiezieken	Laurens LIESENBORGHS
Research group: Tropische Laboratoriumgeneeskunde/ Tropical laboratory medicine		
Tropical Bacteriology	Tropische Bacteriologie	Liselotte HARDY
Clinical Virology	Klinische Virologie	Koen VERCAUTEREN
Clinical Immunology	Klinische Immunologie	Wim ADRIAENSEN
Medical Services/Medische diensten		
Clinical Reference Laboratory	Klinische Referentielaboratorium	Marjan VAN ESBROECK / Dorien VAN DEN BOSSCHE
Polyclinic	Polikliniek	Patrick SOENTJENS
Department Clinical Sciences		
Head of Department	Departementshoofd	Johan VAN GRIENSVEN
Management Clinical Sciences	Beheer Klinische Wetenschappen	Filip DE KEULENAER
Education Coordination	Onderwijscoördinatie	Maria ZOLFO

7

Policy and management to ITM

7. Policy and management to ITM

a. Policy organization

Responsible units = General Management offices

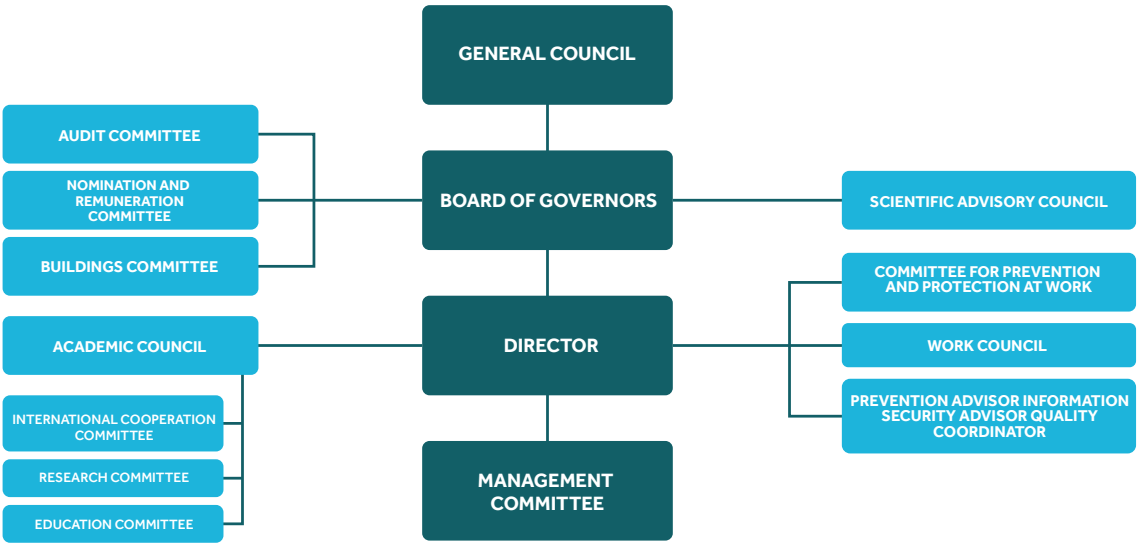
1. Charter of Good Governance

ITM lays down its decision-making principles and methods in a Charter of Good Governance. The Charter aims to ensure effective, sustainable and transparent compliance with ITM's purpose, mission, remit and core values, in the full confidence of its stakeholders and society at large. The Charter ensures that decision-making and managerial actions at every level are transparent, accessible and verifiable. Based on the private-law status of a foundation, the Charter also safeguards the scientific freedom and participatory policy-making characteristic of an academic institution. In doing so, ITM complies with the Recommendations for Good Governance in Flemish Universities. The Charter is published on the ITM website and is accessible to all stakeholders and other interested parties.

2. Overview of consultative

The diagram below charts ITM's policy and advisory bodies as set out in the Statutes, as well as the statutory consultation structures and functions that report to the Management Committee (being the Director). For the sake of completeness, this chart also includes academic consultative bodies that provide advice to the Board of Governors or Director. As well as the functions reporting to the director in accordance with statutory provisions.

Figure 10. Presentation of the various policy and advisory bodies of ITM.



General

The General Council is a statutory body that ensures that the policies, governance and management of ITM are consistent with its purpose, identity and integrity. The General Council consists of various stakeholders with voting rights, specifically the various funding authorities, local authorities, universities, staff, alumni, students and additional members co-opted by the General Council (such as partners). Members of the Governing Council and the Government Commissioner are non-voting members. A list of the current members of the General Council can be found on our website.

The General Council oversees an independent Board of Governors and can appoint and dismiss its members, with the exception of the director (who is appointed and dismissed by the Board of Governors). It evaluates annually the quality of the work delivered by the Board of Governors. In case of serious deficiencies, he may suspend or dismiss one or more directors with a reasoned decision.

The General Council meets at least twice a year, but may organise additional sessions. More information on the General Council can be found in the statutes.

Board of Governors

ITM is managed by a Board of Governors, which delegates day-to-day management to the Director. The Director is accountable to the Board of Governors for all managerial actions. The Board of Governors has full powers, even though some powers require the prior opinion of the General Council.

The Board of Governors is composed of a minimum of three and a maximum of 12 members, appointed by the General Council, excluding the director. The mandate of the members of the Board of Governors lasts for four years and is renewable. The director is an ex-officio member of the Board of Governors, but cannot be chairman or vice-chairman. A list of the current members of the Board of Governors can be found on our website.

The Board of Governors meets at least four times a year and as often as the interests of ITM require. More information on the Board of Governors can be found in the articles of association.

The Board of Governors is supported by three advisory committees, namely the **Audit Committee** (with advisory powers on finance and risk management), the **Nomination and Remuneration Committee** (with advisory powers on the appointment of managerial staff, salary policy and selection of directors), and the **Buildings Committee** (with advisory powers on ITM's building assets). Charters were drawn up for these three advisory bodies, regulating their mission, composition and operation.

Management Committee

The Management Committee assists the director in the day-to-day management of ITM. The composition, functioning and powers of the committee are laid down in the Executive Regulations. In principle, the members of the Management Committee meet fortnightly.

Academic Council

The Academic Council is a consultative body outside the hierarchical line in which ideas are exchanged on academic matters across unit and departmental boundaries and concrete advice is formulated. Members decide autonomously on the agenda and advice is given independently of the hierarchical line. These opinions are not binding, but do provide direction. The Council meets monthly.

Works Council

The Works Council is a consultative body in which the head of the company informs and consults employee representatives. For some matters, the Council can make decisions, for others it has supervisory powers. The Council's powers are in the areas of employment and work organisation, working conditions and remuneration, private life and new technologies, events or decisions that could change work organisation and working conditions, and supervisory powers. The Works Council meets monthly, with the exception of July and August.

Committee for Prevention and Protection at Work

The Committee for Prevention and Protection at Work is a statutory consultative body composed of appointed employer representatives, elected employee representatives as members of the Safety, Health and Environment Department (SHE). The Committee has advisory powers and its main mission is to formulate proposals that promote the safety and wellbeing of workers in the performance of their work as well as to promote the activities of the SHE service and monitor its operation. The Committee meets monthly, with the exception of July and August.

Table 34. Overview of the various meetings and consultative bodies (2019-2024)

Meetings of consultative bodies	2019	2020	2021	2022	2023	2024
General Council	4	2	2	2	2	2
Board of Governors	7	7	7	6	8	6
Management Committee	24	23	23	21	20	26
Audit Committee	2	3	6	4	6	5
Nomination and Remuneration Committee	3	4	4	6	5	5
Buildings Committee	4	2	4	3	4	2
Works Council	10	10	10	10	11	12
Academic Council	12	10	11	10	8	9
Committee for Prevention and Protection at Work	9	10	9	9	10	10

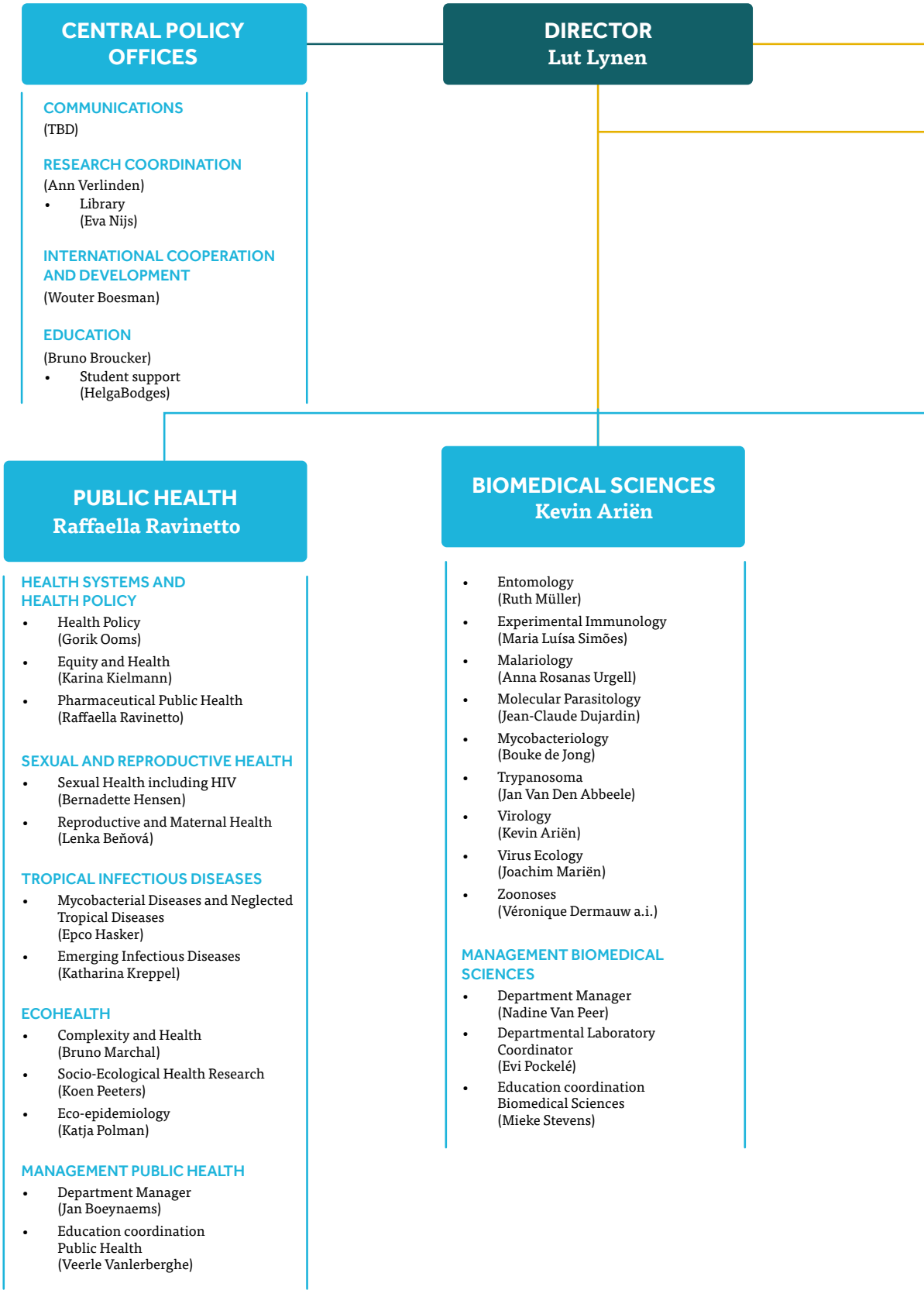
3. Overview of ITM Organizational Structure

The diagram below maps out which departments and services ITM has, and the hierarchical relationship between them. The designation department is henceforth reserved for the clustering of scientific services as well as the management and administrative departmental services.

Central support for the operation of ITM is organised into central policy services reporting to the director on the one hand, and general management services reporting to the general manager on the other. Support in the departments is organised by department into departmental management services.

Since the end of 2020, ITM has had a central service in DRC. The 'ITM-DRC service' or 'ITM-DRC Office' is headed by the ITM DRC representative and coordinates the operation of ITM activities in DRC. The ITM-DRC team aims to carry out close project management in DRC and thus manage the programme more flexibly, as more adapted to the local context. A new statute (Accord de Siège) in DRC was signed in November 2021.

Figure 11. Presentation of the ITM organisational structure.



GENERAL MANAGER
Ann Peters

ITG-DRC OFFICE
Inge Van Cauwenberg

CLINICAL SCIENCES
Johan van Griensven

CLINICAL TROPICAL MEDICINE
- Clinical Trial Centre
  (Yven Van Herrewege)
- Tropical Medicine
  (Emmanuel Bottieau)
- HIV and Tuberculosis
  (Tom Decroo a.i.)
- Sexually Transmitted Infections
  (Chris Kenyon)
- Neglected Tropical Diseases
  (Johan van Griensven)
- Travel Medicine
  (Patrick Soentjens)
- Clinical Emerging Infectious Diseases
  (Laurens Liesenborghs)

TROPICAL LABORATORY MEDICINE
- Tropical Bacteriology
  (Liselotte Hardy)
- Clinical Virology
  (Koen Vercauteren)
- Clinical Immunology
  (Wim Adriaensen)

MEDICAL SERVICES
- Polyclinic
  (Patrick Soentjens)
  - Management Polyclinic
    (Isabel Demuynck)
  - Travel Advice
    (Ula Maniewski-Kelner)
  - Tropical Infectious Diseases
    (Steven Van Den Broucke)
  - HIV and STI
    (Vincent Barvaux)
  - Clinical Nurses and Research Support
    (Ludwig Apers)
- Clinical Reference Laboratory
  (Marjan Van Esbroeck & Dorien Van den Bossche)

MANAGEMENT CLINICAL SCIENCES
- Department Manager
  (Filip De Keulenaer)
- Education coordination Clinical Sciences
  (Maria Zolfo)

GENERAL MANAGEMENT OFFICE
Ann Peters

HR MANAGEMENT
(Nick Cuyvers)

SAFETY, HEALTH AND ENVIRONMENT
(Liesbet De Graef)

FACILITY MANAGEMENT
(Peter Van Eyndhoven)

FINANCIAL MANAGEMENT
(Ben Dergent)
- Acounting
  (Hanne Rheinhard)
- Purchasing and Logistics
  (Martine Wolfaert)
- R&D Contracts and Reports
  (Rebecca De Backer)

INFORMATION TECHNOLOGY
(Tim Wouters)
- ICT Infrastructure and Service Desk
  (Davy Hendriks)

QUALITY
(Tijs Van Poucke)

APPLIED TECHNOLOGY AND PRODUCTION
(Caroline Rombouts)

GENERAL MANAGEMENT
- Process Management Office
  (Valerie Bastiaensen)
- Legal Office
  (Frederik Lecok)
- Management Office

We have **485** staff members from **42** countries

b. Regulatory framework

Responsible units= General Management offices

The main legal missions of ITM are contained in:

- Codex Higher Education;
- Decree of 30 April 2009 on the organisation and financing of science and innovation policy;
- Ministerial decree of 31 August 1998 on the recognition of the Prince Leopold Institute of Tropical Medicine as a reference laboratory for the diagnosis and treatment of tropical and infectious diseases;
- Law of 19 March 2013 on Belgian Development Cooperation;
- Royal Decree of 11 September 2016 on non-governmental cooperation
- Royal Decree of 11 September 2016 on the number of common strategic frameworks of non-governmental cooperation and their geographical or thematic coverage.

Academic recognition and funding by the Flemish Ministry of Education is the basis on which ITM is established. ITM has several public mandates and funding, laid down in a considerable number of agreements with Flemish and federal authorities:

- Management agreement with the Flemish Department of Education as a Foundation of Public Utility for post-initial training, research and services;
- Covenant with the Flemish Department of Economics, Sciences and Innovation for its research programme ('Structural Research Fund');
- Ministerial recognition of ITM as an Institutional Actor by the Minister for Development Cooperation (1/1/2017-31/12/2026) (letter dated 7 October 2016);
- Federal Ministerial Decree of 21 February 2017 on the allocation of the grant for the implementation of the Multiannual Programme 2017-2021 to ITM as an approved organisation (Institutional Actor – IA);

- Project partner "Mozambique", Flemish Department of Foreign Affairs (Global Challenges Division);
- Recognitions and multi-year agreements with the NIHDI (Public Health and Social Affairs) as reference centres or laboratories for tropical and infectious diseases, HIV/AIDS;
- Recognition as a Scientific Institution for tax and parafiscal deductions to promote research and development by the Federal Government;
- Project partner of the Flemish Department of Welfare.

In addition to the above legal mandates and approvals, ITM must comply with general laws and regulations on wellbeing, environment, heritage, etc. (Bio-)safety, welfare and environmental legislation (incl. ADR, IATA, Dual Use, ...) can have an important impact and must be respected in order to be allowed and able to perform our core tasks. In addition, the various activities at ITM must comply, often legally, with certain ISO standards, Good Clinical (Laboratory) Practices (GC(L)P), Nagoya protocol, ...

c. Staff policy and report

Responsible unit = Human Resources, input Safety, Health and Evironment for Wellbeing

The total number of employees at ITM in 2024 (situation on 31 December) is 485. This is a decrease compared to 2023. The number of interim employments decreases on average from 3.9 interim employees in 2023 to 2.9 in 2024[9]. The table below shows the total number of employees, the distribution of the number of employees by staff category and the gender ratio over the last four years.

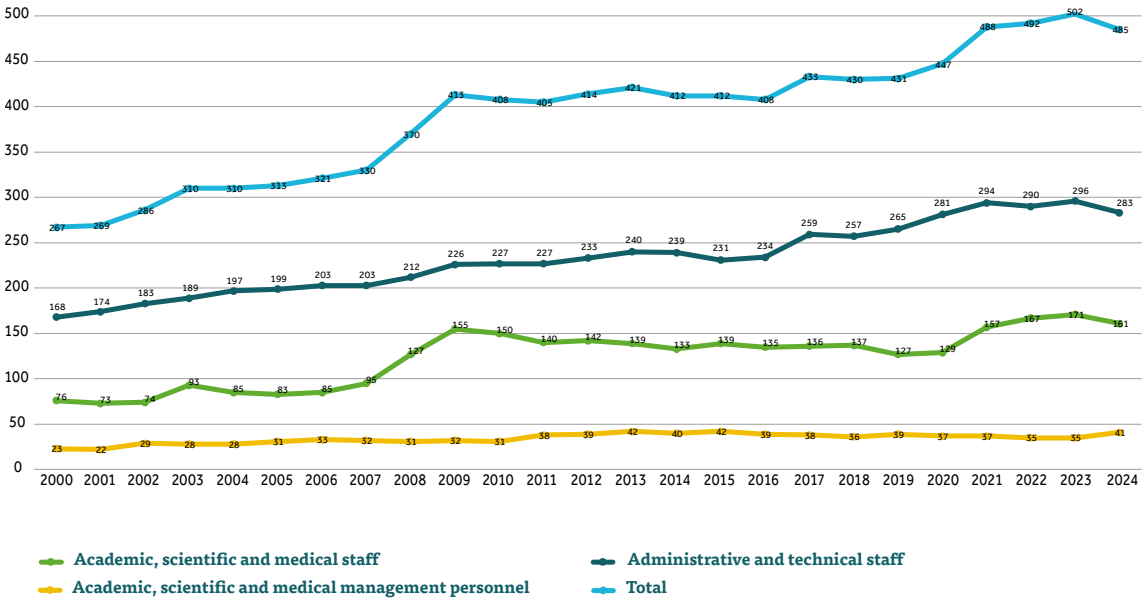
Table 35. Representation of staff numbers (total ITM and by staff category) together with gender ratios (total and by staff category) from 2021 to 2024.

Employees at ITM (situation on 31 December)	2019	2020	2021	2022	2023	2024
Total number of employees	431	447	488	492	502	485
Academic, scientific and managerial staff	39	37	37	35	35	41
Academic, scientific and medical staff	127	129	157	167	171	161
Administrative and technical staff	265	281	294	290	296	283
Male/female (M/F) ratio (%)	33/67	33/67	35/65	32/68	34/66	32/68
M/F ratio academic, science mental and medical staff (%)	59/41	57/43	54/46	51/49	47/53	54/46
M/F ratio academic, scientific and medical staff (%)	32/68	33/67	36/64	34/66	37/63	31/69
M/F ratio administrative and technical staff (%)	29/71	29/71	29/71	29/71	33/67	32/68

9 Source: Social balance sheets

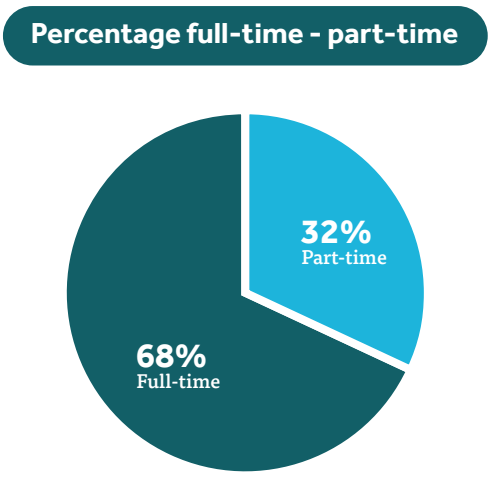
If we take the above data from the past few years, we see that the staffing levels have declined by 2024. Except for the Academic, Scientific and Medical Management staff category, all categories of staff are decreasing.

Figure 12. Evolution of the number of staff (total and per staff category) from 2000 to 2024.



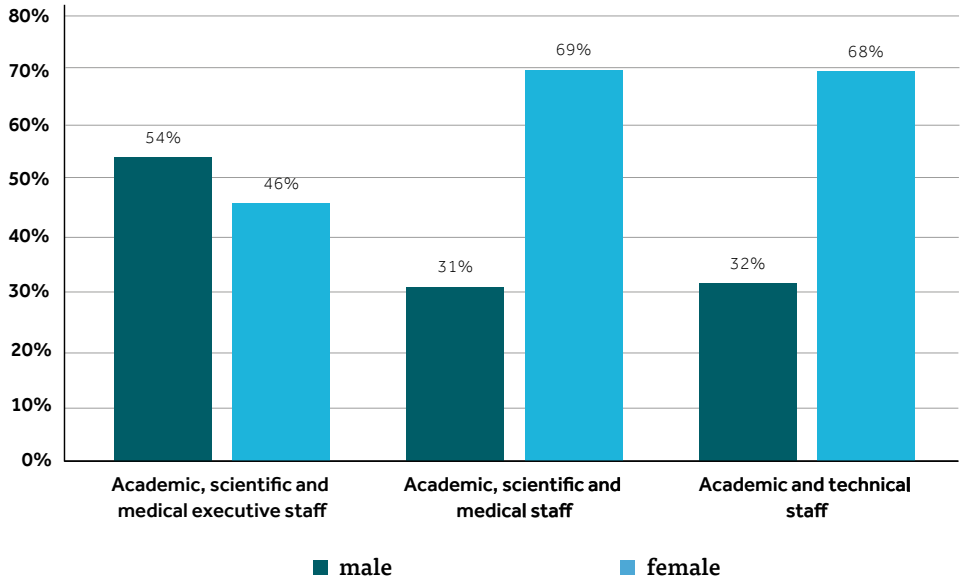
The ratio of full-time to part-time employees is 68% full-time and 32% part-time. Compared to last year, therefore, fewer employees are working full-time. Indeed, last year 71% of employees worked full-time.

Figure 13. Ratio of full-time to part-time employees on 31/12/2024.



Gender ratios across staff categories are shown below. In the academic, scientific and medical management staff category, there are proportionally slightly more men than women employed. In the other categories, there are proportionately more women employed than men.

Figure 14. Graphical representation of gender ratios in 2024 by staff category on 31/12/2024.



Over 81.24% of ITM employees have Belgian nationality. 8.87% are from the Netherlands, France, Spain, Germany and Italy. In addition, 9.90% of the workforce represents a wide range of nationalities (48), which is a direct translation of ITM's international character.

Figure 15. Presentation of the distribution of different nationalities among ITM staff on 31/12/2024.

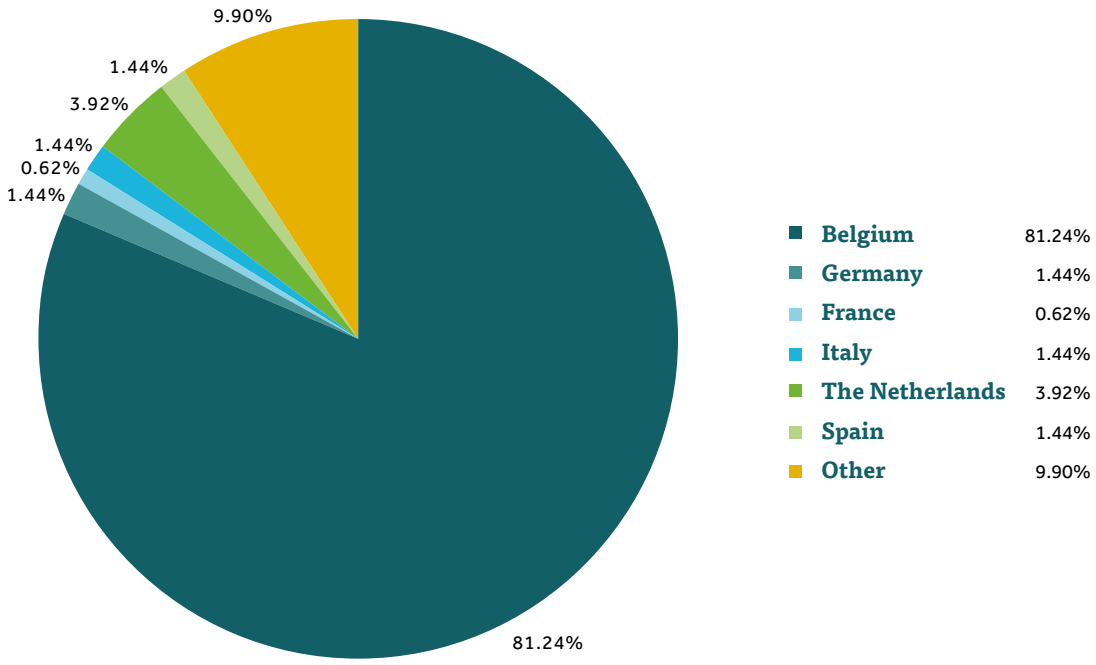
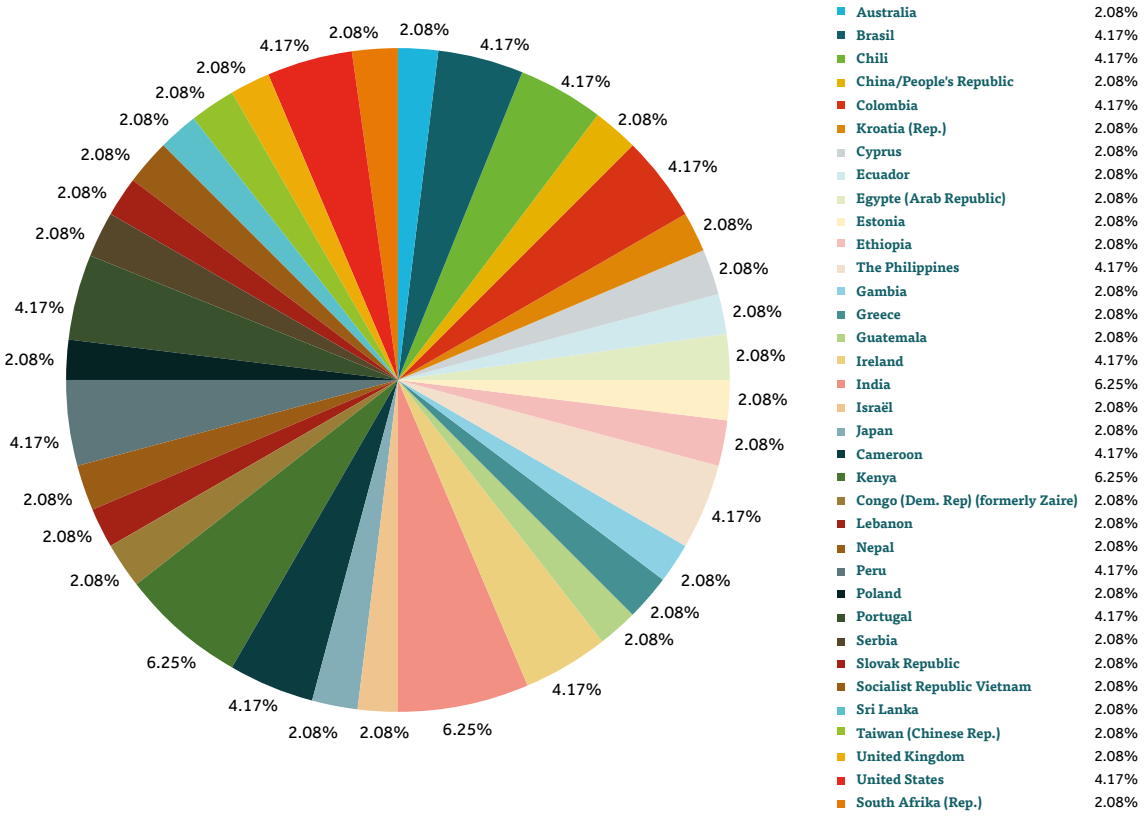
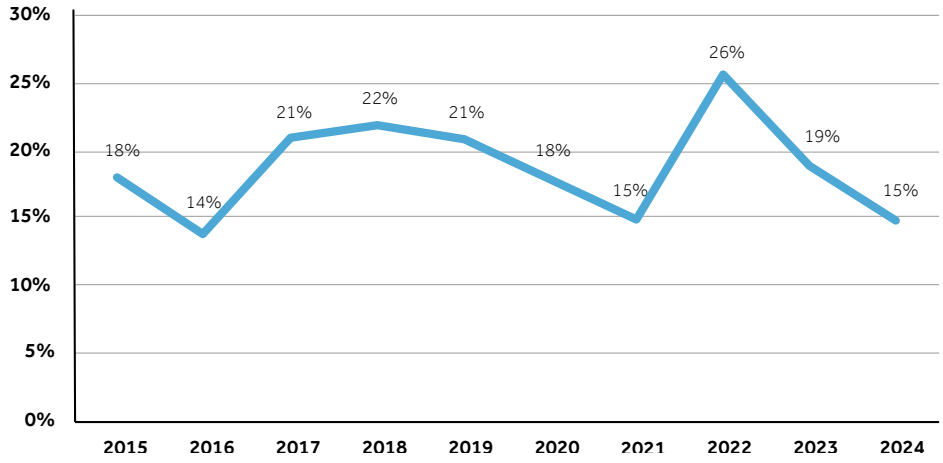


Figure 16. Presentation of the distribution of nationalities of almost 9% of ITM staff as at 31/12/2024.



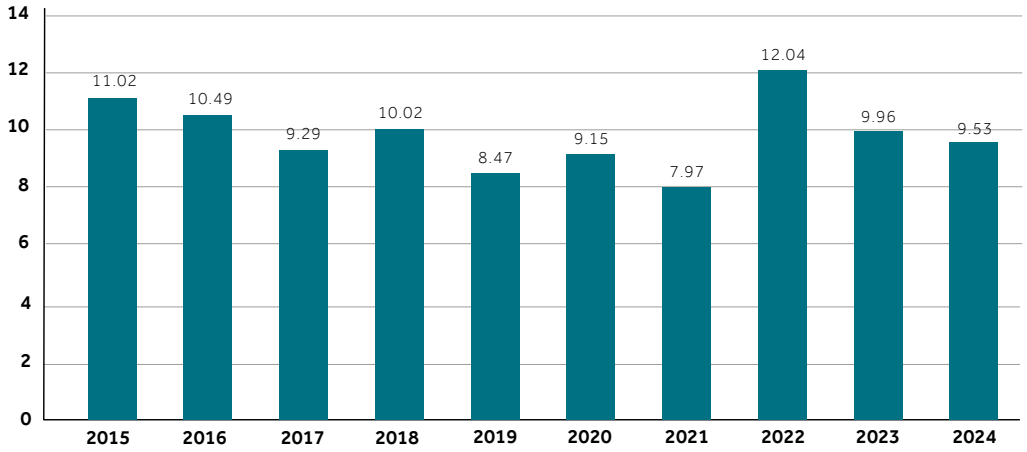
Staff turnover is continuing to fall. In 2023, turnover had fallen to 19%. In 2024, attrition continues to fall to 15%. In 2024, 57 new people were enrolled and 74 people were deregistered.

Figure 17. Percentage of employees leaving per year compared to the total average number of employees in that year.



Since 2018, training effort has been measured by the average number of training days per full-time equivalent (FTE) per year. When we convert the number of training hours (formal, informal and initial vocational training) into full-time days and divide it by the average FTE, it remains relatively stable at **9.53 days** in 2024. The legal standard of 5 days is still comfortably met.

Figure 18. Overview of the average number of training days per full-time equivalent (FTE) since 2015 (Source: social balances).



Wellbeing

Wellbeing concerns the mental and physical health of ITM employees which is monitored through:

Medical examinations

The occupational physician (Mensura) reports annually to the Committee for Prevention and Protection at Work (CPPW) through an annual report and consults with the unit of Safety, Health and Environment (SHE) on a regular basis.

Table 36. Overview of medical examinations in 2024.

Medical examinations	Number
Article 34: determination of definitive unfitness	1
Visit prior to resumption of work	6
Interim examination	1
Medical administrative follow-up of file	30
Maternity protection	14
Examination upon resumption of work	3
Follow-up of resumption of work under conditions	3
Periodic health assessment	68
Spontaneous consultation (fit for travel)	118
Sample collection - Technical examination	6
Targeted interim examination	108
Vaccination	9
Prior health assessment	2
Total	369

There were no occupational diseases reported to Fedris in 2024.

Wellbeing

An annual psychosocial well-being report is prepared and discussed at the CPPW by the PSY team. For 2024, 15 informal and 0 formal files were initiated with the Mensura psychosocial prevention advisor. In addition, 10 informal interventions were also carried out by the confidential counsellors.

In 2022, ITM organised a wellbeing survey in which work organisation, relations, content, terms and conditions were surveyed among employees. Based on the results, an action plan was drawn up to better meet the needs of our employees. In 2024, the implementation of this action plan continued including the ongoing clarification of ITM's vision and mission, the leadership programme and the development of a learning management tool to further support lifelong learning.

Throughout the year, ITM undertakes several initiatives in the field of wellbeing, including the stress permanences, two bicycle repair days, an exercise challenge, 'Well@Work' activities (with a breakfast, massage@work, ergonomic workplace analyses, self-defence workshop, plant exchange, introduction to mindfullness, among others), yoga sessions, Easter gift, Saint Nicolas gift, soup action, a New Year party, e.g..

Medical social team

The MST met 3 times in 2024 to follow up the 34 long-term absentees under the attendance and reintegration policy (2023: 32).

Check-ups

15 employees invoked the comprehensive health survey under CLA104 'employment plan for older workers'.

d. Financial report

Responsible unit = Financial Management

The full annual accounts have been submitted to the Flemish Government no later than 31 March 2025.

The assets amount to 69 million euros at the end of 2024. This represents an increase of about €1.85 million (+2.8%) compared to 2023 (€67.2 million). On the asset side, the variation is due to:

- On the one hand, an increase in (tangible) fixed assets by €0.7 million because of higher investments in 2024 compared to depreciation.
- On the other hand, an increase of 1.1 million euros in current assets, and more specifically an increase in other miscellaneous receivables (reclass credit notes: receivable to Acerta in the amount of 1 million euros relating to social and fiscal research refunds to be received and social wage mitigation 4th quarter).

Furthermore, other internal fluctuations can be noted in current assets:

- Among others, there is an increase of 0.4 million of orders in progress: EWI balance to be claimed of 1.1 million euro relating to closure of the EWI programme and the Flemish Resilience project, combined with projects in progress with lower debit balances (= more costs than receipts; counter-part of the account 46 'prepayments received' for the credit balances projects).
- Also an increase in trade receivables (+0.4 million euros) from 4.4 million euros in 2023 to 4.8 million euros in 2024. This heading is mainly receivables outstanding against funders ('fund claims' of research projects), mutual funds and various sales invoices. In 2024, the decrease in clinical biology is worth mentioning, but it is compensated by a 'medical call centre', around 100 rehabilitation files (which still had to be processed by the health insurance funds) and student grants transferred to the DGD (this account).
- Furthermore, on the other hand, there is a decrease in bank balances by €1.2 million to €28.5 million as at 31/12/2024 compared to €29.7 million as at 31/12/2023.
- Finally, there is a slight increase in accruals of €0.3 million from €0.6 million at the end of 2023 to €0.9 million at 31/12/2024: more costs to be carried forward to 2025 (Medius software), and the DGD allowance for student lodgings (accrued income: only paid over 2024 in early 2025).

Compared to budget 2024 (largely in line with the above statements), assets are about €4.9 million higher due to more orders in progress, more other receivables, mainly higher cash but lower accruals.

Liabilities amount to 69 million euros at the end of 2024. This represents an increase of around €1.85 million (+2.8%) compared to 2023 (€67.2 million). On the liability side, the variation is due to various fluctuations:

- First, there is a significant increase in equity (+5.6 million euros):
  - The addition to the permanent financing in the amount of 3.4 million euros from the legacy received at the beginning of 2024 (in the amount of 3.9 million euros less 0.5 million taken into result), cf. decision of the Board of Governors and in accordance with ASC advice.
  - Increase in earmarked funds (cf. support funds): addition +€0.9m
  - The increase in retained earnings: profit +1 million euros.
  - The payment of 350K euro in (capital) subsidies from the Flemish Climate Fund for (yet to be implemented) energy-efficient investments as part of the Masterplan Buildings.

- Furthermore, there was then another €3.7m decrease in liabilities due to:
  - Decrease in long term debts: -0.8 million due to repayment capital of loans.
  - Decrease in debts due in one year or less: -2.3 million euro. This is due, on the one hand, to the decrease in trade debts by 1.7 million euros (invoices to be received drops as at 31/12 (no project invoices, among other things) and in 2023 there was still a large invoice from Ethias in connection with group insurance) and, on the other hand, to the decrease in advance payments received on projects (-0.9 million euros: although DGD and Mbote project increased by 2.3 million euros, other projects decreased by 2.9 million euros, and NRC was written off by 0.3 million euros). There was also a slight increase of 0.3 million euro in payroll and tax debts.
  - Finally, there is a decrease in accruals and deferred income (-0.6 million euro), mainly the write-off of income to be carried forward ('deferred revenue' -0.5 million euro) due to the recovery from the NIHDI (0.9 million euro) regarding overpayments (2019, 2020 and 2021) from the ARC agreement.

Compared to the 2024 budget (largely in line with the above statements), liabilities are about €4.9 million higher due mainly to an increase in equity, no more provisions, higher prepayments, but lower trade payables and lower accruals.

The result for the 2024 financial year concerns a profit of +1.9 million euros and is improved by 3.5 million euros in 2024 compared to 2023. The 'operating profit' amounting to +1.6 million euros also increases sharply by 3.2 million euros, and is further improved by a positive financial result of +0.3 million euros in 2024 (compared to a financial break-even in 2023). The 2024 'balance' without earmarked funds (amounting to an increase of approx €900K support funds and R&I fund) is less strongly positive and thus amounts to €1 million, which is still €2 million higher than 2023, €950K higher than budgeted and €1.7 million higher than forecast. A combination of several factors explain the variances: among others a better financial result, more overhead income, higher turnover from Production, higher defiscalisation receipts, underspending staff envelopes, a higher balance from support funds, the legacy, etc..

On the one hand, there is a strong increase in operating income of €3.9 million compared to the previous year: among others increase in the basic allowance from Education (index), a slight increase in income from medical services, higher tax and social refunds, a significant increase in other income (among others production testing, overhead, legacy, support funds), an increase in grants projects (mainly partner payments), but on the other hand a decrease matching account (71) projects (although more EWI costs due to programme completion, but mainly due to lower DGD costs compared to last year).

On the other hand, it sees only a limited (and relatively much weaker) increase in operating expenses of €0.7 million compared to 2023. This is 3.2 million less than the increase in operating income, which explains the increase in operating profit. There is a decrease/internal shift in goods (60) due to a new Medius categorisation (P2P tool). Viewed together with the services account (61), there is also a decrease of €0.5 million. Taking into account that EUR 1 million from DGD was not neutralised last year, there is in fact a slight increase of about EUR 0.5 million. There is an increase in vaccines and reagents in line with consumption and revenues from medical services and Production, but also in projects. Furthermore, ITM's operating costs are under control and down compared to last year (e.g. energy costs, interims). Personnel costs (62), on the other hand, rose slightly by €1 million (+2.4%). The explanation in remuneration is mainly the indexations (approx. 3% but with lower average number of FTEs), and various evolutions at ITM, medical services, EWI and DGD and external projects. The personnel evolution consists of +0.4 million euros on personnel envelopes, +0.6 million euros on medical services, and a status quo in the personnel allocation cost of research projects (although EWI increased, but DGD decreased and stable on external projects department H). Finally, depreciation is €160K lower than last year.

Compared to the 2024 budget, we also see (in line with statements mentioned above) a stronger increase in revenues (+3.5 million euros) than the projected costs (+1.8 million euros), resulting in an operating result 1.7 million higher than budgeted. Personnel costs are slightly lower than budgeted. Note that there are always differences between the various departments (project / non-project), so it is also necessary to look at this analytically. The financial result is also 0.4 million higher than budgeted.

Finally, also relevant to mention:

- Liquidity ratio 2024 increased: 1.34 (is greater than 1) compared to 1.21 in 2023, and higher compared to budgeted 1.22;
- Utilisation of investment budget 2024: 1.8 million euros or 134%/106% compared to budget/forecast mainly due to own (catch-up) contribution for the immunology lab (Flemish Resilience project):
  - 717K euros: Immunology lab (hardly any invoices on investments last year, own contribution);
  - EUR 680K: IT infrastructure implemented (nodes, WIFI points, backbone);
  - 364K euro: buildings including façade and joinery campus Mortelmans, business continuity (HVAC) Sint-Rochus 6.
- The 2024 profit appropriation: addition to earmarked funds €892,717 (support funds), withdrawal from earmarked funds €296 (R&I fund), with increase in retained earnings +997,071 to total retained earnings of €11,060,917;
- Addition to permanent funding (equity): €3,427,524 (legacy);
- ESA 2024: total revenue/expenditure 72,122 keur, and final state with result carried forward total revenue/expenditure 87,414 keur.

Last but not least, it is important to note that the file regarding the 'foregone' funds from the past for the group insurance 'goal to be achieved' (equalisation of status with universities, but without subsidy) still remains open, pending possible compensation from the Flemish Fund for Lastendelging.

The notes to the annual accounts in National Bank format will be updated with review by the auditor, including the notes to the pension plans. An annual report was also drawn up in accordance with the LCA model.

A more detailed explanation is prepared in the financial commentary for the benefit of the Government Commissioner in implementation of the Education Management Agreement and can still be delivered later for information.

An evolution of recognised revenue over the different years is shown below, as well as a pie chart showing the different funding streams in 2024.

Figure 19. Evolution of ITM recognised revenues from 1995 to 2024.

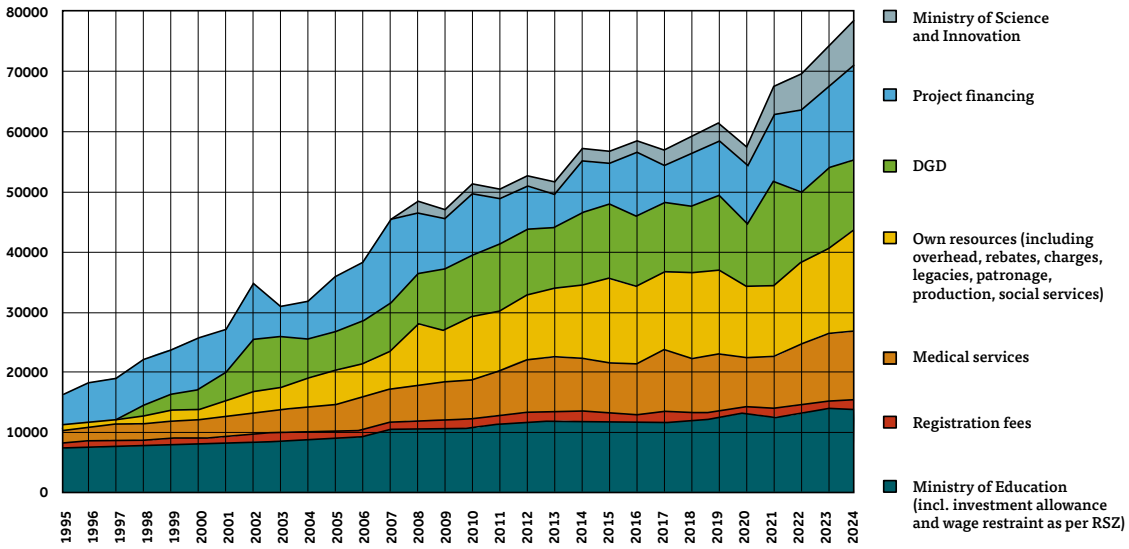
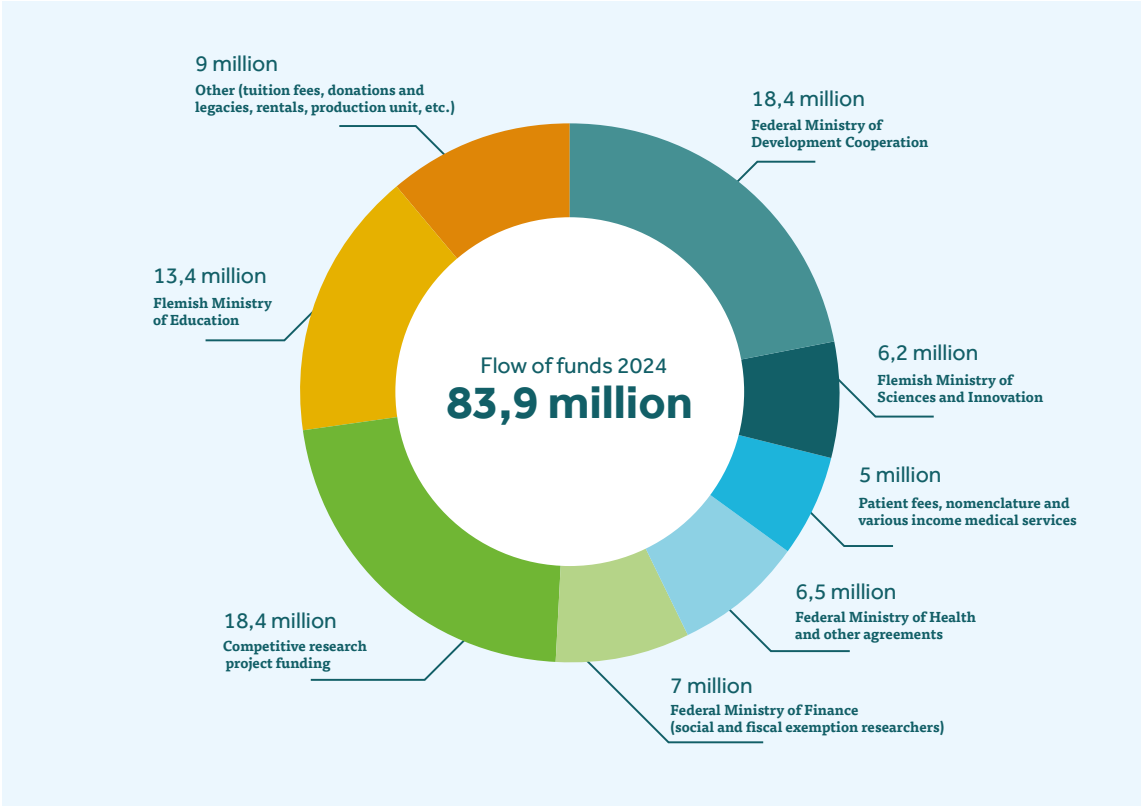


Figure 20. Flow of funds 2024.



e. Risk Management Policy

Responsible unit = Quality

Risk management at ITM is carried out according to the Higher Education Risk Management Review Model. As part of the ITM Policy Plan 2020-2024, a review was conducted in 2020, which included the identification of ITM risks. Annually, the analysis is updated where necessary, and the status of control measures is discussed.

At the organisational level, risks are identified within the following areas:

- Risks linked to ITM's core missions (teaching, research, and service)
- Risks related to the reputation of ITM
- Risks related to our employees (recruitment and retention policies, welfare, etc.) and external stakeholders (patients, students, partners, etc.)
- Risks related to compliance (meeting laws and regulations)
- Financial risks

In addition, ITM has an operational management system for Quality, Safety, and Environment that allows for ad hoc responses to new risks. In addition to controlling risks at the organisational level, risk management is applied at the process level within the various fields in which ITM operates. This is often prompted by normative requirements (in accredited laboratories, central processes, clinical studies, educational activities, etc.).

For the highest priority risks, measures are defined to minimise the risks. If new management measures need to be developed for a risk, this is followed up with an action plan. Detected risks are reported to Management (Management committee) and discussed annually in a management review. The main results are reported to the audit committee, single audit, and Board of Governors.

Dynamic Risk Management System (DRMS)

Within the framework of welfare legislation and the integrated policy of Quality, Safety, Welfare, and Environment, ITM must have a DRMS. This is a system in which risks are mapped at the level of the organisation, department/workstation, and individual.

In the area of DRMS, the main risks lie within the following domains:

- Working with biological agents
- Travel
- Psychosocial burden
- Ergonomics

Integrity Policy and Complaint Handling

ITM staff, researchers, and students must respect internationally recognised standards of academic and scientific integrity. Reports of possible violations of scientific integrity are independently reviewed by the Scientific Integrity Committee.

In its research activities, ITM aims to produce results that are reliable, reproducible, and, as far as possible, accessible to the relevant scientific research community. If relevant, this involves obtaining the approval of a review board, such as the internal Institutional Review Board (see above), biobank administrator, or an external ethics committee, prior to the start of the research.

In addition, employees of ITM undertake to preserve at all times the confidentiality of the data with which they are confronted in the context of their teaching, research, or service, as well as in their administration. In contacts or collaborations with others, employees of ITM guard against self-interest and conflicts of interest.

Reports on integrity, fraud and complaints

Incidents related to integrity, scientific integrity, information security, fraud, and complaints, including those related to outpatient services, are followed up through established procedures. Following an investigation of the report, appropriate action is taken to make corrections and implement corrective actions where necessary.

There were eight reports of aggression by patients towards outpatient clinic staff. These reports were handled by the SHE unit in cooperation with the psychosocial aspects prevention advisor and the outpatient clinic aggression team.

There were no external reports related to the integrity of ITM employees in 2024. No reports related to financial fraud were made.

ITM established a whistleblower reporting channel in February 2023 and implemented a process for follow-up and protection of whistleblowers in accordance with legislation. Reports are followed up according to the procedure.

In 2024, there were no reports of violations of scientific integrity. The ITM Committee on Scientific Integrity can also be consulted for opinions.

f. Audits and evaluations

Responsible unit = Quality

External evaluations

Below are the results of the external audits conducted on ITM during 2024. No critical observations were noted with a direct impact on the continuity of our operations.

Clinical and reference laboratories

Periodically, our clinical and reference laboratories are audited by BELAC (Belgian Accreditation Organisation FPS Economy). These laboratories perform tests accredited to ISO 15189, ISO 17025, and ISO 17043. The certificate for these three standards was granted in 2021 and remains valid until 2026. In 2024, the laboratories underwent the second follow-up audit within the five-year accreditation cycle. The accreditation scope was expanded to include two tests at the Mycobacteriology laboratory for ISO 17025. This laboratory also received additional ISO 17043 accreditation for the ring test it organises on behalf of the WHO.

Central Policy and General Management Offices

The Central Policy and General Management Offices have been ISO 9001 certified since 2014. In 2024, these offices underwent a successful external audit as part of the follow-up of the certificate, which remains valid until March 2026.

Financial processes

Our financial services are audited annually in accordance with Belgian law by the company auditor. Comments are reported to management and the Board of Governors.

Internal audits and evaluations

The ITM Quality Coordinator is designated as the organisation's Internal Auditor. The ITM internal audit programme is co-constructed by the Audit Committee of the Board of Governors.

Internal audit programme:

In accordance with the requirements of the standards applicable to the various activities of ITM, an internal audit programme is defined annually by the Quality unit. The main objective of the internal audits is the pursuit of continuous improvement.

The internal audit programme is risk-based and compiled taking into account the results of historical audits, risk analyses, management reviews, reported complaints, deviations, etc. The programme covers the basic activities of ITM:

- Services: accredited laboratories, outpatient services, clinical trials, CATT production, etc.
- Research, with a focus on the highest risk activities and studies.
- General legislation: e.g. GDPR, safety, biosafety, welfare, and environment.
- Central processes (e.g. purchasing, hiring, IT infrastructure, financial processes, etc.)

Internal audits are performed by ITM employees who are qualified to do so through a training programme (training, internship, etc.). If the required competence for the domain to be audited is not present or if independence is not fully assured, external experts are called in.

The results are reported after each audit. At a minimum, this is done to the unit head or person in charge of the activity.

When relevant, critical audit results are reported to management by the Quality Coordinator (Unit Head Quality), Data Protection Officer, and/or the Unit Head SHE.

As Internal Auditor, the Quality Coordinator reports the results of both internal and external evaluations to the Audit Committee of the Board of Governors. Results of audits may trigger areas for improvement, comments, and recommendations in Management Reviews or external reports.

In 2024, internal and external evaluations reported no critical deficiencies with direct impact on the continuity of ITM's core business.

g. Safety, Health and environmental policies

Responsible unit = Safety, Health and Environment and Management

The policy plan on Safety, Health and Environment is, on the one hand, grafted onto ITM's core tasks of education, research and medical service and, on the other hand, carrying out risk analyses and formulating advice to further shape the safety culture within ITM.

On this basis, an annual action plan is formulated every year in consultation with the management and CPPW members. Despite a long-term understaffing of the unit, 73% of the predefined targets were still achieved.

Safety

In the first quarter of 2024, the focus was mainly on the follow-up and further refinement of the digital incident reporting form following its launch in January 2024. In addition, work continued on the well-being action plan was drawn up based on the results of the 2022-2023 well-being survey. The vision and mission of ITM was further clarified and several leadership training trajectories were launched. The digital reporting form for cross-border behaviour by third parties and the buddy system within the outpatient clinic were evaluated and adjusted where necessary. The welfare survey also showed that students needed additional mental support. To meet this need, a confidential counsellor, specifically for students, was appointed.

The year 2024 was also dominated by ergonomics: twelve workplace analyses were carried out, the offices of the library and the central reception were ergonomically optimised, and an ergonomic analysis with an accompanying action plan and specific training were also developed for the Purchasing and Logistics Unit.

As a result of the recommendations of an internal QESH audit, steps were taken to further optimise and clarify the procedure regarding the prevention of psychosocial risks at work, together with the PSY team. The absenteeism and reintegration policy has also been completely renewed, following regulatory changes, with one of the pillars being the development of a preventive attendance policy.

In addition, together with the Quality and Human Resources Unit, the necessary preparations were made for the launch of the new learning management system. Several E-learning around safety, wellbeing and environment as well as biosecurity were developed that employees can follow after Go-Live.

In terms of crisis management, in addition to a general evacuation exercise, an external training course on cybersecurity was organised for the crisis cell in 2024, in cooperation with the Information Technology Unit.

Finally, several other risk analyses were also carried out in accordance with the Dynamic Risk Management System. This at organisational, workplace and individual level. At the level of the individual, the medical risk list was further updated so that, in future, medical follow-up by the occupational physician can even better match the risks to which an employee is exposed when performing his/her activities. The fire risk assessment was also updated for building 002 and 006.

Safe travel

Given the geopolitical situation, in 2024, in cooperation with ITM's new security partner, intensive efforts were again made to ensure safe travel. On the one hand by providing travellers and the chain of command with clear reports and information on the security situation of a given country, as well as by further optimising the services provided by the SHEs Travel Office so that the necessary support before, during and after a business trip can be provided at all times. Through a plenary session, all travellers were again informed about the services and support options provided by both Travel Office and the security partner ITM works with.

Biosafety

Details related to biosafety can be found in the biosafety coordinator's annual report, which is available internally at the Safety, Wellbeing and Environment Unit and was discussed at the CPPW. In summary:

- Biosafety approval:
  - In 2024, there were no changes that required reporting. This means ITM currently has a valid biosafety authorisation for 27 activities.
- Advisory services:
  - Construction insectarium in basement of 155
  - Masterplan Buildings – biosafety/lab infrastructure
- Special Emergency and Intervention Plan
  - At the request of the National Crisis Centre, to strengthen provincial emergency planning for organisations with at least containment level 3, a special Emergency and Intervention Plan was developed.

Environment and sustainability

In 2024, energy costs were again higher than the 2016-2020 period. To respond to this, another ambitious target was set for 2024, namely 20% less consumption compared to the average of the past six years. This target was unfortunately exceeded by 8 %. Compared to 2023, we see a 4% increase in total energy consumption, due to increased gas consumption for heating as, at the request of staff, the minimum indoor temperature was increased from 19°C to 20°C during the winter months. Energy consumption remained stable despite the commissioning of the immunology labs. This is due to the continued commitment to ITM's energy-reducing measures.

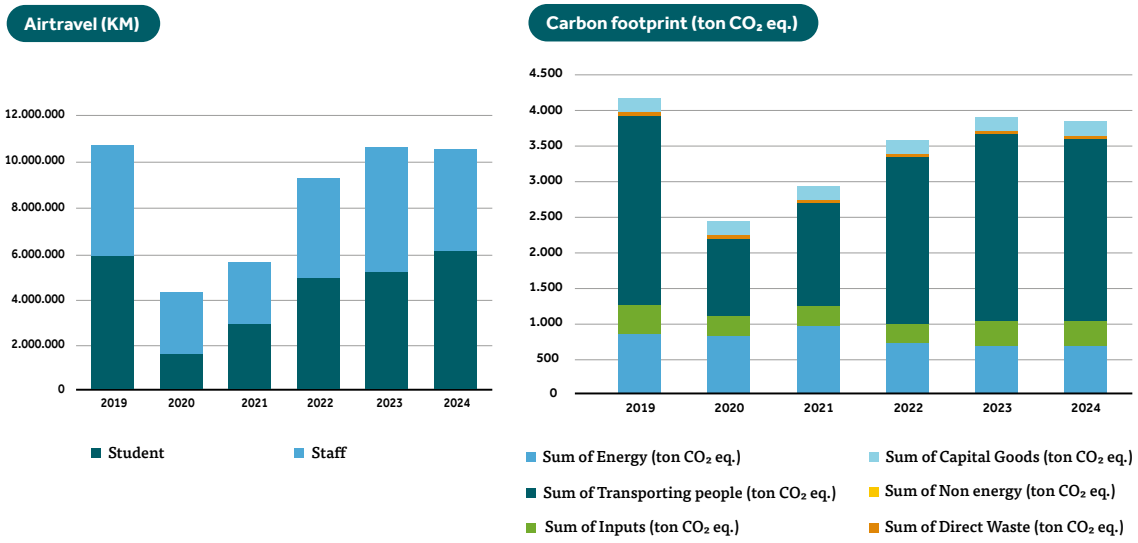
Even in 2024, the Technical Manager continued to plan and monitor the measures, in cooperation with the ITM management. The Masterplan Building Project Manager helps to ensure their incorporation in the short and medium term.

Given the geopolitical situation and the significant price fluctuations on the energy market in recent years, ITM will switch to a framework contract via KU Leuven, starting 1 January 2025 with annual fixed tariffs. Although this tariff is higher than the current variable tariffs, it will offer more certainty regarding the estimated annual energy cost.

The share of energy consumption in the ITM carbon footprint remained stable at 18% (natural gas only, 100% purchased green electricity is considered 'offset').

The share from international travel also remained stable at 68%. Air kilometres travelled remained at about the same level as 2023, at 10.5 million km, which is similar to 2019 (pre-COVID). To reduce the impact of emissions from international travel, an extension of the ITM travel policy was adopted in 2023. Because of ambiguity on whether funds from our lenders could be used for CO_2 offsets, no CO_2 emissions were offset in 2024. ITM is currently in dialogue with our major lenders, among others, to still make this possible in 2025.

Figure 21. Evolution of flight kilometres travelled and carbon footprint ITM (data carbon footprint 2019 & 2020 was externally validated).



Workplace accidents and incidents

To measure the evolution of occupational accidents, relative figures such as the severity and frequency rates (Eg and Fg) are used. These figures only take into account work accidents with temporary disability and do not include work accidents without absence from work, first aid and accidents on the way to or from work. The Fg[10] declined sharply in 2024 due to an increase in total working hours and a decrease in the number of accepted workplace accidents. In turn, the Eg[11] experiences a significant increase due to an increase in the number of calendar days lost compared to 2023.

10 Fg (frequency rate) = number of accidents x 1,000,000)/number of hours of exposure per year (Fg = x, where x corresponds to the number of occupational accidents per year out of approximately 600 workers)

11 Eg (Severity Rate) = number of days of disability x 1,000)/number of hours of exposure per year (Eg = 1 corresponds to 1.5 days of absence for all workers)

Figure 22. Evolution of the frequency rate of occupational accidents of ITM employees from 2017 to 2024.

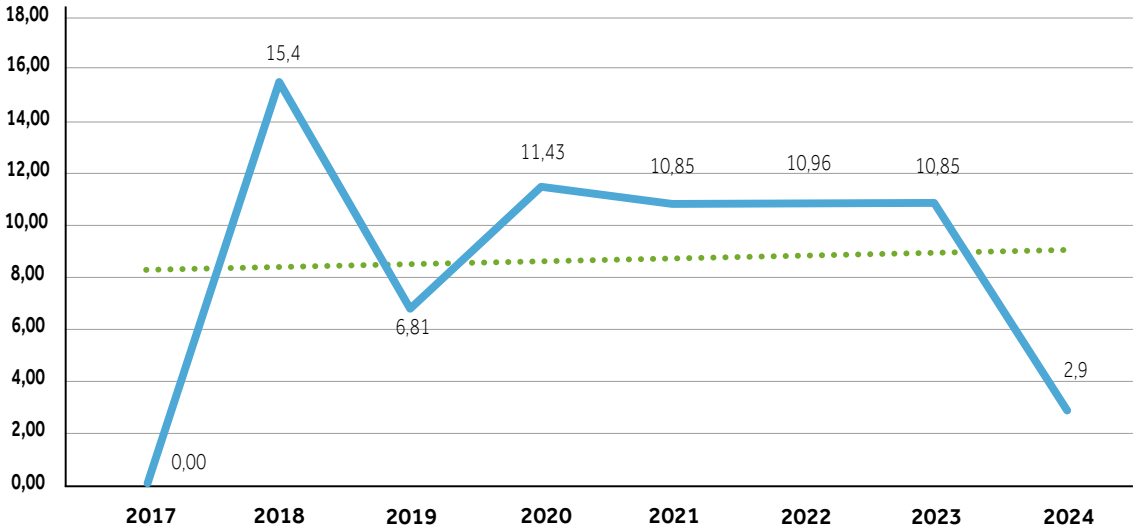
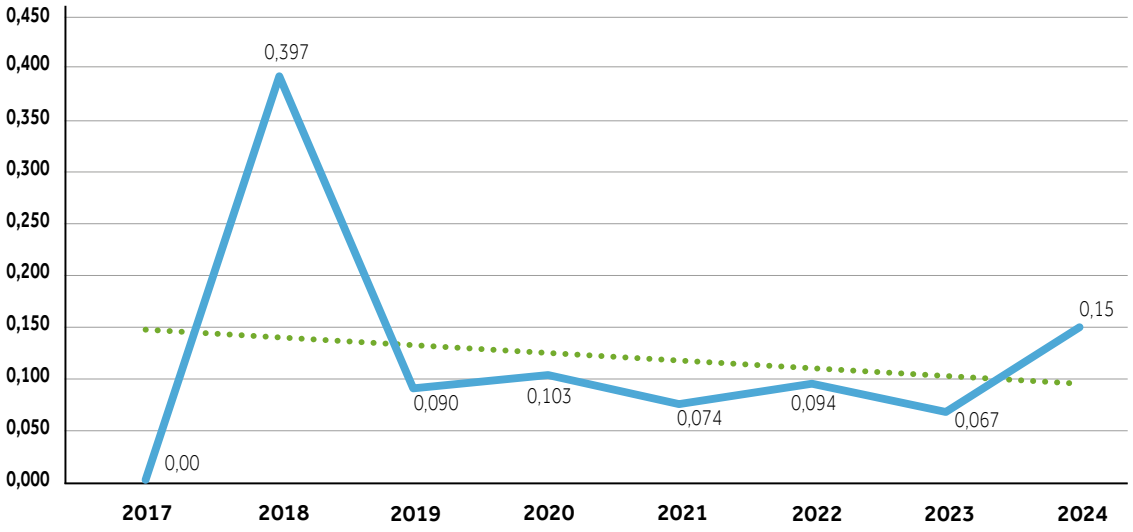
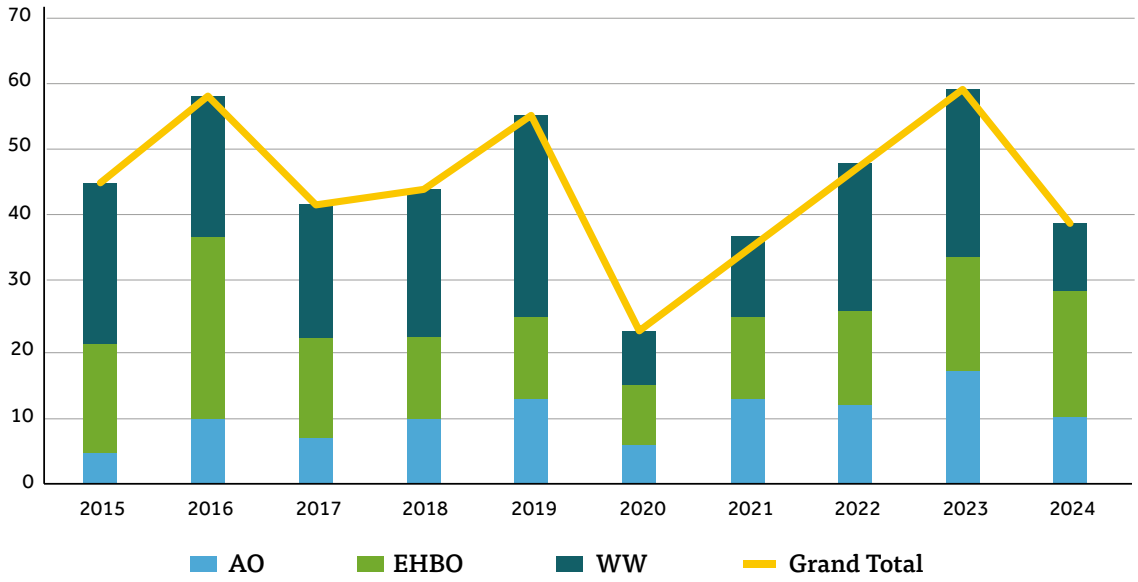


Figure 23. Evolution of the severity rate of occupational accidents of ITM employees from 2017 to 2024.



In 2024, 10 workplace accidents were reported internally. The workplace accidents were mainly caused by potential exposure to biological agents and/or body fluids, body crushing and torsion, biting incidents and physical overexertion, accounting for 105 lost calendar days. In addition, 19 first aid accidents were reported. The increase in the number of reported first aid incidents is partly explained by the continued increase in the reporting culture within ITM. Indeed, every incident is seen as an opportunity to learn and improve the safety at ITM.

Figure 24. Evolution of the number of incidents on the ITM from 2016 to 2024.

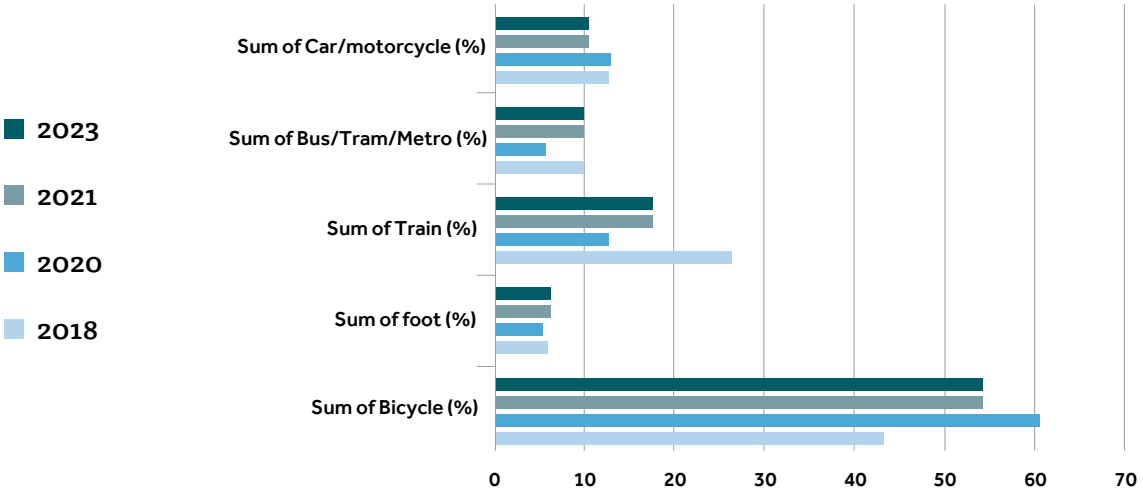


Accidents on the way to or from work

At ITM, 90% of staff commute by bicycle, on foot or by public transport. This is a positive in environmental and sustainability terms but also increases the likelihood of commuting incidents. 26% of all recorded incidents in 2024 were during a commute. In 80% of commuting incidents in 2024 the employee was riding a bicycle. In contrast to 2023, human damage was rather limited in almost all incidents. Thus, only two lost calendar days were counted, compared to 86 days in 2023. Sadly, it should be reported that one of our expatriates died in DRC due to a tragic commuting incident.

The number of incidents themselves was 2.5 times lower in 2024 than in 2023. Presumably, the combination of the many campaigns as well as the mild winter has a role to play here. Despite the significantly lower number of reported commuting incidents, ITM will continue to focus on raising employee awareness around safe commuting, especially with the roll-out of bike leasing at the end of 2024.

Figure 25. ITM Modal Split measured at various time points (Mobiscan 2018, 2020: Intro CAO 3/12/2019 PC337, 2021: Federal Mobility Survey, 2023 preparation file Commuter Fund).



Based on data from the 2023 modal split. Since the modal split is quite stable over the years, it was chosen not to calculate it in the year 2024. The next measurement is scheduled at the end of 2025 where, among other things, it will be examined whether the rollout of bicycle leasing in the fall of 2024 made a positive contribution in the number of staff coming to work by bicycle.

h. Infrastructure (ICT and Buildings)

Responsible units = Technical Management, Information Technology and Process Management Office

Building management

Building management at the Institute of Tropical Medicine is essential to a safe, sustainable and comfortable work environment. It contributes to structural integrity, reducing costs, ensuring safety and reducing environmental impact. This management is critical to improved work quality, efficient use of resources and a sustainable future.

The following works and projects were carried out in 2024:

- Further renovation of showers in student lodge Napay
- The installation of solar panels on the roof of Karibu
- Renewal of exterior joinery and façade renovation of Campus Mortelmans
- Removal of asbestos-containing façade slates at Campus Mortelmans and local asbestos removal in St. Rochusstraat 4
- Start-up framework catering contract
- Update of building management software Siemens
- Digitisation of work orders in Planon
- Renovation and commissioning of the Immunology laboratory
- Creation of an additional meeting room at the Purchasing Department
- Creation of office space for the Immunology Department on the fourth floor, library
- Renovation of insectarium 155-1/02
- Roll-out of freezer and refrigerator purchases for energy-saving measures

Figure 26. Evolution of the various Technical Management cost centres since 2012.

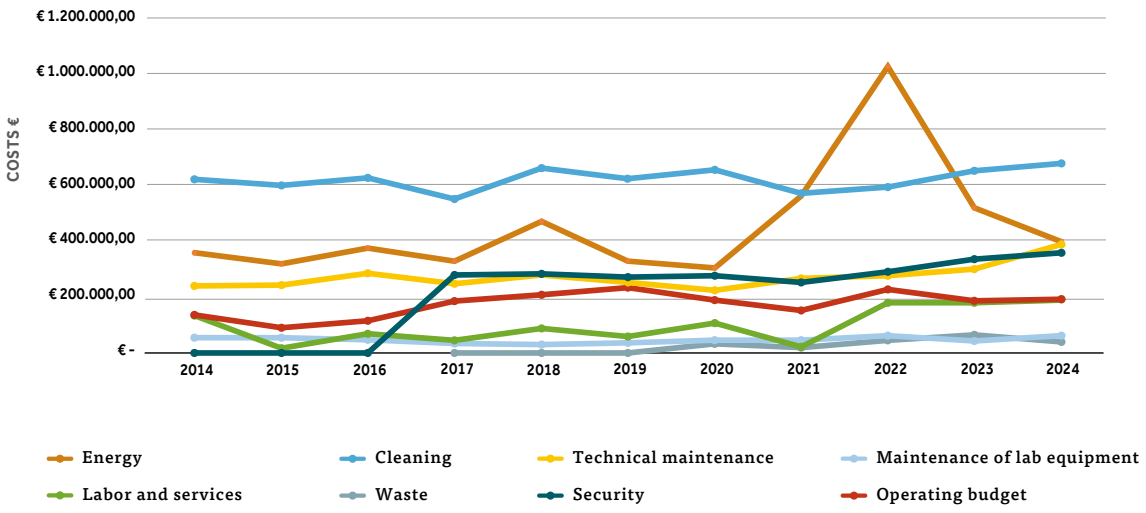


Figure 27. Evolution of total cost of ITM buildings since 2012.

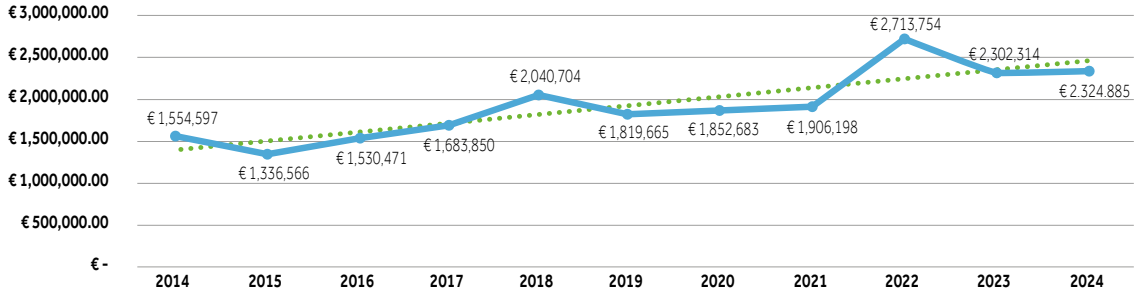
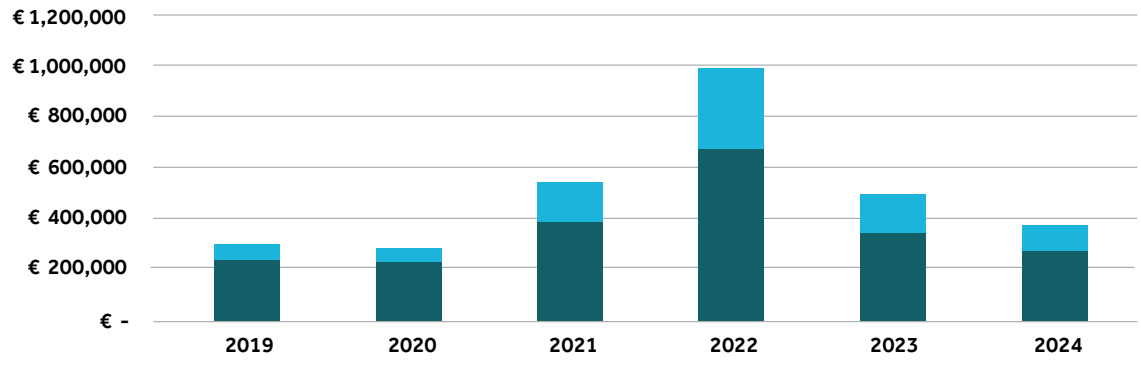


Figure 28. Evolution of energy costs ITM (without lodging).



	2019	2020	2021	2022	2023	2024
Gas	€61,074	€54,287	€154,319	€319,745	€153,452	€99,109
Electricity	€241,999	€229,878	€387,182	€682,809	€346,684	€277,612

ICT infrastructure

The ITM ICT service builds, manages and secures the ICT infrastructure and provides the ITM-wide ICT service desk. In collaboration with the PMO service, the service also builds and maintains business applications to perform certain core ITM tasks efficiently and effectively.

Outside operational activities and delivery of a significant number of smaller projects, the main achievement in 2024 is the upgrade of the SQL Server database infrastructure while maintaining all deduplication and backup functionalities.

Relevant upgrades to the telephony infrastructure and domain controllers have also taken place.

The multi-year plan to mitigate the existing server room as a single-point-of-failure has also been completed. The backup server room is operational and contains the critical ICT infrastructure components to cope with a severe incident in the main room and limit the operational impact in time.

In terms of business applications, new functionalities were developed for the internal applications Archie (student and course administration) and KRYSS (research/project monitoring), and the Test2Know platform for STI and HIV self-testing became operational. A number of major software procurements were prepared in 2024: introduction of an integrated library system, replacement/upgrade of PURE (research portal), successor to LIMS (lab information system incl. electronic lab notebook), SPD 3.0 (Electronic Patient Record). Furthermore, optimisations were carried out on a number of other applications.

i. Communications and fundraising

Responsible unit = Communications

The Communication Unit protects and enhances ITM's reputation in line with its institutional objectives.

Internally, the unit provides ITM staff with tools and training to communicate effectively and represent ITM externally, contributing to a strong communication culture.

Externally, the unit focuses on raising brand awareness and positioning ITM as a trusted and innovative institution in tropical medicine and public health.

In addition, fundraising and public outreach encourage financial support and strengthen public enthusiasm for ITM and science.

Science Communication

With our science communication, we inform a broad national and international audience about the science and health topics in which ITM is active.

We actively engage the public through events such as Nerdland Festival, Antwerp Pride and the Day of Science.

In May 2024, we launched the second season of the podcast series "Transmission". The podcast, awarded the Belgian Podcast Award and the Best of Content Award, reached a total of 41,175 downloads by the end of 2024.

We also developed eight explainer videos in which ITM scientists explain health issues in an accessible way.

Media coverage

In 2024, ITM had a high media reach with 2900 editorial press mentions[12] (+66%), a potential reach of 5.3 billion article views[13] (+86%) and an AVE[14] of €48.7 million (+86%). The increase compared to 2023 is explained by higher reach in international media.

The main news items in 2024 were "the impact of mouthwash on health", mpox research, antibiotics in food and invasive mosquito species in Belgium. The focus in media coverage in terms of research ambitions was on "emerging infections and outbreaks".

The leading media were Gazet van Antwerpen and Het Nieuwsblad, followed by vrt.be. This was followed by Het Laatste Nieuws, La Libre Belgique and De Morgen. The sentiment of the articles was positive with a 'net tonality' score[15] of +32, which is 16 points less compared to 2023.

Worldwide, ITM was mentioned 1,200 times, up 48%. 89% of the reach was in the Western Europe and North America regions. Southeast Asia accounted for 11% of the reach. Belgium and the United States and had the most reach.

Figure 29. Evolution of ITM visibility in national and international media.

12 The number of appearances in online and print articles. (Source: Meltwater)

13 Potential reach based on number of unique website visitors per month. Reach is based on data from SimilarWeb. (Source: Meltwater)

14 3 Advertising Value Equivalency (AVE) is used to assign a value to a published article. (Source: Meltwater)

15 The net change (up or down) in sentiment over the period. Sentiment is positive, negative or neutral. Meltwater's software determines sentiment based on different leading words for a specific tone.

Social media

ITM had five social media accounts in 2024: LinkedIn, Facebook, X (former Twitter) Dutch-speaking and English-speaking, and Instagram. The total number of followers on our channels increased by 146% to more than 36,900 followers across all channels, with Instagram (+36%) and LinkedIn (+66%) being the fastest risers.

Besides followers, we also measure reach and engagement for our social media channels. These parameters influence how often our content is shown to users.

Engagement (interactions, reactions, dialogue, reposts ...) increased by 23% by 2024.

On Facebook, there was slower growth compared to previous years, with an engagement increase of only 6%. On X (formerly Twitter), we saw a 5% drop in engagement. Instagram also had a decrease in engagement rate from 5.65% to 5.10%. On LinkedIn, on the other hand, engagement increases by 49%. Overall, we scored better than average compared to other education and health institutions.

Online communication & web platforms

The number of users of the ITM website increased by 5.23% to 225,675 in 2024. We published 57 articles on the site, implemented improvements to the education module, ensured the flow of donor information to Salesforce, and started recruiting clinical trial candidates through the site.

The travel medicine site www.wanda.be had 213,772 users in 2024, an increase of 15.5%. The website achieved the AnySurfer accessibility level WCAG 2.1 AA. The agreement with the Care Agency was renewed, allowing us to implement new improvements to Wanda in the coming years.

We also supported the MilPasos app, Test2Know and Kink Responsibly, and launched the Platform on Higher Education and Science for Sustainable Development.

Newsletter

Subscriptions to our monthly external newsletter increased from 5,690 to 6,775.

Internal communication

In 2024, the following channels were used for internal communication: Snippets, Tropbox, ITM Mail, the information screens and the various internal events.

Snippets were broadcast 22 times and were opened by more than 80% of recipients on average. The click-through rate to Tropbox and other sites exceeded 42%. Typically, Snippets are read more in the last and first months of the year.

On average, an ITM Mail was sent twice a week. This channel is used additionally to the Snippets.

Internal communication contributed to these realisations in 2024:

- Optimisation of internal communication channels: together with the PMO unit, the ITM intranet (Tropbox) was modernised to make it more accessible and functional. By 2024, the homepage received an average of 15,000 to 20,000 views.
- Supporting services in their operation: subsites on Tropbox (artificial intelligence initiatives, the ITM library, CROO Service documents…), training courses and communication advice (presentation techniques and coaching candidates participating in funding calls).
- Supporting units to organise events: various internal and external events, such as the webinar series 'A Date with Science', the launch of a new workshop series on 'Health & Migration' and initiatives by the Safety, Health and Environment Unit (SHE).
- Promoting culture and connection: ITM Meets, the ITM New Year party and organising onboarding days for new employees.

Start-up of external communication for the Masterplan Buildings

To maintain its leading role, ITM is investing in a forward-looking Masterplan to modernise and expand its facilities.

The Communications Unit systematically communicates progress and increasingly involves the neighbourhood.

In 2024, we engaged the local press, worked with residents' groups and distributed residents' letters to keep our neighbours informed.

Events and room hire

A large number of events took place at ITM in 2024.

As part of the Belgian Presidency of the Council of the European Union, we organised two visits for EU attachés of the European Commission. On the one hand, we provided half a day of lectures with various speakers for the group on development cooperation and international partnerships, and on the other hand we received the group on humanitarian aid and food aid. The Flemish Department of Chancellery and Foreign Affairs was also given an explanation of our work, with a view to future initiatives and collaborations between ITM and the Flemish diplomatic network. The Communications Unit also arranged visits from the embassies of Romania and Nepal. All these events gave us the opportunity to highlight the activities of ITM, but were also fruitful networking moments.

In addition, by hiring rooms, we also had Pharma.be and the Port of Antwerp Bruges (PoAB) visiting us. PoAB organised 'Club Afric' with us, through which the port wants to strengthen the links between the Antwerp port community and the African business community. ITM provided speakers in their programme, allowing us to bridge the gap between our research and the African business community. We also organised visits for Africa CDC, Fiocruz and the Egmont Institute. The events we organised strengthened our position as a centre of excellence and allow us to increase our influence as a leading player in our field.

We offered the city to host the WWII Liberation Festivities at our premises and hundreds of guests, including the mayor, found their way to ITM. Finally, we also regularly built bridges with culture and opened our buildings to the public, with or without room hire, for deSingel's Dear Antwerp Festival, Zuiderzinnen and Salons Curieux.

Fundraising

In 2024, the Fundraising Team launched the Healthropist campaign. Through this campaign, we tie our stakeholders and sympathisers to the organisation and operation, with the ultimate goal of securing financial or other support.

We organised the Merci event and the Dear Antwerp donor event to support the operation.

As part of the Healthropist campaign, six Healthropist newsletters were sent out in 2024. We started 2024 with 458 subscribers. By the end of the year, their number had risen to 771, an increase of over 40%.

Finally, we distributed brochures at strategic locations, such as the various events, as well as to 80 notariats in Antwerp and its surroundings.

Donations

Since 2021, the number of donors ("household donors") has increased by 64.5%. Income rose to €16,970. This is an increase of 33.75%.

Funds

In 2023, we started the Marleen Boelaert Study Fund. In 2024, we welcomed Richard NDayisaba, first scholarship student of the Marleen Boelaert Study Fund, to ITM. We also launched the Heritage Fund in 2024 to support the renovation and restoration of ITM. Finally, we also launched the Armand Van Deun Scholarship Initiative.

Legacies

The Fundraising team successfully facilitated the receipt of a bequest of €3.9 million. To inform the public that ITM is open to receiving bequests, we joined testament.be.

Salesforce

In 2024, the CRM (Customer Relationship Management) Salesforce platform was launched. Different types of integrations and links were implemented to bundle donor information previously available in different systems in Salesforce, making it available in one place.

"Fundraising is all of our business"

An internal mail was sent out monthly with three current calls for scientific prizes, research and teaching projects. These philanthropic funding opportunities support science departments and general services in their search for additional resources.

In 2024, ITM received a donation of €32,000 from cloud provider Nutanix. Through the Anne Maurer-Cecchini prize, we received €21,000. And participation in networking events such as Steunraad KBS Antwerpen raised €11,000. Also, the last edition of Antwerp Diner raised an estimated €41,000 in donation funds for Thijs Reyniers' project "Investigating the feasibility of providing injectable PrEP for HIV prevention in Flanders" (exact amount not yet known at time of publication). We also joined the DiSSCo Flanders project to unlock historical samples, which raised €256,507.

Finally, we facilitated digital donations through the platforms Benevity, KBS/Myriad USA and goodgift.be. This generated €3,171 in 2024.

8

DRC Office

8. DRC Office

Since the end of 2020, ITM has a central unit in the Democratic Republic of Congo (DRC). The 'ITM-DRC Office' is headed by the ITM DRC representative and is composed of a team of 2 to 4 scientific project officers, a logistics team and a financial-administrative team. The ITM-DRC team aims to carry out project management in the DRC and thus manage the programme more flexibly, as more adapted to the local context.

At 2024 we mourn the loss of our colleague Marie-Stephanie Smet who died in a car accident in the DRC. Marie-Stéphanie joined the ITM's DRC Office in June 2023. She had lived and worked in the DRC for many years and had a strong connection with the country and its people. As our logistics manager, she played a crucial role in supporting our operations. With her professionalism and warm personality, Marie-Stéphanie left a lasting impression on everyone who was lucky enough to meet her. She was not only a valued colleague, but also a special person. Someone we will miss tremendously.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Annexes

9. Annexes

a. List of abbreviations

Abbreviation	Meaning
ACL3	Arthropod Containment Level 3
AI	Artificial Intelligence
ALERT	Action Leveraging Evidence to Reduce perinatal morTality and morbidity in sub-Saharan Africa
AMR	Antimicrobial resistance
ARC	AIDS Reference Center
ARES	Académie de recherche et d'enseignement supérieur
ASC	Accounting Standards Committee
ASTMH	L'American Society of Tropical Medicine and Hygiene
ATP	Applied Technology and Production
AUHA-STUVANT	Student Facilities Association of Antwerp
AVE	Advertising Value Equivalency
BCCM	Belgian Culture Collection of Microorganisms
BDOM	Bureau Diocésain des Oeuvres Médicales
BELAC	Belgian Accreditation Body
BICMINS	Building Institutional Capacity at Instituto Nacional de Saúde
BMGF	Bill and Melinda Gates Foundation
BSL3	Biosafety Level 3
CATT	Card Agglutination Test
CCCQ	Quality of Care for Chronic Conditions.
CEA-PCMT	Centre d'Excellence Africain pour la Prévention et le Contrôle des Maladies Transmissibles.
CEPSE	Centre of Excellence for Pharmacovigilance in Southern
COS	Development Cooperation Committee
CoZo	Collective Care Platform
CPPW	Committee for Prevention and Protection at Work.
CREDO	COVID-19 and (re)-emerging diseases studies in Democratic Republic of Congo
CRM	Customer Relationship Management
CROO	Contracts and Reporting Research & Development
CRUN	Clinical Research Unit of Nanoro
CTU	Clinical Trial Unit
DAT/VL	Direct Agglutination Test for Visceral Leishmaniasis
DBS	Department of Biomedical Sciences

DCS	Department of Clinical Sciences
DGD	Directorate General for Development Cooperation and Humanitarian Aid.
DNDi	Drugs for Neglected Diseases initiative
DPH	Department of Public Health
DRBS	Dynamic risk system
DRC	Democratic Republic of Congo
DST	Drug Susceptibility Testing
EC	European Commission
EDCTP	European and Developing Countries Clinical Trials Partnership
EEA	European Economic Area
EER	European Entrepreneurial Region
EMBO	European Molecular Biology Organization
EMCA	European Mosquito Control Association
EPD	Electronic Patient Record
ERC	European Research Council
ESR	European System of National and Regional Accounts
EU	European Union
EV	Emerging Voices
EV4GH	Emerging Voices for Global Health
EWI	Economy, Science & Innovation
F2F	Face-to-face
FAGG	Federal Agency for Medicines and Health Products
FAO	Food and Agriculture Organization
FAVV	Federal Agency for the Safety of the Food Chain
FDFA	Department of Chancellery and Foreign Affairs
FHIR	Fast Healthcare Interoperability Resources
FOSB	Flemish Open Science Board
FRIS	Flanders Research Information Space
FWO	Scientific Research Fund
GCP	Good Clinical Practices
GDPR	General Data Protection Regulation
GSK	Common Strategic Framework
GRIPP	Getting Research Into Policy and Practice
HAT	Human African Trypanosomiasis
HES4SD	Higher Education and Science for Sustainable Development
HFSP	Human Frontier Science Program
HI4A	Health Innovation for All
HIV	Human Immunodeficiency Virus

HPSR	Health Policy and Systems Research
HPU	Health Policy Unit
HR	Human Resources
HSR	Health System Research Symposium
HVAC	Heating, Ventilation, and Air Conditioning
IATI	International Aid Transparency Index
ICH-GCP	International Conference on Harmonization – Good Clinical Practice
IMTAVH	Instituto de Medicina Tropical "Alexander von Humboldt"
INRB	Institut National de Recherche Biomédicale
INS	Instituto Nacional de Saúde
IP	Intellectual property
IRB	Institutional Review Board
IRD	Institut de Reserche pour le Développement
ISI	International Scientific Indexing
ISO	International Organization for Standardisation
IT	Information Technology
ITG	Instituut voor Tropische Geneeskunde
ITM	Institute of Tropical Medicine
JIF	Journal Impact Factor
jPPP	Joint Pump Priming Projects
JSF	Joint Strategic framework
KCE	Federal Health Care Center
KPI	Key Performance Indicator
KRL	Clinical Reference Laboratory
KULEUVEN	Catholic University of Leuven
LCA	Law on Companies and Associations
LIMS	Laboratory Information Management System
LMIC	Low and Middle Income Countries – Low and Middle Income Countries
LNO²	Learning Network for Educational Support Professionals
MaNaMa	Master-after-master
MEMO	Monitoring Exotic Mosquitos
MIC	Minimum Inhibitory Concentration
MOOD	Monitoring Outbreak events for Disease Surveillance.
MOU	Memorandum of Understanding
MPH	Master of Science in Public Health
MSCA	Marie Skłodowska-Curie Actions
MScGOH	Master of Science in Global One Health
MSM	Men who have sex with men

MTM	Master of Science in Tropical Medicine
NCD	Non Communicable Diseases
NIH	National Institutes of Health
NVAO	Netherlands Flemish Accreditation Organization
NRC	National Reference Center
NS	NorthSouth
NTD	Neglected tropical disease
R&I	Research & Innovation
OECD/DAC	Organization for Economic Co-operation and Development/Development Assistance Committee
OECD-DAC	Organization for Economic Cooperation and Development – Development Assistance Committee
OIE	World Organization for Animal Health
ORT	Outbreak Research Team
P2P	Purchase to Pay
PEOPLE	Post exposure prophylaxis for leprosy
PEP	Post Exposure Prophylaxis
PI	Principal Investigator
PF	Postdoctoral fellowship
PMID	PubMed Identifier
PMO	Process Management Office
PPHU	Pharmaceutical Public Health Unit
PPP	Pump Priming Project
PrEP	Pre-Exposure Prophylaxis.
QA	Quality Assurance
QESH	Quality, Environment, Safety and Health
RAG	Risk Assessment Group
NIHDI	National Institute for Sickness and Disability Insurance.
RO	Research Office
SD	Strategic Objective
SEHR	Socio-Ecological Health Research
SERVAL	Seasonal R21 mass vaccination for malaria elimination.
SHE	Safety, Welfare and Environment
SN	SouthNorth
SO	Strategic Objective
SOA	Sexually Transmitted Diseases
SORT-IT	Structured Operational Research and Training IniTiatives.
SPF Santé	Service public fédéral Santé
SRF	Special Research Fund (research funding at Flemish universities)

SSA	Sub-Saharan Africa
SUSTAIN	Sustainable Approaches to Infectious Desease Control and Elimination.
TB	Tuberculosis
TEL	Technology Enhanced Learning
UA	University of Antwerp
UGent	University of Ghent
UNODC	United Nations Office on Drugs and Crime
UOS	University Development Cooperation
UP	University of Pretoria
UPCH	Universidad Peruana Cayetano
UWC	University of Western Cape
UZ	University of Zimbabwe
UZA	University Hospital of Antwerp
Vlaio	Flanders Innovation & Entrepreneurship Agency
VLIR	Flemish Interuniversity Council
VLUHR	Flemish Universities and Colleges Council
VSG	Variable Surface Glycoprotein
FTE	Full-time equivalent
VUB	Free University of Brussels
WaSH	Water, sanitation and hygiene
WHO	World Health Organization
ZAP	Independent Academic Staff

b. List of tables

c. List of figures

d. Overview lists Critical Performance Indicators research 2024

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KPI-3 Number of Clinical Trials Coordinated by CTU

The total number of CTU-supported studies in 2024 is broken down as follows:

- Clinical Studies (i.e., "Clinical Trials" according to ICH-GCP definition): 20
- Interventional studies: 1
- Observational studies: 7

Clinical studies:

1. **TriDoRe Niger** – *ongoing* – Novel TRiple-DOse tuberculosis REtreatment regimens: how to overcome resistance without creating more (Clinicaltrials.Gov. NCT04260477); in Niger
2. **PEOPLE** – completed – Post ExpOsure Prophylaxis for LEprosy in the Comoros and Madagascar (Clinicaltrials.Gov. NCT03662022); in Comoros and Madagascar
3. **AntiCOV** – *ongoing* – An open-label, multicentre, randomized, adaptive platform trial of the safety and efficacy of several therapies, including antiviral therapies, versus control in mild/moderate cases of COVID-19. (PACTR202006537901307); in Ethiopia
4. **THECA** – completed – 3 components (census study / mass vaccination campaign / surveillance study). An open-label effectiveness study of a typhoid conjugate vaccine in Kisantu, Democratic Republic of Congo (TyVECO) – Step 2: Typhoid Conjugate Vaccine (TCV) mass vaccination campaign (Clinicaltrials.Gov. NCT05119426); in the Democratic Republic of Congo
5. **SingleR** – *ongoing* – A single center open-label non-inferiority trial to assess the immunogenicity and safety of an intradermal and an intramuscular single-visit dosing regimen of purified chick-embryo cell-culture rabies vaccine in adults. (EudraCT 2022-002367-29); in Belgium
6. **BE-PEOPLE** – *ongoing* – Bedaquiline Enhanced Post ExpOsure Prophylaxis for Leprosy. (Clinicaltrials.Gov NCT05406479 (phase II) and NCT05597280 (phase III)); in Comoros
7. **HealthyFood** – *ongoing* – A single blind, placebo controlled, single center, randomized controlled pilot study to assess if low dose ciprofloxacin can induce antimicrobial resistance in Escherichia coli (EudraCT 2023-506208-18); in
8. **RABISKIMM** – *stopped before initiation* – Skin imprinting in intradermal rabies vaccination: a prioritized outcome in vaccine trials? (EudraCT 023-507065-26), in
9. **AIM-CL** – *in preparation* – Antimicrobial adjuvants to revert the Imbalance of skin Microbiota for improved outcomes of Cutaneous Leishmaniasis treatment in Ethiopia (AIM-CL) (Clinicaltrials.gov NCT06695143); in Ethiopia
10. **LAI-PrEP** – *in preparation* – Preparing for the new generation of long-acting pre-exposure prophylaxis (PrEP): investigating the feasibility of injectable PrEP for the prevention of HIV in Flanders (EudraCT pending), in Belgium
11. **STAKE** – *ongoing* – Preventing Acquired Resistance: Strengthen TB treatment by adding Amikacin in the first treatment week of multidrug-resistant tuberculosis (Clinicaltrials.gov NCT05555303); in Rwanda
12. **EBO-BOOST** – *in preparation* – Safety and immunogenicity of Ervebo® and Zabdeno® booster vaccines against Ebola Virus following previous vaccination with the Zabdeno/Mvabea® or Ervebo® vaccine schedules in DRC: a mix-and-match phase II RCT (Clinicaltrials.gov NCT06126822); in the Democratic Republic of Congo
13. **SafedoxyPEP** – *ongoing* – A pilot single center, open label trial to assess the impact of doxycycline postexposure prophylaxis on antimicrobial resistance (EudraCT 2023-507137-24-00); in Belgium
14. **RABIKID** (previously named RABIDIC) – *ongoing* – An open-label pilot study to assess pain experience and usability of different injection techniques and devices for the administration of the purified chick-embryo cell-culture rabies vaccine in children aged 4 to 10 years (EudraCT 2024-515122-89); in Belgium

15. **RABIBOOST** – *in preparation* – Comparing the boostability of rabies neutralizing antibodies with a simulated post-exposure prophylaxis 3 years versus 6 years following a 2-visit intramuscular pre-exposure prophylaxis schedule: a non-inferiority study (EudraCT pending); in Belgium
16. **GeKoSKIMM (main study)** – *in preparation* – A randomized controlled trial to compare the immunogenicity and skin imprinting of intradermal, subcutaneous and intramuscular yellow fever vaccination (EU CT 2024-514154-73-00); in Belgium
17. **MBOTE-HIVAX** – *in preparation* – The Mpox Biology, Outcome, Transmission and Epidemiology Project – HIV Immunization and Vaccination Against Mpox eXposure trial (Clinicaltrials.gov pending); in the Democratic Republic of Congo
18. **FASTPOXID2** – *in preparation* – An open-label non-inferiority randomized clinical trial to assess the immunogenicity and safety of a fractional intradermal versus a full subcutaneous booster vaccination of lyophilized modified vaccinia Ankara-Bavarian Nordic virus vaccine against the smallpox and the monkeypox virus (EU CT 2024-517007-37-00); in Belgium
19. **DoxHIV** – *in preparation* – A double-blind, multi-centre, randomized, placebo-controlled crossover clinical trial to assess the efficacy of doxyPEP in reducing the incidence of bacterial STIs among MSM and TGW living with HIV in Belgium (Eu CT pending); in Belgium
20. **DoxyPEP** – *in preparation* – Assessing the benefits and harms of doxycycline post-exposure prophylaxis for bacterial sexually transmitted infection in Flanders (*preliminary title*) (EU CT pending); in Belgium

Interventional studies:

1. **AfriCOVER** – *completed* – Characterizing transmission of SARS-CoV-2 in a peri-urban population in Mozambique using population-based (sero) surveillance (Clinicaltrials.Gov. NCT04442165); in Mozambique

Observational studies:

1. **Preleish** – *ongoing* – Predicting Visceral Leishmaniasis in HIV Infected Patients (Clinicaltrials.Gov. NCT03013673); in Ethiopia
2. **SIMBLE** – *ongoing* – Clinical diagnostic trial in Western Africa of a simplified blood culture system to improve healthcare in low-resource settings (Clinicaltrials.Gov. NCT05722184), in Benin and Burkina Faso
3. **FIKI2** – *completed* – Febrile Illness in Kinshasa and Kimpese (Clinicaltrials.Gov. NCT04760678); in Democratic Republic of the Congo
4. **MuSiFe** – *ongoing* – Multidisciplinary Surveillance and Investigation of Febrile Illness in Guinea (Clinicaltrials.gov NCT06122259); in Guinea
5. **MBOTE-CONTACT (previously named MBOTE)** – *completed* – MPOX biology, outcome, transmission and epidemiology project (Clinicaltrials.Gov. NCT06136117); in the Democratic Republic of Congo
6. **MBOTE-EPIC** – in preparation – CROSS-SECTIONAL STUDY PROTOCOL FOR THE ANALYSIS OF MPOX CASES AND EVALUATION OF VACCINE EFFICACY USING A CASE-CONTROL APPROACH IN EPIDEMIC OUTBREAKS IN THE DEMOCRATIC REPUBLIC OF CONGO / Epidemiological and Pathophysiological Insights through a Cross-sectional survey (Clinicaltrials.Gov. Pending); in the Democratic Republic of Congo
7. **GeKoSKIMM (pilot study)** – completed – A pilot study to finetune skin processing procedures in recent vaccinees, prior to GeKoSkimm study initiation (Clinicaltrials.gov NCT06539351); in Belgium

KPI-4 Number of ongoing competitively awarded research projects, incl. FWO, H2020, Horizon Europe, NIH, … (cumulative) in 2024

Typing in the project number at https://research.itg.be/ provides more information about the project.

Projects started in 2024 are indicated in bold.

FOL-LOW NR	PROJ.NR	FINANCIER	MONEY FLOW	ACRONIAL	PI	BEGIN	END
1	426211	FWO - ERA-Net	2nd money flow	CABU-EICO	Van Der Sande Marianne	1/05/22	30/04/25
2	426252	FWO - ERA-Net	2nd money flow	COINCIDE	Peeters Koen	1/06/22	31/05/25
3	**420005**	**FWO - Internat. Collaboration**	**2nd money flow**	**Energise**	**Jacobs Jan**	**01/01/24**	**31/12/26**
4	**420012**	**FWO - Internat. Collaboration**	**2nd money flow**	**ID-BQI**	**Peeters Koen**	**01/01/24**	**31/12/26**
5	**420008**	**FWO - Research projects**	**2nd money flow**	**Discontinu-ous-Cities**	**Benova Lenka**	**01/01/24**	**31/12/27**
6	424207	FWO - Research projects	2nd money flow	IntegrOmics-DR.MTB	de Jong Bouke	01/01/22	31/12/25
7	**420009**	**FWO Scientific Research Communities**	**2nd money flow**	**CCCQ**	**Van Damme Wim, Gracu Ku**	**01/01/24**	**31/12/28**
8	424208	FWO Scientific Research Communities	2nd money flow	TB/NTM research cluster	de Jong Bouke	01/01/22	31/12/26
9	424415	FWO - Research projects	2nd money flow	Identification reservoir species	Ariën Kevin	01/01/20	31/12/25
10	425408	FWO - Research projects	2nd money flow	LeishQ	Dujardin Jean-Claude	01/01/21	31/12/24
11	425409	FWO - Research projects	2nd money flow	LeishEvol.	Dujardin Jean-Claude	01/01/21	31/12/24
12	425410	FWO - Research projects	2nd money flow	Innatebite	Van Den Abbeele Jan	01/01/22	31/12/25
13	425411	FWO - Research projects	2nd money flow	Immetasex	Rosanas Urgell Anna	01/01/23	31/12/26
14	427100	FWO - Research projects	2nd money flow	Monkeypox virus	Bottieau Emannuel	01/01/22	31/12/25
15	429009	FWO - Research projects	2nd money flow	River epilepsy	Polman Katja	01/01/22	31/12/25
16	**420013**	**FWO - SBO**	**3rd flow of funds**	**Death Care**	**Peeters Koen**	**01/10/24**	**30/09/28**
17	427250	FWO - SBO	2 (3)the money flow	Appliedx	Vercauteren Koen	01/10/22	30/09/26
18	426247	FWO-TBM	2 (3)the money flow	Injectable PrEP	Hensen Bernadette	01/10/22	30/09/26
19	427222	FWO-TBM	2 (3)the money flow	PReGo	Kenyon Chris	01/10/18	30/09/24
20	**310001**	**EC/KU Leuven**	**3rd flow of funds**	**Decipher**	**Vercauteren Koen**	**01/01/24**	**31/12/27**
21	**310003**	**EC/UAntwerp**	**3rd flow of funds**	**Restoreid**	**Ariën Kevin**	**01/01/24**	**31/12/27**

FOL-LOW NR	PROJ.NR	FINANCIER	MONEY FLOW	ACRONIAL	PI	BEGIN	END
22	319005	EC / CIRAD	3rd flow of funds	MOOD	Müller Ruth	01/01/20	31/12/24
23	310002	EC / Farbentech	3rd flow of funds	e-Fabric	Ariën Kevin	01/12/23	30/11/27
24	**330003**	**EC**	**3rd flow of funds**	**CoE4SM**	**Ravinetto Raffaella**	**15/10/24**	**14/10/27**
25	316142	EC / Karolinska	3rd flow of funds	ALERT	Benova Lenka	01/01/20	31/12/24
26	317250	EC / KUL	3rd flow of funds	FortifiedX	Vercauteren Koen	01/08/23	31/07/27
27	317112	EC / SVA	3rd flow of funds	Vacc-Ints	Jacobs Jan	01/10/19	30/09/24
28	316124	EC / Vumc	3rd flow of funds	YoPAAPE	Van Damme Wim	01/01/23	31/12/27
29	320021	EDCTP2	3rd flow of funds	AfriCoVER	Widdowson Marc-Alain	01/06/20	31/10/23
30	327110	EDCTP2	3rd flow of funds	SIMBLE	Jacobs Jan	01/07/21	31/12/24
31	327260	EDCTP2/DNDi	3rd flow of funds	VL-INNO	Adriaensen Wim	01/10/21	31/12/24
32	327231	EDCTP2/Oxford	3rd flow of funds	ALERRT	Van Griensven Johan	01/12/17	30/11/24
33	**320001**	**EDCTP3**	**3rd flow of funds**	**SECRET**	**Ravinetto Raffaella**	**01/07/24**	**30/06/27**
34	**320002**	**EDCTP3**	**3rd flow of funds**	**MBOTE-SK**	**Liesenborghs Laurens**	**01/08/24**	**31/01/27**
35	326201	EDCTP3	3rd flow of funds	STROGHAT	Hasker Epco	01/07/23	30/06/28
36	410004	Federal Science Policy	3rd flow of funds	BE-PIN	Kreppel Kathy	01/12/23	01/03/27
37	526225	NIH, via Banaras Hindu University	3rd flow of funds	TMRC III	Hasker Epco	01/08/17	31/03/23
38	526201	NIH, via Washington State Uni.	3rd flow of funds	CREID-ECA	Hasker Epco	01/06/20	31/05/25
39	424420	VLAIO, via Janssen	3rd flow of funds	DenMark	Ariën Kevin	01/07/23	30/06/26
40	427451	VLAIO, via Voxdale	3rd flow of funds	Collect-2Know	Van den Bossche Dorien	01/07/21	31/12/23
41	520001	MRC	3rd flow of funds	Serval	Peeters Koen	03/07/23	02/07/26
42	526131	MRC, via QMU	3rd flow of funds	Basyc	Kielmann Karina	01/08/22	31/07/24
43	**520002**	**MRC**	**3rd flow of funds**	**Cruzi grant**	**Dujardin Jean-Claude**	**01/02/24**	**31/01/27**
44	**520005**	**MRC**	**3rd flow of funds**	**CLT-protex**	**Adriaensen Wim**	**01/09/24**	**31/08/26**
45	627232	Dioraphte Foundation	4th flow of funds	Spacial CL	Adriaensen Wim	01/01/21	31/03/25
46	629004	International Human Frontier Science Programme, through Wageningen University	4th flow of funds	SWARM	Müller Ruth	01/07/21	30/06/24

FOL-LOW NR	PROJ.NR	FINANCIER	MONEY FLOW	ACRONIAL	PI	BEGIN	END
47	626257	Welcome Trust, via LSTM	4th flow of funds	CEASE	Peeters Koen	01/01/21	31/12/24
48	624254	Welcome Trust	4th flow of funds	Pandr TB	de Jong Bouke	01/05/18	01/02/24

* FWO SBO and TBM are placed by the Flemish universities under the 3e flow of funds. Until annual report 2023, we placed both funding channels under the 2e flow of funds.

KPI-5 number of ongoing ORT projects (n=38)

1. Monitoring outbreak events for disease surveillance in a data science context (MOOD, funding: Horizon2020)
2. Malaria control strategies Burundi, a collaboration with MSF and Ministry of Health Burundi (funding: MSF-OCB, own resources)
3. European network for sharing data on the geographic distribution of arthropod vectors, transmitting human and animal disease agents (VectorNet, funding: ECDC/EFSA)
4. Monitoring of exotic mosquitoes in Belgium (MEMO+, funding: the Flemish, Walloon and Brussels governments, the FPS Public Health, Food Chain Safety and Environment in the framework of the National Environment and Health Action Plan (NEHAP)
5. Arboviruses and *Aedes* in D.R. Congo (funding: Directorate General for Development Cooperation Belgium)
6. Rift Valley Fever outbreak in Rwanda and Burundi. Description of the outbreaks, phylogeography of the Rwandan isolated virus, social sciences review on participatory methods for the involvement of farmers and climate change impacts on RVF
7. Scabies in Belgium and Europe: epidemiological situation and exploration of possible reasons for increase in number of cases and outbreaks (funding: Department of Health Care).
8. Investigating cholera outbreaks in Cameroun
9. CABU – EICO Optimising antibiotic use and infection control at community level through a package of behavioral interventions in Burkina Faso/DRC (JPI-AMR funding)
10. FA5 – One Health: Understanding community-spread of AMR through a One Health perspective in DRC and establishment of One Health laboratories in the DRC.
11. RECoRD Review of health research and data on racialized groups: Implications for addressing racism and racial disparities in public health practice and policies in Europe
12. Sager IOA: Adapting the Sager guidelines for the inclusion of sex-disaggregated data and gendered data in integrated operational analytics in outbreaks and public health emergencies (Integrated Outbreak Analytics)
13. ID-BQI Investigating and defining neglected Bartonella quintana infection and ectoparasitosis among populations experiencing houselessness (Funding: FWO)
14. Lassa-ASSESS : Lassa ASymptomatic Shedding: Evaluation by Self-Sampling. Prospective follow-up of a group of high-risk contacts.
15. FiLiVix : Preparing first-line actors in the Flemish health system for 'virus X' via preparation and validation of a training package using viral hemorrhagic fever as a model (FiLi-Vi-X). Collaboration with the High-Level Isolation Unit of Antwerp University Hospital, including KAP study and Focus groups (funding: UA grant).

16. NIH pilot grant from the Centers for Research in Emerging Infectious Diseases (CREID) 2023-2024. A collaboration with the Institute of Tropical Medicine, Alexander von Humboldt (ITMAvH), Lima, Peru where we are applying next-generation sequencing diagnostics to identify etiologies of acute undifferentiated fever in the Peruvian Amazon
17. Belgian Pandemic Intelligence Network (BE-PIN). POST-COVID – Building an evidence base and lessons learned for future preparedness (funding BELSPO).
18. Elaborate preparation of policy advice on preventive measures tiger mosquito (funding Department of Health Care)
19. RESTOREID Restoring Ecosystems to Stop the Threat of Re-Emerging Infectious Diseases (funding: Horizon Europe)
20. Addressing communication needs in DRC (CRSK and ITM). Joint funding: FA5 ; HAT+
21. Oropouche virus vectors and strains in Trinidad & TobagoMpox transmission risk through the consumption of small mammals in DRC
22. Mass-trapping in Wilrijk. Funding from Agency for Nature and Forests Belgium. "Implementation and process evaluation of alternative techniques to control the spread of the tiger mosquito (Aedes albopictus) in Wilrijk: pilot study".
23. Mbote(Monkeypox Biology, Outcome, Transmission and Epidemiology) Epic study: Epidemiological and Pathophysiological Insights through a Cross-sectional survey (funding: EDCTP)
24. Mbote HIVAX study – HIV Immunization and Vaccination Against Mpox eXposure trial (funded: DGD)
25. Mapping the burden of ocular complications of mpox in DRC
26. PALM007 trial and modular MBOTE protocol
27. Mbote Viral shedding study: description of presence and duration of viral shedding in different bodily fluids
28. Mpox GeneXpert field validation
29. Mbote Clinical description of mpox in pregnant women and documentation of related pregnancy outcomes
30. Mpox clade differences; comparison of risk factors and clinical presentation of clade Ia, clade Ib and IIb mpox
31. PALM010, a Randomized Clinical Trial evaluating Efficacy of vaccines against mpox in the DRC
32. UHasselt clade Ib mpox human-to-human transmission modeling study
33. Long-term health effects, viral persistence, and antibody dynamics following mpox infection and vaccination (Belgium)
34. Guarding against the reintroduction of monkeypox virus: assessing vulnerability and mitigation strategies in the Belgian MSM population (funding: FWO)
35. Characterization of cytokines associated with Clade IIb monkeypox virus infected patients (Belgium)
36. EPOXI – European randomized clinical trial on mPOX Infection.
37. Surveillance, characterization and diagnostics of plague in the Democratic Republic of Congo (DRC) using a multi-disciplinary approach
38. Febrile illnesses in Guinea: Aetiological studies on arboviruses associated with febrile illnesses in Guinea

KPI-6 Number of publicly accessible policy documents, guidelines and recommendations based on ITM research and expertise (n=13(283)).

Arising from ITM research priority 1 'Emerging Diseases and Outbreaks'

1. Belgian Health Care Knowledge Centre (KCE), Belgium, 2024. "Interim Clinical Guidance for Adults with Confirmed COVID-19 in Belgium" by a task force of Infectious Disease Specialists (IDS). Version 39 was published in July 2024. https://kce.fgov.be/sites/default/files/2023-03/COVID-19_InterimGuidelines_Treatment_ENG.pdf. Available online
2. Sciensano Report, Belgium, 2024. "Epidemiological surveillance of echinococcosis *Echinococcus spp.* –2023" by G. Stefani et al. https://www.sciensano.be/sites/default/files/echino_2023_nl.pdf. Available online
3. European Centre for Disease Prevention and Control (ECDC), Sweden, 2024. "Implications of the Marburg disease outbreak in Rwanda for the EU/EEA," https://www.ecdc.europa.eu/sites/default/files/documents/marburg-virus-disease-outbreak-rwanda-EU-EEA-threat-assessment-2024.pdf. Available online
4. European Centre for Disease Prevention and Control (ECDC), Sweden, 2024. "Risk assessment for the EU/EEA of the mpox epidemic caused by monkeypox virus clade I in affected African countries" https://www.ecdc.europa.eu/sites/default/files/documents/mpox-risk-assessment-monkeypox-virus-africa-august-2024.pdf. Available online

Arising from ITM research priority 2 'Antimicrobial resistance'

1. World Health Organization (WHO), Switzerland, 2024. "Technical consultation on the WHO Antimicrobial Resistance Diagnostic Initiative: strategic and operational framework for strengthening bacteriology and mycology diagnostic capacity, Geneva, Switzerland, July 5-7, 2023: meeting report." DOI: https://doi.org/10.2471/B09049. Available online
2. Centers for Disease Control and Prevention (CDC), United States, 2024. "CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention" by Bachmann L.H. et al. DOI: http://dx.doi.org/10.15585/mmwr.rr7302a1. Available online
3. International Union Against Sexually Transmitted Infections, United Kingdom, 2024. "IUSTI Europe position statement on use of DoxyPEP: June 2024" by Sherrard J. et al on behalf of IUSTI Europe Guideline Board. DOI: https://doi.org/10.1177/09564624241273801. Available online
4. Belgium Research on AIDS and HIV Consortium, Belgium, 2024. "Doxy post-exposure prophylaxis for STI not endorsed by BREACH" by De Scheerder M.A., Libois A., Van Praet J. and Kenyon C. https://breach-hiv.be/wp-content/uploads/2024/03/DoxyPEP-Breach-statement-AL.pdf. Available online
5. Centers for Disease Control and Prevention (CDC), United States, 2024. "*Mycobacterium tuberculosis* Complex. Drug Susceptibility Testing Program. March 2024" by Stafford C. et al. https://stacks.cdc.gov/view/cdc/162210/cdc_162210_DS1.pdf

Arising from ITM research priority 3 'Disease elimination'

1. World Health Organization (WHO), Switzerland, 2024. "Treatment guidelines for the treatment of human African trypanosomiasis, June 2024" by Control of Neglected Tropical Diseases Team. https://iris.who.int/bitstream/handle/10665/378083/9789240096035-eng.pdf?sequence=1. Available online
2. WikiTropica, Belgium, 2024. "State of The Art – Treatment of Tropical Diseases." https://wikitropica.org/state-of-the-art-treatment-of-tropical-diseases/. Available online

Arising from ITM research priority 4 'Sustainable health systems and strategies'

1. FPS Foreign Affairs, Foreign Trade and Development Cooperation, Belgium, 2024. "Evaluation of the Belgian fragility approach." https://diplomatie.belgium.be/sites/default/files/2024-12/Eindrapport-Samenvatting-A4-2024-NL.pdf. Available online
2. United Nations, United States, 2024. "Resolution 67/2. Promoting awareness-raising, education, training and data collection as part of a comprehensive approach to ensuring access to and the availability of controlled substances for medical and scientific purposes, including for the treatment of children, and ensuring their rational use." by The Commission on Narcotic Drugs. https://www.unodc.org/documents/commissions/CND/Drug_Resolutions/2020-2029/2024/Res_67_2.pdf

KPI-8 Number of ongoing (cumulative) ITM FWO aspirants and mandates, MSCA (personal grants), HSFP, EMBO or ERC grants, seal of excellence, …: 29

FWO aspirants (15)

1. de Vrij, Nicky (UAntwerpen, ITM), A framework to map the epitope hierarchy and complex repertoire of the human T cell response to visceral leishmaniasis, 1/11/2020-31/10/2024
2. Drissi El Boukili, Yasmina (UAntwerpen, ITM), Unraveling the effect of host, parasite and immuno-parasitological factors on Plasmodium falciparum gametocyte conversion, 1/11/2020-31/10/2024
3. Postovskaya, Anna (UAntwerpen, ITM), Machine learning framework for T-cell receptor repertoire-based viral diagnostics, 1/11/2020-3/10/2024
4. Snobre, Jihad (VUB, ITM), Omics Data Integration to Predict Drug Resistance in Mycobacterium tuberculosis, 1/11/2021-31/10/2025
5. Kraußer, Lena (UAntwerpen, ITM), Laboratory and bioinformatics innovations toward culture-free whole genome sequencing of Mycobacterium tuberculosis for clinical care, 1/11/2021-31/10/2025
6. Wuyts, Ellen (UAntwerpen, ITM), Molecular basis for the potency and selectivity of DNDI-6690, a promising lead for the development of novel anti-leishmanial drugs, 1/11/2021-31/10/2025
7. Sauve, Erin (UAntwerpen, ITM), An investigation into the mechanisms of Plasmodium vivax chloroquine resistance (PvCQR): a transcriptomic/transgenic approach, 1/11/2021-31/10/2025
8. Cuella Martin, Isabel (UAntwerpen, ITM), Curbing rifampicin-resistant tuberculosis in Rwanda and beyond, 1/11/2021-31/10/2025
9. Molenaar, Jil (UAntwerpen, ITM), "Effective coverage" of facility-based deliveries: exploring the relevance and feasibility of a global health indicator from the bottom up, 1/11/2022-31/10/2026
10. De Kesel, Wim (UAntwerpen, ITM), Sylvatic cycle of arboviruses in African wildlife, 1/11/2022-31/10/2026
11. Delgado, Dalia Díaz (UAntwerpen, ITM), Determining the role of tryptophan-rich antigens during *P. vivax* reticulocyte invasion using a functional transgenic *P. knowlesi* model and *P. vivax* ex vivo assays, 1/11/2023-31/10/2027
12. Op de Beeck, Hannah (UAntwerpen, ITM), A novel plasmonic nanoparticle amplified photoelectro-chemical detection platform for dengue diagnosis (DeNPec), 1/11/2023-31/10/2027
13. Verstraeten, Rita (UGent, ITM), Improving insights into the impact of human mobility on dengue epidemiology through mathematical modeling, 1/11/2024-31/10/2028
14. Goossens, Emilie (UHasselt, ITM), Human disturbance, biodiversity loss and the dynamics of snail-associated parasites, 1/11/2024-31/10/2028
15. De Cleene, Witse (UAntwerpen, ITM), Unraveling the molecular basis for recognition of human basigin by Plasmodium vivax tryptophan-rich antigens, 1/11/2024-31/10/2028

Reception mandates through BOF UAntwerpen (3)

In addition, **three** candidates (with University of Antwerp as main host institution and ITM as additional host institution) were awarded a BOF mandate (1 or 3 years) based on the ranking of the reserve list from the FWO evaluation. Candidates with 1-year BOF host funding are invited to reapply in the next FWO round.

1. Niki Danel (BOF 1 year: UA – Yann Sterckx – ITM Jan Van de Abbeele, Nick Van Reet)
2. Martina Ceconi (BOF 3 years: UA – Kevin Arien, Peter Delputte – ITM Kevin Arien)
3. Janne Wouters (BOF 1 year: UA – Nicole Berens-Riha – ITM Wim Adriaensen, Patrick Soentjens).

VLAIO-Baekeland (1)

1. Bouckaert, Johanna (ITM, UAntwerpen), Peptide-based Diagnostics for Re-emerging Flaviviruses of Significant Public Health Concern, 1/02/23-31/01/27

FWO postdocs (9)

1. Christou, Aliki (ITM), Preventing stillbirths in high burden settings: Examining gaps and opportunities to strengthen routine perinatal data collection and to improve quality of care, 1/10/2021-30/9/2024
2. Asefa, Anteneh (ITM), Is mistreatment of women during facility-based childbirth an independent risk factor for postpartum depression? A mixed methods prospective study in Ethiopia and Guinea, 1/10/2022-30/9/2025
3. Negreira, Gabriel (ITM), Revealing the molecular mechanisms and adaptive role of aneuploidy plasticity in *Leishmania spp.*, 1/10/2023-30/9/2026
4. Van Dijck, Christophe (ITM), Mpox, a tale of two epidemics: unraveling differences in disease expression and transmission between Europe and Central Africa, 1/10/2023-30/9/2026
5. Daems, Elise (UAntwerpen, ITM), A novel rolling circle amplification-mediated photoelectro-chemical detection methodology for arboviruses (ArboSense), 1/10/2023-30/9/2026
6. Aljadeeah, Saleh (ITM), Resilience of pharmaceutical systems and access to essential medicines in conflict-affected regions: the case of antibiotics in northern Syria, 1/11/2024-31/10/2027
7. Meulenaere, Katlin (ITM), A single-cell sequencing approach to understand P. vivax gene regulation at the epigenetic level, 1/10/2024-30/9/2027
8. Macharia, Peter (ITM), Precision identification of maternal health vulnerability in sub-Saharan African conurbations using advanced geospatial approaches, 1/10/2024-30/9/2027
9. Ingelbeen Brecht (ITM), Guiding community-based antimicrobial resistance control in low-resource settings: attribution of household sources of resistant bacteria and the impact of improved antibiotic use, awarded, but at Brecht's request, the FWO agreed to defer by one year.

HORIZON MSCA Postdoctoral Fellowship – European Fellowship (1)

1. Alenichev, Arsenii, AIrbrush: a transdiciplinary value-sensitive study of biases and stereotypes in AI-generated Global Health images, and their significance for science and society, June 2024-May 2026

KPI-9 Number of productive (>10 joint publications per year) collaborations with international partners

Affiliations	No. Web of Science documents	% of total (n=365)
University of London (n=55) / LSHTM (n=45)/ UCL (n=10)	110	30.14%
University of Antwerp	102	27.95%
Ghent University (n=29) / Ghent University Hospital (n=11)	40	10.96%
University of Cape Town	33	9.04%
KU Leuven	32	8.77%
Universite de Montpellier (n=13) / Institut de Recherche pour le Developpement (IRD) (n=13)	26	7.12%
World Health Organization	25	6.85%
Universite Libre de Bruxelles (ULB).	24	6.58%
Utrecht University	22	6.03%
Institut National de la Sante et de la Recherche Medicale (Inserm).	19	5.21%
Karolinska Institutet	19	5.21%
Sciensano	19	5.21%
Free University of Brussels	16	4.38%
Harvard University	15	4.11%
University of Witwatersrand	15	4.11%
Universite de Kinshasa	14	3.84%
University of Manitoba	13	3.56%
Ruprecht Karls University Heidelberg	13	3.56%
University of Oxford	13	3.56%
Universidad Peruana Cayetano Heredia	13	3.56%
Kenya Medical Research Institute	12	3.29%
Institute Nacional de Recherche Biomedical	12	3.29%
Makerere University	12	3.29%
University of the Western Cape	12	3.29%
University of Lagos	11	3.01%
University of Basel	11	3.01%
Leibniz Association	11	3.01%
Liverpool School of Tropical Medicine	11	3.01%

e. Balance Sheet

	2024	2023	2022	2021	2020	2019	2018
ASSETS							
Fixed assets	27,737,429	27,023,552	27,708,430	28,396,435	29,365,282	29,919,454	30,503,080
Intangible fixed assets	3,260	16,301	29,342	0	0	0	0
Tangible fixed assets	27,734,169	27,007,251	27,679,088	28,396,435	29,365,282	29,919,454	30,503,080
Land and buildings	25,076,083	25,821,545	26,474,174	27,254,290	27,780,984	28,500,113	28,515,396
Plants. machinery and equipment	2,280	5,663	11,076	20,749	21,638	66,396	80,914
Furniture and motor vehicles	263,502	552,877	855,485	864,288	1,158,434	849,129	1,023,523
Leasing	0	0	0	0	0	0	0
Assets in course of construction and payments on account	2,392,304	627,166	338,354	257,108	404,226	503,816	883,247
Financial fixed assets				0	0	0	0
Current assets	41,278,363	40,140,397	39,607,950	37,266,442	35,195,301	30,322,319	37,674,405
Stock and orders-in-progress	3,097,236	2,707,588	1,725,267	2,050,254	1,580,511	2,009,329	1,704,609
Stock	52,550	52,550	52,550	52,550	334,259	424,547	462,875
Orders in progress (projects in progress)	3,044,685	2,655,038	1,672,717	1,997,704	1,246,252	1,584,782	1,241,734
Debtors due in one year or less	6,269,394	4,649,671	6,460,973	4,980,089	2,474,229	2,561,885	2,232,607
Trade receivables	4,821,895	4,419,741	4,798,077	3,213,713	2,366,953	2,498,309	2,101,797
Other debtors	1,447,499	229,930	1,662,896	1,766,376	107,276	63,577	130,810
Investments	2,469,216	2,469,216	2,469,216	2,480,371	2,480,371	2,480,371	2,480,371
Cash and bank balances	28,518,492	29,725,183	27,432,971	26,588,798	26,748,907	21,390,700	29,756,325
Prepayments an accrued income	924,025	588,740	1,519,524	1,166,930	1,911,283	1,880,034	1,500,493
TOTAL ASSETS	**69,015,792**	**67,163,949**	**67,316,380**	**65,662,877**	**64,560,583**	**60,241,774**	**68,177,485**
LIABILITIES							
Capital and reserves	34,871,556	29,297,966	31,021,400	30,636,875	28,964,857	27,408,986	27,148,529
Funds of the foundation	3,773,235	345,712	345,712	345,712	345,712	345,712	345,712
Revaluation surpluses	11,891,000	11,891,000	11,891,000	11,891,000	11,891,000	11,891,000	11,891,000
Earmarked funds	6,941,713	6,049,293	6,657,011	6,137,497	6,223,548	8,118,675	8,119,575
Profit (Loss) brought forward	11,060,917	10,063,846	11,088,169	11,131,763	9,282,301	5,739,908	5,387,157
Capital grant	1,204,690	948,115	1,039,509	1,130,903	1,222,296	1,313,691	1,405,085
Provisions	-0	-0	251,636	286,503	387,467	1,472,621	2,099,551
Provisions for liabilities and charges	-0	-0	251,636	286,503	387,467	1,472,621	2,099,551
Provisions for pensions and similar obligations	0	0	434	28,051	103,025	1,099,169	1,247,979
Other provisions	-0	-0	251,202	258,452	284,442	373,452	851,572
Debts	34,144,237	37,865,984	36,043,344	34,739,499	35,208,259	31,360,167	38,929,405
Creditors due in over one year	5,196,788	5,963,745	6,706,820	7,426,845	8,192,185	8,956,097	9,697,083
Financial debts	5,196,788	5,963,745	6,706,820	7,426,845	8,192,185	8,956,097	9,697,083
Creditors due in one year or less	27,838,291	30,147,955	27,286,641	25,157,775	25,228,926	20,450,841	28,065,051
Creditors becoming due within one year	766,957	743,075	720,025	765,340	763,911	740,884	718,642
Trade payables	2,893,312	4,563,757	4,103,982	3,240,702	2,650,432	2,565,898	4,587,003
Received advanced payments (project funding)	18,612,205	19,569,176	16,692,797	17,069,499	17,924,805	13,392,752	18,973,731
Debts in reference to taxes. salaries and social contributions	5,418,224	5,118,448	5,309,038	3,871,496	3,751,586	3,714,339	3,733,313
Various debts	147,592	153,499	460,800	210,738	138,192	36,968	52,362
Accruals and deferred Income	1,109,158	1,754,284	2,049,882	2,154,879	1,787,148	1,953,229	1,167,271
TOTAL LIABILITIES	**69,015,792**	**67,163,949**	**67,316,380**	**65,662,877**	**64,560,583**	**60,241,774**	**68,177,485**

f. Profit and loss

	2024	2023	2022	2021	2020	2019	2018
Operating income (+)	71,701,032	67,822,767	63,554,644	62,513,794	52,331,241	55,151,368	53,129,704
Turnover	20,478,847	19,867,043	18,195,378	15,778,176	16,328,828	18,048,071	7,035,195
Work and services in progress (additions +. withdrawals -)	11,355,039	12,289,685	8,946,607	16,996,229	5,828,446	8,773,473	-3,439,145
Member fees. funds. legacies and subsidies	25,911,758	24,317,743	24,122,056	22,360,649	23,187,787	14,615,889	31,927,897
Other operating income	13,955,388	11,348,297	12,290,603	7,378,740	6,986,180	13,713,934	17,605,757
Operating expenses (-)	70,112,828	69,429,479	63,220,911	60,529,527	50,317,409	54,552,689	53,959,554
(Cost of) goods for resale & raw materials	3,446,302	7,321,431	7,329,812	9,318,518	6,454,373	7,333,046	6,013,340
(Cost of) goods and services	21,794,338	18,381,607	16,993,380	15,417,966	11,783,594	15,633,428	16,103,270
Personnel expenses	43,782,560	42,769,071	37,667,094	34,556,026	31,889,450	30,999,280	30,737,810
Depreciation and impairments on fixed assets	1,051,261	1,211,420	1,199,052	1,252,901	1,218,758	1,314,963	1,588,422
Impairments on current assets and provisions for liabilities and charges (additions +. withdrawals -)	-6,312	-293,183	-19,158	-111,941	-1,265,154	-728,180	-781,808
Other operating expenses	44,679	39,132	50,731	96,057	236,388	152	298,520
Operating profit (loss)	1,588,204	-1,606,711	333,733	1,984,267	2,013,832	598,680	-829,850
Financial income (+)	501,443	210,220	567,972	144,431	122,375	103,391	314,817
Revenue from current assets	212,380	130,908	2,468	1,781	1,216	3,378	3,097
Other financial revenue	289,063	79,312	565,504	142,650	121,159	100,013	311,720
Financial expenses (-)	200,155	234,737	425,785	357,851	329,423	346,759	559,805
Costs of debts	205,388	228,435	240,272	263,538	286,080	307,798	328,819
Other financial costs	-5,233	6,302	185,513	94,313	43,343	38,961	230,986
Profit (Loss) from regular company activities	1,889,492	-1,631,229	475,920	1,770,847	1,806,784	355,312	-1,074,838
Exceptional income (+)	0	470	0	20	0	11,864	326,711
Write-back of amortisations and depreciations on fixed assets	0	0	0	0	0	11,864	0
Other exceptional income	0	470	0	20	0	0	326,711
Exceptional expenses (-)	0	1,282	0	7,455	159,519	15,325	808
Exceptional amortisations and de-preciations on fixed assets	0	0	0	0	0	15,325	0
Other exceptional expenses	0	1,282	0	7,455	159,519	0	808
Profit (Loss) of the financial year	1,889,492	-1,632,040	475,920	1,763,412	1,647,265	351,851	-720,163

g. Statutory auditor's report

Instituut voor Tropische Geneeskunde Stichting van Openbaar Nut

Statutory auditor's report to the board of directors of the foundation for the year ended 31 december 2024

In the context of the statutory audit of the annual accounts of the foundation Instituut voor Tropische Geneeskunde Stichting van Openbaar Nut (the « Foundation »), we hereby present our statutory auditor's report. It includes our report on the audit of the annual accounts as well as the other legal and regulatory requirements. This is an integrated whole and is indivisible. We have been appointed as statutory auditor by the board of directors of 15 mai 2023, following the proposal by the board of directors issued upon presentation by the works' council. Our statutory auditor's mandate will expire on the date of the board of directors which will deliberate on the annual accounts closed on 31 December 2024. We have performed the statutory audit of the annual accounts of the foundation Instituut voor Tropische Geneeskunde Stichting van Openbaar Nut for 8 consecutive years.

Report on the annual accounts

Unqualified opinion

We have audited the annual accounts of the Foundation, which comprise the balance sheet as at 31 December 2024, the profit and loss account for the year then ended and the notes to the annual accounts, characterised by a balance sheet total of € 69.015.792 and a profit and loss account showing a profit for the year of € 1.889.492.

In our opinion, the annual accounts give a true and fair view of the Foundations net equity and financial position as at 31 December 2024, as well as of its results for the year then ended, in accordance with the financial reporting framework applicable in Belgium.

Basis for the unqualified opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs) as applicable in Belgium. Our responsibilities under those standards are further described in the 'Statutory auditor's responsibilities for the audit of the annual accounts' section in this report. We have complied with all the ethical requirements that are relevant to the audit of annual accounts in Belgium, including those regarding independence.

We have obtained from the board of directors and Foundation officials the explanations and information necessary for performing our audit.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of the board of directors for the preparation of annual accounts

The board of directors is responsible for the preparation of annual accounts that give a true and fair view in accordance with the financial reporting framework applicable in Belgium, and for such internal control as the board of directors determines is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, the board of directors is responsible for assessing the Foundations ability to continue as a going concern, disclosing, as applicable, matters related to going concern and

using the going concern basis of accounting unless the board of directors either intends to liquidate the Foundation or to cease operations, or has no realistic alternative but to do so.

Responsibilities of the statutory auditor for the audit of the annual accounts

Our objectives are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or error, and to issue a statutory auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.

In performing our audit, we comply with the legal, regulatory and normative requirements applicable to the audit of annual accounts in Belgium. A statutory audit does not provide any assurance as to the Foundation s future viability nor as to the efficiency or effectiveness of the board of directors has conducted or will conduct the business operations of the Foundation. Our responsibilities in relation to the board of director's use of the going concern accounting principle are described below.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Foundations internal control;
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the board of directors;
- Conclude on the appropriateness of the board of directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Foundation s ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our statutory auditor's report to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our statutory auditor's report. However, future events or conditions may cause the Foundation to cease to continue as a going concern;
- Evaluate the overall presentation, structure and content of the annual accounts and whether the annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with the board of directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identified during our audit.

Other legal and regulatory requirements

Responsibilities of the Board of Directors

The board of directors is responsible for the preparation and the content of the directors' report, as well as for the compliance with the legal and regulatory requirements regarding bookkeeping, with the Code of companies and associations and with the Foundations by-laws.

Responsibilities of the statutory auditor

In the context of our mission and in accordance with the Belgian standard (revised version 2020) which is complementary to the International Standards on Auditing (ISAs) as applicable in Belgium, it is our responsibility to verify, in all material aspects, the directors' report, to ensure compliance with certain obligations referred to in the Code of companies and associations and the Foundations by-laws, as well as to report on these matters.

Aspects related to the directors' report

In our opinion, after having performed specific procedures in relation to the directors' report, the directors' report is consistent with the annual accounts for the same financial year, and it is prepared in accordance with articles 3:48 of the Code of companies and associations.

In the context of our audit of the annual accounts, we are also responsible for considering, in particular based on the knowledge acquired resulting from the audit, whether the directors' report is materially misstated or contains information which is inadequately disclosed or otherwise misleading. In light of the procedures we have performed, there are no material misstatements we have to report to you.

Statement related to the social balance sheet

The social balance sheet, to be filed at the National Bank of Belgium in accordance with article 3:12, § 1, 8° of the Code of companies and associations, includes, both in terms of form and substance, the information required by virtue of this Code, including information on wages and training, and does not present any material inconsistencies with the information available to us in the context of our mandate.

Statement related to independence

- Our audit firm did not provide services which are incompatible with the statutory audit of annual accounts, and we remained independent of the Foundation in the course of our mandate.
- The fees related to additional services which are compatible with the statutory audit of annual accounts as referred to in article 3:65 of the Code of companies and associations are duly disclosed and intemized in the notes to the annual accounts.

Other statements

- Without prejudice to certain formal aspects of minor importance, the accounting records are maintained in accordance with the legal and regulatory requirements applicable in Belgium.
- There are no transactions undertaken or decisions taken which may be in violation with the by-laws, the Code of companies and associations, Code that we have to report to you.

Antwerp, 24 March 2025

RSM InterAudit BV
Statutory auditor
REPRESENTED BY
Gert Van Leemput
Partner


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Contact details ITM

Responsible annual report

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