SPARTA

THE SPARTA PILOT CYBERSECURITY COMPETENCE NETWORK AND ITS PARTNERSHIP PROGRAM

Fabio Martinelli
(SPARTA Partnership Director)
National Research Council of Italy

contact@sparta_eu | sparta.eu

OVERVIEW

- The approach
- The structure
- SPARTA research programs
- SPARTA Roadmap
- SPARTA partnership
  - Joint Competence Centre Infrastructure (JCCI)
  - SPARTA associates
  - SPARTA monthly events
- Conclusion

Russians Win Race To Launch Earth Satellite

Man On Threshold Of Space Travel

By DANIEL F. GILMORE
United Press Staff Correspondent

LONDON (UP)—The pulsating radio "beep" of the first manmade earth satellite signalled today to the world that man had crossed the threshold into the age of travel through space.

The Soviet Union announced it had won the race into space by launching an earth satellite Friday, a 184-pound, 22-inch globe now orbiting the earth at 18,000 miles an hour, 560 miles up.

Millions of persons throughout the world heard the "beep...beep... beep..." rebroadcast today by local stations and realized that man

— WEATHER —

WEST VIRGINIA—Partly cloudy

How To Spot Satellite

By UNITED PRESS

Here's how to look for the Russian earth satellite which will be whizzing through the sky at 18,000 miles an hour.

The best time to spot it is at dawn or dusk when the sky is semi-dark. There is a chance that it could be seen if it travels across the face of the moon at night.

The best instruments to use are ordinary binoculars or telescopes. Powerful telescopes won't pick it up because of their narrow fields.

Through optical instruments, the satellite will look like the

U.S. May Sp Up Satellite Program

By JOSEPH L. M
United Press Staff Cor

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STRATEGIC SURPRISE

Man On Threshold Of Space Travel

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Risky and complex developments

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Concrete and transformative results

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THIS IS IT

Re-imagining the way cybersecurity research, innovation, and training are performed in Europe

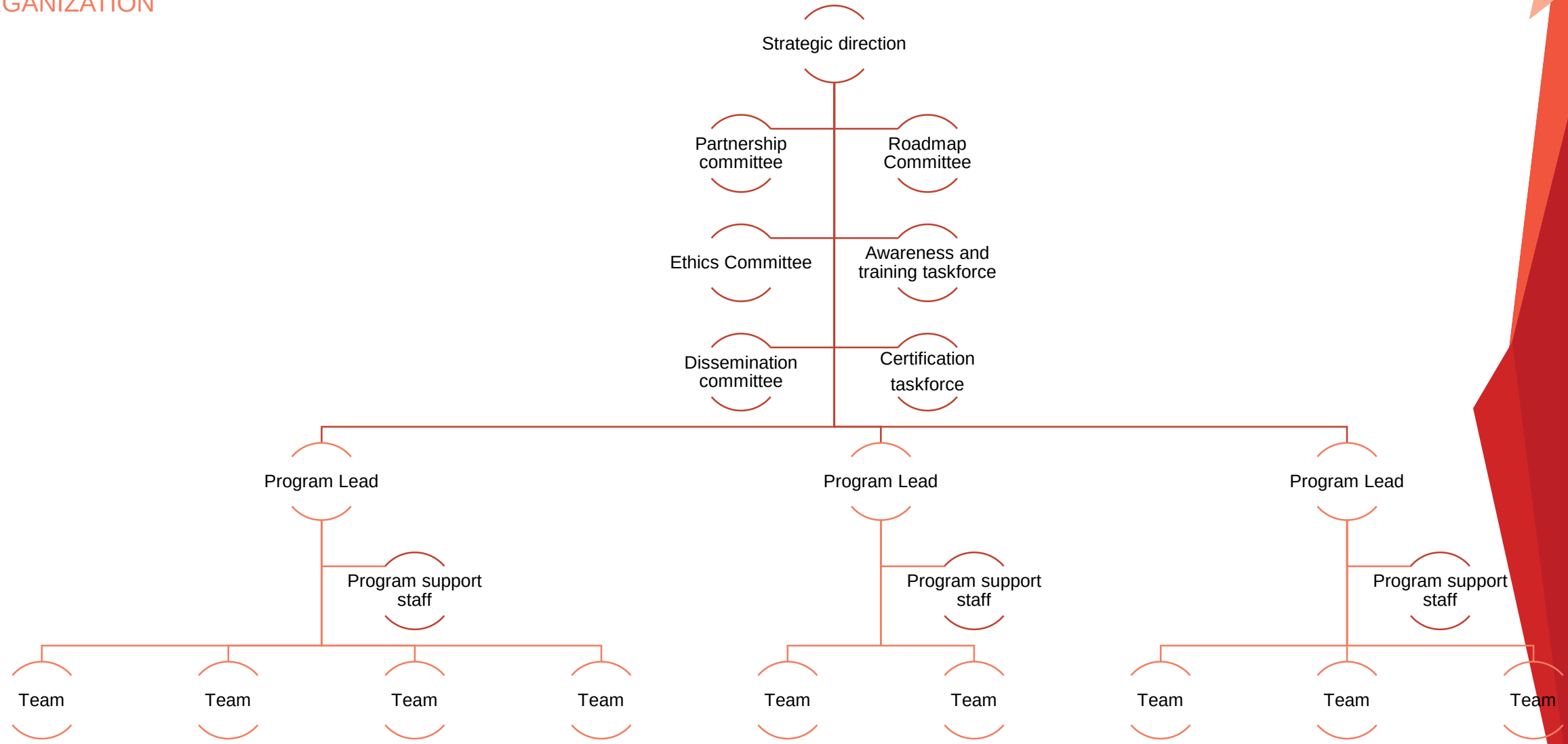
- Develop unique but concrete innovation paths
- Setup shared and virtual spaces for collaborations
- Strenghten certification, outreach, and training capacities
- Pull together European, national, and regional ecosystems

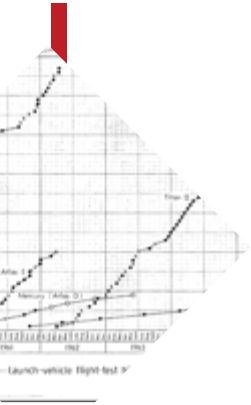
Contribute to the objective of **European strategic autonomy**

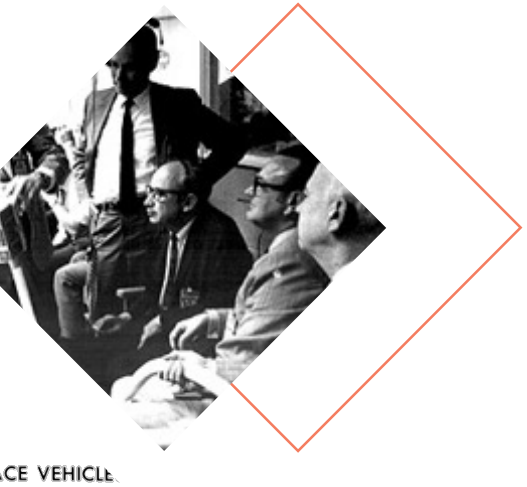
SPARTA
Structure

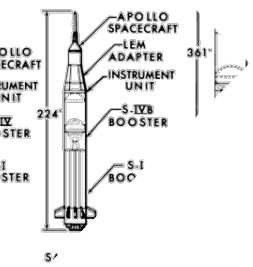
The performance of the defenders at the the Battle of Thermopylae is used as an example of the advantages of training, equipment, and good use of terrain as force multipliers and has become a symbol of courage against overwhelming odds

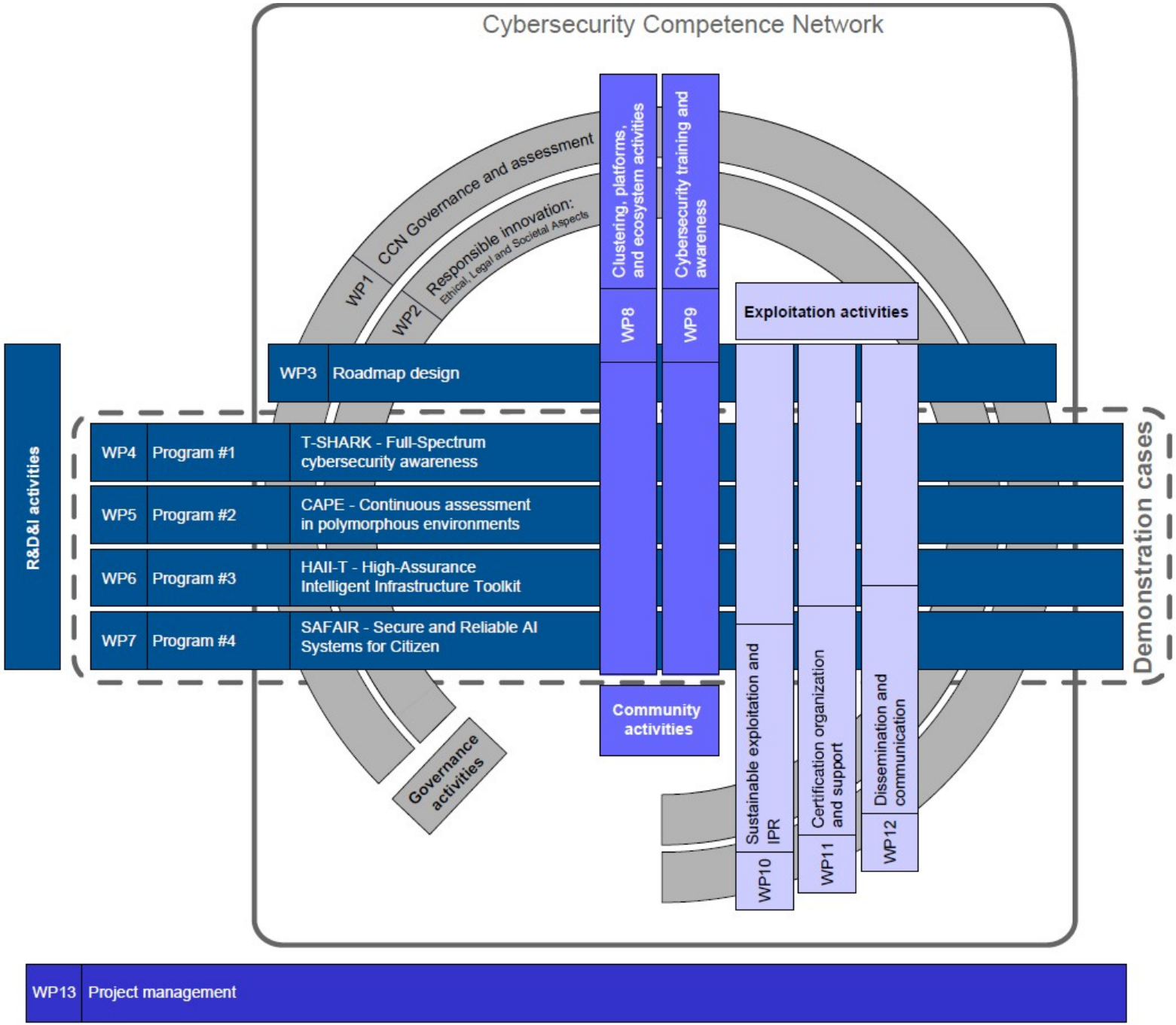
ORGANIZATION








APOLLO SPACECRAFT
LEM ADAPTER
INSTRUMENT UNIT
S-IVB BOOSTER
361'
224'


Cybersecurity Competence Network
WP1 CCN Governance and assessment
WP2 Responsible innovation: Ethical, Legal and Societal Aspects
Clustering, platforms, and ecosystem activities
Cybersecurity training and awareness
WP8
WP9
Exploitation activities
WP3 Roadmap design
R&D&I activities
WP4 Program #1 T-SHARK - Full-Spectrum cybersecurity awareness
WP5 Program #2 CAPE - Continuous assessment in polymorphous environments
WP6 Program #3 HAII-T - High-Assurance Intelligent Infrastructure Toolkit
WP7 Program #4 SAFAIR - Secure and Reliable AI Systems for Citizen
Demonstration cases
Community activities
Governance activities
Sustainable exploitation and IPR
WP10
Certification organization and support
WP11
Dissemination and communication
WP12
WP13 Project management

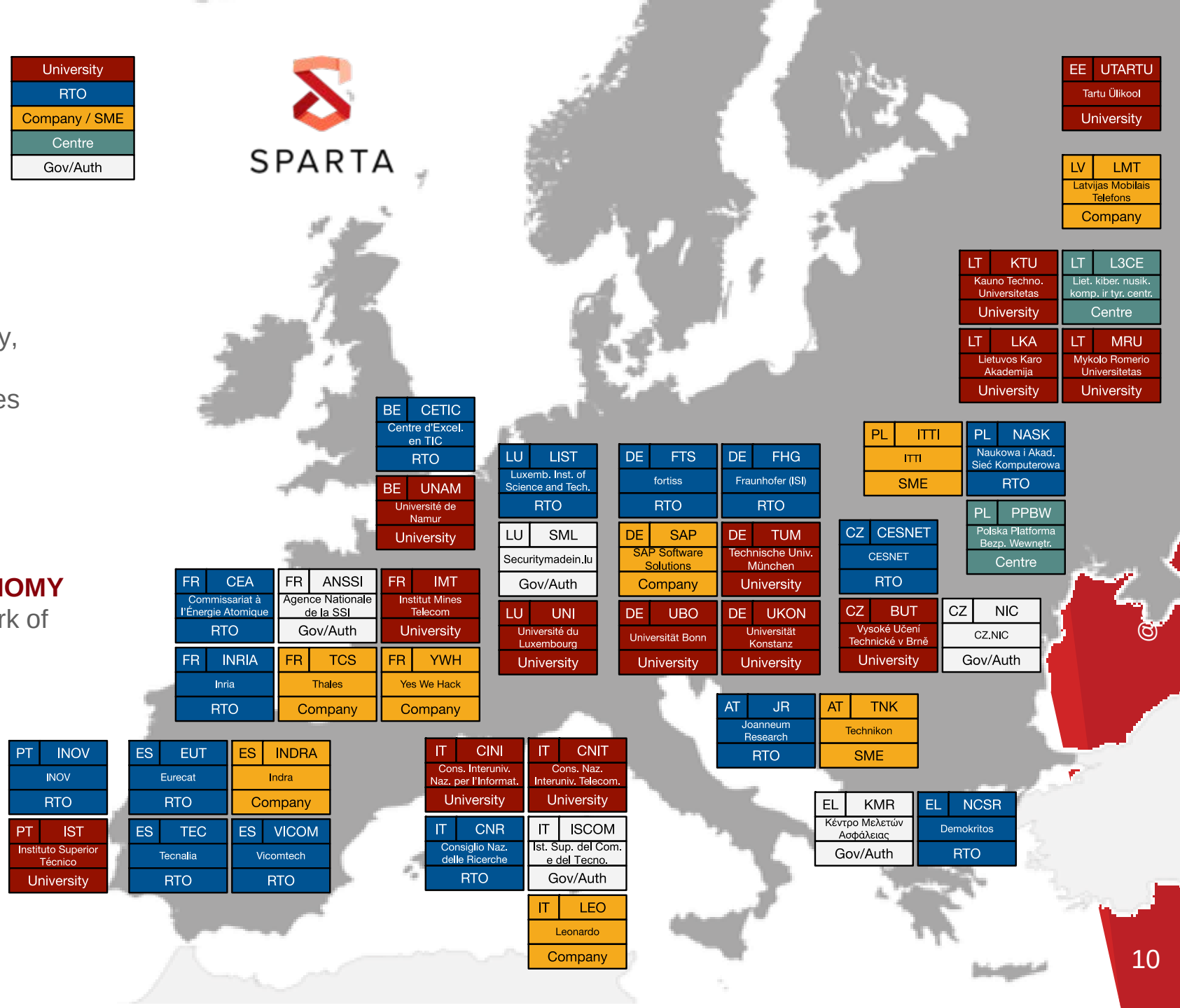
A STRONG BASIS OF EXCELLENCE

44 partners spanning academia, industry, institutions, grassroots
Pragmatically anchored in member states

STRATEGIC PROGRAMS

THE STAKES OF EUROPEAN AUTONOMY

Design a long-term roadmap and network of competence centers



SPARTA

Current research Programs

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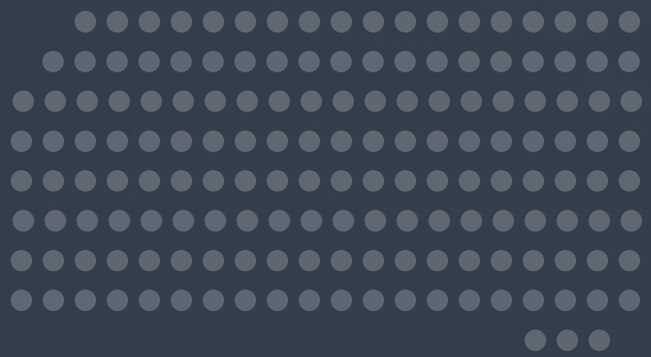
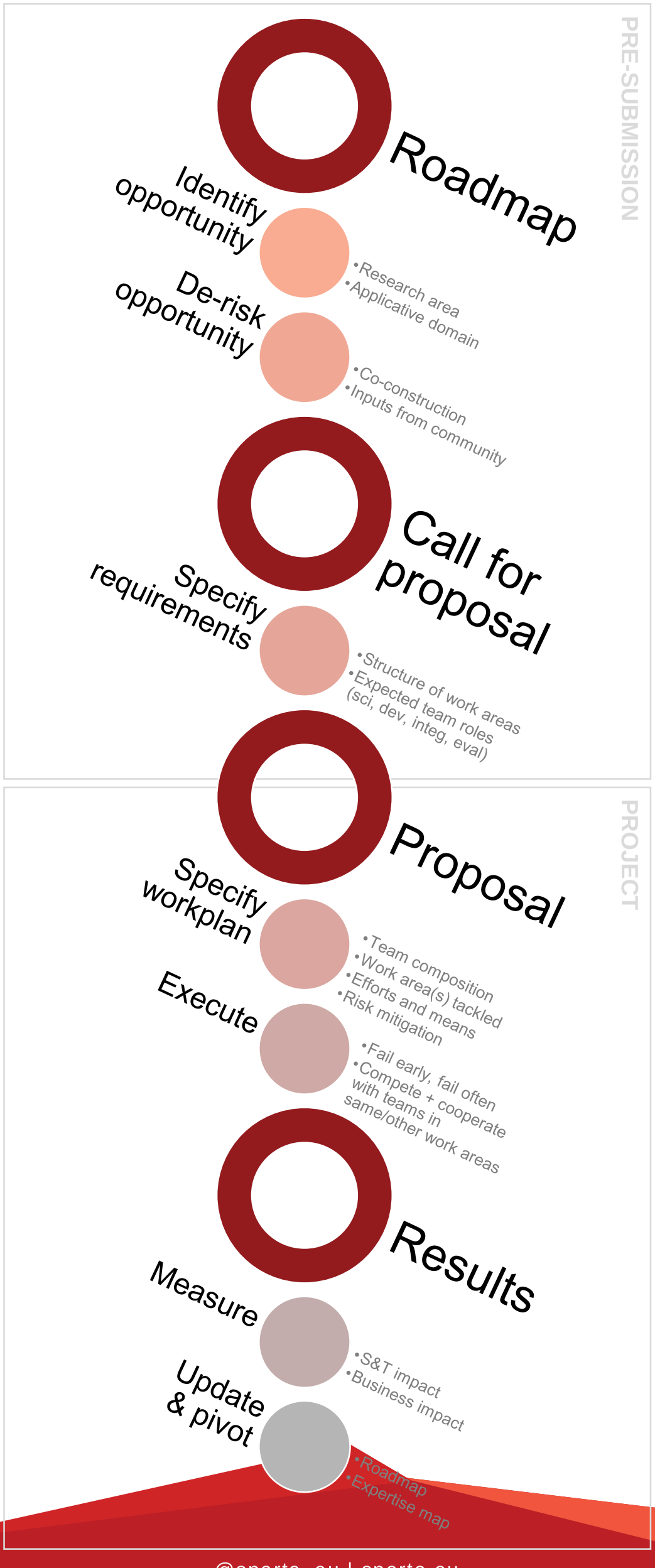
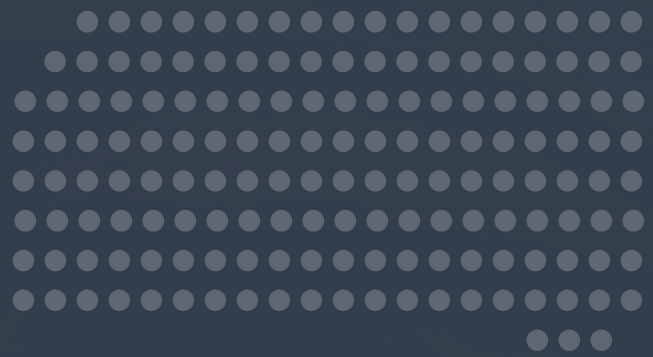



PRE-SUBMISSION
Roadmap
Identify opportunity
•Research area
•Applicative domain
De-risk opportunity
•Co-construction
•Inputs from community
Call for proposal
Specify requirements
•Structure of work areas
•Expected team roles (sci, dev, integ, eval)
PROJECT
Proposal
Specify workplan
•Team composition
•Work area(s) tackled
•Efforts and means
•Risk mitigation
Execute
•Fail early, fail often
•Compete + cooperate with teams in same/other work areas
Results
Measure
•S&T impact
•Business impact
Update & pivot
•Roadmap
•Expertise map

- T-SHARK Full-spectrum cybersecurity awareness
  - **objective** : expand the reach of threat understanding, from the current investigation-level definition, up to strategic considerations, and down to real-time events
  - **requires** : collection of heterogeneous data, models and predictions for multi-level security, AI and visualization
  - **strengths** : regulation encouraging information-sharing (NIS directive, French OIV law, ...), strong culture of data protection (GDPR, cryptography, ...)
  - **aims at** : providing decision-making tools, fostering a common cyber security culture, raising preparedness for possible disruptions and attacks
  - **capabilities** : thoroughly supervise critical systems including when they are not provided / integrated by EU actors, raise awareness and citizen involvement
- CAPE Continuous assessment in polymorphous environments
  - **objective** : enhance assessment processes to be able to perform continuously over HW/SW lifecycles, and under changing environments
  - **requires** : binary and code verification, scalable monitoring, network reaction, HW/SW roots of trust, dynamic assurance cases
  - **strengths** : one of the best evaluation ecosystem in the world (Common Criteria, smart cards, ...)
  - **aims at** : building tools for continuous trust in sovereign and foreign-sourced components, systems, and services
  - **capabilities** : drastically increase evaluation capabilities in a world where most of the components are developed outside of the EU, prepare future certification
- HAII-T High-Assurance Intelligent Infrastructure Toolkit
  - **objective** : manage the heterogeneity of the IoT by providing a secure-by-design infrastructure that can offer end-to-end security guarantees
  - **requires** : formal security models, application security, verification and validation, verified and scalable cryptography, secure OS
  - **strengths** : building on EU's lead position on formal methods for safety and security
  - **aims at** : providing a full verified software stack from applications down to the system software and SW/HW interface, which can serve in a variety of IoT devices
  - **capabilities** : simplify the the deployment of IoT applications ; facilitate their certification
- SAFAIR Secure and fair AI systems
  - **objective** : Evaluating security of AI systems, producing approaches to make systems using AI more robust to attackers' manipulation. Furthermore, the goal is to make AI systems more reliable and resilient through enhanced explainability and better understanding of threats
  - **requires** : adversarial machine learning, data from different AI application domains
  - **strengths** : increasing adoption of AI technology in various information systems within EU, recent strategy of EU member states to collaborate on Artificial Intelligence
  - **aims at** : providing methods and tools for analysis and assessment of security threats for AI systems, and solutions for protection
  - **capabilities** : exploratory

SPARTA
ROADMAP

The performance of the defenders at the the Battle of Thermopylae is used as an example of the advantages of training, equipment, and good use of terrain as force multipliers and has become a symbol of courage against overwhelming odds



SPARTA ROADMAP: MISSION

Mission: Establish a European cybersecurity research & innovation roadmap

That will

- Strengthen the EU's cybersecurity capacity
  Technology, Services, Applications and Products
- Close cyber skill gaps and prepare for future challenges
  Education, Life long learning,

Which is essential to

- retain digital sovereignty and autonomy of the European industries and governments
- increase trust in products, services and infrastructures

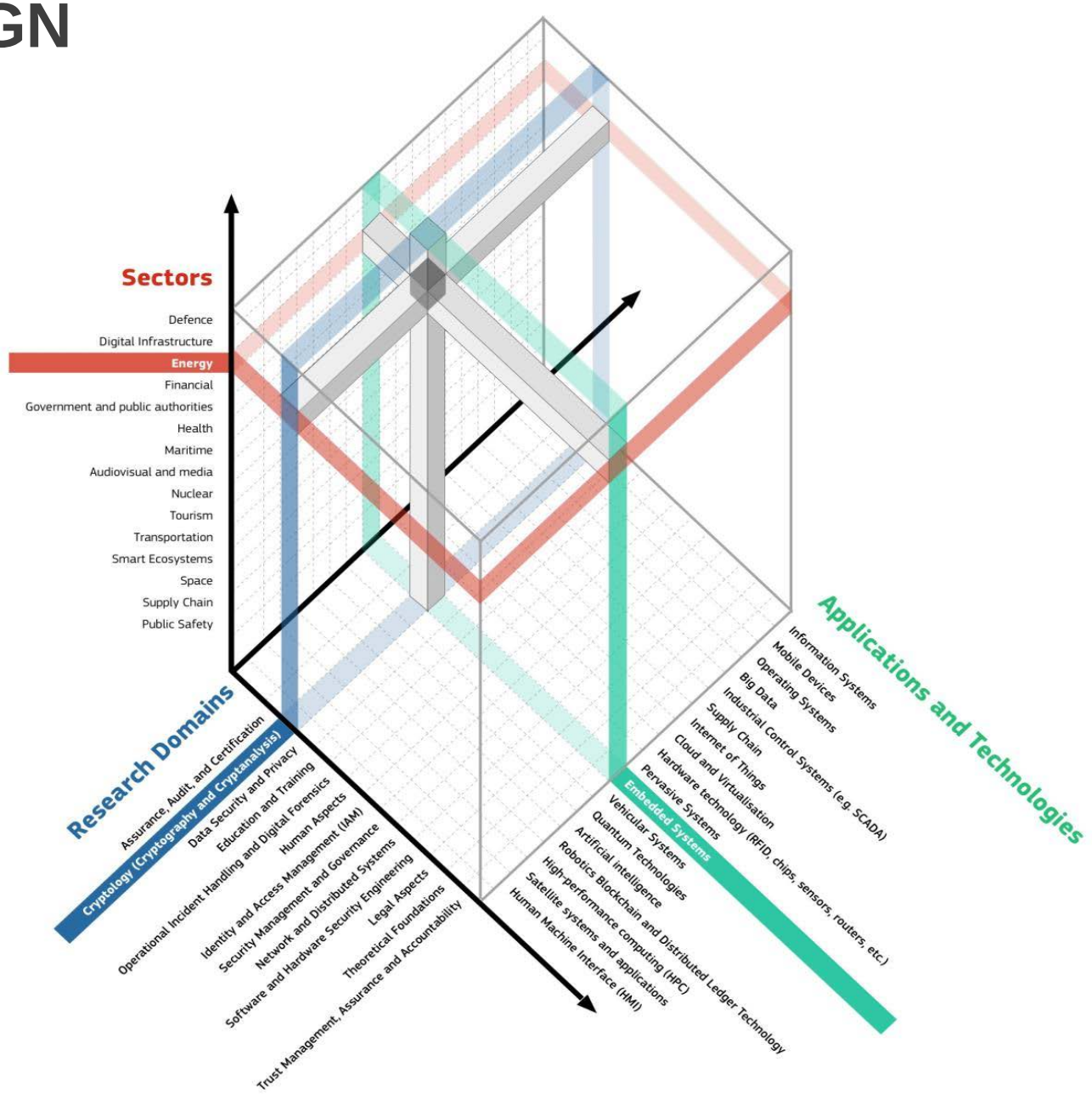
SPARTA ROADMAP DESIGN

Roadmap building blocks:

- JRC Taxonomy
- Roadmap Challenge Templates

4.1 Basis: JRC Taxonomy

- 3 planes for categorizing cybersecurity topics
  - Cybersecurity Research Domains
  - Application and Technologies
  - Sectors



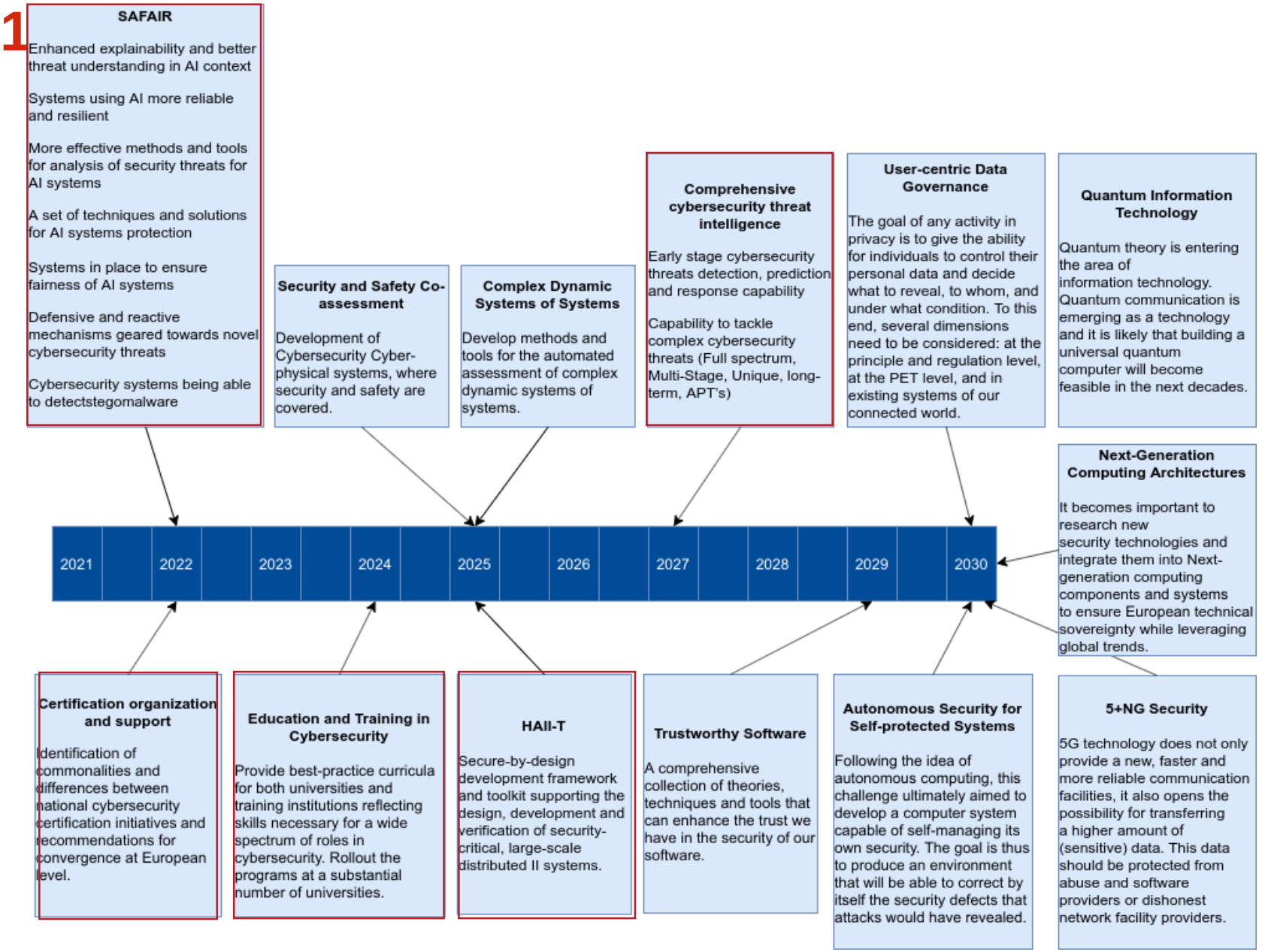
3 – CURRENT STATUS & ACHIEVEMENTS
ROADMAP V1

D3.2, M12

13 Mission Programs

- Technology, Edu, Certification
- Benefits for EU and EU single market
- SWOT (EU view)
- Timeline
- Contributions

- Original SPARTA research programs marked in red squares



SPARTA
Partnership

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SPARTA Joint Competence Centre Infrastructure (JCCI)

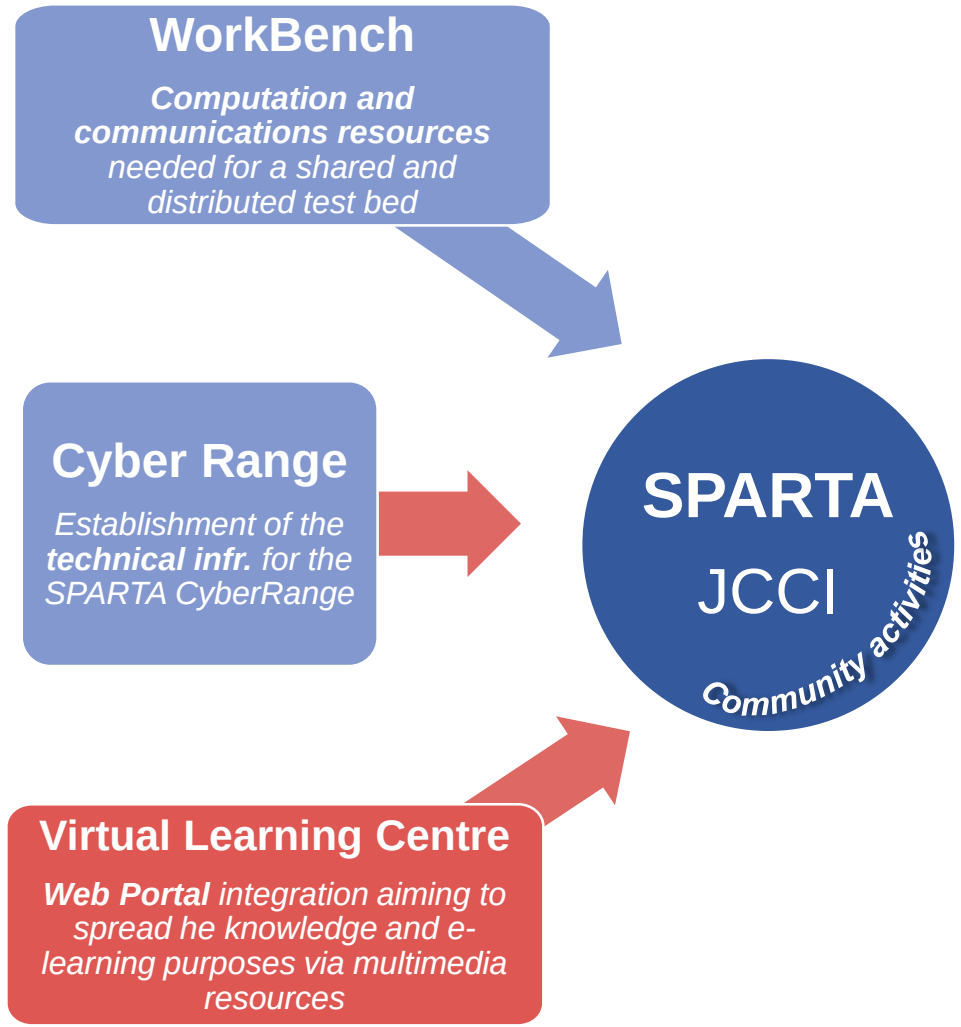
This task is specifically devoted to create a **common working environment** that enables the **sharing and collaboration among partners** also in a **remote way**.

This embodies both the **research and development aspects.** In line with SPARTA planning we have connected:

- **35 platforms** has been located and addressed by JCCI web site

It also includes Virtual Learning centre. In this sense we have gathered and provide through the JCCI web site:

- **5 on-line** courses
- **10 in person** courses
- **5 hands-on-labs**



SPARTA ASSOCIATE PROGRAM

The objective of the SPARTA Associates program is to establish unparalleled traction with European, national, and regional ecosystems, relaying concrete requirements, disruptive ideas, and novel results through multi-level and cross-network actions and events. To this purpose, the community will be offered the possibility to:

- provide inputs and feedback to the **SPARTA *Roadmap*** to ensure the needs and requirements from all stakeholders are represented;
- get preferential conditions for the **SPARTA *Infrastructure*** to benefit from world-leading frameworks and platforms;
- follow **SPARTA *Programs*** advances and get early-access information about their results;
- attend bi-yearly **SPARTA *Days*** and monthly **SPARTA *Workshops*** held across Europe;
- be part of the fast-paced evolving **SPARTA *Associates/friends*** community striving for strengthening European cybersecurity capacities.

- **SPARTA associate have a privileged access to the know how and competence also for participating at EU/nationally funded projects in cooperation with SPARTA**

- **A partnership committee** has been established to manage the partnership activities

PARTNERSHIP AND ECOSYSTEM

14 European member states **44 partners** **more than 90 Associates/friends**

SPARTA associates&friends

EC, JRC, Fellow ICT 03 Pilot Projects

And more !!!

Other EU projects for roadmapping as CyberWatching, AEGIS, EUNITY, Standard ICT, …

Outside EU activities, international dimension (e.g. US/Japan)

EU agencies as ENISA, EC3, EDA, ESA, …

EU organizations as ECSO, ERCIM, IFIP, …

ASSOCIATES&FRIENDS

SPARTA PARTNERSHIP

- Access to SPARTA Infrastructures and platforms
- Contribution to the Roadmap
- Access to results of SPARTA programs
- Attending Bi-yearly SPARTA meetings
- …

SPARTA ASSOCIATES

SPARTA FRIENDS

Benefits for ASSOCIATES

- Benefits for associated partners for:
- Events:
  - Associate partners are allowed to attend SPARTA Days and Workshops.
  - Associate partners are allowed to attend SPARTA meeting upon invitation from Coordinator
  - Associate partners will be to access the training and education facilities at privileged conditions.
- RoadMap and Programs
  - Associates partners can provide inputs to the Roadmap
  - Associates partners are entitled to receive early information on Roadmap outputs
  - Associates partners can provide contributions to the Programs
  - Associates partners are entitled to receive early information on programs outputs
- Communication:
  - Associate partners logo will appear in the main Sparta web site (Sparta.eu)
  - Associate partners will be featured on the SPARTA social media
  - Associate partners are invited to use the SPARTA Associates logo
  - Associate partners will be included in the appropriate SPARTA mailing lists upon request.
- JCCI:
  - Associate partners will be granted access to the project collaboration platform and the SPARTA Web Portal (based on certain conditions)

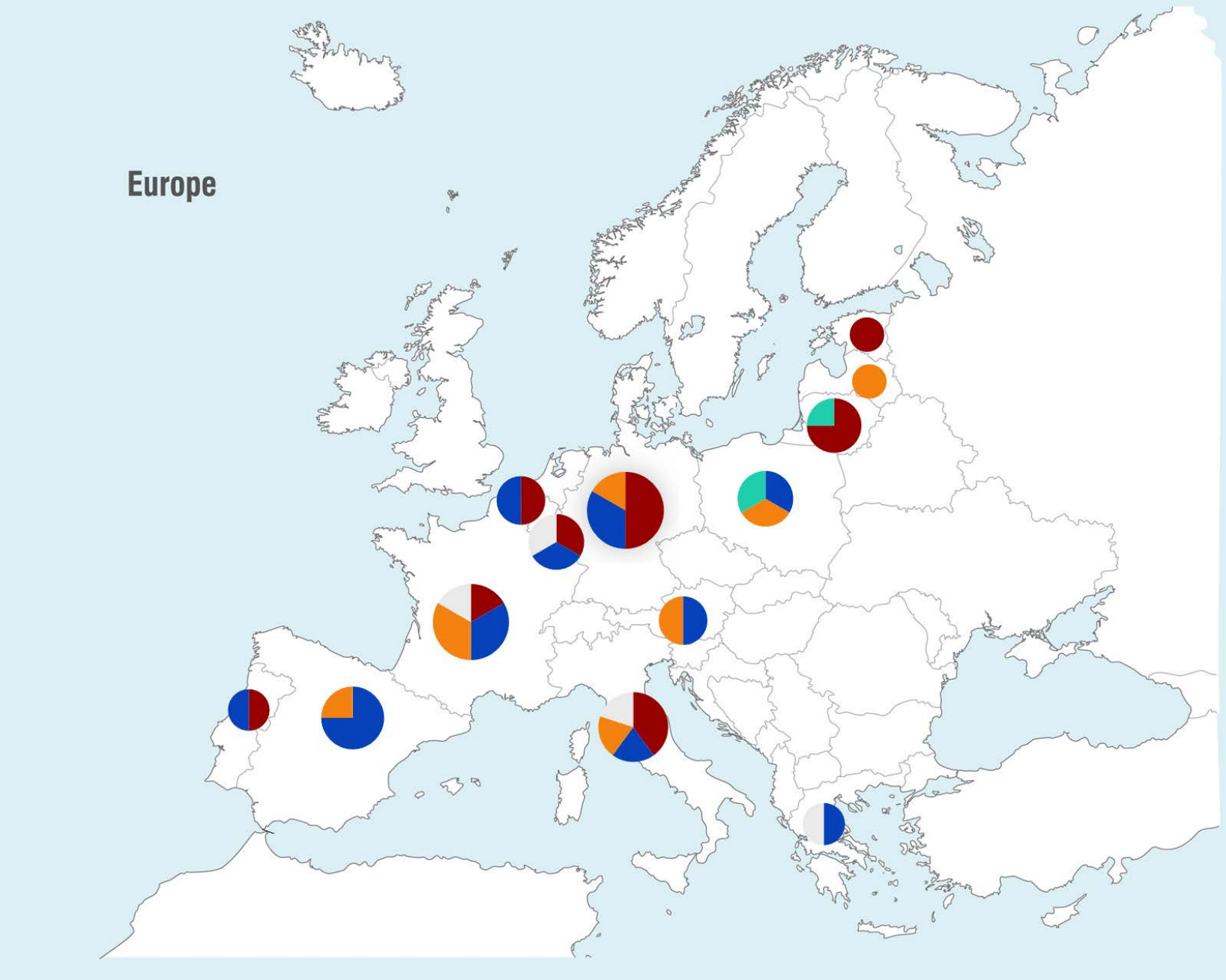
Roadmap design and results	
Early program results	
Networking	
Competence maps	Training
	Certification
	Industry
Territorial animation	
Incubators	

MONTHLY ASSOCIATE WORKSHOPS

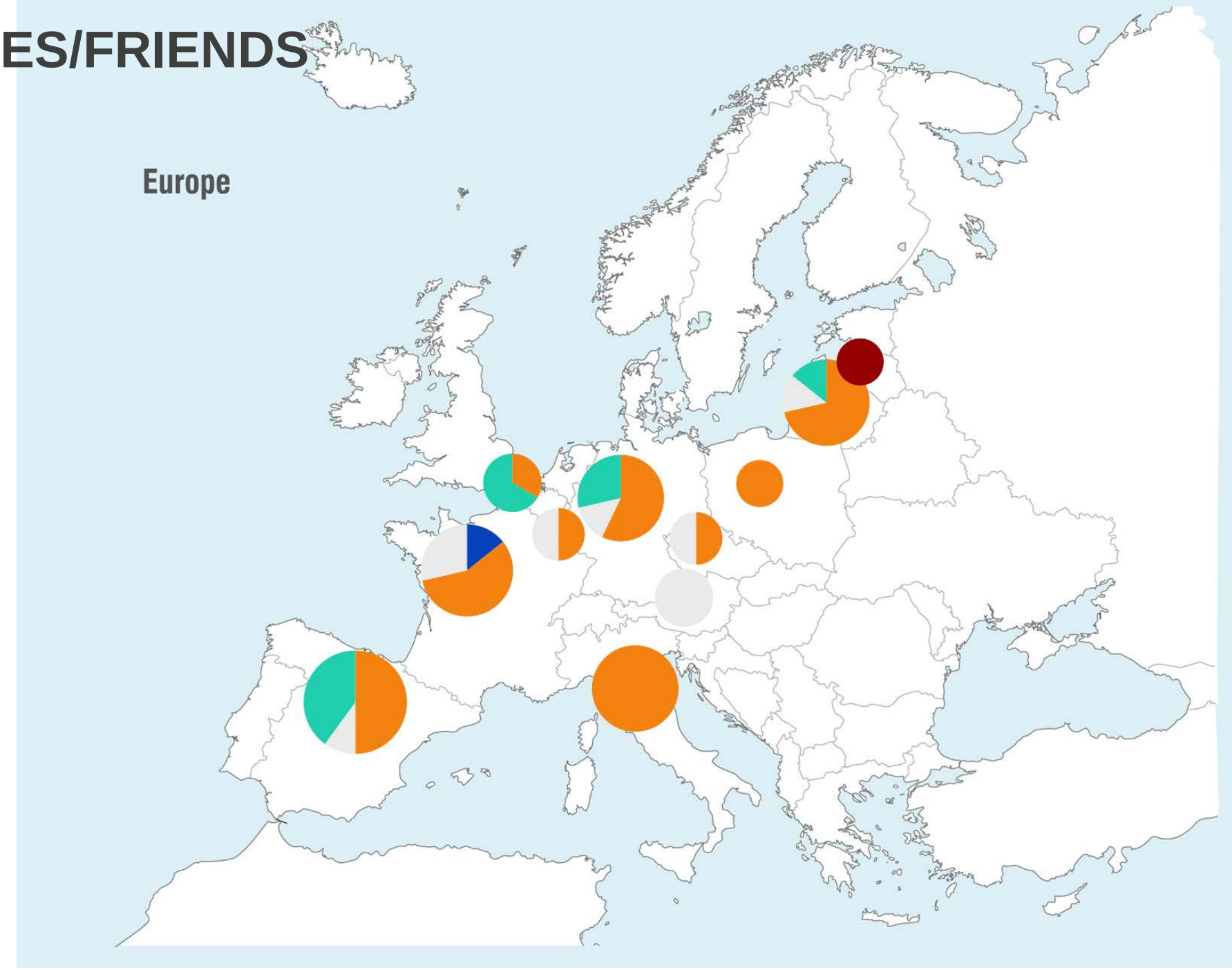
- Each month at least one local SPARTA event involving the associates!
  - Comment on roadmap
  - Spread the SPARTA results
- Many SPARTA monthly workshops done till now
  - Today Switzerland
  - Next Luxemburg (Dec.) and Portugal (Jan.)

- Opportunity to cluster and shape the local ecosystem and integrate it with the European one (SPARTA ecosystem).

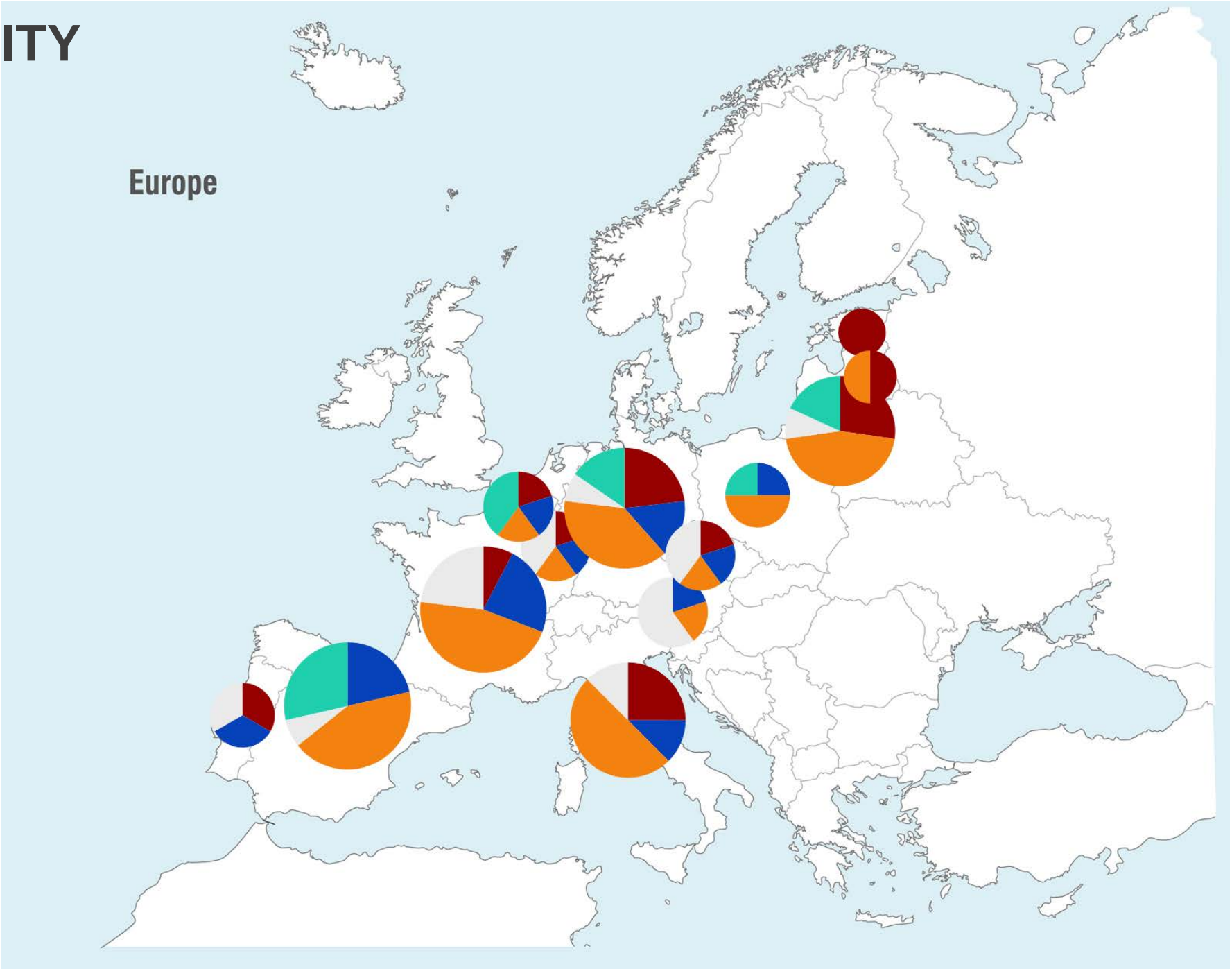
PARTNERS



ASSOCIATES/FRIENDS



COMMUNITY



BROKERAGE EVENTS

- Pulling the SPARTA Partnership (Partners, associates, friends) together to build successful consortiums/partnerships for
  - European
  - National
  - Regional

  and any kind of initiative!

- June 2020, next ~ Feb 2021

TRAVEL GRANTS

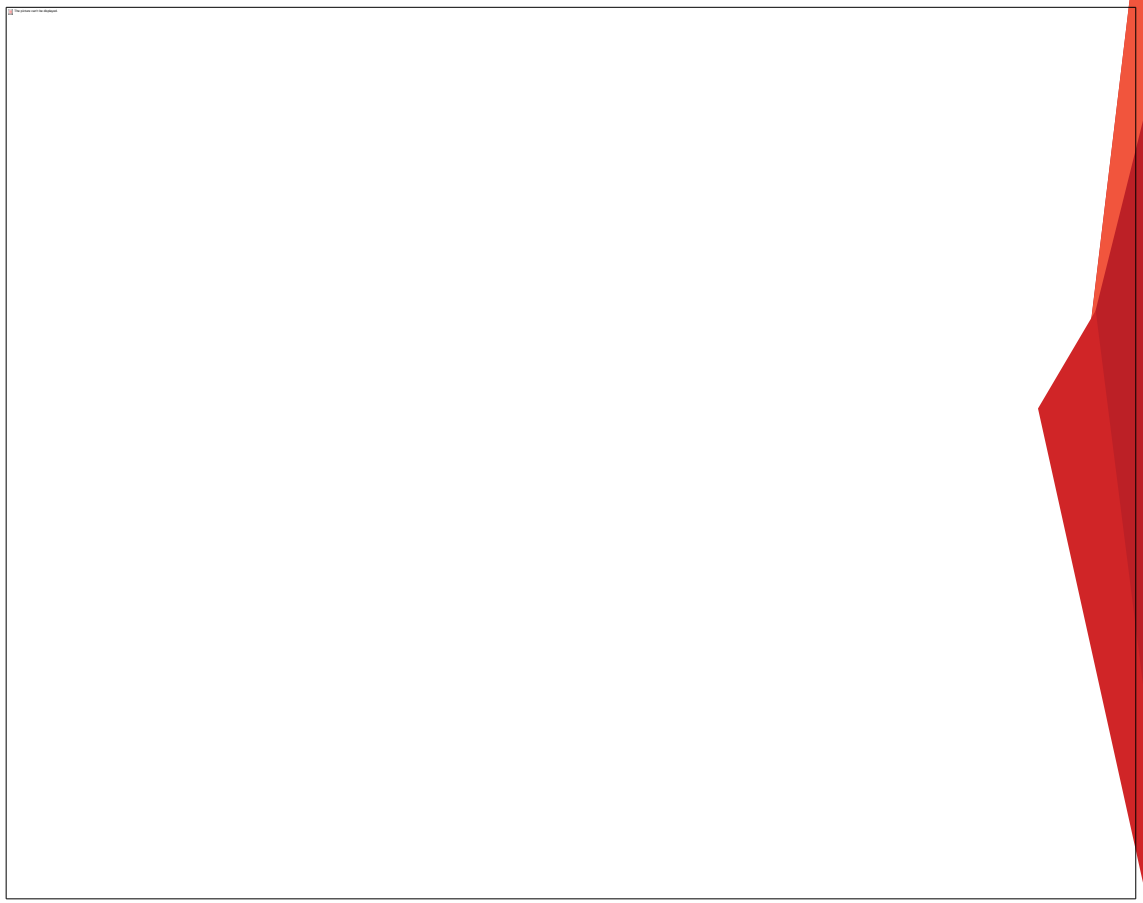
The SPARTA community aims at **gathering and sharing knowledge and expertise** whenever possible:

- Regular workshops;
- Dedicated series (SPARTA Week, etc.)
- Booths/BoF sessions during big events.

‘Grants’ are available for SPARTA associates who would **actively participate** to such activities:

- Travel;
- Accommodation.

Contact: Rayna Stamboliyska <r.stamboliyska@yeswehack.com>



SPECIFIC CONTACTS FOR ASSOCIATES/FRIENDS ACTIVITIES

PROJECT COORDINATION	Florent Kirchner, Thibaud Antignac, Augustin Lemesle	contact@sparta.eu
SCIENTIFIC DIRECTOR	Claudia Eckert	Claudia.Eckert@aisec.fraunhofer.de
PARTNERSHIP DIRECTOR	Fabio Martinelli	Fabio.Martinelli@iit.cnr.it
ROADMAP	Claudia Eckert, Thomas Jensen	Claudia.Eckert@aisec.fraunhofer.de, Thomas.Jensen@inria.fr
T-SHARK – Full spectrum cybersecurity awareness	Evaldas Bruze	Evaldas evaldas@l3ce.eu
CAPE – Continuous assessment in polymorphous Environments	Hervé Debar	herve.debar@telecom-sudparis.eu
HAII-T – High assurance intelligent infrastructure Toolkit	Alessandro Armando, Gabriele Costa	Alessandro.Armando@unige.it,gabriele.costa@imtlucca.it
SAFAIR – Secure and reliable AI systems for citizen	Michal Choras	mchoras@itti.com.pl
TRAVEL GRANTS for ASSOCIATES/FRIENDS	Rayna Stamboliyska	r.stamboliyska@yeswehack.com
JCCI – Joint Infrastructure	Raul Orduna Urrutia	rorduna@vicomtech.org
DISSEMINATION	Elisabete Carreira, Catarina Valente	elisabete.carreira@inov.pt <catarina.valente@inov.pt

SPARTA

THANK YOU FOR WATCHING!

join@sparta_eu | sparta.eu

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