Logistics

1. Short Description

Logistics is s a key pillar of the global supply chain and its efficiency has a direct impact of the performance and competitiveness of supply chains. However, logistics has been challenged by the pandemic and other crisis in the recent years and is facing the digital divide both in Europe and around the world. Digital and Deep Tech solutions are required to enable the simplification and efficiency of the logistics sector.

Digital and Deep Tech solutions to enable the required simplification and efficiency of logistics activities are a key component of global supply chains. LogTech comprises three main domains Freight tech, Warehouse Tech, and Last Mile Delivery to improve competitiveness of Logistics operations. Freight Tech includes Maritime, Waterways, Air and Rail freight, Trucking Logistics, Middle Mile, Fleet Management and Routing & Loading Optimization tools. Warehouse Tech includes warehouse automation, warehouse fulfilment and sustainable packing automation, Last mile delivery includes Delivery Services, Ultrafast Delivery, Drones, evTOL and reverse logistics.

2. The Problem

While we live the 21st century and the 4th Industrial revolution with a first of its kind AI wave, the logistics sector in Europe and around the world is still facing several major challenges in tis digitalization journey:

- Siloed public private stakeholder environment, but also with the public sector and the private sector.
- Lack of data harmonization and standardization, where a simple ETA at a port terminal or warehouse house has a different meaning per type of stakeholder.
- Lack of optimization and automation of business processes and inter-organizational business processes.
- Obsolete but reliable interoperability, whereas electronic data interchange (EDI) is still the norm in the industry. The European Commission interoperability journey started in 1999, followed on 2010 Interoperability Framework but Interoperability is not by default in logistics.
- Visibility platforms are critical for cargo owners' national, regional or Intercontinental Control Tower but data quality is still not the norm.
- Digital divide is existing within Europe and between the global south and global north.
- Cybersecurity should be the norm per NIS2 Directive but there is a long journey towards full compliance.
- Supply chain security is on the top of agenda of supply chain stakeholders as illegal trafficking is exponential.
- Lack of legal framework on electronic transactions record, autonomous systems and data collaboration platforms.
- Lack of Implementation of Electronic Freight Transport Information (eFTI)

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- Lack of seamless integration requirement of initiatives impacting supply chain such as maritime single window environment and customs single window environment, Customs Data hub and other data collaboration platforms.

3. Sustainability and Sovereignty Impact Potential for Europe

Developing and deploying innovative solutions for Logistics is essential for Europe:

- To empower decarbonization through just in arrival of ships, trucks, train, barges and aircraft and optimized multimodal business processes
- To remove the red tape and dramatically reduce illegal trafficking
- To enable cyberthreat resilience
- To improve competitiveness as only 8 EU countries rank in the Top 20 World Bank Logistics Performance Index
- To reduce the burden on BCOs

4. Deep tech and Digital Innovation Potential

A broad range of Deeptech and Digital innovations will be considered to address the challenges mentioned above. These include, but are not restricted to:

- Actionable Artificial intelligence
- Embedded AI
- Predictive and Prescriptive Analytics
- Hyper automation
- Nextgen robots
- Smart operations
- Mobile assets optimization
- Employee engagement applications
- Augmented workforce
- Sustainability tools
- ESG applications
- Ecosystem collaboration
- Industry Cloud platforms and Sovereign Cloud platforms
- Composable Application Architecture
- Integration Services
- Security mesh
- 6G
- IoT
- Digital Twins
- Immersive experience
- Autonomous things

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5. European Market Potential

The goal of the digitalization of Logistics in Europe is to foster growth, competitiveness, more efficient and innovative logistics services, jobs, and the internal market, in particular through making better use of the opportunities offered by digital technologies.

The European Commission estimates that the eFTI only will enable of EUR 20-27 billion administrative cost savings, EUR 75-102 million work hours More efficient and innovative logistics service, 1300+ tones CO2 emissions savings*

The Alliance for logistics innovation through collaboration in Europe estimates that a 10% to 30% improvement in efficiency in the EU logistics sector would potentially equal a € 100 – 300 billion cost relief for the European industry.

The global digital logistics market was valued at $24.8 billion in 2022, and is projected to reach $155.3 billion by 2032, growing at a CAGR of 20.4% from 2023 to 2032 according to Allied Market Research.

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