



‘Researchpreneurship for Early Career Researchers’

Barbara Tan, Head Campus Development, RIVA

22 October 2024, ADS Doctoral Day



Proud Member of the YUFE-Alliance

MEET RESEARCHPRENEUR JENNIFER DOUDNAS



Pioneer in CRISPR Gene Editing

Nobel Prize Winner (2020) in Chemistry

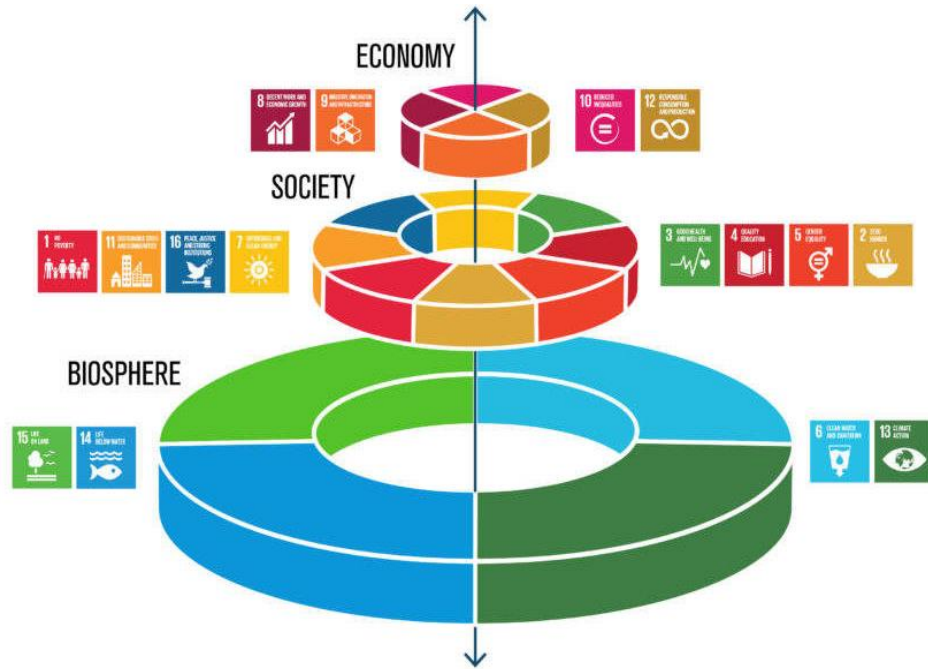
Impact on Healthcare and Biotech sector

Transforming Research into Entrepreneurial Ventures

Co-founder of Editas Medicine, Caribou Biosciences,
and Intellia Therapeutics

1. Setting the Scene: the Entrepreneurial University

Setting the scene: “Let’s shape the future”



Life is not divided in disciplines and neither are the world’s biggest challenges



“We need to break down the barriers between academia & society in order to find solutions for the most difficult societal challenges”

In this context, universities must play a vital role



Fostering innovation in knowledge-intensive ecosystems



Generating knowledge, fostering interdisciplinarity, developing human talent and stimulating entrepreneurial mindsets



Taking the lead in the ecosystems by building partnerships with industry, government and lever to society as a whole



In this context, universities must play a vital role



Fostering innovation in knowledge-intensive ecosystems



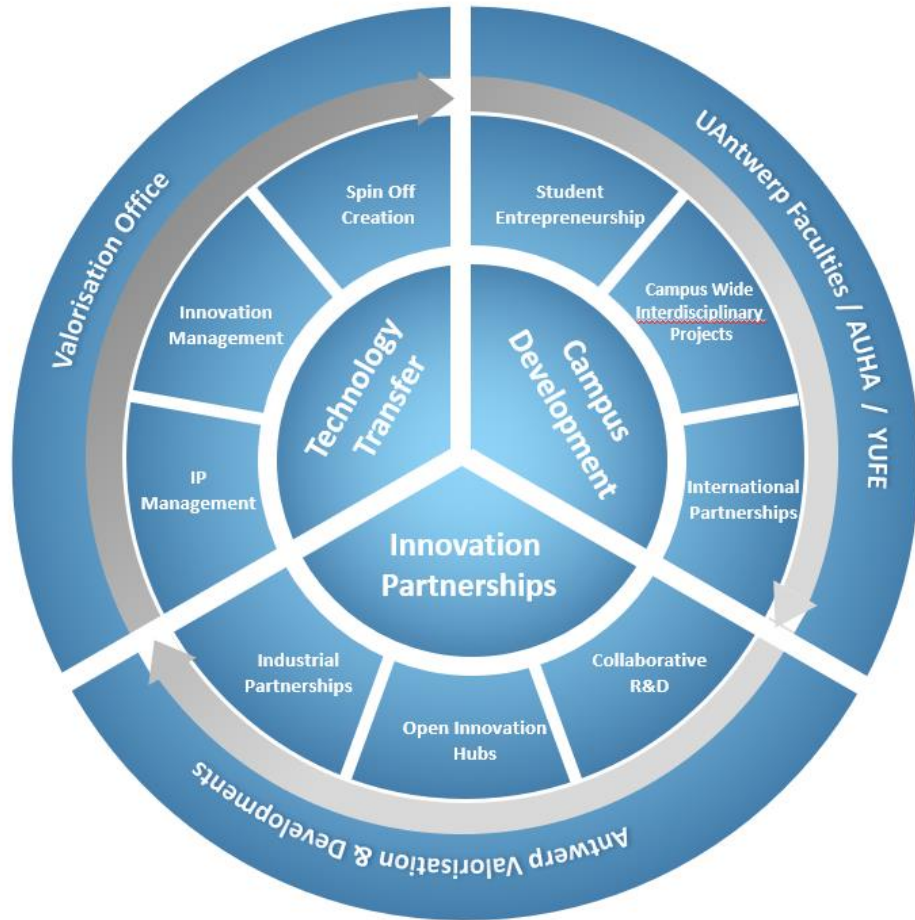
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Taking the lead in the ecosystems by building partnerships with industry, government and lever to society as a whole



Campus Development within the valorisation policy of UAntwerp



TTO: Push innovative projects to society

- Spin-off creation
- License IP
- IP strategy & management
- Increase readiness



Innovation Partnerships: Stimulate outward-in approach

- Industrial collaboration
- Open innovation hubs
- Ecosystem building



Campus Development

- Fostering entrepreneurial mindset (Intrapreneurship)
- Supporting Student Entrepreneurs
- Stimulating interdisciplinary (student) projects to solve wicked challenges
- International partnerships on Knowledge Valorisation and Entrepreneurship

Campus Development

Fostering a more **entrepreneurial mindset (intrapreneurship)**

Stimulating **campus wide** and **interdisciplinary collaboration** around knowledge transfer activities with a positive **sustainable impact** (SDG's)

Fostering **International partnerships** in the domain of Knowledge Valorisation & Entrepreneurship, e.g. within the YUFE-alliance

Supporting and coaching student entrepreneurs who aspire to start their own businesses during their studies

2. Entrepreneurial competences for researchers: Why?

What is an entrepreneur?

The word 'entrepreneur' is derived from the french word 'entreprendre' 'to undertake'

An entrepreneur is an individual who creates and/or invests in one or more businesses, bearing most of the risks and enjoying most of the rewards

The entrepreneur always searches for change, responds to it and exploits it as an opportunity (Peter Drucker, 1985)

THE ENTRECOMP flower



“Entrepreneurship”

is when you act upon opportunities and ideas and transform them into value for others.

Bacigalupo, M., Weikert García, L., Mansoori, Y., O’Keeffe, W. “EntreComp Playbook”, Publications Office of the European Union, Luxembourg, 2020.



EntreComp Framework

EntreComp defines entrepreneurship as:

The capacity to act upon opportunities and ideas, and transform them into value for others. The value that is created can be financial, cultural or social.







3. Competences

Top 10 skills of 2025

-  Analytical thinking and innovation
-  Active learning and learning strategies
-  Complex problem-solving
-  Critical thinking and analysis
-  Creativity, originality and initiative
-  Leadership and social influence
-  Technology use, monitoring and control
-  Technology design and programming
-  Resilience, stress tolerance and flexibility
-  Reasoning, problem-solving and ideation

Type of skill

-  Problem-solving
-  Self-management
-  Working with people
-  Technology use and development

Importance of entrepreneurial competences for a researcher

Being proactive and initiate

Innovative and clear mindset

Collaborating and networking

Mobilizing resources (Funding, technology, talent)

→ Relevant for career development (both within and outside academia)

Meet Wim Cuypers

Postdoc Adrem Data Lab, UAntwerp



*“Through the YUFE accelerator program, we significantly **improved** our LeapSeq **pitch** and gained valuable insights. The **networking opportunities** led to **new collaborations** with Flanders Food and SIPORE, with the potential for a COOCK+ project. Additionally, the experience helped secure a **VLAIO innovation mandate** for a **spin-off** around pathogen monitoring in another application field of wastewater”*



3. From Research to entrepreneurship: the innovation process and real-life cases

Some facts and figures: R&D as resource for innovation

Belgium/Flanders: top R&D personnel

PhDs in Flanders: 2292 in 2022-2023

80.4% of the researchers who obtained a PhD no longer active in a post-doc/ZAP

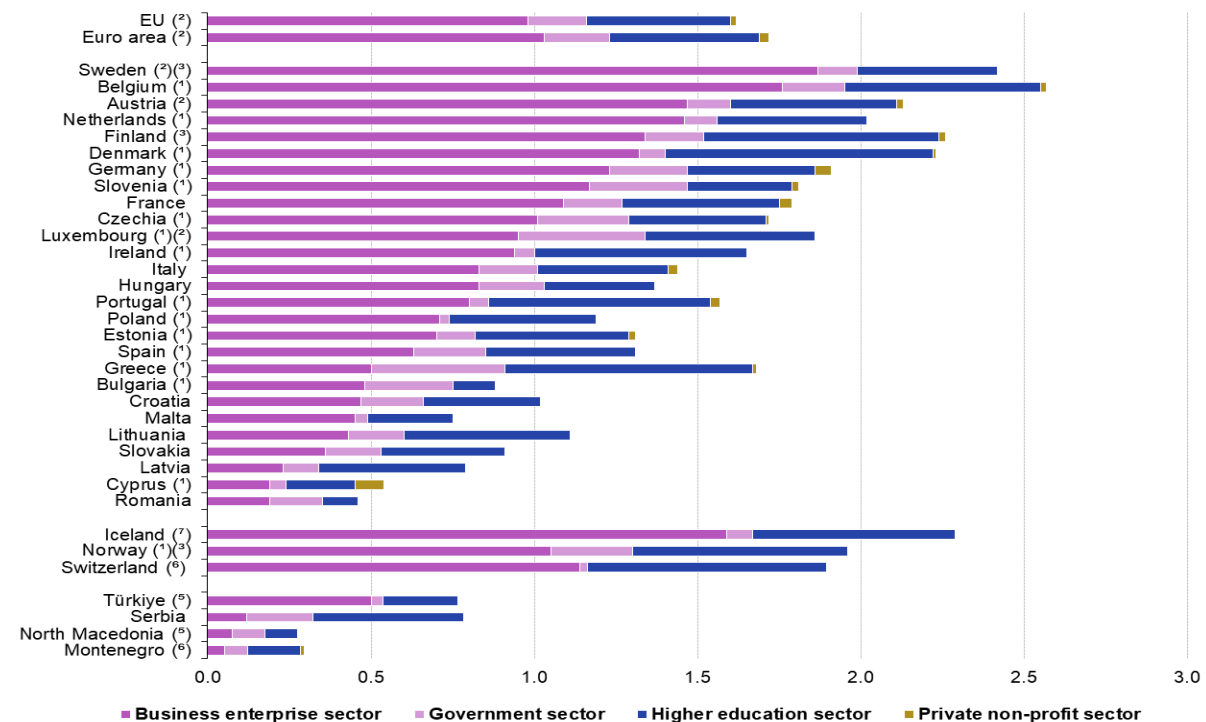
Employed in non academic labour market



Abroad in academic institutions
Spin-off routed in research

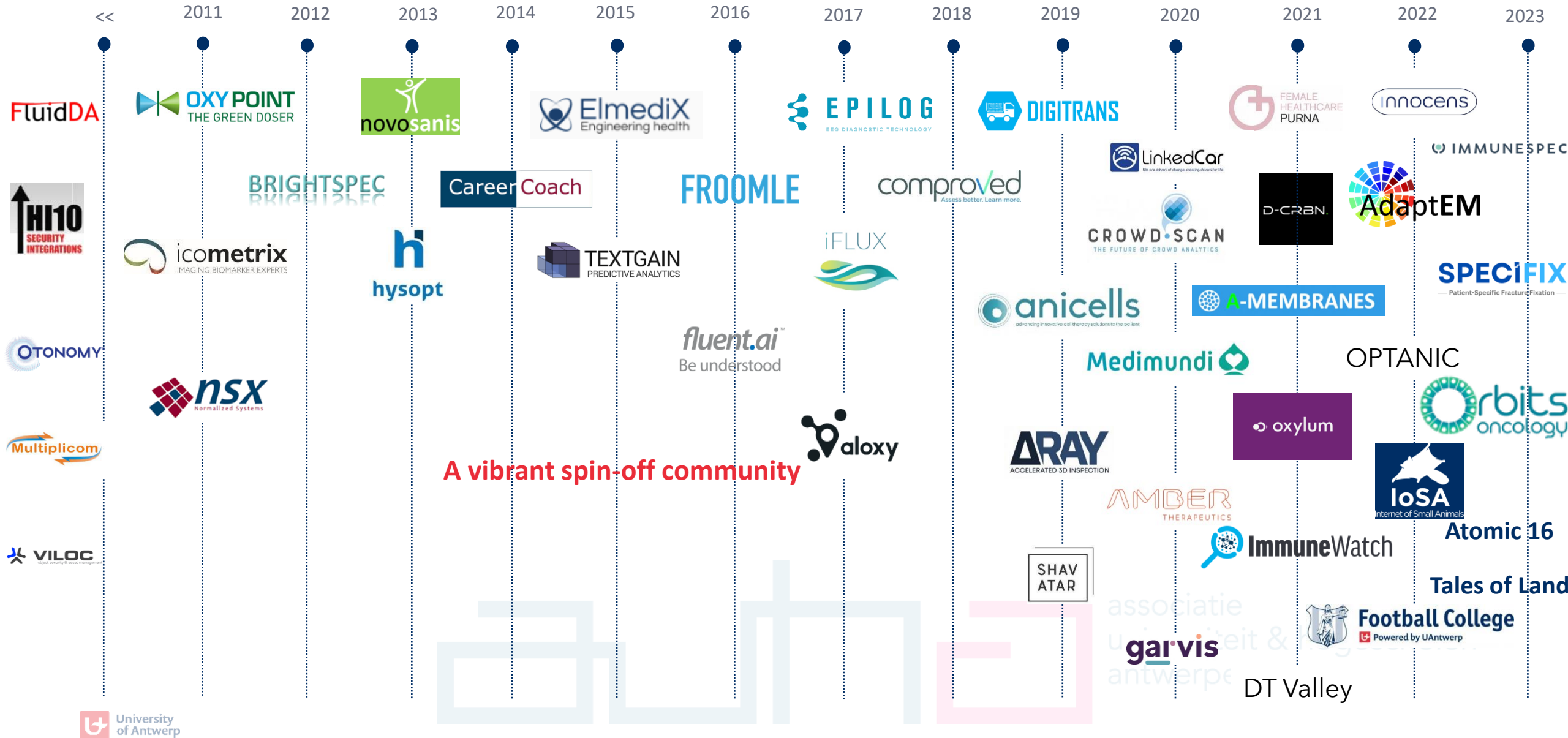
R&D personnel by sector, 2022

(% of total labour force, based on full-time equivalents)



(*) provisional
 (*) estimates
 (*) definition differs
 (*) break in time series
 (*) 2020
 (*) 2019
 (*) unreliable
 (*) PNP sector not available
 Source: Eurostat (online data code: rd_p_perslf)

A vibrant spin-off community



What is innovation?

Which equation do you believe fits best for describing innovation ?

- Innovation = Ideas X Patents
- Innovation = Invention X Commercialization
- Innovation = Invention X Business Plan

What is innovation?

Before we get started let's see how you currently think about innovation.

Which equation do you think fits best for describing innovation ?

- Innovation = Ideas X Patents
- X** Innovation = Invention X Commercialization
- Innovation = Invention X Business Plan

Bill Aulet, MITOpenCourseWare:

[What is Innovation – YouTube](#)

Innovation is about **VALUE CREATION**

Value = a benefit or solution that removes the frustrations, difficulties, problems, challenges or impossibilities from a customer's life to achieve a defined goal or outcome at an affordable cost.

Financial

Generates willingness to pay and financial revenue

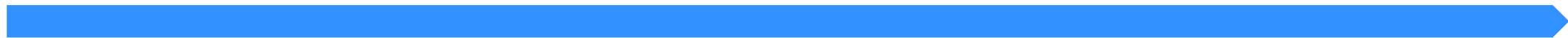
Social

Enhance social conditions, solutions for societal problems

Cultural

Enrich people's cultural experience

Phases in the innovation-process



In reality, no linear process, many iterations needed!

Screening for an innovative idea

What's the *problem or need you're (plan) solving* for the customer?

What's the *value or benefit* it delivers compared to competition?

Look into *megatrends/societal challenges*

IP landscaping can help you to check for technological trends/solutions

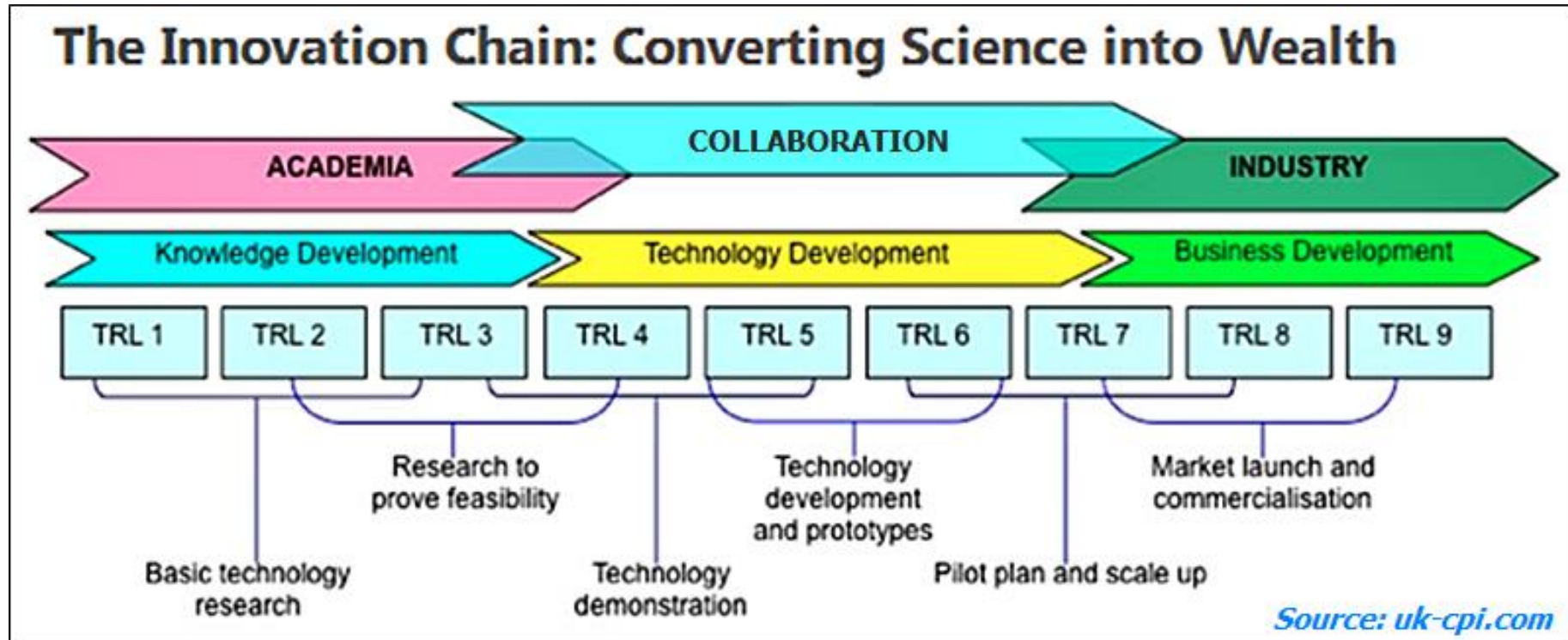
Infinite ideas and (market) opportunities to meet needs of a global society

Technological and societal forecast studies

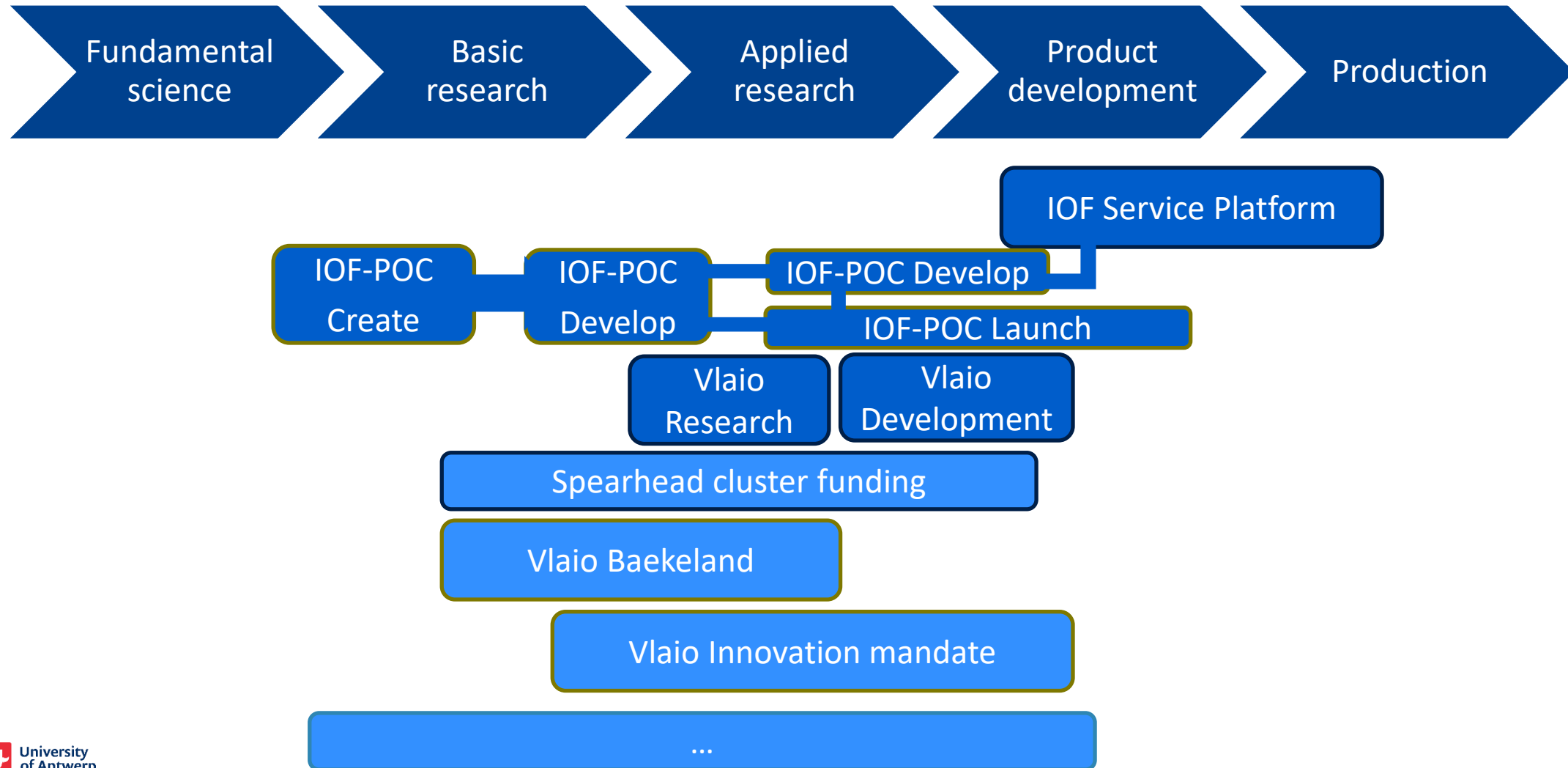
Towards a sustainable Europe by 2030



Technology Readiness & Multidisciplinary Collaboration



Identify the adequate funding for the stage of the project

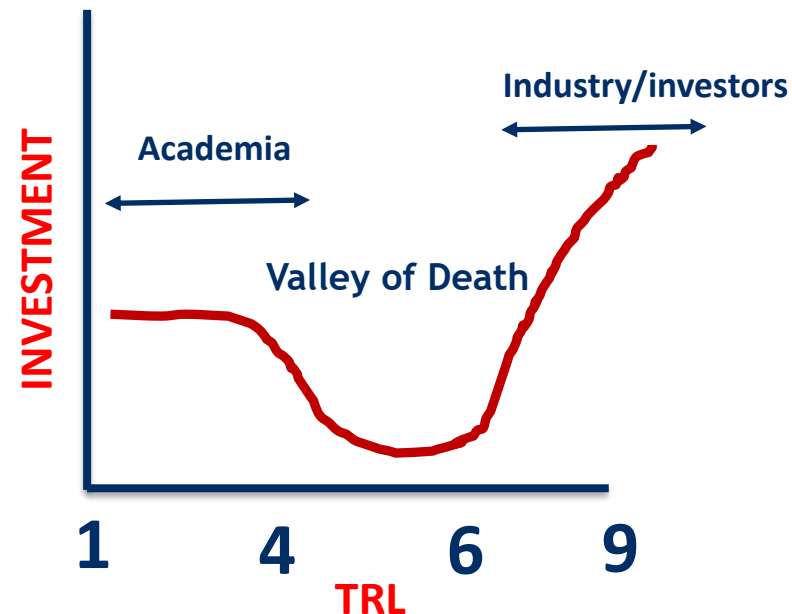


Technology Readiness and Valley of Death

Academia tends to focus on TRL 1-4

Industry Prefers to work on TRL 7-9

Many technologies reach TRLs 4-6 and die in the Valley of Death



Some real-life cases of Researchpreneurs from UAntwerp

Meet Valentin Carlan



Romania - 19/02/1986

Master in Transport Management

Doctor in Applied Economics University of Antwerp,

Title: *“Costs, benefits and cost-effectiveness of ICT innovation in the maritime supply chain”*

Post-Doc researcher @ TPR

Professor @ C-MAT, UAntwerp & AMS

Co-founder spin-off UAntwerp-imec: DigiTrans

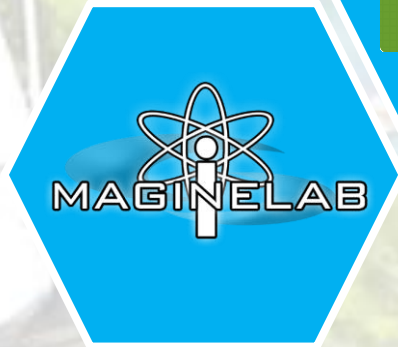


From Hackaton towards the Spin-off: Digitrans



DIGITRANS

VOLVO TRUCKS HACKATHON
CHALLENGE



It all started as a interdisciplinary group of Phd students as HACKATHON team

Meet Guy De Pauw



Dr. Guy De Pauw is a language engineer

More than 20 years researcher @ CLiPS

Particularly motivated in designing real-world applications to tackle societal problems


AI for social good

CEO & Co-founder



CLiPS
Computational Linguistics & Psycholinguistics
University of Antwerp

AMICA



factcheck.vlaanderen

DTCT
DETECT THEN ACT

RHETORIC

RE: LUS

IMSyPP

COMMIT

EOOH
EUROPEAN OBSERVATORY OF ONLINE HATE

European Observatory of Online Hate

textgain academy

BENEDMO

INSIGHT

EHBT
Eerste Hulp bij Twijfel

deDUIDER

CALICO



Taalmodel van Antwerps Textgain jaagt op haters

- KOPIEER LINK
- (TWITTER)
- FACEBOOK
- WHATSAPP
- LINKEDIN
- E-MAIL
- BEWAAR
- SCHENK DIT ARTIKEL



Het Antwerpse Textgain wil hatende taal opspeuren met artificiële intelligentie. ©AFP

Textgain won the prestigious initiative from the European Commission: AI-BOOST : Large AI Grand Challenge”



[Large AI Grand Challenge winners - Textgain \(youtube.com\)](#)

The Prize: access to 2 million (!) GPU hours on the [LUMI supercomputer](#)

Meet Goedele Verreydt



“I have a passion for flux measurements and research”

Dr. Goedele Verreydt, postdoctoral researcher at the University of Antwerp and VITO (Flemish Institute for Technological Research)

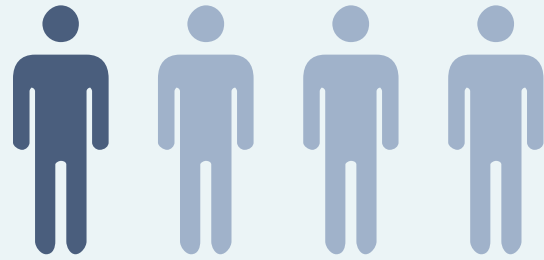
Inventor and inspirer of iFLUX technology and expert in the field of flux measurements for soil and groundwater contamination

Chief Technical Officer & co-founder

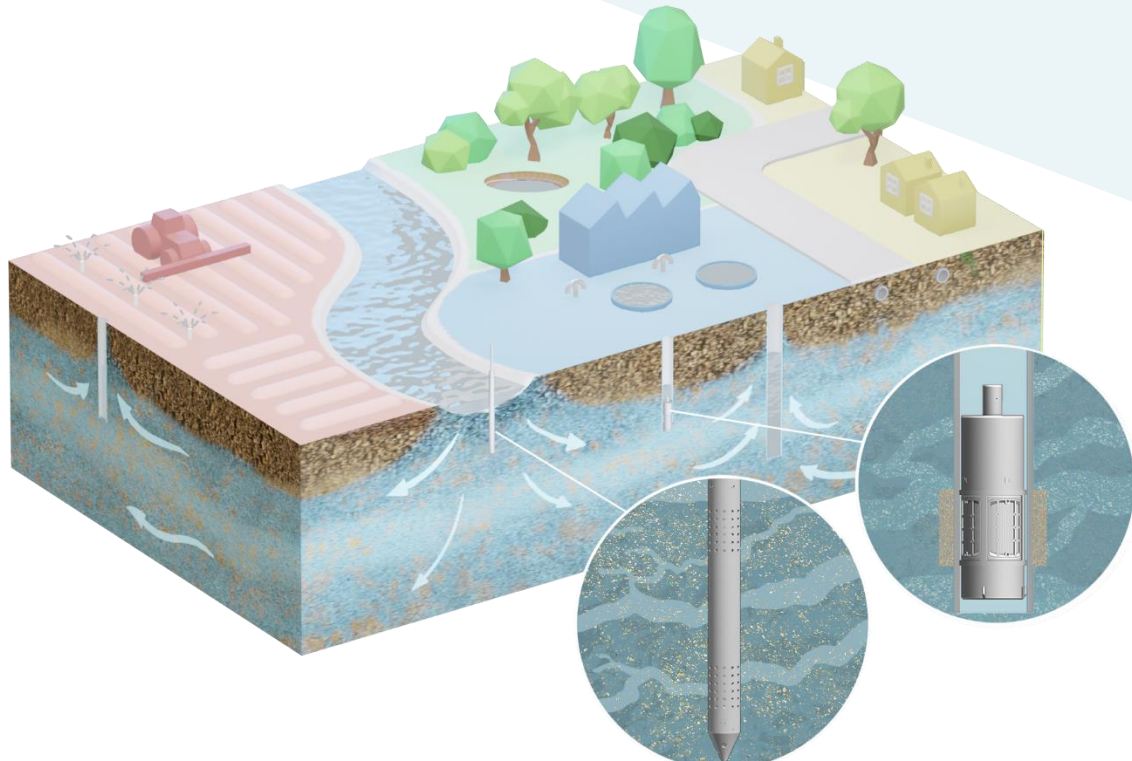


iFLUX addresses one of the defining concerns of our time: the management of clean water

In 2020, 26% of the world's population did not have access to safely managed drinking water



- UN World Water Development Report 2023



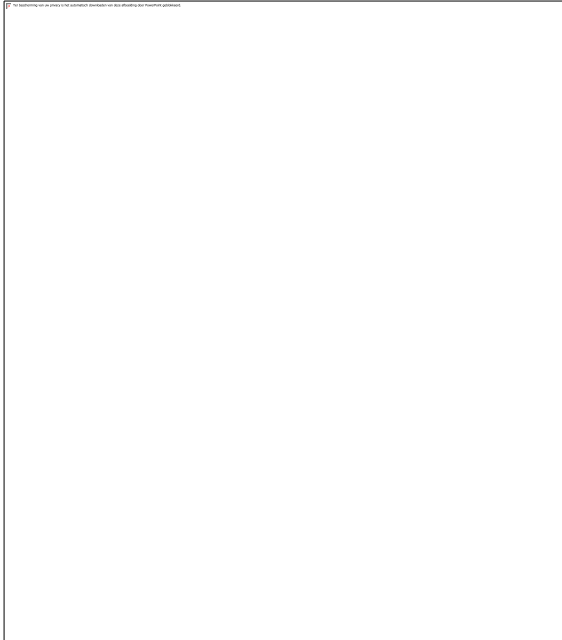
By making the dynamics of groundwater – the world's greatest source of fresh water – visible, iFLUX is helping to ensure our collective, sustainable future.

SUSTAINABLE DEVELOPMENT GOALS



Meet Maarten Weyn

A serial researchpreneur



Industrial Engineer in Electronics-ICT, PhD in Computer Science

Professor at the Faculty of Applied Engineering,

Principal Investigator (PI) at imec-IDLab

Vice-Rector of Research and Impact at the UAntwerp

Actively involved in science communication (Team Scheirre)

Co-founder





With the members of his first research group



With Team Scheire



“Why I Like problems” by Maarten Weyn
TEDxAntwerp



4. How do we support this Entrepreneurial mindset and journey ?



Studeren & Ondernemen?

Wil je studeren én ondernemen?

Ons team van Campus Development staat voor jou klaar!

Heb je ambities om te ondernemen tijdens je studies?

Wij bieden de ondersteuning die je nodig hebt!

We bieden jou:

- ⚡ Hulp bij de aanvraag van jouw statuut als student-ondernemer
- ⚡ Trainingen en workshops over ondernemerstopics
- ⚡ Persoonlijke coaching op maat
- ⚡ Matchmaking-events met experts en andere ondernemers
- ⚡ Toegang tot ons regionale en internationale netwerk

Ons Team



Barbara Tan
Diensthoofd
Campus Development



Nathalie De Schepper
Ondernemerscoach



Filip Noppe
Community Manager
en touchpoint



Hilde Segal
Contact aanvraag statuut
student-ondernemer



Support bij Team student entrepreneurship & entrepreneurial mindset

Do you dream of having a career as a self-employed professional?

Have an idea, but don't know where to start?

Do you want to grow your business?

Do like to have access to **regional/international networks** and meet like minded people?

Access to the network and activities of TAKEOFFANTWERP & YUFE

Support by Valorisation Office Team

Head of the
Valorisation
Office



Jurgens.Joossens@uantwerpen.be

Experts

IP



Steven.Vermeir@uantwerpen.be

IP



Ilse.Heyvaert@uantwerpen.be

Assistant
IP



Pascale.Nagels@uantwerpen.be

License manager



damian.grozdanovski@uantwerpen.be

Venturing
& Licensing



Iris.vanaelst@uantwerpen.be

Assistant
Communication &
Venture:



Diane.Stroobants@UAntwerpen.be

Communication



Eva.VanDoren@UAntwerpen.be

IOF



Inge.Torfs@uantwerpen.be

IOF & Valorisation
assistant



Sander.Goeteyn@uantwerpen.be

Data expert



Ilse.Poels@uantwerpen.be

Valorisation Managers

Exact &
Applied



Bram.Verbinnen@uantwerpen.be

Social Sci. &
Humanities



laurens.vandersteen@uantwerpen.be

Life
Sciences



Nele.kindt@UAntwerpen.be

Life
Sciences



Lieve.Hoflack@uantwerpen.be

Alliance
UZA-UA



Kris.Bonnarens@UAntwerpen.be

Support from Antwerp Doctoral School: the Basics of Entrepreneurship & Innovation – Phd-students



Module 1

Introduction on
(Open) Innovation
and
Entrepreneurship



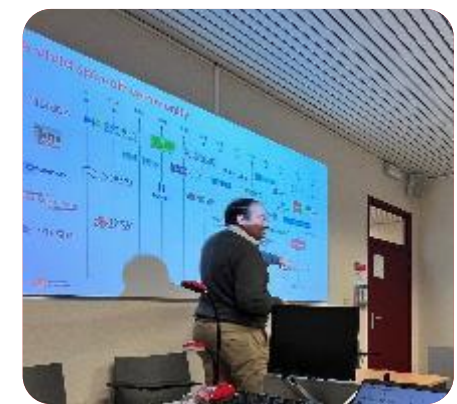
Module 2:

Technological and
Commercial
Readiness Levels
(TRL/CRL)



Module 3

The Business Model
canvas



Module 4

≠ Valorisation
routes:
Licensing, spin-off
creation

Training on valorisation

For Knowledge Transfer Professionals and researchers/Phd's

Dive-into-business

Deep Dive (focused on spin-off creation)

New Offer in the Antwerp Doctoral

School: *“The Basics of Entrepreneurship & Innovation”*

Dive-into-Business

This pillar focuses on the creation of impact through the valorisation of research. The basics programme 'Dive-into-Business' is a customized offer to meet the valorisation needs of researchers. It supports researchers in creating impact through translating their research to society. This impact can either be economic, societal, or both. **It should be stressed that this is an unique opportunity for self-development as well.**

This training course fits in with the competence profile for PhD students and counts as a valid activity in the doctoral study program.

IOF POC Projects/Service platforms

Jump-start your spin-off idea: tips & tricks

To IP or not to IP, an introduction

Collaboration with industry: best practices and funding

EU funding for innovation projects: from research to business

Developing and Valorizing Software

Founding spin-offs in the Social Sciences and Humanities

NEW on Blackboard: A toolkit for entrepreneurial minds: the basics of Intellectual Property Rights (IPR) and valorisation

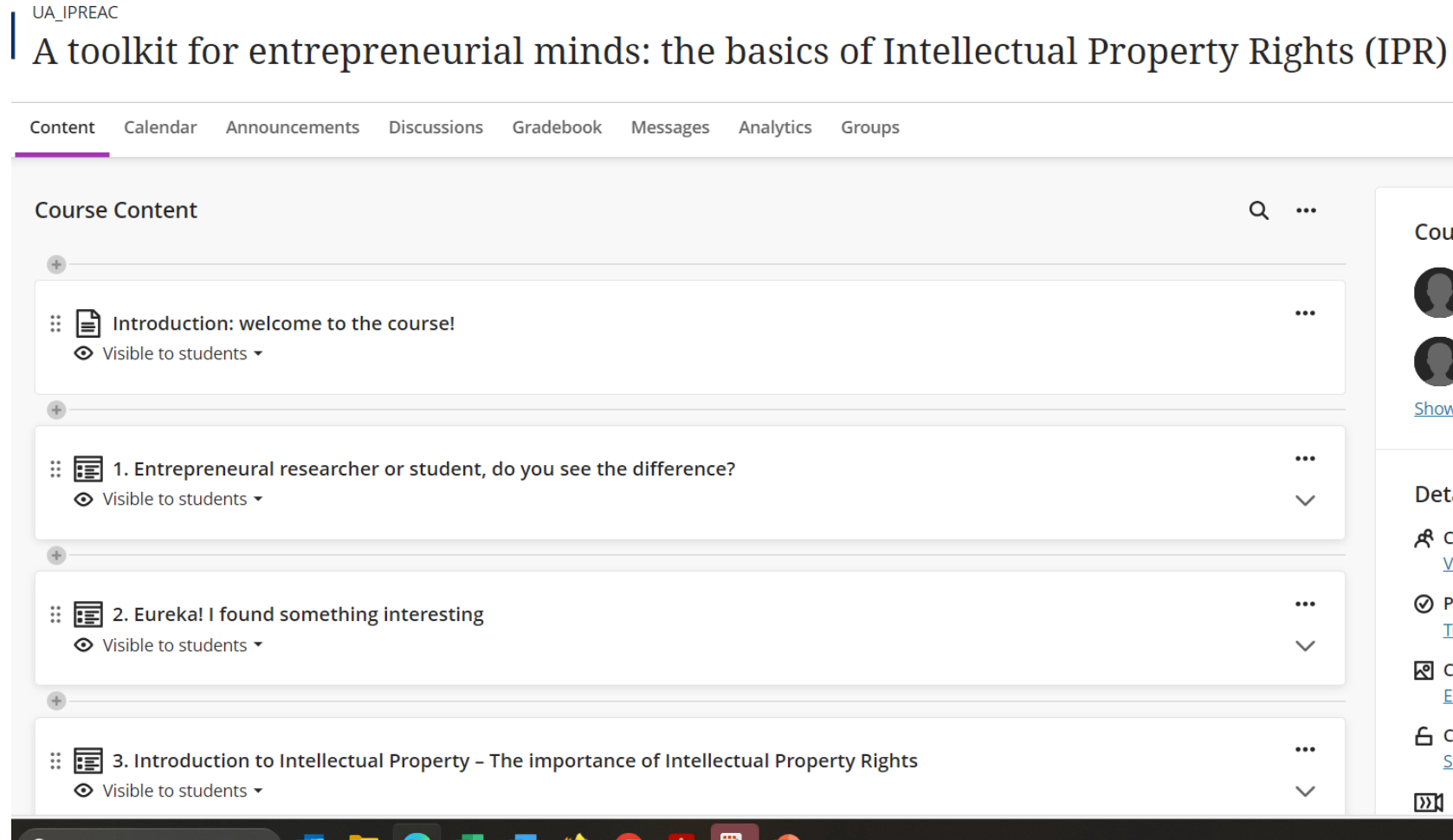
UA_IPREAC

A toolkit for entrepreneurial minds: the basics of Intellectual Property Rights (IPR)

Content Calendar Announcements Discussions Gradebook Messages Analytics Groups

Course Content

- Introduction: welcome to the course!
Visible to students
- 1. Entrepreneurial researcher or student, do you see the difference?
Visible to students
- 2. Eureka! I found something interesting
Visible to students
- 3. Introduction to Intellectual Property – The importance of Intellectual Property Rights
Visible to students



Link: [Inhoud / A toolkit for entrepreneurial minds: the basics of Intellectual Property Rights \(IPR\) and Valorisation \(uantwerpen.be\)](#)

**For students, researchers
and staff**



YUFE offer on developing an entrepreneurial mindset: also for Phds



**YUFE
Challenge
Teams**

Challenge Teams

New call now open!



YUFEthon
Teamwork to Solve Real Challenges

Yufethon

New call - September 2024!



YUFE Ideas Lab

New call - October 2024!



YUFE Incubation program: “YUFE Ideas Lab”

Session dates	Title
January 29 th February 12 th	Creativity - Design Thinking
February 26 th March 5 th	Business Model Definition
March 19 th March 26 th	Pitch
April 9 th May 7 th	Prototype MVP
May 14 th May 21 th	Financials
Second week of June (Madrid)	Open Innovation, Networking and Feedback
Second week of June (Madrid)	Leadership
Second week of June (Madrid)	Funding your startup: investors
Second week of June (Madrid)	Legal Aspects: companies, protection...

Participants that successfully complete the program in May will be selected to participate at the demo day in Madrid



Interested ?

Contact: barbara.tan@uantwerpen.be

Wrap up: what is a Researchpreneur?

A researchpreneur is a researcher who, in addition to their **scientific work**, is **actively involved in entrepreneurship**, usually by valorizing research results through commercial activities. This can include starting a spin-off, developing new technologies for the market, or closely collaborating with industry to foster innovation.

A researchpreneur **combines the skills of a researcher and an entrepreneur**, pursuing both scientific and commercial goals.

Thank you for your attention

Any questions?

Contact us:

Valorisation@uantwerpen.be

Ondernemen@uantwerpen.be