

BIPC 2019

In the era of digital transformation

Foto: Olaf Schieche

BIPC 2019: In the era of digital transformation

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PORT IS WHAT WE DO



What's our challenges?

A port in the heart of Hamburg.

functional infrastructure

Intelligent traffic control

Environment protection

International cooperation

Cyber security

employees

Digitization has an impact on two main factors

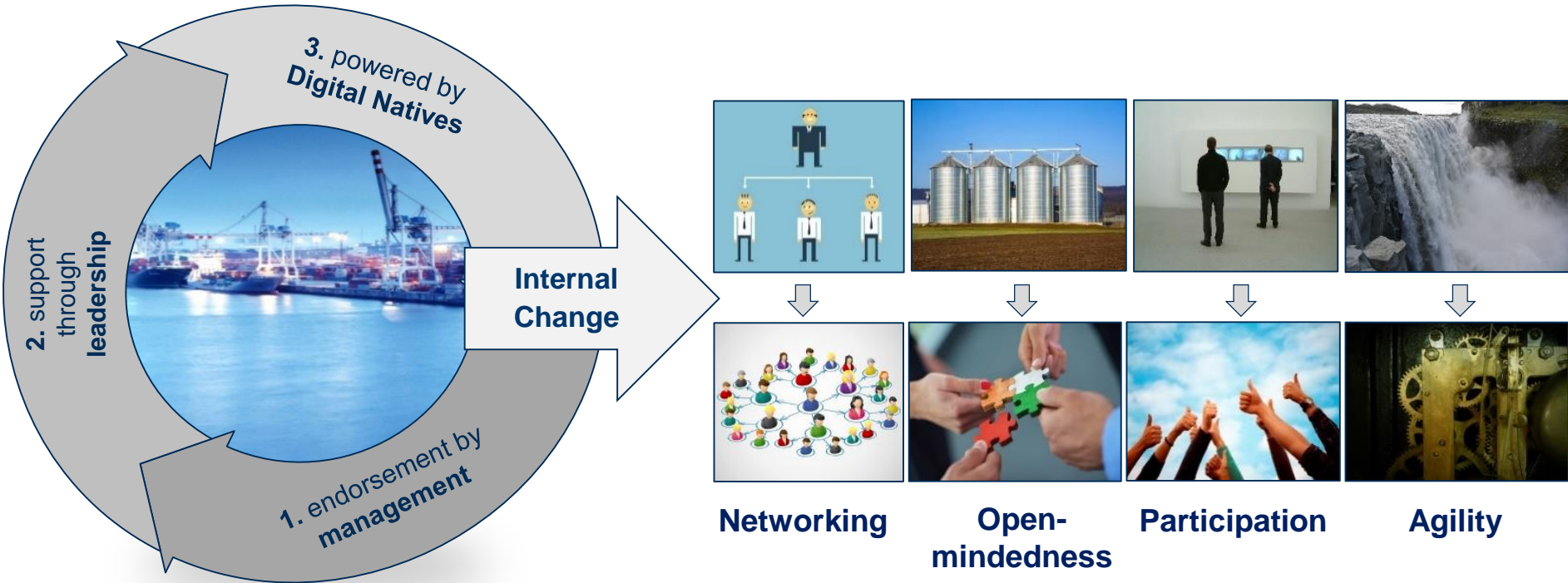
The changing world of work



Digitization along the supply chain



Digital culture within the HPA: Where internal change shall lead the HPA to



New requirements in everyday working life

Employees today work with

2x

almost more teams than
five years ago.



Digitization has an impact on two main factors

The changing world of work



Digitization along the supply chain



Flying drones

Inspection, maintenance and development of
port infrastructure

prevention and management of special events

Fast and large-scale generation of situational
images

Aim: The use of drones should relieve this
time-critical process

Digital twins

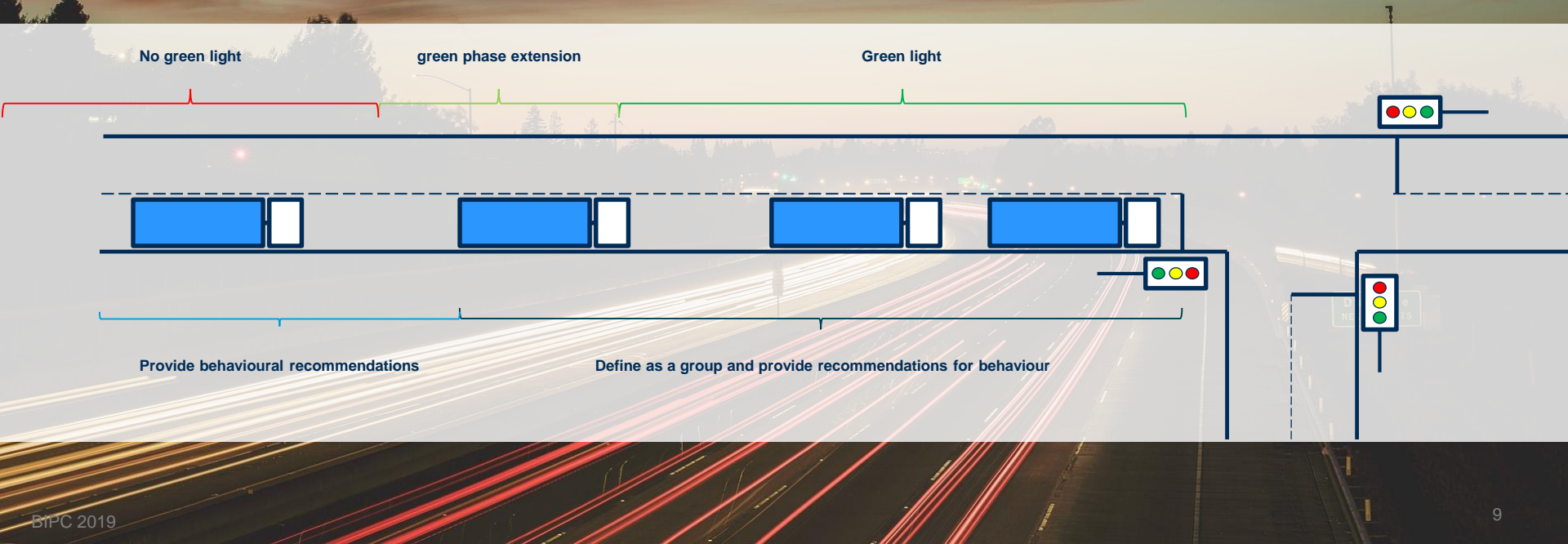
Setting up a digital twin for individual bridges

Aim: control the operation of the bridges and
monitor the condition.

Development and implementation of efficient
maintenance

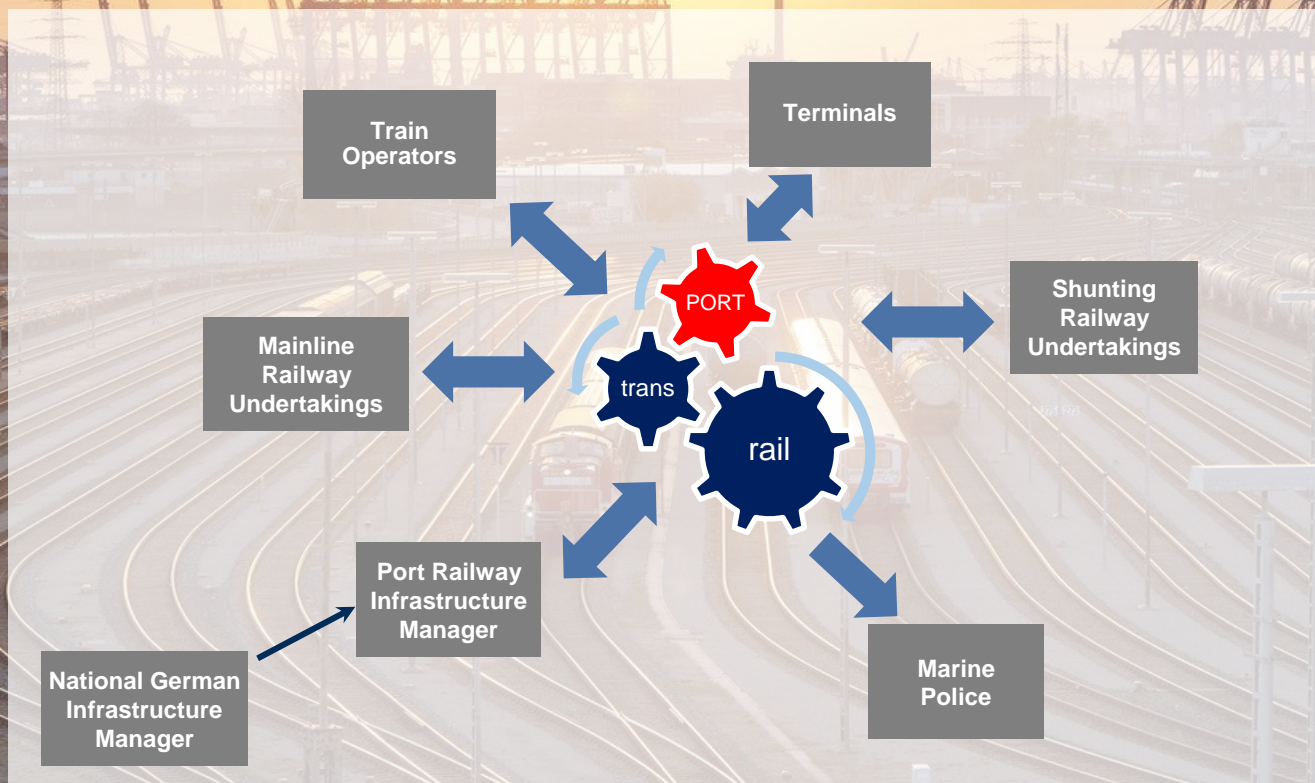
Embracing digitization: Hamburg 5G prototype of an intelligent seaport

The main requirements of any use case should include resilience, security and support for service diversity.



Boosting efficiency with the Port Railway Data Integration Platform

Sharing data and working together with “transPORT rail” (tPr)



Hamburg Vessel Coordination Center GmbH

World-wide unique cooperation



Authorities

VTS Centers



Terminals

Hamburg

Previous Ports

Following Ports



HVCC

Neutral position

Single-point-
of-contact

24/7 Service

Tailor-Made Software



Carriers

Mainline Carriers

Feeder Carriers

Barge Operators



Service Providers

Boatman

Tugs

Pilots

Agents

CHALLENGES in the maritime supply chain

Fragmentation between different actors

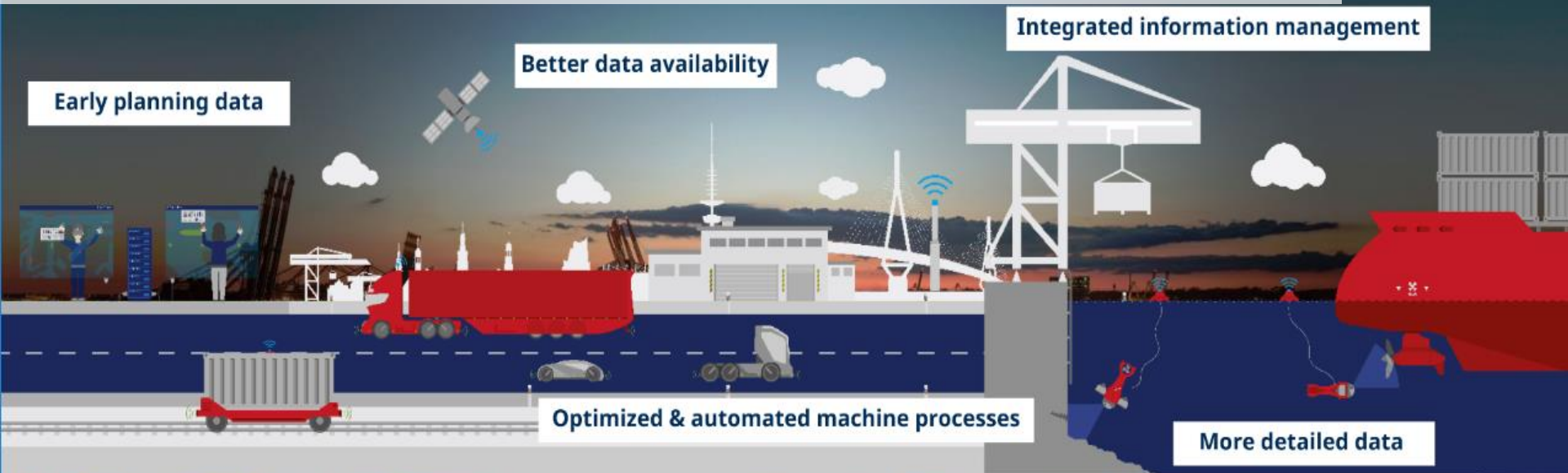
New **technologies** and **innovative** approaches have enabled every single player in the maritime economy to improve its performance significantly over the last decades.

The **cooperation** within the "own family" works very well international organisations of like-minded players do a good job (e.g. IAPH, FEPORT, FIATA).

But...

...there is a high degree of fragmentation and **SILO thinking** across the entire maritime supply chain Low (but fortunately increasing) number of initiatives between different stakeholders.

Digitalization offers opportunities for the maritime logistics chain.



Port Authority

- Optimized use of infrastructure
- Lower emission
- Better planning of capacities & resources

Companies in the Port

- Additional & faster services
- Better traffic flow and less waiting time in the port
- Better planning of capacities & resources

Terminal

- Better planning of capacities & resources
- Shorter cargo dwell time on yard
- Increased security of processes

Shipping Company

- Optimized fuel consumption
- Faster maintenance of ships
- Less time of dispatch

Global cooperation between ports



⚓ Testing international cooperation in the face of a wide range of challenges

⚓ Exchange and benchmarking of innovative and smart solutions

⚓ Next step: Joint planning and implementation of solution concepts

Our vision: To continue the journey!

Thank you for your attention!

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