RUI BARROS

e-IMPACT | e-Freight Implementation Action

JUL | Portuguese Logistics Single Window

PORT DIGITALISATION CONFERENCE
DANUBE PORTS IN THE DIGITAL AGE: CHALLENGES & OPPORTUNITIES

www.mitmynid.com

info@mitmynid.com

+351 225 322 072

+351 935 500 220

Rua de Salazares, 842 – Edifício UPTEC – 4149-002 Porto - Portugal

reusing CEF e-Delivery in

transports and logistics

e-Delivery is a CEF Building Block for
supporting electronic registered delivery of data and documents

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Agenda

- e-IMPACT project
  - e-Freight
  - e-Delivery
  - Conclusions

- JUL Project
  - Ecosystem
  - Hinterland and Foreland
  - Interoperability
  - Conclusions

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e-IMPACT

e-IMPACT | project

e-IMPACT website

www.eimpactproject.eu

Project details

agreement: INEA/CEF/TRAN/M2014/1026063

action name: e-Freight Implementation Action (e-IMPACT)

ref: 2014-EU-TM-0686-S

budget: 3.900.000,00 €

EU Support: 50%

timeframe: 2016 - 2018

e-IMPACT | summary

4 pilot actions in the Core Network and the e-Freight was used in 3 TEN-T corridors: Atlantic, Mediterranean and Baltic/Adriatic

Italian pilot - port of Trieste

Polish pilot - ports of Gdynia, Gdansk, Szczecin e Swinoujscie

Portuguese pilots – ports of Leixões and Lisboa

Pilots included:

- Information systems to improve planning of transport and logistics of goods and its integration with traffic management systems in an European and multimodal perspectives

- Tools for track and trace

- IT infrastructure to support exchange of information, authorization and authentication (using eDelivery)

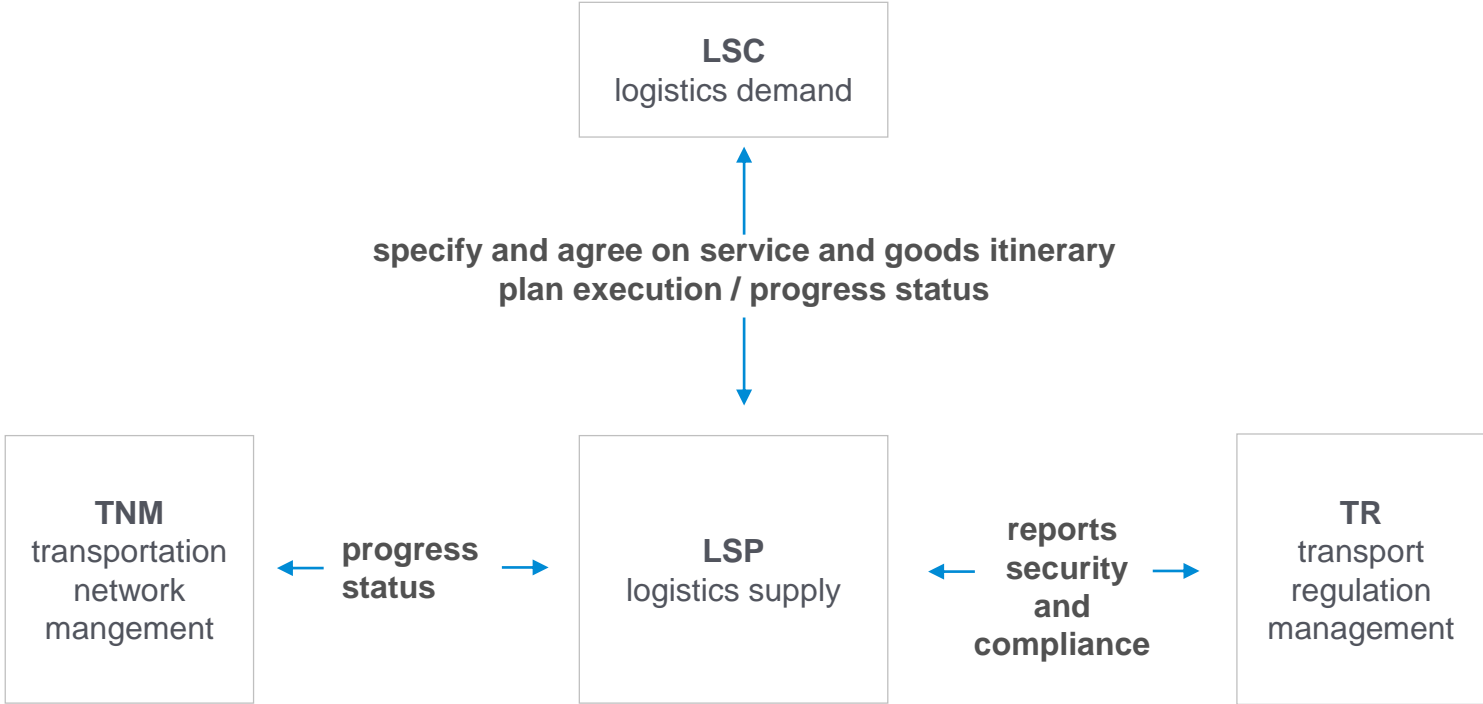- Interoperability between stakeholders using different standards (languages and technologies)
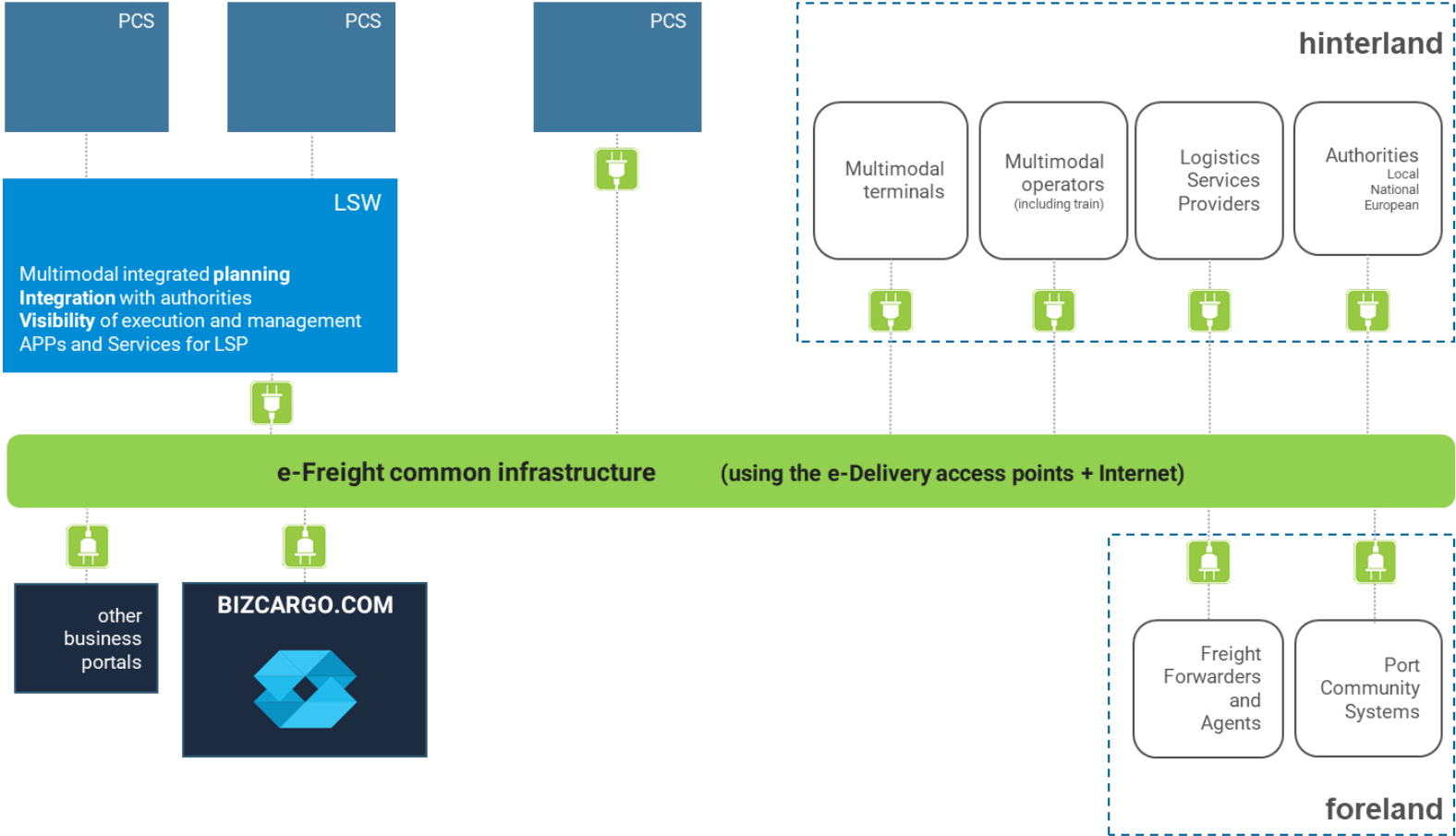
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e-IMPACT | concept

e-Freight | **framework**

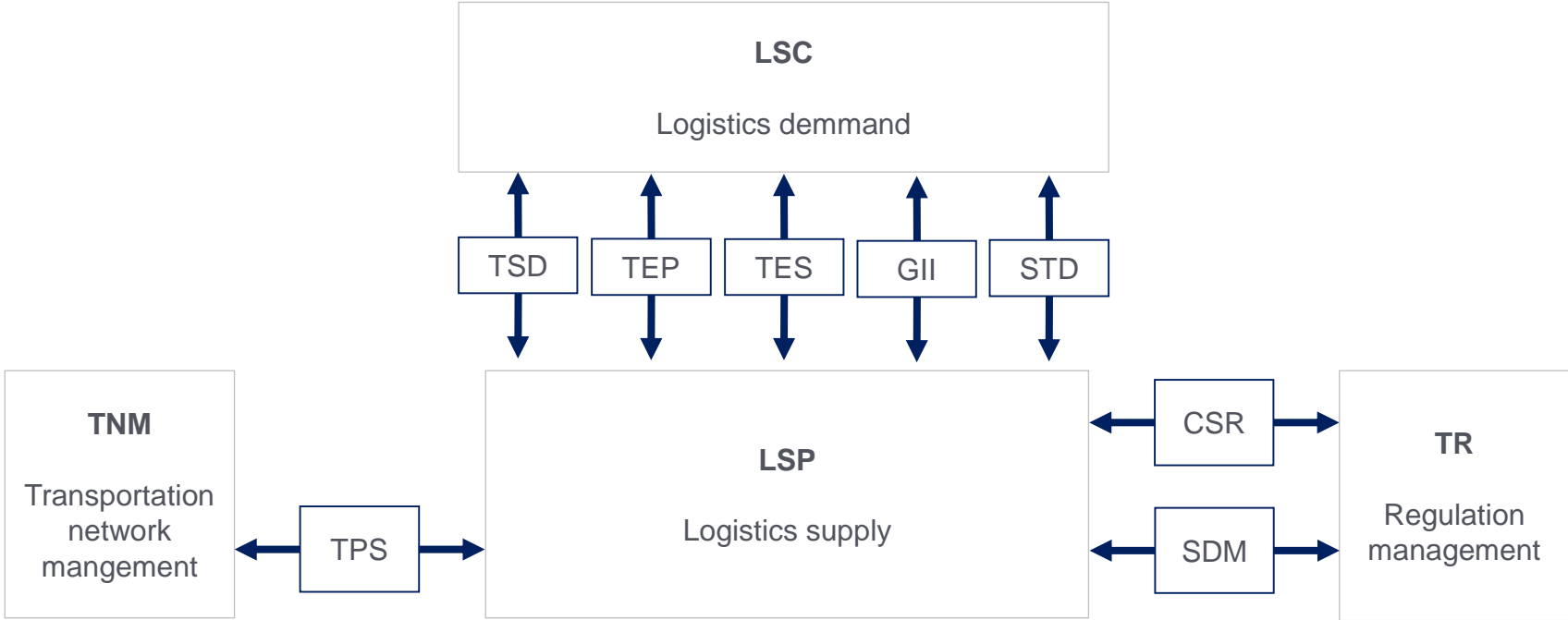- Provides definitions for **several messages** intended **to allow electronic document interchange**, **in bidirectional** relations regarding:

  - Transport service description, execution plan, status and progress

  - Interaction with traffic management systems

  - Communication of security information

  - Reporting to authorities for clearance and compliance

- Part of the ISO19845 standard (UBL v2.1)

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e-Freight | framework

- ## Designed for interoperability

  - Process and information level
    - only necessary information is exchanged
    - the number of messages and their complexity is kept to a minimum
    - messages are unambiguous

  - Architecture level
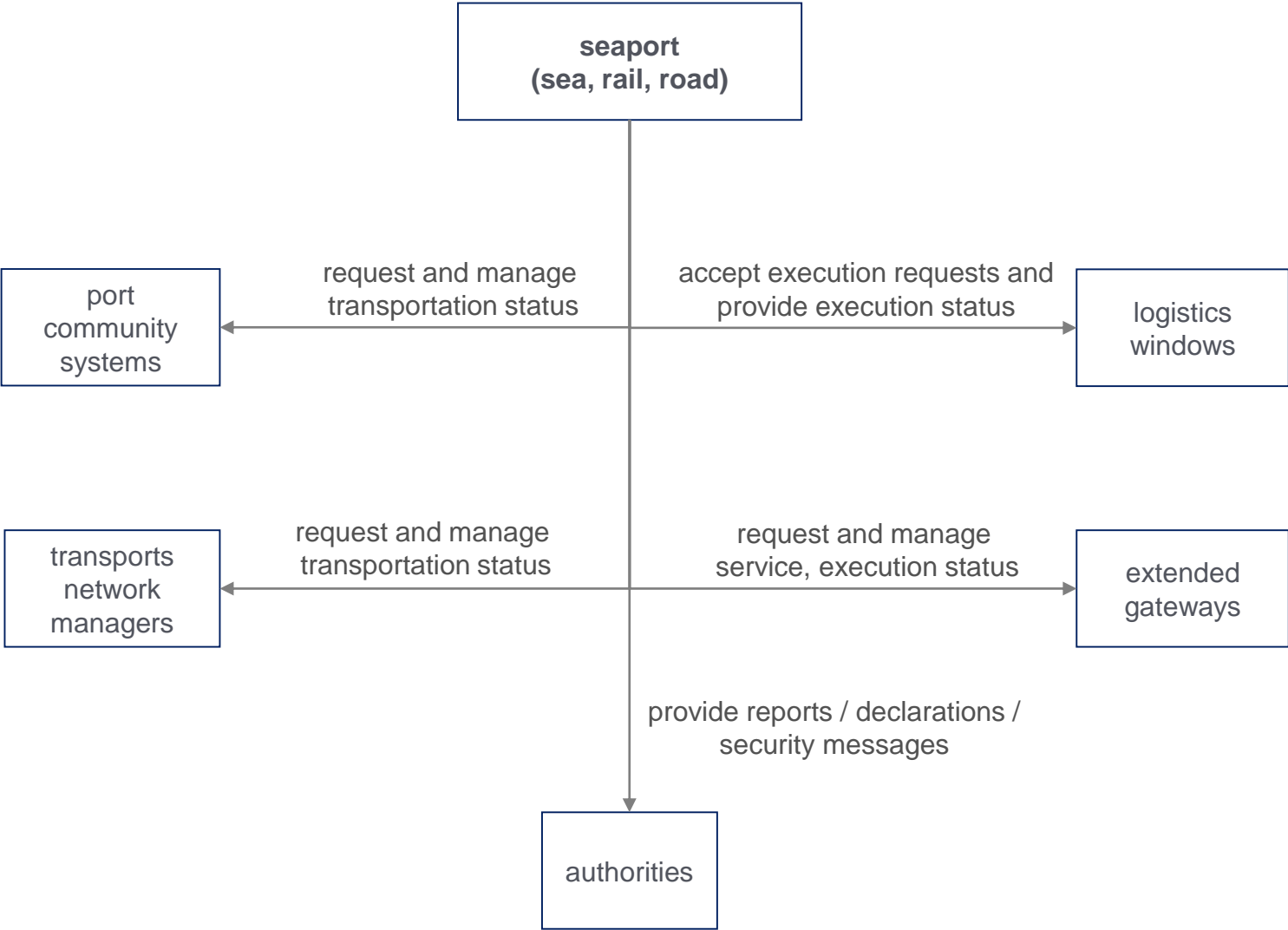   - Builds on open services platforms and self-configuring logistics networks and devices

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e-Freight | general goals

```
                        ┌─────────────────┐
                        │       LSC       │
                        │ logistics demand│
                        └─────────────────┘
                                 ↕

          specify and agree on service and goods itinerary
                   plan execution / progress status

                                 ↕

┌──────────────┐                ┌──────────────┐                ┌──────────────┐
│     TNM      │   progress     │     LSP      │    reports     │      TR      │
│ transportation│  ← status →   │logistics supply│ ← security → │  transport   │
│   network    │                │              │     and        │  regulation  │
│  mangement   │                │              │  compliance    │ management   │
└──────────────┘                └──────────────┘                └──────────────┘
```

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e-Freight | domains and messages

e-Freight | seaport perspective

seaport
(sea, rail, road)

port community systems

request and manage transportation status

accept execution requests and provide execution status

logistics windows

transports network managers

request and manage transportation status

request and manage service, execution status

extended gateways

provide reports / declarations / security messages

authorities

e-Delivery | why?

- **Interoperable**: standardised messaging protocols

- **Secure**: trust among all participants in the message exchange network

- **Scalable**: grow the number of participants as well as the number of exchanged messages

e-Delivery | why?

▪ Access Points

- Agnostic message exchange
- Trust establishment
- Backend Integration
- Domibus (EU reference implementation)
  - CEF e-Delivery Access Point (AP)
  - European Commission AS4 AP implementation
  - (our) adopted version: 3.2.4

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e-IMPACT | benefits for Clients + Providers

- Standardization of processes / messages / technologies

- Scalable, low-cost adoption

- Good representation of the business

  contract, planning, execution, status

- Interoperability

  transparency, safety, reliability, authentication

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e-IMPACT | benefits for authorities

- Standardization of processes / messages / technologies

- Scalable, low-cost adoption

- Interoperability

    transparency, safety, reliability, authentication

- Timely retrieval of security information.

- Communication standardization

    with operators, other national and European authorities

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e-IMPACT | conclusions

the best of both worlds…

e-Freight: to represent process and information

e-Delivery: to securely and reliably exchange data

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JUL website

www.projeto-jul.pt

Project details

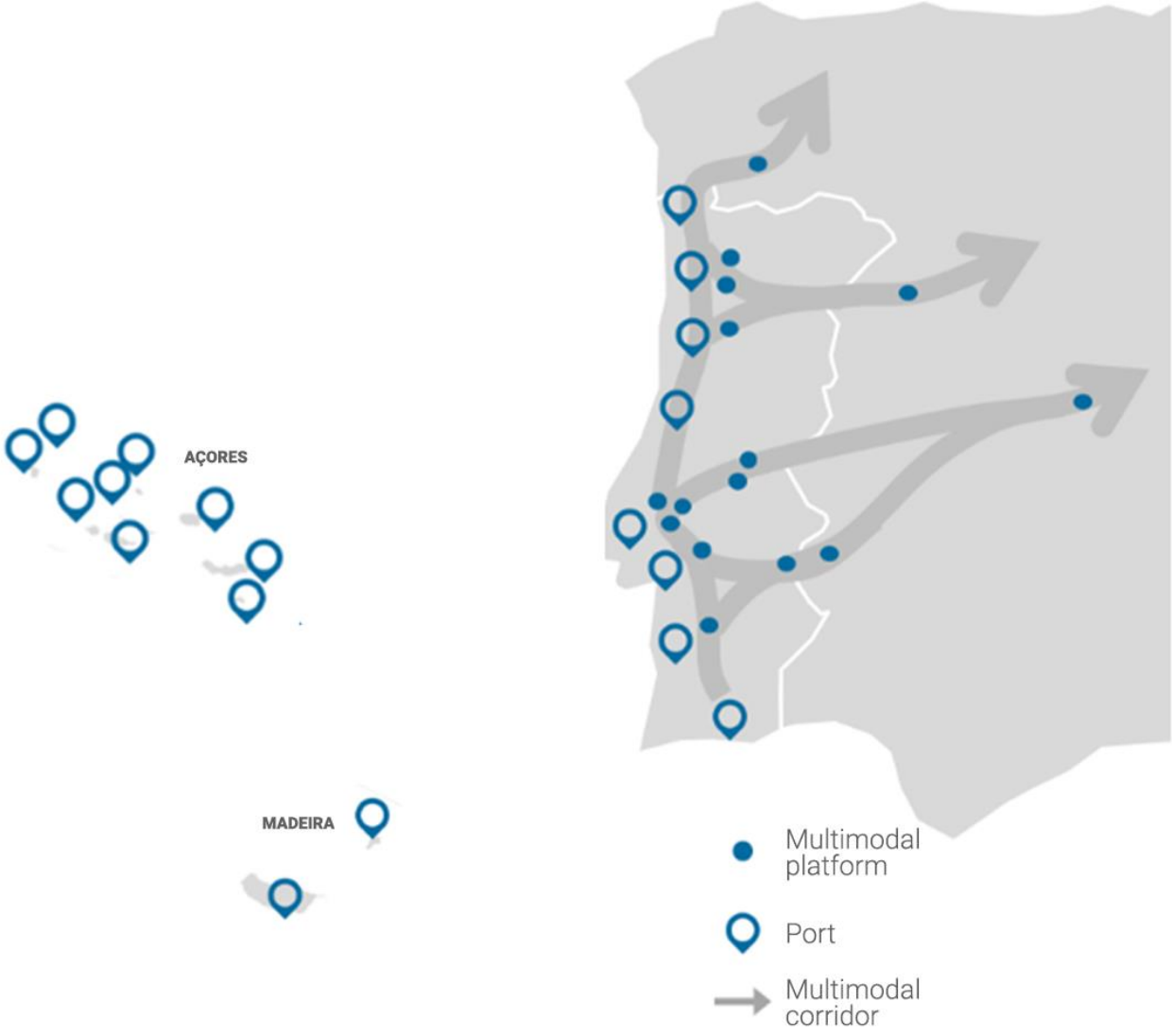budget: 5.100.000,00 €

co-financing: 85%

timeframe: 2 years

JUL | ecosystem
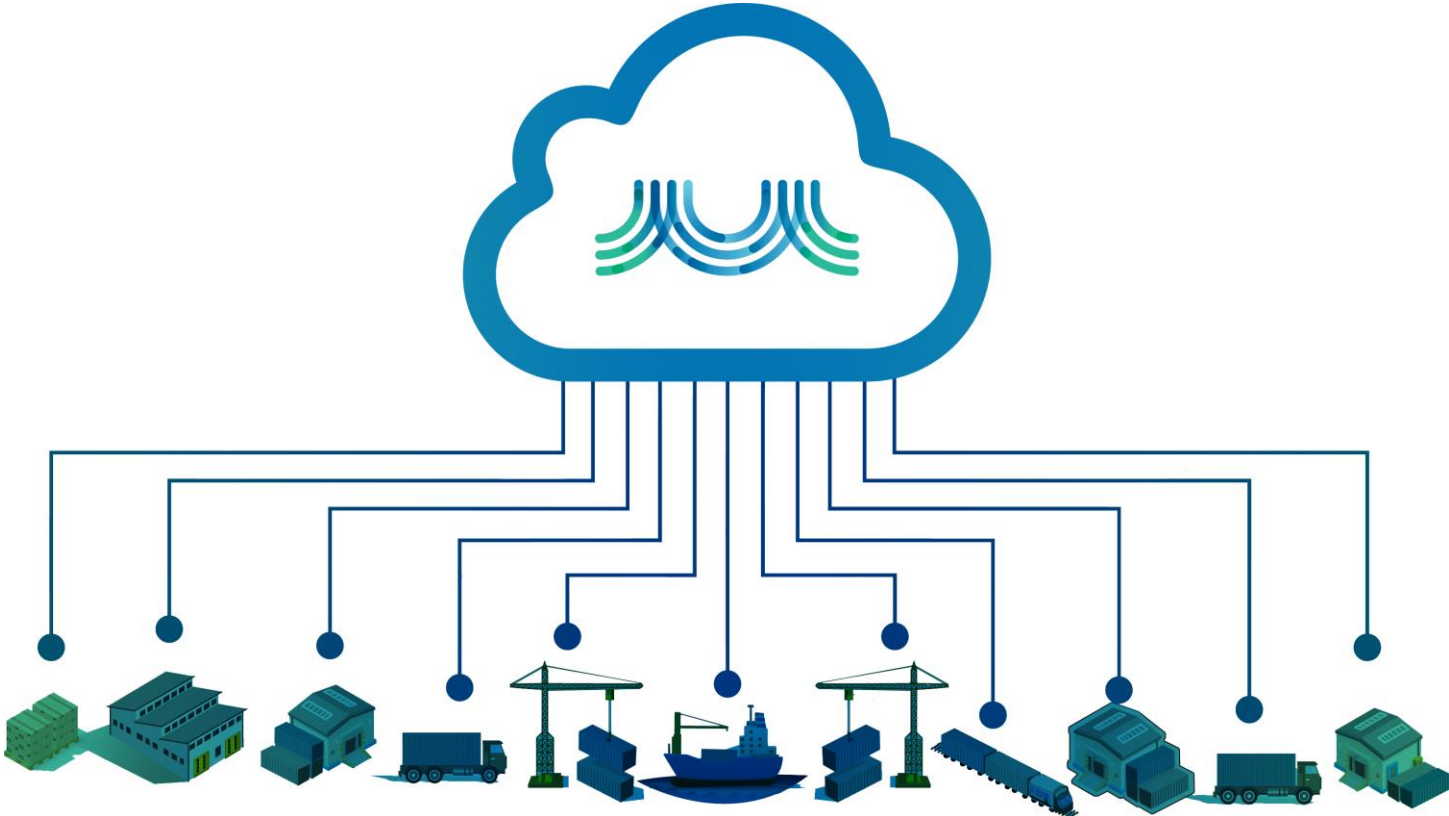
JUL | the hinterland of Portuguese ports

AÇORES

MADEIRA

- Multimodal platform
- Port
- Multimodal corridor

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JUL | hinterland and foreland

Hinterland:
- Harmonised business processes across all ports and multimodal networks
- Synchro modal cross-border corridors (Portugal and Spain)
- Streamlined digital processes with the authorities
- Last mile operations coverage

Foreland:
- The LSW consolidates tracking events and information over the foreland, to support the global experience and visibility of all users.
- Information sharing with Port Community Systems in other countries and business electronic platforms, such as cargo marketplaces.

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JUL | interoperability

JUL | conclusions

Port Community System

Logistics Single Window

Business Portals

Ports and Carriers

Authorities and Extended Gateways

Providers and Clients

collaborative logistics

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Rui Barros

rui.barros@mitmynid.com

BIZCARGO

GLOBAL COLLABORATIVE LOGISTICS

www.bizcargo.com

www.mitmynid.com

info@mitmynid.com

+351 225 322 072

+351 935 500 220

Rua de Salazares, 842 – Edifício UPTEC – 4149-002 Porto - Portugal