Twin Transition

How to leverage the lessons from similar system shifts in the past

Bringing Ingenuity to Life
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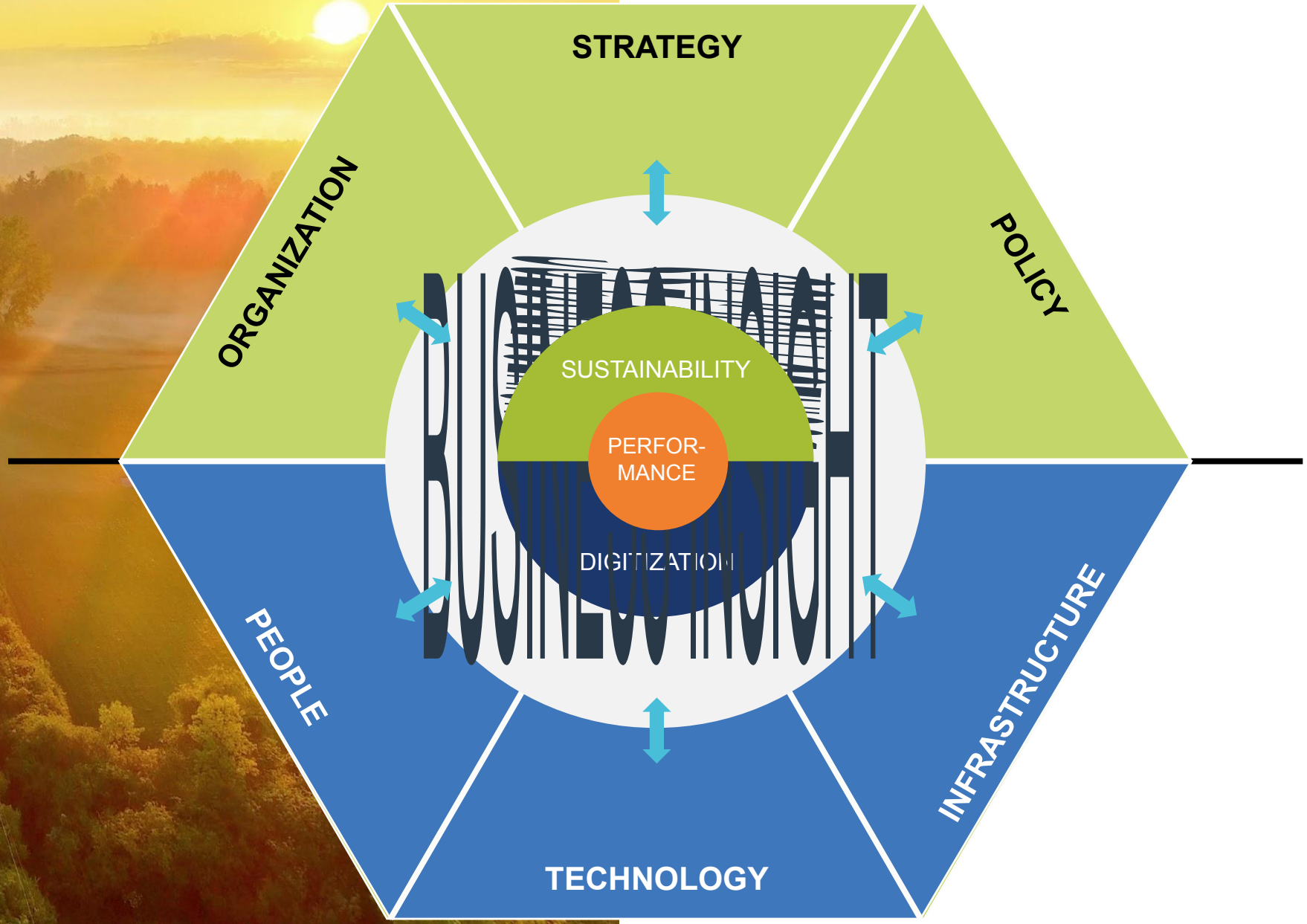
Digital action is climate action

‘If we are serious about reaching our climate goals, while driving Europe’s industrial competitiveness agenda in a global world, we need to accelerate the Twin Transition’

- Digital technologies have the potential to help other industries save 20% of global CO_2 emissions



Twin Transition requires a system shift;
We select two Twin Transition system shifts to take lessons from for Rail

17th – 19th century

Introduction of the steam engine to power machinery and vehicles

1930's - now

Switching trains to electricity as energy source

1950 - now

The efficiency paradigm commercial aviation

1990 - now

Switch from traditional to online banking

2005-2014

From physical tickets to digital credit-based travel

Aviation
Optimising existing transport network

Banking
Legacy vs modern tech

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Twin Transition in banking

Old way of banking, visiting the bank for every transaction or opening an account.

New way of using your bank, arranging the vast majority of business through online channels whilst visiting a branch only rarely.

Quiz: What tonnage of CO_2 did Banking sector save the world per annum?

Lesson 1: Best of both worlds

The efficient legacy and customer engagement IT worlds run next to each other

The IBM mainframe transaction system legacy in many banks…

DIGITAL FIRST BANK

Agile and Automated Systems

Secure and Mobile Workflows

New Digital Services

Great Experience – Any Device

Deliver at the Point of Need

…is wrapped by a state of the art digital interaction layer

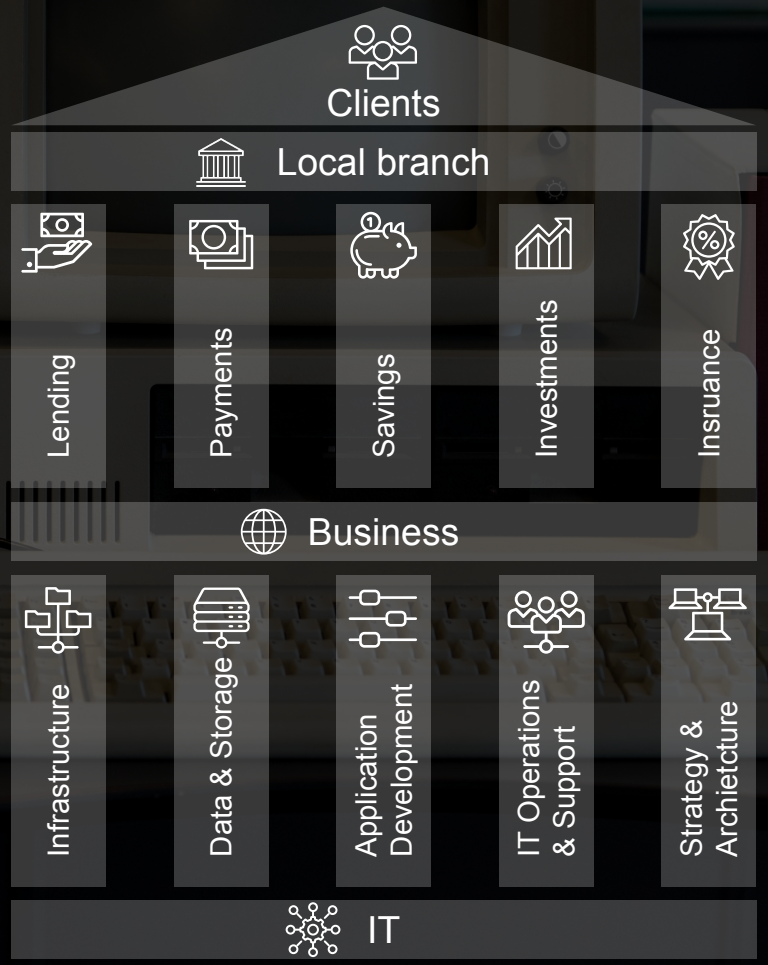
TECHNOLOGY

Lesson 2: Break silos

Create self steering and cross-functional teams to cut through complexity and create value

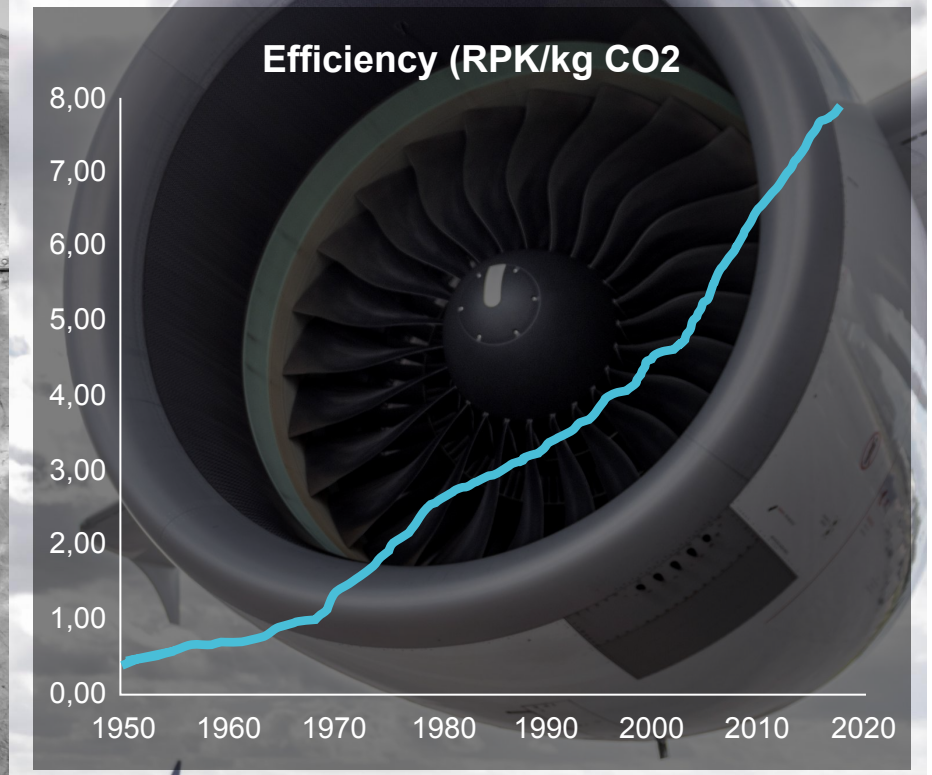
ORGANIZATION and PEOPLE

The old bank's IT and business are both soiled



…which are now replaced by self steering cross-functional teams organised along the (customer) value chain

Twin Transition in aviation



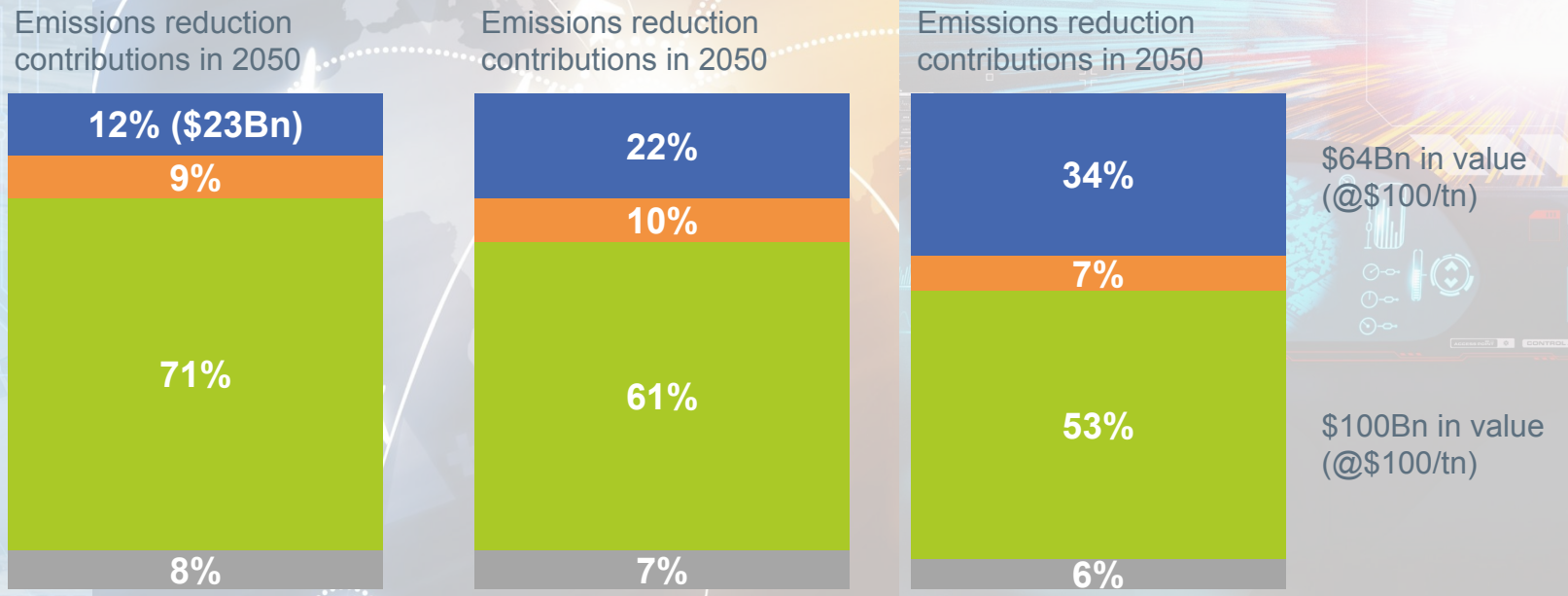
Quiz: How much CO2 has Aviation been able to save on the last 20 years, without changing energy source; only using digital?

Lesson 3: Continuous improvement through sensoring

Infrastructure

AI supported real time IOT data enabling live operations and monitoring

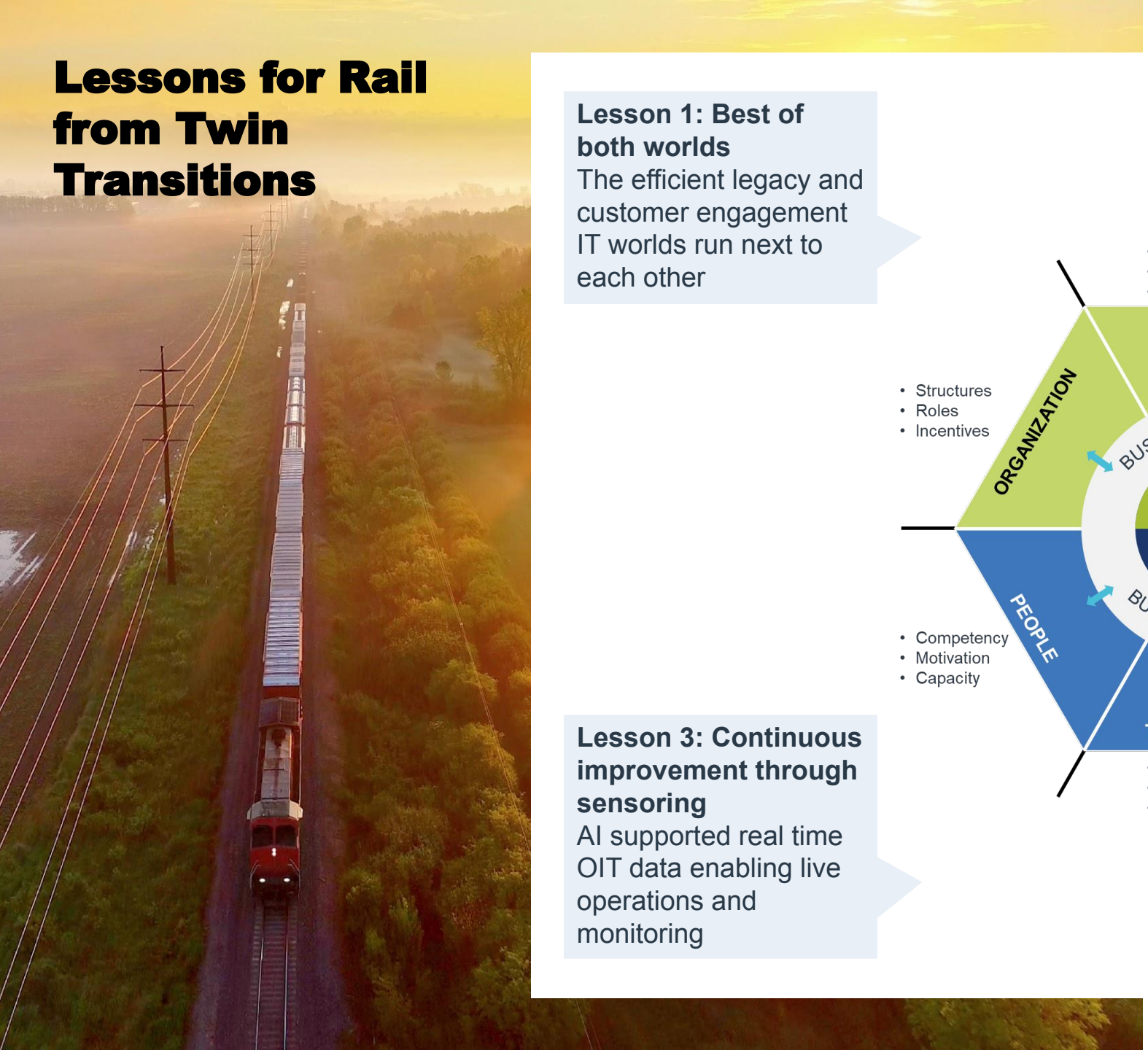
- **T** TECHNOLOGY
- **O** OPERATIONS & INFRA (Including efficiency improvements from load factor)
- **F** SUSTAINABLE AVIATION FUEL
- **M** MARKET-BASED MEASURE



Lesson 4: Create ecosystem win-win

Measure what you change and obsess over optimised use of energy

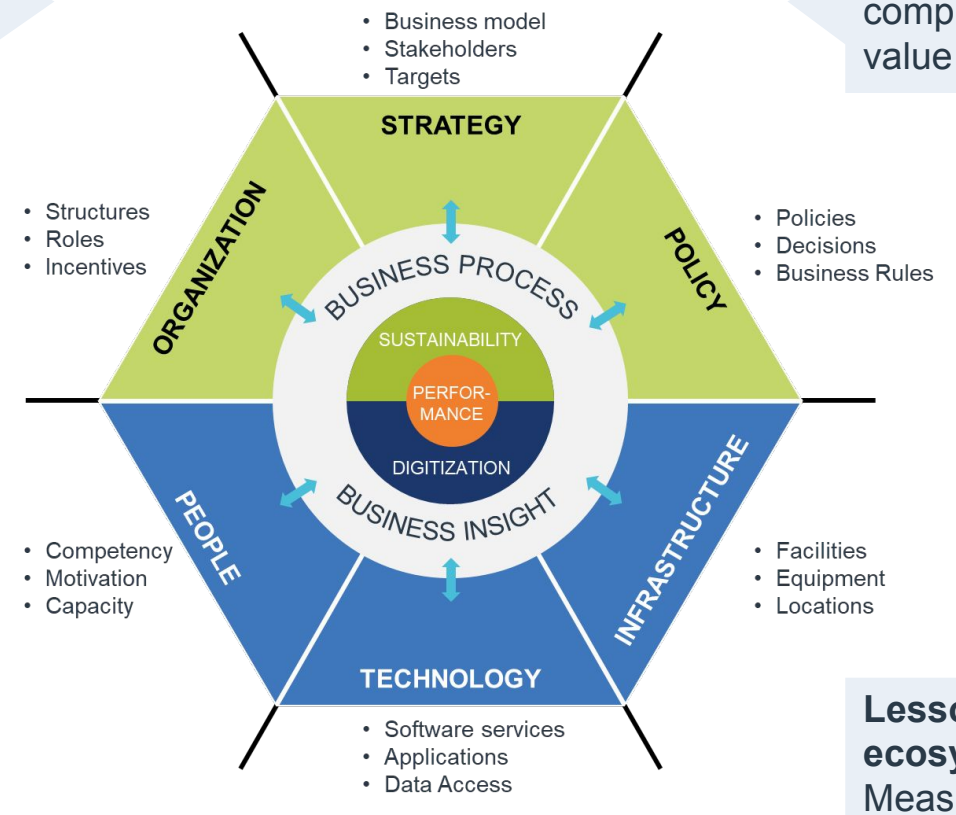
STRATEGY & POLICY



Lessons for Rail from Twin Transitions

Lesson 1: Best of both worlds
The efficient legacy and customer engagement IT worlds run next to each other

Lesson 2: Break Silos
Create self steering and cross-functional teams to cut through complexity and create value



Lesson 3: Continuous improvement through sensoring
AI supported real time OIT data enabling live operations and monitoring

Lesson 4: Create ecosystem win-win
Measure what you change and obsess over optimized use of energy

Thank you & happy to connect in the coffee break or through Brella

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