

# Pipeline based freight transportation

The 5<sup>th</sup> transportation alternative for the transport of goods in congested urban areas

United Nations Geneva

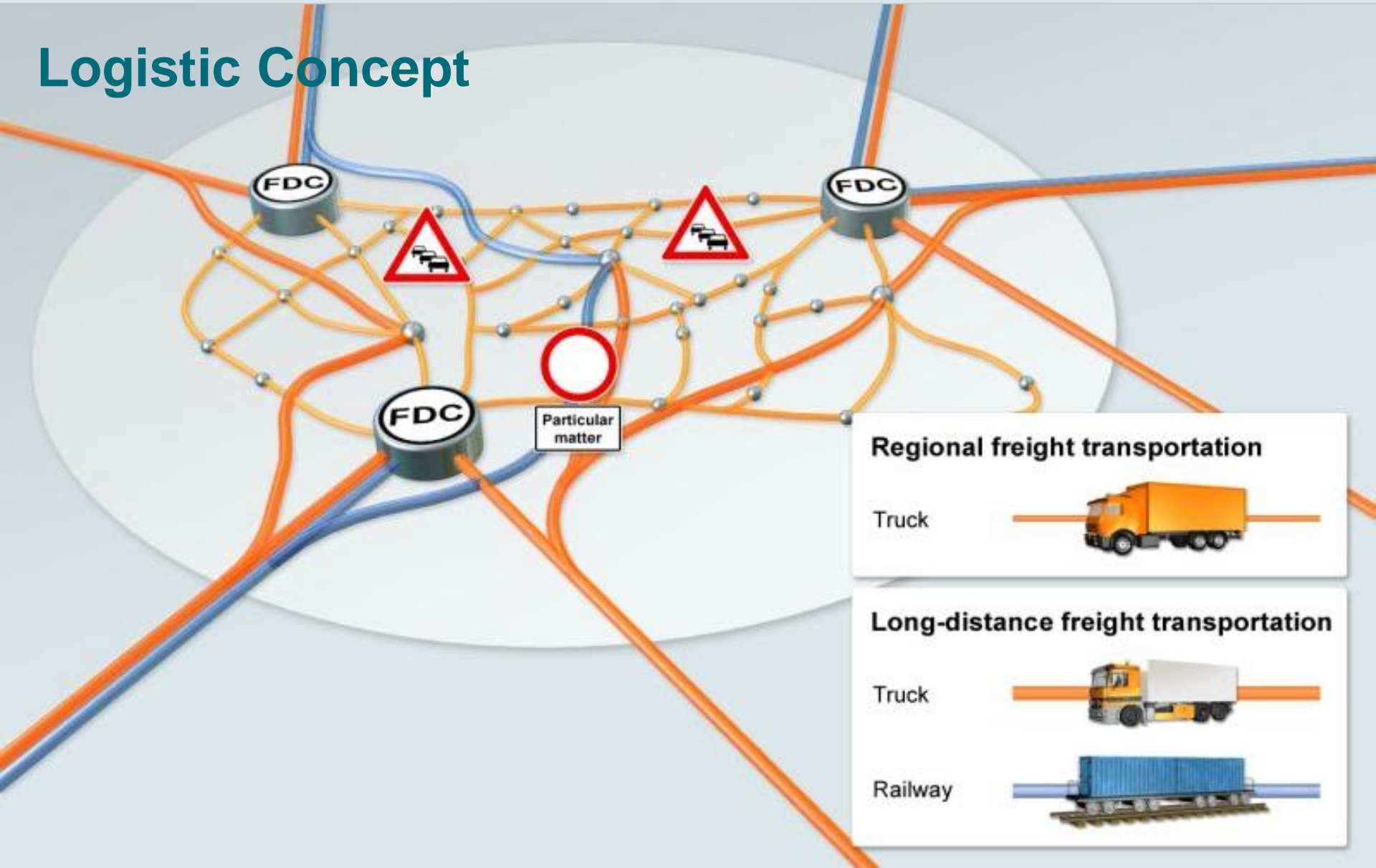
24.02.2015

Dr.-Ing. Robert Stein, Germany



# Pipeline based freight transportation

## Logistic Concept



### Regional freight transportation

Truck



### Long-distance freight transportation

Truck



Railway



# Pipeline based freight transportation

**Albert Einstein:**

„Problems can never be solved with the same mentality that caused them.“

# Pipeline based freight transportation

## Premises for new solutions

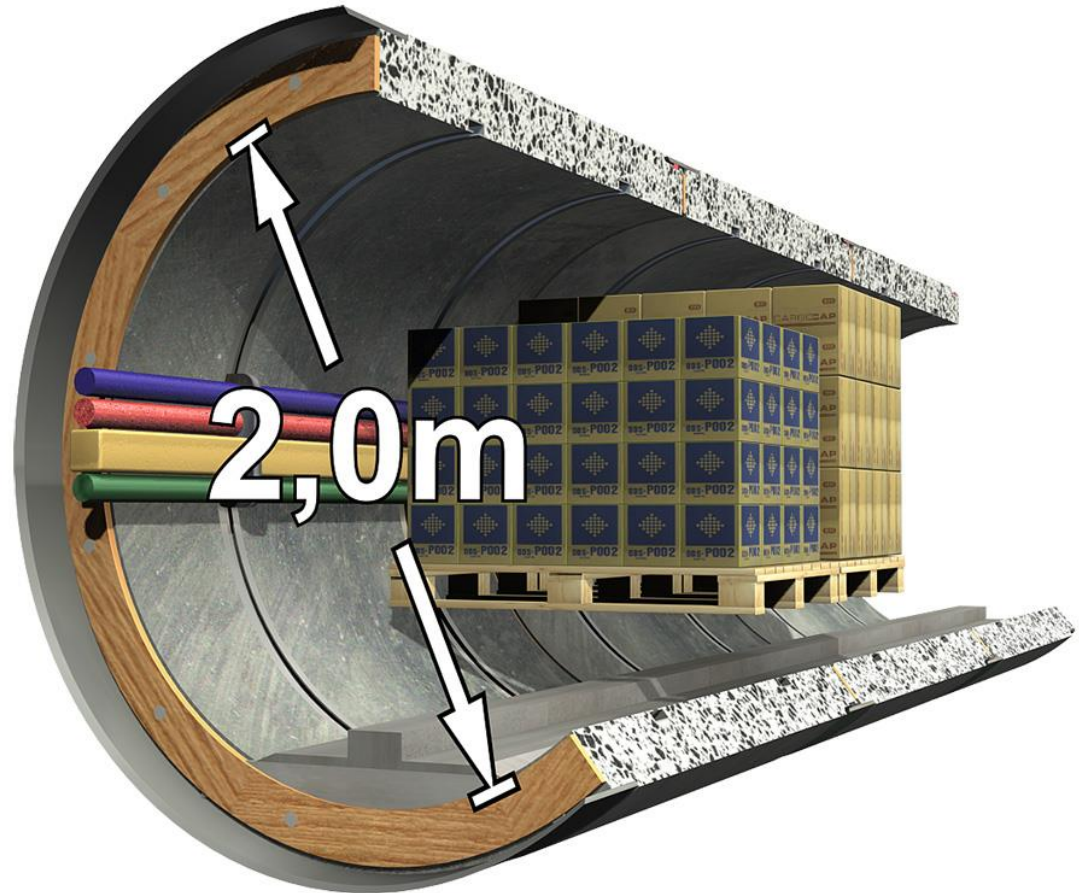
- Fast technical and legal realisation without violation of civil interests (preferably within an election period)
- Simple implementation in traditional traffic systems and logistics concept (compatibility)
- Operational efficiency
- Consideration of public interests, e.g. via public-private-partnership

# Pipeline based freight transportation

## Tube Dimensions

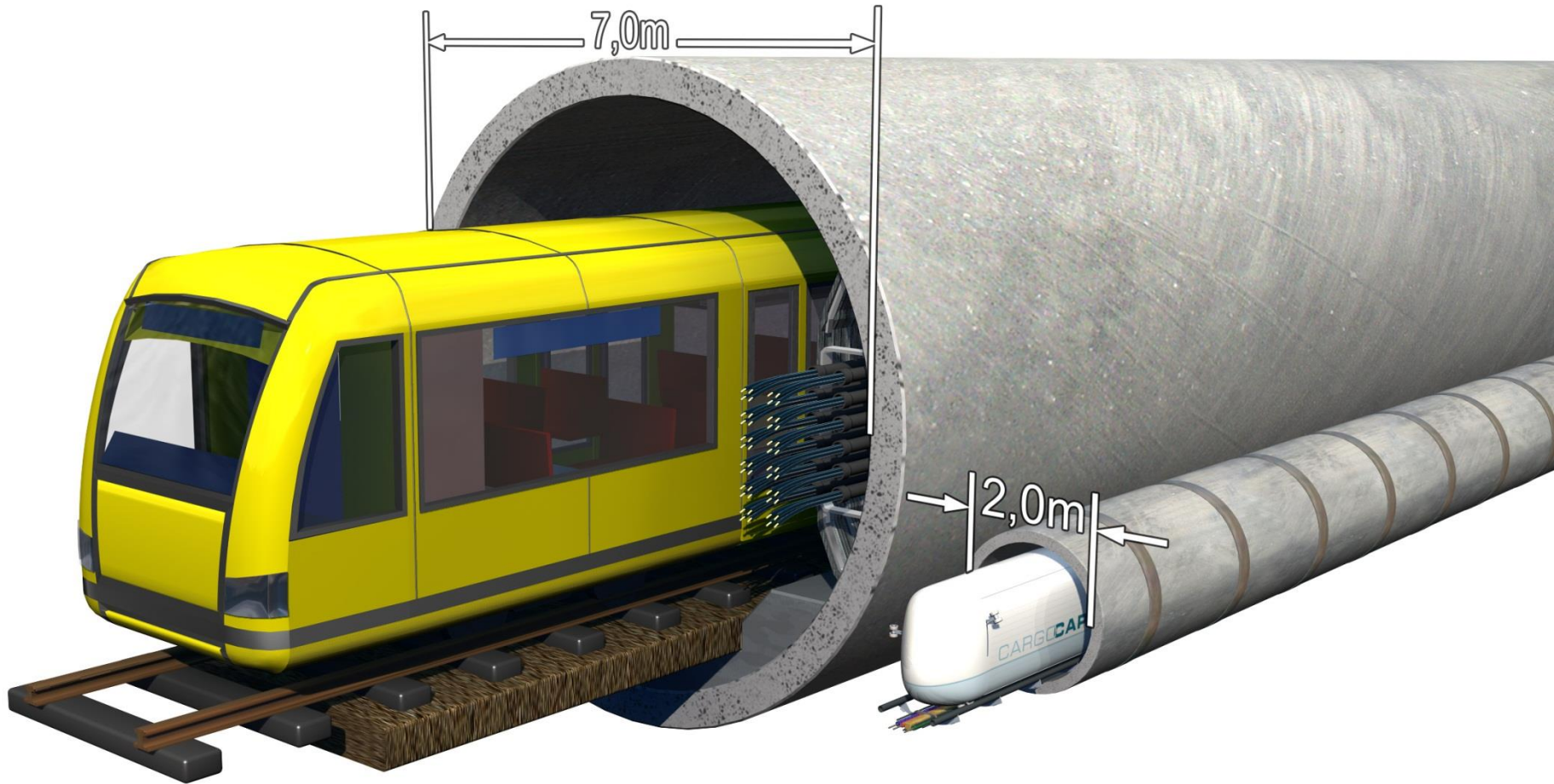
## Europalette - reference base and interface

- Height of load 1,25 m
- Size: 0,80 m x 1,20 m
- Pan-European standardised carrier



# Pipeline based freight transportation

## Tube Dimensions

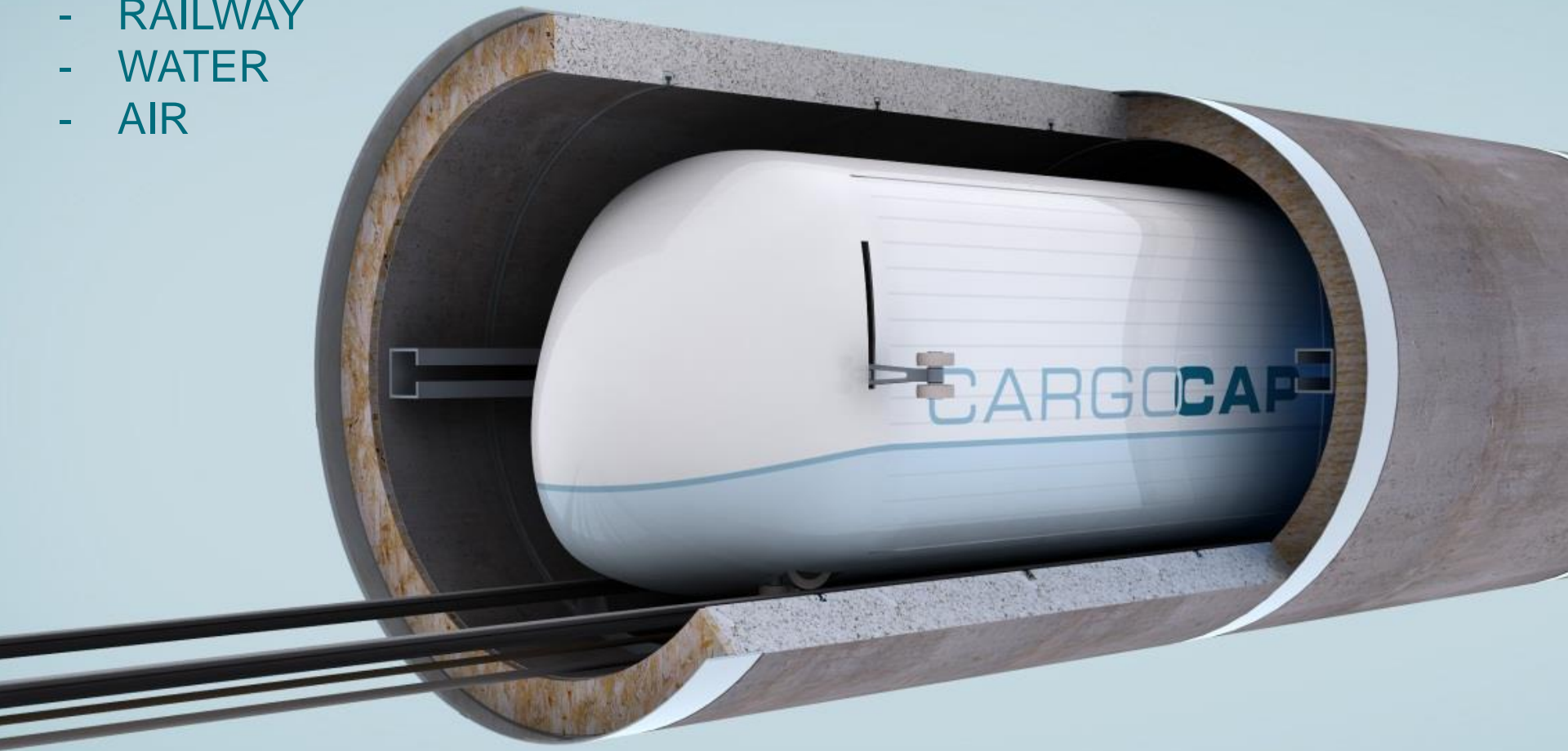


# Pipeline based freight transportation

## CargoCap

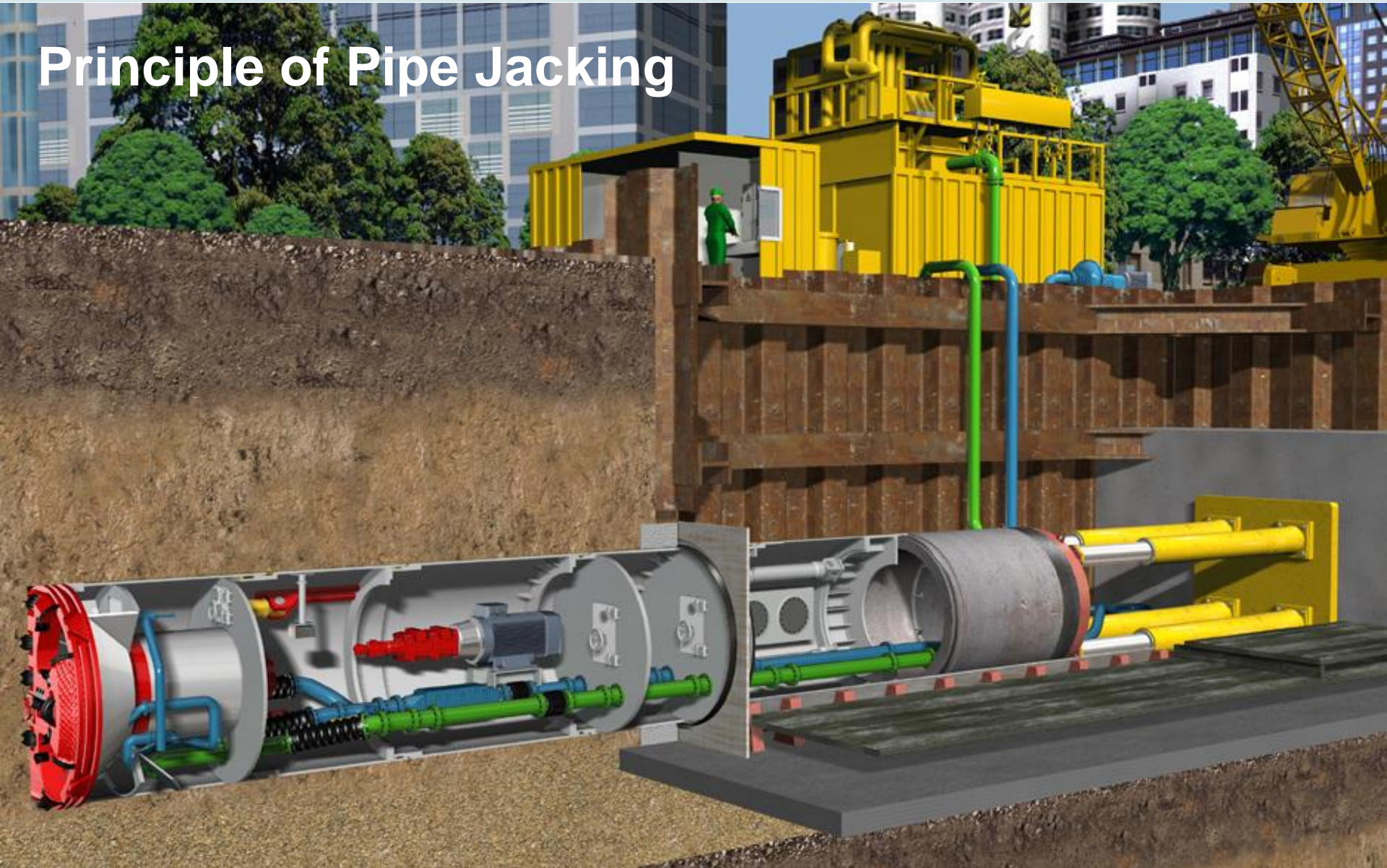
The 5th transport alternative to

- STREET
- RAILWAY
- WATER
- AIR



# Pipeline based freight transportation

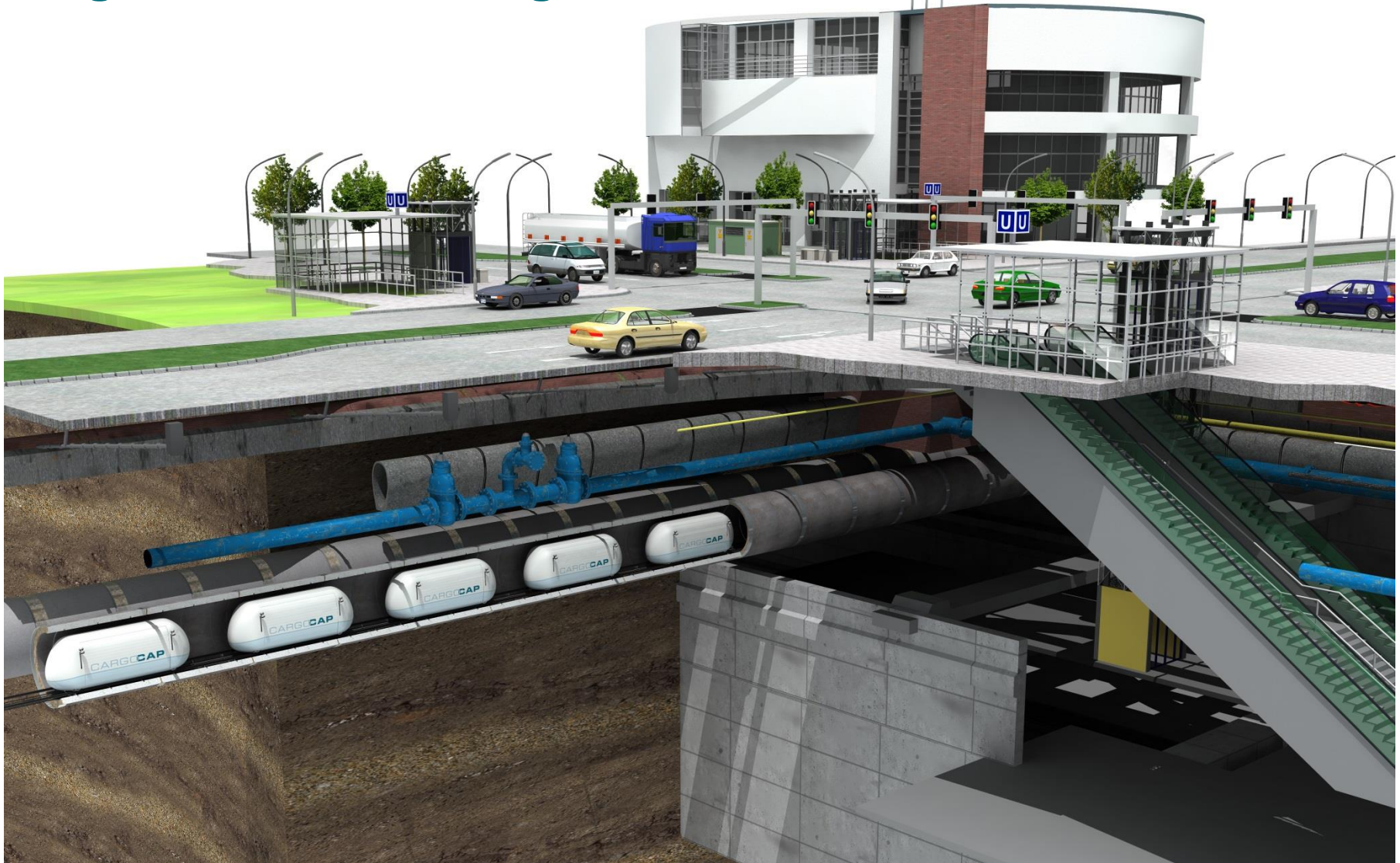
## Principle of Pipe Jacking





# Pipeline based freight transportation

## Integration into existing urban infrastructure



# Pipeline based freight transportation

## Direct transport connections

Airplane					
From	To	Airport	Railway Station	Door / Gate	Conveyer Belt
Airport					
Railway Station					
Door / Gate					
Conveyer Belt					

Railway					
From	To	Airport	Railway Station	Door / Gate	Conveyer Belt
Airport					
Railway Station					
Door / Gate					
Conveyer Belt					

Truck					
From	To	Airport	Railway Station	Door / Gate	Conveyer Belt
Airport					
Railway Station					
Door / Gate					
Conveyer Belt					

CargoCap					
From	To	Airport	Railway Station	Door / Gate	Conveyer Belt
Airport					
Railway Station					
Door / Gate					
Conveyer Belt					

# Pipeline based freight transportation



# Pipeline based freight transportation

## Advantages

### Pros & Cons

- independent
- efficient
- flexible
- exact in time
- weather-independent
- immediately realisable
- expandable
- environmentally compatible
- saves space
- Innovative

## First Mover Advantage

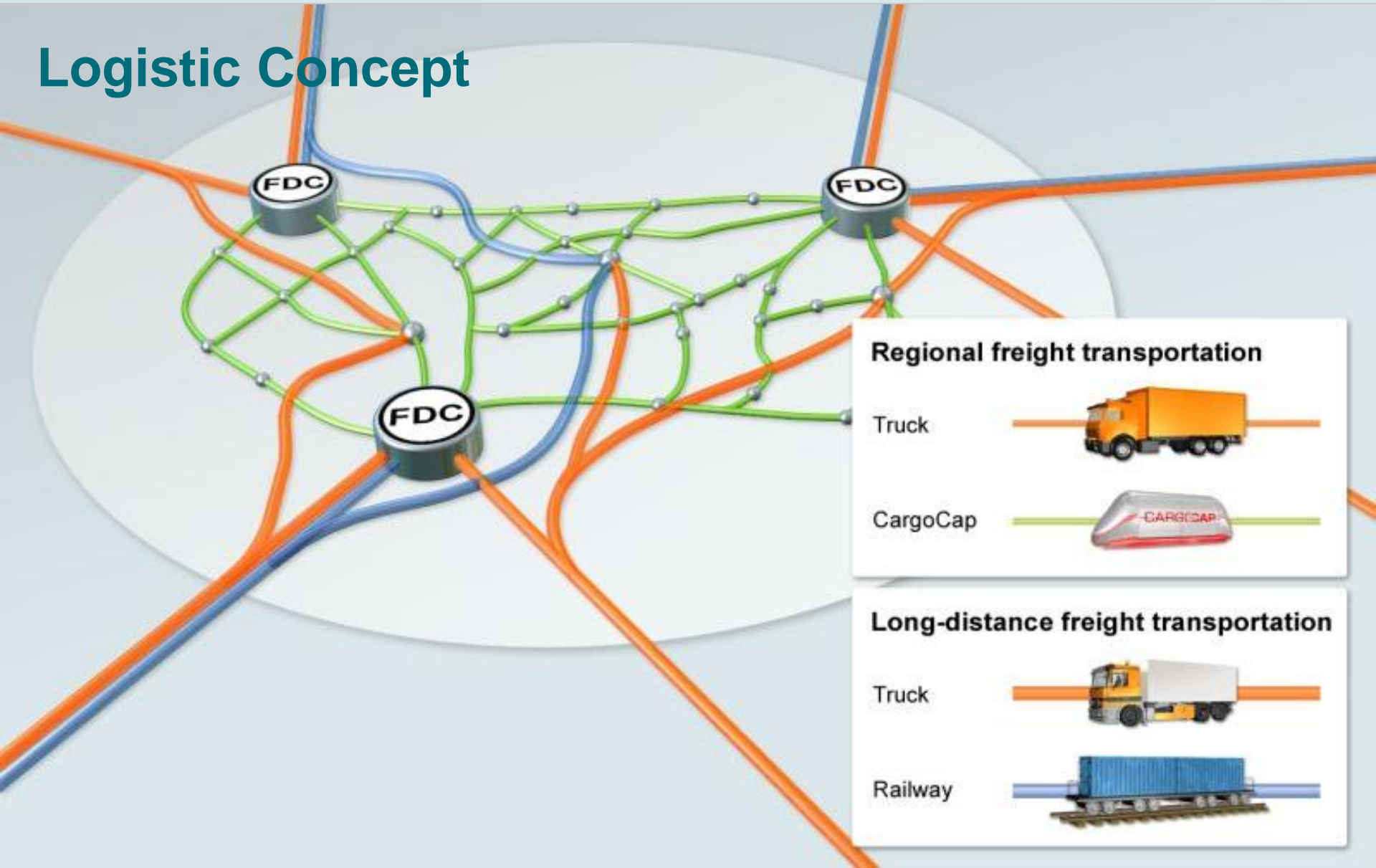
# Pipeline based freight transportation

## Competitive advantages compared to other regions

- Better access to industrial sites
- Logistic connection of decentralized sites.
- Better usage of areas
- Improved environment and health via: reduction of traffic jams, accidents, noise, pollution, CO<sub>2</sub> emissions
- Increased regional competitiveness and thereby more jobs

# Pipeline based freight transportation

## Logistic Concept



### Regional freight transportation

Truck



CargoCap



### Long-distance freight transportation

Truck



Railway

