



# Emerging 5G business opportunities and models: how 5G can enable new market players in the logistics domain

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**5GLOGINNOV**

# Agenda



- 5G-LOGINNOV Plan for boosting marketplace and emergence of new actors
- Assess current market scenarios
- Stakeholders' assessment: the Survey
- Involving new actors: the Open Call
- Collaborative design of new business models

# 5G-LOGINNOV Plan for boosting marketplace and emergence of new actors



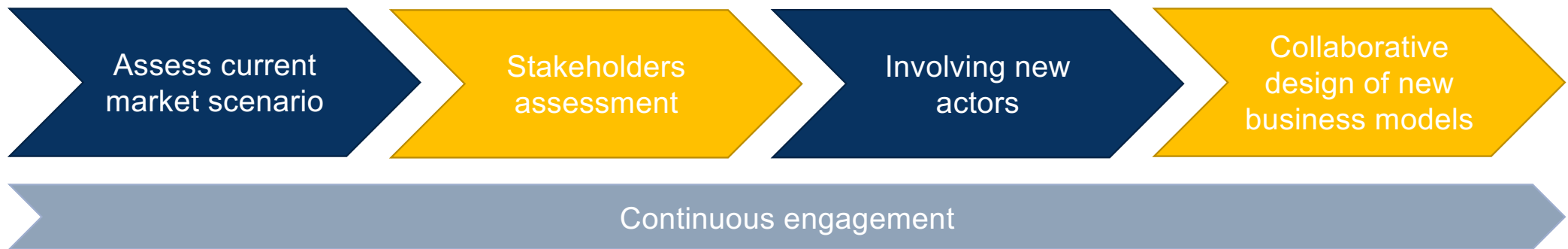
## Goals:

- Analyse the current and future market linked to the 5G core technologies innovation
- Opportunities to new and established actors to create new businesses
- Market strategy for stakeholders
- Facilitate the introduction of 5G core innovation technologies in logistics operations

# 5G-LOGINNOV Plan for boosting marketplace and emergence of new actors



Approach:





**Assess current market scenarios**



# Assess current market scenarios

- Analysis of current applications of 5G technologies and ongoing projects with focus on port operations.
- Analysis of 5G Public-Private Partnership initiatives, including 5G Brazil, 5GMF, 5G Forum, 5G Americas, 5G IMT-2020
- Definition of current market scenario and future perspective for potential applications of 5G technologies.

Description		
Technologies	Network Slicing	Objectives
Artificial Intelligence	MEC	Reduce environmental impact
Blockchain	URLLC	Autonomous vessels/self-driving vehicles
Cloud	mMTC	Remote control of cranes
IoT	eMBB	Safety (port and personnel)
5G		Logistics automation
Augmented Reality/Virtual Reality		Efficiency and productivity in port operations
Robotics		Maritime communications
		5G capacity on demand in rural /underserved areas
		Smart mobility
		Truck platooning
		Accelerate innovation in port
		ICT tool to support operations
		Smart cargo handling
Project initiator	Stakeholder	Sector
Public	Local Administration	Smart Port
Private	Logistics and Transportation company	Other sectors
Mixed	Citizens/Customers	Smart mobility
	Port Authority	Smart transport and logistic
	ICT & Telco Company	
	Other company	
	University & Research Institution	
Business model		
Management	Infrastructure financing	Financial resources
Public	Public	Public
Private	Private	Private
Mixed	Mixed	Mixed
Purpose		
End-User	Product	Geographical Target
Local Administration	Running solution	Local
Logistics and Transportation company	Ongoing development	Europe
Citizens/Customers	Specified product/service	International
Port Authority/Operators		
Company		
University & Research Institution		
City		

# Assess current market scenarios



## Key outcomes:

- Adoption of 5G (100%), Artificial Intelligence (78%), IoT (67%) and AR/VR (56%)
- Purposes: Full digitalization and automation of terminals, and autonomous vehicles (33%), Improve efficiency (44%) and safety (56%)
- Lack of planning in terms of economic sustainability and scalability of the solutions
- Lack of collaboration with non-port stakeholders (trust and better alignment with urban freight transport)

# Stakeholders' assessment

The background of the slide is a solid dark blue. Overlaid on this are several large, flowing, organic shapes in a lighter shade of blue. These shapes are positioned in the upper right and lower left areas, creating a sense of movement and depth. The overall aesthetic is modern and professional.





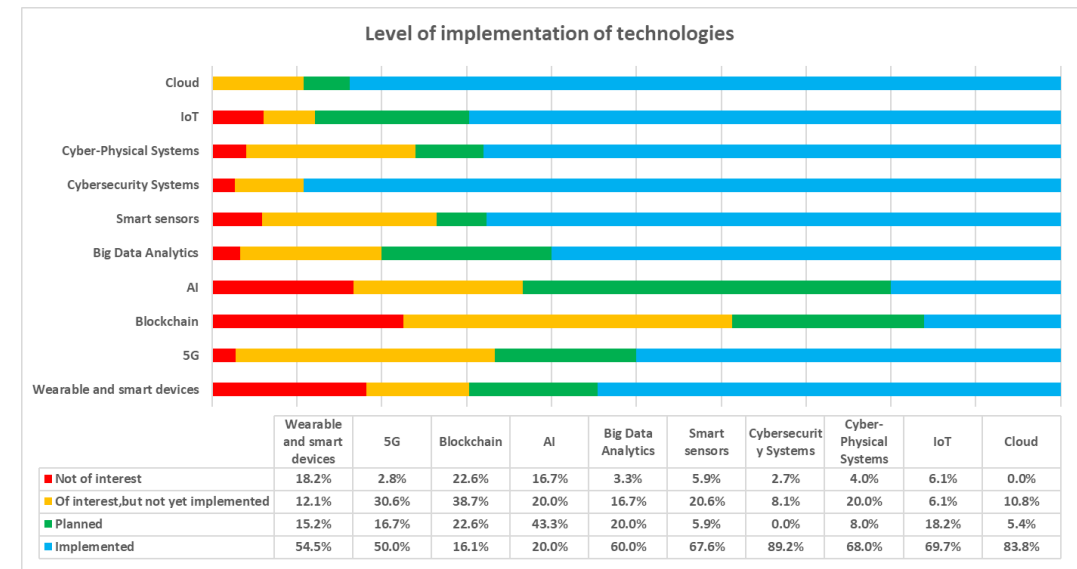
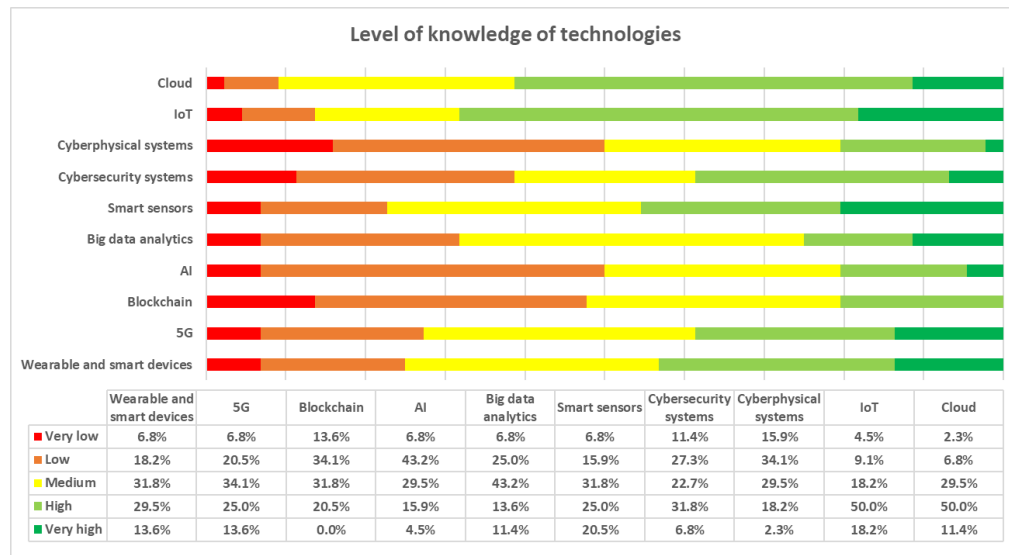
# Stakeholders' assessment

- Survey to assess the level of knowledge and adoption of innovative technologies
- Starting point for the development of new products and services
- Computer Aided Web Interview to stakeholders in each Living Lab
- Survey structure
  - Details about the respondent and its organisation.
  - Assessment of the respondent's awareness and knowledge on Industry and Logistics 4.0 paradigms.
  - Assessment of the respondent's awareness and knowledge on 5G, Internet of Things and Digital Twin, Cloud, Blockchain and Artificial Intelligence technologies.
  - Assessment of the Critical Success Factors.
  - Use case impact assessment.
  - Contacts and further participation.



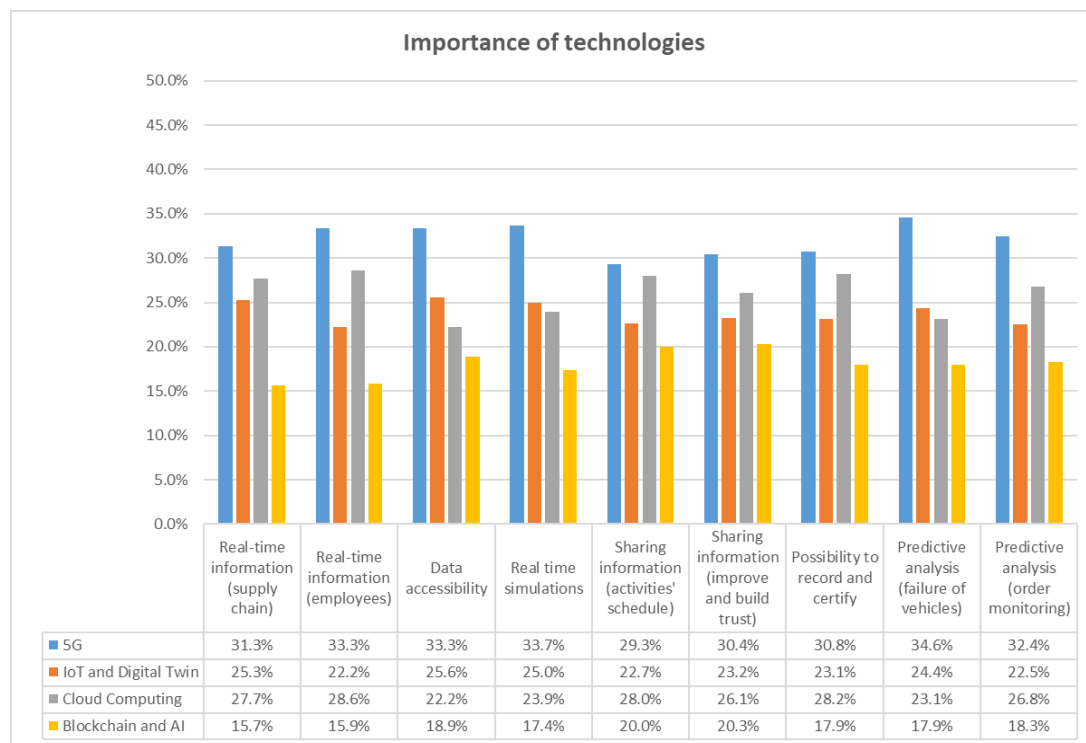
# Stakeholders' assessment

- High level of knowledge and implementation of the Industry 4.0 and Logistics 4.0 enabling technologies
- Expected benefits: improvement of efficiency (14.1%) and quality of the service provided, thus optimizing the operations, and reducing times and costs (13.7% and 11% respectively)





# Stakeholders' assessment



- Data collection and analysis
- Low trust in data sharing technologies can act as a barrier
- Create **collaborative environments** in the Living Labs to test the innovative solutions on a limited scale before replicating and scaling them on wider markets



**Involving new actors**



# Involving new actors

- Open Call for the selection of five innovative start-ups and SMEs to develop 5G-based solutions
- The services provided by selected applicants will include:
  - The design and development of proposed ICT solution
  - The provision of all paper/media documentation needed for its on-field operation
  - The deployment of proposed ICT solution in the physical context and infrastructure of (at least) one of the three Living Labs of the project
  - On-site support to the deployment, installation and validation of the solution
  - Any other support to project management activities
- More information and criteria are available at:  
<https://5g-loginnov.eu/open-call/>



# **Collaborative design of new business models: ongoing and future steps**

# Collaborative design of new business models



- **GUEST methodology:** designed to control the process, from the original idea to its implementation
- Provide a conceptual and practical tool to the various stakeholders, enabling them to communicate their vision
- Develop new business models collaboratively for:
  - Port maintenance and operations' efficiency;
  - Traffic Management;
  - 5G logistics corridors organizing CIDs (Collaborative Information Days), in particular in collaboration with ALICE.

# Collaborative design of new business models



## Stakeholder profile

Assessment of the stakeholder's requirements, jobs, gains and pains

## Business models

The participatory process and stakeholder engagement will assess new business models, requesting feedback and input from the stakeholders' analysis



## Solution design

Intensive study and design of the solutions through the Solution Canvas

## Feedbacks from actors

Implementation and test with a group of representative stakeholders who will give their feedbacks throughout the entire process, allowing to set up guidelines to foster the entrance in the logistics market of new actors





**Thank you for your  
attention**

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