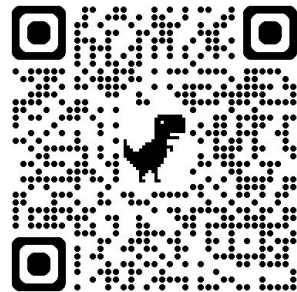


# INTERSECTION25

Brussels, September 17-19

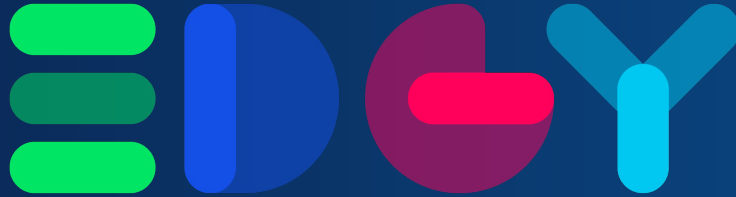


EDGY User Day Session

## **EDGY Capability Modeling Guidelines**

Wolfgang Goebel & Jim Dowling





# Capability Modelling Guidelines

for designing adaptive and purpose-aligned enterprises



INTERSECTION GROUP

# **The symptoms**

**Enterprises struggle with executing their purpose**

**Disciplines work on “how” before “what” & “why” is clear**

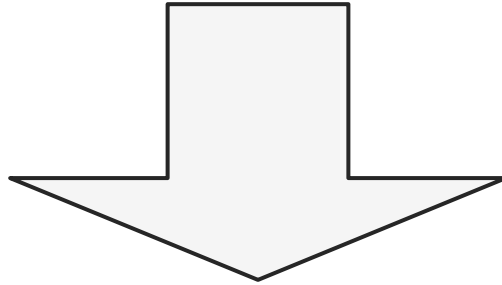


**Project portfolios, organisational & IT structures messy, not adaptive and not in alignment with each other and Enterprise purposes.**

**What are we talking about today?**

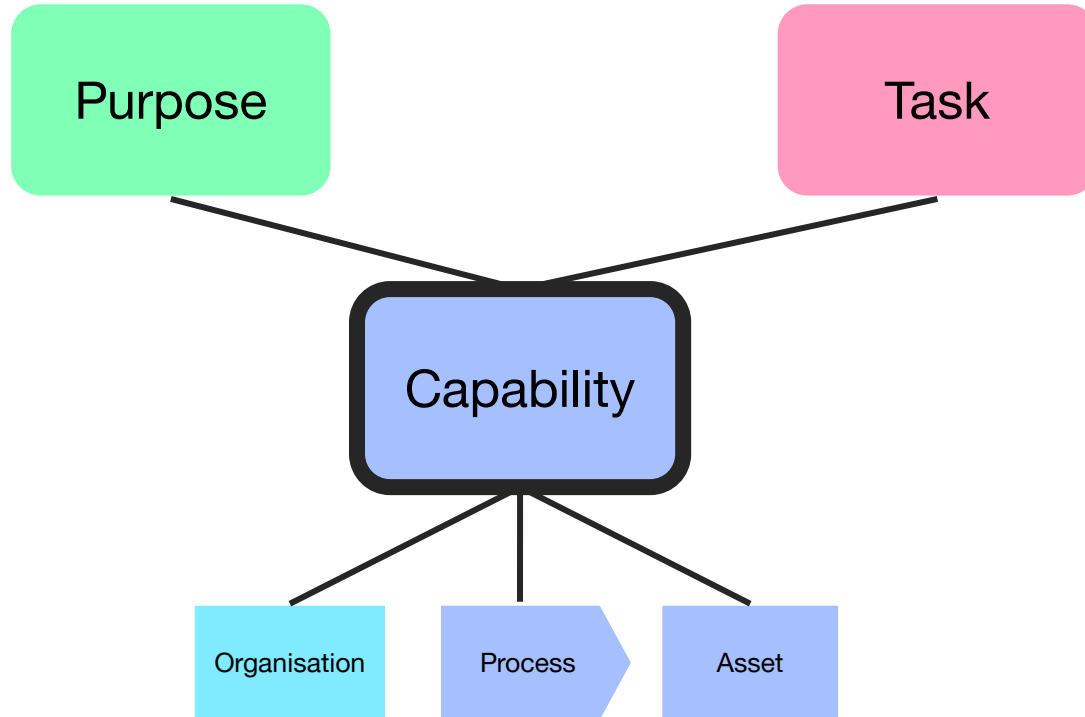
**What do we want?**

**What do they want?**



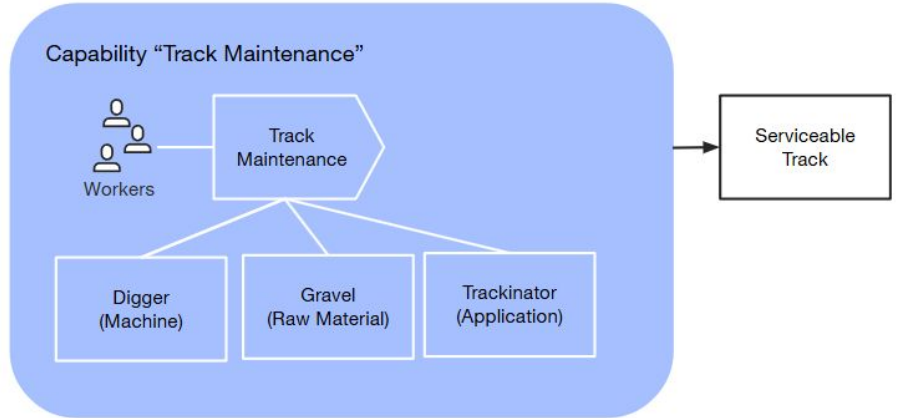
**What do we need to do?**

# ○ What are we talking about today?



# ○ Capability

**What we are able to do by orchestrating people and assets.**



## **Section 1**

**How to structure a  
Capability Map**

## **Section 2**

**How to use capabilities to  
align investments with  
purpose**

# **Section 1**

## **How to structure a Capability Map**



# Capabilities as organic Business Modules

Each module: orchestration of people, assets and processes to create well-defined outputs



# First people co-design the boundaries of the garden beds

Design the “what”

**Well-defined,  
distinctive outputs**

**Together what  
belongs together**



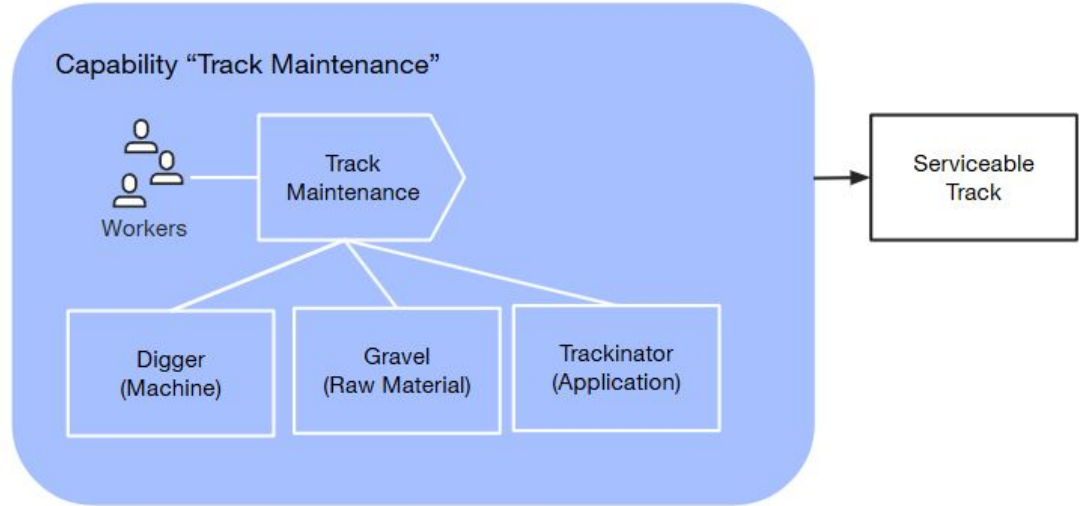
# Then people realise their capabilities

Design the “how”

Which people/skills?

Which assets?

Which processes?



# “Belongs together” in an enterprise context



By object (powerlines)



By activity (logistics)

**Make an intentional design decision based on specialisation.**



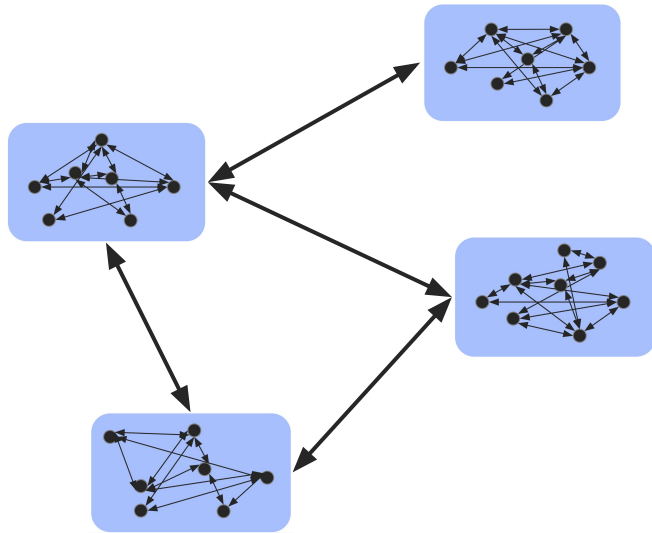
# ○ Loose coupling

**Clear accountabilities**

**Avoid redundancy**

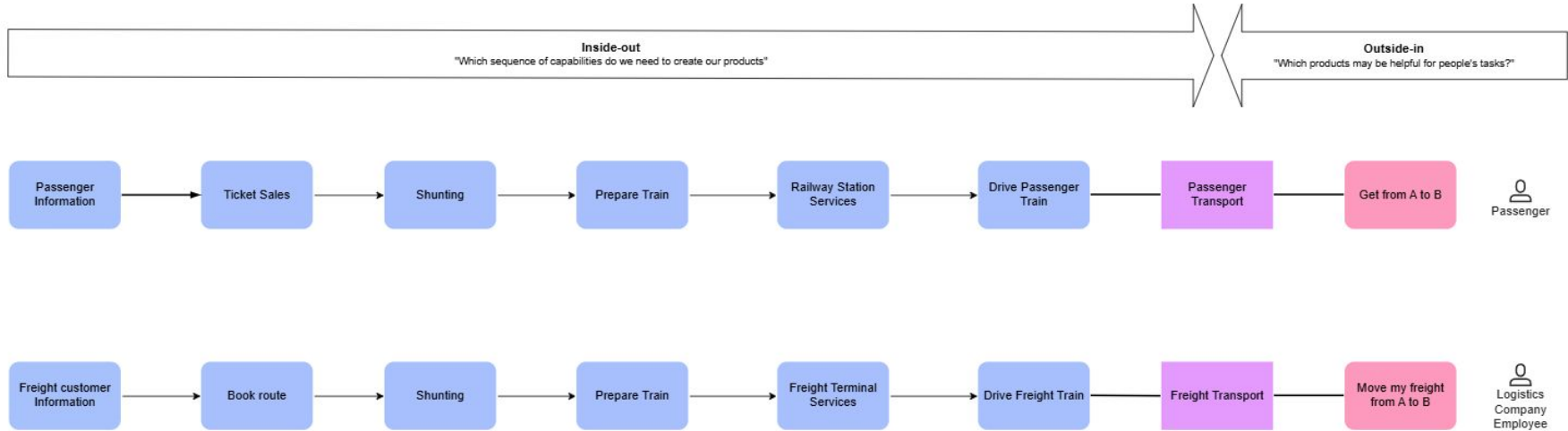
**Minimise interactions  
between capabilities**

**Key to adaptivity**



# Follow the flow to product creation

Work backwards through the flow of product creation activities



# **Follow the flow to product creation**

Work backwards through the flow of product creation activities

**Easiest way to find high-level capability families**

**Scaffolding of the process model**

**Leads to stream-aligned organisations**

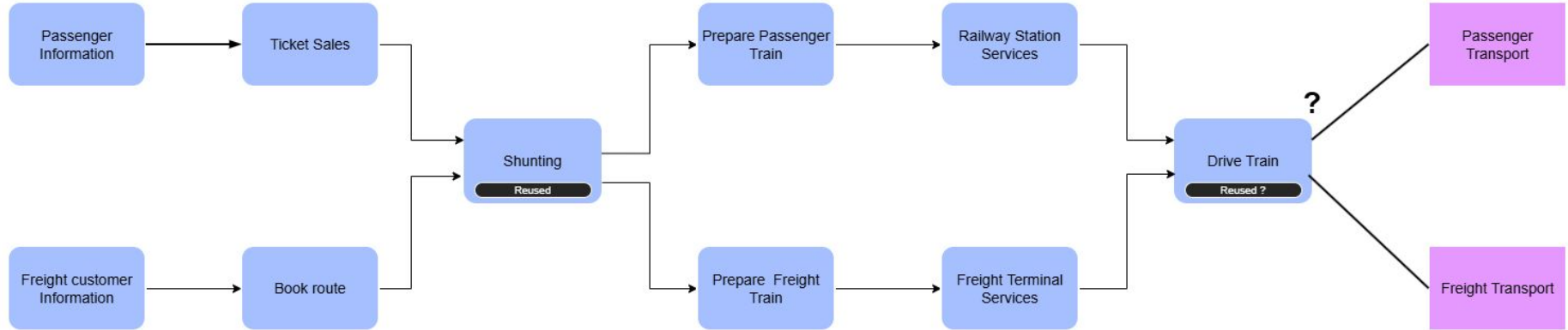
# Balance efficiency with adaptivity...





# Balance efficiency with adaptivity

By reusing capabilities (=business modules) between flows



# Clear language is THE foundation for modelling

Information is subjective. Always. Put more effort into terminology than you are used to.

**Make maintaining the glossary a team effort.**

**Embrace the enterprise's dialect.**

**Don't accept poorly defined concepts.**

**Use simple common terms or verb-noun action phrases.**

**Introduce new terms with care.**

**Vigorous verbs.**



<https://www.howtomakesenseofanymess.com/>

# ○ Create a two-dimensional layout

- make categories clear
- make major product groups visible
- express the relationships between capabilities
  - belongs together
  - follows (sequences of Capabilities in time)
  - dependencies of Capabilities

## Customer Facing

### Passenger Services

Passenger  
Information

Sell Tickets

Railway Station  
Services

### Freight Services

Freight Customer  
Information

Book Route

Freight Terminal  
Services

## Operational

### Train Companies

#### Passenger Trains

Clean Passenger  
Train

Prepare Passenger  
Train

#### Night Trains

Clean Night Train

Prepare Night Train

#### Freight Trains

Clean Freight Train

Prepare Freight  
Train

#### Shared

Shunting

Final Security  
Check

Drive Train

### Train Operations

#### Train Scheduling

Optimise Capacities

Route Planning

Train Scheduling

#### Energy Management

Operate Power  
Plant

Trade Energy

Distribute Energy

#### Train Routing

Railway Signaling

Control Railway  
Switches

Billing and Booking

## Railway Infrastructure Management

### Planning

EU Coordination

Strategic Planning

Budgeting

### Building & Maintaining

Project  
Management

Construction Site  
Planning

Powerplants

Stations

Tracks

Powerlines

### Resource Management

Procurement

Logistics

Asset Accounting

Machines

Material

Crew

## Support

Executive  
Management

HR

Facility  
Management

Legal Compliance

Risk Management

Marketing &  
Communication

IT

Finance

## Change

Strategic  
Management

Research &  
Development

Enterprise Design

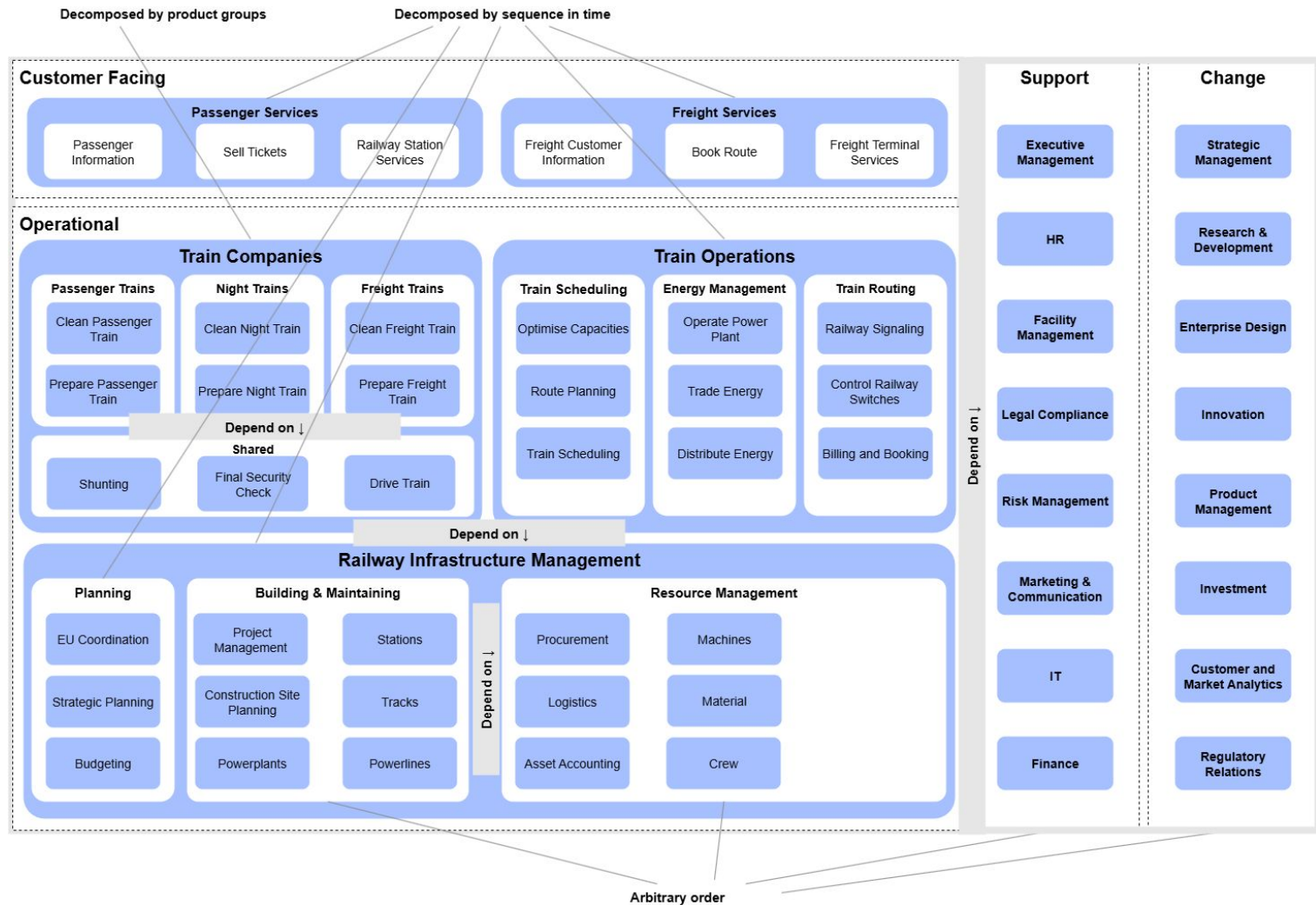
Innovation

Product  
Management

Investment

Customer and  
Market Analytics

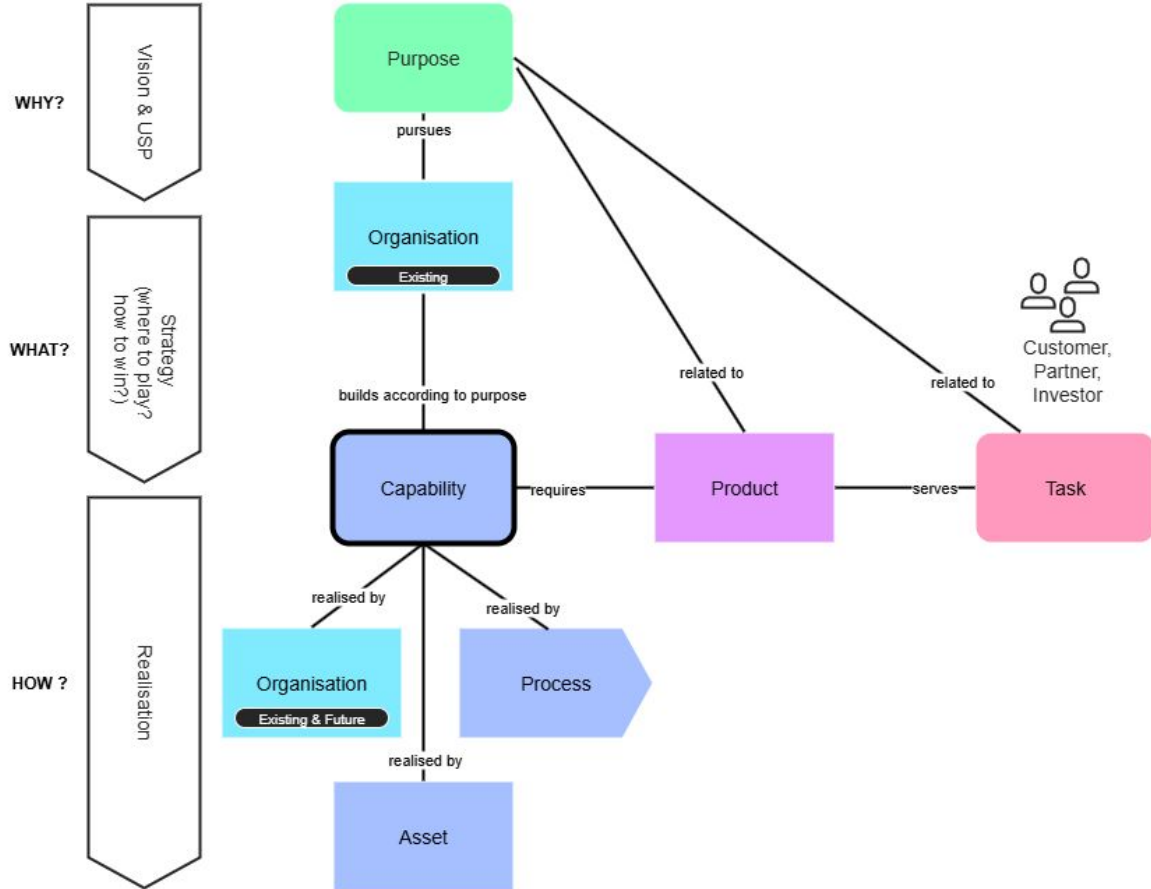
Regulatory  
Relations



## Section 2

**How to use capabilities to align investments with purpose**

# Capabilities align realisation with purposes and tasks



# Seek outside inspiration - LLMs

## Set context with your first prompt:

*LLM Prompt: “For central-EU passenger travel, who are my competitors within and outside railway Enterprises?”*

## Get more specific about what you are going to use the Capability Map for:

*LLM Prompt: “Consider a complete capability set of my railway enterprise and organize it into a **hierarchical depiction** of names of capabilities. Use no more than **seven top levels** and no more than **two sublevels**. This depiction will be **used to discuss performance and investments** in improving performance.”*



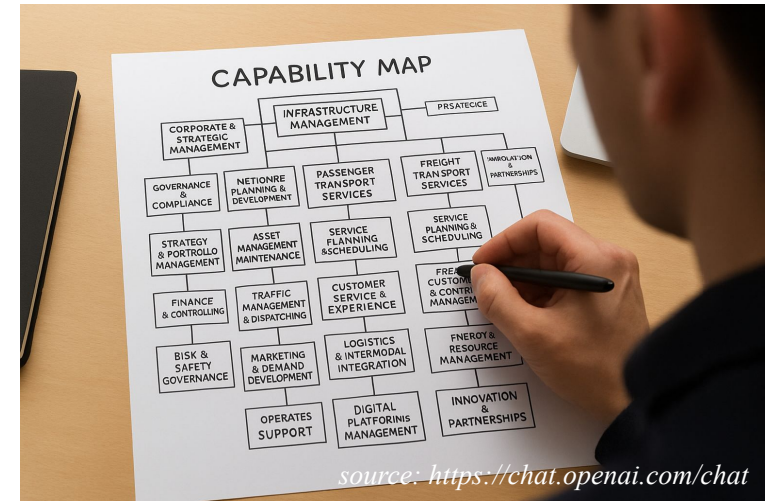
# Explore existing enterprise content

and sketch your first capability map for your own understanding

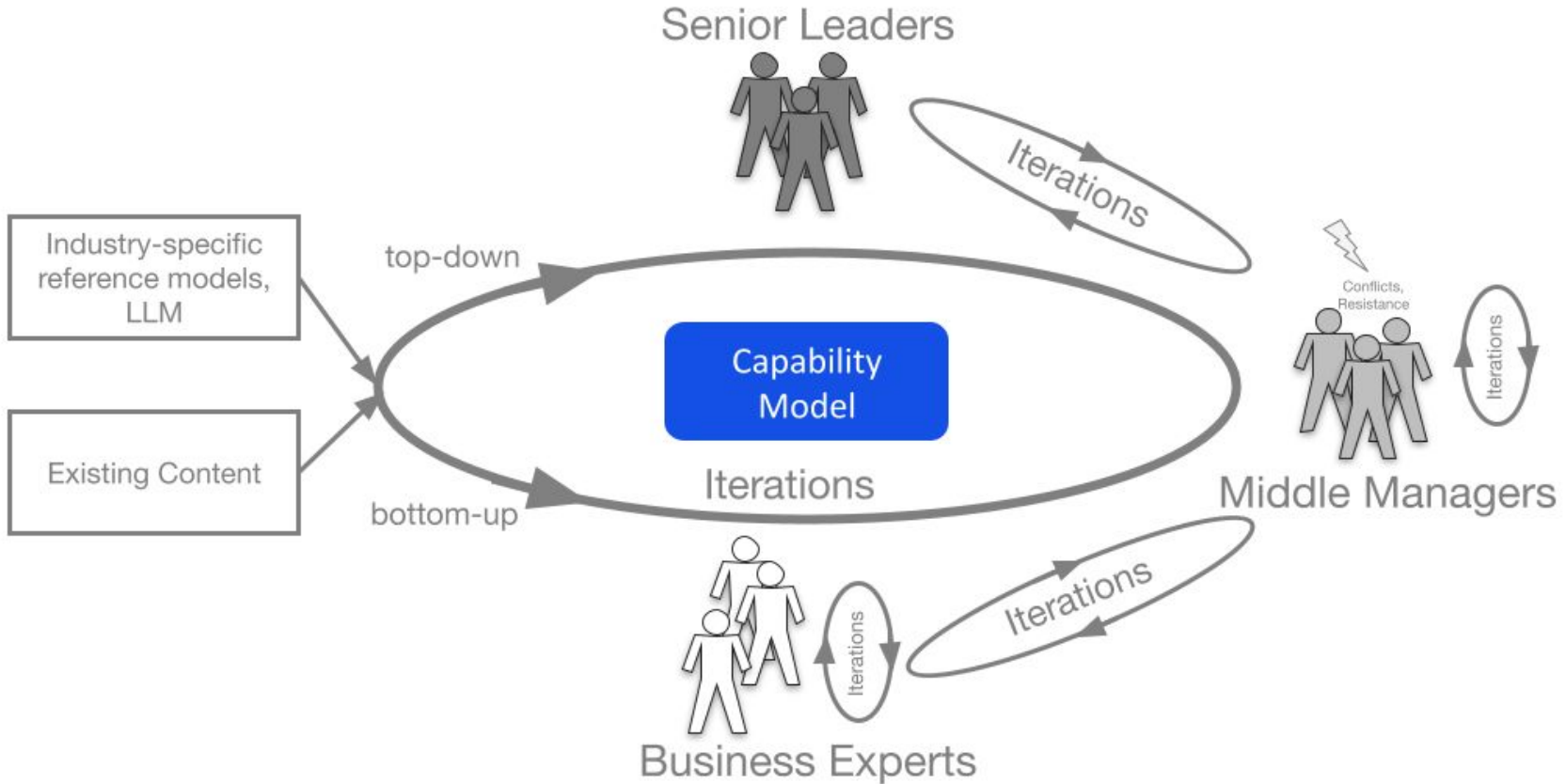
Browse content that contains information about

- How the enterprise sees itself and its future;
- How customers engage with the enterprise;
- Which products it creates and which terminology it uses;
- How it is organised, how decisions are made.

...org charts, customer research insights, process models, service blueprints, journey maps, website, mission/vision statements, strategy documents, KPIs, product catalogue, job descriptions, ...

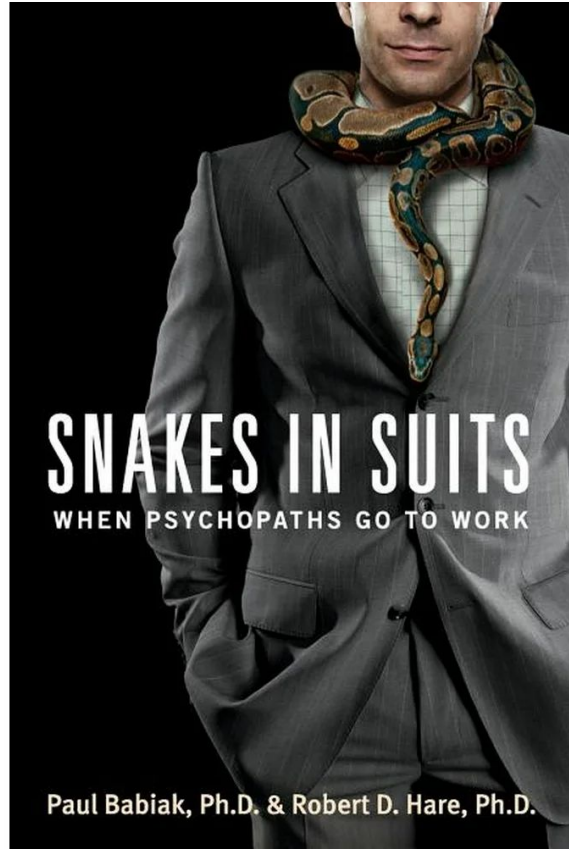


# Capabilities align people towards a shared purpose



# Deal with resistance (of middle managers)

Not everybody likes the transparency that comes with a capability map!



# Deal with resistance (of middle managers)

Tips	Why
Be transparent about the mandate, goals and Process.	A middle manager may view Capability modelling as another time-consuming and abstract exercise with unclear benefits. Explain your mandate (ideally from senior leaders), the goals and address potential concerns head-on.
Provide concrete examples.	Demonstrate benefits for the middle manager in the form of a realistic use case. How would the Capability map help address a particular pain point for middle managers?
Show empathy and respect for their time.	Acknowledge the middle manager's workload. Keep meetings focused and efficient by communicating estimated time commitments upfront. Show that you care about their concerns.
Listen and show that you care about their concerns.	When managers show resistance, listen to understand the root cause. Is it fear, scepticism, or a genuine practical concern?
Start small if the resistance is very high.	If resistance is very high, consider piloting the Capability modelling in a less sensitive or smaller department first to demonstrate success before rolling it out broadly.
Create a power map.	Map out the relationships between people and identify where the key interests, relationships, and points of tension are.

# Benchmark as-is capabilities

Use all kinds of sources to understand competition's capabilities

- *Competitor's website*: products, pricing
- *Public data*: Financial reports, ratings
- *Research firms*: industry benchmarks, market research
- *Social Media and online forums*: client comments and ratings
- *Mystery shopping*: Sign up for competitor products or services
- *Customer surveys*: Ask your customers why they use or left a competitor
- *Employees* who may have worked at competitors

*LLM Prompt: "For central-EU passenger travel, who are my competitors within and outside railway Enterprises?"*

*LLM Prompt: "Summarise what creates competitive advantage for each of the competitors in a table."*

# Benchmark as-is capabilities

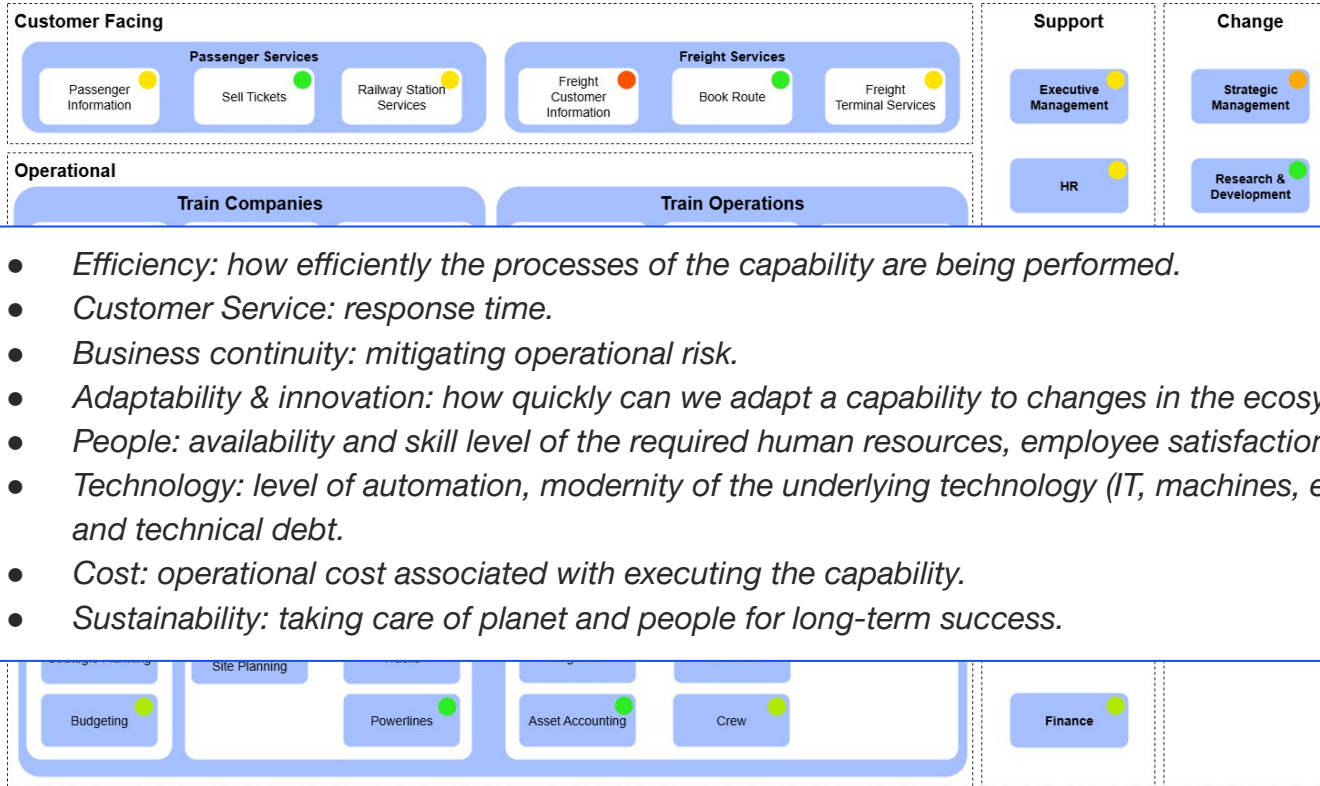
Begin with a basic performance indicator...



Overall performance: ● ...best in class ● ...above average ● ...average ● ...below average ● ...well below average

# Benchmark as-is capabilities

...and analyse further where in doubt.



- *Efficiency: how efficiently the processes of the capability are being performed.*
- *Customer Service: response time.*
- *Business continuity: mitigating operational risk.*
- *Adaptability & innovation: how quickly can we adapt a capability to changes in the ecosystem?*
- *People: availability and skill level of the required human resources, employee satisfaction.*
- *Technology: level of automation, modernity of the underlying technology (IT, machines, etc.), and technical debt.*
- *Cost: operational cost associated with executing the capability.*
- *Sustainability: taking care of planet and people for long-term success.*

Overall performance: ● ...best in class ● ...above average ● ...average ● ...below average ● ...well below average

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*LLM Prompt: "For central-EU passenger travel, who are my competitors within and outside railway Enterprises?"*

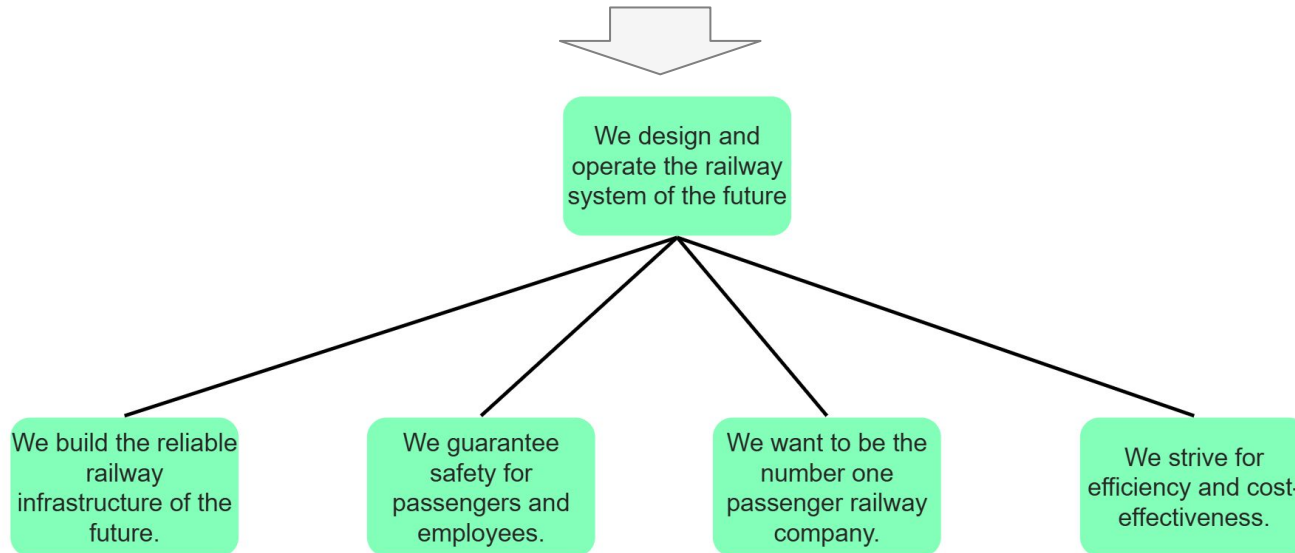
*LLM Prompt: "Summarise what creates competitive advantage for each of the competitors in a table."*



# Clarify Vision

Vision statement → purpose hierarchy → competitive advantage statement → distinctive capabilities

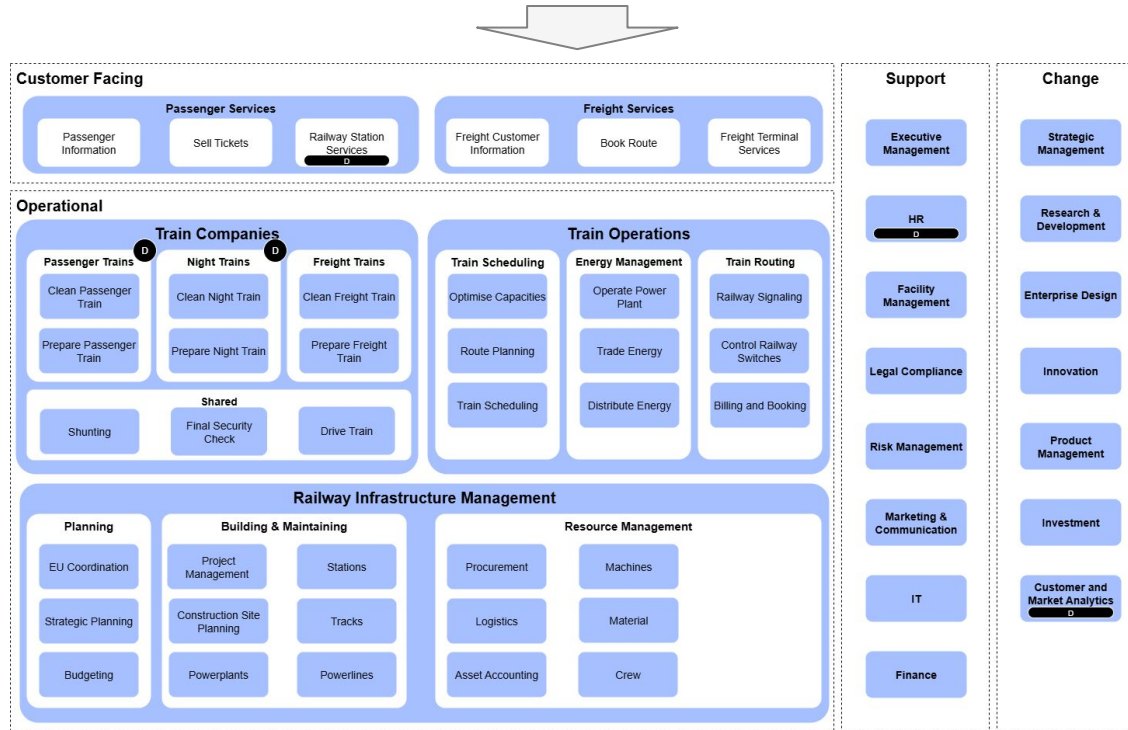
*“Our vision is to lead the transformation of rail transport by designing and operating the railway system of the future. We are committed to building a reliable and forward-looking infrastructure that ensures the highest standards of safety for both passengers and employees. Driven by innovation, efficiency, and cost-effectiveness, we aim to become the number one passenger railway company, setting new benchmarks for excellence in mobility.”*



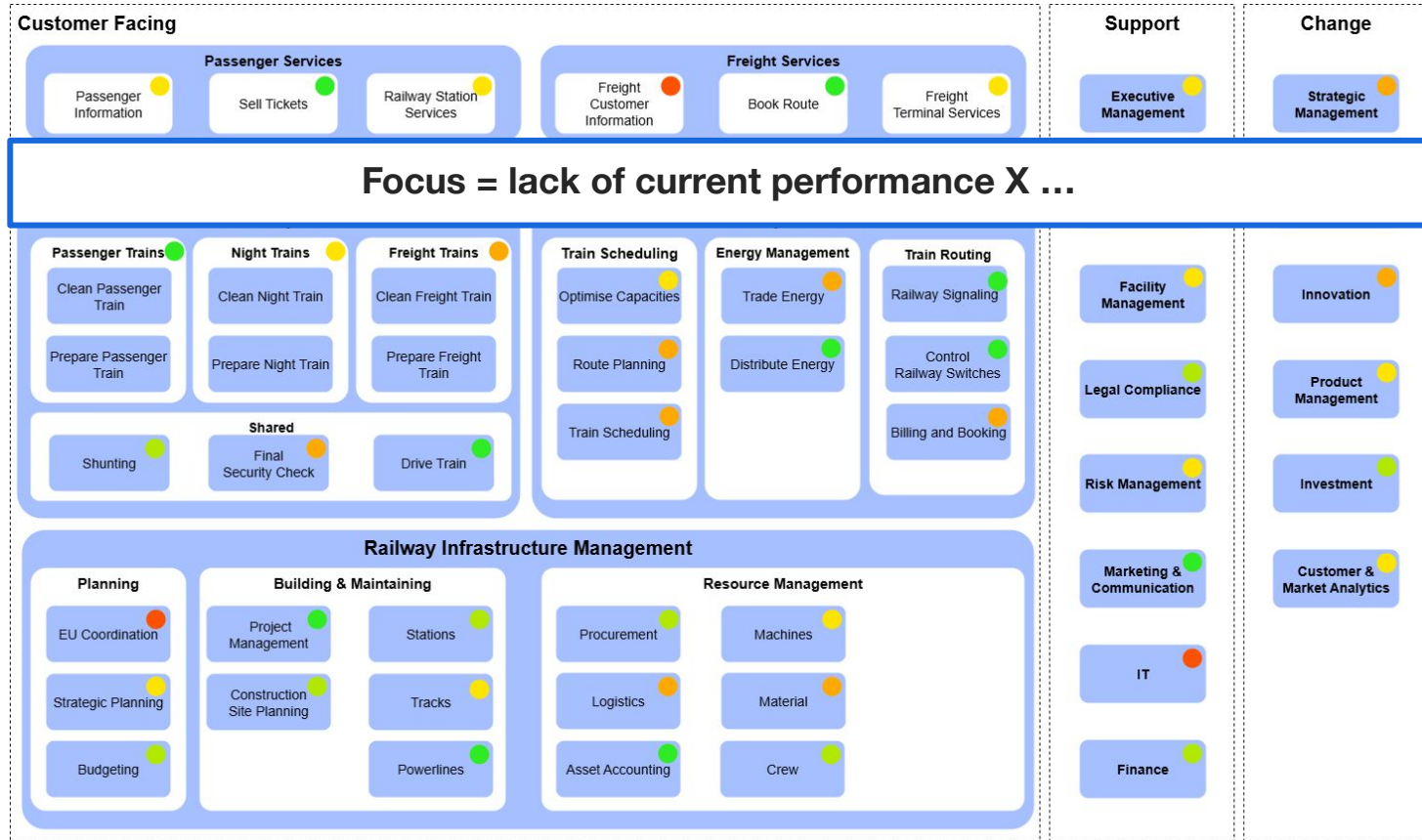
# Clarify Vision

Vision statement → purpose hierarchy → **competitive advantage statement** → **distinctive capabilities**

*“We deliver the most convenient experience for our passengers by day and night in the physical space—combining cleanliness, and unmatched experiences in the stations and onboard the trains.”*



# Indicate where to focus



Overall performance:



...best in class



...above average



...average

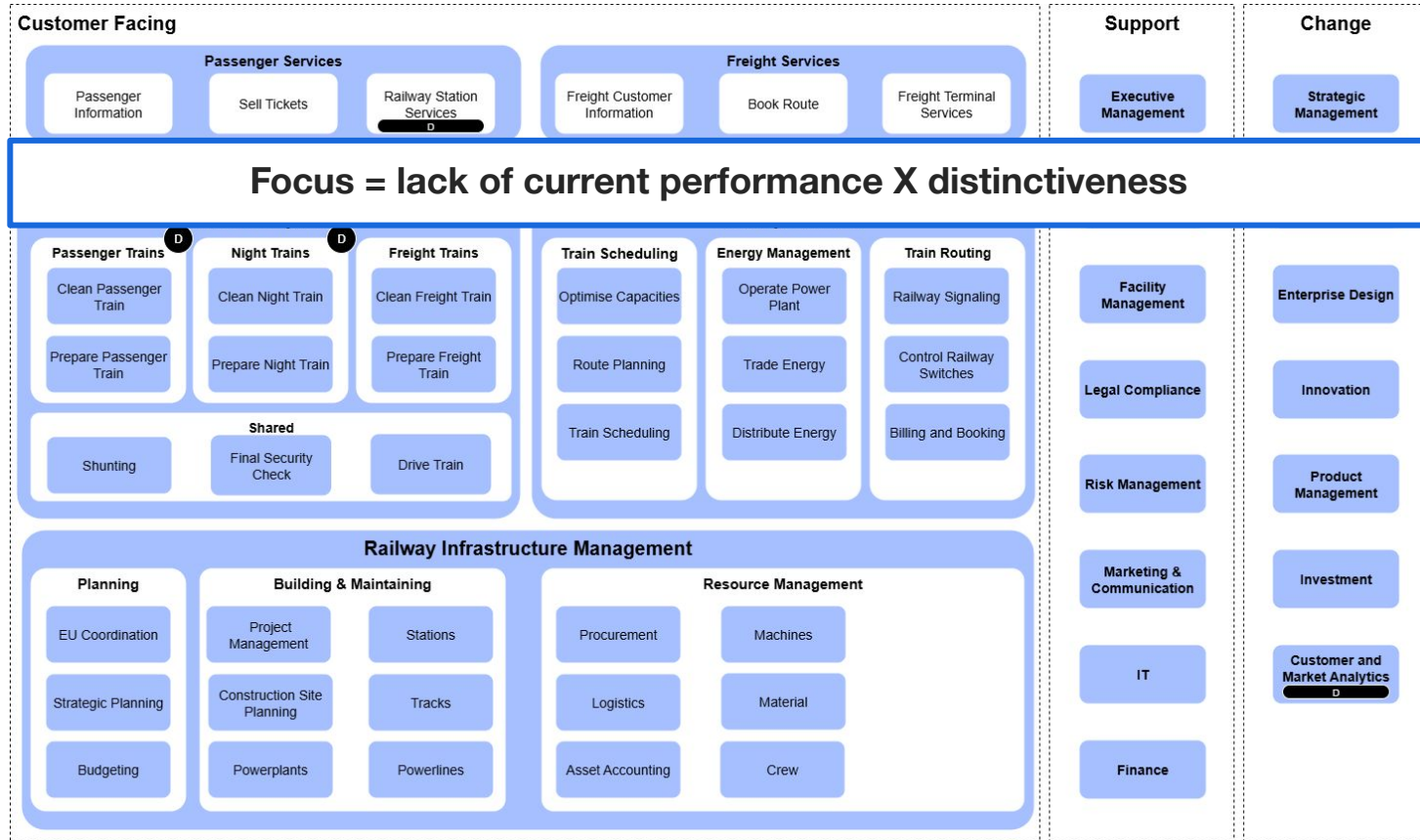


...below average

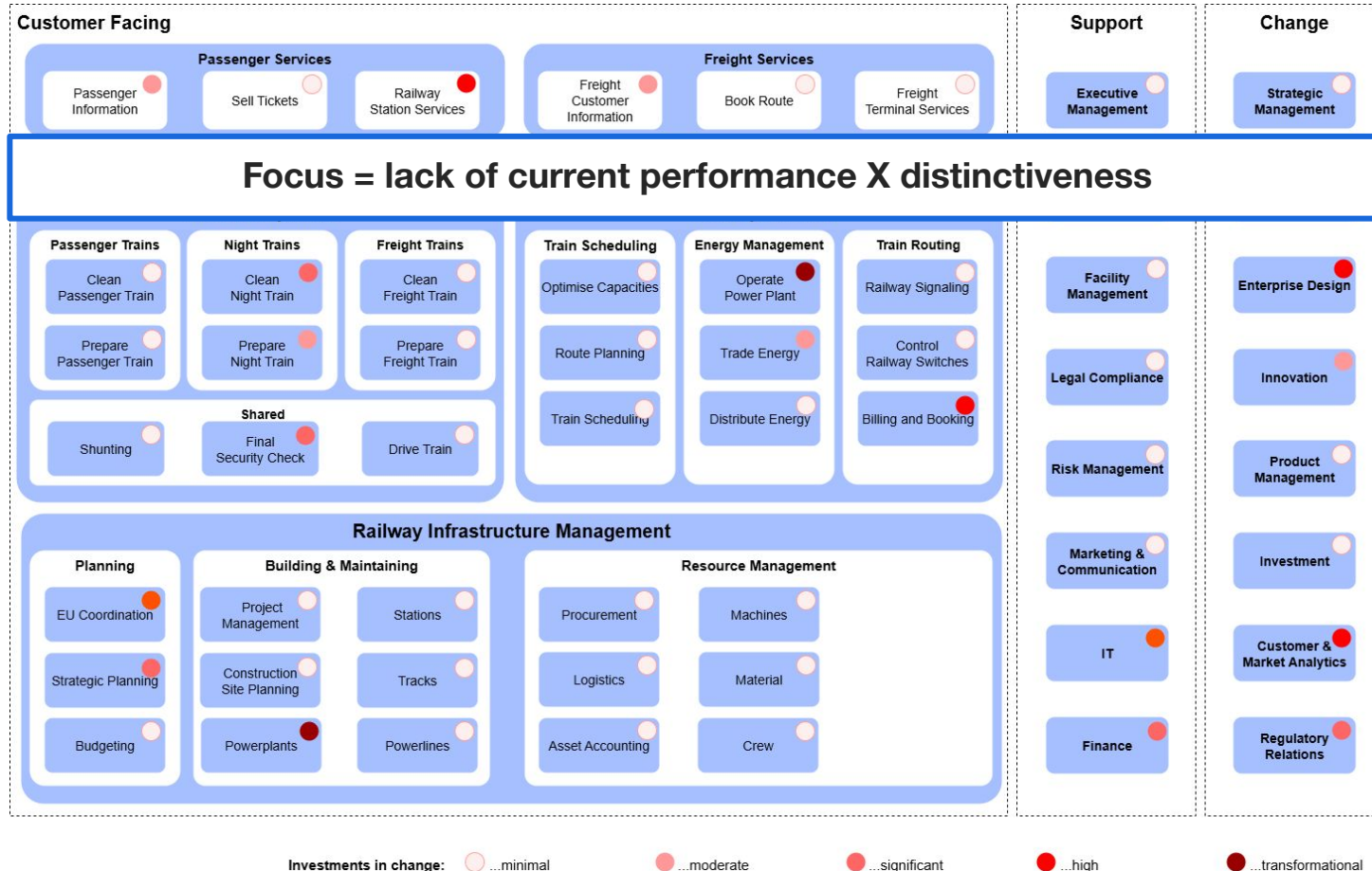


...well below average

# Indicate where to focus



# Indicate where to focus



## Today

**Capability maps use uncommon language and are used exclusively by Enterprise Architects.**

## Tomorrow

**Capability maps are co-designed by all relevant business experts and used throughout the company (for Management, Organisation, Finance, IT, Asset Management, ...)**

## Today

**Organisations are structured into departments and teams by their managers.**

**A combination of politics and gut feeling.**



## Tomorrow

**Capabilities are co-designed by all relevant experts first.**

**Organisation structures are derived from capabilities.**

**HOW?**

**Coming in 2026**