



mec

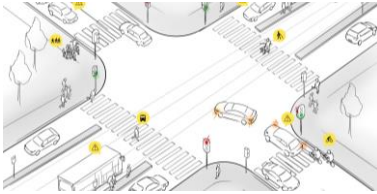
db! !M !Mbc!) MM

E !U b !B c b
M d !S b d !Mb

b b c bA dc

NFD!FE U!N c !M d

MOBILIDATA



Mb ! db ! . ! !D. UT!
!Gb !

CITYFLOWS



N b! b b b
! !d

TOKEN



E b dbdd ! ! !d !
!b ! ! ! d

INDIMO



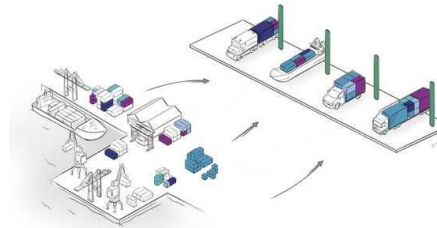
d ! b ! c !
!)D. UT!cb

VLOCA



G ! !d !
b d d ! N c

PILL



db! !M !Mb

PIONEERS

PIONEERS
PORTable Innovation Open Network for Efficiency and Emissions Reduction Solutions

bc ! b ! !
H !

■ Physical Internet

- ! !
- !F
- !Gb !
- Tb b !b ! b b! b
 - B ! !P !
 - b! ! d !
- db! !M !Mb!) MM
 - P c d !
 - Td

b ! ! ! @

U !Physical Internet ! ! db ! ! b! !c ! d !
 b! ! ! ! db! ! ! b ! b! b !b ! !
 b! ! ! ! !d !c ! ! b! ! db! !
 >?! ! d ! !cb ! ! !db bd

D b bd d ;

V b! d d ! ! b ! ! ! !
 b !bdd ! !) ! d !b ! b b
 D b ! c ! b ! c d ! bd ! !d !
 d !

C ;

V !network capacities optimally b! d b !
 Minimize db!movements b ! b !c ! b !
 b ! ! db
 S bc ! c !b !resilience !unforeseen events
 Stimulate business model innovation b ! ! b d b!
 b

Physical Internet

Nb ! ! ! ! ! db!
 (Network of networks)

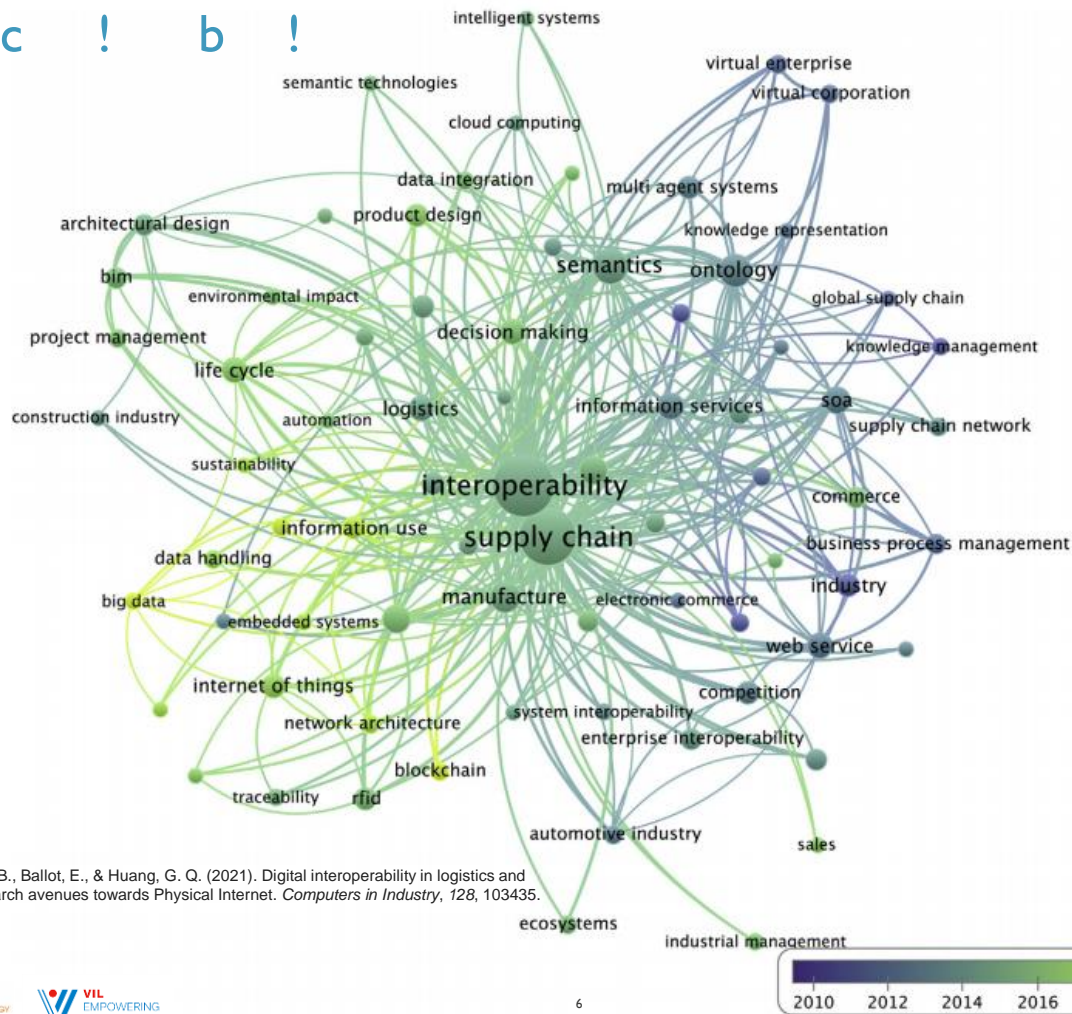


E b!



db!

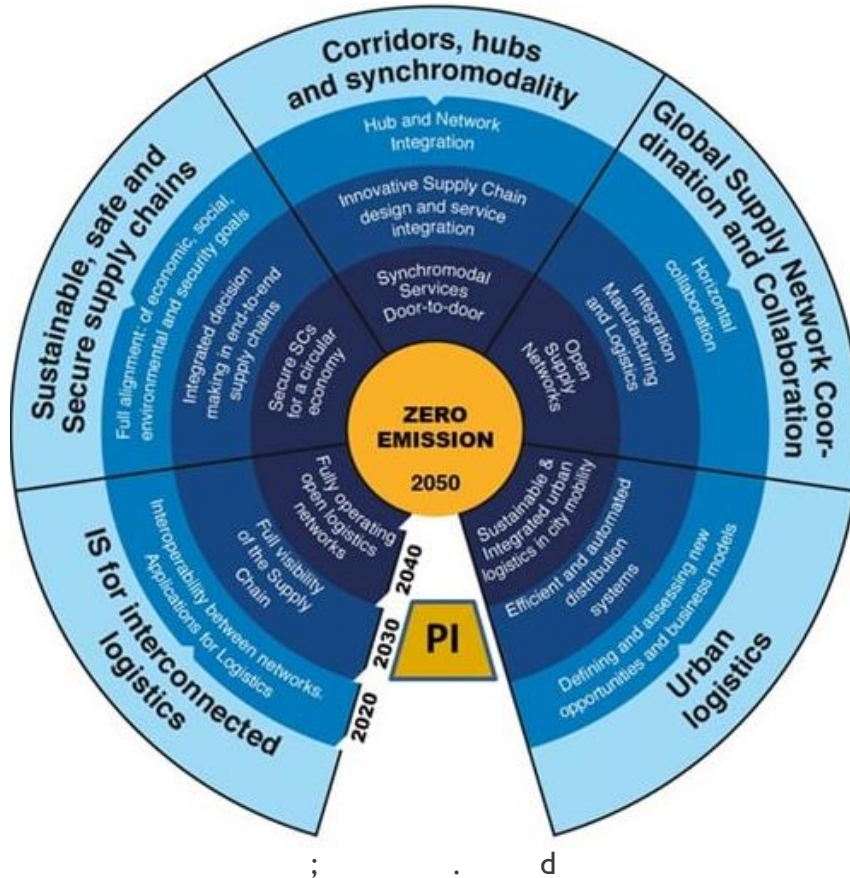
E b! bc ! b !



Pan, S., Trentesaux, D., McFarlane, D., Montreuil, B., Ballot, E., & Huang, G. Q. (2021). Digital interoperability in logistics and supply chain management: state-of-the-art and research avenues towards Physical Internet. *Computers in Industry*, 128, 103435.



! !F



alice | Alliance for Logistics Innovation through Collaboration in Europe


ETP-Alice

The European Technology Platform ALICE is set-up to develop a comprehensive strategy for research, innovation and market deployment of logistics and supply chain management innovation in Europe.


The platform will support and assist the implementation of the EU Program for research: [Horizon 2020](#).

ALICE is based on the recognition of the need for an overarching view on logistics and supply chain planning and control, in which shippers and logistics service providers closely collaborate to reach efficient logistics and supply chain operations.

! !Gb !




PROJECTS TOPICS CONSULTANCY EVENTS MEMBERSHIP

 EMPOWERING LOGISTICS

Home // Projecten // SENSE

m which pursues
activity through
participates the
the Physical Internet to
European level, within a
network, and thereby



SENSE

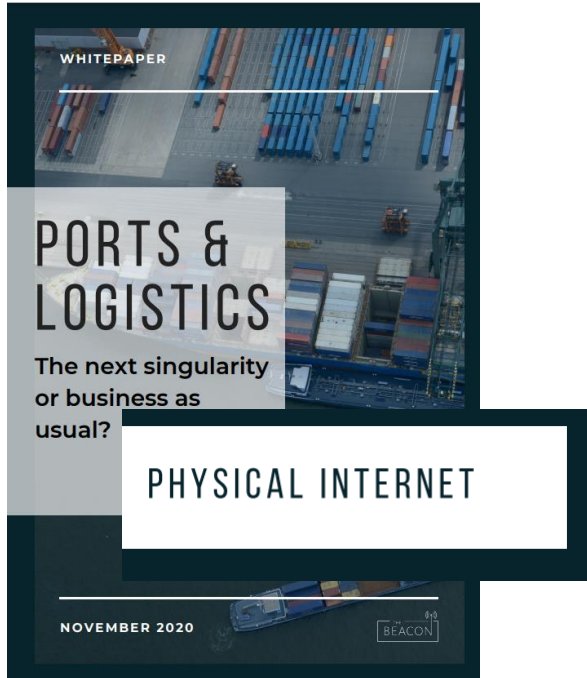
The Physical Internet: an open logistics system that achieves physical, digital and operational interconnection by clustering data, interfaces, protocols, etc. Vrije Universiteit Brussel is part of the European project SENSE which aims to use the Physical Internet to achieve co-modal transport services on a European level, within a network, and thereby give optimal support to the supply chain.

 FLANDERS INNOVATION & ENTREPRENEURSHIP




Clusters for Growth

! !Gb !



Flows

 Trade

 Shipping

 Logistics



Barbara Peene (POM): “Physical Internet maakt logistiek efficiënter”



30 maart 2019 om 07:29

 Share

 Tweet

 Share

Het team Transport & Logistiek van POM West-Vlaanderen versterkte zich met Barbara Peene voor pionierswerk rond de digitale transformatie van logistieke stromen. Haar ervaringen in IT, supply chain en bedrijfskunde sluiten daar perfect op aan.

- db!
 - ! !
 - !F
 - !Gb !
- **Standards and data initiatives**
 - B ! !P !
 - b! ! d !
- db! !M !Mb!) MM
 - P c d !
 - Td

B

!

!

!



b b! b ! d ! d



D b



WORLD CUSTOMS ORGANIZATION
ORGANISATION MONDIALE DES DOUANES



International
Organization for
Standardization



C ! b



U b



bc !b ! bc
D ! b b!B !FUT!OHT!ME! b b !



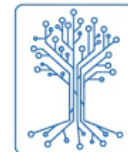
INTERNATIONAL DATA
SPACES ASSOCIATION



FENIX
NETWORK



DIGITAL
TRANSPORT
& LOGISTICS
FORUM



GAIA-X

C-point
Powered by NxtPort

IPCSA



I b b



- B ! ! ! b b ! ! !b !b ! !
- !b ! !b !d ! ! !d !
- b! b ! !b! b !d b ! ! b! b!db ! !c ! !c ! !db @
- **Harmonization -> bring data of varying formats together**

l ! ! d !d db !c ! b

Semantic interoperability

G b!b ! b
What is sent and what is understood

The European Interoperability Framework (EIF)

Technical interoperability

B !b ! b! b! !
Communication protocols, interface spec., data integration etc

P !b !d ! b b ! !F
E b! d !b ! c d! d !.? !S b ! ! b! ! b
D d ! c db b !c !b !d !
FD! ! ! b! b b! bc ! b !
c b !)O P



Disney
**ALICE
IN
WONDERLAND**

P

- db!
 - ! !
 - !F
 - !Gb !
- Tb b !b ! b b! b
 - B ! !P !
 - b! ! d !
- **Physical Internet Living Lab (PILL)**
 - P c d !
 - Td



Objective

D b !b! b . ! db! ! U! !

PILL Partners



PILL companies and organizations



Federal
Public Service
FINANCE



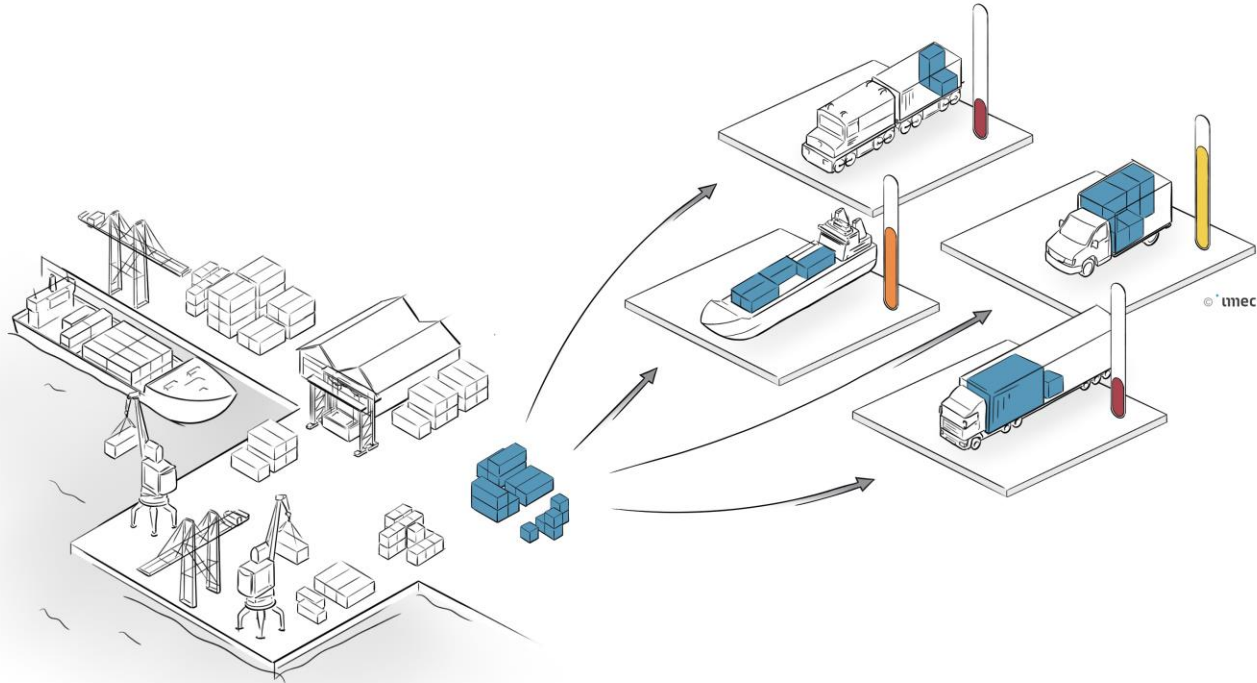
B

b!



G

! c ;



V !b
V !db bd
T !
Gb ! b

I d !b bd

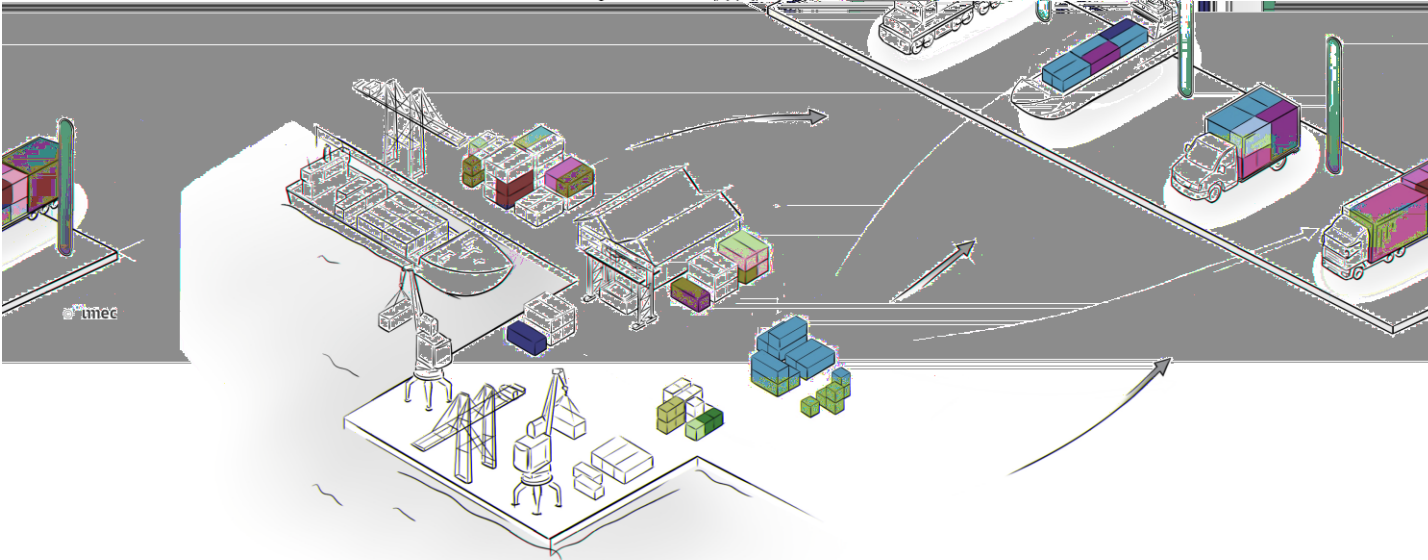
D d! ! !) ! .
! !

T b ! b

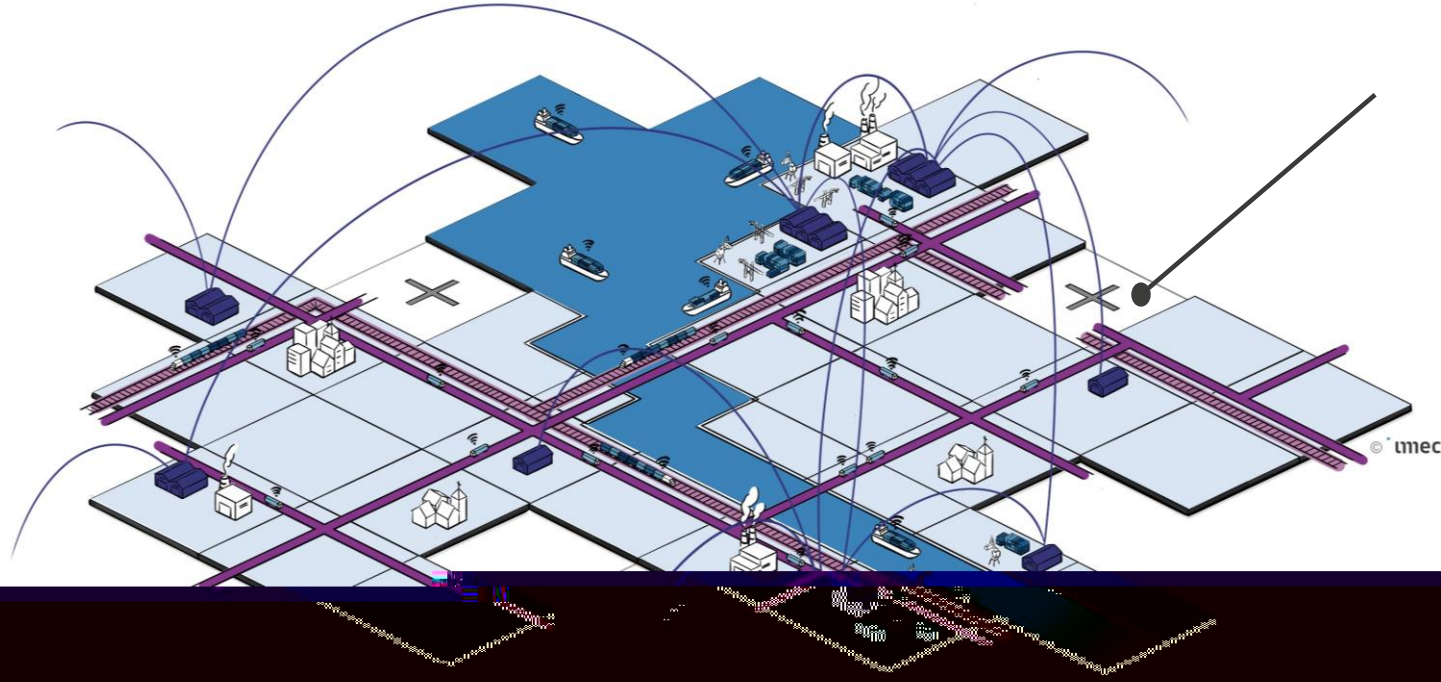
D b !b !b !b ! !

F ! U!b !
d d

F bc !c !



B !d d! b



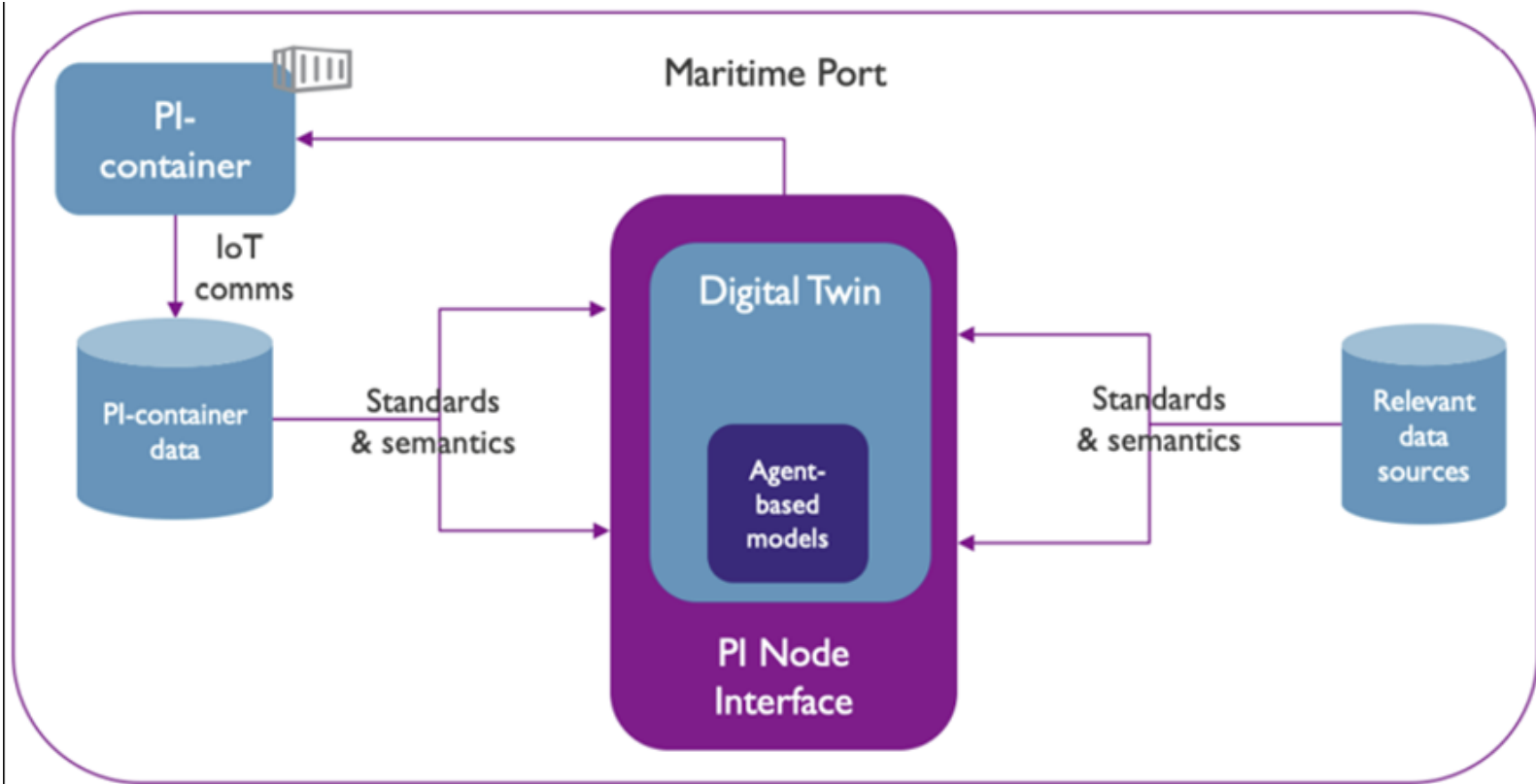
Modular system

D d ! ! ! !
b !

G ! !bdd !b ! b

F b ! ! bd !
! !d

T ! !M d!
O

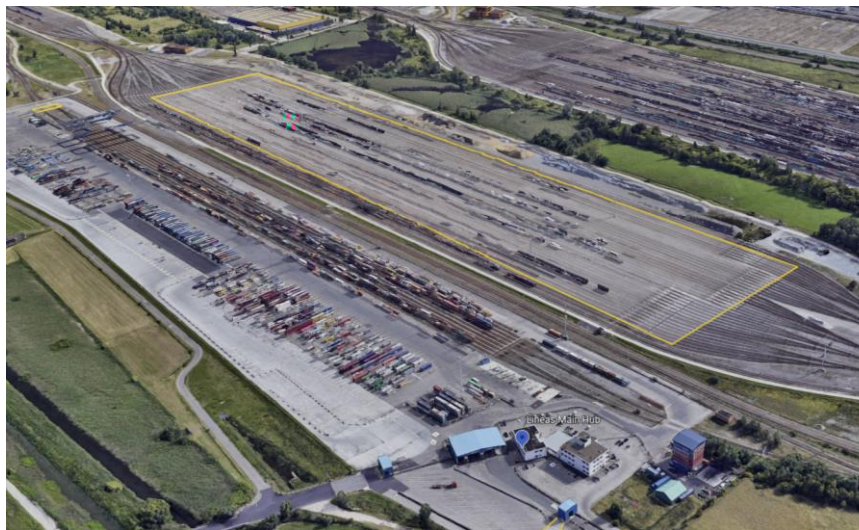
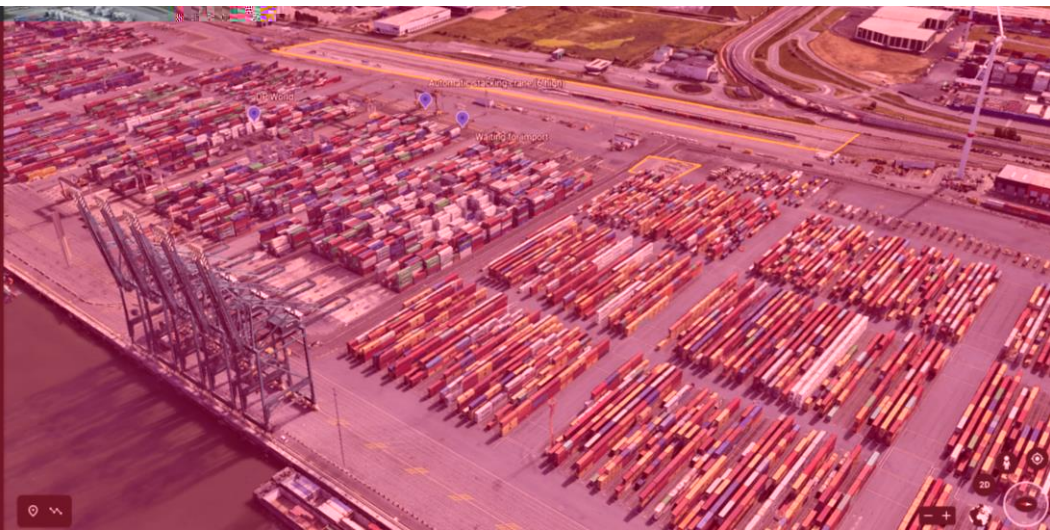


C

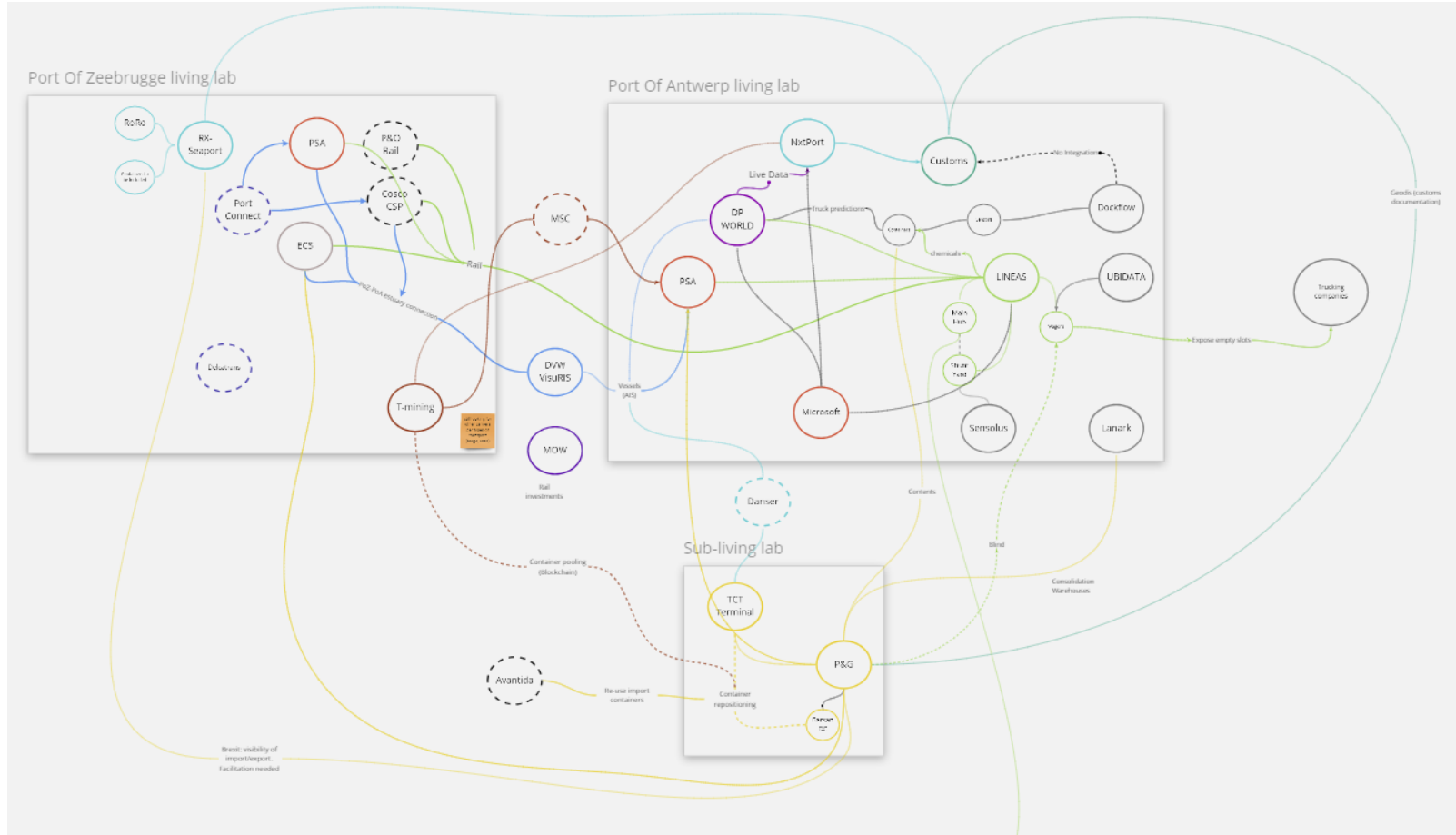
!

!

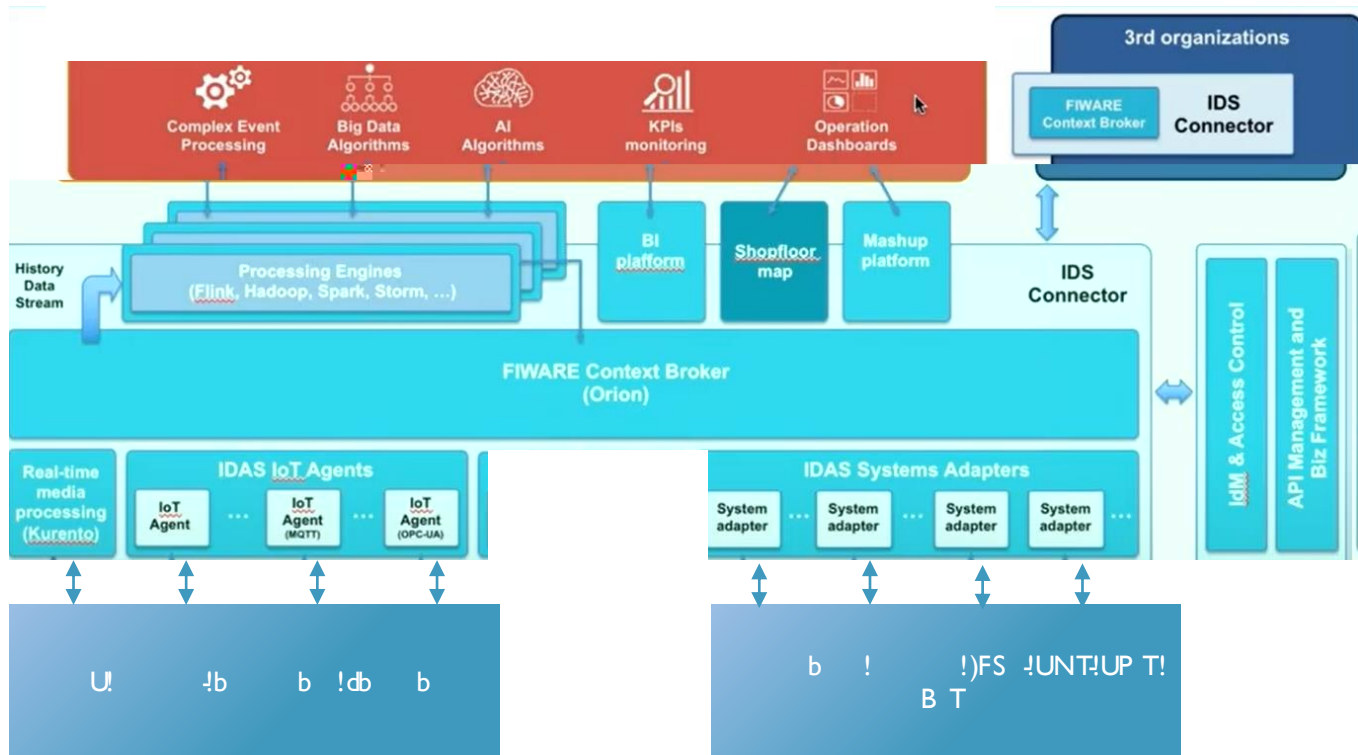
!







U d db! ! !d !b ! !G B SF! E TB



U ! MUB N



U b!B c b) d



W !l b!) d



b!D b!) d



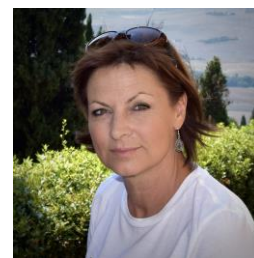
Lbb !C !) d



cl b! !c !) d



Gb !M d) d



B Nb) d



B .Nb !Vb !B c d) d



B E d) d



Db !Nbd b !)vWCNP C



T !T !)vWCNP C



F dW !)vM



T b!C)vM



mec

embracing a better life