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# Making “Digital by Default” a reality:

An industry’s perspective!



# Framing the perspective

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Looking at things from:

- a Business Perspective
  - Please note: Missions/Visions are at level of their core business and not at IT-level
- and even more:
  - Supply Chain perspective
  - Operational perspective



# To Be!

## In other words : " Desired End State"

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As stated in the "TNO-report" of 9/2017 called (Digital Inland Waterway Area) and feedback from the Business:

- Effective and Efficient Integration in Logistic Processes
- Effective and Efficient Navigation and Traffic Management
- Effective and Efficient Admin for complying with Legislation

Taking into account :

- All in the context of maximal safety and security !!!
- With the aim to realise Green Deal, Modal Shift, ... targets
- Addressing the challenges regarding staffing

But leading is the Company's Mission/Vision...



# As is ...

## In other words: finding out where we are we now, by

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- Engage all relevant stakeholders of which the businesses are indeed the key ones while at the same time creating a sense of urgency.
- Analyse current systems and operations and understand it
- Define the starting point and operational targets and measures to achieve these objectives



# As is: a bit more precise

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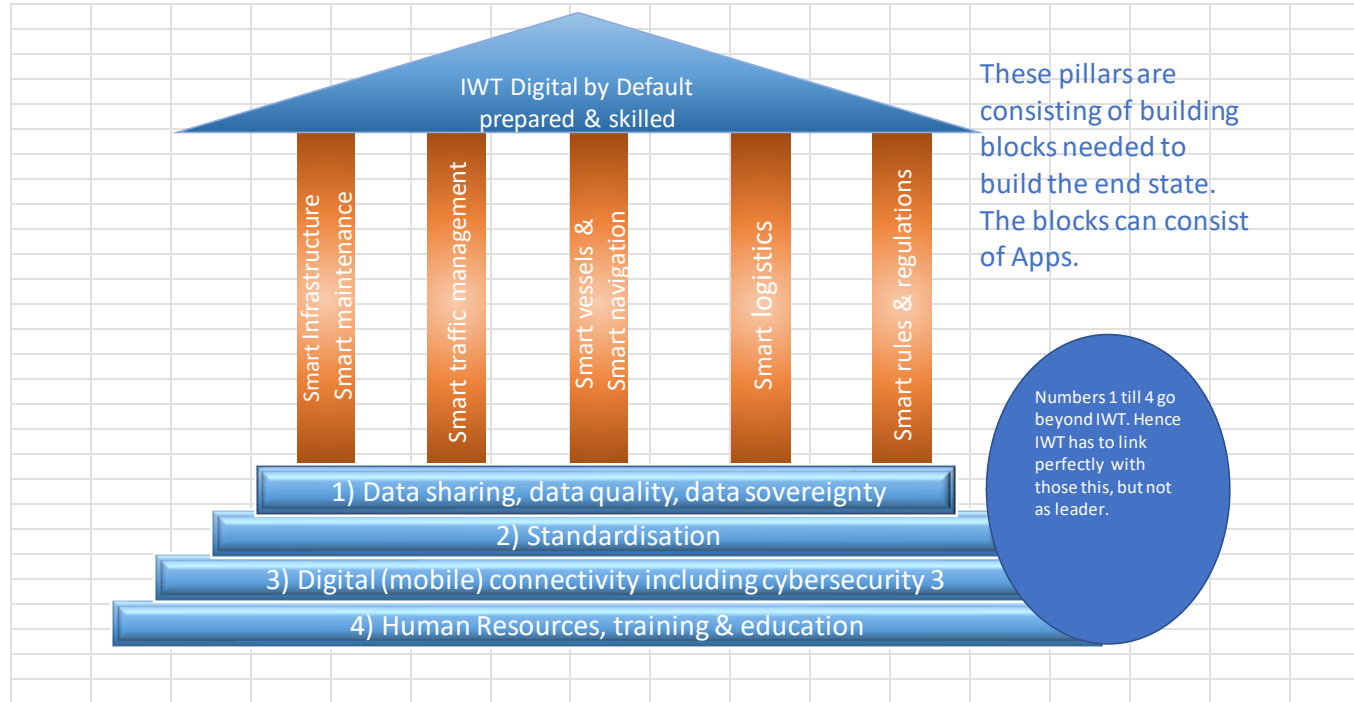
The next slides try to picture elements of the “As Is” which needs to be further investigated and categorized as :

- Maintain since it leads to the “must have” (or already led towards)
- Maintain since it leads to “ nice to have “ (or already led towards)
- Eliminate

Courtesy of H. Van Laar the image of a temple is used. And reference is made to the “Platina 3 table” ( cfr document of holistic vision)



# The temple



# Building blocks of the pillars (the Bill of Material)

Constructed on which foundation(s): 1, 2, 3 ??	Pillars	Building Blocks	Part of DINA doc of 2017?	Recent initiatives supported by EU	BTB/BTA/ATA ?	Available TRL - level	"Must have" degree on a scale from 1 to 5	Action needed: R&D, deployment/communication, nothing
1,2,3	<b>Digital (mobile) connectivity including cybersecurity</b>	Data connectivity IWT actors mutually and with other modes of transport.		FENIX/FEDERATED	BTB/BTA	7	5	
		Seamless communication between vessels, infrastructure and other waterway users to increase the safety of future		EURIS	BTB/BTA	6	4	
	<b>Standardisation</b>	Links to and embedded in initiatives related to eFTI (electronic freight transport information) and corridor information systems within the Digital Transport and Logistics Forum (DTLF) and the European Maritime Single Window Environment (EMSWE)		CEERIS/Riscomex				Communication
	<b>Smart vessels &amp;</b>	More efficient navigation (saving costs and improving reliability): efficient voyage planning						



# Building blocks of the pillars

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	<b>Smart navigation</b>	Increase fleet utilization						
		Adapt voyage plans based on real-time conditions						
		Less greenhouse gas emissions to air and water pollution by fleet operation and transparency by means of (digital) reporting						
		Higher safety of navigation						
		Lower specific fuel consumption			DT4GS			
		Higher average utilisation rate of vessels and less empty runs						
		Autonomous barging with on-board applications that can be controlled remotely and that are linked to a cloud based environment						
		Autonomous sailing to contribute to improved efficiency, safety and sustainability			DT4GS, MOSES			





Market/logistics	Fleet	Jobs&Skills	Infrastructure
Improved traceability of cargo	Single point of access for IWT vessel documents	Single point of access for IWT crew information	Single point of access for infrastructure requirements and characteristics
Lowering the transaction costs for finding, booking and executing IWT logistics services.	Automatic coupling of vessel and crew data	Modernise/flexible manning requirements	Facilitate increased use of inland waterways as a modality supporting a modal shift
Attract additional payload	More efficient navigation (saving costs and improving reliability): efficient voyage planning	Higher availability of qualified human resources	Support the safe and efficient use of inland waterways through more

including supply chains with other transport modes	efficiency, safety and sustainability		manage infrastructure and traffic in a safe and efficient manner
Enhanced information services for transport logistics	exchange of information contained in the vessel certificates between the competent authorities based on European Hull Database		Shorter waiting times at locks, ports and terminals
More efficient multimodal transshipment operations			Reduced transshipment costs
Better voyage and logistics planning			Enhanced information services for traffic management
More operational cooperation between operators			Improved infrastructure and fairway conditions
Seamless multimodal information chain			Raise knowledge level and awareness on opportunities of IWT

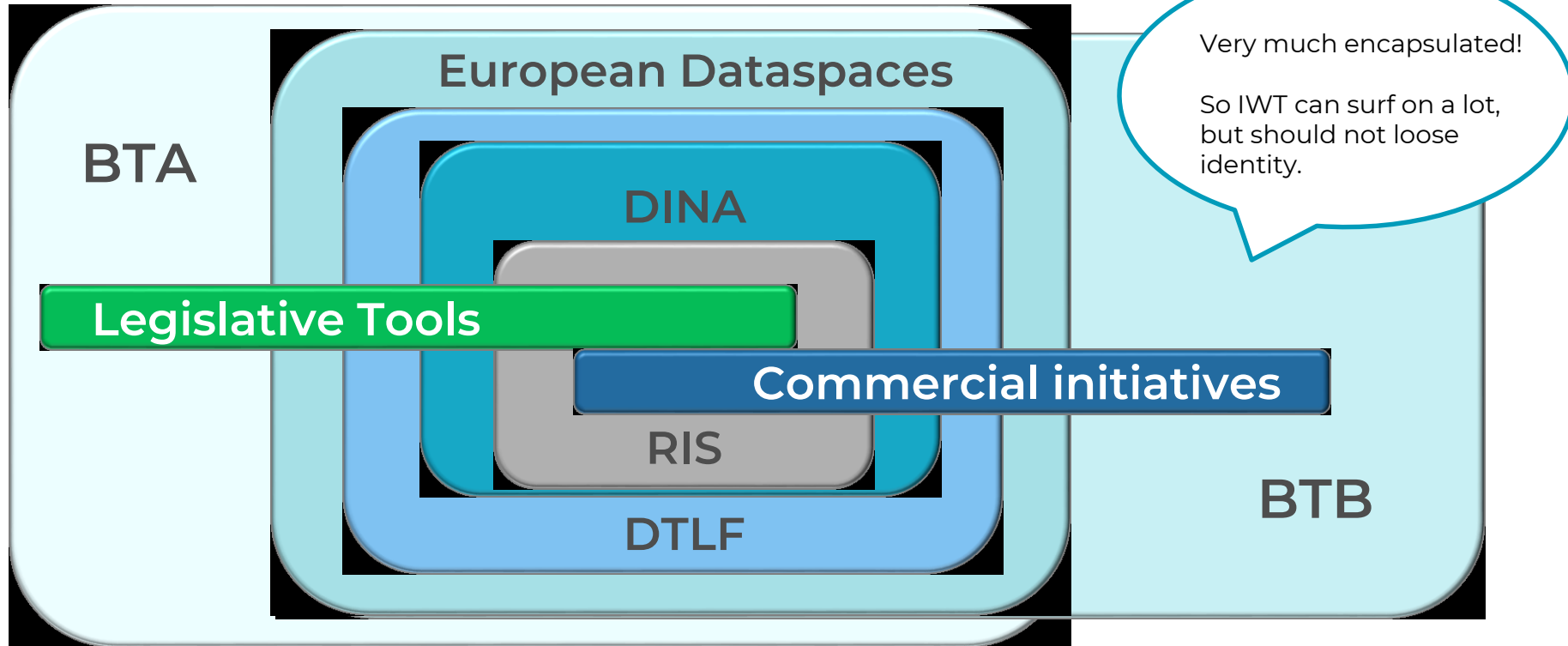
			advanced traffic management
Optimal navigation (fuel efficient, safe), including reporting on the fuel consumption and carbon footprint, e.g. as input for carbon reporting, benchmarking, index-label systems	Increase fleet utilization	More modular and permeable education programmes	Improved berth management in terminals
Vertical integration: process synchronisation between shippers/logistics services providers and barge operators	Adapt voyage plans based on real-time conditions	Enhanced recognition of comparable education and skills	Most efficient employment of personnel and equipment in terminal operations
Make more systematic use of the booking and cargo management systems of shippers and logistics service providers	Less greenhouse gas emissions to air and water pollution by fleet operation and transparency by means of (digital) reporting	More awareness on job and career opportunities	Optimal use of the infrastructure
To exchange information about logistics needs, transport capabilities, bookings and status updates	Higher safety of navigation	Improved social standards and working conditions	Safe, efficient traffic management and navigation
Reduce transaction costs when conducting business with barge operators	Lower specific fuel consumption	More awareness on environmental performance by means of measurements and digital reporting	Horizontal integration: Process synchronization between barge operators and (inland) ports, hubs and terminals
Providing readily accessible information about IWT services and their availability	Higher average utilisation rate of vessels and less empty runs	Exchange of information related to professional qualifications of IWT inland navigation personnel through European Crew Qualification Database	Share required detailed voyage plans with the fairway authorities to improve infrastructure and traffic management
Share information about the journey, resulting in higher logistics efficiencies at ports and terminals	Autonomous barging with on-board applications that can be controlled remotely and that are linked to a cloud based environment		Secure availability of up-to-date information on traffic conditions
Integration of IWT in logistics processes	Autonomous sailing to contribute to improved		Efficient navigation and traffic management:

# How far is IWT with constructing the temple ?

- Foundation?
- Pillars?
- The respective Bill of Material
- There are many sources to be checked, monitored,...
  - See following slides



# Where is IWT in the overall picture



# Picturing the elements

DINA



**Digitalisering anno 2020**

**Een zegen? Of een last?**



Geerttruidenberg 12 mei 2020

Ton Mol



a

# Picturing the elements

DINA

DIWA

RIS

ERP / TMS /  
WMS / ...

INTERREG/  
NATIONAL

RIS COMEX  
1 and 2

*“Digital:  
a curse or a  
Blessing?”*  
by Ton MOL

EU DATA  
SPACES

DTLF

C FEDERATED  
E  
F FENIX

BICS /  
U.A.B.

THE PLATINAs

H  
O  
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N

ReNEW  
CRISTAL  
PLOT0  
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IW-NET  
NOVIMOVE  
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PLANET  
AEOLIX  
...

# From “As Is” to “To be”

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The sources will need to be linked

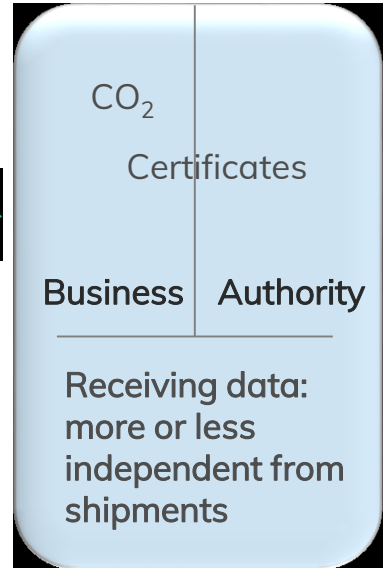
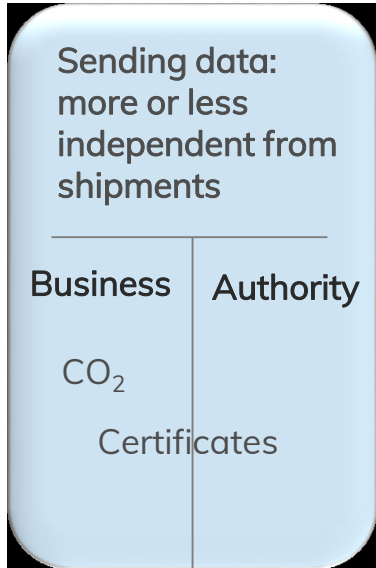
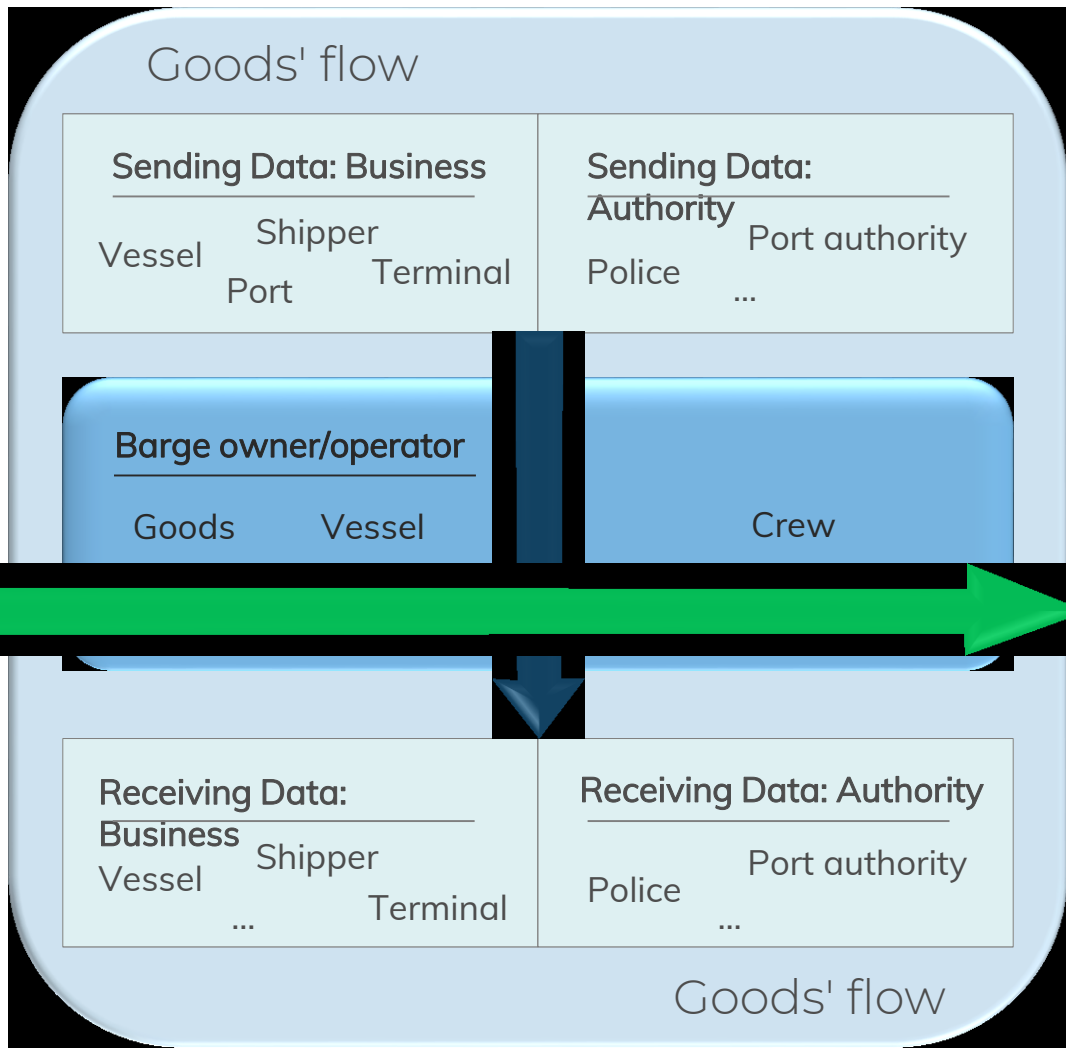
.... to the temple, table, bill of material

.... and to operational processes!

.... which will provide for proposals for actions and measures



To be detailed out and very much finetuned!



# What do we need for that..

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1. A permanent “pivot” which constantly interacts between:
  1. Businesses ( the barging industry)
  2. Commercial parties offering solutions
  3. Authorities:
    1. Fairways and their IT-projects
    2. EU-Commission, MS and their potential support
      - Strategic agenda
      - R&D programmes
      - Deployment programmes
      - Policy





**THAT'S IT  
FOLKS !!!**



 European IWT Platform

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