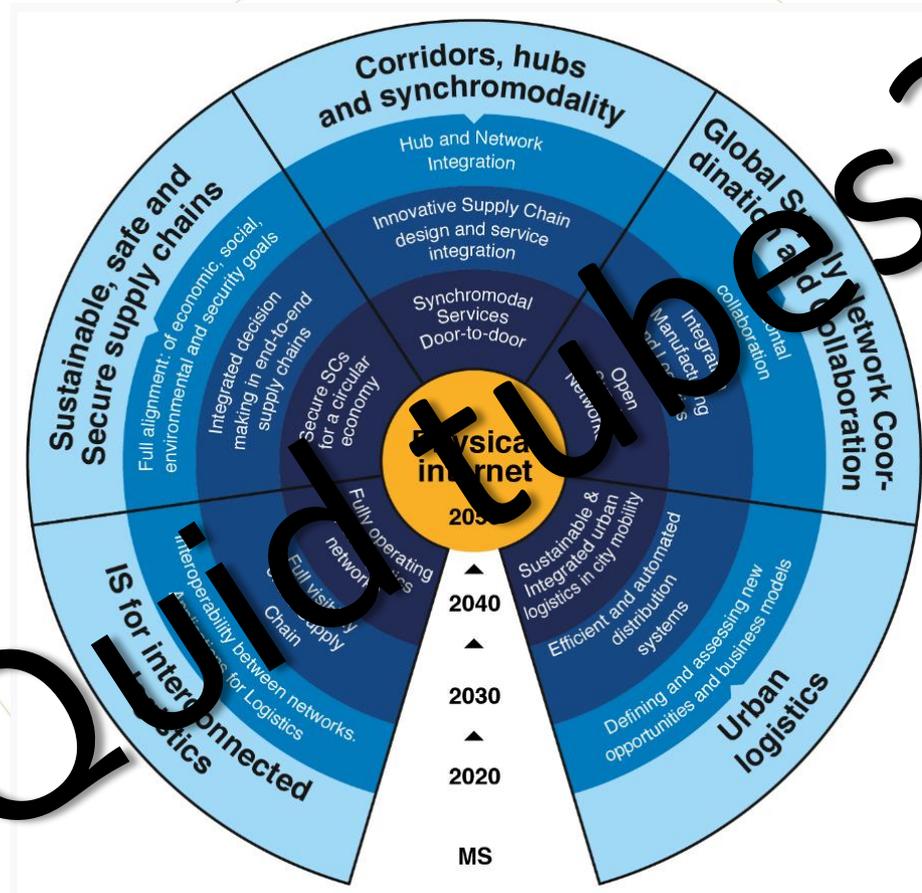


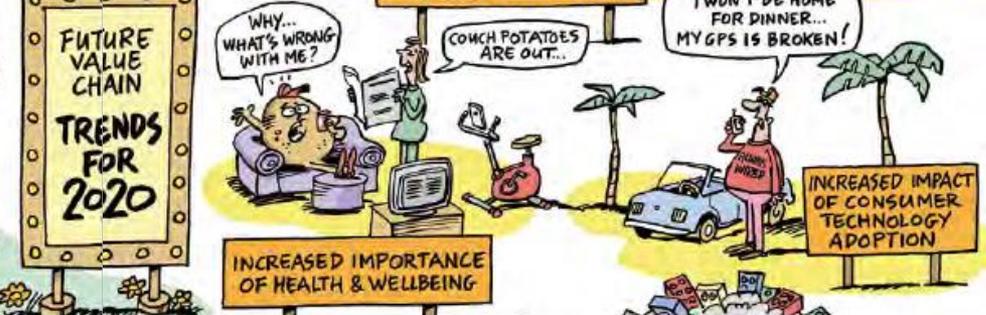
New governance models to integrate tubes in a multimodal transport system

Revisiting Transport of Goods Modes: Pipelines, Tubes and Hyperloop

Dr. Ir. Bart Vannieuwenhuysse
Chairman Working Group BIG - Mobility
FPTI - TRI-VIZOR

The Physical Internet





Supply Chain Studies

World Economic Forum

- ≡ 24% of good vehicles in the EU are running empty
- ≡ Average loading of the rest is 57%
- ≡ Overall efficiency: **43% (!)**
- ≡ Flow imbalance could only explain half of this loss

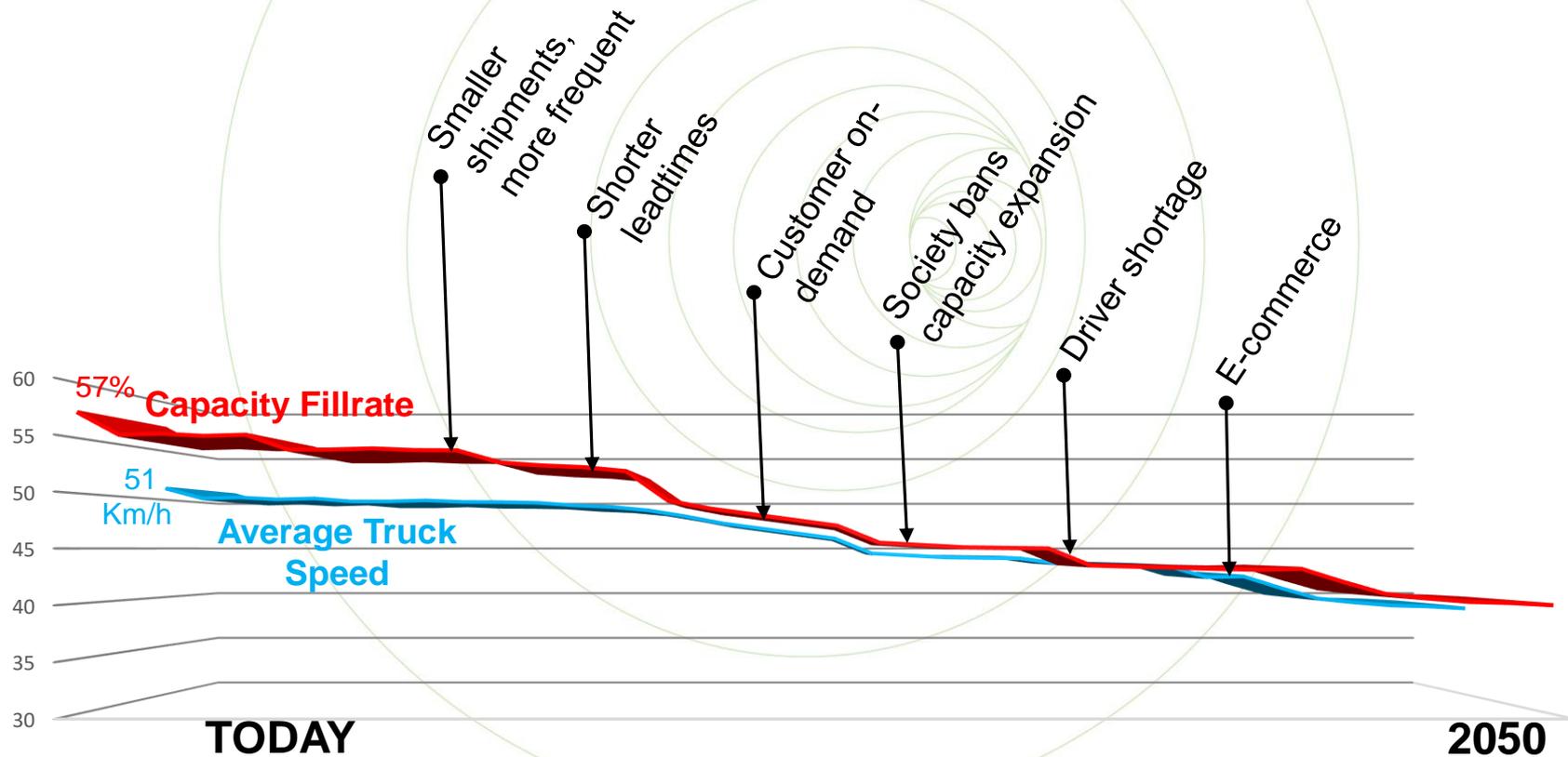
Transport Paradox

How long can this continue?

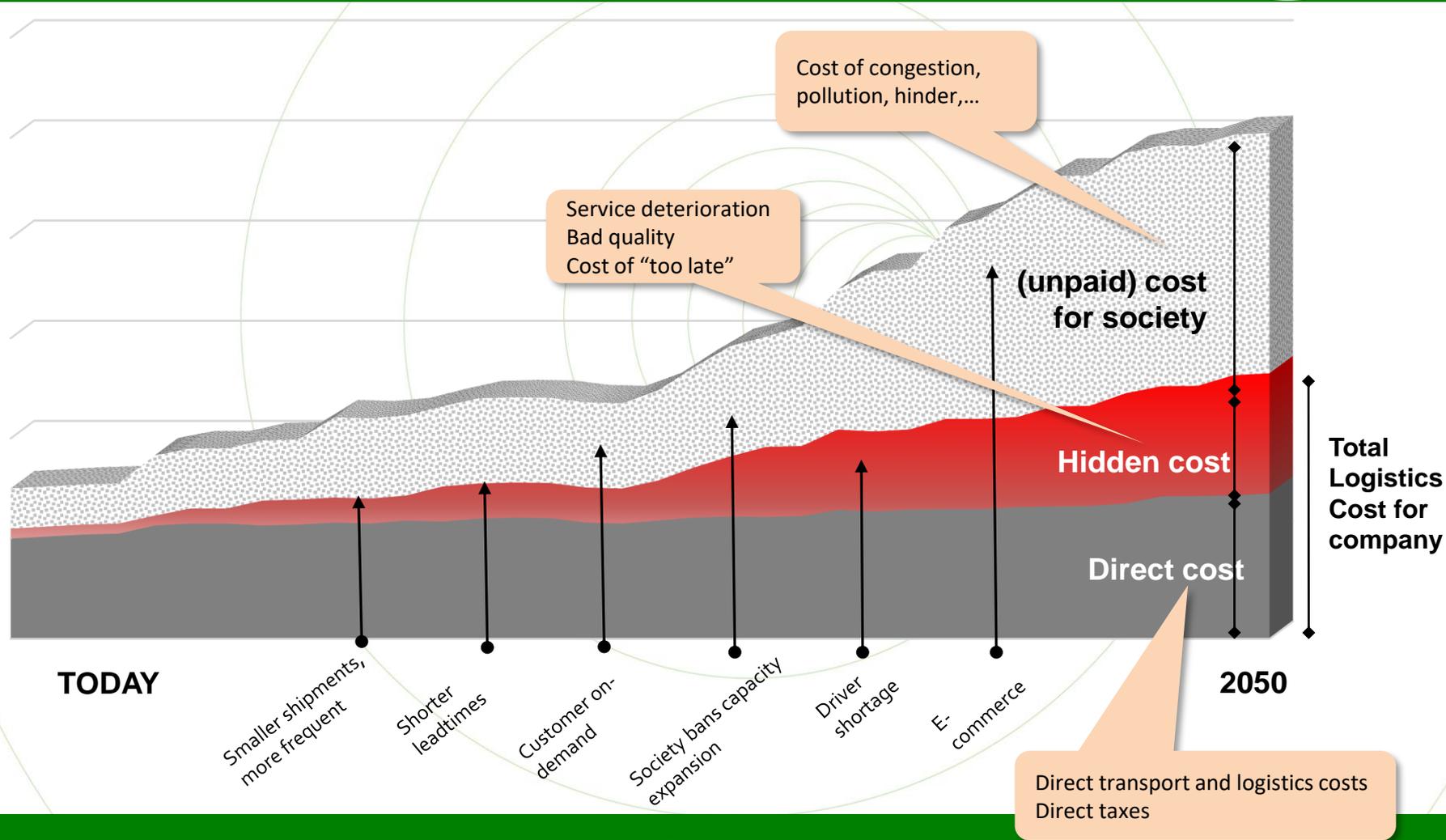
- ≡ Transport and logistics responsible for 14-20% of global *carbon footprint*
- ≡ Growth in transport generates more and more capacity problems - congestion



Why current business models will fail very soon



If we keep going, this will happen!



Current transport system under pressure



Can be improved by:

- Pricing policy – smart and fair road pricing system;
- Efficiency – vertical and horizontal collaboration;
- Smart logistics – “design for logistics”;
- Multimodality > Co-modality > Synchromodality;

≡ Innovation – adding extra capacity through a new transport mode

≡ ULS : the fifth full transport mode

Physical Internet



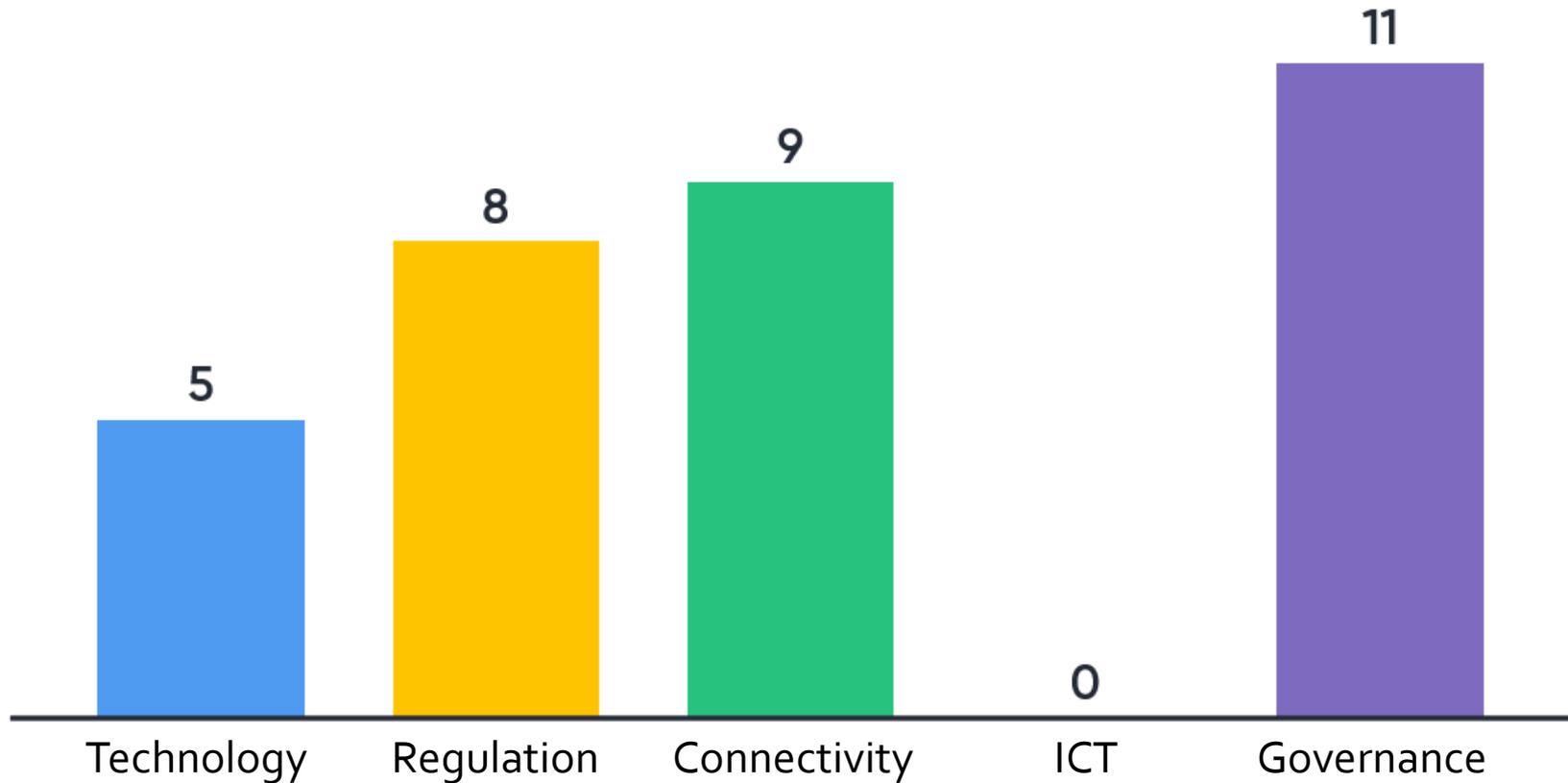
Aspiring a 'perfect' transport system, in terms of

- Automation
- Standardization
- Integration
- Connectivity
- Open access

Towards a smart, hyperconnected era of **efficient, effective and sustainable** logistics, supply chains and transportation

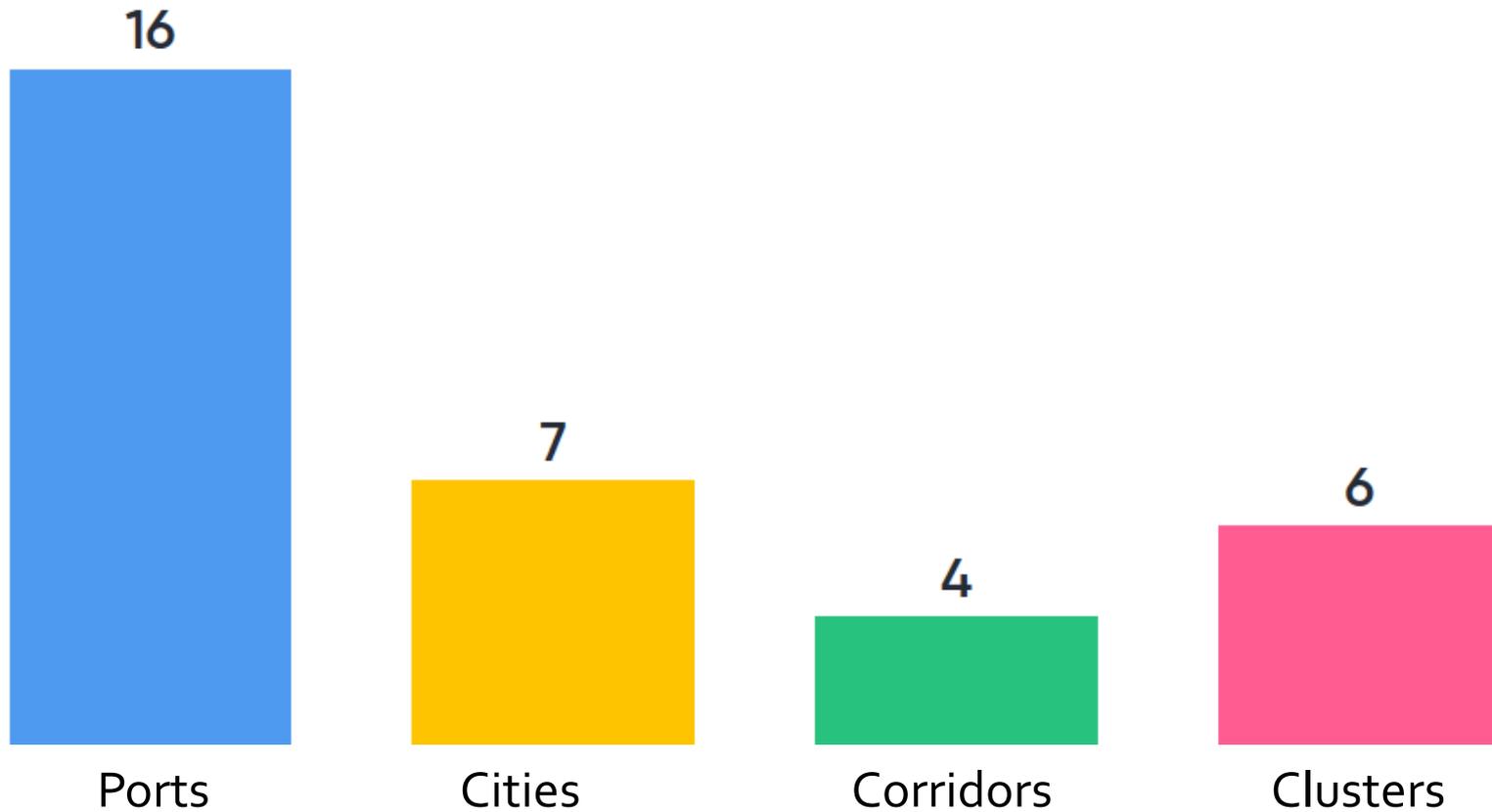
Future proof transport – focus points

Cfr. BIG workshop, 19-06-19

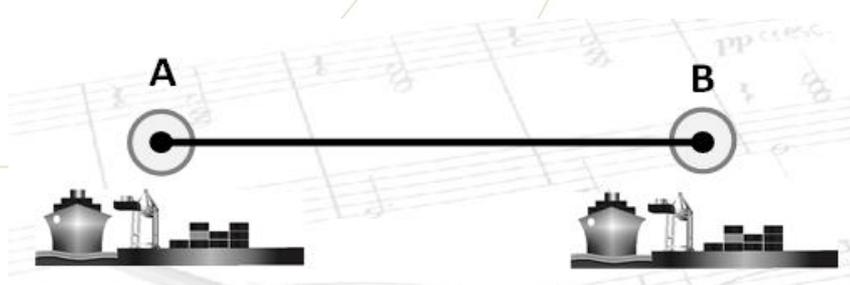
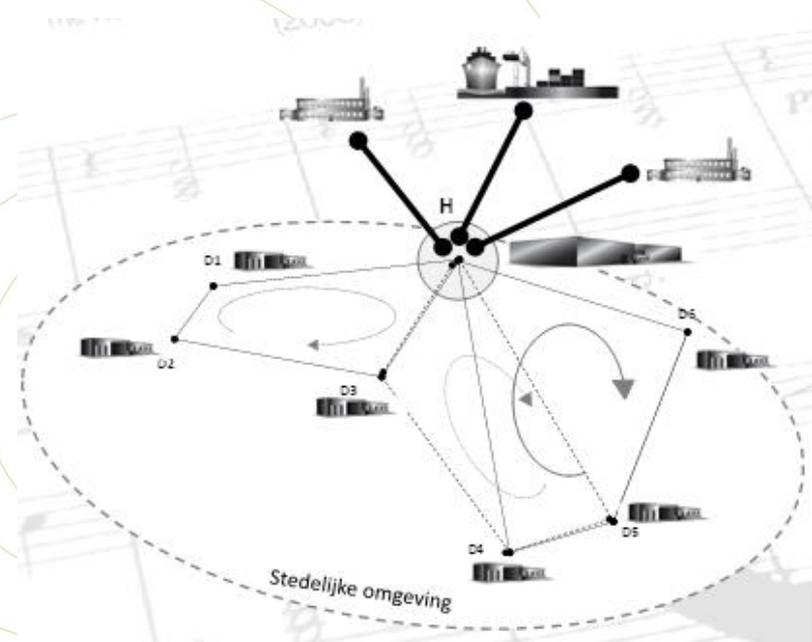
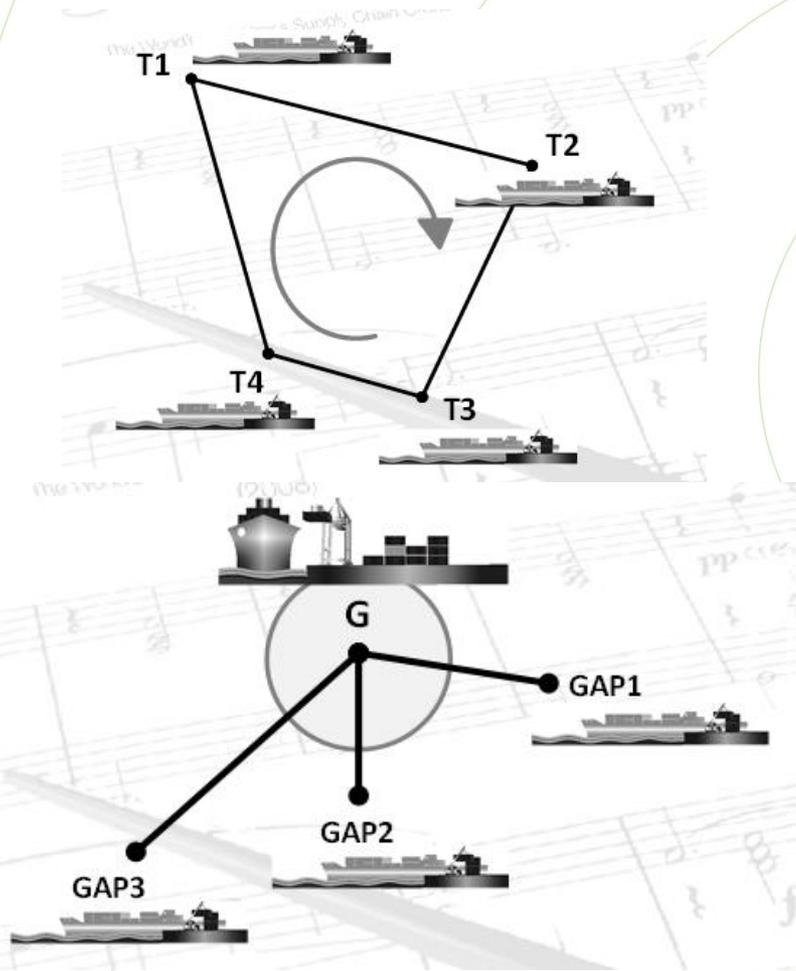


Future proof transport – focus areas

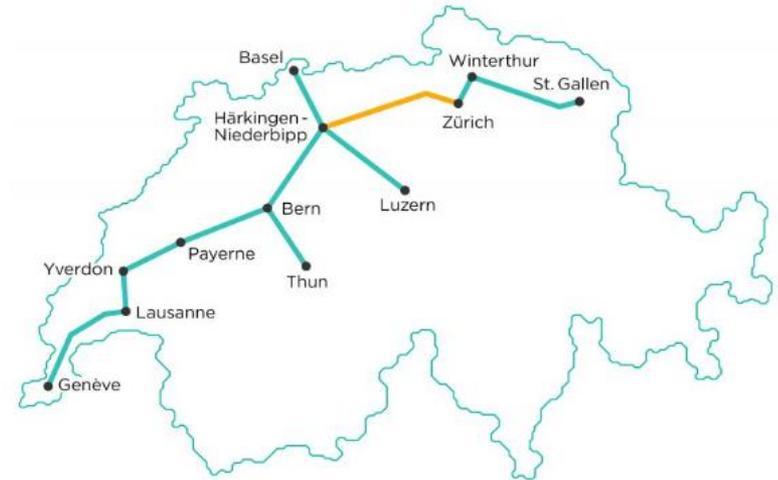
Cfr. BIG workshop, 19-06-19



Underground Logistics Systems



Inspiring case: Cargo Sous Terrain



Lessons learned about *governance*



- ≡ Traditional one-to-one models fail;
- ≡ Through collaboration one can bundle flows;
- ≡ Need for cross sectoral collaboration in order to share the risks (and the gains) in development of new transport systems;
- ≡ Need for public-private alignment;
- ≡ Need for a multi-stakeholder approach.

Contact



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