

European Facility on Molten SALT technologies TO power and energy system applications  
GA Number: 101079303  
European Research Executive Agency REA.C3

# SALTOpower



UNIVERSIDADE  
DE ÉVORA



Deutsches Zentrum  
für Luft- und Raumfahrt  
German Aerospace Center



Italian National Agency for New Technologies,  
Energy and Sustainable Economic Development



Funded by  
the European Union

## WP3 Spin-off facility

CASACCIA, ROME, 09.-10.05.2023

# AGENDA

**SPIN-OFF  
FACILITY**

**INNOVATION  
STAGES**

**SUPPORT  
RESOURCES**

**DISCUSSION**

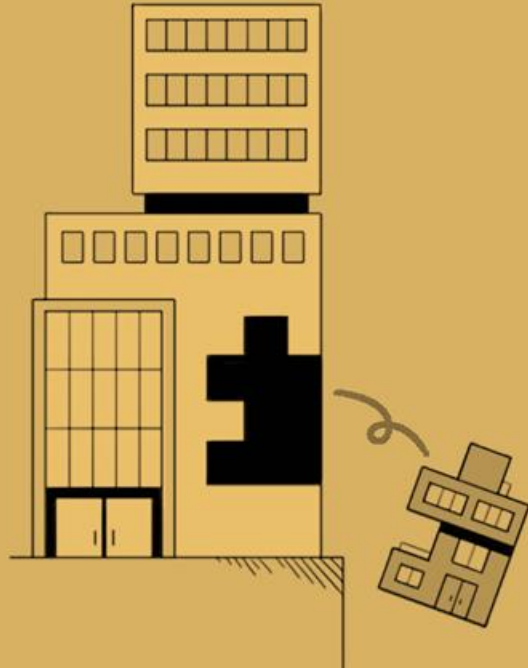
# Spin-off vs Start-ups

innovative company in its initial phase,  
with great growth potential, usually  
related to the technology area.



< 3 years

< 10 years



## Spinoff

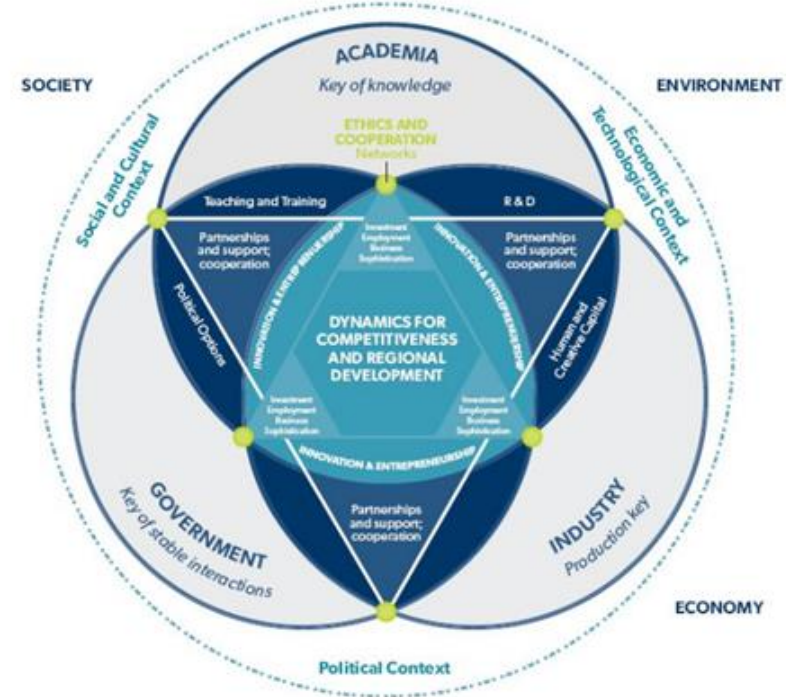
*['spin-,ɔf]*

The creation of a new independent company by selling or distributing new shares of its existing business.

# From Universities to Spin-offs

- **Universities** foster the crucial interaction between **Industry** and **Government**, contributing to the development of knowledge economies and knowledge societies (**Triple Helix Model of Innovation**)
- The transfer of knowledge from Universities often occurs with the establishment of new companies, or **University Spin-offs**.
- **These spin-offs** are an agile, less bureaucratic and more dynamic way for knowledge and technology produced in the Academia to reach the market.

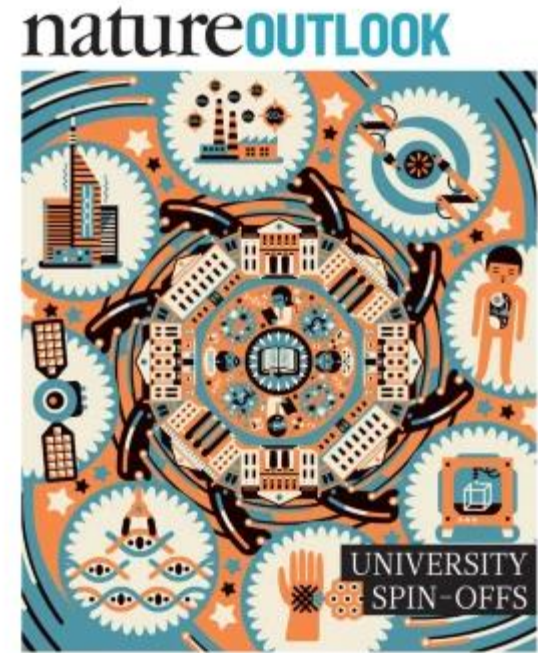
Figure 1  
Farinha and Ferreira's Triple Helix Triangulation model<sup>2</sup>



# University spin-offs potentiality

Four potential innovation pathways are identified:

- (i) **Creating** new industries that are entirely new with no technological antecedent in the regional economy;
- (ii) **Transplanting** industries from elsewhere;
- (iii) **Diversifying** into technologically related industries;
- (iv) **Upgrading** existing industries.



The stories behind  
22 science-based start-ups

<https://www.nature.com/articles/545S1a>

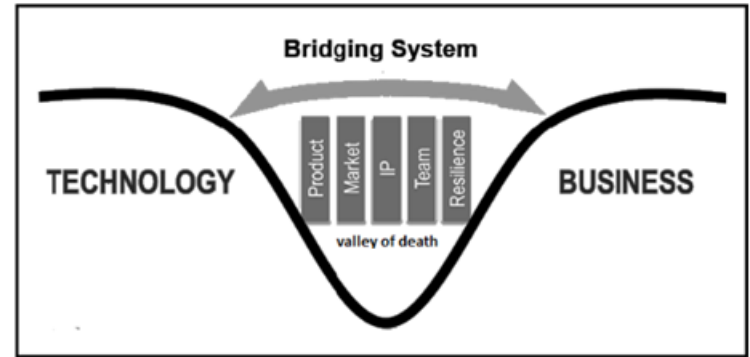
# Spin-offs and the Green Transition

- **Universities play a key role in the Green Transition.**
- The promotion of University Spin-offs **has become a measure** adopted by many European universities to facilitate the commercialization of new technologies and knowledge that can lead to **more sustainable economies and societies.**
- University-based companies have been widely acclaimed by **local and regional governments** for their contribution to **the transformation of low-tech sectors into high-tech industries**, especially through **stimulating sustainable process design**, increasing **regional productivity**, and creating **new employment opportunities** in sustainable sectors



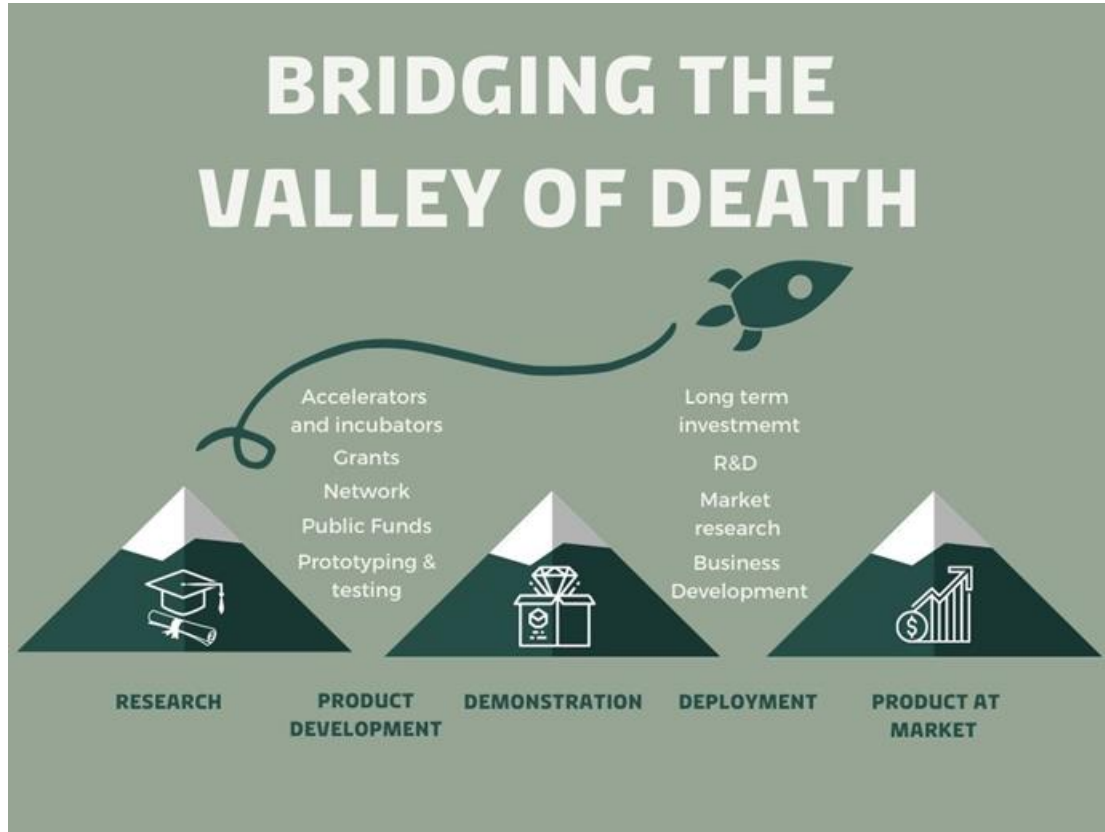
# Clean Tech Industry and the Valley of Death

- Nonetheless, there are **acknowledged gaps** in the journey from university research to its commercialization, metaphorically known as **valleys of death**.
- This refers to the fact that **many promising discoveries never get out of the lab and into the market**, and consequently a lot of potential goes unfulfilled.
- Important knowledge for the **Green Transition** has **remained within the walls of Universities**, affecting the development of the Clean Tech Industry.



Only 75% of the European USOs survive  
6 years after birth

# Universities are working to bridge these gaps

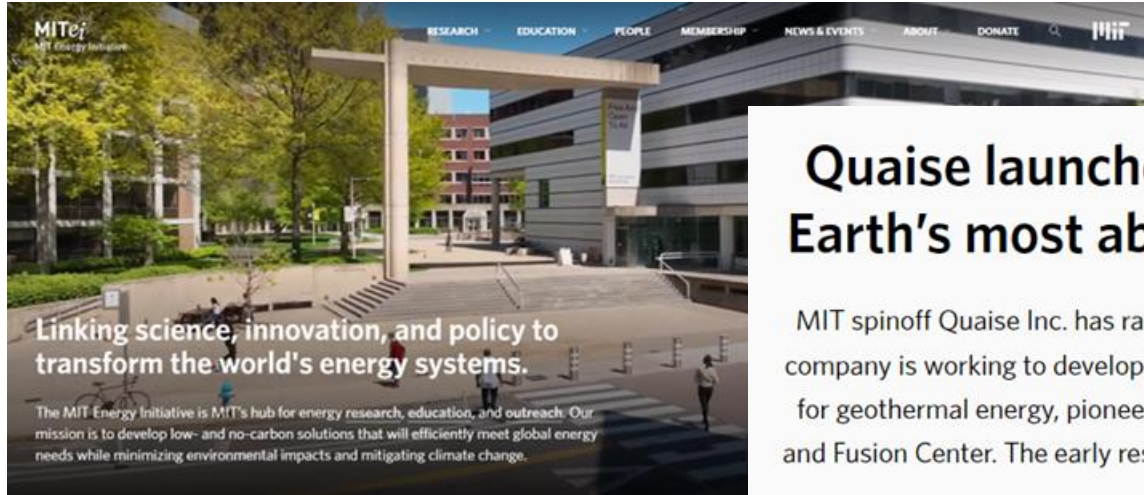


## HOW?

By creating an efficient **infrastructure** and **collaboration** with their surrounding ecosystem



# SUCCESS CASES



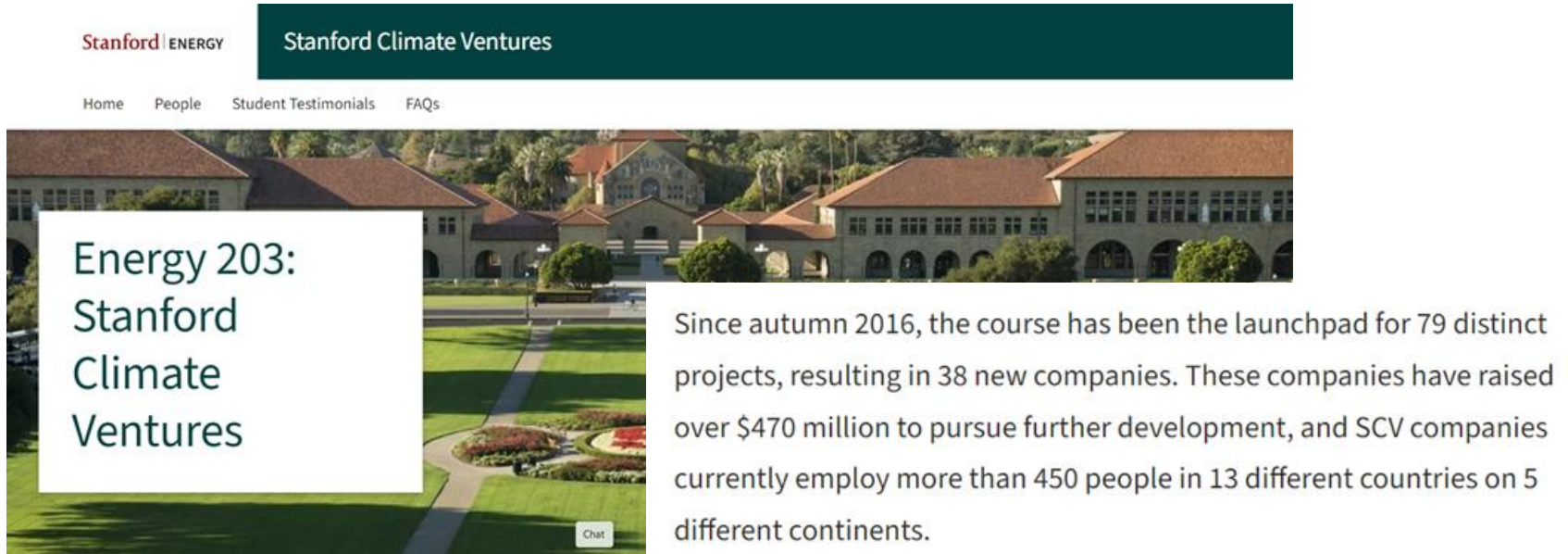
## Quaise launches with \$6 million to unlock Earth's most abundant clean energy source

MIT spinoff Quaise Inc. has raised \$6 million in a funding round led by The Engine. The company is working to develop and commercialize a new hybrid deep drilling technology for geothermal energy, pioneered by Paul Woskov and a team at MIT's Plasma Science and Fusion Center. The early research for this technology was supported through MITEL's Seed Fund grant program.

JUNE 8, 2020 · [BUSINESSWIRE](#)

**MIT Energy Initiative connects MIT research teams with industry and government sectors to develop solutions to the world's energy challenges**

# SUCCESS CASES



Stanford ENERGY

Stanford Climate Ventures

Home People Student Testimonials FAQs

Energy 203:  
Stanford  
Climate  
Ventures

Chat

Since autumn 2016, the course has been the launchpad for 79 distinct projects, resulting in 38 new companies. These companies have raised over \$470 million to pursue further development, and SCV companies currently employ more than 450 people in 13 different countries on 5 different continents.

**Stanford Climate Ventures** is a project-based course sequence that practices the creation of transformational climate ventures and innovation models.

# SUCCESS CASES

SWI swissinfo.ch

Swiss perspectives in 10 languages

Science >

## Swiss universities launch green energy coalition



## Entrepreneurship & Innovation

Many groundbreaking ideas are born at ETH Zurich. Some of them have the potential to survive in the market and make a positive contribution to our society. Support the young

entrepreneurs of tomorrow - so that ETH is not only a place full of inventive talent, but also an entrepreneurial hotspot in Switzerland.



**Switzerland's federal institutions of technology ETH Zurich and EPFL have launched a major renewable energy initiative with partners aimed at developing solutions to stock and transport green power. Training new entrepreneurs is part of the strategy.**

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the European Union

# Spin-Off Facility

**Empowering Entrepreneurship: The Role of Spin-off Facilities**

CASACCIA, ROME, 09.-10.05.2023

# Empowering Entrepreneurship through Spin-off Facilities

- Incubation and Support
- Access to Resources
- Strategic Alignment
- Collaborative Nature

**Spin-off  
Facility**



# Measuring Success in Entrepreneurial Support

Innovation Metrics

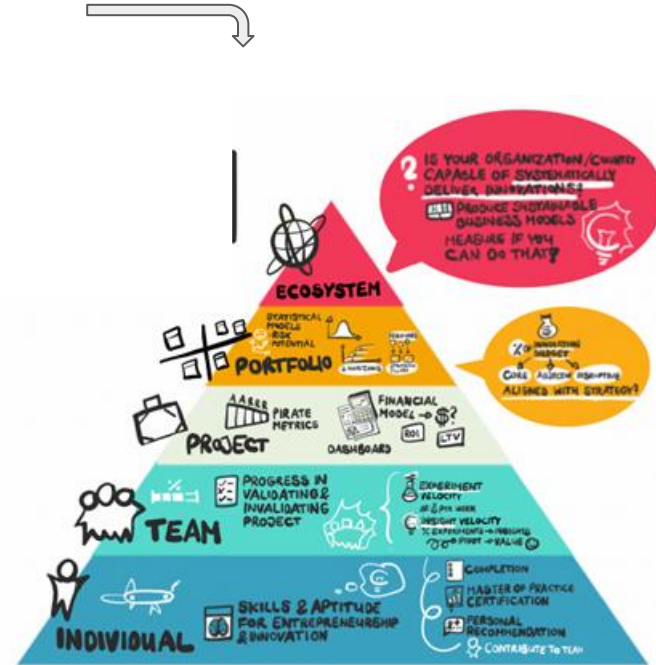
Startup Growth Rate

Job Creation

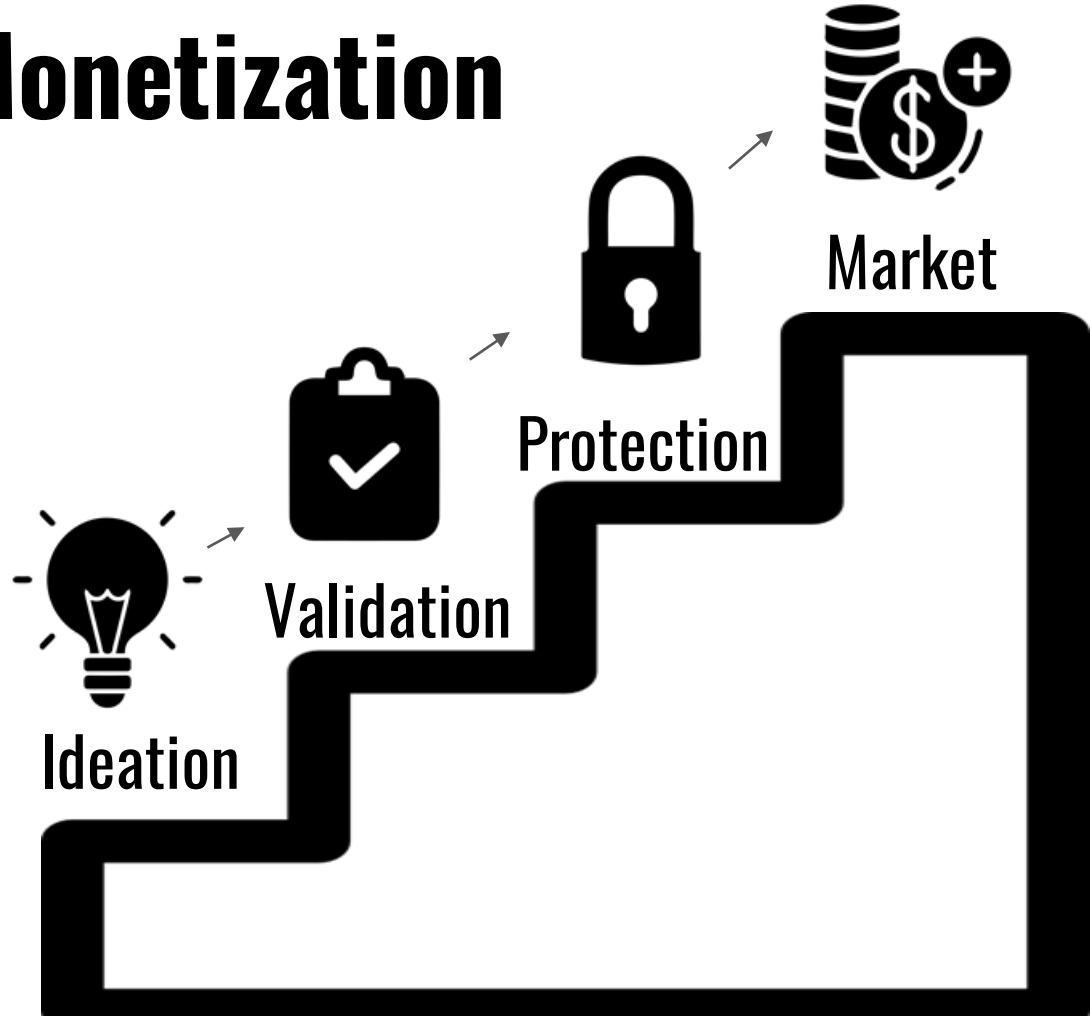
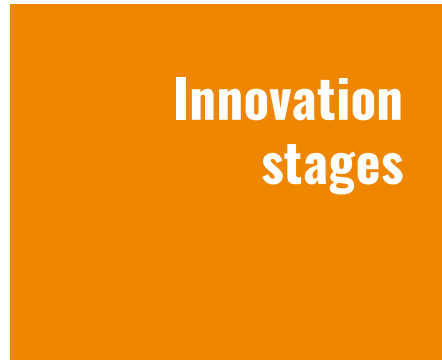
Community Engagement

Survival Rate

Spin-off  
Facility



# From Idea to Monetization





# Ideation



Problem



Top priority need

Solution



The “best option”?

Competitive advantage



## Value proposition

the unique benefits and value a product or service offers to its target customers

Innovation  
stages





# Validation



Proof of concept

Prototyping

Usability test

Business model

**Innovation  
stages**

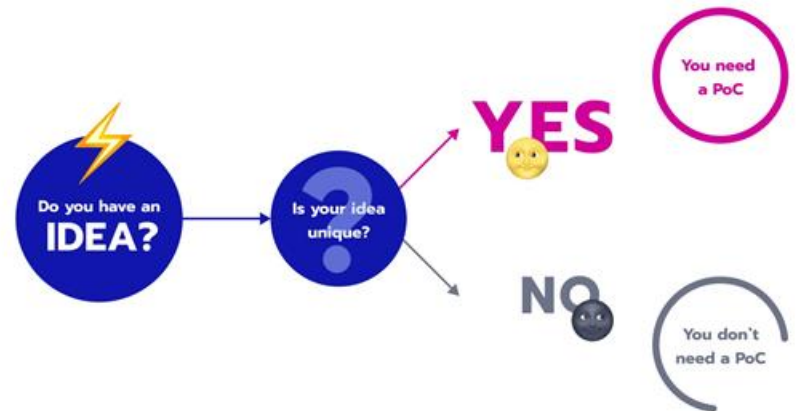
# Validation Proof of concept



Prototyping  
Usability test  
Business model

realization of a certain method or idea in order to demonstrate its feasibility

Innovation  
stages



# Validation

Proof of concept



## Prototyping

Usability test

Business model

Innovation  
stages

a draft version of a product that allows you to explore your ideas and show the intention behind a feature or the overall design concept to users before investing time and money into development



low and high fidelity prototypes

# Validation

Proof of concept



Prototyping

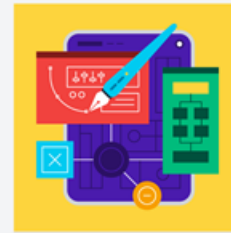
**Usability test**

Business model

**Innovation  
stages**

method of testing the  
functionality of a product by  
observing real users as they  
attempt to complete tasks on it

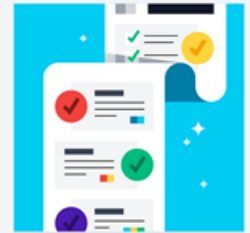
### 3 Elements of Usability Testing



UX Researchers



Test Participants



Tasks

**User Experience**

# Validation



Proof of concept

Prototyping

Usability test

## Business model

a company's plan for making a profit. It identifies the products or services the business plans to sell, its identified target market, and any anticipated expenses

Innovation  
stages



# Protection



**Innovation  
stages**

Patent  
Utility Model  
Trade marks  
Design  
Trade secrets  
Copyrights



# Protection



## Innovation stages



# Market



Elevator pitch

Public support to investment

How to approach VCs and BAs

Exit strategy for investors

**Innovation  
stages**



# Market



## Elevator pitch

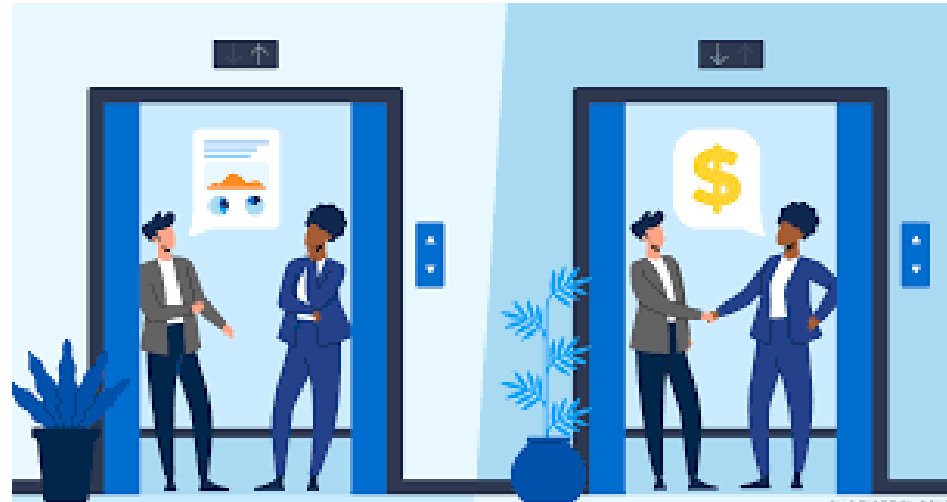
An elevator pitch is a brief (30 seconds!) way of introducing yourself, getting across a key point or two, and making a connection with someone.

Public support to investment

How to approach VCs and BAs

Exit strategy for investors

Innovation  
stages



# Market



Elevator pitch

## **Public support to investment**

How to approach VCs and BAs

Exit strategy for investors

**Innovation  
stages**



# Market



Elevator pitch

## Public support to investment

How to approach VCs and BAs

Exit strategy for investors

Innovation  
stages

### TRADITIONAL FUNDING



Large amounts from one,  
or a few, sources

### CROWDFUNDING



Many small sums from  
a large group of individuals

# Market



Elevator pitch

Public support to investment

## **How to approach Venture Capitalists and Business Angels**

Exit strategy for investors

**Innovation  
stages**

Business angels are individuals, often successful business people, who are using their own funds to invest in businesses they like, whereas venture capitalists manage the pooled money of others in a professionally-managed fund.

# Market



Elevator pitch

Public support to investment

How to approach VCs and BAs

**Exit strategy for investors**

Innovation  
stages

Portugal  
Ventures  
GROWING GLOBAL

  
Caixa Capital Risc

cdp   
Fondo Nazionale Innovazione  
CDP Venture Capital Sgr

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DLR  
German Aerospace Center



Italian National Agency for New Technologies,  
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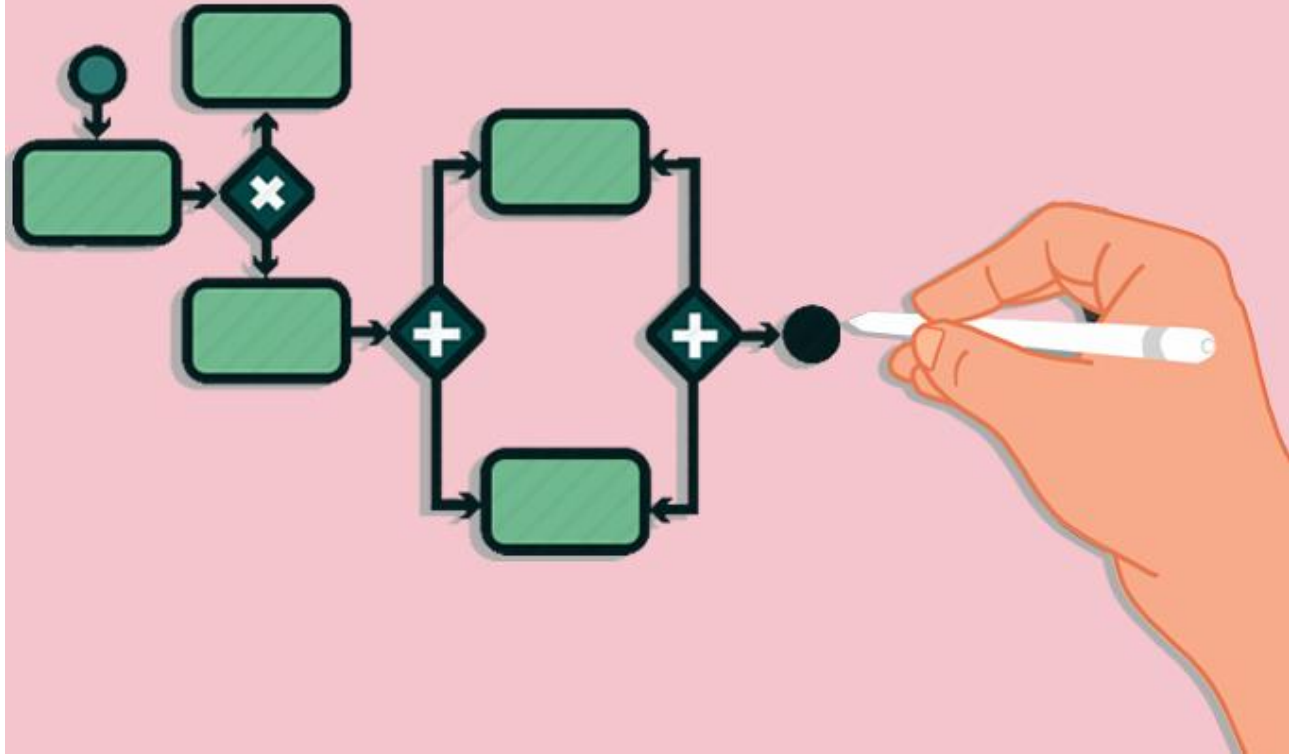
Funded by  
the European Union

# Support Resources

CASACCIA, ROME, 09.-10.05.2023

# How?

## Mapping Internal Resources



**Support  
resources**

# How?

## Mapping Internal Resources





- Know How / HR
- Funding
- Tools
- Physical infrastructure and Facilities
- Networking

**Support  
resources**



# Action

## Support resources

				
<b>HR</b>	Creators Product Managers Market Researchers	Prototype Developers Business Analysts (UX) Designers	Legal Advisors (IP) Lawyers	Marketing Team Sales Team PR Specialists
<b>Funding</b>	Research	Workshops	Legal Fees	BA and VC
<b>Tools</b>	Brainstorming Communication	Survey and FeedBack Prototype tools	Legal project manag. Doc. manag. system	Social media management
<b>Facilities</b>	Office/Workspace Labs	Office/Workspace Labs	Office/Workspace	Office/Workspace
<b>Networking</b>	Conferences Incubators	Networking events Customer validation	Ip Network Associations	Investor Networks

# CARACTERIZAÇÃO DO ECOSISTEMA NACIONAL 2017

80,43%

TAXA DE SOBREVIVÊNCIA  
DAS STARTUPS INCUBADAS  
APÓS 12 MESES DO INÍCIO  
DA INCUBAÇÃO

67,76%

TAXA DE SOBREVIVÊNCIA  
DAS STARTUPS INCUBADAS  
APÓS 24 MESES DO INÍCIO  
DA INCUBAÇÃO

**rni**

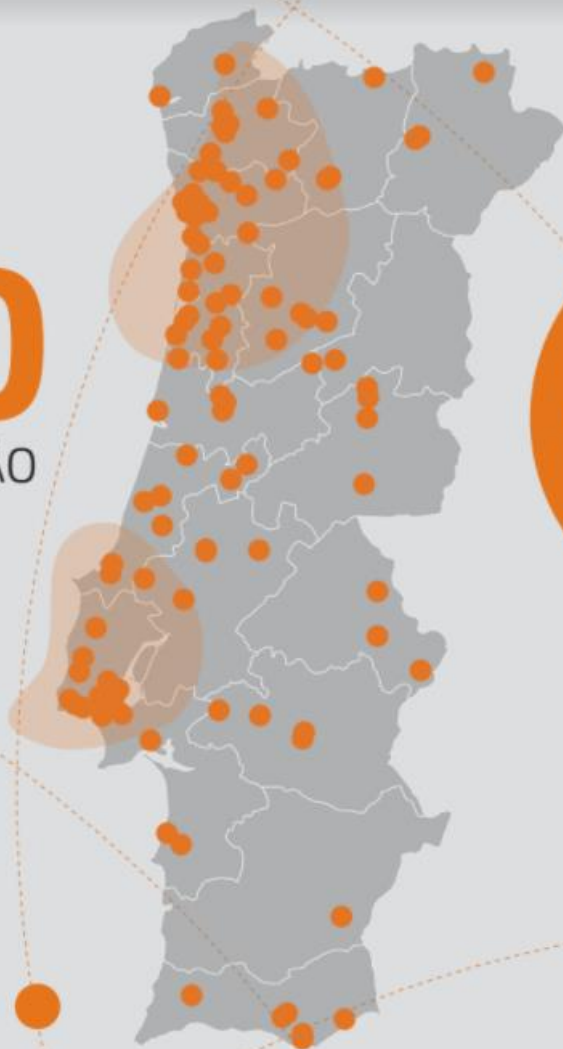
REDE NACIONAL  
DE INCUBADORAS  
E ACELERADORAS

3270

SALAS DE INCUBAÇÃO

2547

DE EMPREGOS CRIADOS POR  
NOVAS STARTUPS NOS  
PRIMEIROS 12 MESES



3004

STARTUPS EM INCUBAÇÃO

1022

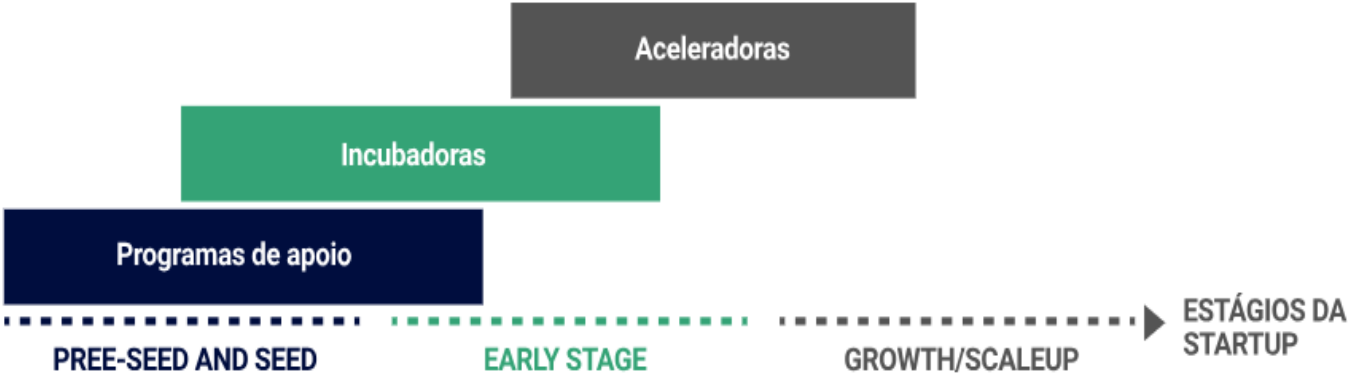
STARTUPS EM  
INCUBAÇÃO VIRTUAL

1983

STARTUPS EM  
INCUBAÇÃO FÍSICA

# SUPPORT ACTIVITIES

## TIPOLOGIAS DE APOIO A STARTUPS



Fonte: Startup & Entrepreneurial Ecosystem Report | 2021

# The Regional Technology Transfer System (SRTT) - survey -

**23 regional entities**

- Incubation Voucher
- Entrepreneurship Voucher
- Research Opportunities Voucher
- Voucher I&D
- Voucher Internationalization Opportunities
- Internationalization Voucher
- Innovation Voucher
- Turismo de Portugal – Incubator of the National Network of Incubators that support innovative projects in the area of tourism



# UM NOVO ALENTEJO, TECNOLÓGICO E INOVADOR



**51**  
EMPRESAS

**120**  
EMPREGOS DIRETOS  
EDIFÍCIO PACT

**80 M€**  
FATURAÇÃO  
ECOSSISTEMA PACT

**3600 M<sup>2</sup>**  
ÁREA TOTAL  
PACT 1.0





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# #INAUGURAÇÃO GABINETE ALENTEDGE

---

## Serviços de Propriedade Intelectual

alent  
edge

08 MAIO  
09H30 - 12H00

# **1. The European Universities Initiative**

# The European Universities initiative

Launched, in 2018, by the European Commission.

These **alliances** between **higher education institutions** have the ambition of **looking at Europe as a large university campus**, promoting the creation of European universities **focused on society's pressing challenges**.





# Flagship initiative to achieve:

- ✓ **European Interuniversity** campuses, **joint study** programmes and **research**
- ✓ **Transnational** and **multidisciplinary** teams working to solve **social challenges**
- ✓ Creating **worldwide known** Universities
- ✓ **Universities of the Future with a structured and sustainable impact on society**

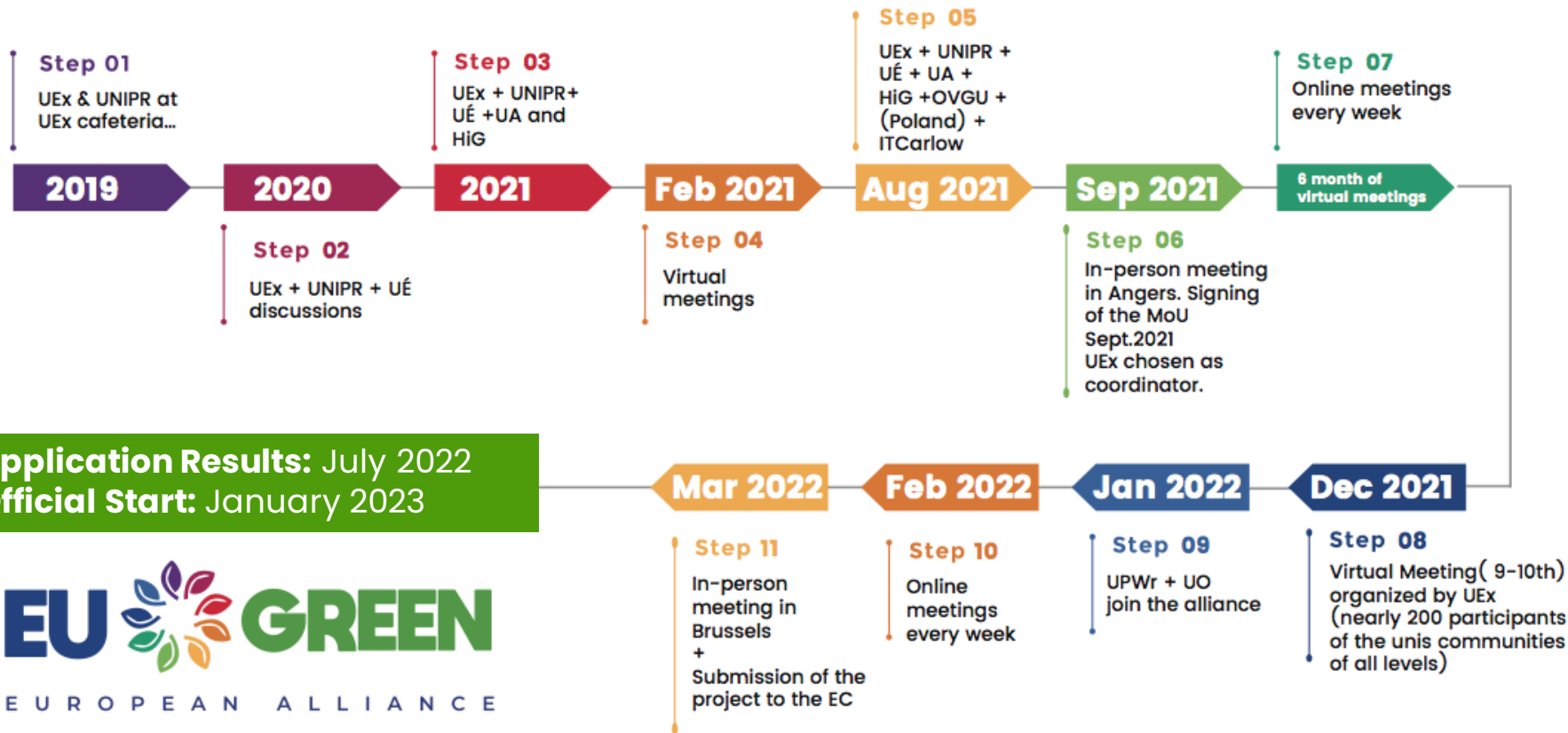


European  
Commission

# 9 Partners



# EU GREEN Timeline till the proposal



# Our Associated Partners



CENTRO DE INVESTIGACIONES  
CIENTÍFICAS Y TECNOLÓGICAS  
DE EXTREMADURA



FUNDECYT PCTEX  
*un espacio para innovar*  
OBREAL Global

**Wrocław**

miasto spotkań



FUNDACJA  
SFN07IMIRA



**DECSIS**

**ADLO**  
We open opportunities



**ADD**  
BIHOR



FUNDACIÓN  
**MAPFRE**



**Spitalul Pelican**  
Totul pentru sănătatea ta

**RAW**



WPT  
WROCLAWSKI PARK TECHNOLOGICZNY



Consiliul  
Județean  
Bihor



FUNDACIÓN  
**YUSTE**  
ACADEMIA EUROPEA E  
IBEROAMERICANA



Extremadura  
**avante**



**INRAE**  
science for people, life & earth



**EVORA**  
Câmara Municipal



**PACT**  
PARQUE DO ALENTEJO  
DE CIÊNCIA E TECNOLOGIA



**Chiesi**



COMUNE DI PARMA  
**DAL GROUP**  
مجموعة دال

**ede**  
agencia extremeña de la energía



EDIA  
Empresa de Desenvolvimento  
e Infra-estruturas do Alqueva, S.A.



**FONDAZIONE  
CARIPARMA**

**epa**  
Environmental Protection Agency  
An Dolanmheacht um Shionannacht Linnbhí



museo de  
arte con  
temporá  
neo helg  
ade alive  
a r CÁCERES



Région  
**PAYS DE LA LOIRE**

**Parma, io ci sto!**



Unione Parmense degli Industriali



ASVIS  
Alleanza Italiana  
per lo Sviluppo Sostenibile

**FIERE di PARMA**



DAL 1877  
**Barilla**

**PROVINCIA DI PARMA**



**CARLOW  
COUNTY COUNCIL**  
COMHAIRLE CHONTAE CHEATHARLACH

**Regione Emilia Romagna**

**teagasc**  
AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY



angers Loire métropole  
communauté urbaine

# Our Associated Partners



Organización  
de Estados  
Iberoamericanos

Para la Educación,  
la Ciencia  
y la Cultura



**CENTRUL DE TRANSFUZIE  
SANGUINĂ - ORADEA**



MUZEUL  
ȚĂRII  
CRIȘURILOR  
ORADEA



TECHNOLOGIETRANSFER UND  
INNOVATIONSFÖRDERUNG  
MAGDEBURG GMBH



DEZVOLTARE DURABILĂ, GRIJA PENTRU VIITOR



Gävle kommun



ottostadt  
magdeburg



SACHSEN-ANHALT

Ministerium für  
Wissenschaft, Energie,  
Klimaschutz und Umwelt

Mitglied von

**DG HOCH<sup>N</sup>**

Deutsche Gesellschaft für Nacht  
an Hochschulen e.V.



IHK MAGDEBURG



**alentejo**

Turismo do Alentejo - ERT

JUNTA DE EXTREMADURA

Consejería de  
Economía, Ciencia y Agenda Digital



Centro de Cirugía de Mínima Invasión  
Minimally Invasive Surgery Centre  
Jesús Usón



APS  
Administração  
dos Portos de Sines  
e do Algarve S.A.



**WESTERN  
DEVELOPMENT  
COMMISSION**

# What does define EU GREEN?

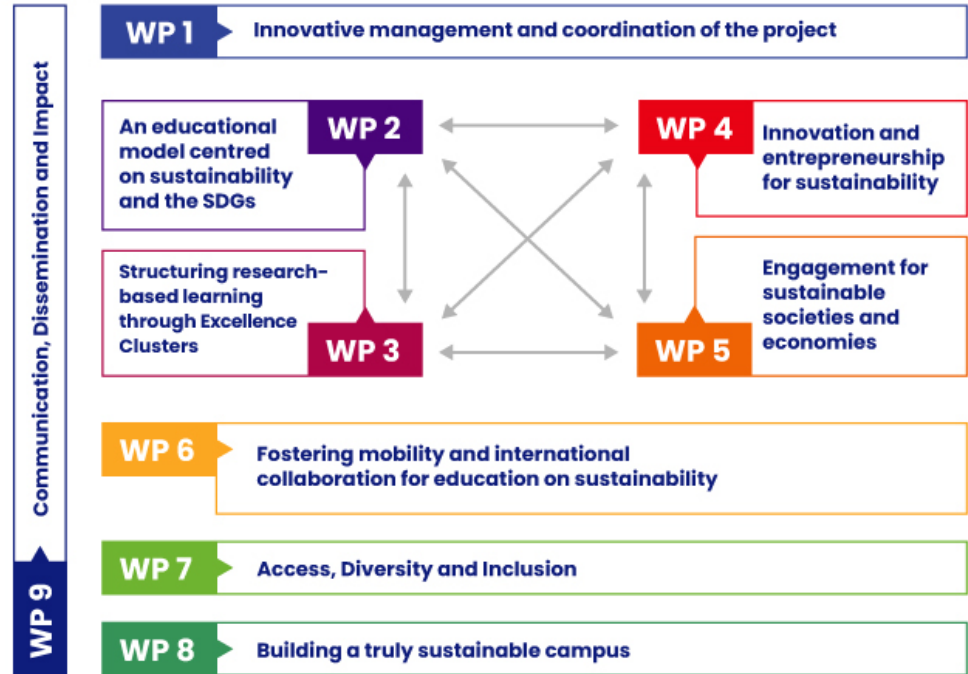
- ✓ We are **universities located in peripheral regions**, but strongly connected to our territories
- ✓ We work for **sustainability** in all fields, connecting to society, leaving no-one behind





# EU GREEN

## Work Plan





# WHY ARE UNICORNS IMPORTANT?



## TECH-SAVVY

Unicorns leverage digital tools for automation, cloud computing and analytics.



## DISRUPTIVE

Unicorns bring innovative and affordable solutions to the market.



## CONSUMER-FOCUSED

Unicorns offer products that solve user problems.



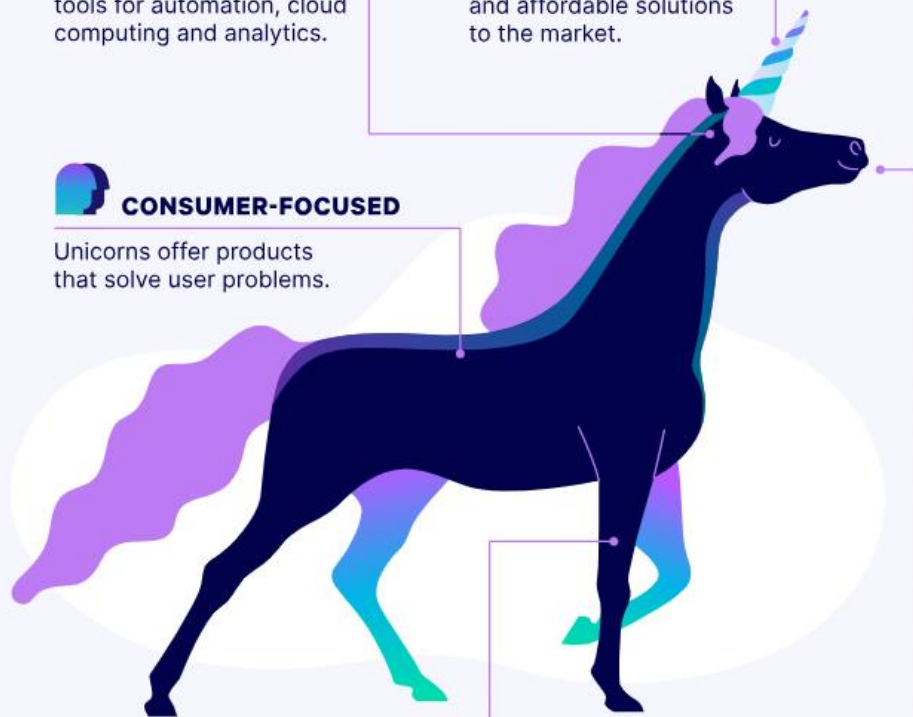
## EFFICIENT

Unicorns build minimum viable products to be repeatedly tested and adjusted.



## GROWTH-DRIVEN

Unicorns have a vision for growth and a plan to scale the company.







More than  
unicorns

A new  
paradigm



# SUSTAINABILITY INDUSTRY



## Future Unicorns in Sustainable Technology

### Biodiversity



### Electric Vehicle



### Climate change



### Energy Storage



### Circular Economy



### Renewable Energy



### Batteries



Source: GlobalData Disruptor Intelligence Center

# HOW DOES SUSTAINABILITY HELP STARTUPS ACHIEVE UNICORN STATUS?

## COMBINATION OF GREAT OPPORTUNITIES



According to Deloitte, young professionals expect not only creative freedom but also adherence to ethical standards and corporate accountability for promises.



According to the investment bank Morgan Stanley, almost 90% of investors say they are interested in investing in sustainable businesses.



Decision-makers used to think that a responsible approach to the environment hindered rapid business development, but today sustainability is one of the most important catalysts in the startup ecosystem

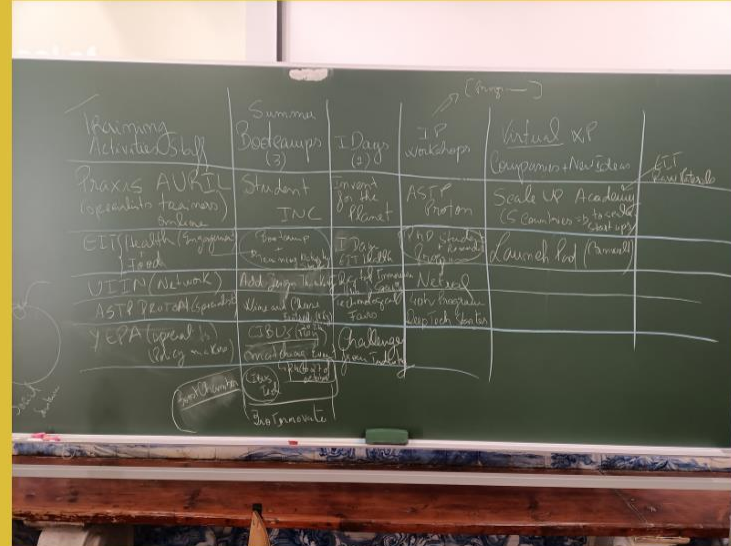




**From May 29th to June 1st, the University of Évora hosted the First EU GREEN WP 4 Staff Week**

## Identification of success cases and other networks of interest

**EU GREEN's objective is also to amplify good practices that Universities already have, also using their contact networks. For this very reason, we started by thinking about programs and entities that could boost WP4 activities.**









EUROPEAN UNIVERSITIES ALLIANCE FOR SUSTAINABILITY:  
RESPONSIBLE GROWTH, INCLUSIVE EDUCATION AND ENVIRONMENT

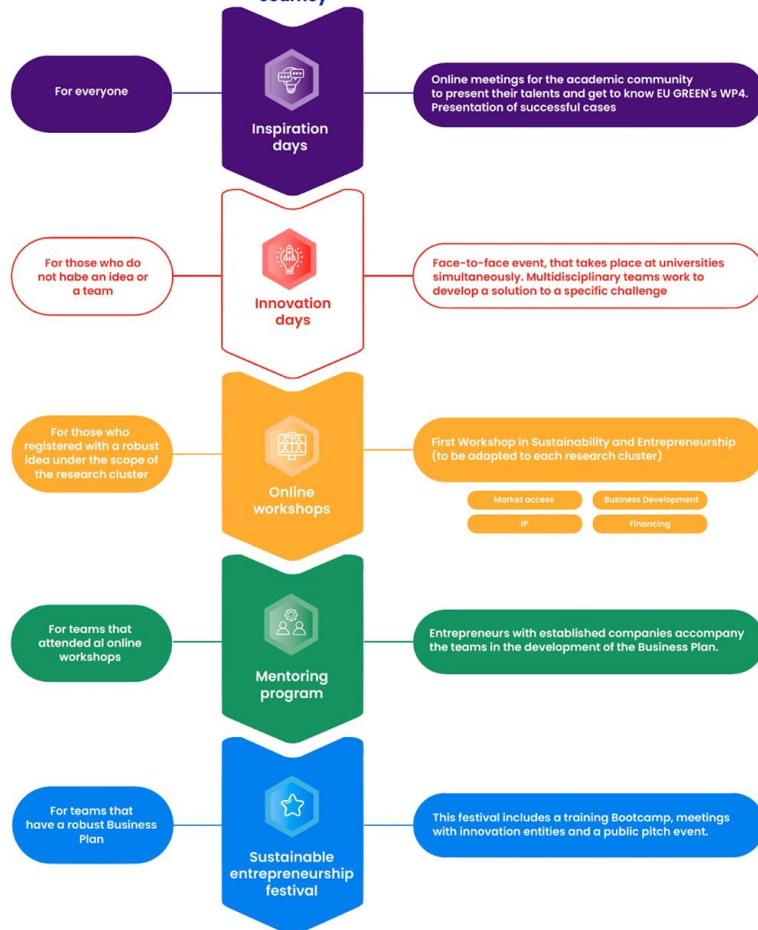
# WP4





## Task 4.5

### Entrepreneur's Journey





# INNOVATION DAYS

**10 e 11 de abril**

Das 9h00 às 17h00, na Casa  
Cordovil

**Um evento presencial sincronizado  
entre 9 universidades diferentes,  
para desenvolver soluções que  
respondam a desafios sociais.**

Sabe mais sobre ferramentas de  
*design thinking* para identificar  
necessidades e desenvolver novas  
ideias académicas.

Inspira-te com mentores de toda a  
Europa e que te irão ajudar a  
trabalhar em equipas  
multidisciplinares.

**O evento deste ano está  
focado nas seguintes áreas:**

- Agricultura, Alimentação e  
Sustentabilidade Ambiental
- Desafios na Diversidade e  
Função dos Ecossistemas



**Link para  
candidaturas  
aqui**

## DESAFIOS 2024

### • Agricultura, Alimentação e Sustentabilidade Alimentar

#### DESAFIO #1

Produtos alimentares inovadores provenientes de fontes de proteína inovadoras

#### DESAFIO #2

Inovação na gestão da água

#### DESAFIO #3

Redução do desperdício alimentar e economia circular na indústria alimentar

### • Desafios na Diversidade e Função dos Ecossistemas

#### DESAFIO #4

Plantas invasoras

#### DESAFIO #5

Como aumentar a biodiversidade no campus universitário

#### DESAFIO #6

Promover a resiliência climática no ensino superior





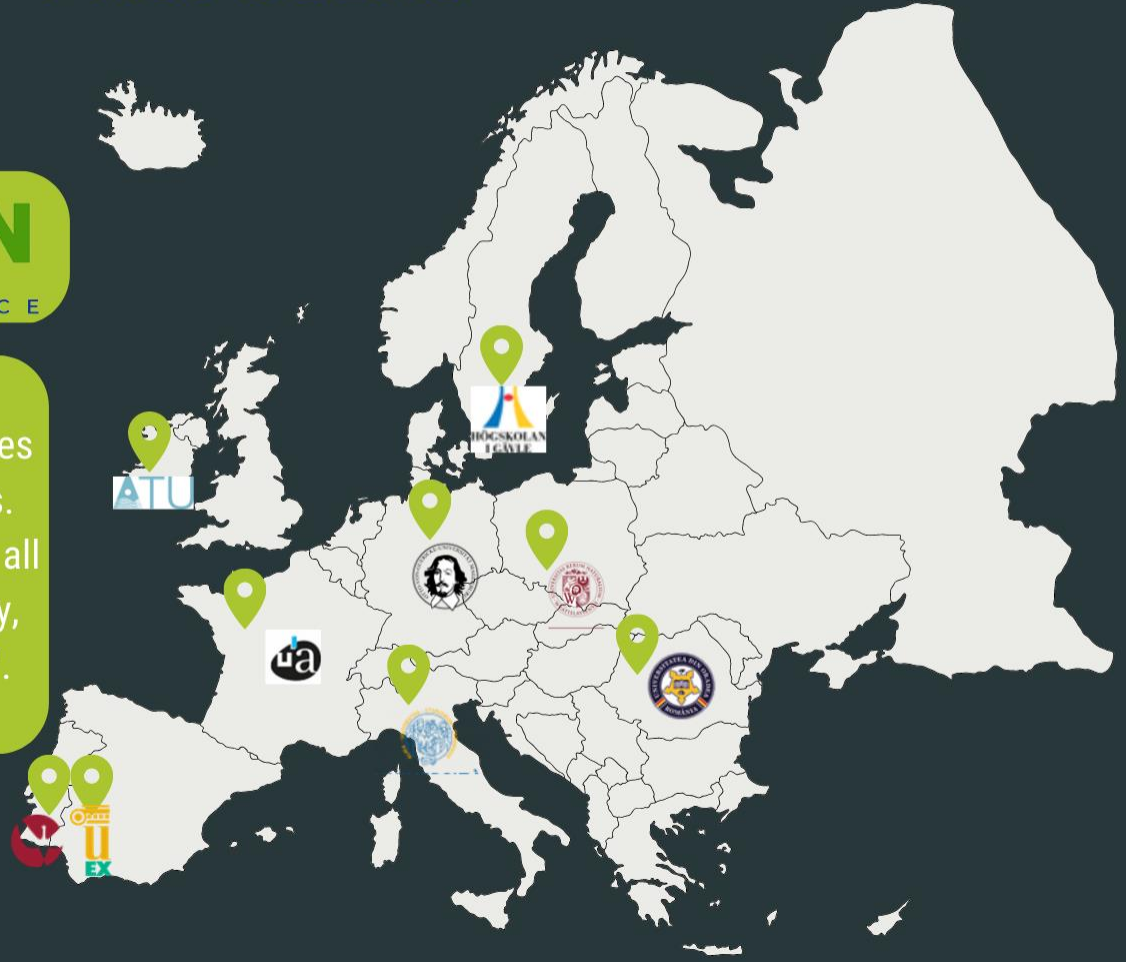
# A SUSTAINABILITY HUB *proposal*



# PROPOSERS



"We are peripheral universities connected to our territories. We work for sustainability in all fields, connecting to society, and leaving no-one behind".



# PROPOSERS



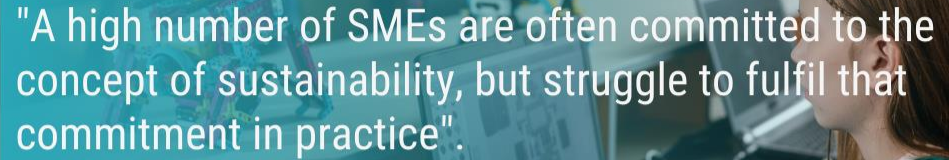
CITTA' DI  
VENEZIA



# SOME EVIDENCE

Bhanot, N.; Rao, P.V.; Deshmukh, S.G. An integrated approach for analysing the enablers and barriers of sustainable manufacturing. J. Clean. Prod. 2017, 142, 4412–4439.

Andjarwati, T., Budiarti, E., Audah, A.K., Khouri, S., & Rębilas, R. (2019). The impact of green human resource management to gain enterprise sustainability. Polish Journal of Management Studies, 20, 93–103.



"A high number of SMEs are often committed to the concept of sustainability, but struggle to fulfil that commitment in practice".



"Limited Funding, time constraints and priorities imbalance are among the main challenges for SMEs related with sustainability".



"It remains unclear how companies grow and successfully present their sustainability-oriented market innovations and transform markets towards sustainable development".



# COMMON MOTIVATION

## FROM "GREEN" TO "SUSTAINABLE"

- Contribute to a **greater global understanding of the industrial goals related to sustainability**, from the environmental, economic and social perspectives.
- To boost **collaborative intelligence** between **Academia, Industrial Stakeholders and Society**, guaranteeing the connection with **The New European Innovation Agenda flagships**.





# WORKING AREAS

The members of this proposed Sustainability Hub consider to be crucial to work on four strategic areas.



## POLICIES

Identify concrete policies that need to be changed/reshaped



## FUNDING

Support in designing funding mechanisms to enhance change



## TALENT POOL

Skilling, upskilling and reskilling new experts and society on a transversal perspective



## REGIONAL INNOVATION VALLEY

To define and create a framework of the minimum - medium - ideal requirements



### 3. Regional Innovation Valley framework definition

- 3.1. Development of an open RVI model
- 3.2. Identify deep tech talents to be trained
- 3.3. Improve Sustainability Literacy



### 1. Mapping process

- 1.1. Best practices collection and analysis
- 1.2. Main needs identification
- 1.3. Identification of areas of intervention



### 4. Support in documenting the change

- 4.1. Promote evidence on implementation strategies
- 4.2. Boost impact measurement
- 4.3. Document behaviour change







### 2. Cooperation strategy

- 2.1. Increase the interaction between Academia, Industry and Society
- 2.2. Improve knowledge transfer mechanisms (resources sharing)

**A POSSIBLE JOURNEY FOR THE HUB**

# Resources

				
HR				
Funding				
Tools				
Facilities				
Networking				

Support  
resources

**Thank you!**