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INTERNATIONAL RAIL SAFETY COUNCIL
SOUTH AFRICA

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INTERNATIONAL RAILWAY SAF

"Reshaping Railway

CAPE TOWN, Oc

FETY COUNCIL

OCTOBER 1 - 6, 2023

HOSTED BY

RAILWAY SAFETY REGULATOR
RAIL SAFETY ON THE RIGHT TRACK

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MIND4CHANGE - RAILWAY CULTURAL MINDSET

Why preparing railway staff for cultural changes linked to digital and technical innovations 1/2

❖ Digital and technical innovations are coming "**sooner or later**" in the **railway landscape, that includes AI, ML, DL, Neuronal Networks, etc.**

❖ Railway compagnies will increasingly have to integrate **digital technologies** into **their operations & safety management, and other activities.**

❖ While becoming more **fluid and more connected** to the rest of the world, railway system is also becoming **more complex,** then **vulnerable to its ecosystem & environment,** more **exposed** to **cyber-risks and consequently social, economic and political risks**

→ As Human plays a key role in **this process of change,** it is important that digital and technical innovations are **accompanied with/by the necessary "cultural change",** to better prepare all **staff, operators, managers, leaders, and decision-makers in the railway industry**

> **Strengthen the development of future technological and digital innovations in the railways by accompanying the necessary cultural changes of all levels of employees**

Resistance is based on the notion that, even though technical barriers have fallen, some features of technology are difficult **for end-users to learn.**

➤ **Anticipate** and accelerate the **shaping transformation** of employees through rail automation and digitalization
➤ **Reduce "organizational" resistance** to digital changes
➤ Promoting / Sharing **practical examples** and **best experiences**

Recognizing the impact of digital technologies on the railway sector and the need for a cultural shift to accompany these changes, UIC is running "**Mind4Change"** study. The objective is to improve safety and performance by addressing any reluctance to adopt digital and technical innovations. It seeks to create a **learning/analysis laboratory for cultural change**, where members can come together to identify all **employee motivations, assess and improve maturity levels, and anticipate resistance obstacles.**

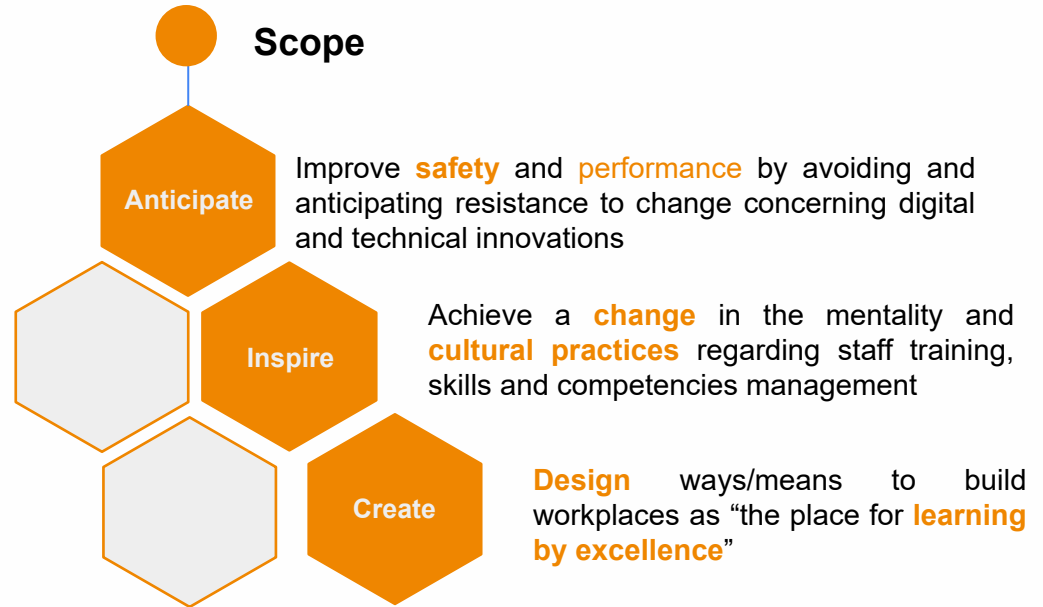# Mind4Change actual UIC Members / Project Team
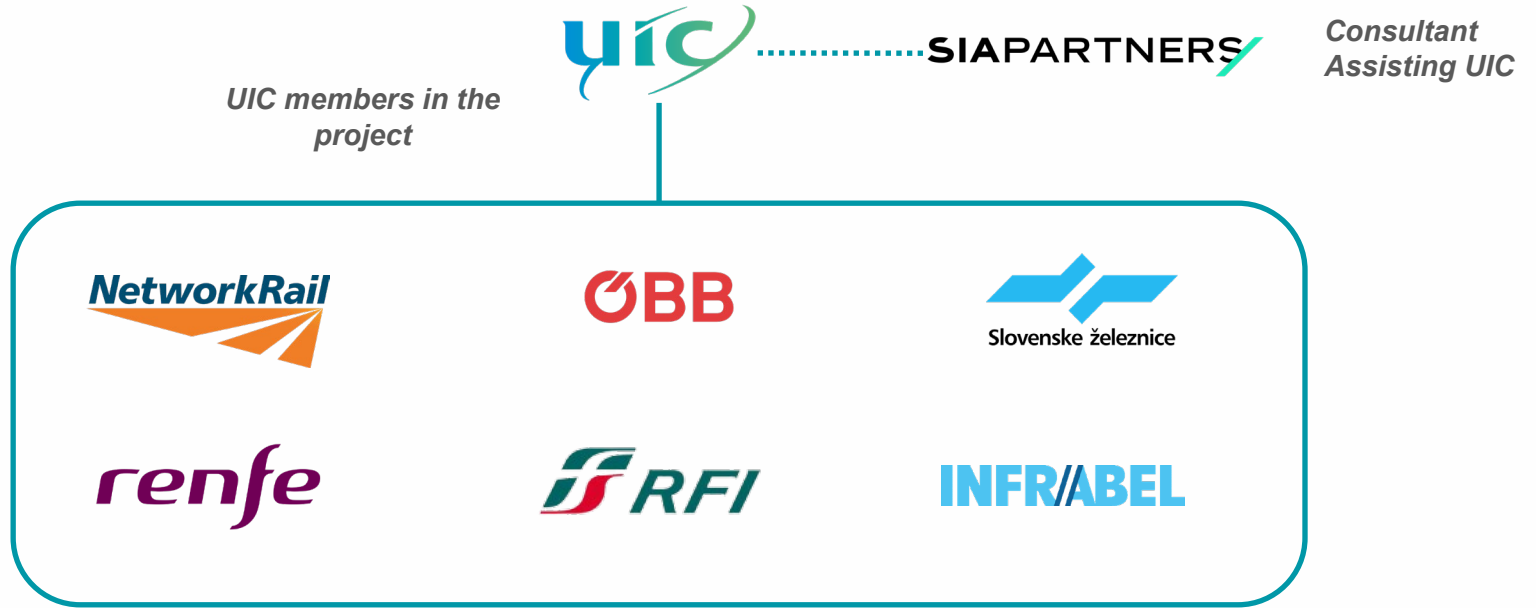
"Mind4Change" Core Objectives

Objectives

The main objective of the study is to **prepare all staff** (decision makers, second and first line managers, operators) **for digital & technical innovations** through cultural change by putting "humans" at the center of this **"driving change"** process

Benefits

The benefits of the study are to enhance **safety performance** and improve **operational excellence** by taking into account digital and technical innovations

Scope

Anticipate

Improve **safety** and **performance** by avoiding and anticipating resistance to change concerning digital and technical innovations

Inspire

Achieve a **change** in the mentality and **cultural practices** regarding staff training, skills and competencies management

Create

Design ways/means to build workplaces as "the place for **learning by excellence**"

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What are the factors causing a resistance to change ?

1

Individual factors

....

Individual causes related to the individuals, their personalities, their ways of functioning, their knowledges, their open-mindednesses, their educations...

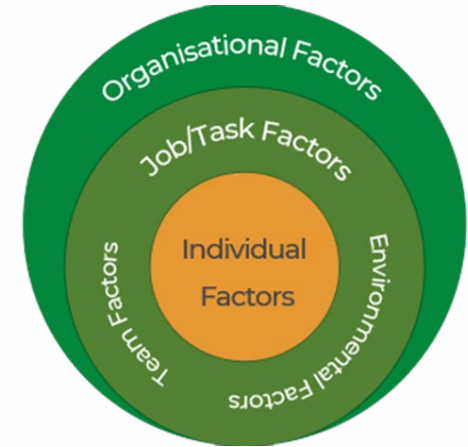**2**

Collective factors

....

Collective causes such as values, culture, social norms, privileges or acquired in the company... factors arising from the organization itself or from the functioning of the group as a whole
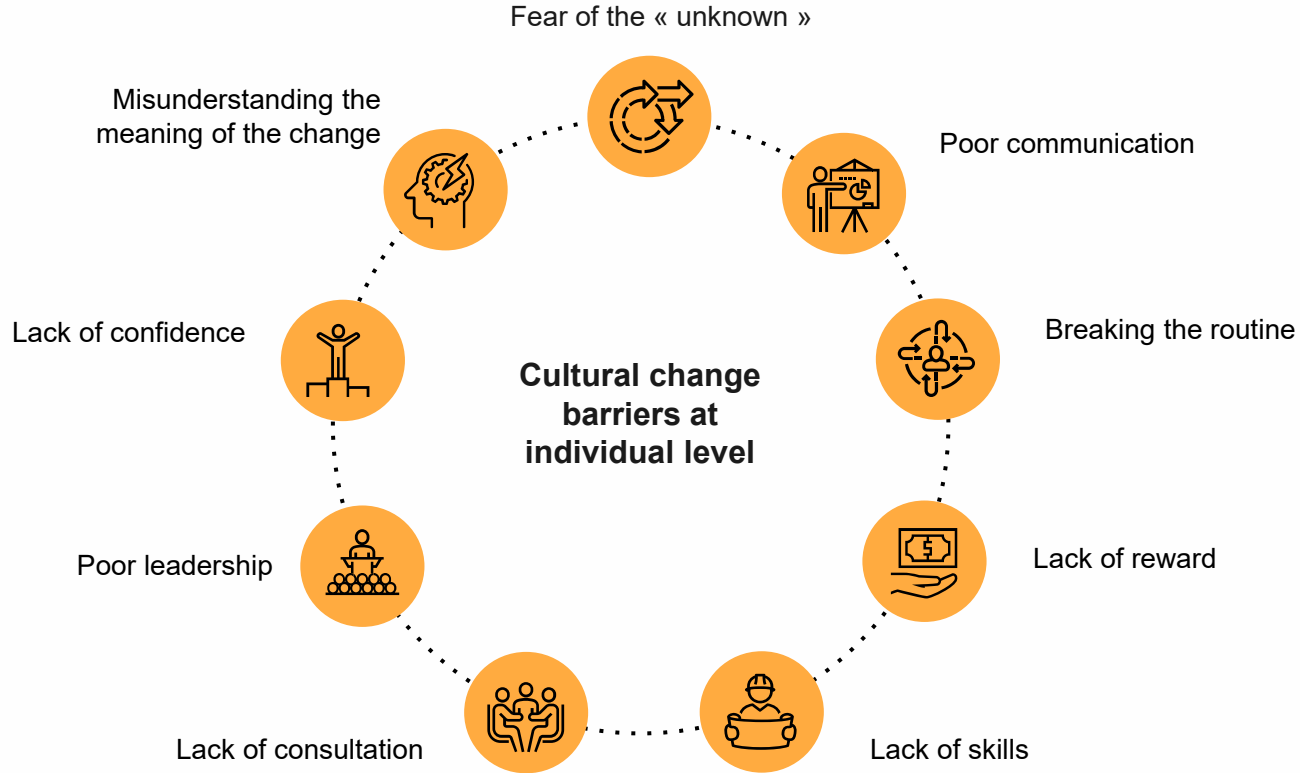
3

Or by the change itself

....

The people affected do not see the point of it and oppose

Rail HOF

Cultural barriers at individual level

Fear of the « unknown »

Misunderstanding the meaning of the change

Poor communication

Lack of confidence

Cultural change barriers at individual level

Breaking the routine

Poor leadership

Lack of reward

Lack of consultation

Lack of skills

Cultural change barriers

Cultural barriers at the organization level

Lack of resources

Poor training offer

Poor vision and strategy

Cultural change barriers at organisation level

Lack of decision-making

Lack of anticipation

Organization struggles

Levers to support/drive changes

COMMUNICATION AND MOBILISATION

- Pulse Survey
- Strategy Definition
- Smart and Easy communication
- Personalized communication (ex: office or not employees)
- Webinar / Seminar
- Newsletter / Testimonials on achievements
- …

TRAINING

- Learning program construction on Tutorials: Leadership, motivation, mobilisation, efficient communication
- Manager toolkit (e.g., impact analysis, project deployment…)
- Personalised (ex: office or field staff) and innovative training (ex: Gamification)
- …

Levers to support change

INDIVIDUAL AND COLLECTIVE SUPPORT

- Group coaching
- Individual coaching
- Leadership Academy
- Mentoring / Tutoring
- Best practice charters
- Support to operational activities
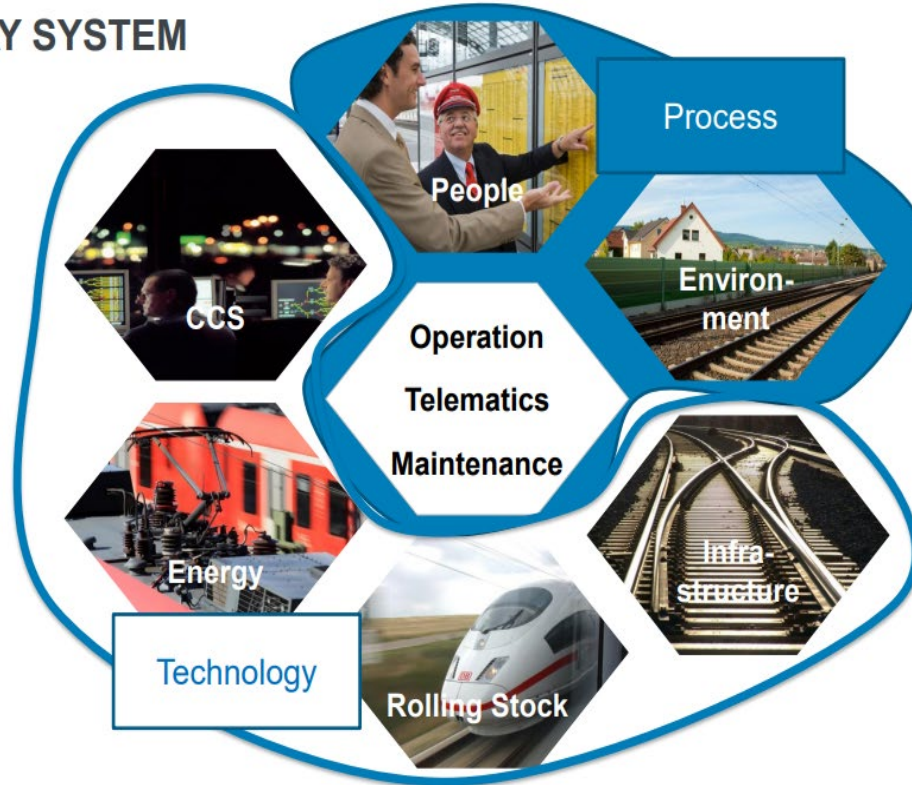- …

ORGANISATION

- Corporate Culture
- Innovative organization
- Employee Attractivity and Retention
- New ways of working for more employee engagement (co-design orientation, acceptation of error, agile organization)
- Exemplarity of manager and leaders
- HR processes
- Job & skills reference frameworks
- Human and Organisation Factors and Safety Culture
- …
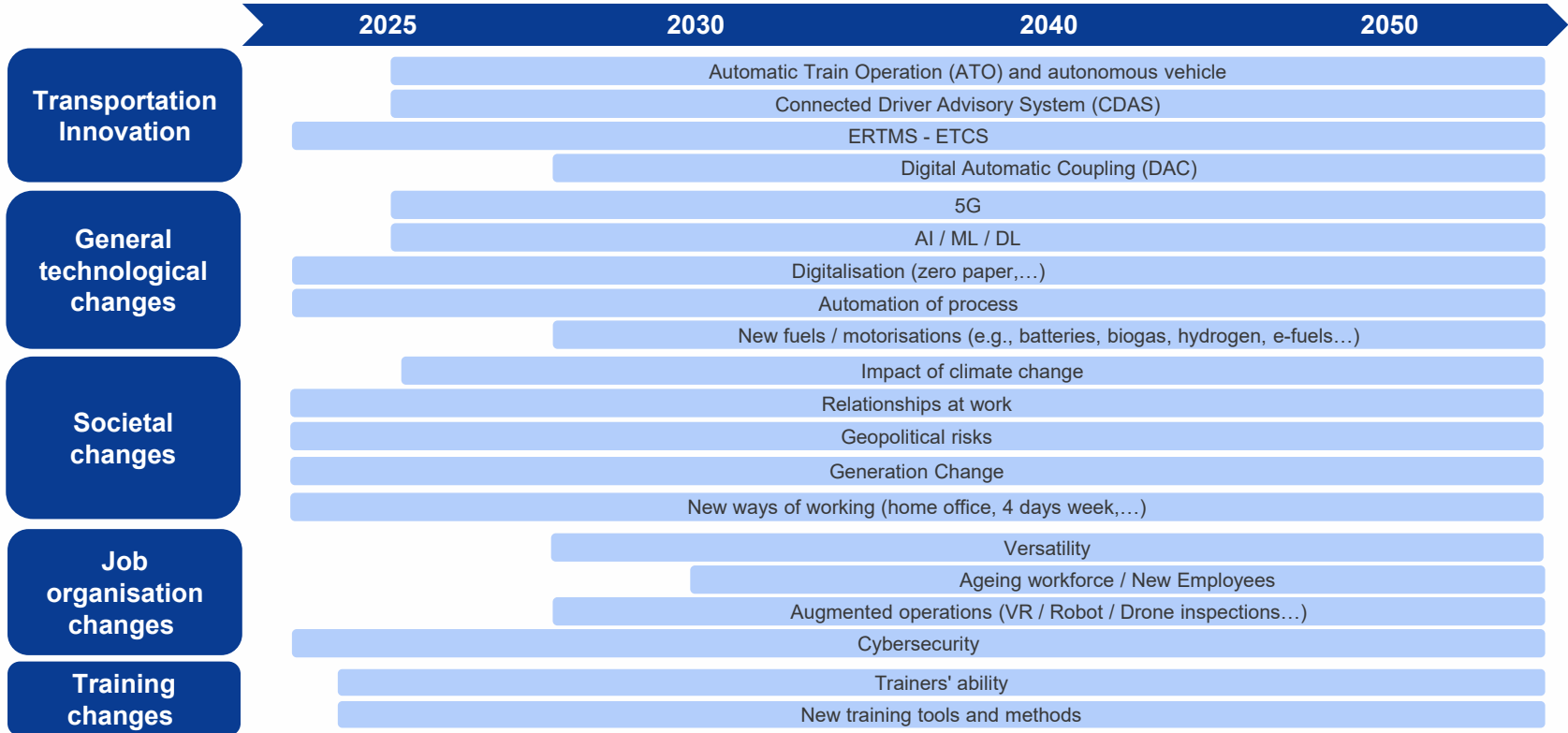
Drivers of the digital and societal transformation

THE RAILWAY SYSTEM

- Transportation Innovation
- General technological changes
- Societal changes
- Job organisation changes
- Training changes

People · Process · Environ-ment · CCS · Operation Telematics Maintenance · Infra-structure · Energy · Technology · Rolling Stock

Drivers of the digital and societal transformation

Drivers of the digital and societal transformation

	2025	2030	2040	2050

Transportation Innovation
- Automatic Train Operation (ATO) and autonomous vehicle
- Connected Driver Advisory System (CDAS)
- ERTMS - ETCS
- Digital Automatic Coupling (DAC)

General technological changes
- 5G
- AI / ML / DL
- Digitalisation (zero paper,…)
- Automation of process
- New fuels / motorisations (e.g., batteries, biogas, hydrogen, e-fuels…)

Societal changes
- Impact of climate change
- Relationships at work
- Geopolitical risks
- Generation Change
- New ways of working (home office, 4 days week,…)

Job organisation changes
- Versatility
- Ageing workforce / New Employees
- Augmented operations (VR / Robot / Drone inspections…)
- Cybersecurity

Training changes
- Trainers' ability
- New training tools and methods

Drivers of the digital and societal transformation

Target staff groups that will be impacted

TRAIN RUNNING (TRACTION / OPERATION)

Train driver, train attendant, signaler (traffic controller), node logistics, onboard service (catering), cleaning, security staff, on-board instructors / trainees, regulator (makes service level decisions, while signalers make more local decisions), customer service operatives, revenue protection officers (ticket checkers), station/platform staff (including dispatchers), train guards, level crossing operators/attendants…

TRAIN PREPARATION

Shunter, wagon master, dispatcher, fleet management, shift planners, depot controllers, cleaners / train presentation…

TRAIN MAINTENANCE & REPAIR

Mechanics (mechanical fitters), short/medium/long term maintenance, engineers, supply chain, depot management, electricians

RAIL INFRASTRUCTURE MANAGEMENT

Track / Signal Box , Station/Building managers, corridor planners, plant/ tunnel/bridge construction, asset management, train control systems
-a civil engineering department which covers maintenance of perway (track), bridges and structures, buildings and facilities.
-a signalling, electrical and telecoms department which covers maintenance of all those assets (interlockings, signals, control systems, GSM-R and analogue telephones, electrical supply.

RAIL QUALITY & SAFETY MANAGEMENT

Safety / HOF experts, safety auditors, safety peers, safety inspectors, supervisors/ checkers, safety executives, rule book and procedures management, safety investigators

EDUCATION & TRAINING

(Simulator) trainers, instructors, mentors/ coaches, supervisors, competency assessors/ examiners
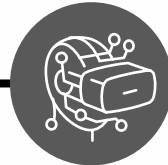
CORPORATE FUNCTIONS

Recruitment & Selection, HR arrangements: Rewards, Bonus, etc. Mentors, Coaches, Champions
Sales & Marketing, Customer Services, finance/ controlling, managers, office IT, corporate comms, strategy, procurement, environment & sustainability

Impacted staff groups

Mind4Change deliverables

Creation of a Learning Lab for cultural changes to achieve a consistent path for "mindset change".

Toolbox and guidelines gathering/ presenting a list of **recommendations** of key levers on how to engage staff at all levels of the organization.

December 2023

December 2024

June 2024

September 2025

Design / propose the future scenario for the coming years

- Technologies coming / expected in railway companies ?

- Which staffs/categories will be affected and what impacts ?

- Which tasks and activities will be affected, and what impacts ?

Cultural Changes

- Final dissemination Event to share the results

- Add a chapter on cultural changes in "RAILHOF" Digital Platform in which will be included best practices, solutions and recommendations.
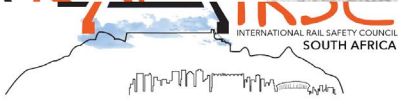
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