



PORT AUTHORITY STRATEGY/BUSINESS MODEL

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LARISSA VAN DER LUGT
RHV – BV
SCHOOL OF ECONOMICS
VANDERLUGT@ESE.EUR.NL

CONTENT

- ❑ BACKGROUND ROADMAP
- ❑ UNDERLYING PRINCIPLES
- ❑ APPROACH





BACKGROUND TO ROADMAP

ROADMAP

COMBINATION RHV AND RSM

HENK VOLBERDA

FRANS VAN DE BOSCH

RICK HOLLEN

LARISSA VAN DER LUGT

INVOLVEMENT POR: CORPORATE STRATEGY

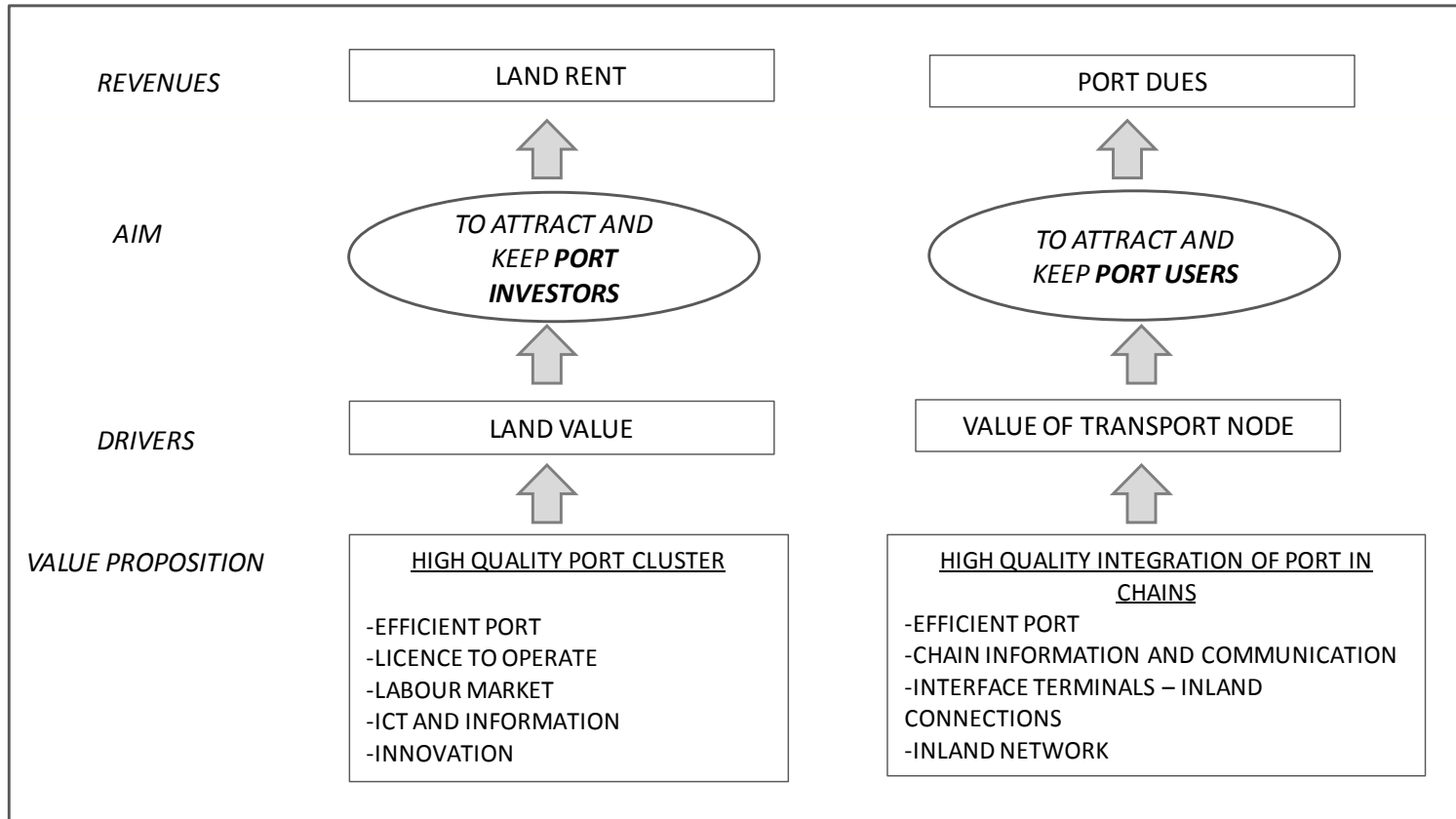
THE CORE CHALLENGE IN PORT MANAGEMENT

THE CORE ISSUES IN PORTS GENERALLY ARE NOT ABOUT TERMINAL OPERATIONS, BUT ABOUT:

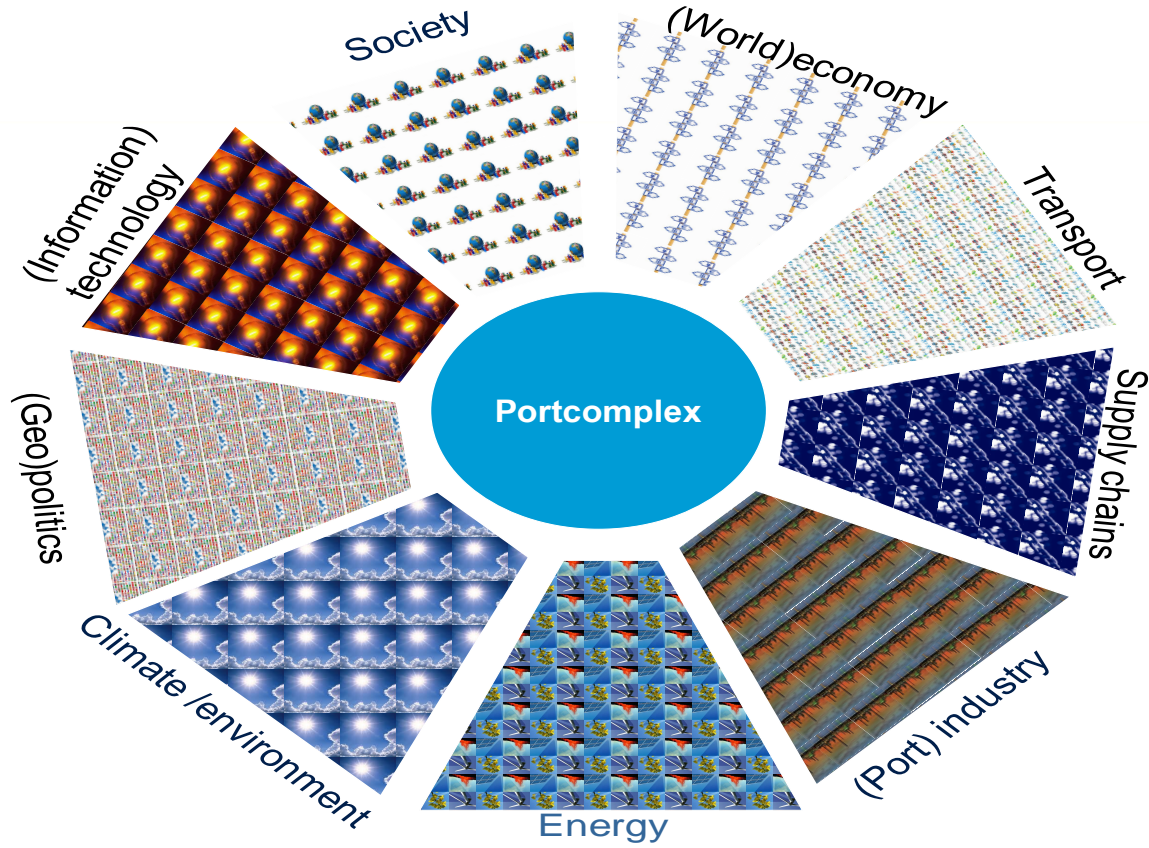
- PORT PLANNING (INCLUDING HINTERLAND CONNECTIONS)
- ASSET UTILIZATION
- FUNCTIONAL INTEGRATION
- PROCEDURES OF CUSTOMS (AND OTHER INSPECTION AGENCIES),
- INFORMATION EXCHANGE, INTEGRATED PORT CALL OPTIMIZATION
- INNOVATION



PA BUSINESS MODEL



BACKGROUND: DRIVERS OF CHANGE



DRIVERS OF CHANGE: IMPACT

- ❑ ENVIRONMENT: ENERGY TRANSITION, LNG AS FUEL FOR SHIPS
- ❑ PORT RELATED INDUSTRIES: HOW DOES A CIRCULAR ECONOMY IMPACT FREIGHT FLOWS?
- ❑ INFORMATION TECHNOLOGY: WHAT WILL DRIVERLESS TRUCKS MEAN FOR THE 'MODAL SHIFT'?
- ❑ TRANSPORT: EVOLUTION OF MARITIME NETWORKS? DIRECT SHUTTLES?
- ❑ SUPPLY CHAINS: 3D PRINTING?
- ❑ ENERGY: THE PACE OF THE ENERGY TRANSITION.
- ❑ GEO-POLITICS: WHAT IF EUROPE REALLY AIMS FOR ENERGY INDEPENDENCE?
- ❑ GLOBAL ECONOMICS: REGIONALIZATION, TRADE OF SERVICES?
- ❑ SOCIETY: AGING, REPLACEMENT OF LABOUR BY CAPITAL



ENERGY TRANSITION

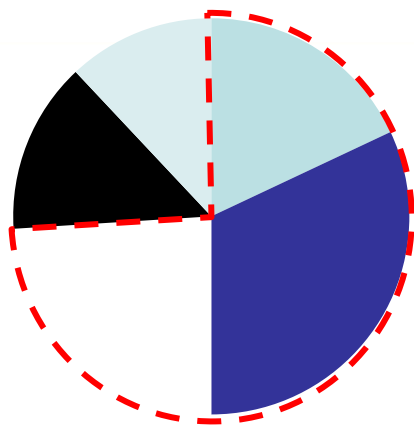


DIGITALIZATION

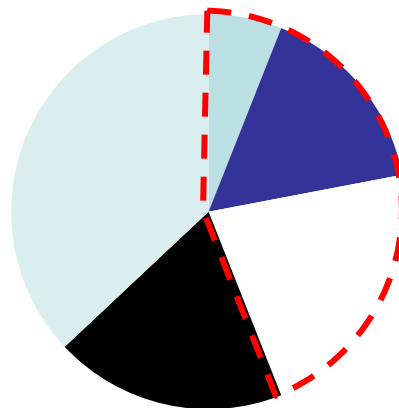


MOST IMPORTANT DRIVERS OF CHANGE

SHARE FOSSIL FUELS



2013: 74%



2040: 44%

- Kolen
- Olie
- Gas
- Nuclear
- Renewables

source: International Energy Agency, Energy Demand in European Union in 2040 scenario)

INFORMATION TECHNOLOGY

INFORMATION-EXCHANGE

INTERNET OF WHAT?

3D PRINTING

BIG-DATA



SHIPMENT VISIBILITY

Track your shipments and receive notification updates

Manage all your company's global freight shipments through a simple online dashboard. Your dedicated customs broker and logistics experts will manage the movement of your goods while you optimize your supply chain down to the SKU.

The screenshot displays the FLEXPOR T web interface. On the left is a dark blue navigation sidebar with the following menu items: DASHBOARD, SHIPMENTS (highlighted), QUOTES, PRODUCTS, NETWORK, REPORTS, BILLING, and SETTINGS. The main content area features a search bar for the supply chain, a breadcrumb trail for 'Shipment: FLEX-18277', and the shipment title 'Hoverstick G2'. Below this, it lists subscribers 'Anthony Chen, Andrew Dunn'. A world map shows a shipping route from Asia to North America. To the right, there is an 'Activity' feed with a user profile for Phoebe Ro and a message: 'I have the first first sailing on... has gone ahead... I have a couple...'. At the bottom, a 'Details' section is partially visible, showing a table of shipment information.

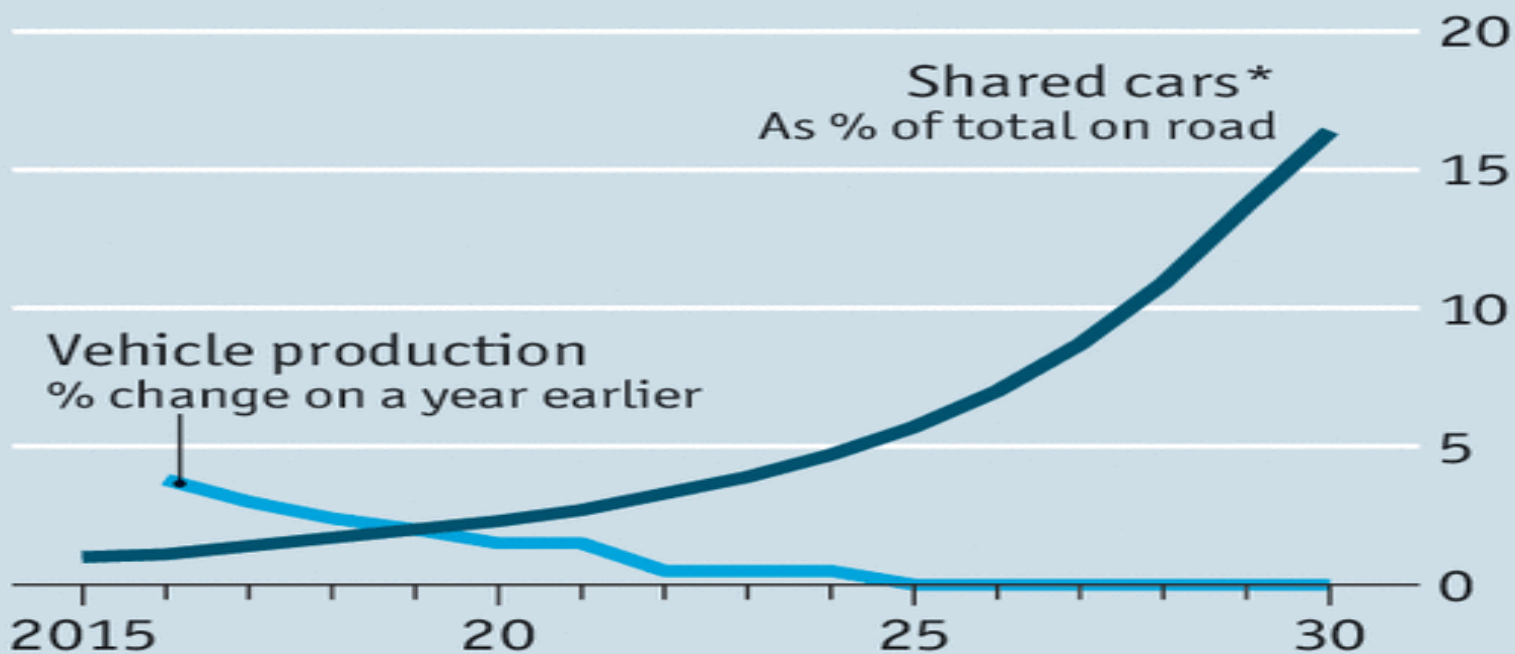
BASIC	
SHIPMENT METHOD	Oce
CONTAINER TYPE	40' Container (High Cube)
CARRIER	National Li

REFERENCE NUMBERS	
MASTER BILL OF LADING	NJLCAC975191
ISF NUMBER	JSUDC9752931
VESSEL NAME	CMA CGM FIG

CARGO	
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Sharing, not growing

Worldwide forecast



Source: Morgan Stanley

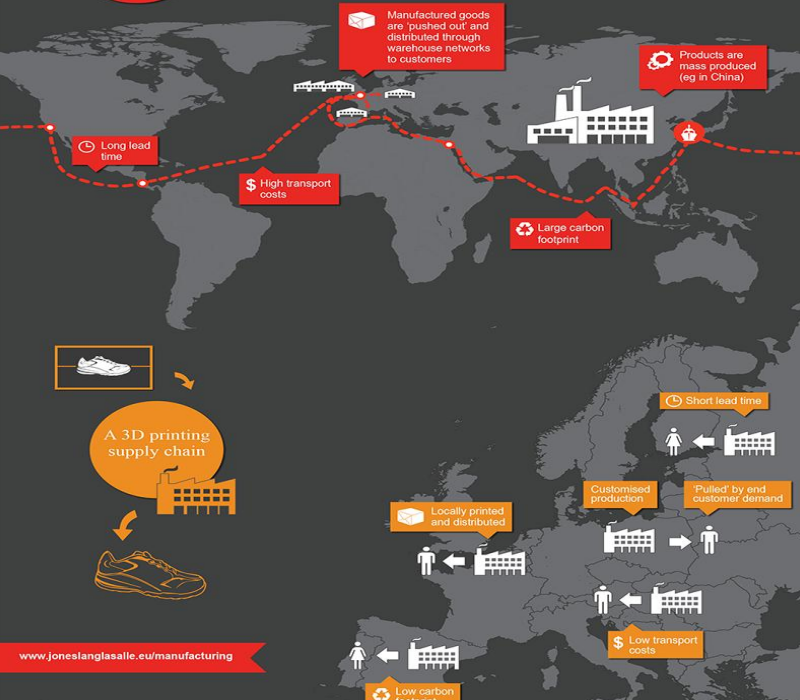
*Including taxis, excluding car rental

The impact of 3D printing on supply chains

Whilst modest at present, 3D printing has the potential to transform certain parts of manufacturing, and supply chains, over the longer term.

In addition, instead of taking place in bespoke factories, 3D printing will create demand for smaller and more standard premises, opening up opportunities for developers and investors.

A traditional supply chain



3D-PRINTING : LARGE IMPACT ON SUPPLY CHAINS:

- ❑ LOCAL PRINTING AND DISTRIBUTION
- ❑ PRODUCTION TO INDIVIDUAL CUSTOMER ORDER
- ❑ SHORT LEAD TIMES
- ❑ LOW TRANSPORT COSTS
- ❑ LOW CARBON FOOTPRINT

IMPACT PORTS?

INTERNET OF WHAT?

...SHIPS

...CONTAINERS

...NOSES

...EQUIPMENT

...WATER & WIND

...DRONES



SOMETHING HÁS TO CHANGE...

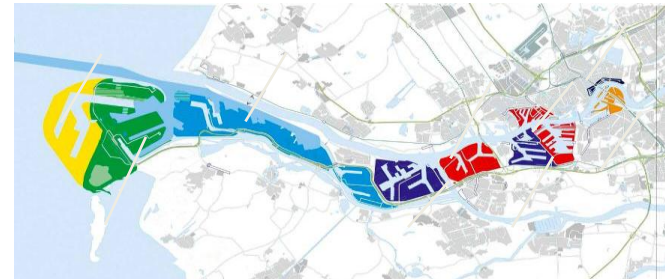


CONTEXT:

- ❑ BIGGEST PORT OF EUROPE
- ❑ BEST PORT INFRASTRUCTURE IN THE WORLD (WORLD ECONOMIC FORUM)
- ❑ ACCESS TO 350 MILLION WEALTHY CONSUMERS AND HIGH POPULATION DENSITY

BUT:

- ❑ 80% OF THE ASSETS ARE ECONOMICALLY (AND TECHNICALLY?) WRITTEN OFF
- ❑ 60% ACTIVITIES ARE FOSSIL-FUEL BASED
- ❑ HIGH ENERGY PRICES IN EUROPE
- ❑ HIGH LABOR COSTS (+BATTLE FOR TALENT)
- ❑ HIGH LAND LEASE COSTS



ROADMAP STRUCTURE

- ❑ 3 PROJECTS DEFINED



UNDERLYING PRINCIPLES

CONTEXT CHANGE

INTERNAL

- FROM LANDLORD TO DEVELOPER
- FROM INVESTMENTS IN INFRASTRUCTURE TO NETWORK

EXTERNAL

- END OF FOSSIL FUEL
- GEO-ECONOMICAL AND GEOPOLITICAL DYNAMICS
- SUPPLY CHAIN CHANGES
- DIGITALISATION



CONSEQUENCE

- ❑ NEW STRATEGIC SCOPE AND BUSINESS MODEL
- ❑ *BUT: CAN WE CONSIDER A PORT AUTHORITY LIKE ANY OTHER COMPANY?*

PA CHARACTERISTICS

- ❑ GEOGRAPHICALLY TIED
- ❑ PUBLIC OWNERSHIP (BUT ACTING ON COMMERCIAL GROUNDS)
- ❑ MARKET DISCIPLINE ONLY LIMITED
- ❑ MIX OF PUBLIC AND COMMERCIAL GOALS
- ❑ STRONGLY RELATED TO PRIVATE COMPANIES IN THE PORT



STRATEGIC GOALS

- ❑ CREATION OF SOCIAL VALUE WITHIN FINANCIAL CONSTRAINTS,

OR,

- ❑ CREATION OF FINANCIAL VALUE WITHIN SOCIETAL CONSTRAINTS

YOU NEED TO MAKE A CHOICE FOR BEING ACCOUNTABLE!





VALUE

- ❑ FINANCIAL VALUE: METRICS AVAILABLE
- ❑ SOCIETAL AND STRATEGIC VALUE
 - ❑ GEOGRAPHICAL PERSPECTIVE?
 - ❑ TIME HORIZON?

HOW TO INCORPORATE THESE VALUES IN STRATEGY
MAKING PROCESS?

SCOPE OF ACTION IN CLUSTERS AND NETWORKS

- ❑ CONDITIONED BY STRATEGIC DEVELOPMENT OF COMPANIES WITH THE CLUSTER/NETWORKS
- ❑ INTERACTIVITY WITH ACTORS WITHIN PORT COMPLEX REMAINS KEY ASPECT FOR DETERMINING SCOPE OF ACTING
- ❑ *MONITORING, SIGNALLING, REACTING*

**CASE
HINTERLAND**

EXAMPLE: START-UPS



Erasmus University Rotterdam

PORTXL
world port accelerator

www.portxl.org

Global port operator PSA joins venture capital crowd

Monday 09 May 2016, 12:30

by Katherine Espina



PORTS & LOGISTICS

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Newly created venture capital unit PSA unboXed will provide money and testbed for start-ups

SINGAPORE-headquartered PSA International, operator of the world's largest transshipment hub, has unveiled its new corporate venture capital arm, PSA unboXed, with an initial fund size of S\$20m (\$15m).

PSA unboXed will invest in and nurture about 10 to 20 start-ups keen on creating innovative logistics solutions in container and cargo-handling operations and transaction solutions for the maritime trade and finance ecosystems. PSA International group president chief executive Tan Chong Meng said PSA has "the unique platform to instigate and support game-changers" in the industry, given that it is one of the world's largest port operators.

"With the internet of things, artificial intelligence, imaging capabilities, automation and robotics developments over the past few years, we feel that now is a good time to provide PSA as a testbed, a collaborative platform to harness the possibilities that are enabled by these technologies that may have been developed for other purposes but can then be extended to this space," Mr Tan said at the launch of PSA unboXed.

Asked why PSA resorted to creating a venture capital arm, Mr Tan said: "We want to try to create a culture change for ourselves, that we should be open. Any other way feels like we are controlling as much as possible. We are still going to innovate and do what we know but at the same time we are willing to bring in other stakeholders and provide a voice and work together with them."



FINDINGS ANALYSIS INTERNATIONAL STRATEGY



ARGUMENTS:

- PROVIDES BENEFITS
- DRIVEN BY KNOWLEDGE AND COMPETENCIES
- MARKET FOR PORT MANAGEMENT?

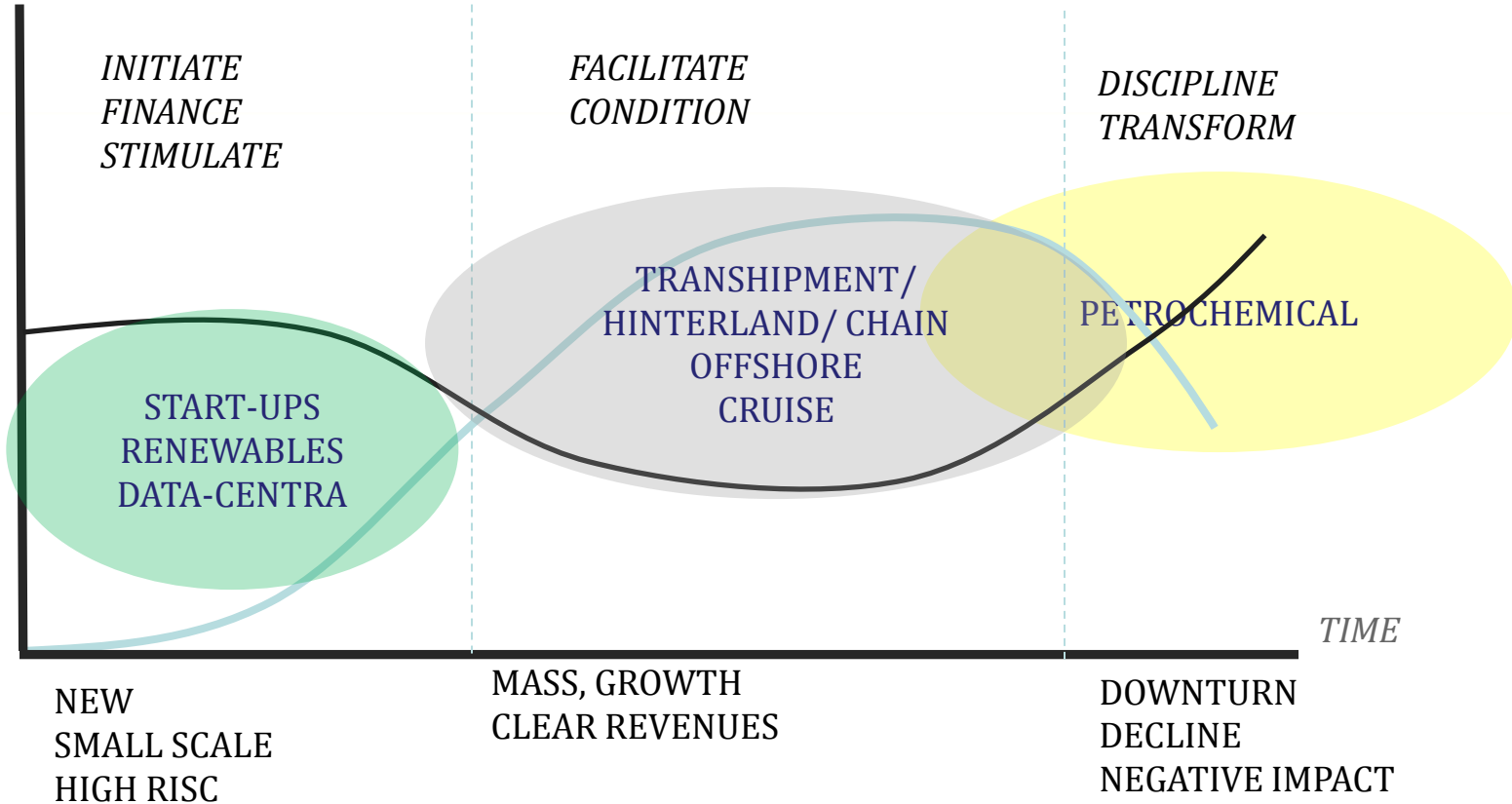
FINDINGS FROM CASE RESEARCH:

- LIMITED POSSIBILITIES YET, DIFFICULT PROCESSES
- OPPOSITION FROM STAKEHOLDERS

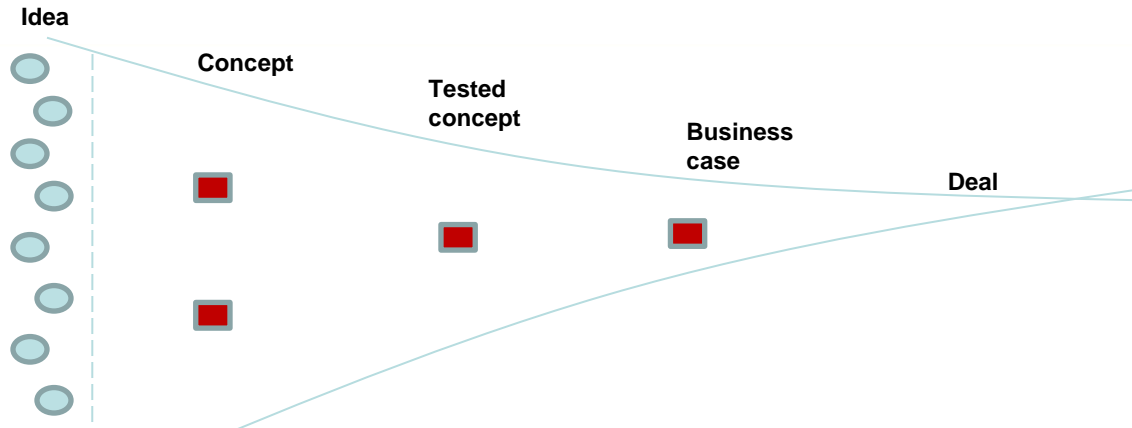
PA'S ACTING IN CLUSTER



VALUE
CREATION



NEW BUSINESSES/ACTIVITIES MANAGING THE FUNNEL



- PORT AUTHORITIES BENEFIT FROM ACTIVELY MANAGE THE 'BUSINESS DEVELOPMENT FUNNEL'. NOT ALL IDEAS WILL END UP IN A DEAL, SO PORT AUTHORITIES NEED A HEALTHY FUNNEL.
- PORT AUTHORITIES MAY LEARN FROM OTHER COMPANIES TO 'FAIL FAST': NOT TO HAVE IDEAS FLOATING AROUND FOR YEARS, BUT ACTIVELY PUSHING PROGRESS, AND BE COMFORTABLE WITH IDEAS THAT FAIL – BUT FAST AND WITHOUT HUGE DEVELOPMENT COSTS.

Source: Peter de Langen



ISSUE

- ❑ HOW DO THE CONTEXT CHANGES CHANGE THE BUSINESS MODELS OF ESTABLISHED PORT CLUSTERS/SEGMENTS
- ❑ WHAT NEW CLUSTERS/SEGMENTS COULD DEVELOP
- ❑ WHAT IMPACT ON PORT BUSINESS MODEL
 - ❑ NEW INVESTMENTS
 - ❑ NEW SCOPE OF ACTING
 - ❑ NEW ASSET BASE
 - ❑ NEW REVENUE STREAMS

