



# **Research and Innovation Policy Plan 2017-2021**

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## **Introduction**

In accordance with the provisions of the Flemish Government Decree regarding Special Research Funds financing for Flemish Community universities, Hasselt University has included its strategic objectives for research and innovation for the period 2017-2021 in its 2017 - 2021 Research and Innovation Policy Plan.

The Research and Innovation Policy Plan outlines the research and innovation policy for the next five years and establishes the policy priorities for research and innovation. The policy priorities are categorised under six strategic objectives that are further developed into operational objectives and specific actions. BOF (Special Research Fund) and IOF (Industrial Research Fund) resources will be optimally used to achieve these objectives.

This policy plan is based on the rector's policy plan and additionally takes into account the implications of strategic frameworks and realities outside the university: motivated by funders, authorities and external partners.

A choice was made to harmonise R&I policy-related activities as much as possible with EU policy, which is why this new policy plan is based on the principles of the Lund Declaration. Consideration was also afforded to the three 'Os' that could facilitate the implementation of this Research and Innovation Policy Plan: *Open Innovation, Open Science and Open to the World*.

In order to obtain as much support as possible for both researchers and the policy, Hasselt University decided to gather input from different angles to compile a research and innovation policy for the next five years. Based on brainstorming sessions with members of the Research and IOF Board, and based on discussions about the strategic plans of research institutes, a first draft of the policy plan was drawn up in which an alternative organisation and structure is proposed for research, innovation and research infrastructure.

Since Hasselt University strives to fulfil its role in society as a driving force for prosperity and welfare as effectively as possible, this draft of the policy plan will be assessed with an international focus group, comprised of external experts from the academic world and business community. This objective, external view on growth potential, the role of the university in society and its potential impact provided valuable input as a supplement to the insights supplied by internal members.

Research and innovation is an integral aspect of several departments at Hasselt University, which is why the academic and administrative services will be involved in the further elaboration of the action points related to the operational objectives and their conversion into impact.

This Research and Innovation Policy Plan is ambitious and requires cooperation from the different departments and academics at Hasselt University and a coordinated use of budgets (BOF, IOF, operational resources, external resources, etc.) in order to put new mechanisms in place that will contribute to the implementation of this policy plan.

## **1. How the Research and Innovation Policy Plan fits within Hasselt University's strategic positioning**

Hasselt University has developed into an **active hub in the global knowledge and innovation web** and partners with universities, research centres and organisations **all over the world**. The university welcomes students and researchers from every continent. This results in intense interaction and cross-pollination and makes it possible for Hasselt University to fully take up its role as a **civic university**. The international quality and cooperation are reflected in its commitment to the region's economic, social and cultural development.

This enables Hasselt University to play a key role in society's social, economic and cultural development. In addition, Hasselt University and the Province of Limburg constantly spur each other on to grow and innovate. In its teaching, research and service provision Hasselt University is convinced by the notion that: *a strong university makes a strong region*.

Hasselt University is a key actor in the different regional innovation systems and, being a dynamic university, strives to present itself as a driving force for prosperity and welfare in society via **impactful research and innovation**, that promotes the growth of economic and social development both within and outside the region. Hasselt University sees impact as also encompassing research and innovation that take place in an **ethically responsible** manner with a focus on **integrity and diversity**.

Excellent research and innovation continue to be the number-one requirement for being able to assume our role on an international level. True to its character, Hasselt University traditionally approaches research questions from a **multidisciplinary and interdisciplinary perspective**. This results in excellent research and innovation that is internationally recognised and visible.

The University has been listed on the Times Higher Education Ranking since 2017, and according to the ranking, is one of the fifteen best small universities in the world.

Excellent research and innovation are only possible with motivated researchers that are given the possibility and the space to achieve their full potential. With this in mind Hasselt University implements an **HR policy** focused on the needs of all researchers from doctoral candidates to professors.

To afford our excellent research and innovation the greatest possible chance of success, Hasselt University continues to invest in a limited number of spearheads, that are further defined at multidisciplinary research institutes concentrated on specific **grand challenges**. In this regard issues and challenges are viewed academically from a perspective that is cross-disciplinary and supradisciplinary. Moreover, Hasselt University continues to invest in research and innovation across the **full research chain**: from fundamental to applied and innovation-oriented research, consistently from its characteristic **multidisciplinary** perspective.


Hasselt University is socially committed, implementing its research and innovation for and alongside society. It seeks further expansion, optimal use and improved access to its research infrastructure facility by employing **technology platforms**.


In its Research and Innovation Policy Plan Hasselt University details the above focal points in the following six strategic objectives:


- (SO1) Hasselt University endeavours to be an increasingly efficient, multidisciplinary research organisation.
- (SO2) Hasselt University encourages Responsible Research and Innovation (RRI).
- (SO3) Hasselt University actively works on talent and employability skills within research and innovation.
- (SO4) Hasselt University covers the entire research spectrum: from fundamental research to valorisation, and back.
- (SO5) Hasselt University opts for interdisciplinary research with socio-economic relevance.
- (SO6) Hasselt University aims to boost the international dimension of its R&I activities.

## 2. Research and innovation target figures


Hasselt University strives to achieve the following target figures for research and innovation by 2021:


	2016	2021
Number of PhDs obtained	75	100
Number of PhDs obtained in association with an academic partner (joint PhDs)	14	30
Number of PhDs obtained in association with a non-academic partner (industry, partnership, partners and/or SOCs)	-	30
Number of current PhDs	557	700
Proportion of foreign PhD students	38%	45%
Average number of current PhDs per ZAP (senior academic staff)	2.4	2.8

	2016	2021
Number of researchers (ZAP)	230	250
Number of researchers: (BAP,AAP)	376	400
Number of researchers (grant recipients)	223	275

	2016	2021
2nd cash flow income (EUR)	9,179,715	10,000,000*
3rd cash flow income (EUR)	11,605,137	13,000,000*
4th cash flow income (EUR)	4,206,678	5,000,000*
Proportion of international research funds for total income (other research funds)	11%	25%
Number of ERC grant holders	4	8

\*this concerns a deliberate decision to cautiously aim for cash flow growth in that these correlate with the creation of ZAP positions.

	2016	2021
Number of validated publications (ECOOM & VABB)	792	1200
Number of highly-cited papers on Web of Science	12	20
Proportion of international co-publications	54%	75%
Proportion of co-publications with industry	5%	15%
Proportion of full-text publications on the document server	53%	75%
Proportion of Open Access publications on the document server	33%	75%
Proportion of Open Data for all research data in repositories	-	35%
Number of new patent applications	6	10
Number of newly granted patents	5	7
Number of active patents (cumulative)	69	84
Number of active licenses (cumulative)	15	23

	2016	2021
Number of spin-off incubation projects	8	12
Number of new spin-offs	1	2
Number of active spin-offs (cumulative)	12	20

### 3. Strategic (SO) and operational (OO) objectives of the Research and Innovation Policy Plan

#### **SO1: HASSELT UNIVERSITY ENDEAVOURS TO BE AN INCREASINGLY EFFICIENT RESEARCH ORGANISATION.**

Hasselt University sees impactful research as research that nourishes and promotes the development of economic and social growth and future sectors - certainly in the region - but also beyond. The University strengthens its research in spearhead fields in which issues and challenges are approached from an interdisciplinary perspective. Research at Hasselt University is internationally competitive and generates new knowledge that contributes to a more innovative society. The University targets research that, in addition to being fundamentally-oriented, focuses on knowledge valorisation and scientific service. This leads it to encourage its researchers and students to base their research on intense interaction, cross-pollination and collaboration with other universities, companies, authorities and organisations.

As a young university seeking to play our role in society and to be able to contribute to social challenges, a solid research base is required. Excellent fundamental research provides the foundations for this research base and delivers the appropriate starting point for effective, multidisciplinary research. Since its acquisition of research funding, Hasselt University has promoted multidisciplinary research. The distinctive character of our university makes it possible to effectively bundle forces from various disciplines. Communication lines between researchers and administrative services must also be short to offer targeted and efficient support.

#### **OO1 - Development of a quality care system that promotes excellence**

During the 2017-2021 policy period, Hasselt University will continue to work on **excellent** research with a focus on applications and valorisation. Identifying research quality already takes place by the Research Coordination and Tech Transfer departments at the level of the researchers, research groups, institutes and institutions. To optimise research quality measurements, an integral quality care system will be developed that is based on a well-designed *Business Intelligence* system. This quality care system is a differentiated system that takes account of the distinctive character of the various scientific domains, and the multidisciplinary character and various foci of the research (fundamental, applied and innovation-oriented). The quality care system focuses on: (1) monitoring research quality, (2) improving research management, and (3) justification to the board, authorities, and stakeholders. The development of a *Business Intelligence system* that measures the quality of the research, not only ensures proper justification but also clear profiling of the research, with a focus on the regional, national and international dimensions, and also takes into account qualitative and quantitative parameters.

#### **OO2 - Robust multidisciplinary research institutes for research and innovation focused on social challenges**

In order for our research area to be able to flexibly respond to social and economic developments, and to boost the impact of its research and innovation, Hasselt University chooses to shift the focus of existing research institutes more toward multidisciplinary research institutes that play a leading role in a limited number of well-considered social challenges.

With regard to research, Hasselt University aims to distinguish itself through excellence in various academic disciplines by 2021. It seeks to achieve this excellence through the intensive collaboration of Hasselt University researchers across the various disciplines and through R&I collaboration with other knowledge institutions and companies (in and beyond the borders of Flanders) from the multidisciplinary research institutes.

The research institutes will develop strategic programmes with stakeholders (universities, research centres and companies) in which all aspects of research and innovation are included, with the multidisciplinary of the research as the basic principle. Bringing fundamental research together for valorisation, from theoretical to applied research, provides focus, the right critical mass and quality within relevant R&I domains. Focus will be achieved by approaching well-considered topics from a theoretical and applied research perspective that sees valorisation as an objective.

Hasselt University strives to integrate its strategic choices in its (international) educational study programmes and promote their visibility in campus development, and by so doing contribute to the University's image. Moreover, these institutes commit to science communication and **Science** sharing.

### **003 - Organising research infrastructure into technology platforms**

Excellent research is only possible if it is supported by the necessary *state-of-the-art* research infrastructure. To improve access to existing research infrastructure and use it more efficiently, Hasselt University is targeting the focussed deployment of this infrastructure on technology platforms. They could be developed thematically (databases, etc.) or be based on research infrastructure (e.g., dealing with *imaging*, *omics*, etc.).

In addition to *state-of-the-art* research infrastructure, these technology platforms are also characterised by technical knowledge and expertise, and are accessible to academic as well as private partners.

### **004 - Scientific innovation through stimulus funding for multidisciplinary research initiatives**

However, Hasselt University is also interested in encouraging scientific innovation, starting with the launch of a research programme for innovative multidisciplinary research initiatives. This programme, financed with BOF and IOF funding should boost scientific innovation and provide a leveraging effect for participation in external research and innovation programmes. Again, the focus will be on multidisciplinary collaboration and researchers will be encouraged to work across different research disciplines.

## **SO2 - HASSELT UNIVERSITY ENCOURAGES RESPONSIBLE RESEARCH AND INNOVATION**

*Responsible Research and Innovation* (RRI) involves social actors (researchers, citizens, policy-makers, the business community and other organisations) working together throughout the entire research and innovation process to better align the process and research results with the values, needs and expectations of society.

Hasselt University subscribes to the six basic objectives of the RRI policy framework outlined by the European Commission and translates them into specific operational objectives.

### **001 - Research and innovation at Hasselt University with and for society**

A number of social challenges, such as an ageing population, sustainability and energy supply require an integrated approach. Hasselt University actively assumes its role in this area, and pro-actively involves social actors (universities, SOCs, scientific institutions, alumni, industry and policy-makers, etc.) in its R&I activities. This results in intense interaction and cross-pollination and makes it possible for Hasselt University to fully take up its role as a *civic university*. The international quality and cooperation are reflected in its commitment to the region's economic, administrative, social and cultural development.

## **002 - Hasselt University integrates gender and diversity in its R&I activities**

In accordance with the guidelines of the Special Research Fund and of the Equal Opportunities Action Plan (developed at the VLIR), Hasselt University strives to create an organisational culture that is inclusive and in which the individual, regardless of his or her gender or nationality, can flourish and use his/her talent to contribute to its organisational objectives. To this end, Hasselt University welcomes PhD students and researchers from different cultures and ensures that PhD students and researchers from every walk of society have equal opportunities. For this purpose Hasselt University has developed the obligatory policy-supporting measures, and annually adjusts them.

Reflecting Flemish policy on the matter, Hasselt University has developed a Gender Policy Plan that endeavours to respond to the interests, needs and wishes of both women and men, building on the fact that woman as well as men struggle to combine their professional and personal/social lives.

The measures of this Gender Policy Plan can be classified into three groups: - measures related to the company culture (target group: all members of staff), - measures related to influx and transfers (target group: academic staff), - measures related to the work-private life balance (target group: all members of staff). An important objective of the Gender Policy Plan focuses on facilitating researchers' academic careers. The measures focused on the influx and transfer of academic staff strive to respond to this. Hasselt University will assess current actions, update the Gender Policy Plan and define specific objectives.

## **003 - Impact and science communications**

Hasselt University sees impactful research as research that nourishes and promotes the development of economic and social growth and future sectors. Communicating with diverse stakeholders internally and externally about research and innovation continues to be essential for perpetuating and reinforcing its position in the research and innovation landscape.

In its role as a *civic university* Hasselt University encourages its researchers to communicate their research and its social relevance to the outside world through diverse activities tailored to various stakeholders. This is why Hasselt University is committed to creating an appealing, user-friendly website where communication on Hasselt University research takes pride of place.

## **004 - Open Science (Open Access - Open Data - Research Data Management)**

Hasselt University endorses the significance of *Open Science* to share knowledge and encourage research cooperation at a global level. In addition making published research results in *Open Access* available, it also fully engages in the effective management of research data in order to make it accessible to third parties (*Open Data*) *where possible*. To this end, Hasselt University provides the necessary training, policy support and infrastructure so that *Research Data Management* becomes embedded in the research culture.

## **005 - Ethics and integrity**

Hasselt University is convinced that incorporation of ethics and integrity across the institutions for all its assignments (teaching, research and service provision) is essential. For this reason it attaches considerable importance to the integrity of all staff and the scientific and ethical quality of its education, research and service provision, as well as the administration performed on its behalf. With this in mind, Hasselt University commits to a university-wide culture of integrity, and provides the necessary training, policy support and infrastructure to achieve this.

Hasselt University also strives to focus and maintain attention on the various elements listed in the Integrity Charter applicable to all Hasselt University staff by clearly communicating.

#### **006 - Good Governance Charter**

Hasselt University's regulation related to the internal allocation of global resources from the Special Research Fund and the Industrial Research Fund is embedded in the University's Good Governance Charter. The University safeguards the elements necessary for good governance by adjusting and steering these regulations where necessary.

#### **SO3 - HASSELT UNIVERSITY ACTIVELY WORKS ON TALENT AND EMPLOYABILITY SKILLS WITHIN RESEARCH AND INNOVATION**

Hasselt University acts as a catalyst for talent. Researchers are aware of and have access to sufficient and diverse funding channels and sources. In this regard, in its role as a *civic university* Hasselt University also aims to work closely with non-academic funders and partners, such as strategic research centres, hospitals, industry, etc. Moreover, researchers benefit from the necessary support, space and facilities to realise their full potential in all stages of their research career. Specifically for young researchers, the *Doctoral Schools* provide academic education and training in *employability skills*, and offer young PhD candidates a clear framework of rights and obligations. In terms of doctoral policy Hasselt University critically monitors related European trends, such as PhDs with industrial and social actors, financing via *crowdfunding* and donations, shorter time frames for PhD students and qualitative working conditions for researchers.

#### **001 - Hasselt University strives to expand, and further differentiate the range of PhD funding by 2021.**

To this end, existing programmes will continue and new programmes with social and/or economic objectives will be started up to fund doctoral research with national, international and intersectoral partners. This cooperation can be achieved through joint funding programmes as well as by continuing to reinforce national/international and intersectoral mobility options within the research policy.

**002 -Doctoral Schools are responsible for providing a qualitative setting for young researchers** In the *Doctoral Schools* PhD students are coached and trained, and supplied with enough room and attention for each researcher's individual gifting and preferences. To this end, seminars and workshops are offered on specialised topics, generic (*transferable*) and business skills related to entrepreneurship and valorisation. The *Doctoral Schools* further develop this range with partners within Hasselt University, but also in association with other academic and non-academic partners at home and abroad. In order to effectively support this **entrepreneurship for students and young researchers**, Hasselt University endeavours to develop a suitable range of services, including management training for young, interested researchers.

By 2021, the *Doctoral Schools*, as smooth-running competence centres for Hasselt University's young researchers, aim to optimally align the researchers' training with the differentiated career options that PhD candidates have access to.



### **003 - Hasselt University works toward differentiated career options for postdoctoral researchers**

Depending on where it's strategically needed, the postdoctoral research group will be reinforced. This postdoctoral research group makes a significant contribution to, for example, research management, service provision and valorisation.

**Differentiated career options** will be developed (IOF managers, research managers, postdoctoral researchers) for this group. This postdoctoral research group's status is clearly defined using an unambiguous and competitive career plan, which is outlined in the HR policy.

A postdoctoral status will be developed for postdoctoral researchers who have obtained a grant/subsidy within the framework of international scientific mobility - in line with other Flemish universities.

### **004 - HR policy for researchers at Hasselt University obtains European quality label**

The European Commission *HR-Strategy-for-Researchers* (HRS4R) logo that Hasselt University obtained in 2011, illustrates those efforts which had already been made in terms of researcher working conditions and mobility, as well as researcher recruitment and selection and training and integrity. The HRS4R plan provides Hasselt University with a guideline for the optimisation of researchers' working conditions and improved support for their careers. In 2017, Hasselt University intends to once again succeed in obtaining this label, an endeavour that goes hand-in-hand with the formulation of updated objectives that will work to further clarify and improve researchers' careers both at and outside the university.

### **SO4 - HASSELT UNIVERSITY COVERS THE FULL RESEARCH SPECTRUM: FROM FUNDAMENTAL RESEARCH TO VALORISATION, AND BACK**

Adequate and strategic deployment of internal resources for research and innovation is more important than ever. Fundamental research budgets have come under pressure, and the competition for obtaining external research and innovation funding continues to mount. Given Hasselt University's priority focus on fulfilling its social role (*as a civic university*), the University carries out its R&I activities within the context of social challenges. By doing so the full research spectrum is covered, from fundamental to innovation-oriented research. To achieve this, Hasselt University encourages the development of multidisciplinary and intersectoral networks at the regional, national and international levels. Besides responding to social challenges, it is important that income from the valorisation of research is reinvested in fundamental, ground-breaking research, the driving force behind the new challenges of tomorrow.

### **001 - BOF and IOF as the lever for obtaining external resources - major commitment to focus**

Hasselt University makes an effort to use internal BOF and IOF resources as a lever by which external resources can be obtained and as additional support for optimally using external funding channels. Hasselt University opts for the targeted use of internal resources to increase excellence in the disciplines related to major social issues. This leads to greater focus and quality in the selected research fields and also boosts the University's social profile.

Via the BOF a new programme is provided to fund multidisciplinary research initiatives that in time should result in increased participation in external research and innovation programmes. In addition to large-scale research projects, adequate resources will also be reserved for junior researchers (such as the BOF PhD fund).

In order to promote and further develop cooperation with industrial and social actors, a specific PhD fund for cooperation with social and economic actors will be set up.

The use of IOF resources is directed at IOF managers and *business developers* in the research groups. They support researchers by translating their research into possible applications and economic value, and will be drawn on to acquire external resources for applied research and valorisation. It is by performing this task that they create a link between Hasselt University and the business world. Hasselt University also continues to promote researchers' mobility, and internal resources are being deployed to start up international consortia with other knowledge institutions and companies that fit with the Government of Flanders' strategic R&I roadmaps. This means networks can be developed that are capable of responding to future calls for research funding and research initiatives.

## **002 - Sound promotional policy for external funding**

Hasselt University continues to encourage its researchers to participate in external funding programmes for research and innovation. Flemish and regional funding should serve as a springboard for obtaining European and international research funding. To achieve this it is important on the one hand that the funding strategy and promotional policy adequately account for the distinct character of the research fields and with the objectives of R&I funding programmes; on the other, it is crucial that researchers are sufficiently encouraged to collaborate with new research partners (knowledge institutions and research centres in Flanders and abroad), social and economic actors (such as authorities) and businesses. After all, new multidisciplinary and intersectoral collaboration creates new funding opportunities and results in an increased number of research activities that Hasselt University is capable of participating in.

## **003 - Reinforcing and expanding the scope of networks (with other universities, research centres and third parties)**

Networks are paramount in the pursuit of excellent research and far-reaching innovation. On the one hand, Hasselt University strives for institutional collaboration with strategically-chosen, international partners, while on the other, spontaneous initiatives in the context of excellent research continue to play a significant role in network development and internationalisation.

Hasselt University's unique positioning in the EUREGIO and its role as a driving force in this region, represent an opportunity for international collaboration. In this policy plan Hasselt University continues to focus on reinforcing this unique cooperation partnership in the EUREGIO.

Hasselt University optimises its internal organisation and administrative support using the Lerend Netwerk Onderzoek en Innovatie (Research and Innovation Learning Network).

## **S05 - HASSELT UNIVERSITY OPTS FOR INTERDISCIPLINARY RESEARCH THAT IS SOCIO-ECONOMICALLY RELEVANT**

### **001 - Impact of and communication on research performed at Hasselt University to businesses**

The first step in creating relevance and added value for the (EU)region is to openly communicate about research performed at Hasselt University. Demonstrating the importance of research and bringing about industrial research collaboration are only possible if businesses, and by extension society, understand the applicability and the impact of research results. Researchers must be encouraged to communicate about their research externally. They are encouraged to reflect on the socio-economic impact of their research and share the knowledge acquired with actors in civil society because this will, in turn, encourage other actors to join these efforts.

### **002 - Stimulating applied research, industrial collaboration and knowledge transfer among researchers**

Knowledge transfer begins when research results are translated into social and/or economic applications and value. Researchers do not always possess the necessary knowledge or time to achieve this. With regard to internal IOF resources Hasselt University had already strategically opted to focus more on **business** support for researchers during the previous policy period. When the new policy plan is rolled out, this approach will be assessed and adjusted and improved if necessary through effective interaction between researchers, the IOF team (embedded in the research group) and the TTO team. This method means that ongoing research can be structurally monitored in order to begin estimating the valorisation potential of a research result and launch the appropriate valorisation process at an early stage.

Through this underlying IOF/TTO structure researchers will receive the right supervision during and contact with **knowledge transfer**. Hasselt University will make even more concerted efforts toward raising awareness about valorisation over the next few years. Good results in the area of knowledge transfer will have a positive impact on the academic career of the researcher concerned.

Available resources for valorisation and industrial research cooperation are key in this context. In addition to the available funding channels from the Government of Flanders for industrial research and knowledge transfer (VLAIO and IOF are, however, limited in scope with regard to the knowledge institutions), Hasselt University aims to set up a specific PhD fund during the coming policy period for collaboration with social and economic actors, in analogy with the Flemish Baekeland programme.

### **003 - Industrial collaboration with external partners leads to socio-economic impact and prosperity in a regional and international context**

Using the above structure and approach Hasselt University aspires to increase industrial collaboration with external partners. This type of collaboration leads to direct socio-economic impact via, for example, service provision, research partnership, patents, licenses and spin-offs. These valorisation processes lead to short and/or long-term (incremental or disruptive) innovation, which results in the optimisation or the creation of products/services, the expansion of markets, an increase in turnover and generates employment for society.

In this context the IOF/TTO team is involved in regional and international platforms with companies and policy to facilitate a collective response to strategic domains and support initiatives in a regional and international context.

#### **004 - Involvement in the policy related to knowledge transfer and collaborative research**

The focus on knowledge transfer and demand-driven collaborative research with output in the short term (and corresponding funding) from industry is on the rise at all policy levels: regional, Flemish and European. As mentioned previously, fundamental research budgets with output in the medium or long term and the corresponding funding flows are under considerable pressure. However, the importance of fundamental research for valorisation in the medium or long term, the impact of incremental versus disruptive innovation on the future of our economy, etc. are important themes that should repeatedly be brought to the attention of policy-makers as a priority. In this respect, Hasselt University endeavours for representation in policy groups working on this theme. Finding an appropriate financial equilibrium is vitally important in the context of guaranteeing prosperity in the long term.

#### **SO6 - HASSELT UNIVERSITY AIMS TO BOOST THE INTERNATIONAL DIMENSION OF ITS R&I ACTIVITIES**

Hasselt University is an active hub in the global knowledge and innovation web. It works with universities, research centres, businesses and organisations worldwide. Being a university that warmly welcomes students and researchers from every continent, Hasselt University is also an international hub in the region. Hasselt University is keen to take Limburg hospitality to heart when international students, lecturers, and researchers, etc. join the university fold. To this end, an effective and unambiguous reception policy forms the basis for welcoming and supporting national and international guests that temporarily or permanently join the university. Deeply embedded in the region, Hasselt University significantly prioritises international networks. It is this international orientation and mobility of students, researchers and staff to which Hasselt University aspires.

In its research policy Hasselt University also devotes attention to initiatives focused on scientific collaboration with developing countries (*science sharing*).

##### **001. Boosting Hasselt University's international image**

Internationalisation improves the quality of the University and affords it a sustainable, international reputation. Effective, reliable external communication helps place Hasselt University on the map as a 'strong brand'. International marketing has to provide room for the University's international range of study programmes and the *Doctoral Schools*. The continued development of Hasselt University as a *civic university* requires an extensive alumni network which is also an aspect that is key in highlighting the University's international character. In addition, university rankings continue to be a means for making the University's quality visible on a global level. Our English-language website serves as the University's primary and most accessible calling card. This is why Hasselt University is committed to creating an appealing, user-friendly website for international visitors.

##### **002. Encouraging and facilitating quality, international mobility**

A practical reception policy is needed to attract international researchers. For this reason Hasselt University uses a **single point of contact** (SPOC) for international mobility, in which customer-friendliness is paramount. The SPOC centralises the expertise required to professionally support and provide international visitors with information. This SPOC also serves as the first point of contact when our researchers have plans to travel abroad for their work. The required build-up of expertise related to international mobility is achieved with the aid of all the services involved (HR Office, Education Office, etc.). This facilitates the creation of a culture of internationalisation at Hasselt University. This culture also includes the proper and relevant use of the English language that extends to the administration.

Moreover, Hasselt University continues to encourage its researchers to participate in funding programmes that support mobility. This ranges from funding for short and long stays abroad, to *sabbaticals*, setting up international networks and projects.

### **003. The international *mindset* of Hasselt University is supported within the institution**

Hasselt University seeks to create an international *mindset* among its researchers. From the launch of their research careers, researchers are encouraged to develop an international network. Hasselt University reserves operational resources from the Doctoral Schools and from the BOF for researchers starting with the PhD level, to lay the foundation for an international network through international research stays.

### **004. *Science sharing* with developing countries**

Hasselt University also devotes attention to initiatives focused on scientific collaboration with developing countries (*science sharing*). Hasselt University wishes to provide its researchers and staff with an opportunity to acquire mobility experience in the global South, as well as attracting PhD students and professors from the South to work on a PhD or to teach, including via the BOF programme for bilateral scientific collaboration. Furthermore, Hasselt University seeks to actively participate in the search for sustainable solutions to social challenges in developing countries. It also encourages and facilitates participation in programmes that aim for capacity development in terms of research and social services in the South. In this way Hasselt University's expertise in research and innovation is deployed internationally.

## APPENDIX 1 - LIST OF ABBREVIATIONS


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The following abbreviations are used in the text and appendixes of the Research & Innovation Policy Plan:

SO:	Strategic Objective
OO:	Operational Objective
PI:	Principal Investigator
BOF:	Bijzonder Onderzoeksfonds (Special Research Fund)
IOF:	Industrieel Onderzoeksfonds (Industrial Research Fund)
SOC:	Strategische Onderzoekscentra (Strategic Research Centres) (IMEC, VIB, VITO, FlandersMake)
ZAP:	Zelfstandig Academisch Personeel (Senior Academic Staff)
BAP:	Bijzonder Academisch Personeel (Special Academic Staff)
AAP:	Assisterend Academisch Personeel (Junior Academic Staff)
AO (ORF):	Other Research Funds
ECOOM:	Expertise Centrum voor O&O Monitoring (Expertise Centre for R&D Monitoring)
VABB:	Vlaams Academisch Bibliografisch Bestand (Flemish Academic Bibliography)
R&I:	Research & Innovation
RRI:	Responsible Research & Integrity
VLIR:	Vlaamse Interuniversitaire Raad (Flemish Interuniversity Council)
RDM:	Research Data Management
VLAIO:	Vlaams Agentschap voor Innoveren & Ondernemen (Flanders Innovation & Entrepreneurship Agency)
SPOC:	Single Point of Contact
DOC:	Dienst Onderzoekscoördinatie Universiteit Hasselt (Hasselt University Research Coordination Office)
TTO:	Hasselt University Tech Transfer Office
CID:	Centrale Informaticadienst Universiteit Hasselt (Hasselt University Central IT Office)
PER:	Personeelsdienst Universiteit Hasselt (Hasselt University HR Office)
DIOS:	Dienst internationalisering & ontwikkelingssamenwerking Universiteit Hasselt (Hasselt University Internationalisation & Development Cooperation Office)
DCM:	Hasselt University Communications and Marketing Office
SEE:	School of expert education
R:	Research
CWTS:	Centre for Science and Technology Studies
BTC:	Belgian Development Agency
WoS:	Web of Science
VLIR-UOS:	Flemish Interuniversity Council - University Development Cooperation

## APPENDIX 2 - RESEARCH AND INNOVATION TARGET FIGURES

**Hasselt University strives to achieve the following target figures for Research and Innovation by 2021**

	2016	2021
Number of PhDs obtained	75	100
Number of PhDs obtained in association with an academic partner (joint PhDs)	14	30
Number of PhDs obtained in association with a non-academic partner -> Hasselt University PhDs (industry, partnership, partners and/or SOCs)	1 <sup>1</sup>	30
Number of current PhDs	557	700
Proportion of foreign PhD students	38%	45%
Average number of current PhDs per ZAP (FTE) <sup>1 2</sup>	2.4	2.8

### PhDs successfully obtained

Source:

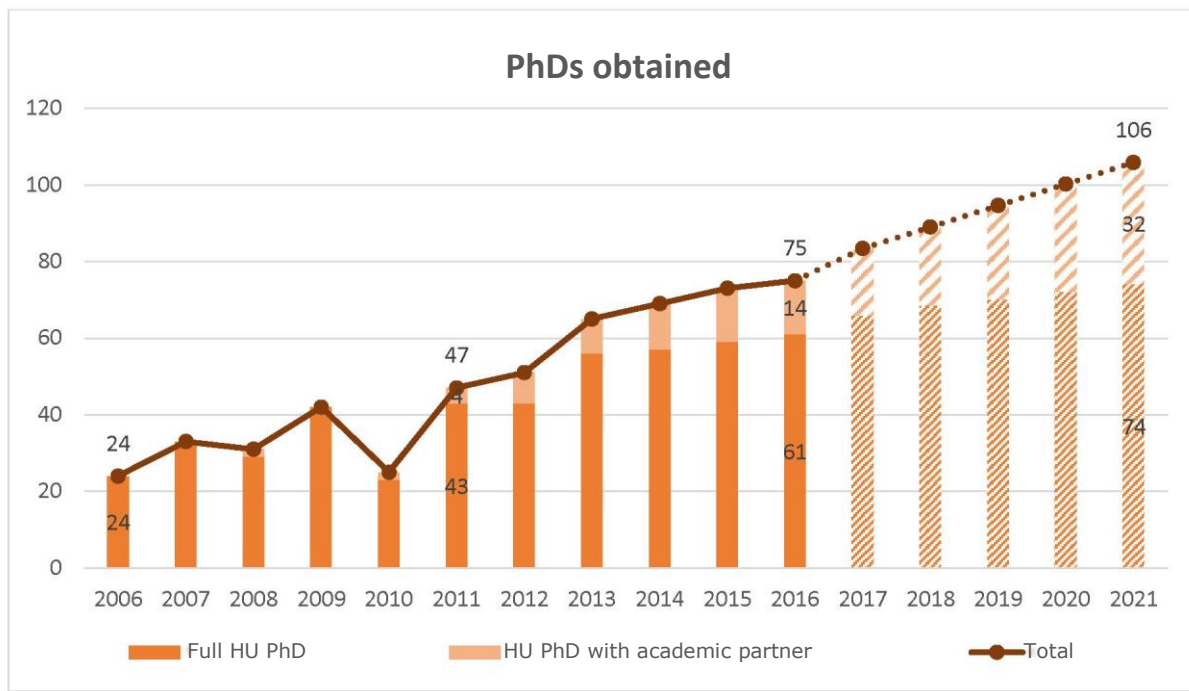
- Research statistics database (based on My Doctoral File): 01/06/2017

Calculation:

- Linear growth of the total number of PhDs, estimated using the number of PhDs obtained in the past five years (2012-2016)
- Gradual increase in the number of PhDs with an academic partner to 30% (2016: 16%)
- Comment: the research statistics database does not specify whether a PhD has a non-academic partner. For this reason these figures are included in the figures of the total number of Hasselt University PhDs.

<sup>1</sup> This data is not currently linked to the PhD students.

<sup>2</sup> This target figure represents the average number of current PhDs per year per ZAP. Please note: the number of current PhDs per ZAP depends on the field of research and can therefore vary significantly at the individual level. In 2016, there was a total of 557 current PhDs and 230 FTE ZAPs registered. This equates to approximately 2.4 current PhDs per ZAP per year. An increase to 700 current PhDs and 250 FTE ZAPs results in an average of 2.8 current PhDs per ZAP per year.



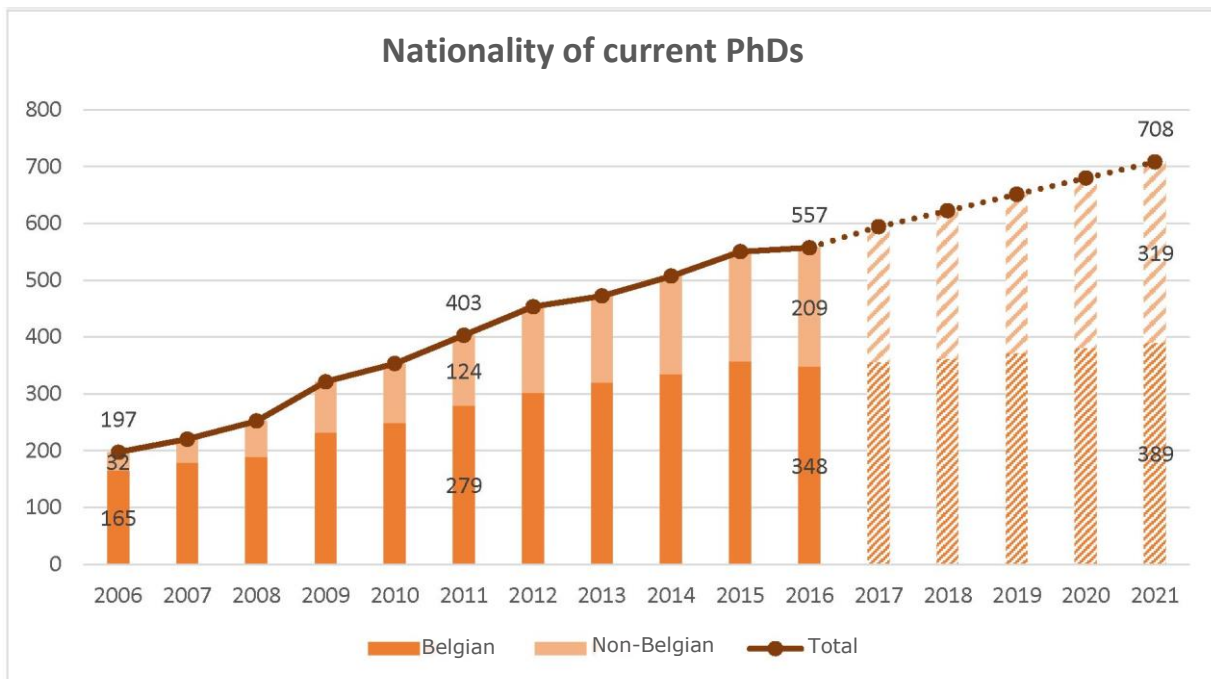
#### Number of current PhDs

Source:


- Research statistics database (based on My Doctoral File): 01/06/2017

Calculation:

- Linear growth of the total number of PhDs, estimated using the number of current PhDs in the past five years (2012-2016)
- Gradual increase in the number of foreign PhD students to 45% (2016: 38%)





		2016	2021
			
Number of researchers (ZAP)		230	<b>250</b>
Number of researchers: (BAP, AAP)		376	<b>400</b>
Number of researchers (scholarships/grant recipients)		223	<b>275</b>

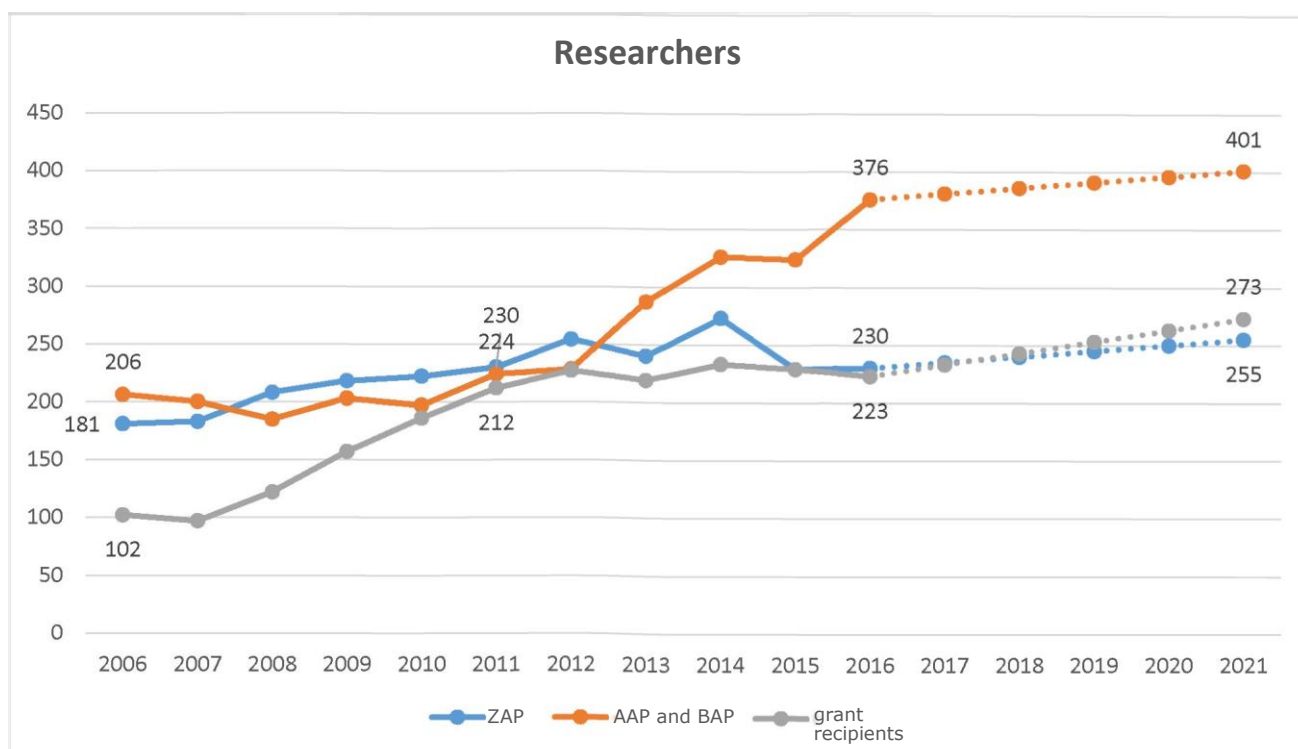
## Researchers

Source:

- Data received from Hasselt University's HR Office

Calculation:

- Linear growth of the total number of ZAPs (+5 per year), AAP (+5 per year) and BAP (+10 per year)



	2016	2021
2nd cash flow income (EUR)	9,179,715	<b>10,000,000</b>
3rd cash flow income (EUR)	11,605,137	<b>13,000,000</b>
4th cash flow income (EUR)	4,206,678	<b>5,000,000</b>
Proportion of international research funds for total income (AO) <sup>3</sup>	11%	<b>25%</b>
Number of ERC grant holders	4	<b>8</b>

### Income

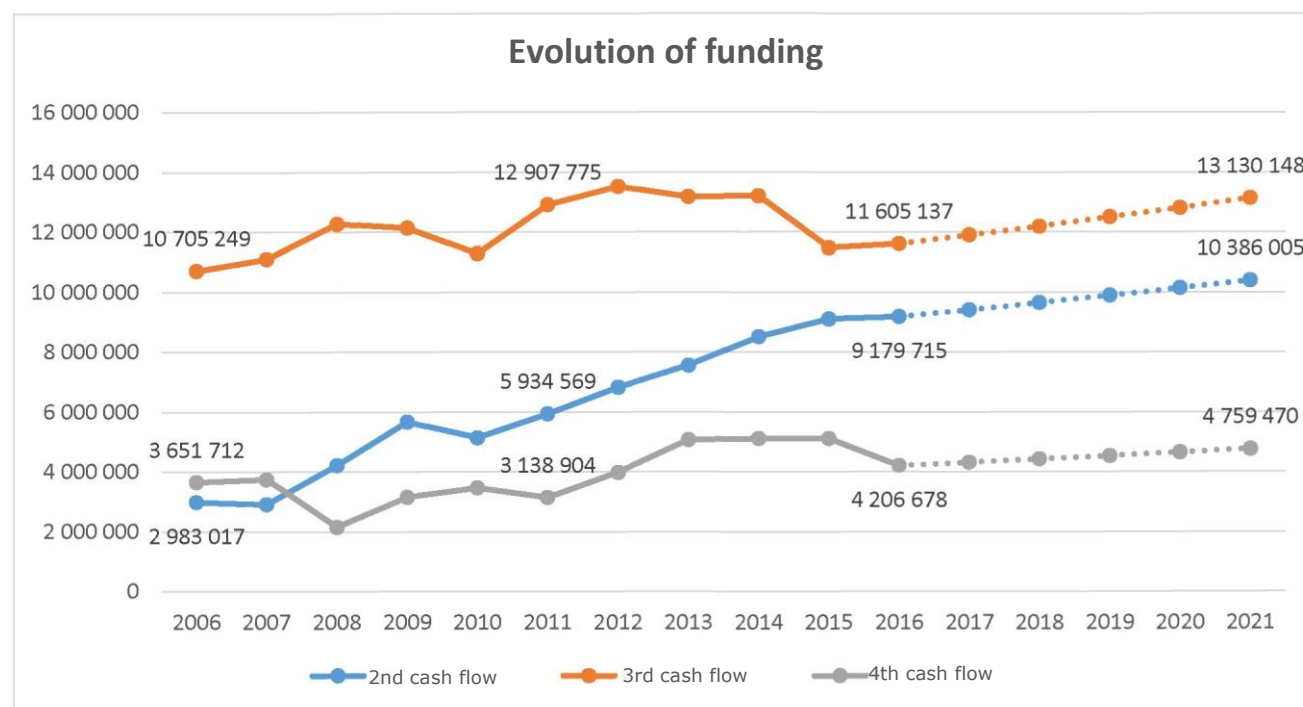
Source:

Research and innovation data from annual

report

Calculation:

Cautious linear growth of 2.5% per year for income from each cash flow, based on ZAP growth forecasts.



<sup>3</sup> Figures based on Hasselt University's annual accounts (accounting code 7023: International bodies)

	2016	2021
Number of validated publications (ECOOM & VABB)	792	<b>1200</b>
Number of highly-cited papers on Web of Science	12	<b>20</b>
Proportion of international co-publications	54%	<b>75%</b>
Proportion of co-publications with industry	5%	<b>15%</b>
Proportion of full-text publications on the document server <sup>4</sup>	53%	<b>75%</b>
Proportion of Open Access publications on the document server <sup>4</sup>	33%	<b>75%</b>
Proportion of Open Data for all research data in repositories	-	<b>35%</b>
Number of new patent applications	6	<b>10</b>
Number of newly granted patents	5	<b>7</b>
Number of active patents (cumulative)	69	<b>84</b>
Number of active licenses (cumulative)	15	<b>23</b>

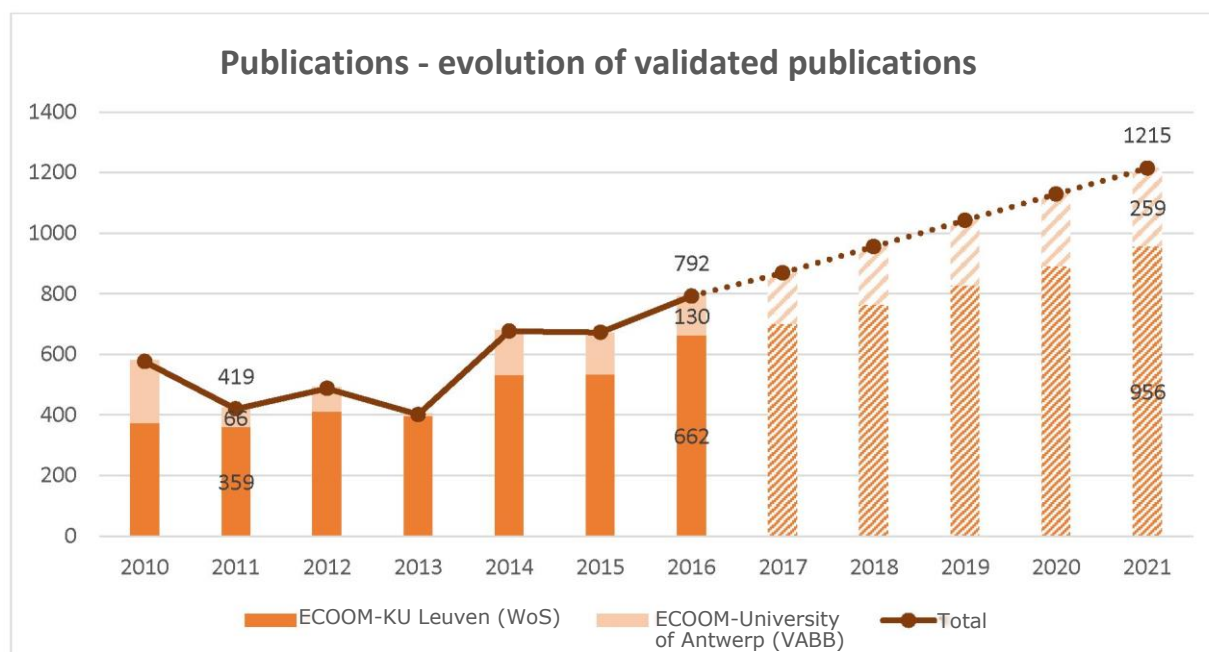
### **Number of validated publications (ECOOM & VABB)**

Source:

- Research statistics database (based on the document server): 01/06/2017
- Research and innovation annual report

Calculation:

- Linear continuation of the growth of ECOOM KU Leuven (WoS) validated publications, estimated using figures of the past five years
- Linear continuation of the growth of ECOOM University of Antwerp (VABB) validated publications, estimated using figures of the past five years



<sup>4</sup> Figures originating from the University Library 2016 annual report

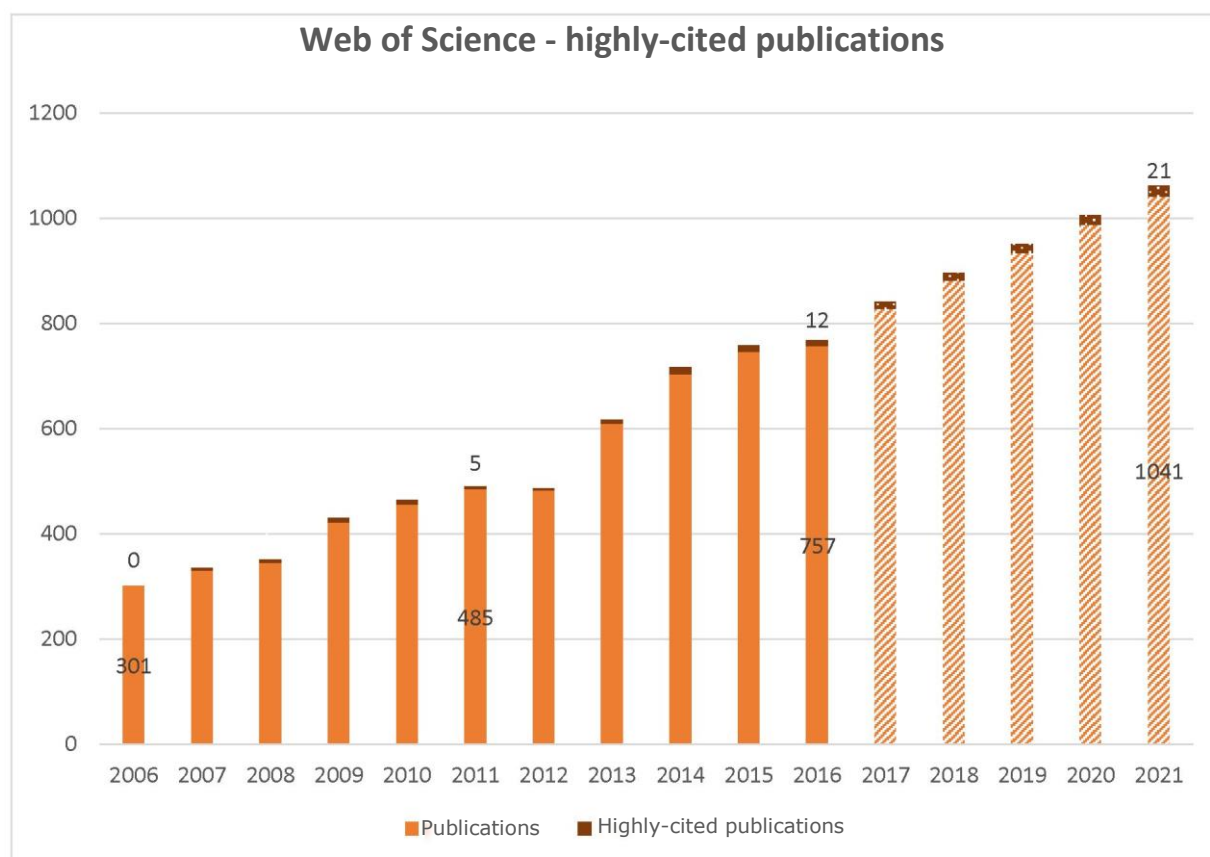
### **Number of highly-cited papers on Web of Science**

Source:

- Web of Science, consulted on 01/06/2014

Calculation:

- Figures based on the increase in the total number of publications (on WoS) between 2009 and 2016 and an expected increase to 2.0% for highly-cited papers by 2021 (1.6% in 2016).



### **Proportion of international co-publications**

Source:

- International joint publications as used in U-Multirank, calculated by CWTS Leiden based on publications on Web of Science

Calculation:

- International joint publications: the percentage of Hasselt University publications with at least one foreign co-author.

	2015	2016	2017
<b>International joint publications (% of total publications)</b>	52.1%	53.6%	54.7%

### **Proportion of co-publications with researchers from industry**

Source:

- Co-publications with industrial partners as used in U-Multirank, calculated by CWTS Leiden based on publications on Web of Science

Calculation:

- Co-publications with industrial partners: the percentage of Hasselt University publications of which at least one co-author is affiliated with a non-profit company or private R&D institution Average number for the 2012-2016 period

	2015	2016	2017
<b>Co-publications with industrial partners (% of total publications)</b>	6.3%	5.4%	6.0%

## APPENDIX 3 - ACTION PLAN

### Action plan:

This action plan below contains the action points included at the beginning of this policy plan, but for which an annual update is entailed.

#### SO1: HASSELT UNIVERSITY ENDEAVOURS TO BE AN INCREASINGLY EFFICIENT RESEARCH ORGANISATION.

Action	Lead	Stakeholders
<b>OO1 - Development of a quality care system that promotes excellence</b>		
External research evaluations by EWI	DOC	Hasselt University Policy
Launch of the reform of Input-output to achieve an efficiency measurement	DOC & TTO	Research groups
<b>OO2 - Robust multidisciplinary research institutes for research and innovation focused on social challenges</b>		
Relaunch the Institute Directors Advisory Board	DOC & TTO	Research institutes
Launch the terms for institutional reform and draft the timetable	DOC & TTO	Research institutes
<b>OO3 - Organising research infrastructure into technology platforms</b>		
Call for submission of technology platforms	DOC & TTO	Researchers
<b>OO4 - Scientific innovation through stimulus funding for multidisciplinary research initiatives</b>		
BOF-NI programme reform	DOC	Researchers

- **Instruments for achieving the objective:**
  - o development of a BI system, restructuring of institutes, launch of the funding project for multidisciplinary research initiatives
- **Estimate of the (current) financial arrangements:**
  - o Hasselt University operations, BOF special research fund, FWO resources for research infrastructure

#### SO2 - HASSELT UNIVERSITY ENCOURAGES RESPONSIBLE RESEARCH AND INNOVATION

Action	Lead	Stakeholders
<b>OO1 - Research and innovation at Hasselt University with and for society</b>		
External research evaluations by EWI	DOC	Policy
<b>OO2 - Hasselt University integrates gender and diversity in its R&amp;I activities</b>		
Evaluate current activities related to the gender and diversity plan	Manager	Hasselt University - staff
<b>OO3 - Impact and Scientific communication</b>		
Compile a science communications plan for Hasselt University / AUHL	DCM & DOC & TTO	Hasselt University - staff
<b>OO4 - Open Science (Open Access - Open Data - Research Data Management)</b>		
Implement the 'green route' for research publications	University library	Researchers
Prepare a university-wide RDM policy and four specific disciplinary action plans	DOC	Hasselt University
Compile an RDM plan for BOF and IOF applications	DOC	Researchers
Store research data in accordance with FAIR principles	DOC & CID	Researchers
Make data accessible for reuse by third parties	DOC & TTO & CID	Researchers

<b>O05 - Ethics and integrity</b>		
<i>Implement the Ethics &amp; Integrity Charter</i>	<i>DOC &amp; PER</i>	<i>Hasselt University - staff</i>
<i>Set up the Hasselt University Dual Use Committee</i>	<i>DOC</i>	<i>Researchers</i>
<b>O06 - Good Governance Charter</b>		
<i>Update BOF internal guidelines and internal regulations</i>	<i>DOC</i>	<i>Researchers</i>
<i>Update IOF internal guidelines and internal regulations</i>	<i>TTO</i>	<i>Researchers</i>

- **Instruments for achieving the objective:**
  - o Develop an RDM infrastructure (in association with CID), modify document server in light of Open Access and Open Data requirements.
- **Estimate of the (current) financial arrangements:**
  - o Hasselt University operations, BOF, Flemish funds for Science Communications

### **SO3 - HASSELT UNIVERSITY ACTIVELY WORKS ON TALENT AND *EMPLOYABILITY SKILLS* WITHIN RESEARCH AND Innovation**

<b>Action</b>	<b>Lead</b>	<b>Stakeholders</b>
<b>O01 - Hasselt University strives to expand, and further differentiate the range of PhD funding by 2021</b>		
<i>Broaden interuniversity collaboration related to joint doctoral funding</i>	<i>DOC</i>	<i>Researchers - partner universities</i>
<i>Establish a specific PhD fund for collaboration with social and economic actors</i>	<i>DOC &amp; TTO</i>	<i>Researchers - third parties</i>
<b>O02 - <i>Doctoral Schools</i> are responsible for providing a high-quality setting for young researchers</b>		
<i>Assessment of OJO (Flanders' 'Support for Your Researchers' programme) resources by EWI</i>	<i>DOC</i>	<i>Policy &amp; Researchers</i>
<i>Continue and optimise the existing offer</i>	<i>DOC</i>	<i>PhD students, postdocs, supervisors and faculties</i>
<b>O03 - Hasselt University works on differentiated career options for postdoctoral researchers</b>		
<i>Launch collaboration between doctoral schools and SEE for entrepreneurship training courses</i>	<i>DOC - SEE</i>	<i>PhD students, postdocs</i>
<i>Introduce career path opportunities for young researchers including, for example, entrepreneurship</i>	<i>DOC</i>	<i>PhD students and postdocs</i>
<b>O04 - HR policy for researchers at Hasselt University obtains European quality label</b>		
<i>Schedule internal stakeholders meeting with the aim of evaluating the previous HRS4R plan and developing the new HRS4R plan</i>	<i>PER</i>	<i>each researcher</i>

- **Instruments for achieving the objective:**
  - o Reform BOF programmes, and extend the scope of the BOF PhD fund
- **Estimate of the (current) financial arrangements:**
  - o BOF special research fund and OJO resources & DS co-funding of Hasselt University operational resources; and operational resources for HRS4R.

**SO4 - HASSELT UNIVERSITY COVERS THE ENTIRE RESEARCH SPECTRUM: FROM FUNDAMENTAL RESEARCH TO VALORISATION, AND BACK**

<b>Action</b>	<b>Lead</b>	<b>Stakeholders</b>
<b>OO1 - BOF and IOF as the lever for obtaining external resources - major commitment to focus</b>		
<i>Establish a specific PhD fund for collaboration with social and economic actors</i>	<i>DOC &amp; TTO</i>	<i>Researchers - third parties</i>
<i>Co-funding policy for Marie Skłodowska-Curie scholarships</i>	<i>DOC</i>	<i>Researchers</i>
<b>OO2 - Sound promotional policy for external funding</b>		
<i>Implement ERC promotional policy</i>	<i>DOC &amp; Rectorate</i>	<i>Researchers</i>
<i>Support the development of international consortia to prepare for future research initiatives and funding applications linked to R&amp;I roadmaps</i>	<i>DOC</i>	<i>Researchers</i>
<i>Develop New investigator support:</i> - <i>DOC-TTO reception day for new ZAP members and postdoctoral researchers (2x/year)</i> - <i>DOC-TTO welcome email + brochure</i> - <i>Support the development of a funding strategy</i>	<i>DOC &amp; TTO</i>	<i>New ZAP members and postdocs</i>
<i>Organise learning network activities to support funding applications</i>	<i>DOC &amp; TTO</i>	<i>Researchers and internal services (FIN, etc.)</i>
<i>DOC/TTO support for optimising funding applications:</i> <i>Website, knowledge exchange and broadening through participation in network activities, info sessions, workshops for support staff and researchers, open session days for researchers, peer review services.</i>	<i>DOC &amp; TTO</i>	<i>Researchers and internal services (FIN, etc.)</i>
<b>OO3 - Reinforcing and expanding the scope of networks (with other universities, research centres and third parties)</b>		
<i>EARMA &amp; IREG membership</i>	<i>DOC</i>	<i>DOC/TTO/support staff/researchers</i>
<i>ECIU/Civic universities membership</i>	<i>DIOS</i>	<i>Hasselt University</i>

- **Instruments for achieving the objective:**
  - o Reform BOF programmes and expand the scope of the BOF PhD fund
  - o Organise the learning network
- **Estimate of the (current) financial arrangements:**
  - o BOF special research fund and Hasselt University operational resources.



## S05 - HASSELT UNIVERSITY OPTS FOR INTERDISCIPLINARY RESEARCH THAT IS SOCIO-ECONOMICALLY RELEVANT

Action	Lead	Stakeholders
<b>OO1 - Impact of and communication on research performed at Hasselt University to businesses</b>		
DCM support for translating research for society	DCM & TTO & DOC	Hasselt University & external stakeholders
Set up an efficient network, structure and funding for science communications	DCM & TTO & DOC	Hasselt University & external stakeholders
Showcasing: highlight results, collaborations, achievements, etc. so that internal and external opinions are positive.	DCM & TTO & DOC	Hasselt University & external stakeholders
<b>OO2 - Stimulating applied research, industrial collaboration and knowledge transfer among researchers</b>		
Reinforce and optimise the IOF/TTO structure: - Deploy IOF capacity - Structured monitoring of research in the context of valorisation, improved identification of findings with valorisation potential	TTO	Researchers
Need for knowledge transfer training, tools and funding through the Hasselt University learning network: - Commercialisation of research - Access to databases with market information - Adapt proof-of-concept funding (IOF)	TTO	Researchers
Incentives for researchers related to knowledge transfer	TTO	Researchers
Establish a specific PhD fund for collaboration with social and economic actors	DOC & TTO	Researchers - third parties
<b>OO3 - Industrial collaboration with external partners leads to socio-economic impact and prosperity in a regional and international context</b>		
Clear overview of services, applications, licensing options from a business angle	TTO	Researchers
Professional compilation of business cases	TTO	Researchers
<b>OO4 - Involvement in the policy related to knowledge transfer and collaborative research</b>		
Involvement in policy platforms on which policy related to knowledge transfer and valorisation (as well as the corresponding funding flows) is formed: VLAIO, VLIR, EU, Province and SALK, etc.	TTO	Researchers

- **Instruments for achieving the objective:**
  - o Reform IOF programmes
  - o Reform BOF programmes, and expand the scope of the BOF PhD fund
  - o Organise the learning network
  - o Science communications action plan
- **Estimate of the (current) financial arrangements:**
  - o IOF industrial research fund, BOF special research fund and Hasselt University operational resources.

## S06 - HASSELT UNIVERSITY AIMS TO BOOST THE INTERNATIONAL DIMENSION OF ITS R&I ACTIVITIES

Action	Lead	Stakeholders
<b>OO1 - Boosting Hasselt University's international image</b>		
Continue participation in rankings, expand analysis (QS)	DOC	Hasselt University
Launch procedure to improve the English-language website	DCM & DOC	Hasselt University and external stakeholders
<b>OO2 - Encouraging and facilitating quality, international mobility</b>		
Communicate mobility options via Knowledge on the move info sessions	DOC & DIOS	Researchers
Establish a Single Point of Contact for researchers involved in mobility (incoming and outgoing)	DIOS - in association with DOC & PER	Researchers
Update and expand agreements with external partners	DOC	Researchers
<b>OO3 - The international <i>mindset</i> of Hasselt University is supported within the institution</b>		
Stimulate outgoing mobility through the development of networks with international partners	DOC	Researchers
<b>OO4 - Science sharing with developing countries</b>		
Encourage collaboration with partners in the South and participation in programmes focused on science sharing	DIOS & DOC	Researchers

- **Instruments for achieving the objective:**
  - o BOF programmes (BOF-bila and visiting programme); VLIR-UOS programmes, BTC programmes and EU programmes
- **Estimate of the (current) financial arrangements:**
  - o BOF special research fund and Hasselt University operational resources.