This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

GRANT AGREEMENT NUMBER

101035819

This project has received funding from the European Union's
Horizon 2020 research and innovation programme

ENLIGHT RISE- RESEARCH AND INNOVATION AGENDA WITH AND FOR SOCIETY: LEVERAGING DIGITAL INNOVATION FOR A GREENER AND HEALTHIER EUROPE

WP No	Del. Rel. No	Del No	Title	Lead beneficiary
WP5	D5.1	D26	Map of academy-industry partnerships	NUIG

Nature	Dissemination Level	Related to Del. No (if applicable)
Report	Public	D9

Description (short)
The report brings together a mapping of the academy-industry partnerships. The objective is to identify synergies related to the UN-SDGs & ENLIGHT flagship challenges, available through the ENLIGHT R&I Observatory.

Document Version Control		
Version 0.1 DRAFT AWAITING EUROPEAN COMMISSION APPROVAL	Originated by:	NUIG
DOI	https://doi.org/10.5281/zenodo.7456857	

The content of this deliverable represents the views of the author only and is his/her sole responsibility. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains."

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Contents

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Introduction and context

ENLIGHT is a European University formed by nine comprehensive research-intensive universities from nine European countries (Belgium, Estonia, France, Germany, Ireland, Netherlands, Slovakia, Spain & Sweden). ENLIGHT has obtained funding from the European Commission in the Horizon 2020 Science With and For Society (SwafS) work programme. The ENLIGHT RISE project (Research and Innovation agenda with and for Society) seeks to strengthen the research and innovation dimension of the ENLIGHT alliance.

Although the EU is a global leader in research and innovation, it continues to lag behind in translating R&I results into the economy. Moreover, the imbalance between the number of PhD graduates and the number of tenure track positions in academia are an obstacle for retaining talent. To overcome this, the new European Research Area (ERA) plans to improve researchers' employability and at the same time boost transfer to economy by enhancing academy-industry partnerships and inter-sectoral mobility schemes involving industry.

The ENLIGHT alliance gathers a strong knowledge community composed of highly competitive, entrepreneurial universities, increasingly networked with businesses and society. Linked to these instruments, the aim of ENLIGHT RISE WP5 is to develop a map of academy-industry partnerships related to the five ENLIGHT flagship challenges, to explore strengths and weaknesses and to define what an ENLIGHT European Innovation District might look like with an overall goal of boosting European entrepreneurial and innovation capacity.

This document represents D26 (D5.1) deliverables, the specific activities of which are as follows:

(i) Based on D9 'Map of Scientific & Technological domains & common skills' from WP2, identify existing industrial partners of the ENLIGHT universities related to the five flagship challenges (health and well-being, climate action, digital innovation, energy transition, and equity)

(ii) Identify new academic-industry collaboration opportunities, in particular connecting to the European Innovation Council and the Digital Innovation Hub (DIH) services

(iii) Develop a digital map of ENLIGHT academy-industry partners

This deliverable complements the mapping of expertise in the ENLIGHT Think Tank (Erasmus+) and the WP2 analysis of the alliance members' scientific and technological profiles, to help focus future innovation collaborations.

Over the course of the project, WP5 also has responsibility for arranging two Academic Industry Collaboration events using the AIMday methodology. This approach is a proven structured method for bringing academics and external organisations together for innovative exchange of knowledge and ideas, allowing project concepts to be discussed between the academic researchers from each ENLIGHT partner and the company representatives.

The first AIMday was held at Uppsala University, Sweden on 12 May 2022 on the theme Sustainable Urban Development.

The first workshop was held at Comenius University, Slovakia on 15 November 2022 to discuss key topics of innovation districts of ENLIGHT RISE partners in link to deliverables: D5.1 Map of academy-industry partnerships and D5.2 Formalize the ENLIGHT Innovation Network. Finish detailed mapping of academy-industry partnerships and set the basis for formalization of Innovation Network.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

(i) Identify existing ENLIGHT industrial partners

The first part of this task consisted of mapping and validating the existing industrial partners (for-profit) of the nine alliance members. The basis of this analysis was the scientific and technological mapping carried out by WP2 as part of D9 (D2.1) 'Map of Scientific and technological domains & common skills'. A detailed description on the mapping methodology is described in D9 of WP2.

This analysis was primarily based on three criteria:

1. Co-publisher on scientific publications: organizations appearing on at least 10 scientific publications with the university concerned [2016-2021]
2. Co-applicant on patent families: organizations appearing on patent families with the university concerned.
3. Partner on research projects: organizations appearing as partners on the research projects of the university concerned.

A list for each ENLIGHT University was produced and a total of 8,609 organisations were identified based on 13,038 co-publications, 839 patents and 9,081 research projects (Table 1). The full data set is available here.

ENLIGHT University	Number of Organizations	Number of on scientific co-publications	Number of Joint-Patents	Number of Research Projects
Tartu	738	367	2	1109
Galway	951	448	26	120
Commenius	129	197	1	119
UPV	869	532	44	896
UB	713	2191	275	624
Gottingen	546	1332	44	501
Ghent	1745	1851	351	2021
Uppsala	1410	3012	2	1688
Groningen	1508	3108	94	2003
Total	8609	13038	839	9081
Average	957	1449	93	1009
Median	869	1332	44	896

Table 1

The second part of this task involved a detailed assessment of the mapping report by subject matter experts at each institution to validate the findings of the WP2 Mapping report.

A discussion and critical analysis of the findings was conducted during the face-to-face workshop hosted by Comenius University in Bratislava on 15 November 2022. It was generally recognised the mapping report is an excellent and useful tool for identifying industrial partners, particularly in the context of transversal (partners of more than one ENLIGHT university) partners.

However, an additional level of context is required for identifying optimal innovation partners that takes cognisance of the following criteria:

- Regional strengths (particularly with Smart Specialisations)
- Current partners (*e.g.* older projects and partnerships represented as publications or patents in the WP2 – D9 (D2.1) analysis may have ended)
- Relationships with particular entities
- University regional and national priorities
- Additional criteria, such as student placements, sponsorship agreements etc.
- University priorities
- Size of the industry collaborators

An analysis of the top 10 transversal partners according to the WP2 mapping report of Scientific and technological domains and common skills shows that all of the industry partners except one (EDF) are in the health space. **This strongly suggests that a key strength within the consortium is related to health and well-being and should be a focus for initial innovation collaborations. Additional collaborations across other flagship areas will be initiated as the innovation districts develops.**

At the Bratislava workshop , the WP5 Team agreed to initialise the ENLIGHT Innovation District with targeted invitation to industry partners aligned with the ENLIGHT Health and Wellbeing Flagship. Based on the mapping and also input from domain experts, a list of key target companies for new academic-industry collaborations for this theme has been identified by each university partner (**Table 2**).

University	Ten Identified Industry Partners: ENLIGHT Flagship Health and Well-Being									
Basque Country	Jansenn Pharmaceutica	FAES PHARMA	INITHEALTH	IMG PHARMA BIOTECH	MIramoon Pharma	POLIMERBIO	ULMA Medical Technologies	TECNALIA	BEXEN MEDICAL	IBERMATICA
Bordeaux	Novartis	Siemens Healthineers	Ceva Santé Animale	Fealinx	Certis Therapeutics	Myotact	Nurea	Practeex	Rebrain	Industry Cluster ALLIS-NA
Comenius	SELECTA Biotech	GENETON	R-DAS	PowerfulMedical	Diagnose.meBV	MultiplexDX	Glycanostics	Siemens Hesalthineers	Tatramed	POWERTEC s.r.o.
Galway	Boston Scientific	ONK Therapeutics	Neuravi Ltd	Bristol Myers Squibb	Medtronic	Rabdox	Valitacell	Omnispirant	Aurigen	Aerogen
Ghent	Janssen Pharmaceutica (J&J)	Medtronic	Philips	Cochlear	Indigo	Azalea (now MEEP)	Brolis	Byteflies	Morrow Optics	Abbott
Göttingen	Amedes	BBraun	Evotec	Myriamed	Novartis	Ottobock	Philips	Repairon	Sartorius	Siemens Healthineers
Groningen										
Tartu	TBD-Biodiscovery OÜ	The Health Clinic OÜ	Chemestmed OÜ	VÄRSKA SANATOORIUM AS	Antegenes OÜ	Geneto OÜ	Dermtest OÜ	BioCC OÜ	Perkinelmer Cellular	HansaBioMed Life Sciences OÜ
Uppsala	Advania	Astra Zeneca	BC platforms	Galderma	healtintegrator	IQVIA	Novogene	O-link	Oncodia	Qlinea

Table 2 Ten Identified Partners: ENLIGHT Flagship Health and Well-being

(ii) Identify new academic-industry collaboration opportunities

The output of the data mapping exercise identified potential industry collaborators within the ENLIGHT consortium. Based on the mapping exercise the theme of the initial innovation district formation will be associated with the health and wellbeing flagship. The use of the AIMday methodology will explore potential research and innovation collaboration opportunities. However, the development and sustainability of an ENLIGHT innovation district will need to encompass opportunity for broader collaborations within the context of regional development.

To help identify the strengths and weaknesses of the innovation districts in each region, the WP5 team undertook a project to assess their regional innovation district assets under categories of Network, Economic, Physical based on '*The Rise of Innovation Districts*' (2014) Katz, B and Wagner, J. This assessment also identified key actors beyond industry who are critical to a successful Innovation District including Government Agencies, Intermediaries, Investors, and Research Organisations.

The conclusions of the WP5 review of ID's can be summarized as following:

A. *Innovation districts are found in the majority of partners only in a partial form - distributed, in the case of CU we cannot speak of a complex ID, in the case of UGent it was possible to observe the strongest existence of ID.*
B. *In the case of several partners, a clear leadership of ID or city spaces were missing. On the other hand, CU had the strongest physical assets thanks to the size and location of Bratislava as the capital city.*
C. *Several partner universities have positively evaluated organized events and activities for entities in the innovation district (for example, for start-ups in the case of UT, or activities at UU), but there is not always a network for sharing the given events and their results within ID.*
D. *As part of the value proposition, similar key areas were identified for the partners, such as: talent, image for partners, larger impact, mutual relationships, possibilities for strategic partnerships, external funding.*
E. *Missing strategies and structure, leader and coordinator, thematic events and, from a broader perspective, communicating IDs, Multi-disciplinary Cooperation (different faculties), integration and open innovation approach were identified as challenges for building ID from the perspective of ENLIGHT RISE.*

F. *In the subsequent discussions, the specifics and understanding of the Innovation District were more deeply analysed - in the context of the scope (whether it is a place like a district, for example from the perspective of a city, or a district in the European sense, for example, a region) In this context, the partners expect further discussions, especially in of communication with potential partners of the Enlight innovation network.*

Based on the assessment (Mapping chart and Appendix 1) it was agreed, that a focus on the networking assets is the optimal approach to initiate an Innovation District. A further examination of the strengths and weaknesses highlighted significant areas of weakness: district marketing and branding in all except Uppsala and Bordeaux. This is an obvious focus area to achieve an early highly visible win by leveraging the structures and methods used at Uppsala and Bordeaux.

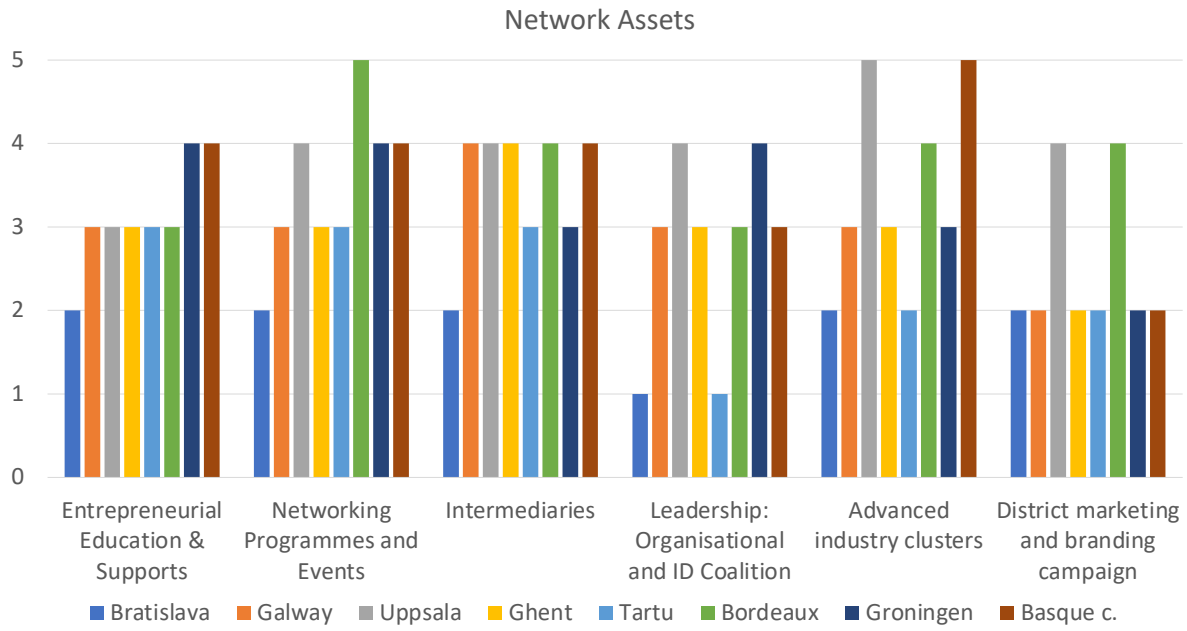

Figure 1 Network Assets

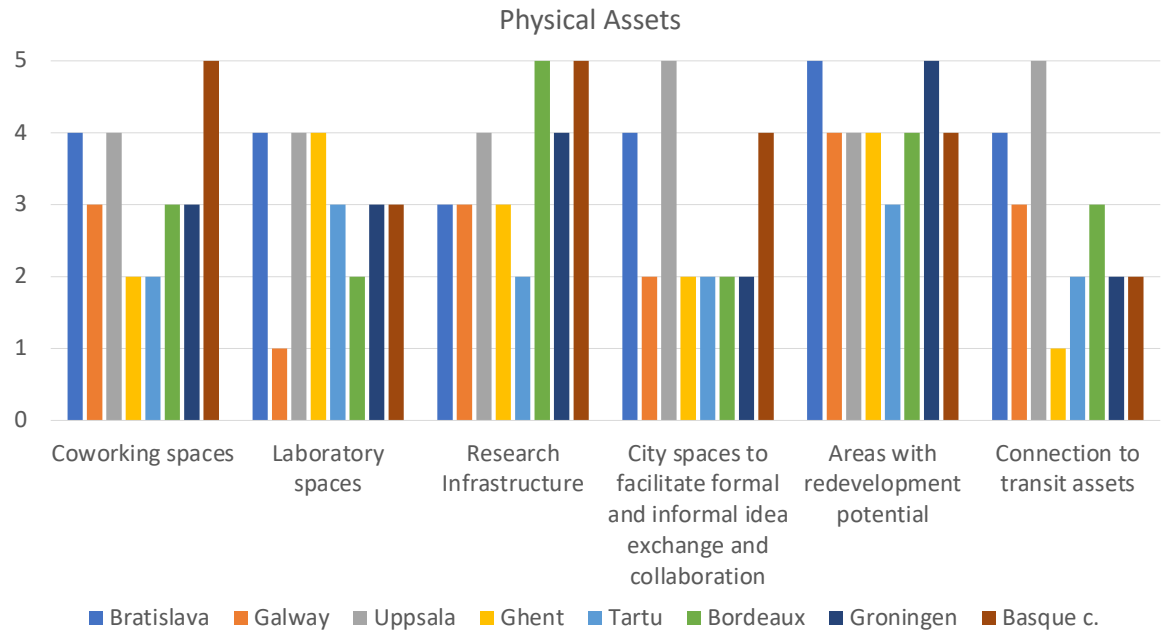

Figure 2 Physical Assets

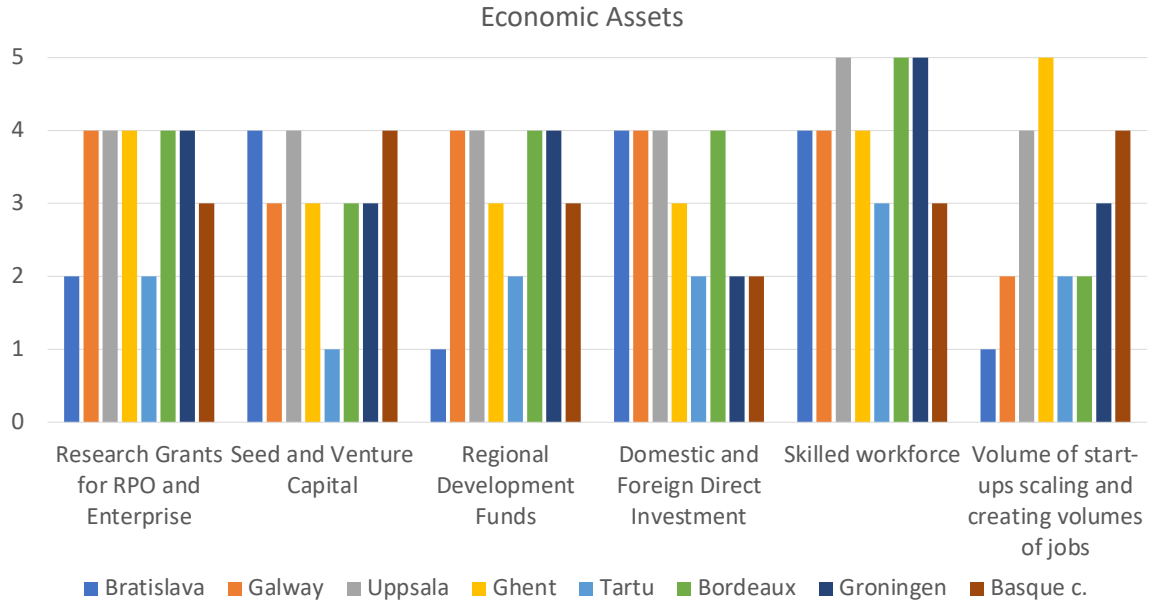

Figure 3 Economic Assets

(iii) Develop a digital map of ENLIGHT industry-academic partners

For this task we will leverage the map of scientific and technological (S&T) domains of each ENLIGHT university and of areas with common R&I skills across ENLIGHT universities on shared research topics linked to our flagship challenges, produced in WP2. As this information is publically available, it can be used as direct input to the ENLIGHT observatory.

However, an additional examination of the data will provide meaningful interpretations.

To identify health partners, the list of potential ENLIGHT industry partners was reduced using the following criteria:

- select partners collaborating with all or at least two of the 9 universities (i.e. KP and TP partners in the file) in terms of Scientific Publications, Projects and Patents
- select partners having more than 20 PubSci OR more than 10 Projects (remove duplicates)
- select partners collaborating on "medic*/health"
- select partners collaborating on "digital/artificial intelligence /data/ehealth/comput*" (remove non-sense/aberrations/results out of scope) resulting in 35 partners

Industry partners were classified as (a) key partners (KP, partners of all nine ENLIGHT universities, (b) transversal partners (TP, partners of 2-8 ENLIGHT universities) or (c) specific partners (SP, partners of only one ENLIGHT university).

	Type of partner			Number of collaborations		
	Patent	PubSci	Project	Patent	PubSci	Project
ASTRAZENECA	-	TP	KP		742	46
NOVARTIS	TP	KP	TP	2	576	36
BOSCH	-	KP	KP		389	20
JANSSEN	TP	TP	TP	3	380	53
HOFFMANN LA ROCHE	-	KP	TP		322	27
GSK	-	KP	TP		319	42
BAYER	TP	KP	TP	13	258	37

BOEHRINGER INGELHEIM	SP	TP	TP	1	236	28
PFIZER	-	KP	TP		220	34
SANOFI	SP	KP	TP	1	203	40
GENENTECH	-	KP	-		197	
DELL	SP	KP	TP	1	191	40
FISHER SCIENTIFIC	-	TP	TP		186	3
SAMSUNG	SP	KP	SP	1	158	1
ABBVIE	-	TP	TP		154	14
AMGEN	SP	TP	TP	1	128	10
JOHNSON JOHNSON	-	TP	TP		123	2
GE HEALTHCARE	-	TP	TP	1	104	4
MEDTRONIC	-	TP	TP		101	4
PHILIPS	SP	TP	KP	1	99	41
TNO	SP	KP	TP	2	99	58
REGENERON	-	TP	-		87	
SIEMENS	SP	TP	TP	1	86	30
NOVO NORDISK	-	KP	TP		84	23
UCB	-	TP	TP		67	24
H LUNDBECK	-	TP	TP		64	11
EUROPEAN MOLECULAR BIOLOGY LAB EMBL	-	TP	-		47	
23ANDME INC SUNNYVALE CA USA	-	TP	-		44	
CORE LABORATORIES	-	TP	-		44	
CELGENE	-	TP	SP		39	1
MICROSOFT	-	TP	TP		32	2
GILEAD SCIENCES	-	TP	-		31	1
OTSUKA	-	TP	SP		29	1
KONINKL	TP	TP	KP	17	21	81
GENZYME	-	TP	SP		20	1

Top 10 transversal partners based on scientific publications were as follows:

- ASTRAZENECA
- JANSSEN
- MERCK
- BOEHRINGER INGELHEIM
- TEAGASC
- EDF
- FISHER
- FISHER SCIENTIFIC
- BRISTOL MYERS SQUIBB
- ABBVIE

Top 10 transversal partners based on research projects were as follows:

- NOVARTIS
- JANSSEN
- MERCK
- HOFFMANN LA ROCHE
- GSK
- BAYER
- BOEHRINGER INGELHEIM
- PFIZER
- TEAGASC
- SANOFI

Conclusion and Next Steps

This document, which is an active asset, describes the mapping of academy-industry partnerships and benchmarking of innovation district assets. It will be complemented by the future deliverable D5.2 to be published in month 20, which will formally set up an ENLIGHT European Innovation District with an ENLIGHT Innovation Network of academy-industry collaborators including aims, composition, expected tasks and action plan.

To introduce the companies to the ENLIGHT consortium and also to begin the process of exploring the potential for new collaborations involving ENLIGHT partners, companies identified as partners for the Health and Wellbeing flagship will be invited to take part in the European Dialogue and AIMday event scheduled for Galway in May 2023. The partners identified will be invited to both join the innovation network and to attend the ENLIGHT Dialogue/AIMday event. Digital Innovation Hubs from the partner countries will also be invited to the AIMday.

The theme for this event is *Digital Innovation in Health and Wellbeing* and is aligned to the ENLIGHT flagship area: Urban Health with a special focus on:

I. the impact of aging populations, especially on brain and mental health
II. the impact of environmental exposures and inequalities in healthcare access, and
III. opportunities for future cities through precision medicine and digital public health.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

Appendices

Appendix 1: Innovation Ecosystems & Districts:

University of the Basque Country (UPV/EHU)

UPV/EHU Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	4	3 entrepreneurial programs, Entrepreneurship MBA, 3,500 participants annually
2	Networking Programmes and Events	4	Networking events for researchers, venture capitals and industry organized by Basque Government and Provincial Government
3	Intermediaries	4	Basque Government and Provincial Development Agencies, City agencies, Private Incubators
4	Leadership: Organisational and ID Coalition	3	Good organisational and agency but not organised as a coalition
5	Advanced industry clusters	5	High clusterisation of the industry: machine tool, aeronautic and aerospace, health, automotive, energy, telecommuncations, electronics.
6	District marketing and branding campaign	2	The innovation ecosystem branding is a selling point of the Basque Country

UPV/EHU Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	3	Basque Country, National and European
2	Seed and Venture Capital	4	Basque Government, Provinces , Cities and, Business angels
3	Regional Development Funds	3	National and European
4	Domestic and Foreign Direct Investment	2	Domestic private investors for spin-offs
5	Skilled workforce	3	High number of R+D personnel but average work force with low digital skills. Brain drain for better working conditions abroad
6	Volume of start-ups scaling and creating volumes of jobs	4	UPV/EHU: 90% of university spin-off survive beyond 5 years. 1,200 direct jobs from 2006

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

UPV/EHU Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	5	At city level (Auzo Factory spread in city neighborhoods) and province level: BAT Tower (Bizkaia acceleration space), Tabacalera (Gipuzkoa acceleration), Artium (Araba acceleration space)
2	Laboratory spaces	3	Sharing capacities among Universities and Technological Centers, SGIKER laboratories for open use (companies, enetities, other research centers, spin-offs), University-Industry Classrooms
3	Research Infrastructure	5	Universities. BERC, CIC, Technological centers University- Industry Classrooms
4	City spaces to facilitate formal and informal idea exchange and collaboration	4	Universities' buildings, coworking spaces and accelerator spaces
5	Areas with redevelopment potential	4	Zorrozaurre island and sourroundings, Portugalete, Otxarkoaga. Embedding the urban campuses in the new urban regeneration projects
6	Connection to transit assets	2	In the multicampus approach, Bizkaia has better flight connections. The headquarters' of the University (Leia) don't have good public transport connection. Gipuzkoa and Araba are in the city center, well communicated but far from the airport.

University of Bordeaux (UBx)

UB Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	3	Start-up, Scale training and funding advisory. Strong Professional Services. In house incubators : Ubee lab incubator for students (370 projects in total, 180 at city scale and 90 at university scale), SATT Aquitaine (technology transfer office) & its incubator Chrysalink for researchers (scale training and funding advisory) Private Incubators : UNITEC, Bordeaux TechnoWest
2	Networking Programmes and Events	5	Chambers, Industry Clusters/Groups, University Forums. Major strength of the territory : many industry clusters, CCI Bordeaux Gironde, Region Nouvelle Aquitaine, Conurbation (Bordeaux Metropole)
3	Intermediaries	4	Regional Development Agencies (ADI), Technology Transfer Centers (~30)
4	Leadership:Organisational and ID Coalition	3	In the process of being established The BPI DeepTech Tour helped laying the foundation for such organization
5	Advanced industry clusters	4	Aeronautic-Space-Defense (Aerospace Valley), Health (Allis-NA), Laser-Photonics (Alpha-RLH), Chemistry and Materials (Aquitaine Chimie Durable), Agri (Agri sud ouest innovation), Energy (S2E2), AI-numeric-robotics (Digital Aquitaine, Aquitaine Robotics), wood and construction (Xylofutur), social economy and innovation (ATIS), wine (Innovin)
6	District marketing and branding campaign	4	Invest In Bordeaux is the major organization aiming at promoting the local territory in terms of economics and scientific facilities. Placéco is a media whose objective is to promote the ecosystem at a departmental scale. Tourism is one of the high priority economic sectors for the region

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

UB Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	4	National (ANR), European, Regional, in-house
2	Seed and Venture Capital	3	Many seed capital investors (example Sofimac Innovation) Venture capital investment to be improved Biotech and HealthTech focused
3	Regional Development Funds	4	Regional, National, European
4	Domestic and Foreign Direct Investment	4	Mainly local financial authorities for domestic Investment Significant FDI for Biotech HealthTech (second round, particularly US investors)
5	Skilled workforce	5	Significant for Deeptech start up (engineers and PhD) To be improved for undergraduate (Bac +3) Real European stake
6	Volume of start-ups scaling and creating volumes of jobs	2	Many start-ups being in scaling process with a significant probability of being repurchased by companies outside Europe 5 start-ups from UB laboratories created every year

5

UB Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	3	Multiple – In the process of establishing the real estate masterplan for uses
2	Laboratory spaces	2	Strategic work in progress regarding space rental for companies
3	Research Infrastructure	5	Extended university (UB, INRAE, INRIA, INSERM, CHU, CNRS) : about 80 research units and 100 technology platforms, 1 University Hospital Research Institute in Cardiology (IHU Lyric)
4	City spaces to facilitate formal and informal idea exchange and collaboration	2	Establishment of the real estate masterplan in collaboration between Bordeaux Metropole and UB. Willingness to develop these spaces in our campuses, our buildings, which we own. Widespread presence and influence of UB in the city
5	Areas with redevelopment potential	4	Willingness to support the revitalization of the territories in which UB is present - Perigueux, Bayonne, Dax - Libourne (strong redevelopment to come)
6	Connection to transit assets	3	Good infrastructure : rail (Paris-Bordeaux), airport, seaport, road

4

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Comenius University Bratislava (CU)

Bratislava Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education* & Supports**	1* 3**	*A low level of EE in all levels of the educational system. **The developed support system in private and public institutions.
2	Networking Programmes and Events	2	Business Agencies, Chambers of Commerce, Private initiatives
3	Intermediaries	2	Regional Offices of National Entrepreneurial Centre, Entrepreneurial Associations
4	Leadership: Organisational and ID Coalition	1	Missing leadership actors
5	Advanced industry clusters	2	Automotive, TECH, ICT, Environment
6	District marketing and branding campaign	2	No district marketing and branding, some actions by Development Agency

Bratislava Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	2	Few national options and a low success rate in European grants
2	Seed and Venture Capital	4	Enough but few fundable projects
3	Regional Development Funds	1	Not available resources
4	Domestic and Foreign Direct Investment	4	High foreign investments, strong SME base
5	Skilled workforce	4	Available
6	Volume of start-ups scaling and creating volumes of jobs	1	Problems with startup scaling

Bratislava Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	4	Multiple, e.g., 0100 Campus, Hub Hub, Cvernovka, The Spot,...
2	Laboratory spaces	4	Scientific Parks, Universities
3	Research Infrastructure	3	Universities focused on natural sciences, tech and med
4	City spaces to facilitate formal and informal idea exchange and collaboration	4	Cowork spaces, Events & Expo Facilities, Universities, Hotels
5	Areas with redevelopment potential	5	Several places with redevelopment potential, e.g. Patrónka, Staré Grunty, City centre in the proximity of the Technical university
6	Connection to transit assets	4	Well-developed city infrastructure

University of Galway (Gal)

Galway Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	4	Start-up, Scale training and funding advisory; Strong Professional Services
2	Networking Programmes and Events	3	Chambers, Industry Groups, University Forums,
3	Intermediaries	4	Regional Development Agencies, Private Incubators
4	Leadership: Organisational and ID Coalition	2	Good organisational and agency but not organised as a coalition
5	Advanced industry clusters	3	LifeScience; ICT; Marine; Food; Creative
6	District marketing and branding campaign	2	Individual Organisation; Tourist No regional innovation district branding

Galway Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	3	National and European (scale is quite low)
2	Seed and Venture Capital	3	MedTech focused
3	Regional Development Funds	4	National and European
4	Domestic and Foreign Direct Investment	4	Strong SME base and significant FDI
5	Skilled workforce	4	Subject to availability
6	Volume of start-ups scaling and creating volumes of jobs	2	SME; Trade Sales; No IPO; One MNC **Aerogen**

Galway Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	3	Multiple
2	Laboratory spaces	2	Limited dry labs, no wet lab capacity, RPOx2 provide some capacity
3	Research Infrastructure	3	Universities and Hospital
4	City spaces to facilitate formal and informal idea exchange and collaboration	3	Universities, Hotels Professional hubs (Portershed, GTC, and CREW) , no district of scale
5	Areas with redevelopment potential	4	University and City owned - Nuns Island, The Docks, Ceannt Station
6	Connection to transit assets	3	Reasonable Good rail, road, air, port infrastructure. Not a major logistics hub

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

Ghent University (UGent)

Ghent Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	3	Several coaching and training opportunities, but rather general
2	Networking Programmes and Events	3	Several networks for entrepreneurs, but not always directed to innovation
3	Intermediaries	4	Government, sectoral, city,
4	Leadership: Organizational and ID Coalition	3	Organization of Tech Lane Ghent Science park has only started recently
5	Advanced industry clusters	3	Established plant biotech/agro cluster, photonics & bio-pharma clustering just started
6	District marketing and branding campaign	2	Branding of Tech Lane Ghent Science Park only recently started

Ghent Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	4	VLAIO agency with dedicated grants
2	Seed and Venture Capital	3	Links to different funds, but could be improved
3	Regional Development Funds	3	Familiar with EU and national funds
4	Domestic and Foreign Direct Investment	3	Several investments made, but case-based
5	Skilled workforce	4	Close link to university & higher education, but high needs
6	Volume of start-ups scaling and creating volumes of jobs	5	Several international success stories (10 MNO success stories)

Ghent Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	2	Still under development
2	Laboratory spaces	4	Several lab spaces available, but demand remains high
3	Research Infrastructure	3	Close link to accessible university infrastructure
4	City spaces to facilitate formal and informal idea exchange and collaboration	2	Outside city. Park buildings under construction
5	Areas with redevelopment potential	4	Currently under development, but area is dense and limited
6	Connection to transit assets	1	Close to highways and trainstations, but insufficient public transport.

University of Göttingen (UGOE)

UGOE Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	4	Start-up, Scale training and funding advisory. Strong Professional Services. In house Counceling, incubator (Transfer & Startup Hub Universität Göttingen)
2	Networking Programmes and Events	4	SüdNiedersachsenInnovationsCampus SNIC , Strength of the territory : SME support cluster, several Industry Cluster (IT-Innovations-Cluster, Logistik-Cluster, Measurement Valley), Life Science Startup Support Network
3	Intermediaries	4	Regional Development Agencies (Südniedersachsenstiftung with several projects), Private Incubators : Life Science Factory, Life Science Valley
4	Leadership: Organisational and ID Coalition	2	In the process of being established for Life Sciences
5	Advanced industry clusters	4	Health (Plasma4life), Digitalization (IT-Innovations-Cluster), Logistics (Logistik-Cluster), Tech (Measurement Valley)
6	District marketing and branding campaign	3	SNIC as well as the GWG (Wirtschaftsförderung - business development) are the major organizations aiming at promoting the local territory in terms of economics and scientific facilities Tourism is one of the high priority economic sectors for the region

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

UGOE Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	3	National, European, Regional
2	Seed and Venture Capital	1	Few seed capital investors (NSeed, HTI) Venture capital investment to be improved
3	Regional Development Funds	3-4	Regional, National, European
4	Domestic and Foreign Direct Investment	3	Local financial authorities for domestic Investment (especially for LifeSciences)
5	Skilled workforce	5	Göttingen Campus (UGOE together with seven non-university local research centres), TU Clausthal (SNIC partner)
6	Volume of start-ups scaling and creating volumes of jobs	2	Start-ups being in growing/scaling process but with a significant probability of moving to metropoles (Hamburg, Berlin, Frankfurt)

UGOE Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	3	Multiple – In the process of establishing a Network for the whole region SNIC, StartRaum, LifeScienceFactory, digit49
2	Laboratory spaces	3	Lab rental for Life Science Startups within 24hours at the LifeScience Factoy, rental space for growing companies still necessary
3	Research Infrastructure	5	Göttingen Campus: University of Göttingen, including the University Medical Center, and seven non-university local research centres
4	City spaces to facilitate formal and informal idea exchange and collaboration	4	Meetups and Events in different places like TSH, StartRaum, LifeScienceFactory.
5	Areas with redevelopment potential	3	Larger region of South Lower Saxony, as the SNIC supports
6	Connection to transit assets	4	Very centrally located, good infrastructure : rail (Frankfurt-Berlin/Hamburg), road (major Autobahn north-south), Hannover Airport (around 1h away)

University of Groningen (RUG/UG)

university of groningen — University Services | *Cluster Research & Impact*

University of Groningen
Innovation District Assets

Network: expertise, human capital

#	Network Asset	Assessment (Low 1 - 5 High)	Comment
1	Entrepreneurial education and supports	4	(research based) Education within all domains and levels, support through Venture lab & RUG Ventures & IP team (eco system under construction).
2	Networking programmes and events	4	Mostly outside UG, some formulas within the cluster, some within research domain/CoE. Initiatives from district +.
3	Intermediaries	3	Not that visible/accessible. But there is a lot.
4	Leadership: Organizational and ID coalition	4	Growing leadership in region. RIS3/Akkoord van Groningen, UvhN.
5	Advanced industry clusters	3-4	Smart & circular, Digitalization, Health, Bio.
6	District marketing & branding campaign	2	Needs more cohesion as a region, lots of sprawl with narrow reach/audience. Unclear.

university of groningen — University Services | *Cluster Research & Impact*

University of Groningen
Innovation District Assets

Economic: investment, scaling, resource sharing

#	Network Asset	Assessment (Low 1 - 5 High)	Comment
1	Research grants for RPO and enterprise	4	NGF, Kick-fund, NL gov. Funds.
2	Seed and venture capital	3	CCF, RUG Ventures, NOM, IPF, Triade, UMCG.
3	Regional development funds	4	EFRO, NPG, JTF, UvhN. Almost too many.
4	Domestic and foreign direct investment	2	There is some, for development and short term collaboration, but hard to fund projects on a longer term this way.
5	Skilled workforce	5	Very skilled workforce. To many skilled alumni to keep in area.
6	Volume of start-ups scaling and creating volumes of jobs	3	High quality start-ups, low quantity (in development). Hard to keep in area scaling up.

university of groningen — University Services | *Cluster Research & Impact*

University of Groningen
Innovation District Assets

Physical: available facilities, resources, equipment, and materials

#	Network Asset	Assessment (Low 1 - 5 High)	Comment
1	Coworking spaces	3	Not so many publicly available.
2	Laboratory spaces	3-4	Innolabs: ML1, ML2, Chem & Engineering Labs. Increasing focus on shared facilities.
3	Research infrastructure	4	Pushing towards 5, within specific sectors like chem and smart industry. Small amount of R&D heavy companies. Agenda's with focus on strengths of the area.
4	City spaces to facilitate formal and informal idea exchange and collaboration	2	Will increase with House of Connections. Zernike lacks open area's: needs public-private collaboration spaces.
5	Areas with redevelopment potential	5	In potential (lot of 'empty' space surrounding Groningen).
6	Connection to transit assets	2	Far from political centre. Train ok. Airplanes bad. Car ok.

University of Tartu (UT)

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	3	sTARTUp Lab in UT, spin-off program in UT, micrograde of entrepreneurship; less in lower level education
2	Networking Programmes and Events	3	sTARTUp Day, support of Estonian Research Council, measures of Enterprise Estonia, Smart Thursdays, EIT Hubs (Manufacturing, Food, Urban Mobility, Health)
3	Intermediaries	3	Tartu Business Advisory Services, Enterprise Estonia, Estonian Research Council, Innovation Leaders Club, Adapter network
4	Leadership: Organisational and ID Coalition	1	no leadership actors
5	Advanced industry clusters	2	ICT, Health Tech, Biotech, Electronics, Defense
6	District marketing and branding campaign	2	sTARTUp Day, European Capital of Culture 2024, SPARK Hub, actions by Enterprise Estonia

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	2	few national grants (only low budget grants), low success rate in European grants
2	Seed and Venture Capital	1	few venture capital funds, small investments, UniTartu Ventures
3	Regional Development Funds	2	available resources from EU
4	Domestic and Foreign Direct Investment	2	few foreign investments
5	Skilled workforce	3	available, lack in ICT
6	Volume of start-ups scaling and creating volumes of jobs	2	low scaling and low volumes of jobs

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Coworking spaces	2	SPARK Hub, Science Park, Business Incubator, Science Centre AHHAA, Estonian National Museum, Centre for Creative Industries
2	Laboratory spaces	3	Science Park, BioPark, universities, Delta Sandbox, ESA BIC
3	Research Infrastructure	2	universities, Science Park, NAMUR+, BioPark, competence centers (Bio, Health, ICT)
4	City spaces to facilitate formal and informal idea exchange and collaboration	2	Aparaaditehas (Widget Factory), SPARK Hub; cowork spaces in Science Park, Tartu Business Advisory Services
5	Areas with redevelopment potential	3	Aparaaditehas (Widget Factory), Estiko Kammivabrik, Villavabrik (Wool Mill), Pärmivabrik (Yeast Factory)
6	Connection to transit assets	2	no proper flight connections, no good train connections, well-developed city infrastructure

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Uppsala University (UU)

Uppsala Innovation District Assets

Network: Expertise, Human Capital

#	Network Asset	Assessment (Low 1 – 5 High)	Comment
1	Entrepreneurial Education & Supports	3	Start-up, Scale training and funding advisory; Strong Professional Services
2	Networking Programmes and Events	4	Chambers, Industry Groups, University Forums (e.g. ÅMA and the meeting format AIMday)
3	Intermediaries	4	Regional Development Agencies, regional collaboration platform (STUNS), incubator (Uppsala Innovation Centre). For students: Entrepreneurship training, Start-up support. For researchers: Innovation Partnership Office, UU Innovation.
4	Leadership: Organisational and ID Coalition	4	Good organisational and agency, in part organised as a coalition (e.g. through STUNS)
5	Advanced industry clusters	5	LifeScience; Materials science, ICT
6	District marketing and branding campaign	4	Common innovation district branding, mainly through STUNS

Uppsala Innovation District Assets

Economic: Investment, Scaling, Resource Sharing

#	Economic Asset	Assessment (Low 1 – 5 High)	Comment
1	Research Grants for RPO and Enterprise	4	National and European
2	Seed and Venture Capital	4	No particular focus
3	Regional Development Funds	4	National and European
4	Domestic and Foreign Direct Investment	4	Strong SME base and significant FDI
5	Skilled workforce	5	Subject to availability
6	Volume of start-ups scaling and creating volumes of jobs	4	SME; Trade Sales; IPO; MNC

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

Uppsala Innovation District Assets

Physical: Available facilities, resources, equipment, and materials

#	Physical Asset	Assessment (Low 1 – 5 High)	Comment
1	Co-working spaces (outside UU)	3	E.g. Base10, Green innovation Park, Uppsala Business park
2	Laboratory spaces	4	Dry and wet lab capacities at universities, companies (including Testa Center) and hospital.
3	Research Infrastructure	4	Universities and Hospital
4	City spaces to facilitate formal and informal idea exchange and collaboration	4	Universities, conference centres, Business parks, Innovation Hub Uppsala
5	Areas with redevelopment potential Areas with development potential	3 4	City and private owned – Främre Boländerna
6	Connection to transit assets	5	Good rail, road, air infrastructure (18 min to Arlanda airport).

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

DRAFT AWAITING EUROPEAN COMMISSION APPROVAL

Appendix 2 Summary information of the strengths and weaknesses in each of the regions existing innovation districts:

University of the Basque Country (UPV/EHU)

UPV/EHU Innovation District: Strengths and Weaknesses

Strengths
Strong economic and mentoring support by public authorities (in three governance level). Highest R+D expenditure over GDP in Spain
Very rich and dense innovation ecosystems with different innovation actors: universities, RTOs, BERC, CRC, industrial clusters, government agencies (Ikerbasque, SPRI, Innobasque, Bizkaia talent, Fomento San Sebastian)
Industrialised region, with many innovative SME-s and big companies.

Weaknesses
The large number of actors in the ecosystem becomes a problem in times of economic crisis (Cannibalism)
UPV/EHU: lack of an structure and systematics for the connexion with the industry and enterprises.
Talent balance: need of attracting talent and brain drain.

University of Bordeaux (UBx)

UB Innovation District Assets

Strengths
Strong ecosystem on health research
Involvement of public institutions in innovation (Region, University, public investment bank)
Many advanced industry clusters and innovation intermediaries
Strong and extensive geographical presence
Multidisciplinarity and Interdisciplinarity

Weaknesses
Limited incentive and therefore interest of researchers in innovation → InnovationS project (2022-2030) : acculturate all staff to innovations and its tools, entrepreneurship and business development
Multiplicity of actors and competition between research organizations complexify innovation → wish to implement a site policy to simplify the « mille-feuilles » + Innovation University Center : project to set up a strategy and unified tools around a site
Limited private investments (most of the investments are public) → development/clarification/dissemination of our "offer of services" to attract industrials and their investments

7

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101035819

Comenius University Bratislava (CU)

Bratislava Innovation District: Strengths and Weaknesses

Strengths
Physical assets (redevelopment potential, number of laboratory spaces, universities, coworking spaces)
Skilled Workforce (high skilled workforce available)
High domestic and foreign investment / venture funding available

Weaknesses
Missing leadership actors (managing, coordinating and utilization of physical,network, economic assets)
Weak entrepreneurial education in all levels of educational system, insufficient networking programs and events and retaining talents
Weak start-up scaling and university spin-offs (volume and sustainability)

University of Galway (Gal)

Galway Innovation District: Strengths and Weaknesses

Strengths
Comprehensive Medical Technology Ecosystem (Corporates, SME's, Investors, Funders, RPOs, Entrepreneurs)
Skilled Workforce and Engaged Leadership (Enterprise, RPO, Regional)
Availability of Grant and Investment funding (FDI, Government, EU, Private)

Weaknesses
Limited cohesive approach across all actors to promote and build innovation district assetts
Lack of dedicated innovation hubs esp. life science facilities
Few start-up companies scaling in the region and over- reliance on MedTech (most medtech start-ups trade sale and the scaling is done by the acquirer but they have then scaled e.g. Neuravi, Crospon, Genesys)

Ghent University (UGent)

Ghent Innovation District: Strengths and Weaknesses

Strengths
Builds on established world class ecosystem on biotech, complemented with ICT and materials
Closely linked to university for talent, spin-off companies and use of R&D infrastructure
Support organisations for training, coaching and finance are closely connected
Local real estate ecosystem of with experience & gut in investing in laboratory facilities going international

Weaknesses
Developments limited by dense population, limited land availability and mobility issues
Open spaces for coworking and networking can be improved

University of Göttingen (UGOE)

None identified

University of Groningen (RUG/UG)

university of groningen — University Services | *Cluster Research & Impact*

University of Groningen
Innovation District Assessment

Strengths and Weaknesses

Strengths
Momentum for cooperation between stakeholders in the regional innovation system.
Research topics relatively good aligned with regional strategy and industry.
Broad classic university with strong research focus (from regional culture to deep tech).

Weaknesses
Far from national political and economic centre. (Challenge to keep business and talent in area)
Needs more long term vision and agendas/roadmaps. (Lacks focus in regional marketing)
Not a lot of Public-Private collaboration spaces.

University of Tartu (UT)

None identified

Uppsala University (UU)

Uppsala Innovation District: Strengths and Weaknesses

Strengths
Comprehensive Life Science ecosystem (Corporates, SME's, Investors, Funders, RPOs, Entrepreneurs, Agencies: Swedish Medical Products Agency; Swedish Food Agency; National Veterinary Institute, two University hospitals)
Highly educated workforce and collaborative culture.
Strong Innovation System with many actors.
Strong innovative collaboration in Material science.

Weaknesses
Relatively few large corporates.
Few medium size SMEs (40-100 FTE).
Resource deficit in certain areas (e.g. process engineers).
Lack of cluster organisations (generally applies to all of Sweden). (e.g. former UppsalaBio)