

## H2: estratégia europeia e oportunidades de financiamento

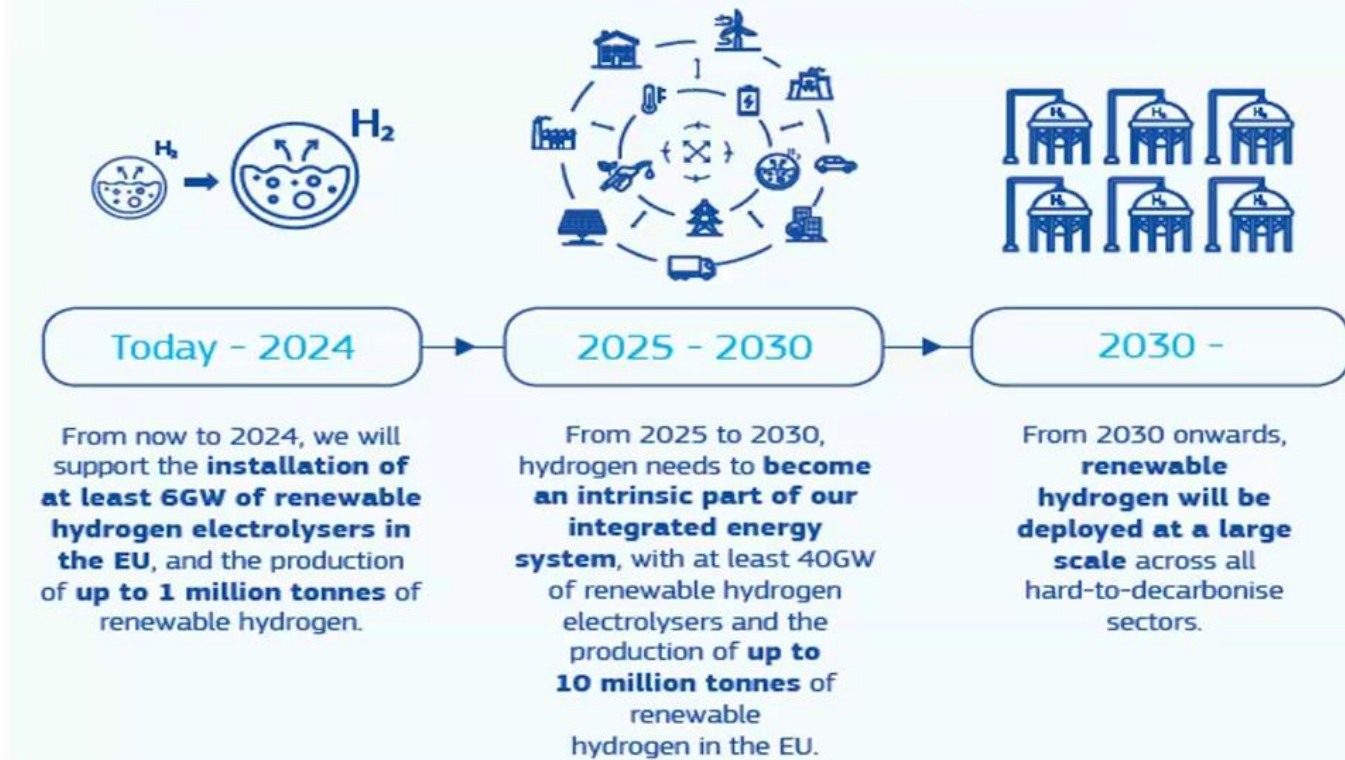
Cristiana Leandro ([cristiana.leandro@ani.pt](mailto:cristiana.leandro@ani.pt))

08.07.2022



# An ambitious strategy for Europe

The path towards a European hydrogen eco-system step by step :



[A hydrogen strategy for a climate-neutral Europe](#) – COM (2020) 301 final of 8.7.2020



EUROPEAN COMMISSION

Brussels, 8.7.2020

COM(2020) 301 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL,  
THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE  
REGIONS

A hydrogen strategy for a climate-neutral Europe

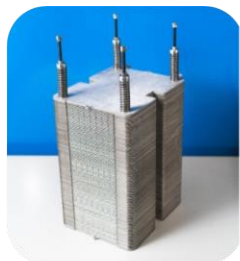
## 1. INTRODUCTION – WHY WE NEED A STRATEGIC ROAD MAP FOR HYDROGEN

Hydrogen is enjoying a renewed and rapidly growing attention in Europe and around the world. Hydrogen can be used as a feedstock, a fuel or an energy carrier and storage, and has many possible applications across industry, transport, power and buildings sectors. Most importantly, it does not emit CO<sub>2</sub> and almost no air pollution when used. It thus offers a solution to decarbonise industrial processes and economic sectors where reducing carbon emissions is both urgent and hard to achieve. All this makes hydrogen essential to support the EU's commitment to reach carbon neutrality by 2050 and for the global effort to implement the Paris Agreement while working towards zero pollution.



European  
Commission

# A 14 years journey of the Fuel Cells and Hydrogen JU



Manufacturing



Green H2  
production



Buses



ships



Aviation



Research  
PoC



Domestic heat  
and power



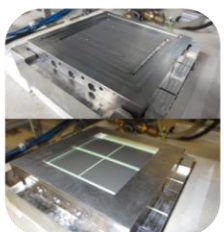
Heat and power  
for industry



Heavy duty trucks



Logistics machinery



Materials



Gensets



Light duty  
vehicles



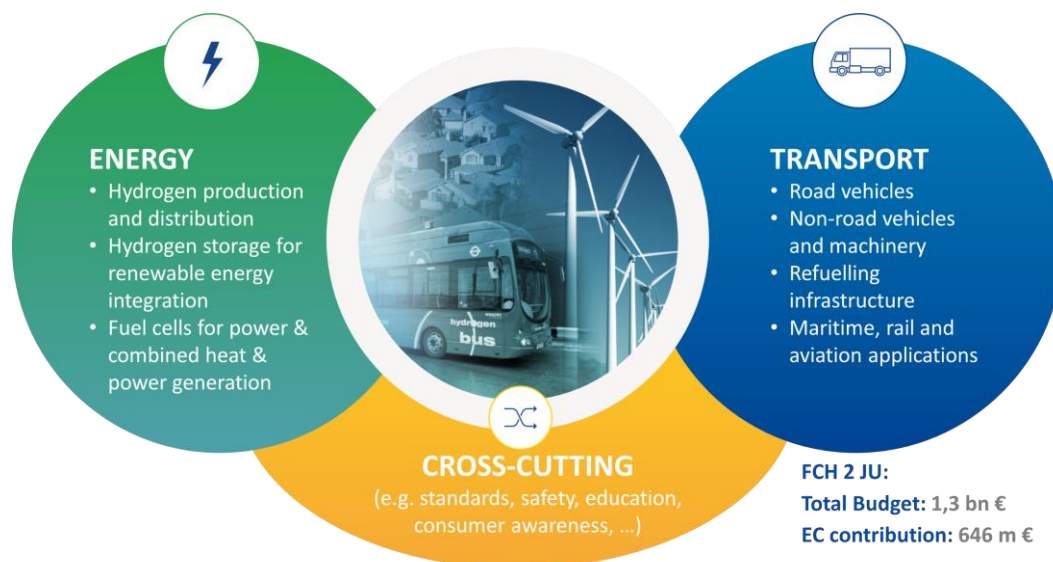
Trains

# Clean Hydrogen Partnership

- (HORIZON EUROPE) Budget: EUR 1 billion 2021-2027 (>50% increase compared to HORIZON 2020)



## FCH 2 JU Programme structure



## Clean Hydrogen JU Programme structure

Research and Innovation activities			Other activities
<b>Renewable H2 Production</b> <ol style="list-style-type: none"> <li>1. Electrolysis</li> <li>2. Other routes of renewable hydrogen production</li> </ol>	<b>H2 Storage &amp; Distribution</b> <ol style="list-style-type: none"> <li>1. Large scale storage</li> <li>2. Hydrogen in natural gas grid</li> <li>3. Liquid hydrogen carriers</li> <li>4. Improving existing hydrogen transport means</li> <li>5. Compression, purifications and metering solutions</li> <li>6. Hydrogen refuelling stations</li> </ol>	<b>H2 End uses</b> <p>Transport applications</p> <ol style="list-style-type: none"> <li>1. Building blocks</li> <li>2. Heavy duty vehicles</li> <li>3. Waterborne applications</li> <li>4. Rail applications</li> <li>5. Aeronautic applications</li> </ol> <p>Clean heat and power</p> <ol style="list-style-type: none"> <li>1. Stationary fuel cells</li> <li>2. Turbines, boilers and burners</li> </ol>	<b>Synergies</b>
Cross-cutting issues			JRC
Hydrogen Valleys			RCS SC
Supply chain			EHSP
Strategic Research Challenges			S&CP
			KM
			International Cooperation
			COMMS



- Plano **REPowerEU**, maio de 2022
  - 10 milhões de toneladas de produção doméstica de H2 renovável e 10 milhões de toneladas de importações até 2030
  - 200 milhões € para ‘H2 valleys’
  - Concluir a avaliação do IPCEI do H2 no verão
  - Reportar regularmente, em estreita cooperação com os EM, a partir de 2025, sobre o *uptake* e utilização de H2 em indústrias energeticamente intensas.



## Hydrogen Valleys in Europe [www.h2v.eu](http://www.h2v.eu)

23 Hydrogen valley's identified in 10 EU countries + U.K.

**3 in The Netherlands:**

- North Netherland
- Zuid Holland
- Zeeland (H2 delta)

**2 in U.K.:**

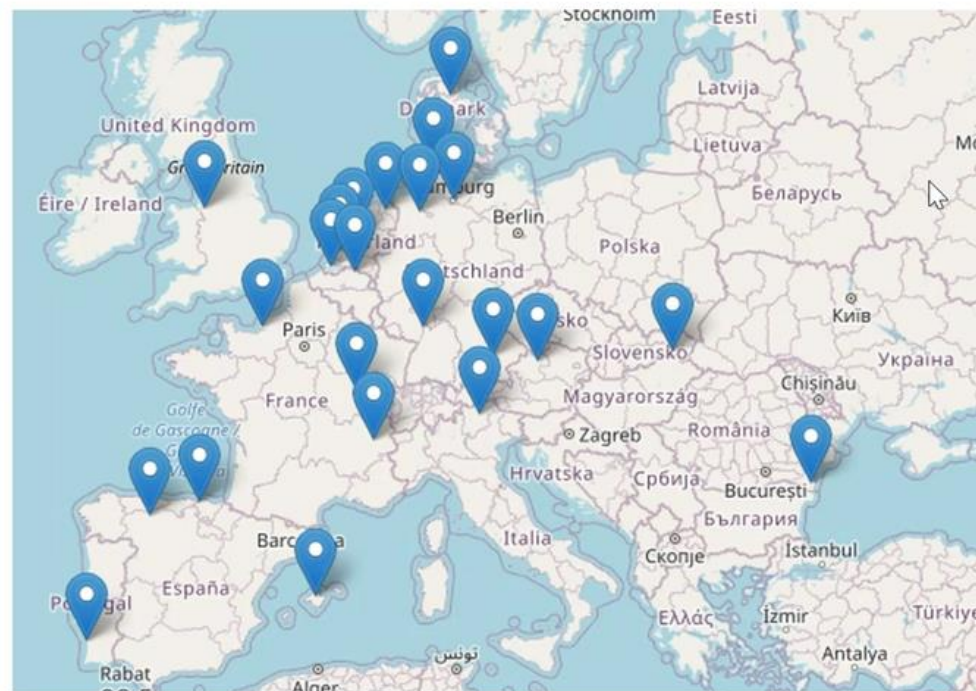
- North West England
- Orkney Islands

**4 in France:**

- Rhone Alpes
- Normandy
- Bourgogne Franche Comté
- French Guiana

**1 in Portugal:**

- Sines industrial hub



**3 in Spain:**

- Island Mallorca
- Basque (BH2C)
- Green Crane

**1 in Italy:**

- Bolzano

**1 in Austria:**

- Linz (WIVA)

**1 in Denmark:**

- Hobro (Hybalance)

**5 in Germany:**

- Munich (Hybayern)
- Mannheim (H2rivers)
- Heide (eFarm)
- Hamburg (NDRL)
- Oldenburg (HyWays)

**1 in Slovakia:**

- Kosice (Black Horse)

**1 in Romania:**

- Constanza (Blue Danube)

# Call for proposals 2022: [HORIZON-JTI-CLEANH2-2022](#)

- Hydrogen production
- Hydrogen distribution
- Transport
- Heat and Power
- Cross-cutting
- Hydrogen Valleys



Total budget:  
€300.5 mn

41 topics

## 41 topics available

10 - Renewable Hydrogen Production

11 - Hydrogen Storage and Distribution

8 - Transport

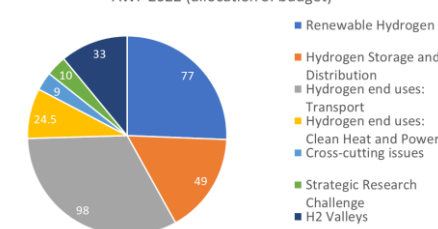
4 - Heat and Power

5 - Cross-cutting

2 - Hydrogen Valleys

1 - Strategic Research challenge

AWP 2022 (allocation of budget)



The topics will be grouped into 10 Innovation Actions (IA), 29 Research and Innovation Actions (RIA) and 2 Coordination and Support Actions (CSA). 6 Innovation Actions (IA) are considered of strategic importance and are selected as **flagship projects**, expected to have a significant impact in accelerating the transition to a hydrogen economy.

Synergies with other European partnerships and programmes, as well as with Member States and regional programmes are at the core of a number of topics.

	Budget (EUR 300.5 million)	Publication	Deadline
First deadline	179.5	1 <sup>st</sup> March 2022	31 <sup>st</sup> May 2022
Second deadline	121.0	1 <sup>st</sup> March 2022	20 <sup>th</sup> September 2022



SEARCH FUNDING &amp; TENDERS

HOW TO PARTICIPATE

PROJECTS &amp; RESULTS

WORK AS AN EXPERT

SUPPORT

Type your Keywords...

☒ Match whole words only☒ GRANTS☐ TENDERS

## Submission status



Forthcoming



Open for submission (15)



Closed

## Programming period

Select a Programme period...



## Filter by Programme / Programme group

Select a Programme...



## Filter by call

HORIZON-JTI-CLEANH2-2022-2 (15)



## Funding and tenders (15)

Need help?



Sort by:

Submission status



## Integration of multi-MW electrolyzers in industrial applications

HORIZON-JTI-CLEANH2-2022-01-08

Call for proposal

Grant

Programme Horizon Europe (HORIZON)

Status Open for submission

Type of action HORIZON JU Innovation Actions

Deadline model single-stage

Opening date 31 March 2022

Deadline date 20 September 2022 17:00:00 Brussels time

## Demonstrating offshore production of green hydrogen

HORIZON-JTI-CLEANH2-2022-01-10

Call for proposal

Grant

Programme Horizon Europe (HORIZON)

Status Open for submission

Type of action HORIZON JU Innovation Actions

Deadline model single-stage

Opening date 31 March 2022

Deadline date 20 September 2022 17:00:00 Brussels time

## Design for advanced and scalable manufacturing of electrolyzers

HORIZON-JTI-CLEANH2-2022-01-04

Call for proposal

Grant

Programme Horizon Europe (HORIZON)

Status Open for submission

Type of action HORIZON JU Research and Innovation Actions

Deadline model single-stage

Opening date 31 March 2022

Deadline date 20 September 2022 17:00:00 Brussels time



# Hydrogen Valleys - Topics

## HORIZON-JTI-CLEANH2-2022-06-01: Hydrogen Valleys (large-scale)

Develop, deploy and demonstrate a **large-scale H<sub>2</sub> Valley** with interlinkages outside its boundaries

- Production of **≥ 5,000 tonnes of renewable H<sub>2</sub> per year** using new hydrogen production capacity
- **≥ 2 FCH applications** from **≥ 2 sectors** (energy, industry, transport)
- **Demonstrate: existing/new H<sub>2</sub> markets**, contribution to economic growth, impact and replicability, commitment of stakeholders
- Financing structure and strategy describing the business model, including envisaged sources of co-funding/co-financing needed

## HORIZON-JTI-CLEANH2-2022-06-02: Hydrogen Valleys (small-scale)

Develop, deploy and demonstrate a **smaller H<sub>2</sub> Valley** (particular attention to areas of Europe with no/limited presence of H<sub>2</sub> Valleys)

- Production of **≥ 500 tonnes of renewable H<sub>2</sub> per year**
- Supply **more than one end sector or application** (mobility, industry energy); **>20% H<sub>2</sub> produced** for each of the 2 main applications
- **Demonstrate: existing/new H<sub>2</sub> markets**, contribution to economic growth, impact and replicability and commitment of stakeholders
- Financing structure and strategy describing the business model, including envisaged sources of co-funding/ co-financing needed

# **Rules for participation, call conditions, evaluation and submission**

# Annexes A, B and E – Admissibility, eligibility and documents

A proposal is **ADMISSIBLE**, when:

- **Submitted** electronically via the Funders & Tenders Portal **on time**
- **Readable**, accessible and printable
- **Complete** (admin data, proposal description, **operational capacity**, etc.)
- Must include a **plan for the exploitation and dissemination** of the results
- Consist of 2 parts:
  - **Part A:** administrative and budgetary data
  - **Part B:** technical description

Respect page limit for  
**Part B!**  
CSA = 30 pages  
RIA = 45 pages  
IA = 70 pages

A proposal is **ELIGIBLE**, when:

- **In line with the topic and call conditions**, with exclusive focus on civil applications
- **Complies with consortium composition:**

+ Additional Conditions in the AWP

<b>RIA and IA</b>	<ul style="list-style-type: none"> <li>- At least one independent legal entity established in a Member State</li> <li>- And at least two other independent legal entities, each established in different Member States or Associated Countries.</li> </ul>
<b>CSA</b>	<ul style="list-style-type: none"> <li>- At least one legal entity established in a Member State or Associated Country</li> </ul>

# Applicable rules

HorizonEU

Call: HORIZON-JU-CLEANH2-2022

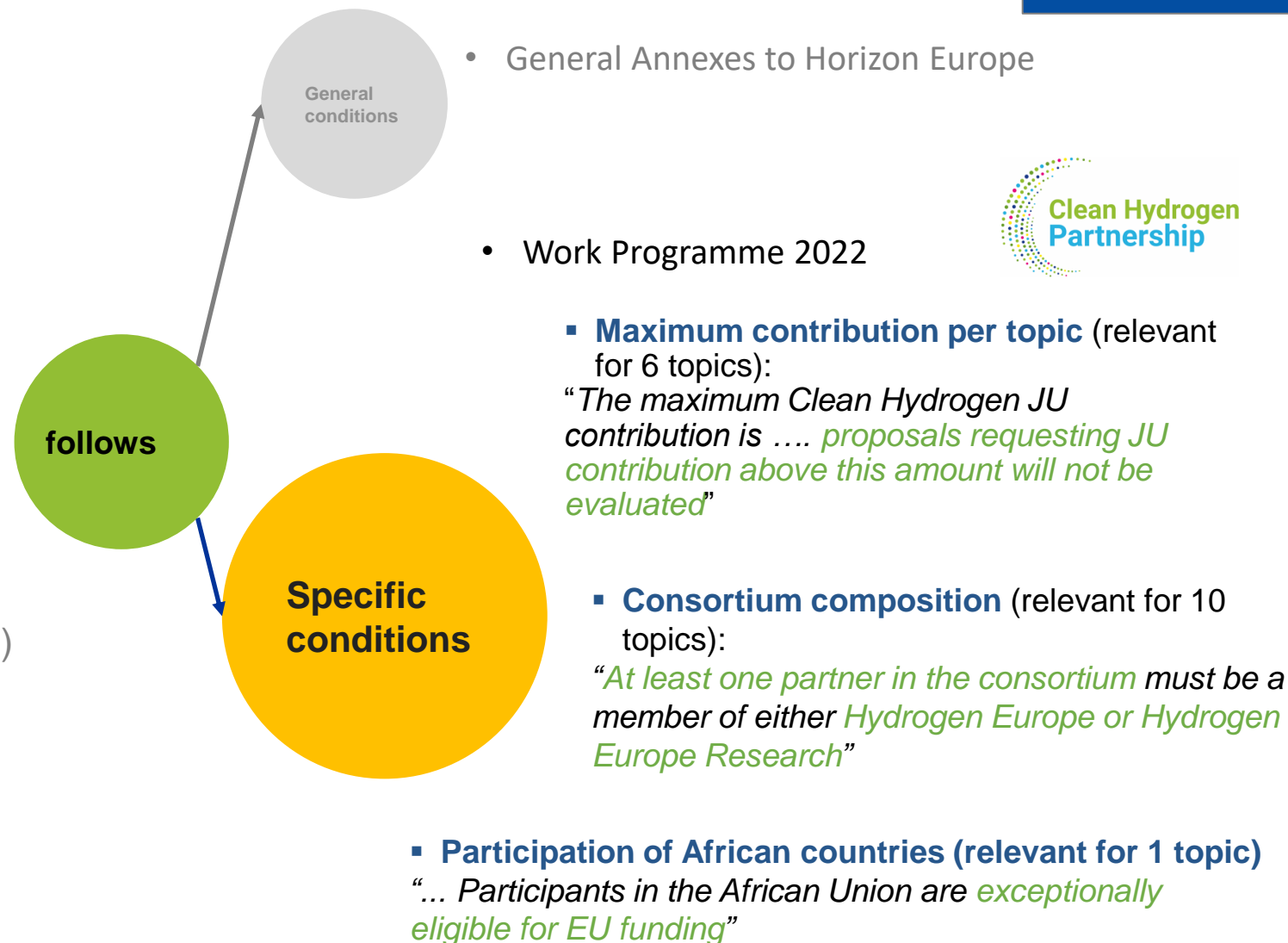
Total budget: EUR 300.5 mn

Publication date: 1<sup>st</sup> March 2022

Opening of submission: 31<sup>st</sup> March 2022

## Deadlines:

- 31<sup>st</sup> May 2022 (26 topics)
- 20<sup>th</sup> September 2022 (15 different topics)





## Funding and Tenders Opportunities Portal

### Get Support

- [Online Manual](#) is your guide on the procedures from proposal submission to managing your grant
- [Funding & Tender Portal FAQ](#) find the answers to most frequently asked questions on submission of proposals, evaluation and grant management
- [Research Enquiry Service](#) enquiries about the validation process of the legal entities
- [PROJECTS@clean-hydrogen.europa.eu](mailto:PROJECTS@clean-hydrogen.europa.eu)

### WP 2023-2024

[Grupo Nacional de Discussão do Horizonte Europa Pilar II & Pilar III](#)



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[EXHIBITION](#) ▾

[PARTNERS](#) ▾

[PRACTICAL INFO](#) ▾

[REGISTRATION](#)



# Hydrogen Europe Flagship Event & Expo

Part of the Hydrogen Week

📅 24-28 October 2022 | 📍 Brussels Expo Hall 5

109

DAYS

0

HOURS

34

MINUTES

13

SECONDS

# PERIN

Portugal in Europe  
Research and Innovation Network



CRISTIANA LEANDRO  
([cristiana.leandro@ani.pt](mailto:cristiana.leandro@ani.pt))



LUÍS MAIA  
([luis.maia@ani.pt](mailto:luis.maia@ani.pt))