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## RESearch and innovation on future Telecommunications systems and networks, to make Italy more smart (RESTART)

*National Recovery and Resilience Plan (NRRP)  
Mission 4 Component 2 Investment 1.3*

**Grant=116M€**

**Nicola Blefari Melazzi,**  
University of Rome Tor Vergata  
President of the RESTART Foundation

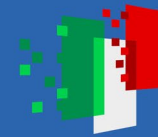




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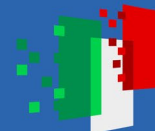


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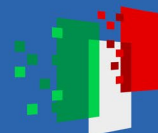
## Program Partners



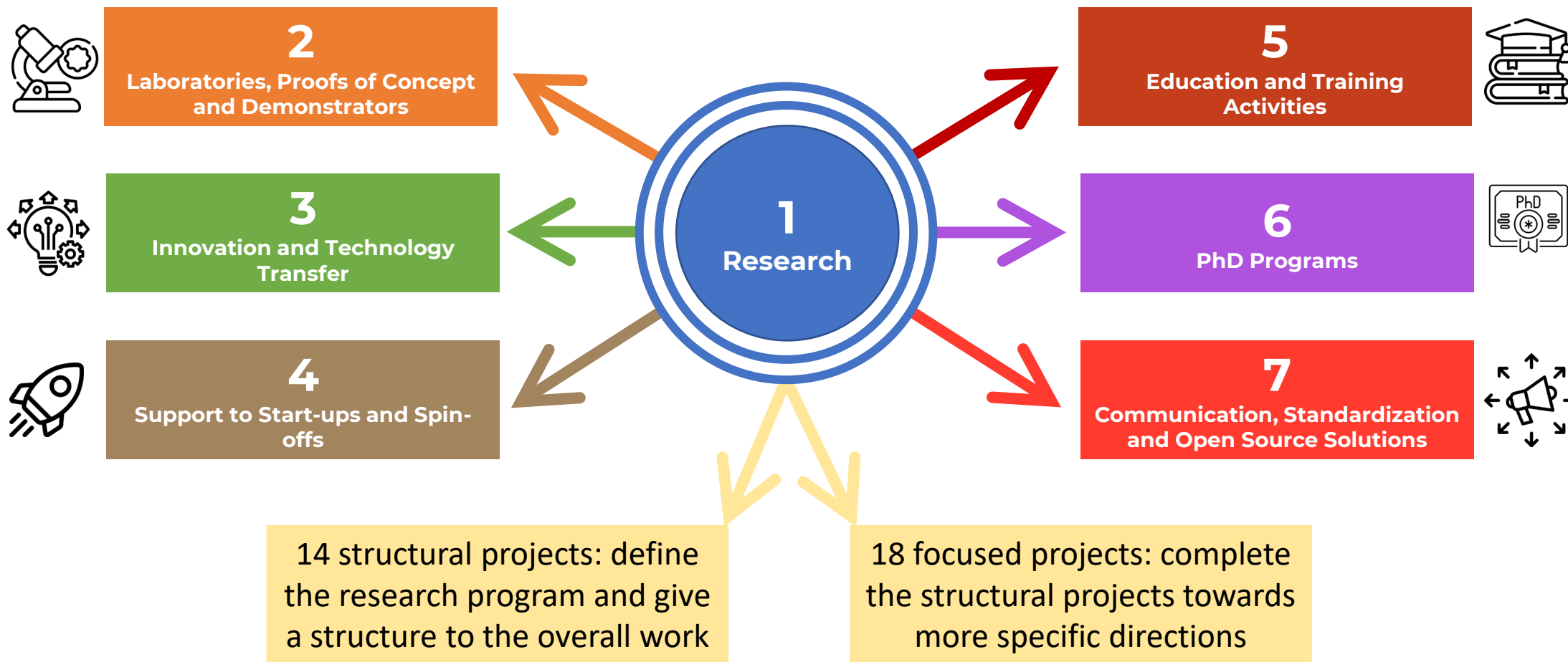


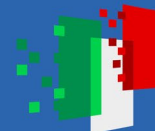
## As of now

- RESTART now includes 130 partners: the original 27 plus 103 who joined through so called cascade calls
  - 42 public universities and 3 national research centers
  - Private partners include primary operators, vendors, technology providers and SMEs
- Thus, the program represents a significant portion of the Italian Telecommunications community, fostering synergies and efficiencies on a large scale

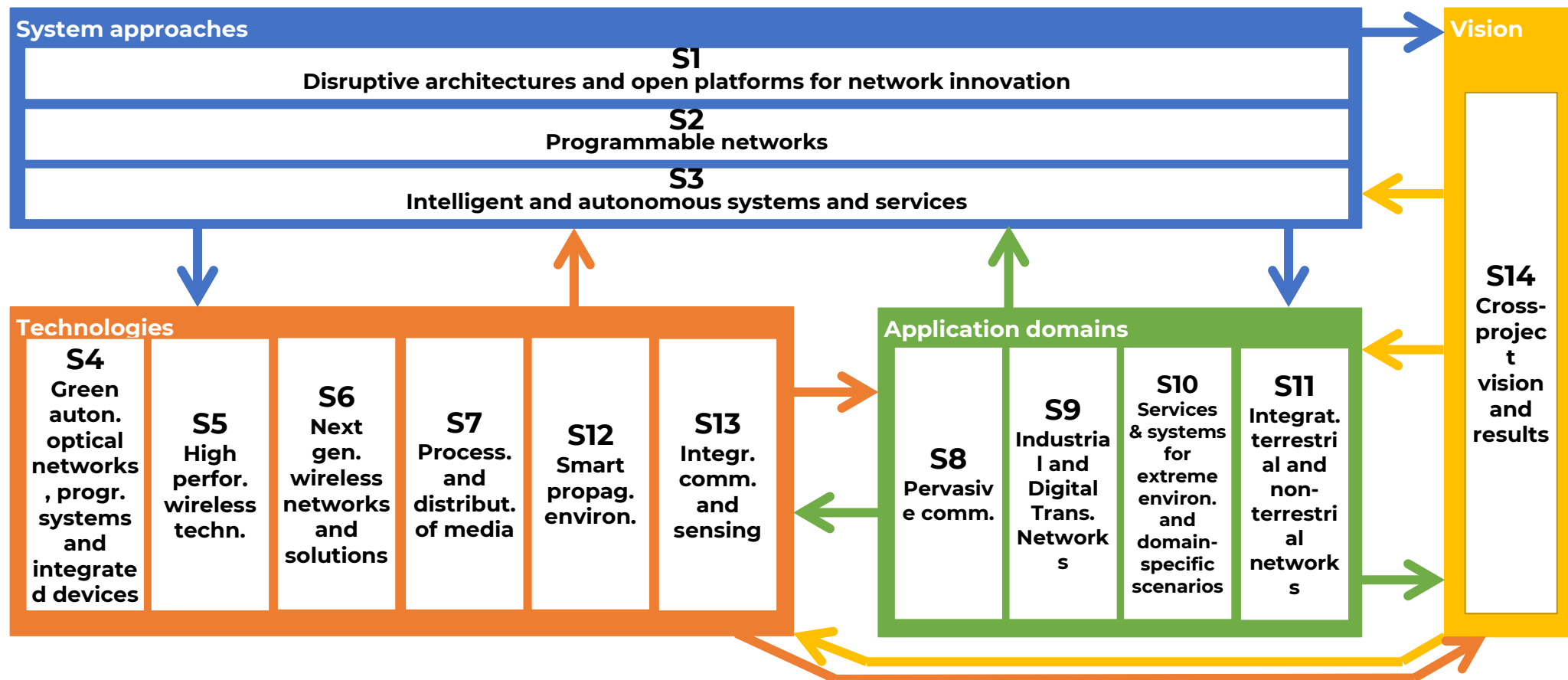


## Missions





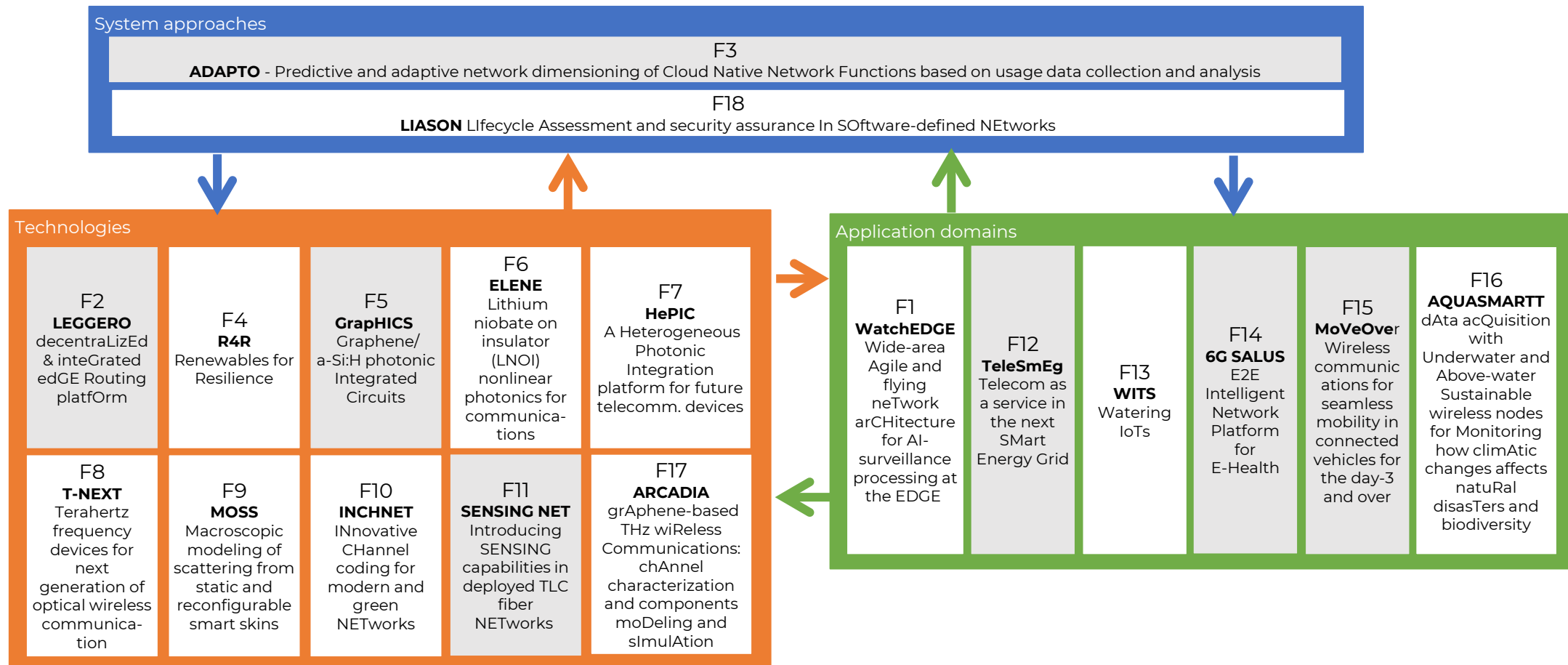
## 14 Structural projects

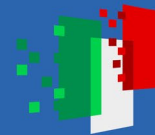






## 18 Focused projects





## 19 Grand Challenges: impact-stimulating transversal actions

Create a vision of future evolution of telecommunications ecosystem



Design networks hard to die (even in extreme conditions)



Define how to transmit meanings not information



Bend propagation to the needs of networks



Make teleportation virtually possible with digital twins



No more generations but continuous innovation in networks



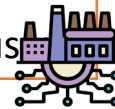
Design an Internet of Emotions



Digitalize the natural resources for a sustainable world



Add connectivity to digital transformation for a sustainable industry



Integrate media and networks for an immersive new digital world



Make the network a platform for programming and running applications



Uncovering image and video deepfakes to fight against misinformation



Sensing and protecting the world with communication signals



Make artificial intelligence distributed and networked



Open up the large spaces of high frequencies to radio access



Redefine the role of hardware components in softwarized networks



Investigate the role of hyperscalers and app developers in network design



Connect and support everything and everyone that moves



Building the future highways for fiber communications





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## Thank you

- For inviting me to give this talk
- For your attention



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