

alice

Alliance for
Logistics Innovation
through Collaboration
in Europe

An insight into ALICE: The European Technology Platform for Logistics

Asamblea Logistop, Madrid 25 de Junio 2015

Fernando Liesa

Lider Innovación logística, ENIDE

Secretario General, ALICE

Agenda

Introducción: Por qué, para qué, quién, que y como...

Resumen y contenidos de los roadmaps

Iniciativas en otros países

Oportunidad de mercado y visión

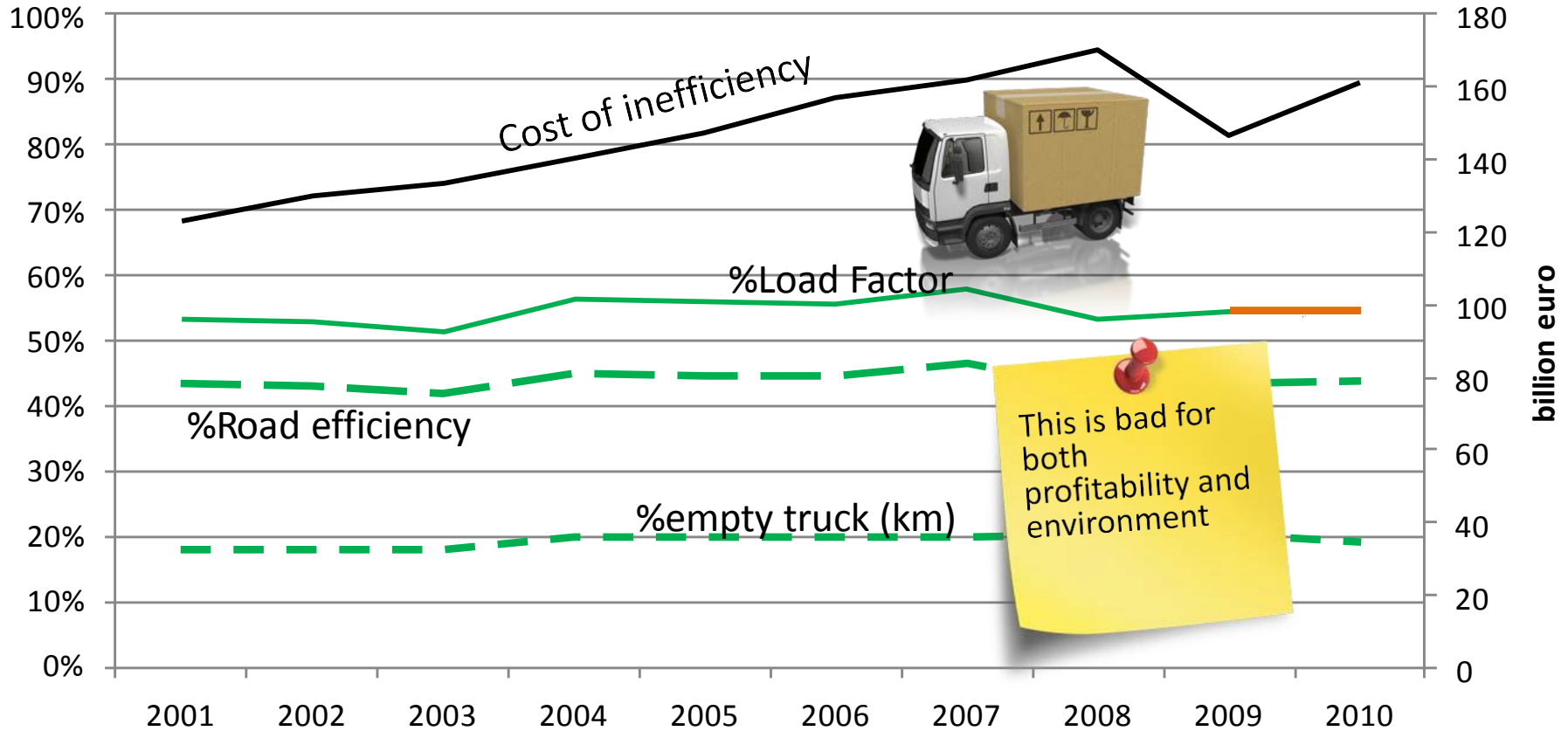
Un 10% a 30%  eficiencia en el sector logístico UE

=

€ 100 – 300 miles de millones costes evitados a
la industria europea*

Lograr que el sector logístico contribuya a la competitividad
de la industria y a los objetivos de la UE

10 años: Cero mejoras en factor de carga **alice**



Ineficiencia en el transporte = 160 mil millones de pérdidas

1.3% huella CO₂

No podemos ser complacientes con los paradigmas existentes

- Los factores de carga de los camiones no pueden mejorarse
- Soluciones intermodales ralentizan la cadena de suministro y aumentan el inventario
- Reducción de inventarios como un objetivo financiero puro
- La colaboración horizontal es imposible

.....

ALICE es una Plataforma Tecnológica Europea (ETP) pero que son las ETPs?

*"European Technology Platforms (ETPs) are industry-led stakeholder fora that develop short to long-term research and innovation agendas and roadmaps for action at EU and national level to be supported by both private and public funding"**

www.ec.europa.eu/etp

ALICE Steering Group composition



Related associations and ETPs/PPPs represented in the SG



Plenary Members

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BOSCH
Invented for life



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

BIBA



enide



Instytut Logistyki i Magazynowania

TNO innovation for life

argus I



CHALMERS
UNIVERSITY OF TECHNOLOGY



KVLEIDO



LOGIT ONE™

FM LOGISTIC



GEA
CONSULENTI DI DIREZIONE
al fianco dell'impresa italiana dal 1965

...20+ in process/interested

ALICE Chair and vice-chairs

- Chairman:



Ralph Keck. Director. Product Supply – Global Logistics



- Vice-chairman:



Prof. Dr. Rod Franklin. Academic Director Executive Education



- Vice-chairman:



Prof. Dr. Henk Zijm. Research Director (DINALOG)



ETP Working Groups & Chairs

Logistics + Supply Chain

Sustainable, Safe and Secure Supply Chains

Corridors, hubs and synchro-modality

Information systems for interconnected logistics

Supply Chain Coordination and Collaboration

Urban Logistics



Prof. dr. Albert Venstra

Mr. Dario Biggi

Angelo Aulicino

Marcin Hajdul

Lóri Tavasszy

Andreas Nettsträter

Rod Franklin

Stefano Persi

Sergio Barbarino

Dirk 't Hooft

Paolo Paganelli

Paola Cossu

Emilio Gonzalez



Instytut Logistyki i Magazynowania



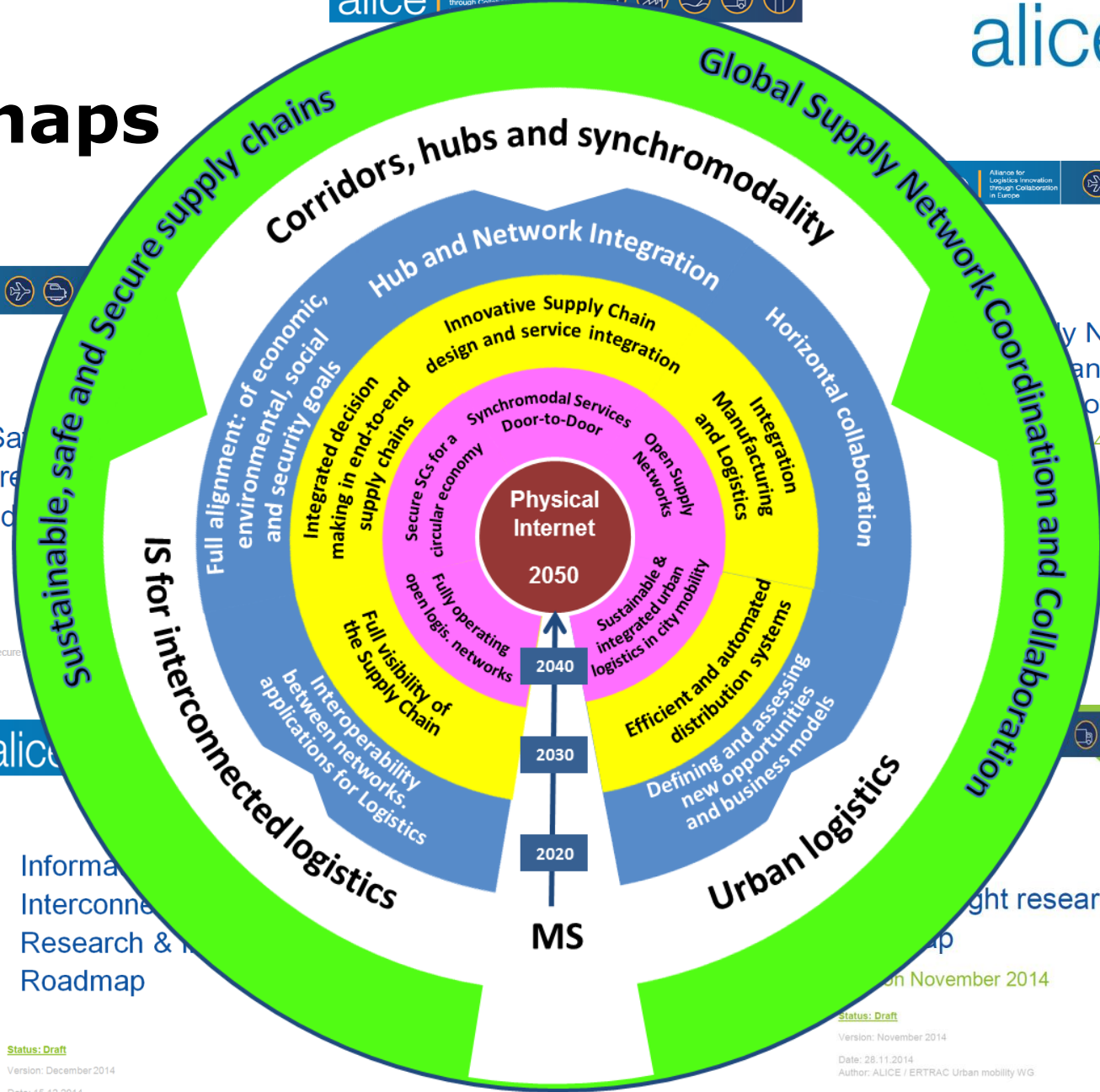
European Road Transport Research Advisory Council



European Road Transport Research Advisory Council



Alice Roadmaps



Sustainable, Safe and Secure Supply Chain research and innovation roadmap

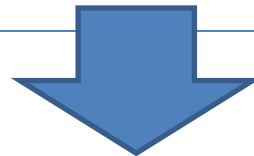
Status: Draft
Version: October 2014
Date: 25.10.2014
Author: ALICE Sustainable, safe and secure supply chain WG 4

Information Systems for Interconnected Logistics Research & Innovation Roadmap

Status: Draft
Version: December 2014
Date: 15.12.2014
Author: ALICE Information Systems for Interconnected Logistics WG 4

Status: Draft
Version: November 2014
Date: 28.11.2014
Author: ALICE / ERTRAC Urban mobility WG

*Future logistics is based on an **open global logistic system:** (connecting logistics networks), founded on physical, digital, and operational interconnectivity (access to resources), enabled through encapsulation of goods, standard interfaces and protocols, with the aim to move, store, produce, supply and use physical objects throughout the world in a manner that is economically, environmentally and socially efficient and sustainable*



*We call this the **Physical Internet***

Expected Impacts

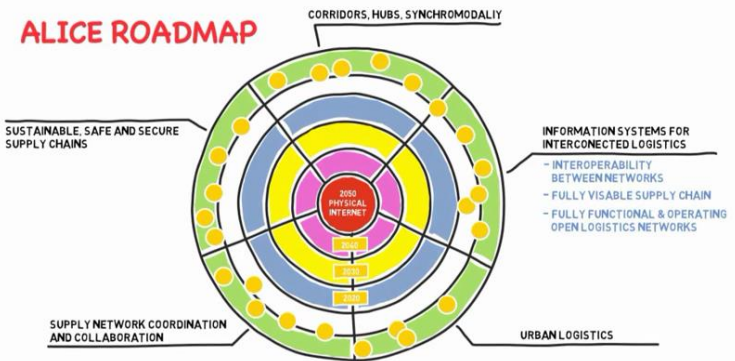
	Primary Impacts	Secondary impacts
People	<ul style="list-style-type: none"> + Increase customer satisfaction + Products availability + Secure societies 	<ul style="list-style-type: none"> + Load factors: weight and cube fill of vehicles + Volume flexibility (Time to +/- capacity) + % Synchromodal + Asset utilization + Supply Chain Visibility + Reliability of transport schedules + Perfect order fulfilment + Transport routes optimization (reducing Kms) + Transport actors using automatic data exchange + Cargo and logistics units integrated in the automatic data exchange + Upside / Downside Supply Chain Adaptability and Flexibility + Decoupling logistics intensity from GDP - Empty Kilometres - Waiting time in terminals - Risk factor reduction - end-to-end transportation time - Travel distance to reach the market - Lead times
Planet	<ul style="list-style-type: none"> - Energy consumption (kWh Logistics/GDP) + Renewable energy sources share - CO₂ Emissions (kg CO₂/tKm) 	
Profit	<ul style="list-style-type: none"> + Return on assets and working capital - Total supply chain costs - Cargo lost to theft or damage 	

Alice Videos



PHYSICAL INTERNET

www.youtube.com/watch?v=PJyzFaKOXnY



www.youtube.com/watch?v=4vc7XoEYUs8

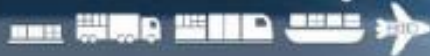
Why become a member?

- Contribute needs and **challenges** to industry research and innovation **in logistics and supply chain management**
- Support the European Commission to **define EU co-funded programs**, starting with HORIZON 2020, and to **implement the outcomes** of these programs in support of competitiveness and sustainability targets.
- Access a network for **interdisciplinary collaborative research** involving industry, academia and public institutions.
- Be at the **forefront of industry innovation, development and implementation**
- Have a role in **developing regulatory requirements needed for innovation implementation**
- Have the right to **participate in the WGs and assembly** as well as the option to **be part of the Steering Group** and recommend experts to participate in the different WGs.

SAVE THE DATE

Physical Internet

Efficient Sustainable Logistics



2nd INTERNATIONAL PHYSICAL INTERNET CONFERENCE

6th-8th JULY, 2015 in Mines ParisTech at PARIS

LATEST RESULTS FROM RESEARCH, SOLUTIONS AND A ROADMAP TOWARDS GLOBAL LOGISTICS INTERCONNECTIVITY

Physical Internet (PI) proposes to exploit the Internet metaphor, proposing the progressive deployment of a new logistics system paradigm for a networked economy.

Relying on the general idea of the Internet to transmit packages of information packets (datagram) through all networks the Physical Internet would not deal with materials, but rather with interlocking modular containers encapsulating objects. Physical Internet drives to high-performance logistic centers, movers and systems, making it seamless, easy, fast, reliable and cheap to interconnect physical objects through modes and routes, toward universal interconnectivity.



www.physicalinternetinitiative.org

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The research leading to these results has received funding from the European Union Seventh Framework Programme under grant agreement n° 314468



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Additional Information

The following documents can be found on ALICE Web (www.etp-alice.eu):

- ALICE Executive Summary and Mission Statement ([link](#))
- ALICE Terms of Reference ([link](#))
- Who is who in ALICE, Steering Group Membership ([link](#))
- ALICE input for HORIZON 2020 2014-2015 calls ([link](#))
- ALICE input for HORIZON 2020 2016-2017 calls ([link](#))
- ALICE Research & innovation Roadmaps ([link](#))

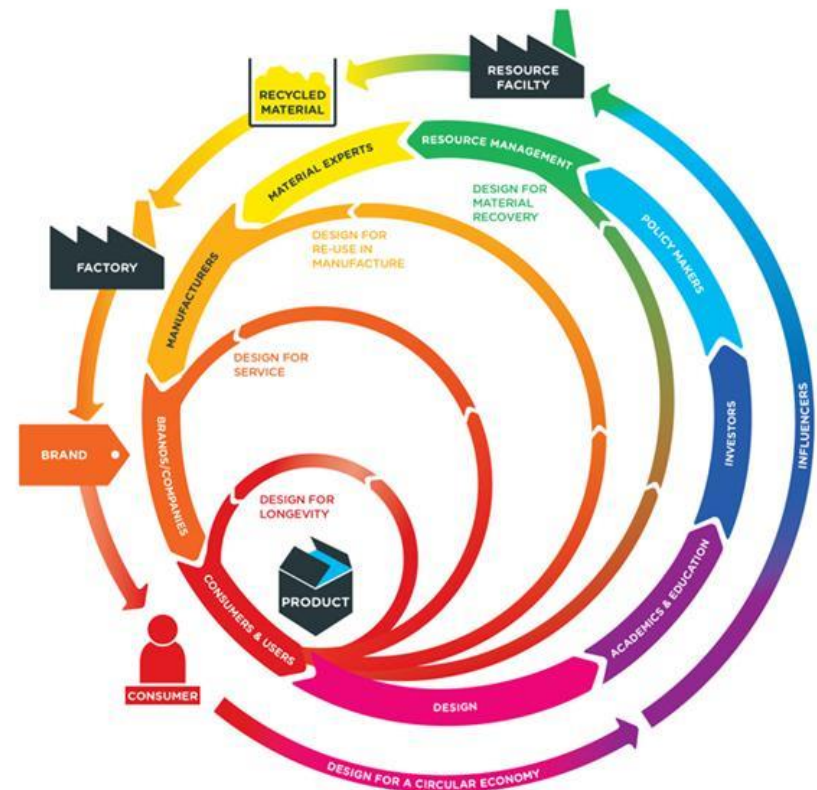
Resumen y contenidos de los roadmaps

Sustainable, Safe and Secure Supply Chain Research Roadmap

Vision & Mission

Sustainable, safe and secure logistics systems and supply chains provide an answer to the **growing concern on environmental and social problems related to logistics and security while maintaining or enhancing profitability.**

This requires fully integrated **close loop** supply networks, in which logistic service providers, shippers and authorities closely cooperate. In particular shippers, as the owners of the goods in transit, play a key role; their decisions on **product configuration** after all determine what to transport.



Sustainable, Safe and Secure Supply Chain Research Roadmap: Milestones

2020

- Full alignment of economics, environmental, social and security goals

2030

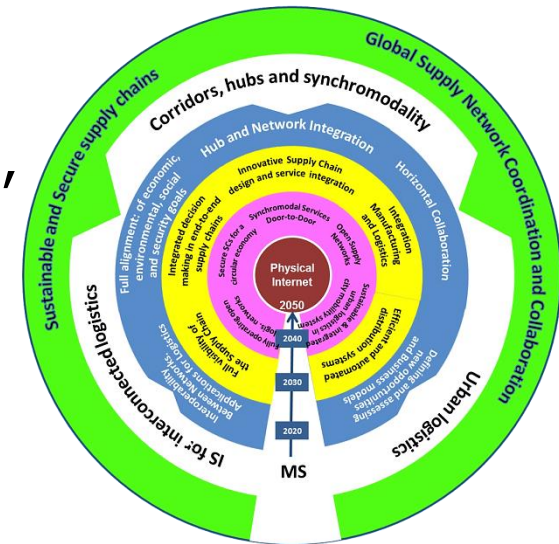
- Integrated decision making in end-to-end supply chain

2040

- Safe and secure supply chains for circular economy

2050

- Physical Internet



Sustainable, Safe and Secure Supply Chain Research Roadmap: Contents

What are the key issues?

- Logistics as a key factor enabling circular economy → Reducing waste
- Measuring and minimizing emissions and energy consumption but also logistics costs.
- Improving Load units Standardization and modularization facilitating consolidation, bundling and collaboration.
- Facilitating trade while keeping or improving security in EU borders.

Not only how to transport but also what to transport!

Vision

EU wide **synchromodal services** for a smart and seamless network, based on corridors and hubs facilitating efficient operations and resilient, customized, responsive supply chains.

Mission

Identify and define research and innovation challenges to establish an European core freight network of hubs and corridors bearing the novel needs of the transport industries for a sustainable supply-chain.

Main Scope

In addition to the current focus on strategic investments and policies, the new focus of innovations includes:

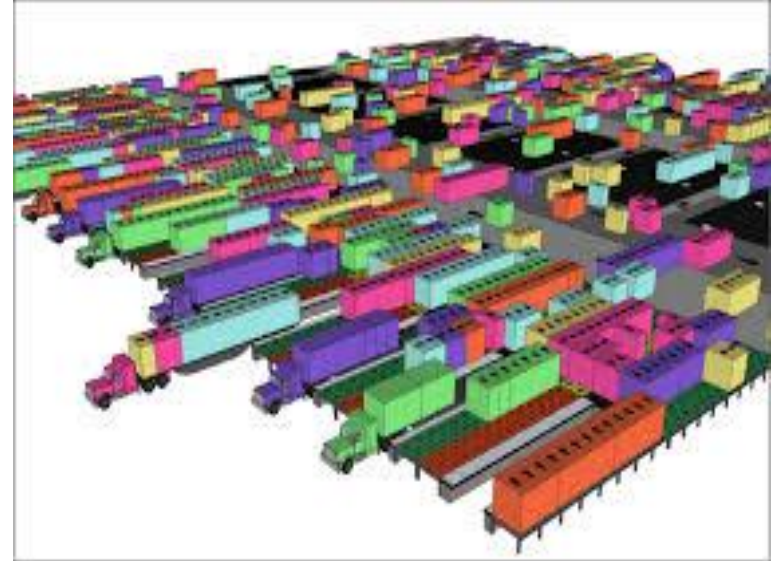
- **Integration of networks** – interconnected & interoperable EU freight network
- **Service Integration** – achieving integration by aligned operations
- **Supply chain perspective** – synergetic supply chains & transport improvement

We are
still not
there!

New
Focus!

New
Direction!

*Optimally, **flexible and sustainable deployment of different modes of transport and hubs** in a system operated by a logistics service provider (PI provider), so that the user or customer (shipper or forwarder) is offered or can directly access to an **integrated and sustainable solution for their (inland) transport needs.***



***Coordination of logistics chains and networks** (different customers), transport chains and infrastructure, is made in such a way that, given **aggregated transport demand** from different owners, the right mode is used at every point in time fulfilling user service requirements.*

* See ALICE roadmap on Corridors Hubs and Synchromodality

Corridors, Hubs and Sychromodality: Milestones

2020

- Hub and network integration

2030

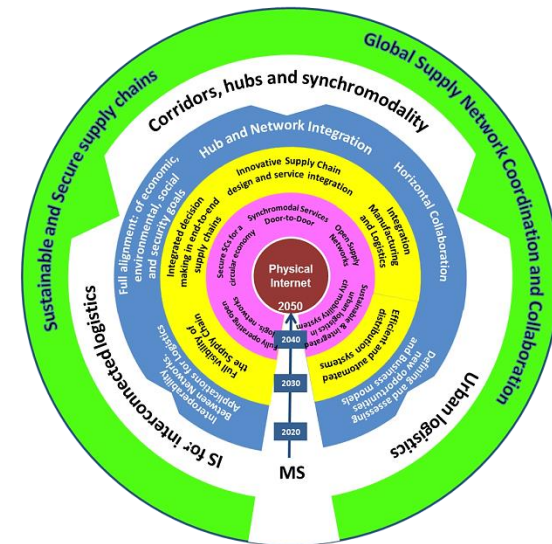
- Innovative supply chain design and synchronomodal service integration

2040

- Synchronomodal services door to door

2050

- Physical Internet

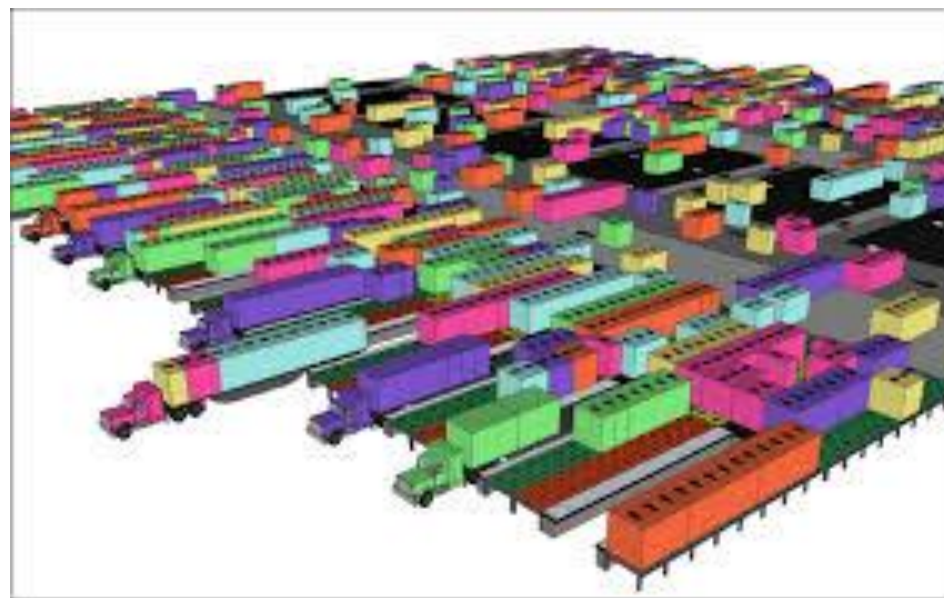


Vision

Real-time (re)configurable supply chains in (global) **supply chain networks** with **available and affordable ICT solutions** for all types of companies and participants, whether large or small.

Mission

Identify and define research and innovation **challenges** including the development of **technologies and tools** that facilitate the closure of existing **gaps in current ICT systems and data sharing capabilities in supply chains** for optimal performance in the execution of supply chain activities.



Information Systems for Interconnected Logistics Roadmap: Milestones

2020

- Interoperability between networks and IT applications for logistics

2030

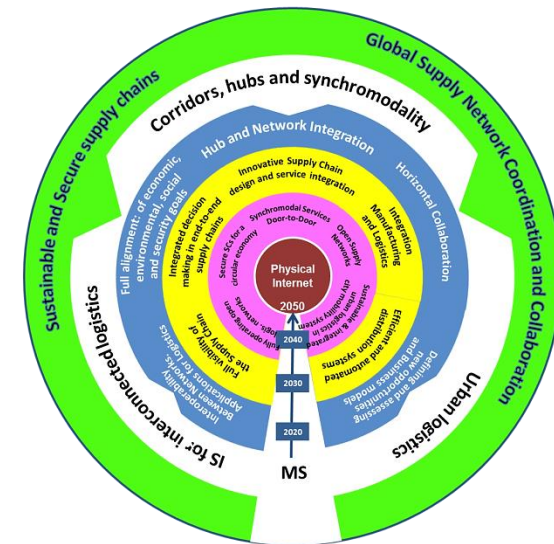
- Full visibility throughout the supply chain

2040

- Fully functional and operating open logistics networks

2050

- Physical Internet



Principales retos

- Habilidad para conectar y desconectarse a cadenas de suministro globales a dos niveles; Nivel de negocio y nivel TIC → **Fácil, asequible y fiable!**
- Simplificación y estandarización de la interconectividad de dispositivos que permita una conexión y desconexión rápida a sensores → **Internet de las cosas**
- Plataformas de colaboración abiertas en la nube que permitan la formación dinámica y efectiva de cadenas de suministro complejas y su gestión.
- Gestión de la información segura y fiable manteniendo la privacidad → **Big Data**
- Adopción e integración de nuevos desarrollos tecnológicos. Además de **IoT y Big Data**, Tecnologías de **Sistemas inteligentes de transporte, robótica, vehículos autónomos, impresión 3D**, etc. que permitan incrementar la eficiencia, efectividad y control de las redes de cadena de suministro.

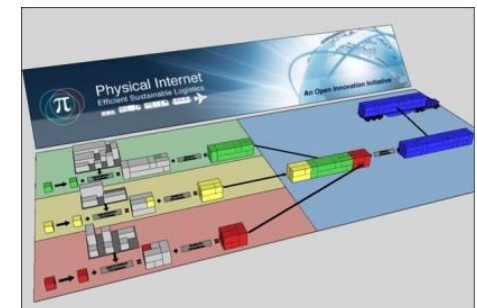
Global Supply Network Coordination and Collaboration Research Roadmap

Vision

Supply networks that are operated as a whole, meaning full vertical and horizontal integration and coordination.

Mission

- **Removing barriers** through new concepts and approaches, for **closer Vertical and Horizontal Collaboration** among different Network owners in Europe.
- To favour a smooth transition **from independent Supply Chains to open global Supply Networks**.
- To make the most efficient **use of available resources and modes, they will be compatible, accessible and easily interconnected**



Global Supply Network Coordination and Collaboration: Milestones

2020

- Horizontal Collaboration

2030

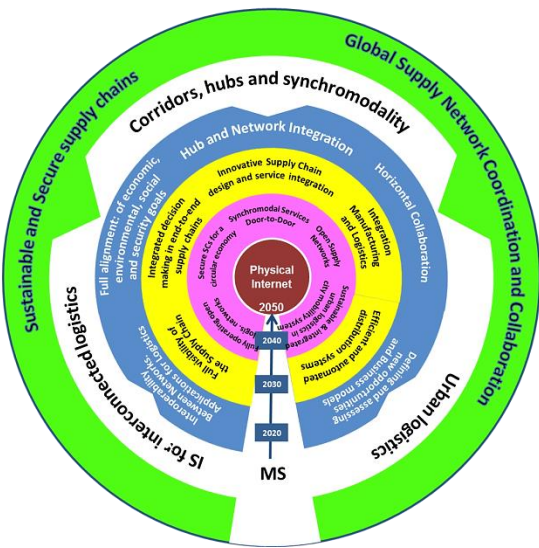
- Integration Manufacturing Logistics

2040

- Open Supply networks

2050

- Physical Internet



Vision

Full integration of freight flows in cities operations and activities that allow citizens to access the goods and the goods to access the citizens they require and at the same time supporting sustainable development in cities

Mission

Identify and define research and innovation challenges to optimize flows of goods within, into and from urban conglomerates by leveraging existing infrastructure

Urban Logistics: Milestones

2020

- Defining and assessing new opportunities and Business Models

2030

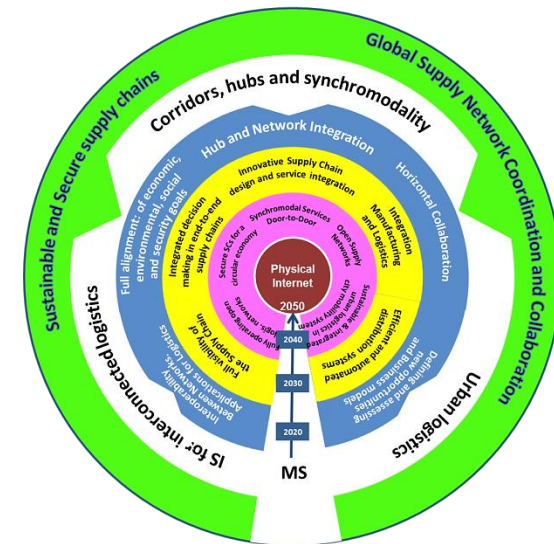
- Efficient and automated distribution systems

2040

- Sustainable and integrated urban logistics in the city mobility system

2050

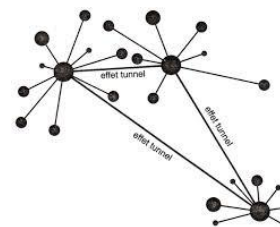
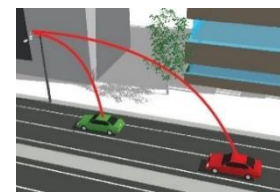
- Physical Internet



Challenges and themes

The roadmap identifies **data collection and knowledge building** on urban logistics as the first step for a relevant urban logistics research agenda.

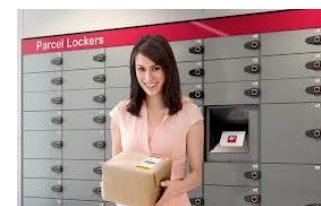
- **Identifying and assessing opportunities** in urban freight (measuring freight component, load factors, demand B2B, B2C, set KPIs)
- **Efficient integration** of urban freight in city:
 - Understand the **impact of land use** on urban logistics activities (parking spaces, lanes, availability mgmt.)
 - **Mobility Plans** taking urban freight into consideration
 - Improving the **interaction between long distance** freight transport and urban freight (e.g. freight corridors, locations of DC and consolidation centers)
 - Better **adapting the vehicles** to innovative urban freight delivery systems (sizes, modularity, intermodality, tech. for load consolidation)



Challenges and themes

- **Business Models** and Innovative Services

- Value creation **logistics services** and more efficient operations: Consolidation schemes, night deliveries, out of office hours)
- **Collaboration and concerted actions/regulations** between local authorities, shippers, retailers and LSPs
- New **Governance models**: Financing/Business models, roles
- **E-commerce implications**: Direct to consumer deliveries and functional logistics services, decoupling delivery/reception
- **Reverse logistics**: e.g. direct/reverse integration
- Designing and operating urban **freight infrastructures**
- **Safety and security** in urban freight
- **Cleaner and more efficient vehicles**



Iniciativas en otros países

[Sustainable Logistics and Supply Chains Call](#)[Future Travelling Call](#)[Electromobility+](#)[Stepping Stones](#)

Sustainable Logistics and Supply Chains Call

ENT launches its Flagship 2015 call 'Sustainable Logistics and Supply Chains'.

Dates and deadlines

The call is open from 1st April 2015 to 2nd October 2015 (17:00 CET)

Scope and call domain

This call is open for project proposals in the following five call domains.

1. Cross-border freight transport corridors
2. Hub development
3. Urban / last mile logistics
4. Organisational innovations and new business models in logistics
5. Information infrastructure and services for logistics

The call aims at proposals that deliver operational strategies, applicable results and/or deployable products/services for improving effectiveness, efficiency and sustainability of logistics in Europe.

Participating countries and regions

Austria, Basque Country, Belarus, Catalonia, Flanders, The Netherlands , Nord Pas de

Call contact

Call Secretariat

Mandy Willems

Wendy van Nostrum

sustainablelogistics@era-net.eu



Download call documents

 [Call leaflet](#)

 [GfA Sustainable Logistics & Supply Chains](#)

 [FAQs](#)

- Creada la PT de logística en Polonia
- El gobierno austriaco a través de su "CDTI" financia la participación de empresas austriacas en ALICE. Viajes, etc. y ha creado un foro austriaco para seguimiento actividades de ALICE.
- Los gobiernos francés, sueco, austriaco promueven la participación en ALICE.

*Logistics innovation for a more
competitive and sustainable industry*