

# the next generation of **European Training for Manufacturing**

## The present and the future of European Projects

*Session focused on analysing the opportunities that the future European Programmes, ERASMUS + and HORIZONEUROPE, will bring to the Manufacturing community*

# 18<sup>th</sup> November 2020

11h – 12h CET

Event organised in the framework of the  
**57<sup>th</sup> Meeting of the EWF General Assembly**



# The present and the future of European Projects

Time	Topic	Moderated by
11h00	<p>How does EU Funding work?</p> <p>Results of European Projects funded under H2020</p> <ul style="list-style-type: none"> <li>– Additively Manufacturable – <i>AMable</i></li> <li>– An Open Innovation Ecosystem for upscaling production processes of lightweight metal alloys composites – <i>LightMe</i></li> <li>– Development and Pilot Line Validation of a Modular re-configurable Laser Process Head – <i>ModuLase</i></li> </ul>	<p>Rita Bola</p> <p>Rita Bola Pedro Catarino David Barbosa</p>
11h20	HORIZON EUROPE	Rita Bola
11h35	The new Skills Agenda   ERAMUS+	Adelaide Almeida
11h45	<p>Matchmaking &amp; Networking Session – 3 parallel sessions</p> <ul style="list-style-type: none"> <li>– Training Methodologies and tools</li> <li>– New Manufacturing Qualifications</li> <li>– Innovative Manufacturing Technologies</li> </ul>	Eurico Assunção



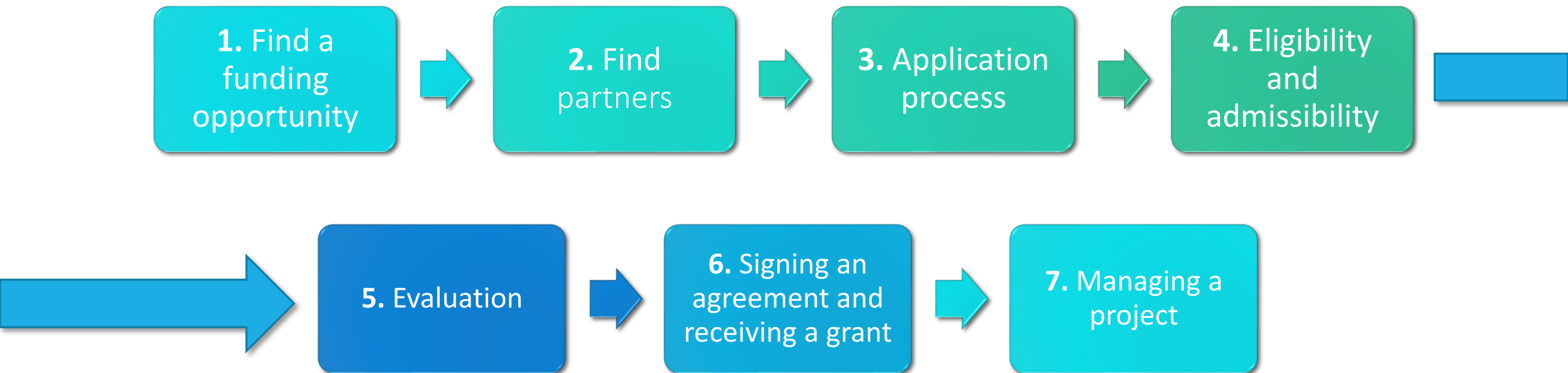


## How does EU Funding work?

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# How EU funding works?

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# How to find: the right funding opportunity? The right partner?

## Funding Opportunity

Overview of funding programmes

Find calls for funding – by topic



## Partner



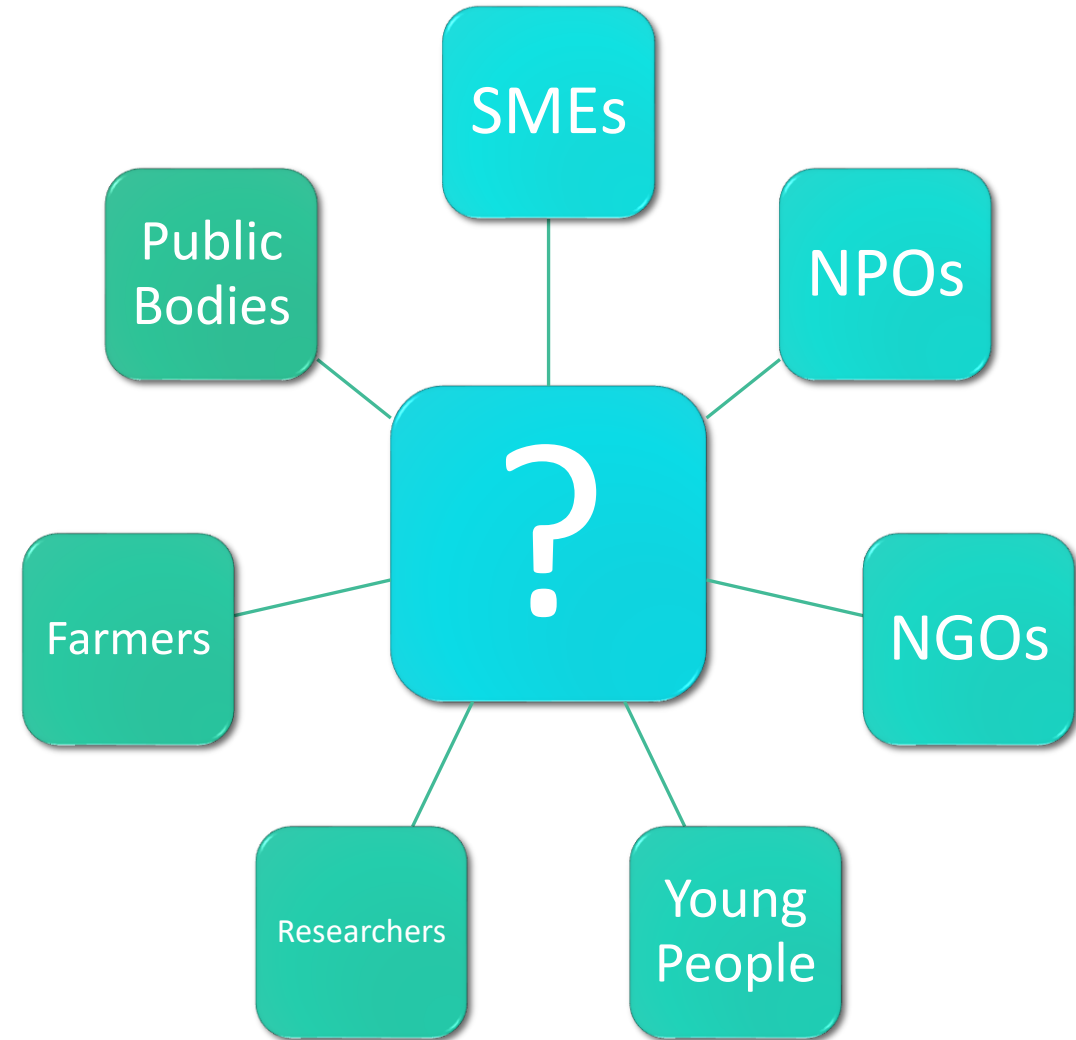
Partner Search



# Who is eligible for funding?

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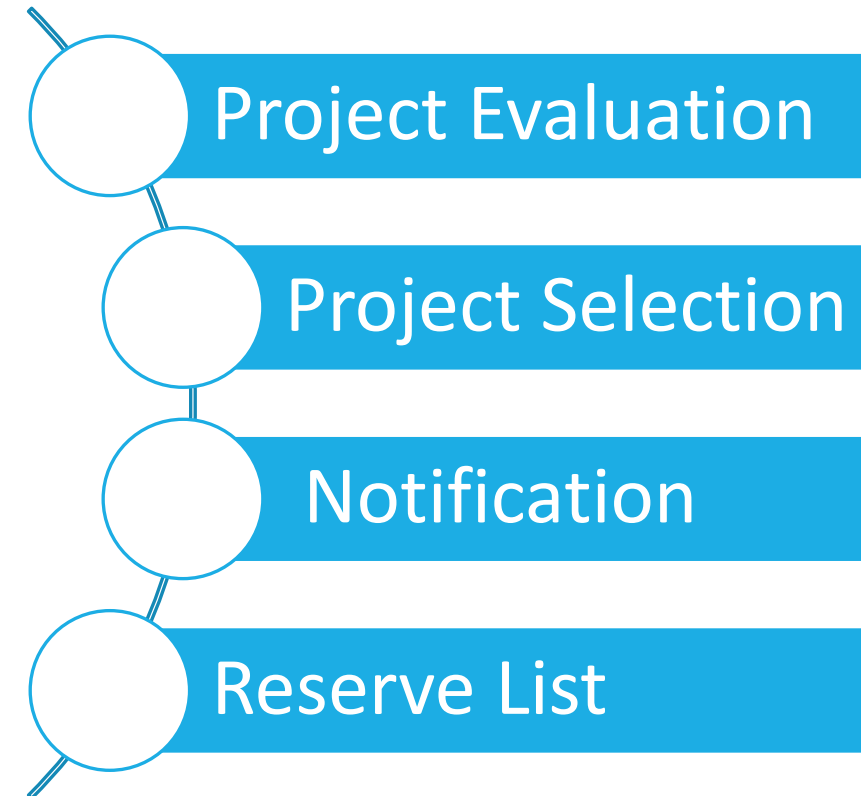
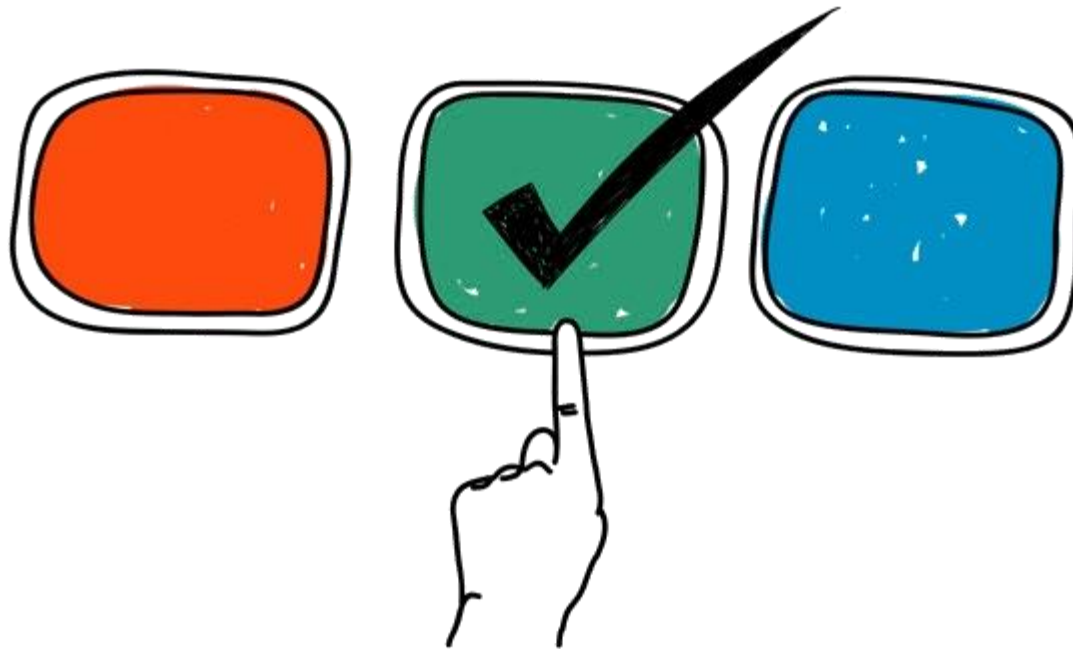
## 4. Eligibility and admissibility





# Selection Process

## 5. Evaluation



# Types of Grants

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Grants

Loans,  
guarantees  
and equity

Subsidies

Prizes







## Results of European Projects funded under H2020

*Session focused on analysing the opportunities that the future European Programmes, ERASMUS + and HORIZONEUROPE, will bring to the Manufacturing community*



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by Rita Bola



*This project has received funding from the European Union Horizon 2020 research and innovation programme under grant agreement No 768775*

# AMable

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Provides support to SMEs and mid-caps for their individual uptake of additive manufacturing.

## How?

1. Eco-system that provides a wide offering of services
2. Training: skills and education
3. Funding: Open Calls



*This project has received funding from the European Union Horizon 2020 research and innovation programme under grant agreement No 768775*



# AMable

## Services



- The AMable Services Arena provides services from design to finish.
- Offers support to different AM readiness stages.



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# AMable

## Training

- Empower people in those companies to enhance their skills, while delivering the services
- Experience Labs
- AM Interaction Days
- Determine the training needs of the SME's personnel and connect them to initiatives and providers of training schemes which are officially recognised



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# AMable

## Open Calls

1. SMEs formulate an idea or a challenge
2. Identify their gaps in AM and pick services
3. Submit the proposal
4. If approved, receive funding
5. Receive training and services delivery
6. Final product

**Example: Prosad3D** - prosthesis adapters with maximum performance at minimum weight



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## Results of European Projects funded under H2020

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by Pedro Catarino

Lightme

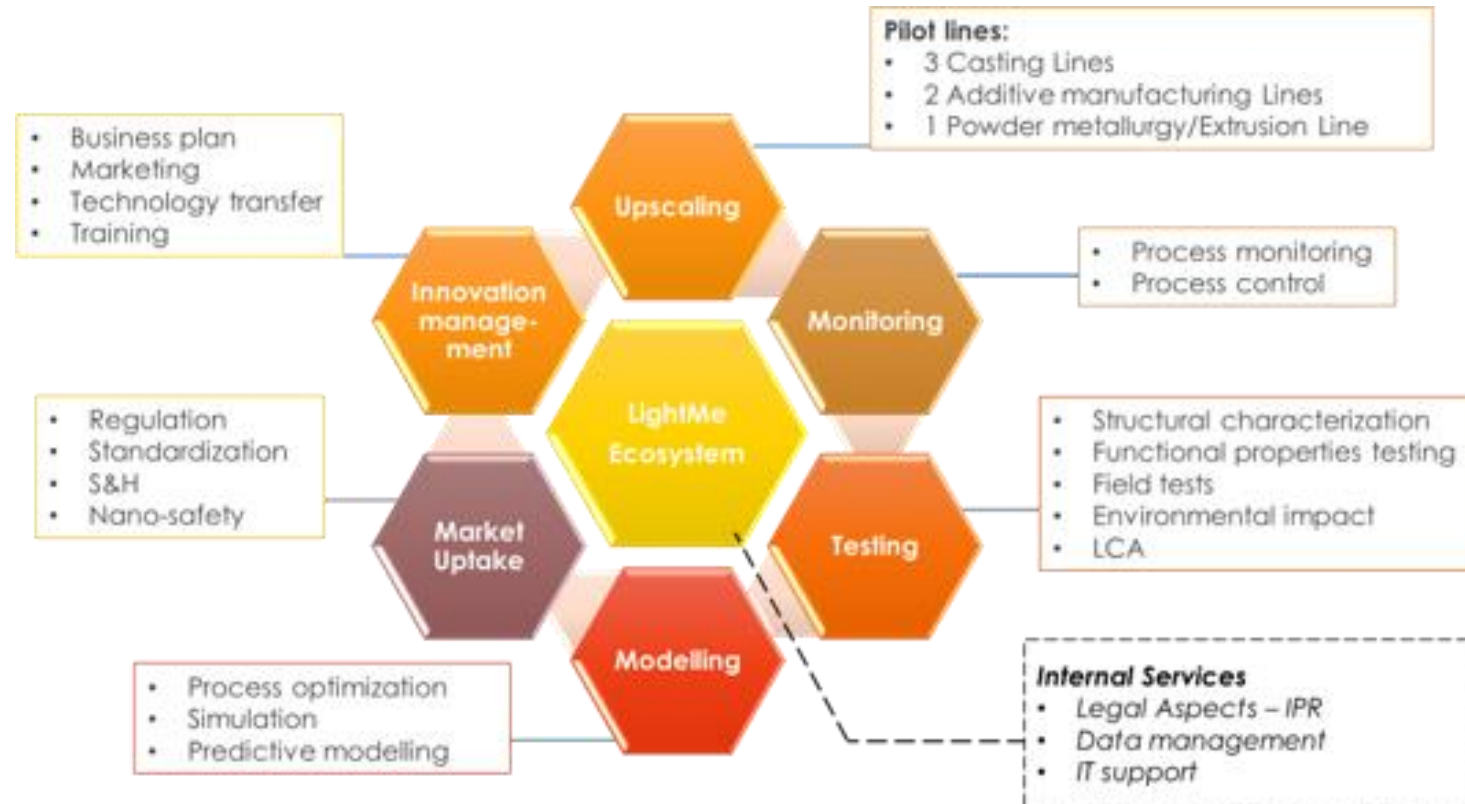


*This project has received funding from the Industrial Technologies Advanced Materials and Nanotechnologies under the European Union's Horizon 2020 innovation programme under the grand agreement number 814552.*



# LightMe

## The services and Pilot Lines



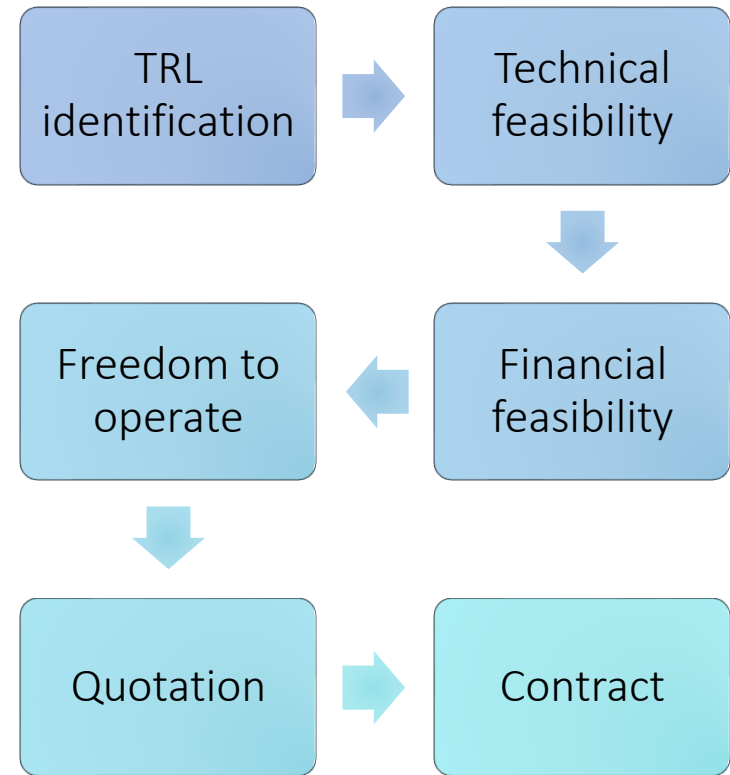
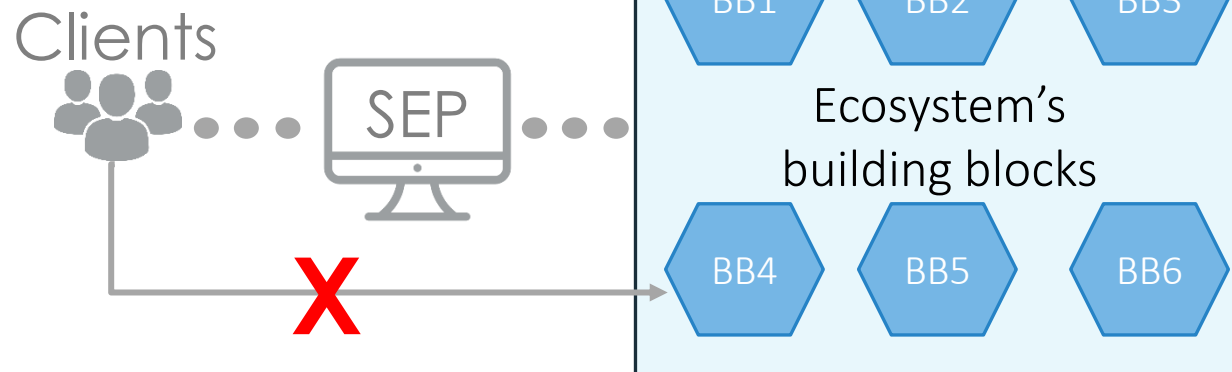
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# LightMe

## Relation with clients

### Access

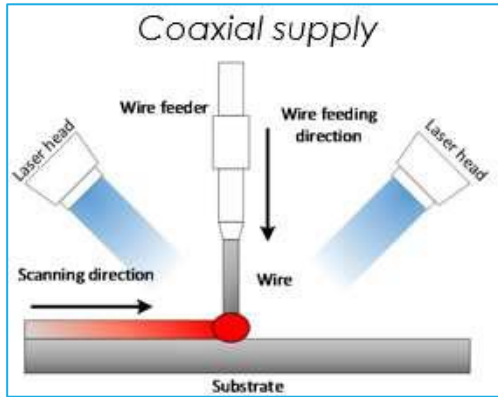


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# LightMe

## Upgrades on PL

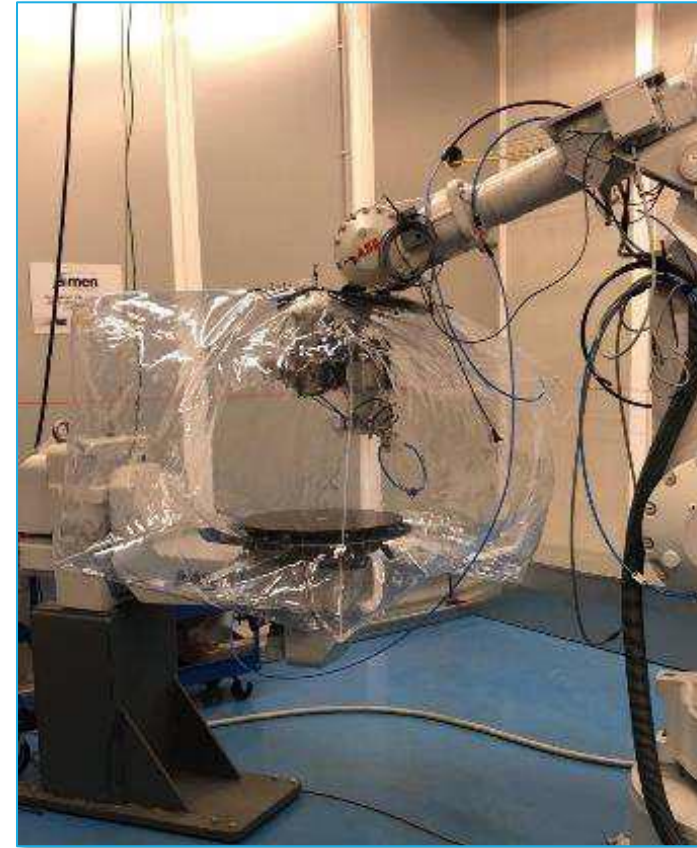


Set-up of new coaxial head

Inert Gas atmosphere shielding system

Controlled temperature build plate and Table

Online Monitoring tools

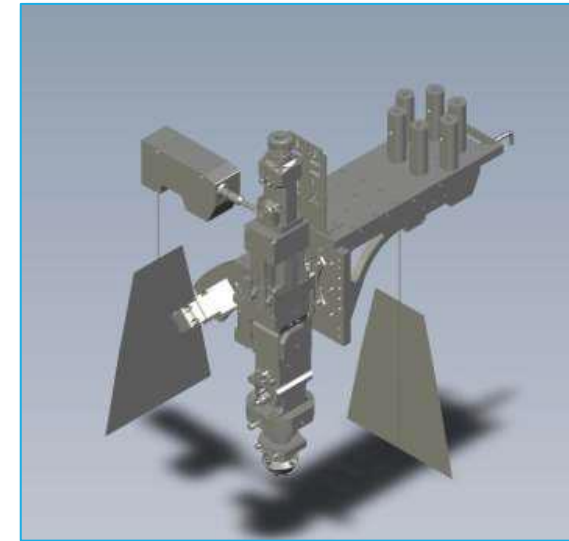
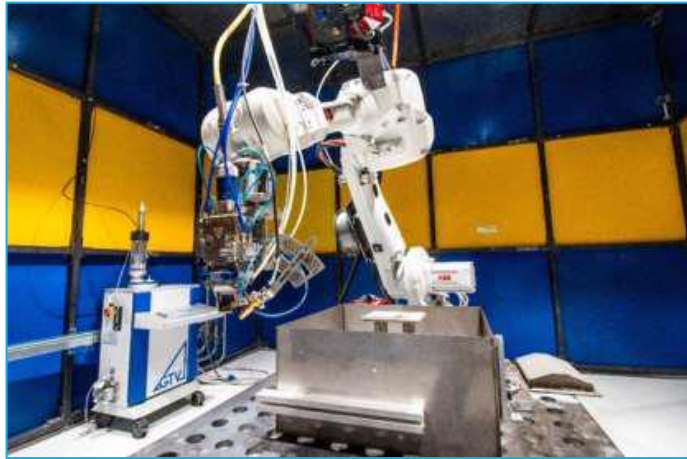


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# LightMe

## Upgrades on PL



A monitoring system made of vision system and appropriate sensor to obtain information about:

- Geometric features of the melting pool
- Growth of the deposited clad



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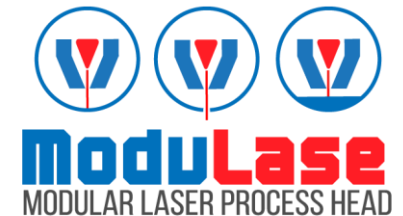




## Results of European Projects funded under H2020

*Session focused on analysing the opportunities that the future European Programmes, ERASMUS + and HORIZONEUROPE, will bring to the Manufacturing community*

by David Barbosa



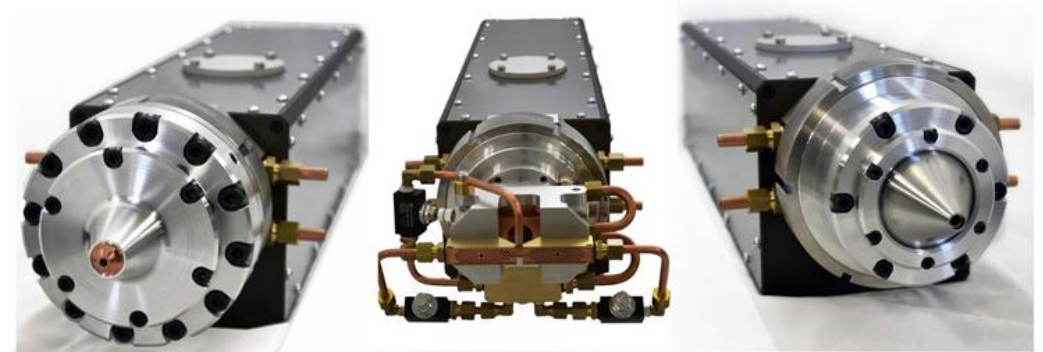
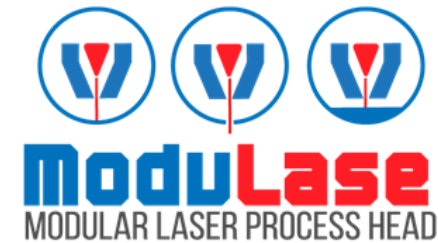
PHOTONICS PUBLIC PRIVATE PARTNERSHIP

*The ModuLase project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. H2020-FoF-2016- 723945-ModuLase. The project is an initiative of the Photonics and Factories of the Future Public Private Partnerships.*



# MODULASE

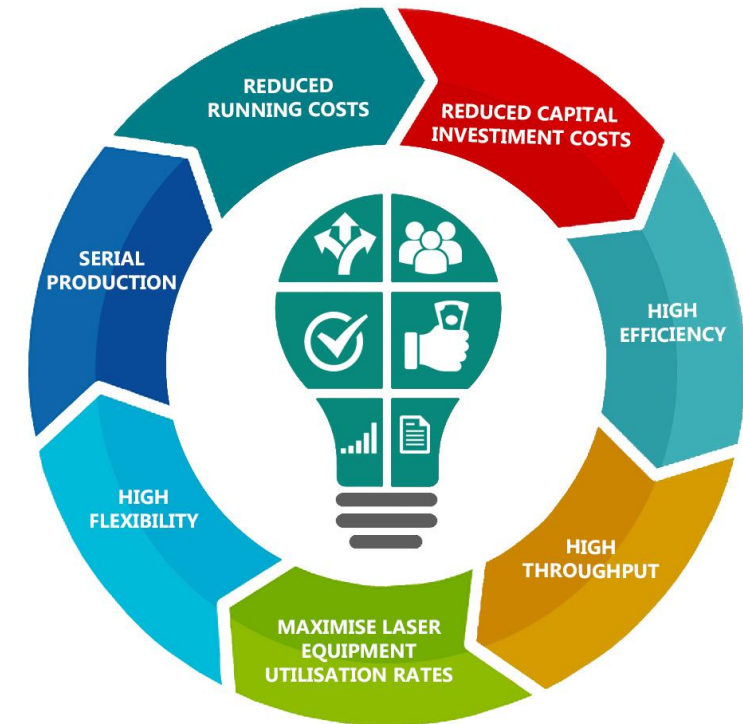
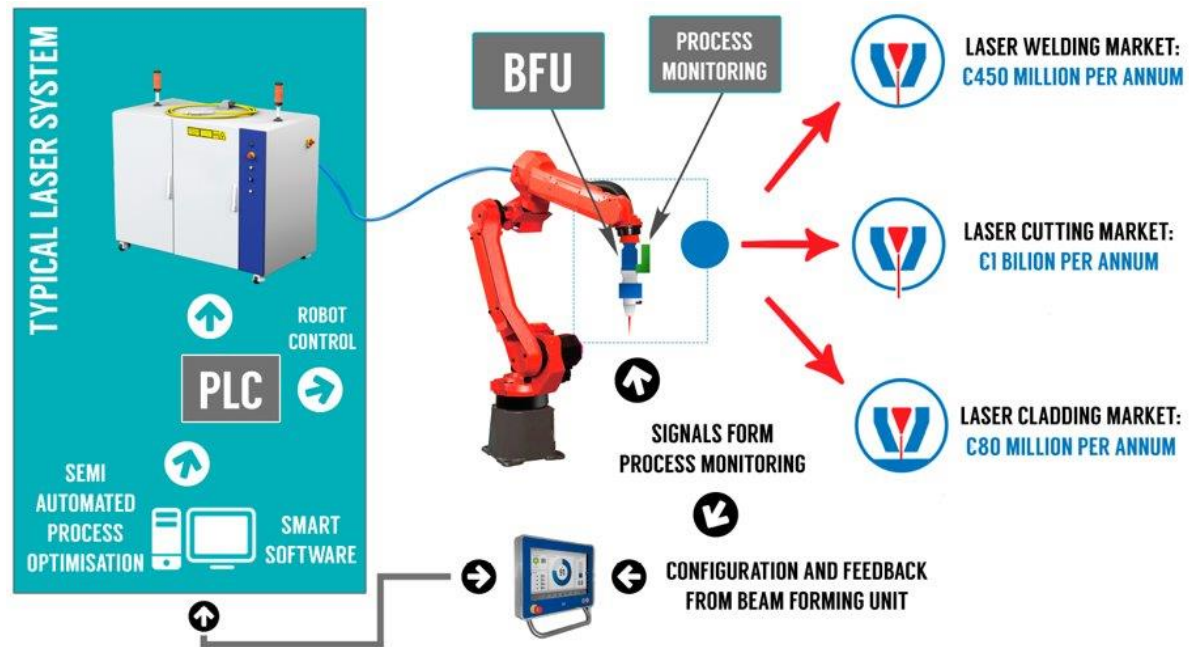
Project Title	Development and Pilot Line Validation of a Modular re-configurable Laser Process Head
Finishing Date	31/03/2021
Call identifier	H2020-IND-CE-2016-17
Topic	Industry 2020 in the Circular Economy







# MODULASE



# MODULASE

The poster features a blue and white geometric background with a large, stylized 'M' shape. On the right side, there is a photograph of an industrial robotic arm with a blue and orange body, equipped with a laser head, working on a metal part. The text on the left side of the poster includes the Modulase logo (three stylized 'V' shapes in blue and red) and the text 'Modulase MODULAR LASER PROCESS HEAD'. Below this, the main title 'MODULASE DEMONSTRATION EVENT' is written in large, bold, blue and red letters. Underneath the title, it says 'FEBRUARY 2021' in red, followed by 'Date to be confirmed' in small black text. A prominent red button with white text says 'JOIN US NOW' with a blue arrow pointing to the right. At the bottom left, the location is given as 'Location: Centro Ricerche Fiat (CRF) - Str. Torino, 50, 10043 Orbassano TO, Italy' and the website 'www.modulase.eu' is listed.

  
**Modulase**  
MODULAR LASER PROCESS HEAD

**MODULASE  
DEMONSTRATION  
EVENT**

**FEBRUARY 2021**  
Date to be confirmed

**JOIN US NOW →**

Location: Centro Ricerche Fiat (CRF) - Str. Torino, 50, 10043 Orbassano TO, Italy  
[www.modulase.eu](http://www.modulase.eu)

Stay tuned

Final Date TBC



# HORIZON EUROPE

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by Rita Bola





# HORIZON EUROPE

## Ambition (2021-2027)

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To strengthen the EU's scientific and technological bases and the European Research Area (ERA)



To boost Europe's innovation capacity, competitiveness and jobs



To deliver on citizens' priorities and sustain our socio-economic model and values

# HORIZON EUROPE

## ADDED VALUE



FOR EUROPE

- ✓ Trans-national collaboration exchange and networks
- ✓ Critical mass to address global challenges
- ✓ Competitive funding promoting excellence
- ✓ Visibility for leading research and innovation
- ✓ Transnational mobility
- ✓ Creating new market opportunities
- ✓ Strengthened European R&I landscape
- ✓ Attracting the best talents



# HORIZON EUROPE

## Mission Areas

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Adaptation to climate  
change, including societal  
transformation



Cancer



Healthy oceans, seas,  
coastal and inland  
waters



Climate-neutral and  
smart cities



Soil health and food

# HORIZON EUROPE

## New approach to European partnerships

New generation of **objective-driven** and **more ambitious partnerships** in support of agreed EU policy objectives

### Key features

- ✓ Simple architecture and toolbox
- ✓ Coherent life-cycle approach
- ✓ Strategic orientation

Co-programmed

Co-funded

Institutionalised



# HORIZON EUROPE

## International Cooperation

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### Extended openness to association

- Third countries with good capacity in science, technology and innovation
  - Taking into account objective of driving economic growth in Europe through innovation
- 
- General opening for international participation
  - Intensified targeted actions (flagship initiatives, joint calls, etc.)

# HORIZON EUROPE

## Open Science across the programme

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Better dissemination and exploitation of R&I results and support to active engagement of society

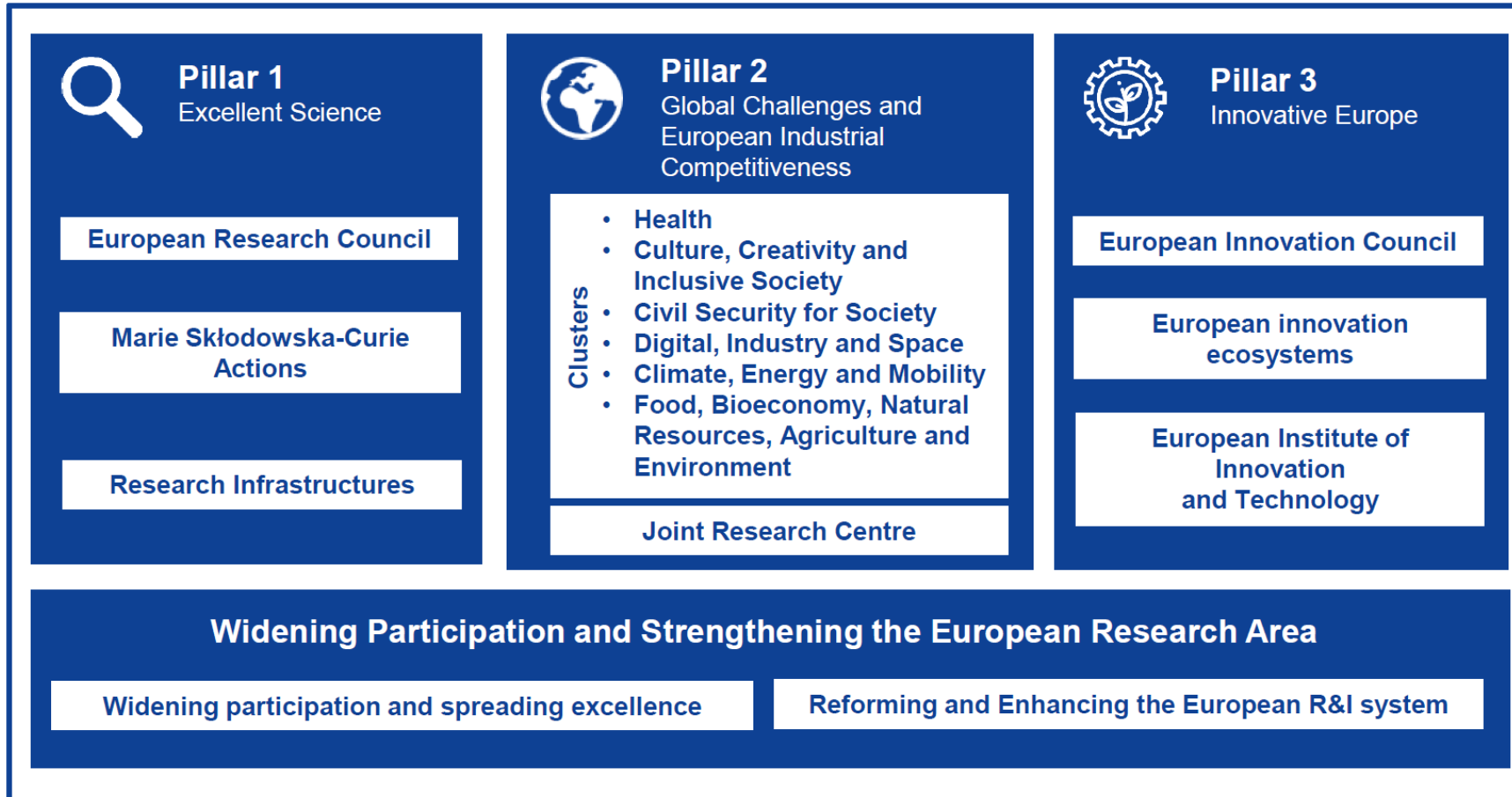
**Mandatory Open Access to publications:** beneficiaries shall ensure that they or the authors retain sufficient intellectual property rights to comply with open access requirements

**Open Access to research data ensured:** in line with the principle "as open as possible, as closed as necessary"; Mandatory Data Management Plan for FAIR (Findable, Accessible, Interoperable, Re-usable) and Open Research Data



# HORIZON EUROPE

## Preliminary Structure



# HORIZON EUROPE

## Pilar 1 – Excellent Science

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### European Research Council

*Frontier research by the best researchers and their teams*

Commission Proposal: € 16.6 billion

### Marie Skłodowska-Curie Actions

*Equipping researchers with new knowledge and skills through mobility and training*

Commission Proposal: € 6.8 billion

### Research Infrastructures

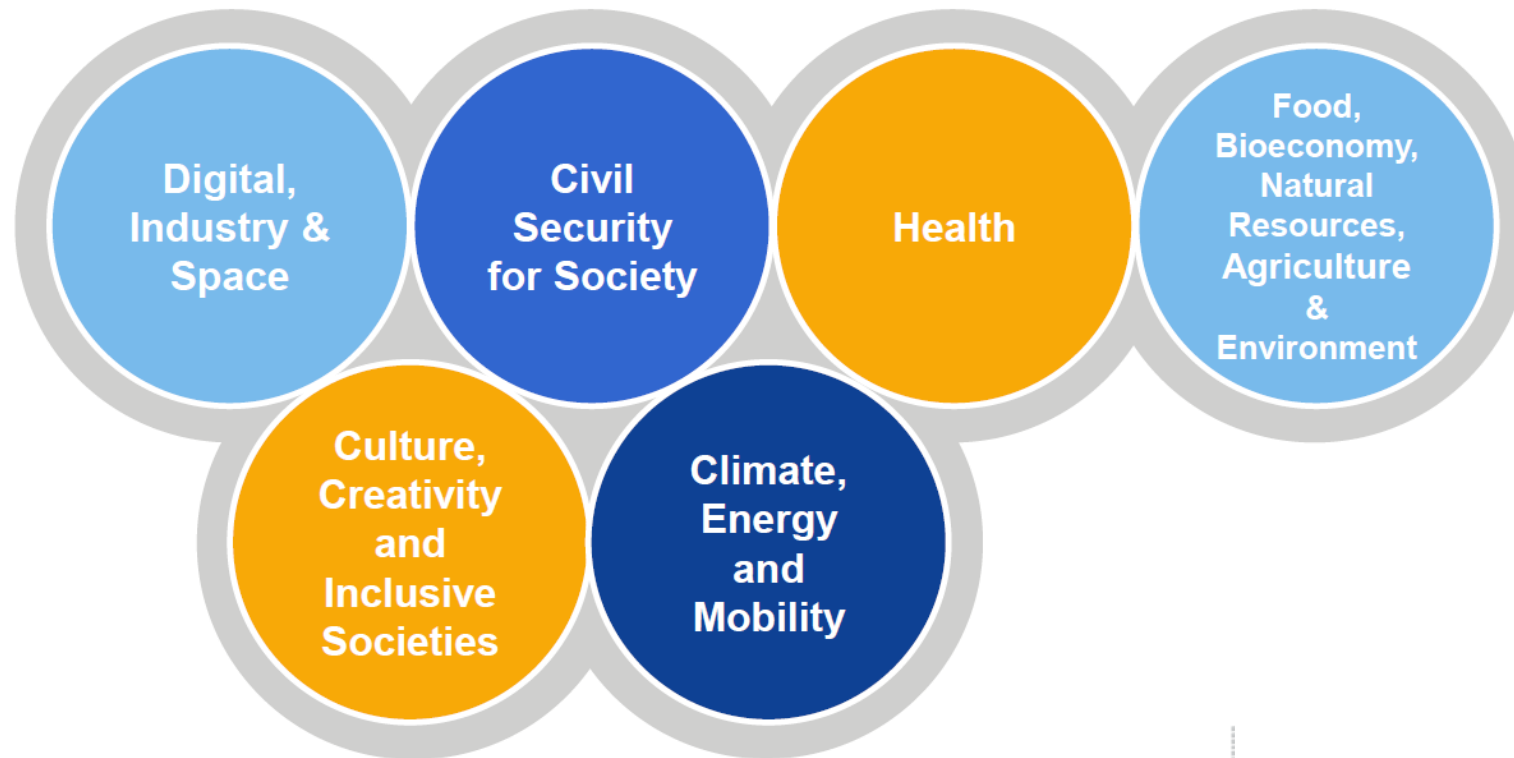
*Integrated and inter-connected world class research infrastructures*

Commission Proposal: € 2,4 billion

# HORIZON EUROPE

## Pilar 2 – Clusters

**Global Challenges & European Industrial Competitiveness:** boosting key technologies and solutions underpinning EU policies & Sustainable Development Goals





# HORIZON EUROPE

## Pillar 3 – Innovative Europe

Stimulating market-creating breakthroughs and ecosystems conducive to innovation

### European Innovation Council

*Support to innovations with breakthrough and market creating potential*

Commission Proposal: € 10.5 billion

### European Innovation Ecosystems

*Connecting with regional and national innovation actors*

### European Institute of Innovation and Technology (EIT)

*Bringing key actors (research, education and business) together around a common goal for nurturing innovation*

Commission Proposal: € 3 billion

# HORIZON EUROPE

Widening Participation and Strengthening the European Research Area: optimising strengths and potential for a more innovative Europe

## Widening Participation and Spreading Excellence

- ✓ *Teaming & Twinning*
- ✓ *ERA Chairs*
- ✓ *COST*
- ✓ *Support to NCPs*
- ✓ *Brain circulation and excellence initiatives*
- ✓ *“Hop-on”*

## Reforming and enhancing the European R&I system

- ✓ *Scientific evidence & foresight*
- ✓ *Open Science*
- ✓ *Policy support Facility*
- ✓ *Attractive Researcher careers*
- ✓ *Citizen science, responsible research & Innovation*
- ✓ *Gender equality*

# HORIZON EUROPE

## Synergies with other Union programmes



- ✓ Common Agricultural Policy
- ✓ LIFE
- ✓ ERASMUS
- ✓ ERDF
- ✓ Connecting Europe Facility
- ✓ Innovation Fund
- ✓ External Instrument
- ✓ ESF+
- ✓ Internal Security Fund
- ✓ Maritime & Fisheries Fund
- ✓ Digital Europe
- ✓ Single Market Programme
- ✓ InvestEU
- ✓ Space Programme

### Enhanced synergies

#### Compatibility

- ✓ Harmonisation of funding rules
- ✓ Flexible co-funding schemes
- ✓ Pooling resources at EU level

#### Coherence and complementarity

- ✓ Alignment of strategic priorities in support of a common vision

# HORIZON EUROPE

## Key impact pathways to track progress





## The new Skills Agenda ERAMUS+

*Session focused on analysing the opportunities that the future European Programmes, ERASMUS + and HORIZONEUROPE, will bring to the Manufacturing community*

by Adelaide Almeida

# ERASUMS + Funding Opportunities (2021-2027)

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**Focus on digital and green skills transitions**

*WHAT'S NEW?*

**Focus on synergies between VET and Adult Learning** (continuous learning, up skilling and reskilling, exchanges of Knowledge and experiences)

**Focus on Excellence in VET** (COVES – Erasmus Teachers Academy , Accreditation of VET organizations for mobility purposes)

**Focus on the New Skills Agenda – Building Block**



# The new Skills Agenda | ERASMUS+

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propose to businesses, social partners and other stakeholders to WORK TOGETHER, under an ambitious Pact for Skills;



develop SKILLS FOR JOBS, thanks to a forward-looking approach to skills development, based on sound skills intelligence and modern and dynamic education and training provision that links directly with labour market and societal needs;



EMPOWER PEOPLE to build up their skills by developing innovative tools, making learning pathways more flexible and accessible.



# The new Skills Agenda | ERASMUS+

1. PACT FOR SKILLS, including upscaling Blueprints

2. STRENGTHENING SKILLS INTELLIGENCE  
3. NATIONAL SKILL STRATEGIES and public Employment Services  
4. RECOMMENDATION ON VET  
5. EUROPEAN UNIVERSITIES  
6. SKILLS TO SUPPORT TWIN TRANSITIONS  
7. STEM graduates, entrepreneurial and transversal skills  
8. SKILLS FOR LIFE

Joining Forces

Tools for Lifelong Learning

Skilling for a Job

Unlocking Investment

9. INDIVIDUAL LEARNING ACCOUNTS  
10. MICRO-CREDENTIALS  
11. EUROPASS

12. FRAMEWORK TO UNLOCK MEMBERS STATES AND PRIVATE INVESTMENTS IN SKILLS

# The new Skills Agenda | ERASMUS+

# 1

**WORKING TOGETHER  
UNDER A PACT  
FOR SKILLS**



# 1

## **Pact for Skills**

Mobilising all partners for more and better opportunities for people to train, and to unlock public and private investments across industrial and skills ecosystems.

### Initial Focus Areas

- ✓ Industrial ecosystems heavily affected by the current crisis
- ✓ Priority areas identified in the European Green Deal

The Pact for Skills will **build bridges between pre-existing EU initiatives for cooperation** and become the single-entry point for:

- ✓ The Blueprint for Sectoral Cooperation on Skills
- ✓ The reinforced European Alliance for Apprenticeships
- ✓ The Digital Skills and Jobs Coalition

### Subsequent Areas

- ✓ Health
- ✓ Construction
- ✓ Automotive and Transport
- ✓ Tourism

# The new Skills Agenda | ERASMUS+

SKILLING FOR A JOB: ALIGNING  
POLICIES TO DELIVER RESULTS

2



2

## Strengthening skills intelligence

To skill for a job, we need online 'real-time' information on skills demand, including at regional and sectoral level, using big data analysis of job vacancies and making it widely available.



3

## EU support for strategic national upskilling action

We will work with Member States on modern and comprehensive national skills strategies and join forces with national public employment agencies to realise them. This can be coupled with a more strategic approach to legal migration, oriented towards better attracting and keeping talent.



4

## Future-proof vocational education and training (VET)

Taking a fresh approach to make vocational education and training more modern, attractive for all learners, flexible and fit for the digital age and green transition. [Find out more about the VET recommendation](#)

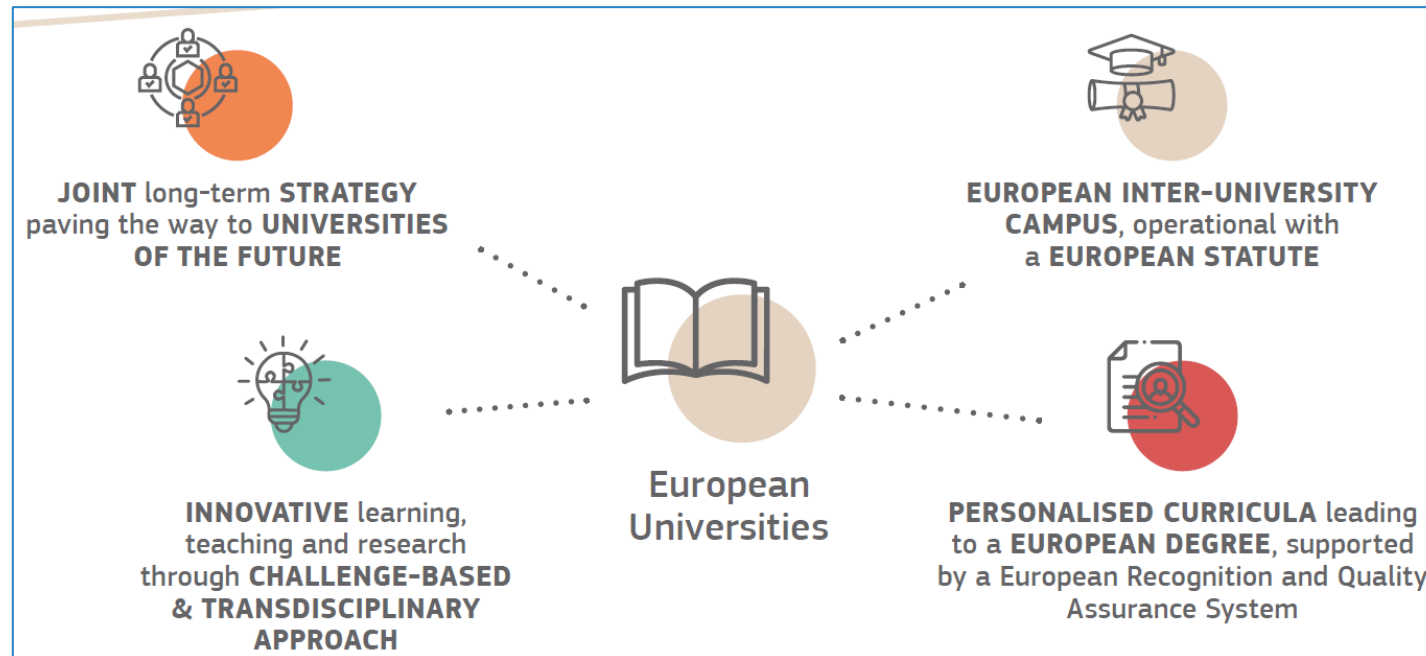
# The new Skills Agenda | ERASMUS+



5

## Rolling out the European Universities initiative and upskilling scientists

Building long-term transnational alliances between higher education institutions throughout Europe and developing a core set of skills for researchers.



# The new Skills Agenda | ERASMUS+

SKILLING FOR A JOB: ALIGNING  
POLICIES TO DELIVER RESULTS

2



6

## Skills to support the green and digital transitions

Developing a set of core green skills, statistical monitoring of the greening of our workplaces, boosting digital skills through a Digital Education Action Plan and ICT jump-start training courses.



7

## Increasing STEM graduates, fostering entrepreneurial and transversal skills

We encourage young people, especially women, into Science, Technology, Engineering and Maths. We also want to strengthen support for entrepreneurs and the acquisition of transversal skills like cooperation and critical thinking.



8

## Skills for life

Beyond the labour market, we will support adult learning for everyone — young people and adults — on issues such as media literacy, civic competences, and financial, environmental and health literacy.

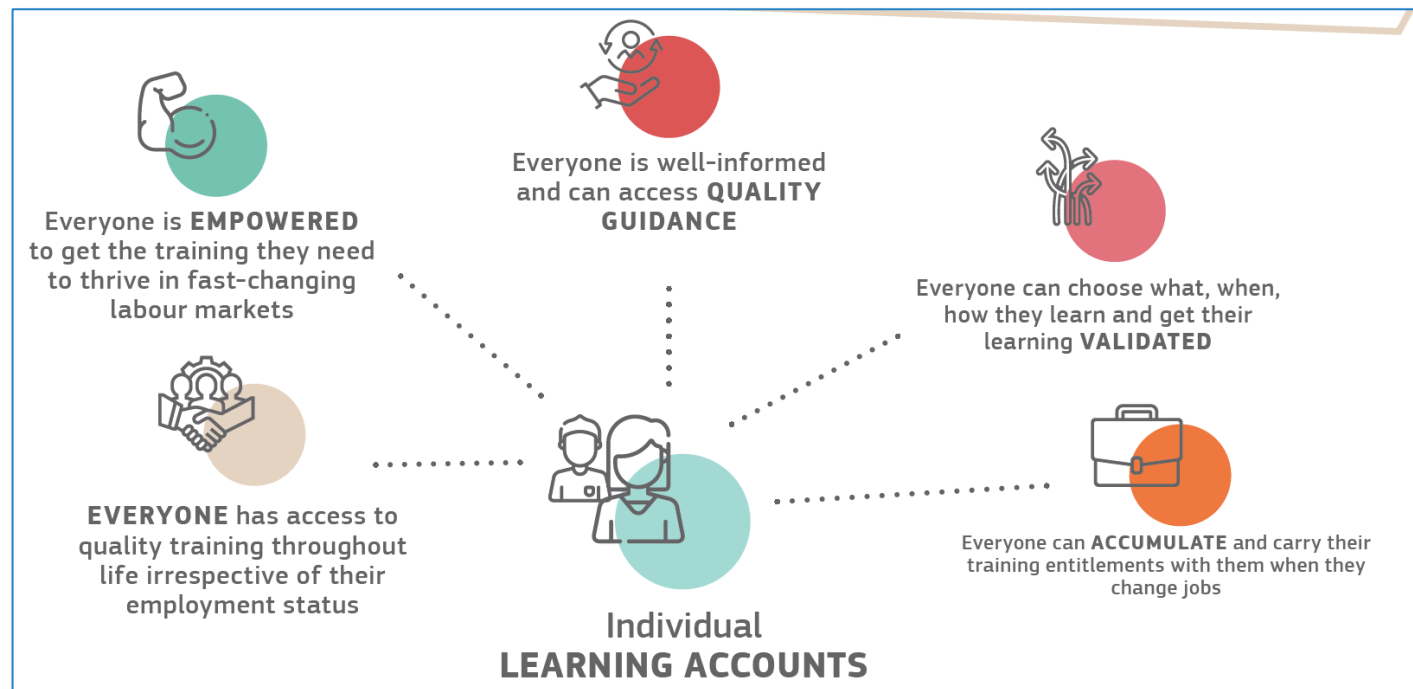
# The new Skills Agenda | ERASMUS+



## 9

### Initiative on individual learning accounts

We will explore if and how portable and quality-checked training entitlements could help stimulate lifelong learning for all.



# The new Skills Agenda | ERASMUS+



10

## A European approach to micro-credentials

Training courses are becoming shorter and more targeted and are often online. We will create European standards that should help recognise the results of such training.



11

## New Europass platform

We have completely revamped the Europass platform. As of today, it offers online tools and guidance on CV-writing, suggests tailored jobs and learning opportunities, provides information for job seekers, and is available in 29 languages. CHECK OUT THE NEW EUROPASS PLATFORM!

[www.europa.eu/europass](http://www.europa.eu/europass)



# The new Skills Agenda | ERASMUS+



Indicators (in %)	Objectives for 2025	Current level (latest year available)	Increase (in %)
Participation of adults aged 25-64 in learning during the last 12 months <sup>58</sup>	50%	38% (2016)	+32%
Participation of low-qualified adults 25-64 in learning during the last 12 months <sup>59</sup>	30%	18% (2016)	+67%
Share of unemployed adults aged 25-64 with a recent learning experience <sup>60</sup>	20%	11% (2019)	+82%
Share of adults aged 16-74 having at least basic digital skills <sup>61</sup>	70%	56% (2019)	+25%

# The new Skills Agenda | ERASMUS+



## Improving the enabling framework to unlock investment

A key element of the Skills Agenda is the much-boosted EU budget to catalyse Member States and private actors to invest in skills. We will work on improving transparency around skills investment and explore novel financing mechanisms.

- ✓ Investment in inter-company training centres
- ✓ Blueprints for sectoral cooperation on skills
- ✓ Skills forecasting systems
- ✓ National Skills Strategies
- ✓ Implementing VET and apprenticeships reforms
- ✓ Direct subsidies for apprentices in SMEs
- ✓ Digital learning equipment and technologies
- ✓ Digital learning content and core curricula modules

- ✓ Short courses to reskill workers
- ✓ ICT-Jump-Start trainings and the Digital Crash courses for SMEs
- ✓ Master courses to train digital experts in advanced digital skills
- ✓ Master courses to train experts in green skills
- ✓ Entrepreneurial skills hubs
- ✓ Quality, equity and labour market relevance of education and training systems
- ✓ Community adult learning centres
- ✓ Individual learning accounts.
- ✓ Incentives to support participation in training
- ✓ Training programmes to accompany short-time work schemes





## Matchmaking & Networking Session

*Session focused on analysing the opportunities that the future European Programmes, ERASMUS + and HORIZONEUROPE, will bring to the Manufacturing community*

by Euríco Assunção



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# Matchmaking & Networking Session

Training  
Methodologies and  
Tools



Room 1

New Manufacturing  
Qualifications



Room 2

Innovative  
Manufacturing  
Technologies



Room 3

