MIND4 CHANGE

INTERNATIONAL UNION OF RAILWAYS

UIC Members' Perspectives on Mind4Change

DECEMBER 2025

Objectives of the focus groups

Following Mind4Change survey, that gathered perceptions of future cultural and technological transformations of UIC members, focus groups with experts were held to deep-dive on the results.

280
experts answered the survey from 7 different railway companies

50
experts agreed to be contacted again for the focus groups

7
different focus groups were held, one for each company

The focus groups objectives were to:

- Determine UIC members’ companies' level of maturity with regard to new technology mindset, and their specific needs,
- Gather UIC members’ expectations on what the future Mind4Change Learning Lab platform could contain.

Strategic context: Why this matters

Technological transformation

Innovations like AI and digital signaling systems are reshaping railway roles and skills rapidly.

Accelerated adaptation

Shrinking system life cycles demand faster learning and flexibility from railway workforce.

Strategic preparedness

Organisations must plan proactively to address barriers and align technology adoption with goals.

Safety and efficiency

Maintaining safety and performance standards remains central amid technological evolution.

Challenge 1:
Technology and organisation

Digitalisation with BIM and AI

Digital processes using BIM, simulators, and AI enhance operational efficiency and decision support.

Shift to advanced digital signaling

Transition from traditional signaling to advanced digital systems, removing lateral signaling complexity.

Evolving organisational structures

Organisations must adapt to coordinate technical teams and management for effective technology integration.

Investment in infrastructure and training

Successful transformation requires investment in infrastructure, training, and governance frameworks.

Challenge 2:
Human and cultural factors

Challenges in technological transitions

Resistance, cognitive overload, and stress commonly arise as employees adapt to new technologies.

Importance of psychological safety

Psychological safety and soft skills like adaptability and collaborative problem-solving enable successful transformation.

Maintaining morale and engagement

Preserving meaning and engagement in work supports morale and productivity during change.

Balanced training programs

Training should focus on both technical skills and interpersonal abilities to manage change effectively.

Resistance to change

Resistance to change often reflects protective instincts, not sabotage.
People usually have valid reasons for resisting; they often seek to safeguard the organisation.
Favor a positive and empathetic approach to foster adoption.
Don’t just focus on individuals; organisational structures (HR, strategy, etc.) also need to be addressed.

Challenge 3:
Societal and generational factors

Multigenerational workforce

Teams with varied generations bring diverse expectations and work styles requiring inclusive management strategies.

Impact of remote work

Remote work influences organisational policies and technology adoption to support flexible and personalized services.

External influences

Geopolitical tensions and digital culture shape operational priorities and workforce engagement strategies.

Strategies for engagement

Flexible environments, continuous learning, and technology foster collaboration across diverse employee groups.
Rethink organisational models to be more agile—perhaps like SMEs, even in large corporations

Topics of interest

The Mind4Change Learning Lab is perceived as a tool to help anticipate and support changes, both technological, organizational & human

- The socio-economic and socio-cultural aspects of changes
- Cultural preparation of field teams facing changes
- Anticipation and support for organisational changes

Co-creation and participation

Employee involvement

Engaging employees in solution definition fosters ownership and reduces resistance to change.

Collaborative methods

Workshops, feedback loops, and participatory design align goals with employee needs.

Building trust and adaptability

Active engagement builds trust and enhances resilience during organisational change.

Collaboration and openness

Coordination and governance

Act as a facilitator to connect countries facing similar challenges and foster cross collaboration,
Clarify roles and responsibilities between national and European regulatory bodies and companies to ensure effective governance.

Strategic alignment

Promote strategic thinking, especially in a context of market liberalisation, by clarifying the relationship between traditional players and new market entrants,
Provide benchmarking and reflection tools to inform internal strategies and anticipate future trends.

Knowledge sharing and collaboration

Encourage sharing of best practices between incumbents and startups leveraging the agility of new entrants,
Strengthen collaborative approaches to address complex and systemic challenges effectively.

Innovation and implementation

Offer better support for scaling up innovations to ensure successful frontline implementation,
Highlight real-life case studies on technology integration, including lessons learned and failures.

People and change management

Anticipate and provide support for organisational changes,
Develop HR guidelines to align operating procedures, change management practices, and examples of successful adoption,
Provide organisational and managerial tools to help leaders manage transformation and adapt to evolving environments.

Benchmarking and knowledge sharing

Benchmarking best practices

Benchmarking provides valuable insights by comparing practices across rail and other industries to manage transitions effectively.
Need for European and international insights (benchmarking, UIC role, lessons from outside Europe).
Look for inspiration from other sectors beyond rail.

Observatory of transitions

An observatory of transitions helps organisations learn from past experiences and anticipate future challenges proactively.

Knowledge-sharing platforms

Knowledge-sharing platforms enable exchange of ideas, case studies, and lessons learned, fostering continuous improvement.

Supporting agile decision-making

These initiatives promote informed decisions and organisational agility amid evolving technological and societal demands.

As a result: Ambition for Mind4Change Learning Lab, a platform to support decision-making

INTELLIGENT SEARCH ENGINE

- ✓ Semantic search + question reformulation
- ✓ Aggregates validated internal/external content
- ✓ Transversal exploration across silos

STRUCTURED KNOWLEDGE HUB

- ✓ Central repository of rail technologies: ATO, 5G, FAC, IoT, AI, CDAS….
- ✓ Short fact sheets + technology status (testing/ deployed/ obsolete)
- ✓ Use cases, ROI, risks (cyber, dependency, overload)

SHORT AND ENAGAGING LEARNING CONTENT

- ✓ Video capsules, podcasts, mini-modules
- ✓ Practical operational sheets
- ✓ Success stories & lessons learned including failures

COLLABORATIVE SPACE & MIND4CHANGE COMMUNITY

- ✓ Thematic forums (HR, operations, IT)
- ✓ Confidential workspaces
- ✓ Cross-country, cross-company exchange

GAMIFICATION AND ENGAGEMENT MECHANISMS

- ✓ Badges rewarding training and contributions
- ✓ Progress tracking and personalized recommendations

SUPPORT TOOLS

- ✓ Maturity mapping across participants
- ✓ Practical planning tools: impact mapping, foresight scenarios, and methods to support effective planning and execution
- ✓ Success metrics for ROI and human impact to provide measurable indicators and track project success

Risks, dependency & resilience

Timing management
Avoid premature announcements to prevent disappointment and loss of trust among stakeholders.

Technology readiness alignment
Align change initiatives with TRL (Technology Readiness Levels) to match technological maturity accurately.

Organisational complexity
Robust governance and communication strategies are essential to address organisational complexity challenges.

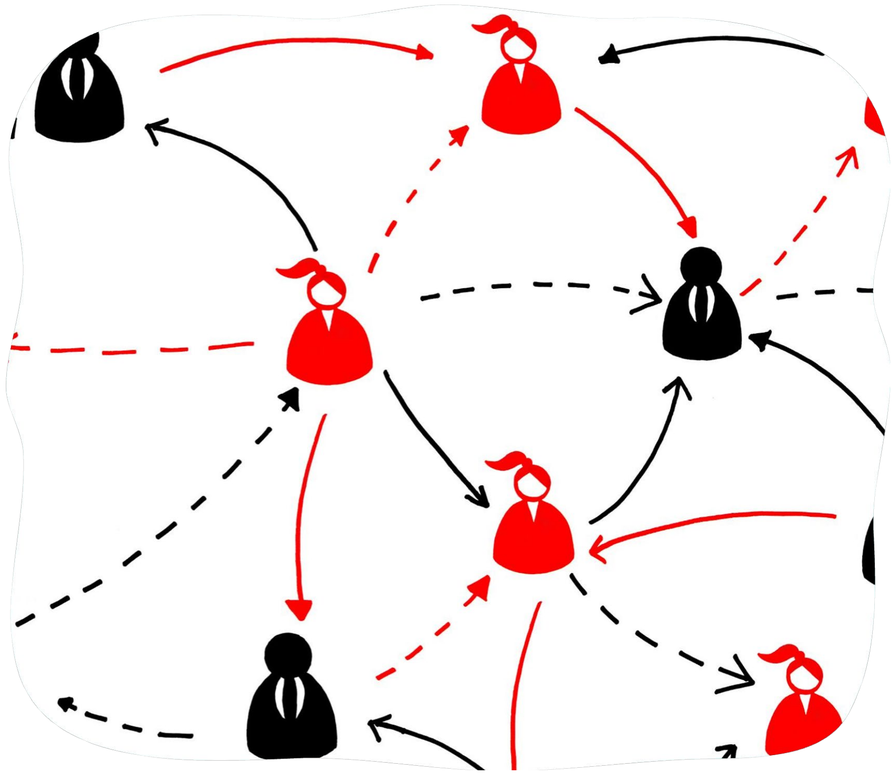
Ethical and regulatory considerations
Address AI bias, data privacy, and compliance to build trust and ensure legal integrity.

Dependency
Beware of over-dependence on technology: ensure human expertise remains available for when systems fail.

Resilience
Build not just resilience, but antifragility—the ability to grow stronger through shocks.

Cyber risks
Cyber risks are increasing, with better-equipped attackers.
As IT systems accumulate, we must rethink architecture and security approaches.

Mindset for success: Human-centric innovation



Technology enhances humans

Innovation should support human abilities, improving lives without causing overwhelm or dependency.

Ethical decision-making

Critical thinking, discernment, and transparency drive ethical and effective choices in innovation.

Phased communication

Progressive communication prepares teams gradually, avoiding unrealistic expectations during transitions.

Observatory of transitions

Institutionalising transition observatories helps organizations learn from the past and anticipate future trends.

Mindset for embracing technological change

- Anticipate new technologies and the skills they require.
- Maintain critical thinking: avoid blind trust in technological promises.
- Technologies should remain tools serving humans, not the other way around.
- The human element should be the starting point, not an afterthought to fit technology.
- Psychological dimension matters: how do we prepare operators and overcome resistance?
- The human factor is central to successful project integration and implementation.
- Find the right balance of trust in technology, especially concerning safety issues.

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Thank you for your attention

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