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Member MT DIH-HERO
Member RIMA Alliance
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BUILDING BLOCKS FOR INNOVATION ECO-SYSTEMS to create value and impact



Europe's most valuable tech companies founded after 1990

	Name	HQ	Founded	Valuation
#1	Booking.com	Amsterdam	1996	€60B
#2	adyen	Amsterdam	2006	€42B
#3	worldpay	London	1993	€39B
#4	Spotify	Stockholm	2006	€39B
#5	Infineon	Neubiberg	1999	€24B
#6	HEXAGON	Stockholm	1992	€24B
#7	ocado	London	2000	€20B
#8	Delivery Hero	Berlin	2010	€19B
#9	zalando	Berlin	2008	€15B
#10	Takeaway.com	Amsterdam	2000	€14B

Jan 2021 | techleap.nl | CBRE | dealroom.co

ENTERPRENEURIAL UNIVERSITY

Societal & Economic Impact

Involved in large number of PPPs.
>1,000 start-ups since 1984:
many international scale-ups, 2 Unicorns,
>14,000 direct jobs in region.

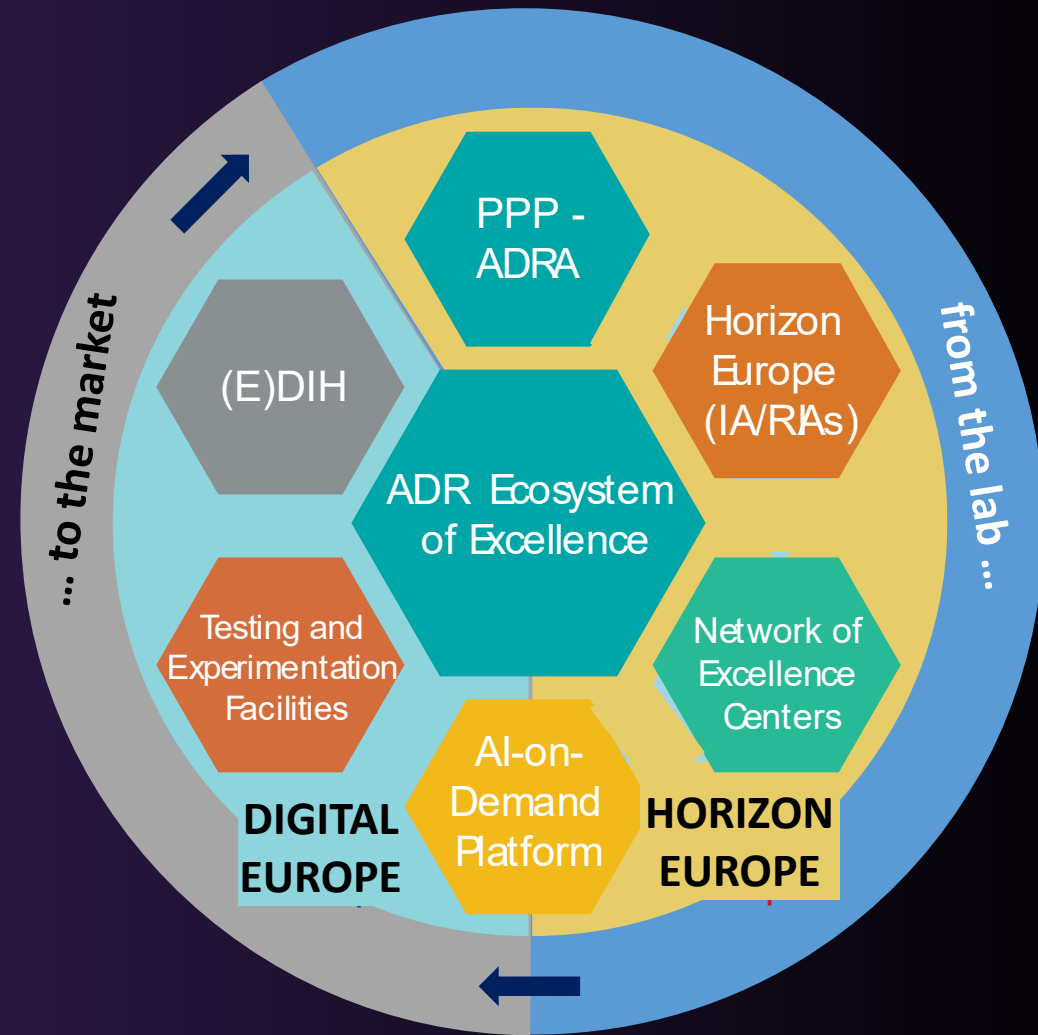
Born in
Twente



Rethink Cybersecurity



Ecosystem of Excellence-in-ADR-Innovation





Universiteit Twente
de ondernemende universiteit



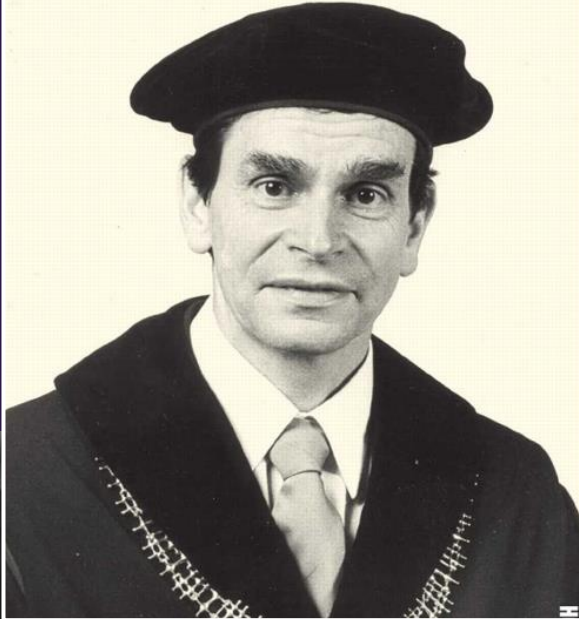
Van experiment
in het bos
tot ondernemende
universiteit



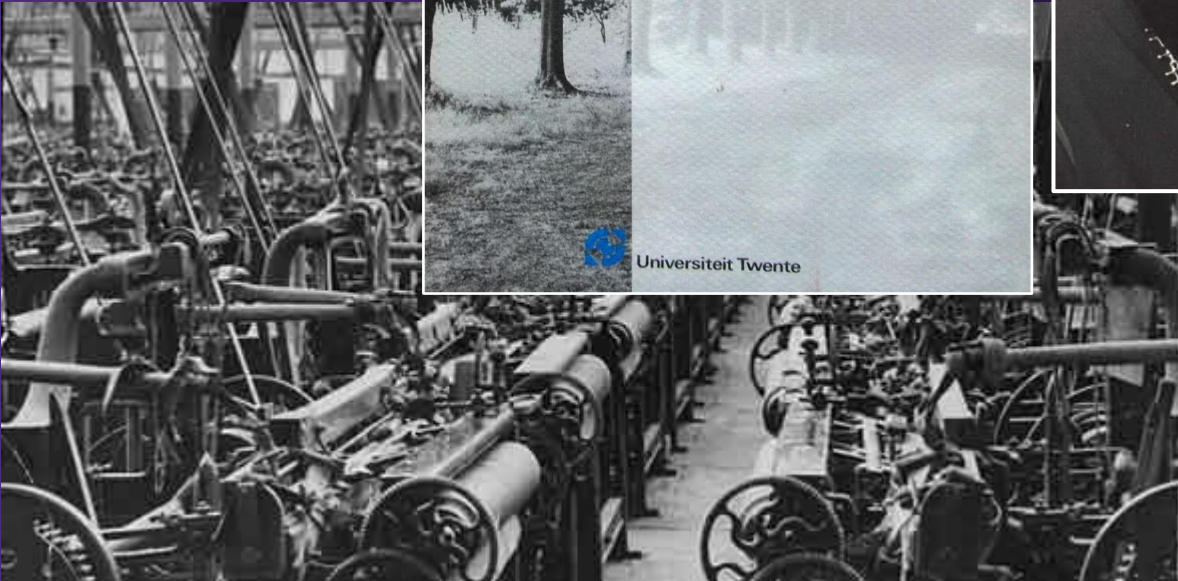
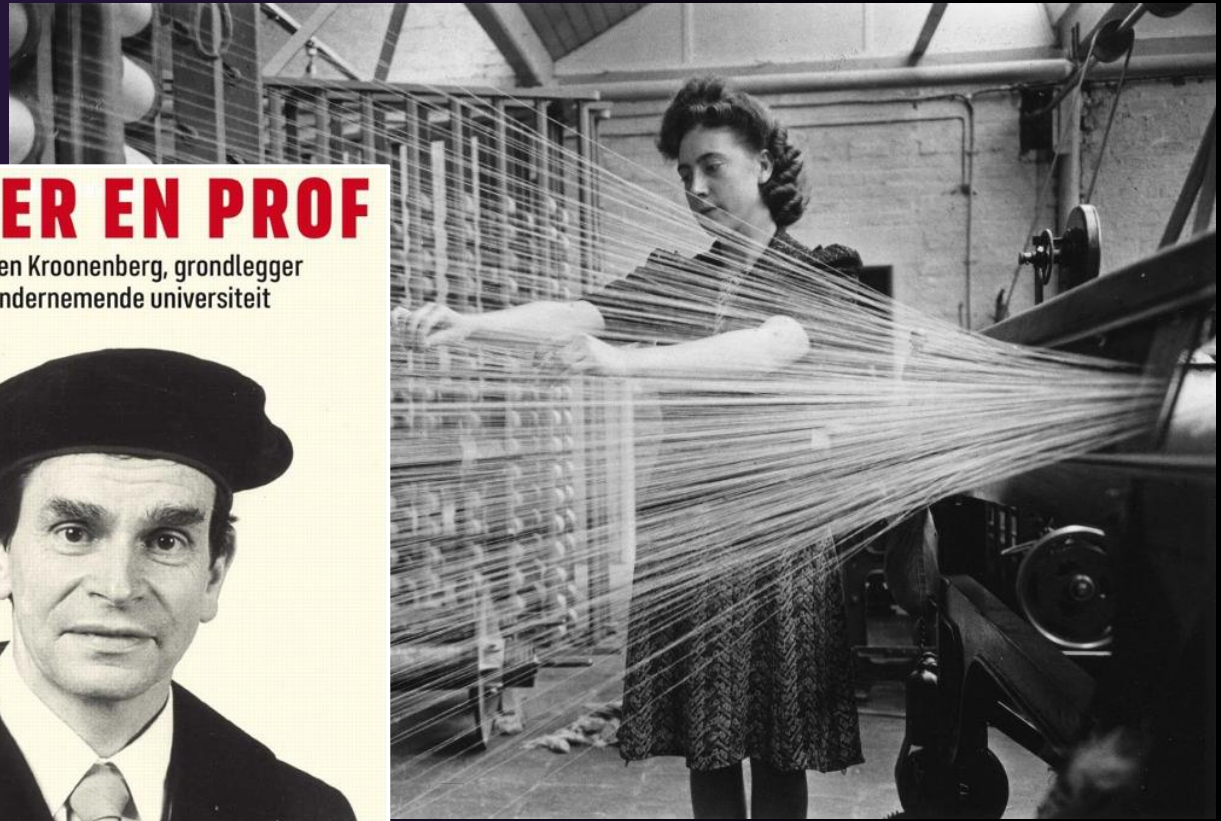
Universiteit Twente

PIONIER EN PROF

Harry van den Kroonenberg, grondlegger
van de ondernemende universiteit



PEOPLE !



UNIVERSITY
OF TWENTE.

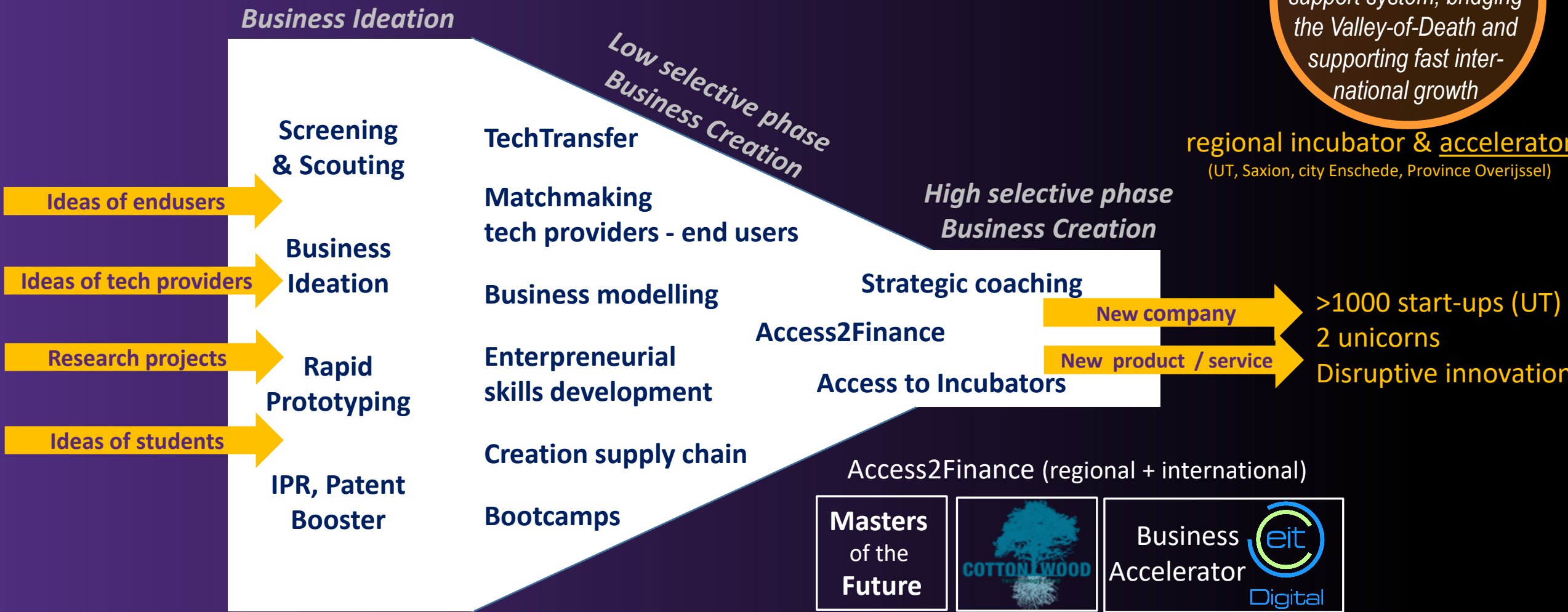
DIGITAL SOCIETY
INSTITUTE

CREATING IMPACT: (1) soft landing place for ideas & businesses

stimulating & supporting stand-up, start-up, scale-up



regional incubator & accelerator
(UT, Saxion, city Enschede, Province Overijssel)



Linear innovation process

More focus on scalability of Technology / Team / Business Plan

Generic support vs Domain-specific approaches:

- IPR → time-to-market
- Specialized investors
- Innovation chains / knowledge market domains
- Societal acceptance & trust → legislation, AI-act
- Innovation in AI vs Innovation with AI (AI-as-enabler)
→ explainability, trustworthiness

Market Value

Entrepreneurial mindset

Screening & Scouting
Incentives,
IP policy for tech transfer,
Entrepreneurial education

Stimulating risk-taking

Pre-Venture Loans

Fast growth

Strategic hands-on coaching,
EU business developers network,
Entrepreneurial talent development,
Matchmaking, Bootcamps,
Start-up weekends, Patent Booster

Access-2-Finance

VCs en Private Investor
networks, Pitch training

New markets, ideas, PMCs, inspiration

Business Club,
DesignLab, Field Labs

the First

the Fastest

the Fittest

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INSTITUTE

EIC European Innovation Council



EIC work program 2024: over €1.2 billion funding opportunities

1. EIC Pathfinder

Supporting research and deep tech projects with a high degree of scientific ambition and risk.

2. EIC Transition

Helping researchers to move from academic lab to start-up.

3. EIC Accelerator

Supporting start-ups and SMEs to develop and scale-up to new markets or disrupt existing ones.
Combi of grant and equity funding.

Tech areas:

AI, energy, quantum, medical imaging, MedTech, biotech, GreenTech, food, semiconductors, space, ...

AI challenge 2024:

Human-centric generative AI, transparent and trustworthy generative AI models

Access2Finance: EIT Digital



To Unicorn

Growth

- Growth Services**
- Access to Finance
 - Access to US Market
- Professional School**

Acceleration

**Open Innovation Factory
Speed Master**

Incubation

Venture Program

Unipreneurship

**Master School
Summer School
DeepHack**

From Student

*Cyber-security
Data Science & AI
Autonomous systems, ...*

Standing up

Starting up

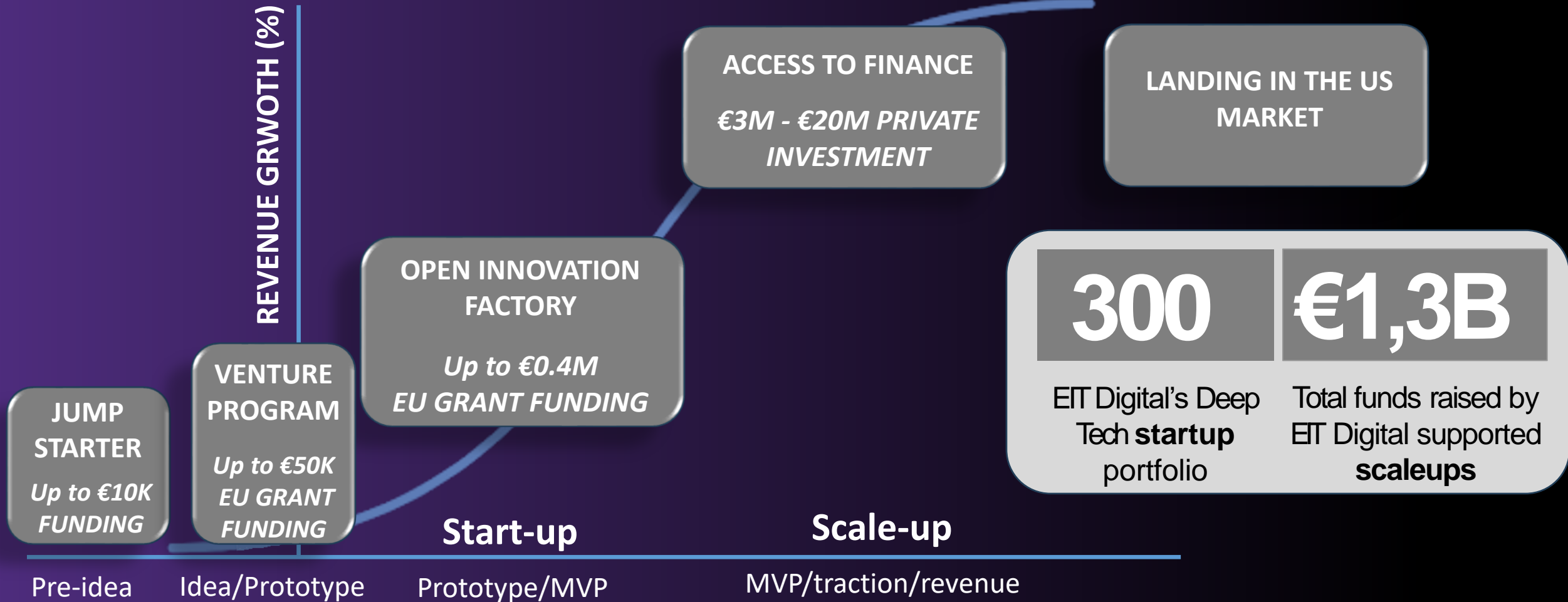
Scaling up



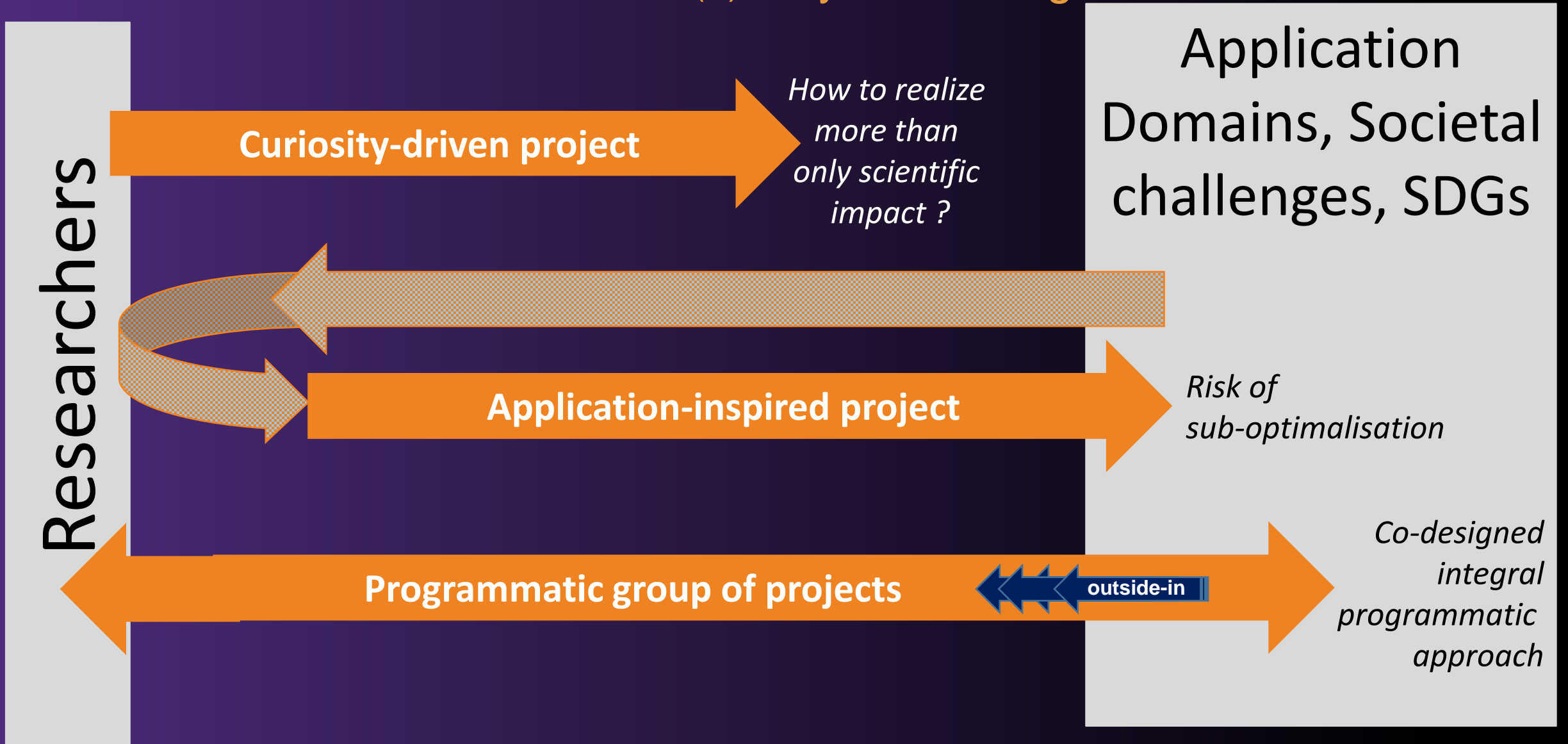
Brand Name VCs
The usual suspects
Multi-sector
Overwhelmed with deals

Under the Surface
Sector specialist funds
Corporates, Family Offices,
Private Equity Funds, ...
Hungry for Opportunities

EIT Digital Start-up, scale-up support programs



CREATING IMPACT: (2) way of working



CREATING IMPACT: (3) co-design Tech & ELSE

SUCCESSFUL HEALTHCARE INNOVATIONS:

25% technological innovation
75% social innovation

CREATING IMPACT:

- + Technology
- + Market, Business plan
- + Societal acceptance

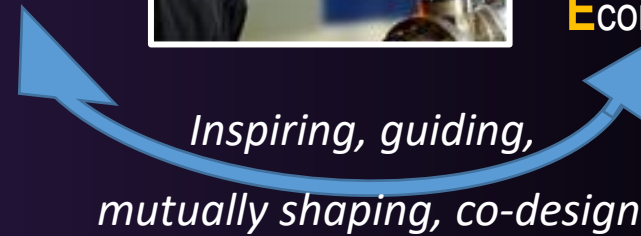


MAKERS & SHAPERS



Technological
Physical/Embedded AI
& Robotics

Ethical
Legal
Societal
Economical



(because it's certainly not about technology alone)

CREATING IMPACT: (4) people, education, training



International EIT Digital Masterschool:

- * Next generation real entrepreneurial and innovation-oriented tech students
- * Makers & Shapers approach → Courses: 75% Tech + 25% ELSE/entrepreneurship/innovation/impact
- * MSc Autonomous Systems, Data Science & AI, Cybersecurity, Human-Machine-Interaction & Design, ...
- * Dual degree

European ECIU University (MSc, LLL):

- * From academic diplome to micro-credentials / micro-modules
- * Challenge-based learning
- * EU-funded initiative of the alliance of 13 ECIU universities to create a ground-breaking and innovative educational model on a EU-scale

**Entrepreneurial Mindset
Employees**



Summer School: re-skilling, up-skilling of professionals

- * Deep-dive into emerging digital technologies, learn how to turn technology into business, and eventually launch deep-tech startups
- * E.g.: Boosting entrepreneurship in digital wellbeing, Cybersecurity between tech and business, Resilient Industrial IOT, ...

CREATING IMPACT ⁽⁵⁾ integrated cascade of research, test & experimentation facilities

Develop / low TRL / Controlled Environment

Adopt / high TRL / Open environment

Drones



In-house Research labs

Open space: Space53

Living Campus

Smart Cities
& Agriculture

*often shared facilities
with partners*

*Pipe-inspection,
Maintenance
robots*

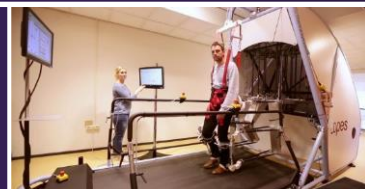


In-house Research labs

Outdoor Tech Base Twente / Safety Campus

Real life Petrochemical plant

*Rehabilitation,
Wearable
robotics*



In-house Research lab

Wearable Robotics Lab UT

Roessingh RRD Lab

Real life – Rehabilitation clinic

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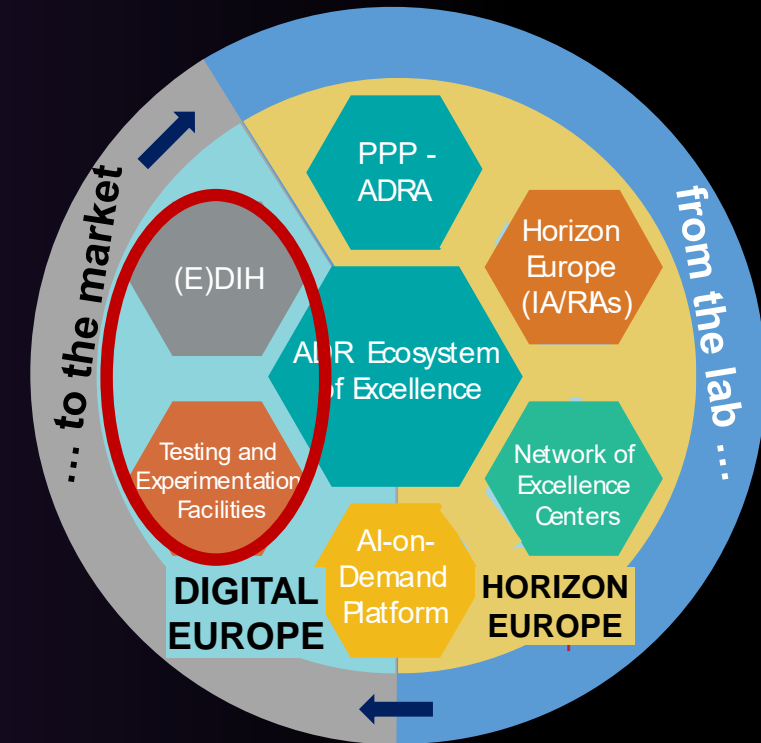
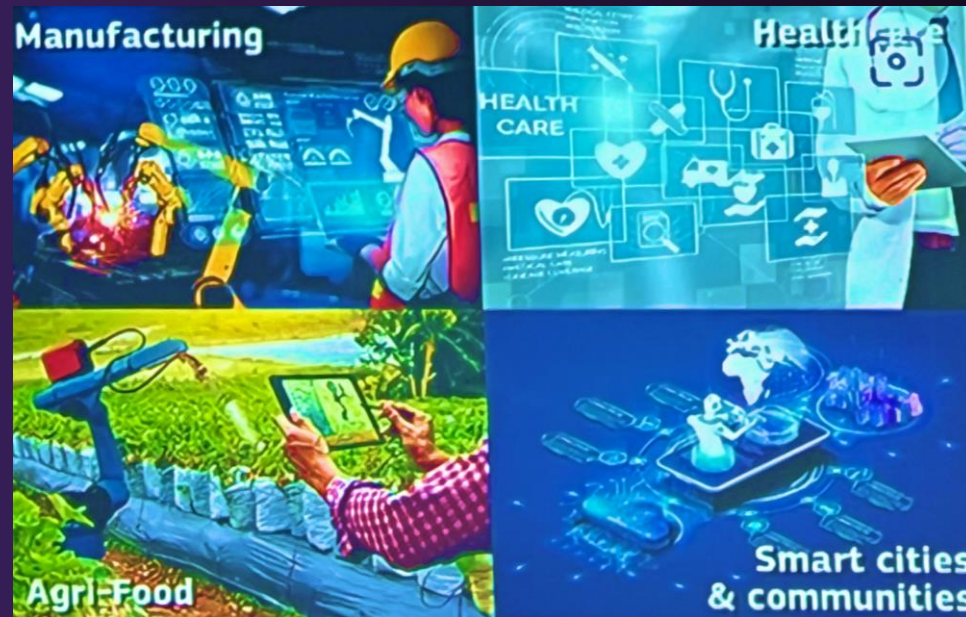
AI Testing & Experimentation Facilities (TEF)

Large-scale reference sites offering a combi of physical and virtual facilities, in which tech providers can test (e.g. robustness, safety, accuracy) their AI-based software/hardware technologies at TRL 6-8 in real-world environments.

Application sectors:

- Agri-Food
- Healthcare
- Manufacturing
- Smart Cities & Communities
- Energie (?)
- Technology: Edge TEF

TEFs also support regulatory sandboxes



EDIHs – European Digital Innovation Hubs

Provide technological expertise (AI, cyber-security, HPC, robotics, ...) and experimentation facilities to enable the digital transformation of companies.

Test before invest

Help companies to assess whether they can benefit from an existing digital technology before they buy it.

Skills & Training

Digital Innovation Hubs

one-stop-shop

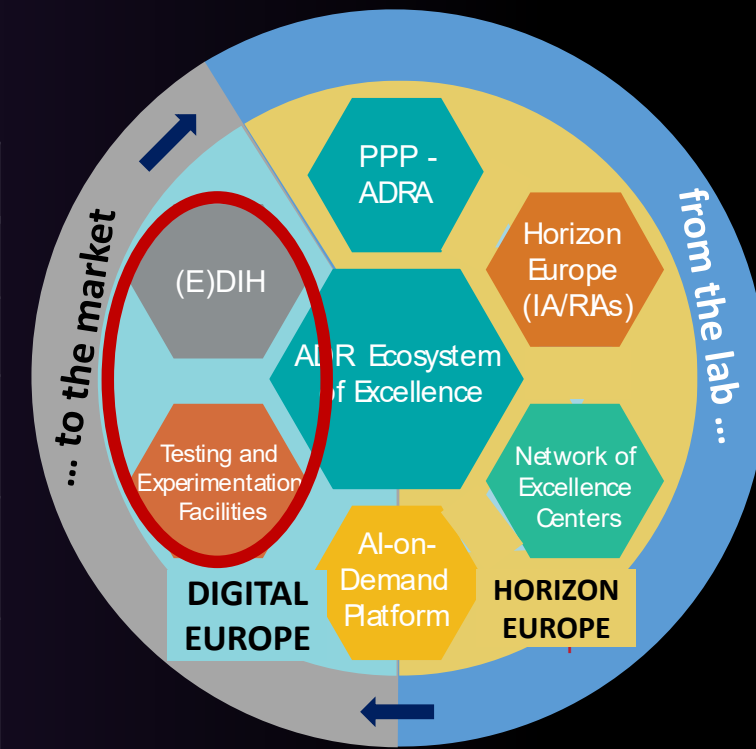
Support to find investment

228 EDIHs
Search robotics: 40 EDIHs
Search AI: 75 EDIHs

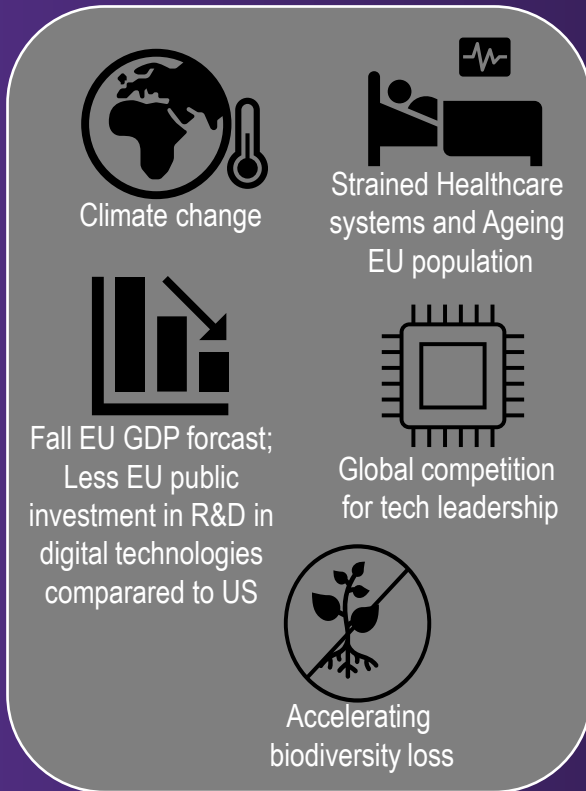
Innovation ecosystem & networking

TEF vs EDIH

	EDIH	TEF
Funding from	EC + MS	EC + MS
Number	228 (1 in each EU region)	5-6
Technology to test	Mature (test-before-invest)	substantial testing & validation needed
Tech-focus	digitalisation, AI, cyber-security, robotics, hpc, ...	AI
Application domain-focus	Many (but limited in depth), o.a.: healthcare, agri-food, manufacturing, space, sea, governmental organisation, ...	<ol style="list-style-type: none"> 1. Agri-Food 2. Healthcare 3. Manufacturing 4. Smart Cities & Communities 5. Energie (?) 6. Edge AI technology
Focus	Region, sometimes MS (+ little bit Europe)	Europe
TRL	Often higher than TEF	6-8
Remarks	Awareness creation, early & late majority, laggards	More innovative companies



CREATING IMPACT: (6) strategic partnering, collaboration with industry

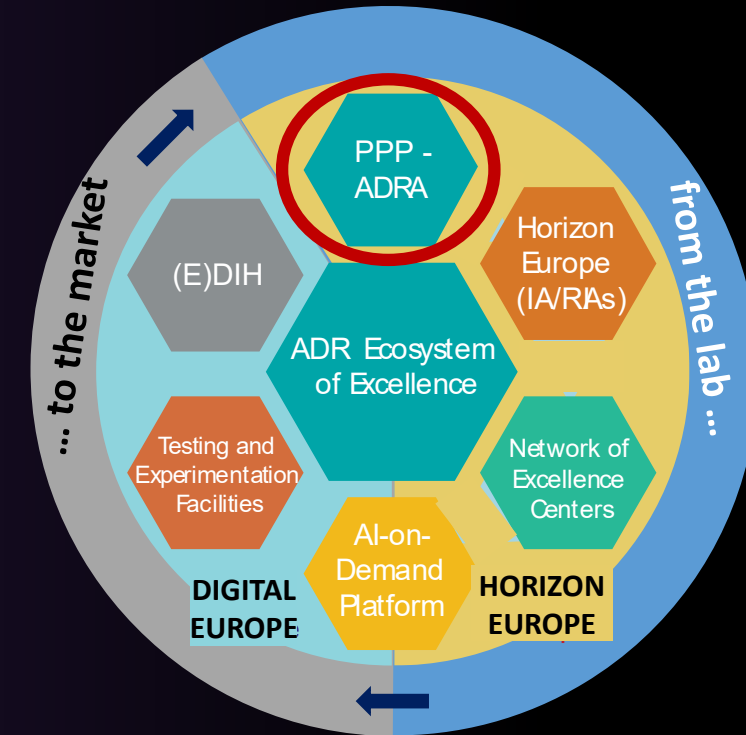


Addressing these challenges implies solutions at a larger scale with EU-level coordination, which is what partnerships are all about:

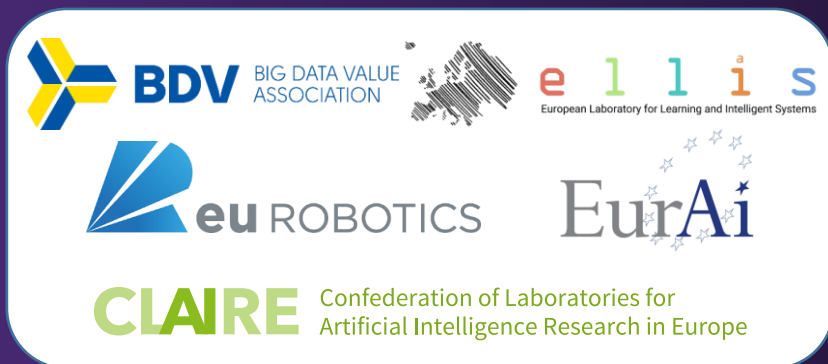
- EU-wide coordination
- Systemic solutions

European Partnerships: initiatives where EC together with private & public partners and MS jointly support the development and implementation of impact-oriented **SRIDA** roadmaps.

- Shared long-term EU vision.
- Create critical mass and scale of investment to demonstrate radically new innovations across Europe (co-invest in solutions).
- Overcome fragmentation.



CO-PROGRAMMED PARTNERSHIP ADRA



Develop & implement mechanisms to create strong, effective and accessible ADR innovation ecosystems

Topic Groups
Healthcare, I&M,
Standardisation-Legislation,
Innovation-Deployment
Uptake

Bring EC, private and public partners together; stimulate joint industrial investments and private funding

Aligning legal foundations, standards and effective regulations in relevant industrial sectors

Accelerate and scale-up new markets and novel applications

Collaborate with other horizontal and vertical communities

Accelerate digital transformation and uptake of industry

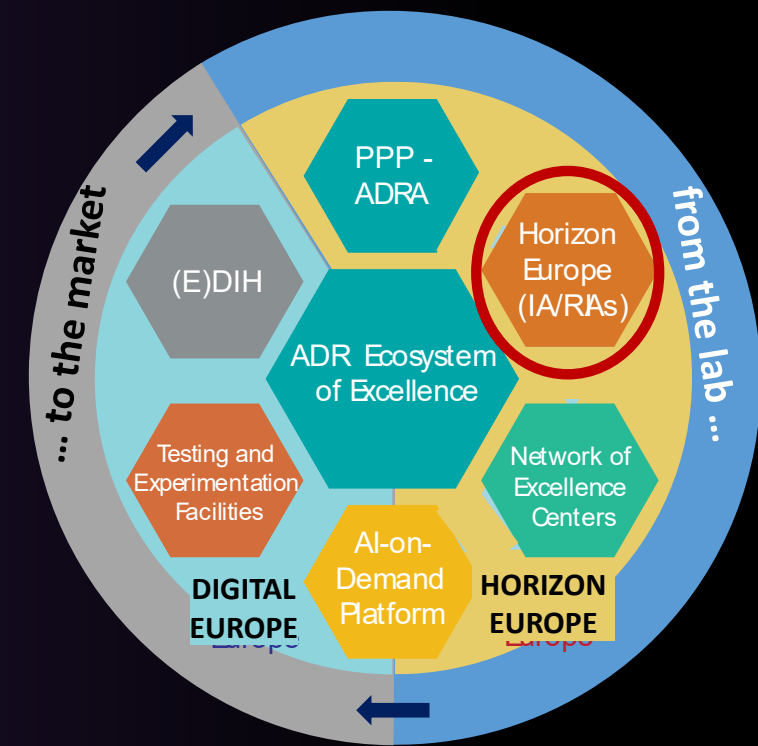
Contribute to reducing the fragmentation of the research and innovation landscapes

Adra will deliver: EU's joint vision for a human centric and trustworthy use of AI, Data & Robotics

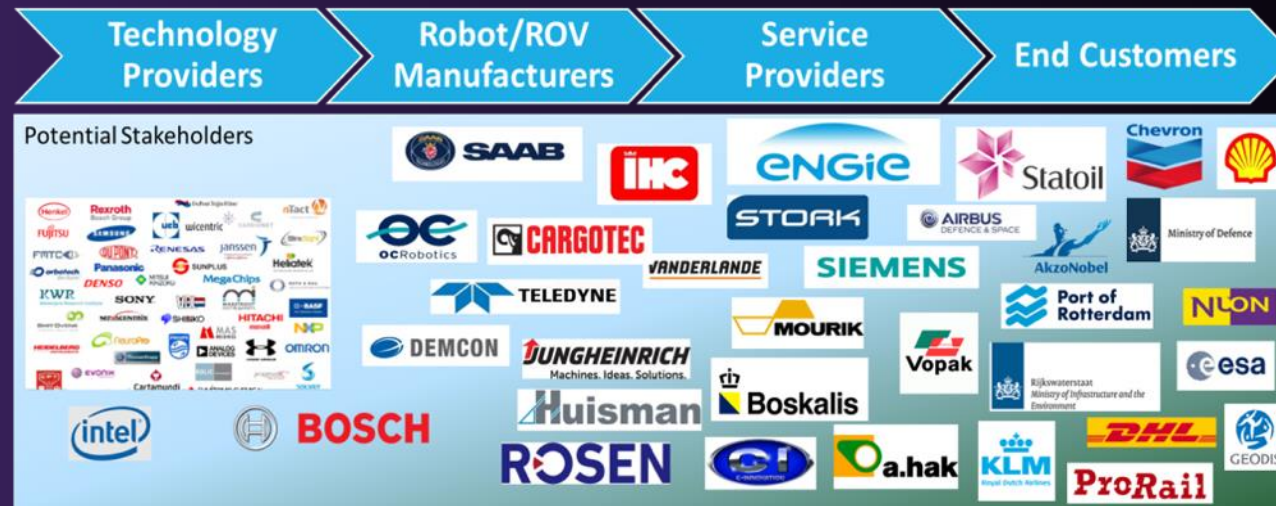
Provide concerted research and innovation initiatives and improved academia-industry collaborations built on academic excellence and grounded by industrial relevance

Former European DIH networks

- Horizon Europe IA's
- In-dept knowledge of application domain
- All players innovation chains
- Services: ELSE-readiness, standardisation, domain-specific innovation models,...
- Now often **Topic Groups** of European PPPs Adra, euRobotics, BDVA (learning communities, EU focus, Innovation/deployment/uptake)



WHOLE INNOVATION CHAIN

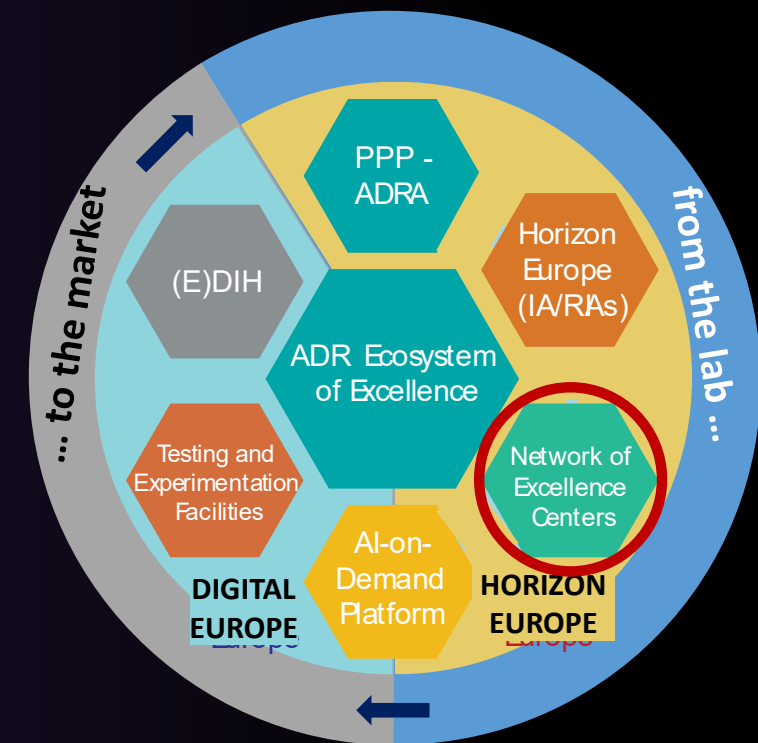


Many
Regional, national
Technology focus

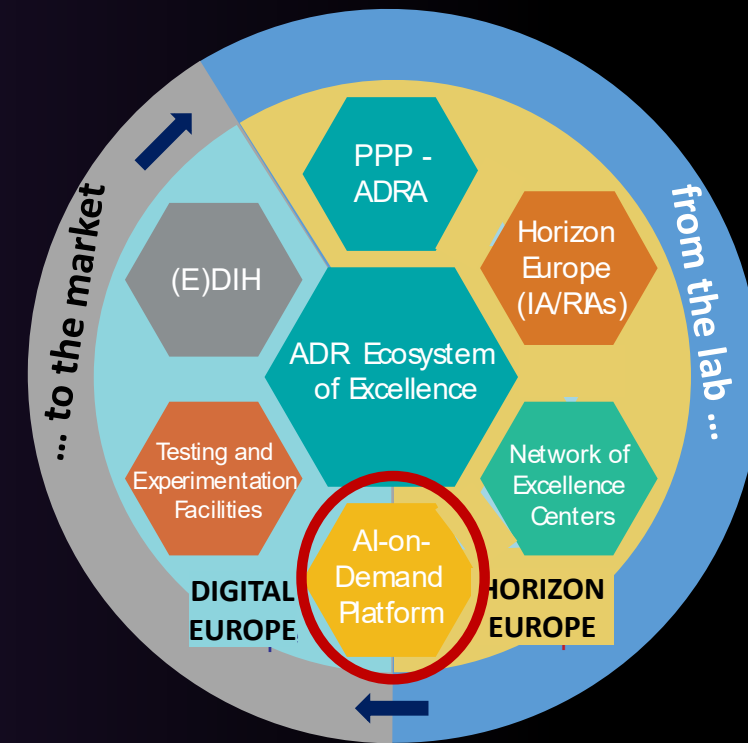
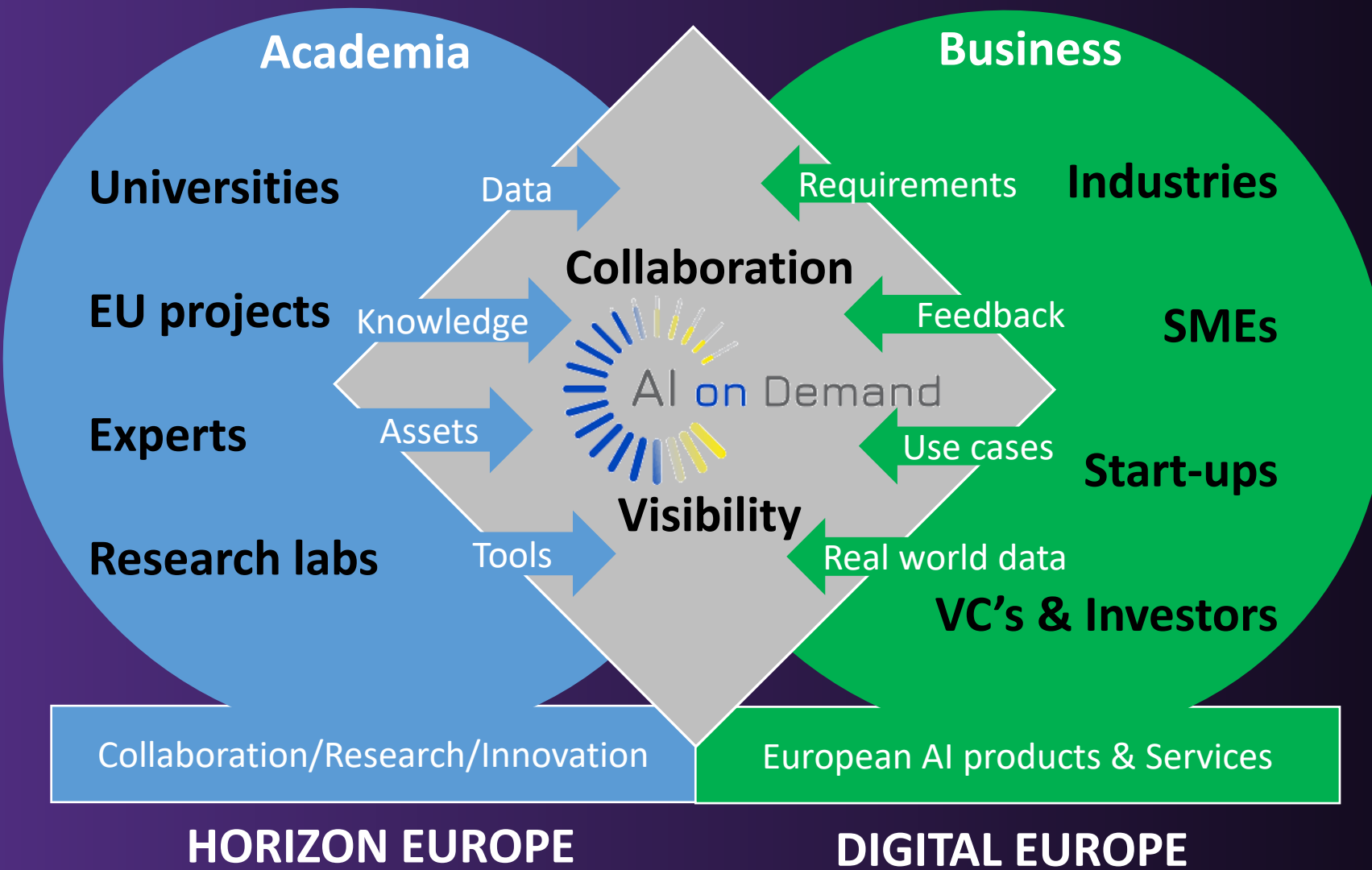
Limited number
National, international
Application domain

Photonics
Batteries

European Networks of AI Excellence



European AI-on-Demand platform



Single access point to trustworthy resources.

Bridge & catalyst between European AI research, industry and public services.

REGIONAL ECO-SYSTEM TWENTE ROBOTICS

UNIVERSITY OF TWENTE.

SAXION
University of Applied Sciences

Ethical
Legal
Societal
Economical



Technological
AI & Robotics

Integrated
M.Sc. Robotics

TECHNICAL
SUPPORT

INTEGRATED CASCADE
OF RESEARCH &
TESTING FACILITIES



Develop, low TRL, controlled environment

Adopt, high TRL, open environment

INTEGRATED CASCADE OF RESEARCH AND TEST FACILITIES (shared facilities)

*Knowledge, Technology
& Infrastructure*

KNOWLEDGE

ROBOTICS CENTRE
one-stop
Research &
Innovation Hub
(200 researchers)

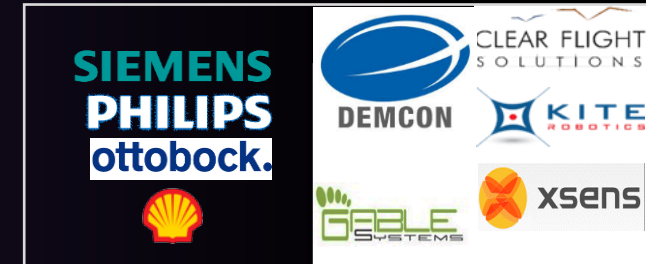
COMMUNITY
BUILDING,
BROCKERAGE



WHOLE INNOVATION CHAIN

TRAINING
(SKILLS, EDUCATION)

EU-WIDE
NETWORK



Business support

FINANCE

ELSE ADVICE

*Access to
Ecosystems*

INDUSTRIAL &
SME NETWORK

LOBBYING

INCUBATOR &
ACCELERATOR
SUPPORT

INNOVATION COACHING,
BUSINESS & STRATEGY
DEVELOPMENT



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Thank you for your attention



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