

BOOSTLOG workshop “Identified priorities for R&I in logistics”

26.10.2021

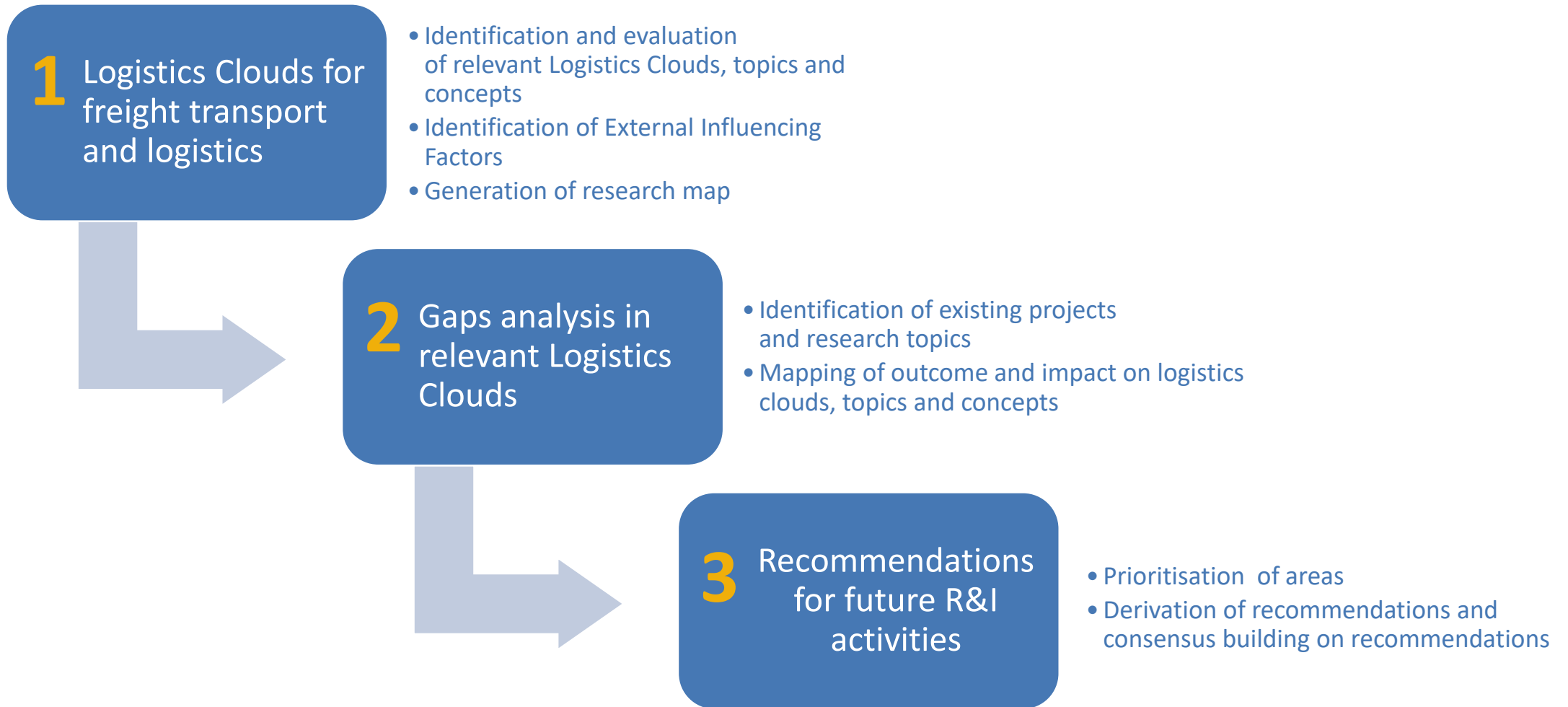


“Define high potential contribution to EU policy objectives that need to be prioritized in future R&I actions”



- Develop a holistic framework for identification, assessment and consensus building around priority R&I gaps
- Collect input und feedback from project partners, ALICE members and external stakeholders







TCNU 2503209 5

TTNU 106765 0
22G1

MAX. GROSS 30.480 KGS
67.200 LBS
TARE 2.100 KGS
4.630 LBS
NET 28.380 KGS
62.570 LBS
CU. CAP. 33.2 CU.M.
1.172 CU.FT.

GL

PONU 009531 5
22G1

MAX. GROSS 30.480 kg
67.200 lb
TARE -2.300 kg
5.070 lb
PAYLOAD 28.180 kg
62.130 lb
CUBE -33.0 cu.m
1.165 cu.ft.

SUDDU 769 753 0
22G1

MSKU 769 753 0
22G1

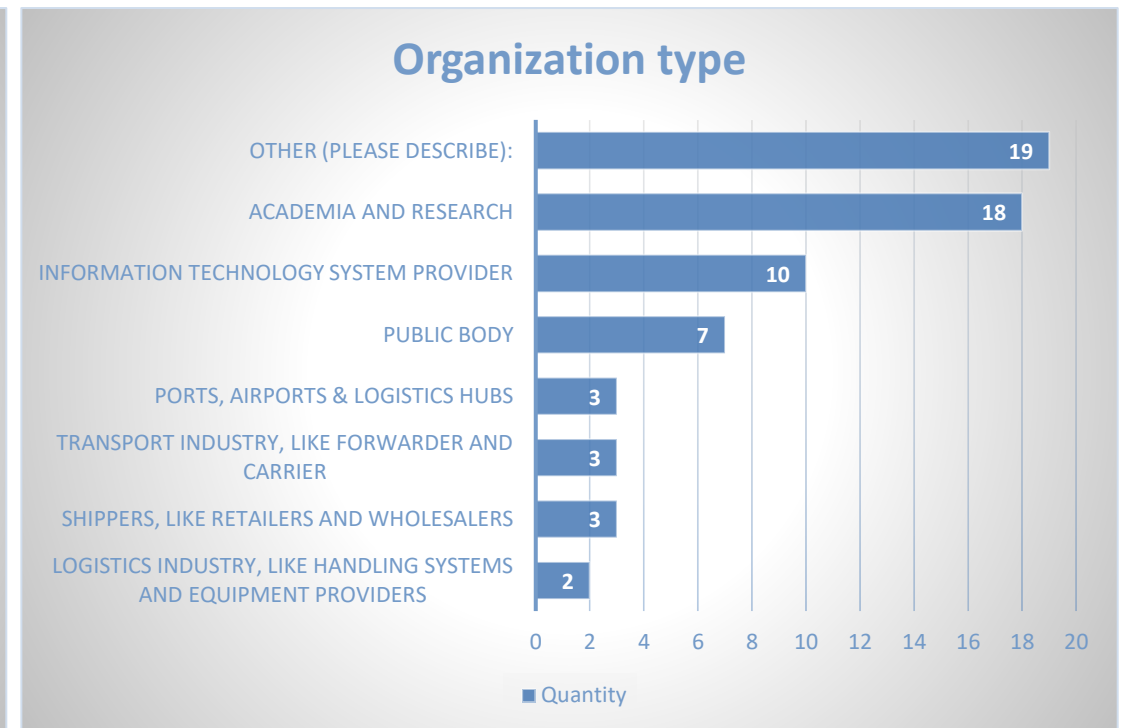
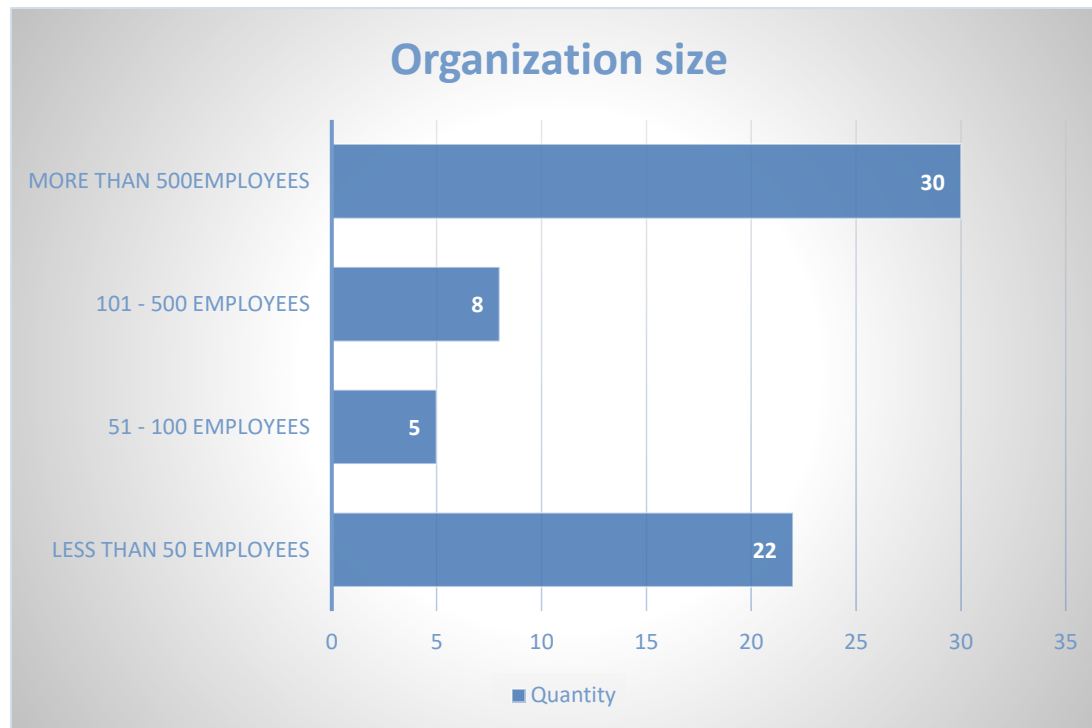
MAX. GROSS 30.480 KG
67.200 LB
TARE 2.170 KG
4.780 LB
PAYLOAD 28.310 KG
62.420 LB
CUBE 33.2 M³
1.170 FT³

MRKU 734 355 6
22G1

MAX. GROSS 30.480 KG
67.200 LB
TARE 2.170 KG
4.780 LB
PAYLOAD 28.310 KG
62.420 LB
CUBE 33.2 M³
1.170 FT³

Results from BOOSTLOG Online Survey

Size and Type of Organizations





1. Data sharing architecture / technology
2. Interconnected logistics networks
3. System of logistics networks: The Physical Internet
4. Fostering cooperation and collaboration among the logistics chain
5. Supply chain visibility
6. Autonomous operations
7. Autonomous transport
8. E-commerce delivery concepts
9. Supply chain resilience
10. Synchromodality

	Reshoring	Crowd-economy	Personalisation / consumer centricity	On-demand-economy	Urbanisation vs reversed urbanisation	Local-for-local	Climate change	Circular Economy	Resource scarcity and depletion	Sustainability	Skilled workforce shortage	Demographic change	Inclusiveness	New work & social innovation	E-commerce	Covid-19
	1	1	2	0	1	1	2	2	2	3	2	2	1	2	2	2
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	2	2	2	0	2	2	2	2	2	3	2	2	2	2	2	2

Observation of two main trend groups generating more heat than others:

- Sustainability related trends
- E-commerce and on-demand related trends



Distributed Ledger Technology & Blockchain	Next Generation Wireless - 5G	Clouds & Virtualisation	Standardisation & data modelling	Internet of Things	Mobile Computing	Digital Twins	Data Science	Artificial Intelligence	Big Data Analytics	Robotics, Cobots & Automation	Self Driving Vehicles / CCAM	Platooning	Augmented reality	Virtual Reality	Additive Manufacturing / 3D printing	Nano technologies	Alternative fuels & drive train technology	Predictive maintenance
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3	2	2	3	2	2	2	2	2	2	2	2	1	2	1	1	2	2	2

- Data Analytics and data infrastructure topics are generating more *heat* than others
- With some minor exceptions respondents from the Industry and other organisations share the same priorities



First recommendations based
on survey results



R&IA „Connected networks in a sustainable society“



Research question:

How do interconnected networks help in resolving the resource scarcity?

- If interconnected logistics networks exist, how do they help in achieve resource utilisation and the circular economy
- What is the impact then on emissions, resources useage, etc?
- How can (new) technologies facilitate the connectivity and required data analytics



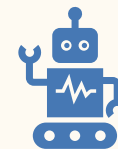
Related topics:

PI, connected networks, synchronomodality, connected corridors & hubs



Related trends:

sustainability, circular economy, resource scarcity



Related KETs:

AI, data science, digital twins

R&IA „Coping with the on-demand economy“



Research question:

How can logistics concepts streamline the growing impact of e-commerce channels?

- How should promising concepts be used and integrated in end-2-end e-commerce supply chains
- What distribution models will lead to sustainable and liveable cities?



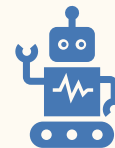
Related topics:

PI, connected networks, e-commerce delivery concepts, zero-emission vehicles



Related trends:

sustainability, on-demand economy, e-commerce



Related KETs:

IoT, AI, data science, digital twins

Demonstration "Digital connected sustainable intermodal networks"



Research question:

Is it possible to show how intermodal networks can be connected for the transfer of information of shipments?

- Practical approach to integrate the data required in e-cmr, eAWB, etc.
- Building on eFTI regulations to see how information is received from a B2G perspective



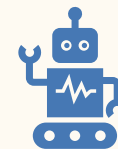
Related topics:

PI, connected networks, synchronomodality



Related trends:

Sustainability, resource utilisation, collaboration



Related KETs:

Data infrastructure, standardisation, DLT

R&IA "Prepare for disruption – Resilience and visibility to the next level"



Research question:

How to achieve increased robustness of supply chains using multi-platform forecasting?

- How will supply chains become more robust and able to cope with disruptions
- What is needed to achieve increased visibility and coordination based on integrated data usage of platforms and other data sources



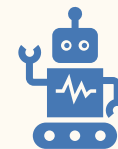
Related topics:

SC visibility, SC resilience



Related trends:

Sustainability



Related KETs:

AI, Agility to plan, forecast and adapt

R&IA „Modular loading units for e-commerce“



Research question:

Are modular loading units (PI containers) potential sustainable concepts for increasing e-commerce?

• ...



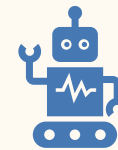
Related topics:

PI



Related trends:

Climate change, Circular Economy, Sustainability



Related KETs:

Standardization & data modelling, IoT, digital twins

R&IA „Requirements for sustainable fleets and assets“



Research question:

Which conditions do sustainable fleets & assets require with view to data infrastructure, gathering, depiction & analytics and how can this be addressed?

• ...



Related topics:



Related trends:

Climate change, Circular Economy, Sustainability



Related KETs:

Standardization & data modelling, IoT, digital twins

CSA „Aligning initiatives for sustainability measurement schemes“



Research question:

How to measure sustainability impact of research projects?

- Which sustainability measurement & reporting schemes/approaches can help measuring impact of R&I projects?
- What does the term „sustainability“ cover with regard to EU research agenda?
- Which framework for quantifying the impact could be used by research consortia (incl. which sustainability indicators, Which benchmark/target value for sustainability indicators)?
- Which impact do proposals / projects have?

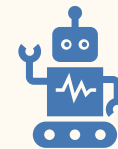


Related topics:



Related trends:

Climate change, Circular Economy, Sustainability



Related KETs:

Standardization & data modelling

CSA „Aligning initiatives for carbon emission accounting/measuring schemes“



Research question:

How to measure and report GHG emissions arising from digitalization of logistics chains?

- Which carbon accounting approaches can help to estimate GHG emissions related to the use of ICT equipment and data servers related to transport operations?
- Which carbon accounting approaches can help at what level (models, practical, real-time) ?
- Which standards should be aligned at EU and national levels to enable GHG info exchange between different roles as well as comparison of logistics chains?



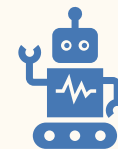
Related topics:

fostering collaboration, interconnected networks, PI, data sharing



Related trends:

Climate change, Circular Economy, Sustainability



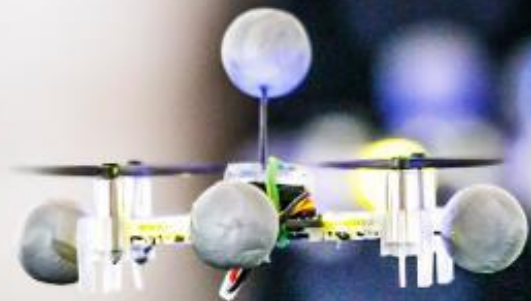
Related KETs:

Standardisation & data modelling, data architecture



Open discussion!

Which important open research question do we not yet cover?



Thanks for your input and support!