NEXT GENERATION EUROPEAN IOT
A LOOK INTO THE FUTURE

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EU-IoT AT WORK TO BUILD A STRONG EUROPEAN IoT AND EDGE ECOSYSTEM

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ECOSYSTEM BUILDING

A VALUE CHAIN APPROACH TO IMPROVE EUROPEAN LEADERSHIP IN THE GLOBAL DATA ECONOMY

- Ecosystem building is one of the key components of the EC R&I Strategy
- Closing the gap between supply and demand - matching digital innovation and vertical legacy
- Allowing smaller companies and start-ups to engage with large projects

DIRECTIONS OF TRAVEL

- The importance of Openness
  - European values can be upheld while engaging in global, open initiatives
  - Open Source, Open Data, Open Standards, Open Hardware
  - A level playing field can be achieved through an Open Ecosystem
- Blend and evolve the relevant European Communities
  - Harmonise the landscape views from IoT-centric and Cloud-centric actors
  - Bring forward the work of all relevant EC initiatives in a sustainable way
- Reconsider and shape the vision for intelligent and resilient infrastructure
  - Progress and innovation needed from a conceptual, technical, and business perspective

HOW TO GET THERE?

A RATHER ARTICULATED CONTEXT

COMPLEXITY FACTORS

- COVID19 crises
- Transition from Horizon 2020 to Horizon Europe
- Growing set of projects including planned third-party participants
- A diverse and still rather fragmented ecosystem
  - AIoTI, ARTEMIS-IA, BDVA/AIRO, GAIA-X, 5G IA, SNS JU, …
  - Eclipse, ETSI, FIWARE, etc.

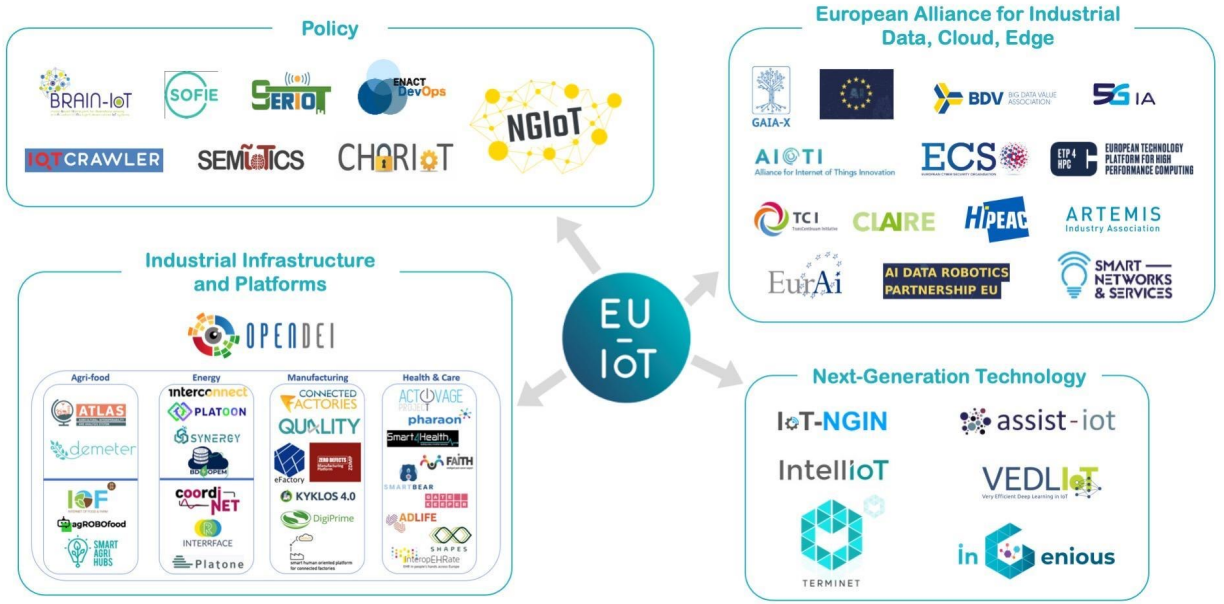
MAJOR CHALLENGES AND PRIORITIES

- Convergence of technologies – IoT/Edge/Cloud/AI/5G…
- Proliferation and fragmentation of standardisation efforts
- ➢ Improving economic performance - accelerate digital transformation
- ➢ Reducing carbon emissions – digital must green and be green

CONTRIBUTION & ACTIONS – WHERE WE ARE!

"STRATEGY ACROSS NGIOT ECOSYSTEM"
EU-IoT GUIDE

- Coordination and Advisroy Board strategic discussions
- Experts Groups engagement
- Map IoT research landscape, Research & Innovation priorities
- Towards a vibrant European IoT ecosystem – strategy white paper

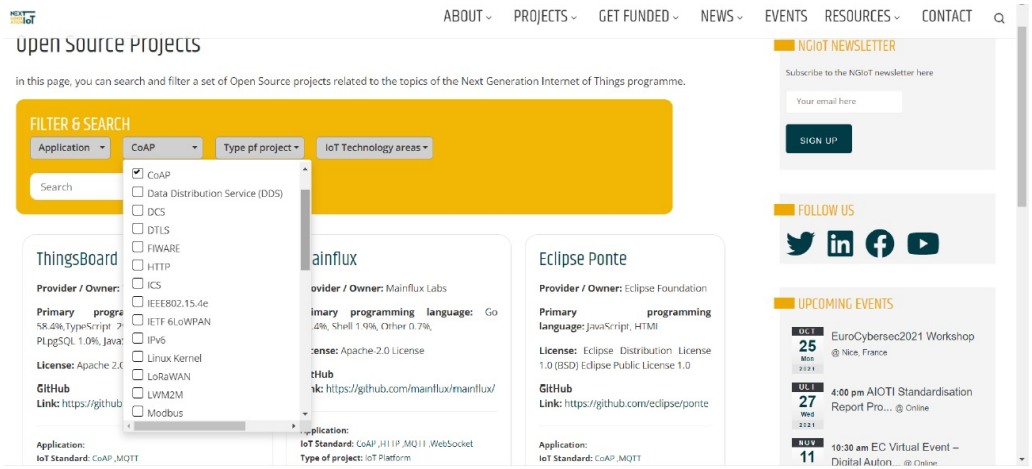


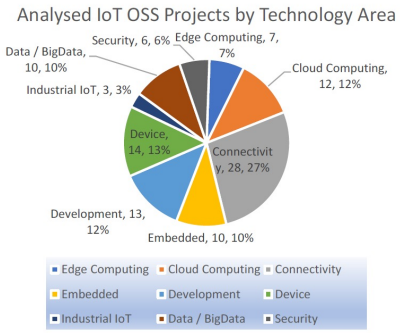
CONTRIBUTION & ACTIONS – WHERE WE ARE!

"COMMUNITY BUILDING AND INNOVATION STRATEGIES"

EU-IoT CATALYST

- Organisation of several webinars and evetns
- IoT Next Club, reaching over 500 SMEs in Europe
- NGIoT Open Calls support and engagement
- Online standardisation initiatives list and open source projects catalogue
- White papers and recommendations published in open source and standardisation



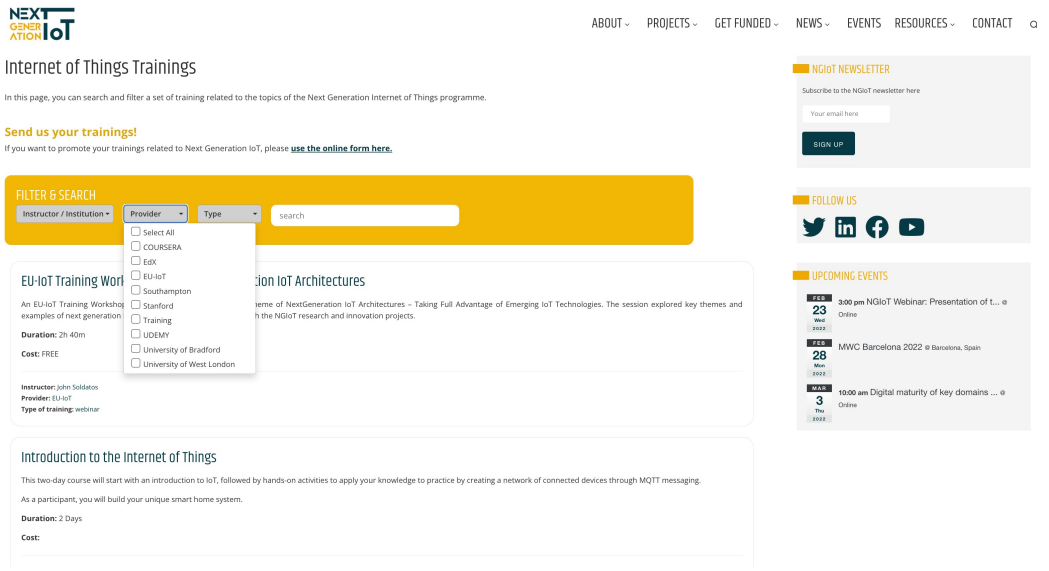


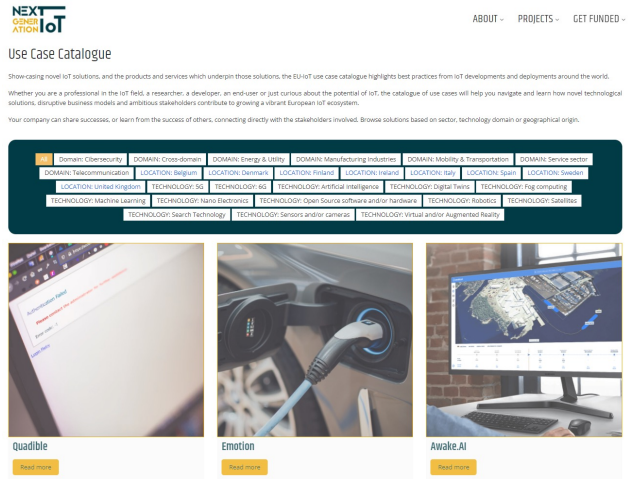
CONTRIBUTION & ACTIONS – WHERE WE ARE!

“POSITIONING AND STRENGTHENING IOT AS A DRIVER”

EU-IoT COACH

- Collection of 25 use cases from the community
- Identify and publish “success stories”
- Training seminars and online training catalogue
- Skills survey and taxonomy framework

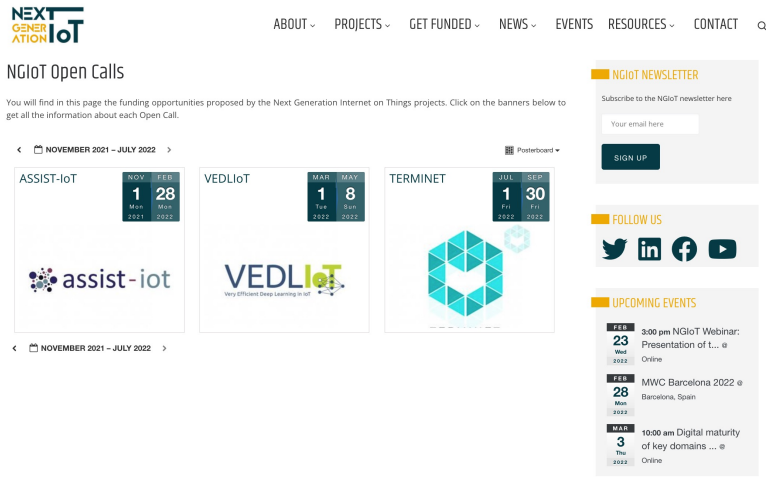


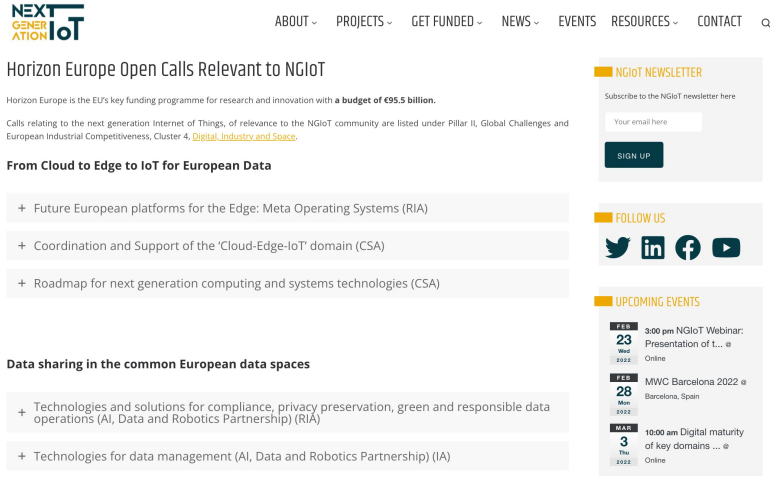


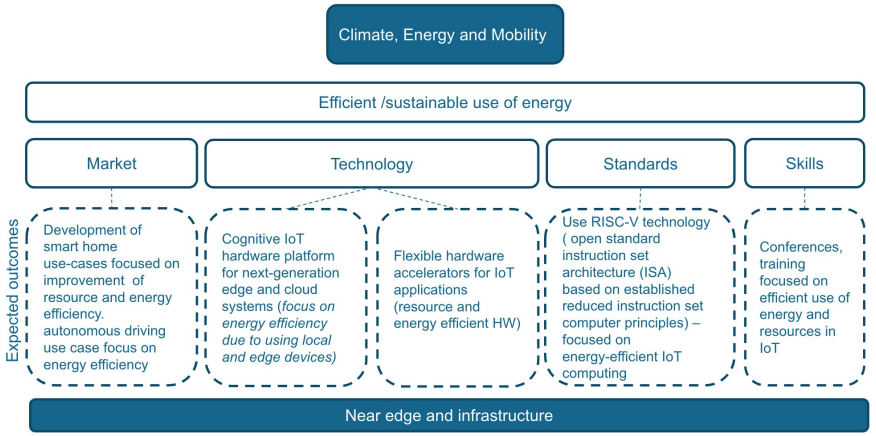
CONTRIBUTION & ACTIONS – WHERE WE ARE!

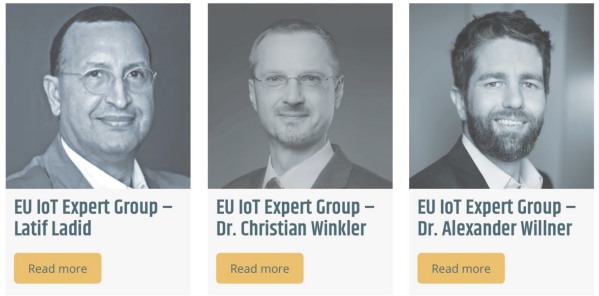
"OUTREACH AND IMPACT CREATION"
EU-IoT AMPLIFIER

- Establish NGIoT identity
- Promote EC and Open Calls funding opportunities in NGIoT
- Establish NGIoT Communication Task Force
- Promote and support community events & key achievements
- Impact assessment methodology and tools









CONTRIBUTION & ACTIONS – WHERE WE GO!

"STRATEGY ACROSS NGIOT ECOSYSTEM"
EU-IoT GUIDE

- NGIoT Roadmap and policy recommendations
- Broad and open strategic dialogue within NGIoT community

"COMMUNITY BUILDING AND INNOVATION STRATEGIES"
EU-IoT CATALYST

- Wide, open and sustainable NGIoT community
- Recommendations on research priorities and innovation strategies to standardization

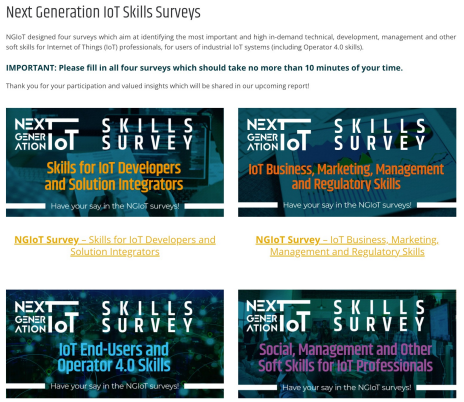
"POSITIONING AND STRENGTHENING IOT AS A DRIVER"
EU-IoT COACH

- 30 use cases and success stories
- IoT training programmes recommendations, certification & learning paths
- IoT business model innovation patterns and acceleration support activities

"OUTREACH AND IMPACT CREATION"
EU-IoT AMPLIFIER

- A live, dynamic and interactive online community
- Guidelines for IoT collaboration sustainability
- Impact of NGIoT initiatives

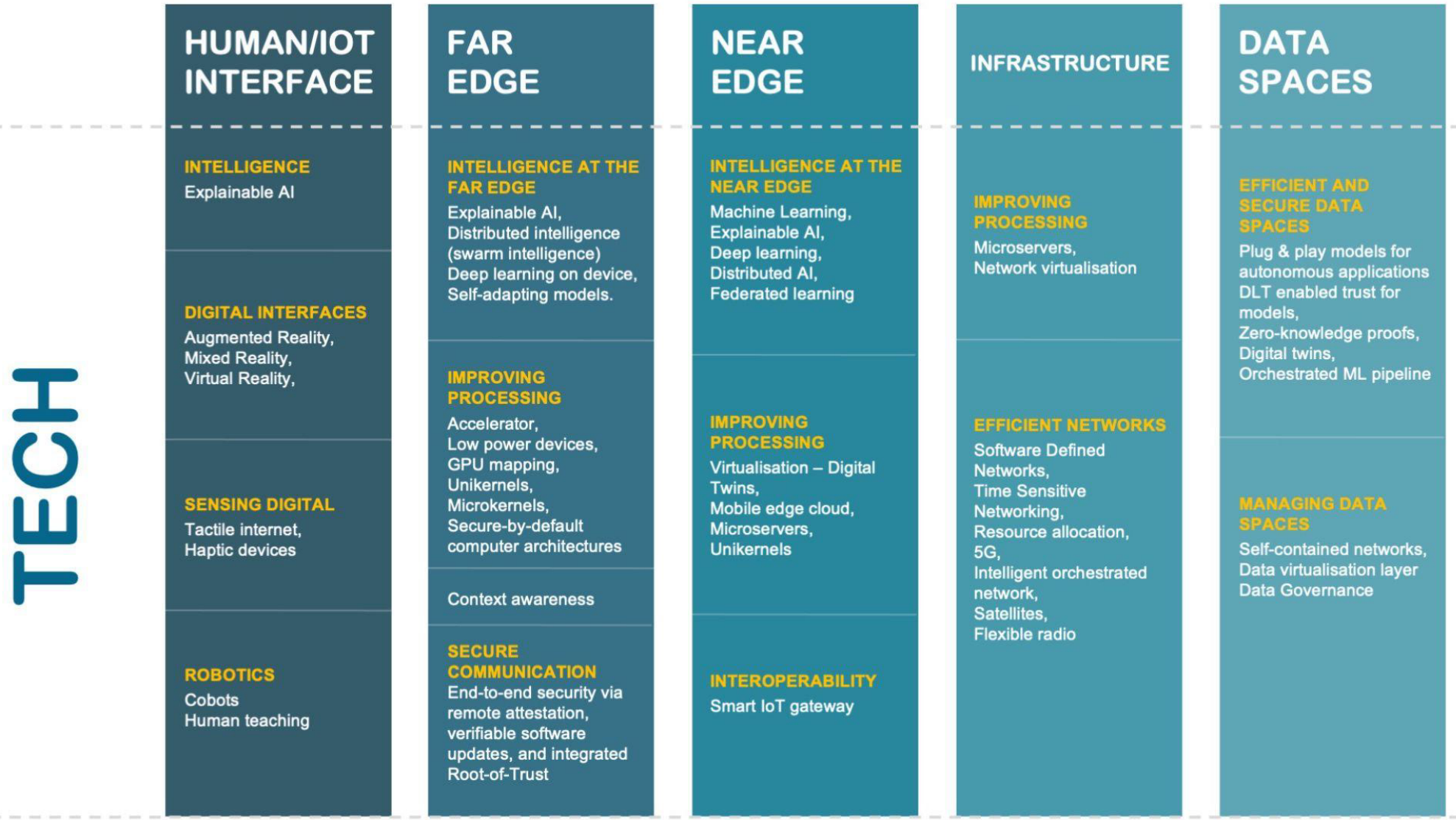
IOTWeek



https://www.ngiot.eu/next-generation-iot-skills-surveys/

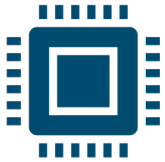
LOOKING AHEAD

THE MOVE TOWARDS THE EDGE IN NGIOT



AN INTELLIGENT EDGE – A COORDINATED IOT

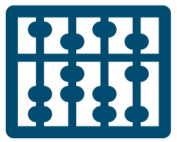
SHIFTING TECH



Hardware accelerators on device
Intelligence on chip

Decentralised architectures
Multi-access and flexible

Transfer learning approaches
Federated data models



Context-dependent IoT
Edge platforms

PULL FACTORS

Low power
Reduced traffic

Reduced latency
Real-time decisions

Privacy
Security

Efficiencies:
Cost and Sustainability

REALISING THE NGIOT FUTURE

- **Collaboration and more collaboration**
  - Unifying ecosystems and networks to deliver together and bridge the gaps.
- **Intelligence across the board from TinyML to HPC**
  - New machine learning approaches (federated, embedded and small data learning).
- **Open source and open standards**
  - Defining the interoperability on the edge-cloud, with an end-to-end perspective.
- **New skills and new specialists**
  - Keeping up with the change in technologies to ensure adoption, combining skillsets.
- **Underpinning the green transition through digital**

THE EUROPEAN WAY

GROWING A SUSTAINABLE AND COMPREHENSIVE NEXT GENERATION IoT ECOSYSTEM

Ultimate ambition

- Connect the dots and foster synergies among all relevant stakeholders
- Boost industrial competitiveness and sustain the economic recovery and growth
- Promote sustainable and inclusive development of our society
- Ensure EU digital autonomy and technological sovereignty

What does it take to get there…

- Overcome diversity and fragmentation
- Leverage on success stories and best practices – provide the means
- Develop adequate business models and instruments – reskilling-upskilling is necessary
- Align on standardization efforts
- Dedicated investments, both public and private!

THANK YOU FOR YOUR ATTENTION

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EU-IoT project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 956671