INTERNATIONAL UNION
OF RAILWAYS

HEALTH & SAFETY CHALLENGES FACED BY RAILWAYS SINCE COVID-19

African Railway Thursdays

30 September 2021

PROGRAMME

OFFICIAL OPENING 11h-11h15

- François Davenne, UIC Director General
- Mohamed Rabie Khlie, Chairman UIC Africa, UIC Vice-Chairman

PANEL N°1 11H15-12h15

Overview of Health & Safety in Railway Transport dictated by Pandemic

Moderator : Frédéric Henon

- **The future "normality" of rail transport after the pandemic: recommandations and perspectives**
- Philippe Lorand, Senior Advisor UIC High-SPeed

- **Travel safety during COVID-19 for passengers travelling long distance by train and other modes**
- Speaker: Torben HOLVAD, Team Leader, ERA Analysis and Monitoring Unit

- **New global approach onto Safety in Railways, since the COVID-19 Pandemic**
- Speaker: Frédéric Hénon, Head of Operations & Safety, UIC

- Q/A Session

PANEL N°2 12h15-12h45

Health & Safety challenges during COVID-19, network experiences

Moderator : Ali Chegini

- **Health & Safety in GB Rail**
- Marcus Dacre, Professional Head Risk and Safety Intelligence, RSSB

- **Long-distance train service in pandemic times. Results of DB's epidemiological study**
- Christian Gravert, Chairman of the WG UIMC - UIC

- **Lessons learned by SNCF Through COVID 19 Pandemic crisis**
- Frédéric Villot, Health and Safety Project Manager, SNCF

- **Challenges faced by railway networks in Asia - JR East's countermeasures during and post pandemic**
- Masayoshi Toyohara, Senior Manager, East Japan Railway Company

- **Specificities of African countries, examples of Morocco, Cameroon and Côte d'Ivoire**

- Q/A Session

CONCLUSIONS 13h45 – 14h

- Saïd Chandid, UIC Africa Regional Office

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OFFICIAL OPENING

François Davenne

UIC Director General

WELCOME MESSAGE OF THE PRESIDENT OF THE UIC AFRICAN REGION

Mohamed Rabie Khlie

COVID-19, an unprecedented global crisis ...

A global health shock ....

2,97%

Confirmed cases of the global population

2%

Death rate of confirmed cases

An economic and financial upheaval ....

255

Millions of full-time jobs lost in 2020

-3,6%

Contraction of the world economy in 2020

Emergency and recovery plans ....

6,13

Billion doses of vaccinations administered

+5,4%

Forecast GDP growth in 2021

COVID-19, disastrous consequences in Africa…

Resilience to the pandemic

- **17%** of the world's population
- **2,5%** world contaminated
- **03%** deaths in the world

Multiplying measures

- Adjustment according to each country
- Creation of support funds
- Use of loans …

A breathless economy

- Falling oil prices
- Business disruption
- Supply difficulties

Multiple negative impacts (2020)

- **-1,1%**, GDP growth located at
- **- 35%**, trade
- **+130** billion dollars of public spending

COVID-19, a hard-hit for the transport sector …

ALL MODES MOBILITY LIMITATION FACTORS

- Mobility restrictions
- High degree of uncertainty
- Moderate demand

- New requirements
- Adaptations to devices
- Work at home

RESILIENCE OF THE RAIL SECTOR

- Travelers offer discount
- Usefulness of the Freight activity
- Degradation of financial situation

- Emergency plans
- Continuity plans
- Stimulus plans

HUMAN CAPITAL AT THE HEART OF CONCERNS

- Adoption of preventive measures
- Reinforcement of hygiene
- Dematerialization

- Training and task force
- Awareness campaign
- Enrichment of instructions

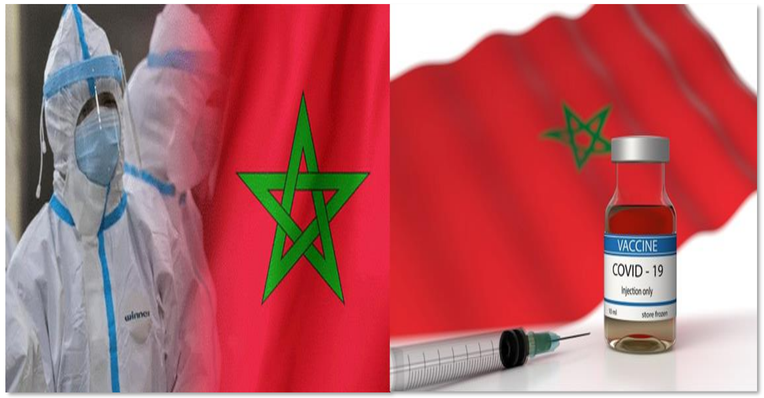
-76%
Air traffic

-4,1%
Maritime commerce

-5,3%
Trade in goods

-40 à 60%
Rail passenger traffic

OHS in the railway sector, the case of Morocco …



A BATTERY OF MEASURES FOR …

- Containing the pandemic
- Manage its impacts / ensure recovery
- Focus on human capital
- Preserving the health of citizens

FOUR TIME FOR EVOLUTION …

- Time 1: Old normal
- Time 2: Containment period
- Time 3: Management of return to work
- Time 4: Post COVID-19 preparation

ANTICIPATION

RESILIENCE

AGILITY

ADAPTABILITY

REACTIVITY

OSH in the railway sector, orientations and ways of adaptation …

1 **New management practices in the face of paradigm shifts**

2 **Definition and deployment of an HRM model reconnecting with humans**

3 **Reposition health and safety at the heart of the future of work**

SYSTEM

- Inculcate the **OHS culture**
- Reconsider our **pact** / **CSR commitment**
- Develop an **integrated and coherent system**
- Develop an OHS risk map
- **Multidisciplinary** management of OSH

TOOLS

- Adapt to recent **standards**
- Comply with **legal obligations**
- Promote the principles of **prevention**
- Accelerate **the digitization** of the system
- Strengthen **the steering** / **decentralization** system

RESSOURCES

- Readjust our **work organization**
- Strengthen **OHS skills**
- Design OHS **training cycles**
- Develop ***cooperation*** (HR circle at UIC)
- Build **communication** / **awareness** plans

The COVID-19 crisis, a catalyst to build an integrated, people-centered, inclusive, sustainable and resilient OSH

'' Men only accept change in necessity and see necessity only in crisis …''

Panel 1: Overview of Health & Safety in Railway Transport dictated by Pandemic

Moderator: Frédéric Henon

Philippe Lorand
UIC

Torben Holvad
ERA

Frédéric Henon
UIC

INTERNATIONAL UNION
OF RAILWAYS

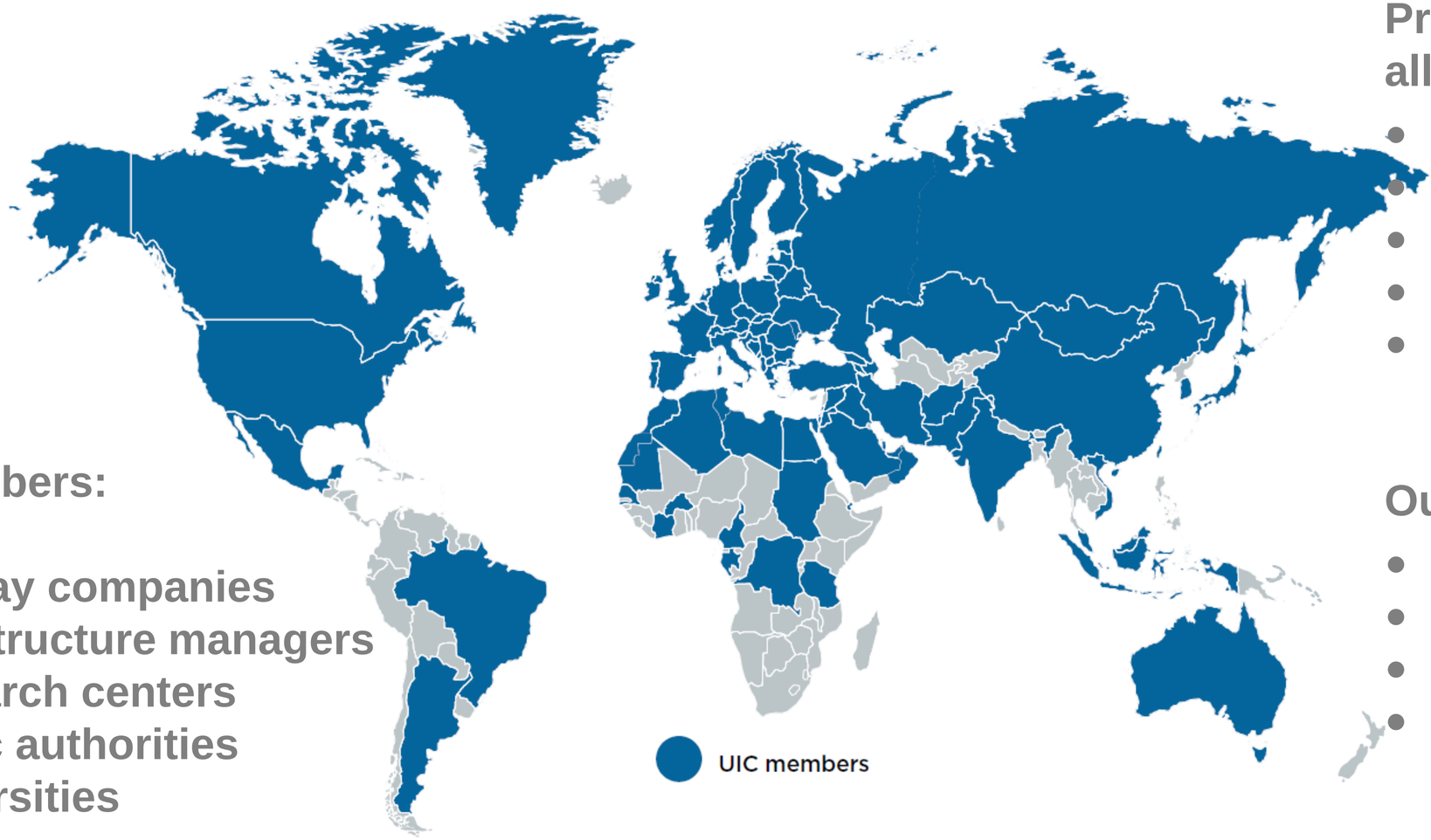
THE FUTURE "NORMALITY" OF RAIL TRANSPORT AFTER THE PANDEMIC: RECOMMENDATIONS AND PERSPECTIVES

Philippe Lorand

Senior Advisor UIC High-Speed

Health & Safety Challenges faced by Railways since COVID-19 - Les Jeudis du rail - 30 septembre 2021

International Union of Railways (UIC)
205 members in 95 countries



Our members:

- Railway companies
- Infrastructure managers
- Research centers
- Public authorities
- Universities

Our missions:

Promote railway transport all over the World:

- Innovation
- Standardisation
- Transmission
- Dissemination
- Strategic consulting

Our sectors :

- Passengers
- Fret
- Rail system
- Fundamental values (safety, security, environment…)

Context: UIC Covid-19 Task Force

- **71 UIC members** and **18 international organisations** (UITP, IATA, CER, EIM, CIT, APTA…)
- **6 UIC Guidance documents** for railway stakeholders: www.uic.org/covid-19
- **UIC Covid-19 dedicated workspace** on UIC Extranet: https://extranet.uic.org/index.php
  - Entire documentation made available by Task Force members
  - A dedicated forum to raise/answer specific questions
  - A database with all contributions from Task Force members
- **Video conferences every month** with all Task Force members to share **best practices** (Europe, Middle-East, Asia, Africa, Americas)
- **Dedicated conferences for UIC Regions**: Africa, Latin America…
- **UIC Covid-19 Task Force media center** to share videos from all around the world (more than 130 videos): https://mediacenter.uic.org/fr/sws-nav/540-994-covid19/page/1/template/second-level
- **Dedicated UIC LinkedIn group**: https://www.linkedin.com/groups/13846065/

Building RAILsilience together – Five guidance documents

Some translations available:
French, Spanish, Portuguese, Russian, Japanese, Farsi, Serbian and soon in German

Management of Covid-19
A series of potential measures (March 2020)

Management of Covid-19
Potential measures to restore confidence in rail travel following the Covid-19 pandemic (April 2020)

Management of Covid-19 ***RAILsilience - How the rail sector fought Covid-19 during lockdown (May 2020)***

Management of Covid-19
RAILsilience - Back on the track (June 2020)

Management of Covid-19
First estimation of the economic impact of Covid-19 on rail (July 2020)

Building RAILsilience together – State of the art papers

Some translations available

Covid-19 - state of the art
RAILsilience – Masks, ventilation and social distancing (July 2020)

Covid-19 – state of the art
Thermal cameras (August 2020)

Covid-19 – state of the art
Contamination Rates (December 2020)

A. Context: the new normal

The Covid-19 crisis has influenced multiple long-term railway megatrends

Overview of mobility megatrends affected by the Covid-19 crisis

1 Evolution of mobility behaviour

The Covid-19 crisis has heavily affected mobility with **new working habits** (e.g. acceleration of **remote working,** decrease in **business mobility), health** and **environmental concerns** (driving **growth in soft mobility** modes for instance)

2 Public financing

Acceleration or maintenance of **public financing programmes for rail** during the Covid-19 crisis to sustain economic activity by investing in infrastructure with positive environmental footprints

3 Sustainability & social concerns

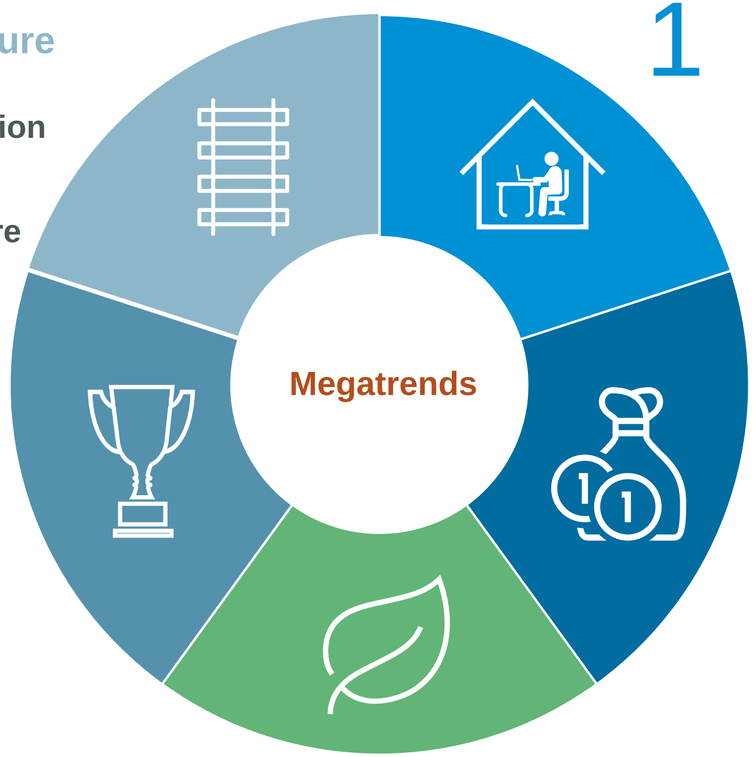
Reinforcement of **individual environmental & social concerns** in the context of Covid-19 – increasingly challenging mobility behaviours

4 Market liberalisation

Slowdown of large-scale liberalisation waves initiated pre-Covid in the **long-distance passenger railway market,** including open network access

5 High-speed infrastructure development

Extension and modernisation of infrastructure potentially accelerated by **public investment in infrastructure** and willingness to **create alternatives to air travel**



- **Will these megatrends persist in the “new normal”?**
- **What is the long-term impact on rail mobility?**
- **What are the actions to be taken for rail stakeholders in this context?**

Covid-19 led to changes in mobility behaviour and a decrease in leisure and business trips, which may recover after 2021

Impact on mobility in 2025

Uncertain impact

- Leisure mobility heavily affected by lockdowns and border closures during the crisis – may experience a rapid recovery after 2022
- Working from home driving reduced demand for business mobility and spreading of weekly and daily peaks – uncertainty as to whether this trend will continue in the future
- Deurbanisation: moving from megacities to live in mid-sized cities/countryside, with different mobility patterns (more mid- and long-distance traffic, though limited to some types of jobs)
- Mistrust in mass transport modes due to health concerns – trend may decline in the future

Impact on rail modal share in 2025

Neutral impact

- Negative impact on mobility expected to be shared between transport modes (air/road/rail), especially for long-distance travel

Positive impact

- Environmental awareness will impulse longer duration in train travel: night trains, High-Speed or Intercity trains for longer distances (e.g. 1 500 km) in direct competition with airplanes

Individuals' environmental concerns present an opportunity for increased rail modal share – limited impact of Covid-19

Impact on mobility in 2025

Overall negative/neutral impact on global demand for mobility, with shift from one mode to another

- In the short/medium term, negative impacts will focus mainly on commercial aviation (Flygskam), with a very limited impact on air transport: c. 5% of global air PAX potentially impacted by Flygskam in 2025 (Roland Berger estimate) – mainly domestic flights in developed countries
- Negative impact on road modal share in the medium/long term, largely compensated by demographic and economic growth in developing countries (notably China/India)

Impact on rail modal share in 2025

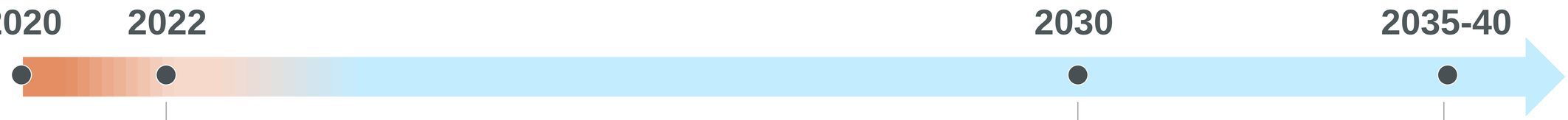
Positive impact on rail modal share thanks to new consumer expectations:

- Expected growth of rail offering to compete directly with air transport (notably night trains and high-speed trains)
- Reinforcement of public transport and soft mobility offerings in urban areas to replace traditional mobility via individual cars

Fighting climate change, one might expect the other transport modes getting more expensive

Other modes are challenging their models, with results not expected before 2030, leaving rail with a short window of opportunity

Window of opportunity



Most airlines focusing on cost structure reduction following Covid-19 crisis

New investment cycle with focus on **alternative powertrains** (e.g. electric, LNG) and **new forms of mobility** (carpooling, car sharing) – expected to gain in maturity over the decade

Short-term window of opportunity for rail

- **Post-Covid-19, other modes are entering a revolutionary period with new investment cycles (and new regulations) that will lead to results by 2030**
- **In the meantime, rail has the opportunity to adapt its model in order to gain its fair share in the post-Covid era**
- **Window of opportunity might be shortened with acceleration of innovation and speed of Covid recovery (e.g. upturn of air traffic)**

Acceleration of SAF (Sustainable Aviation Fuel) solutions: target 5% of aviation fuel by 2030, 20% by 2035

Development of hydrogen propulsion: Airbus launching its first zero-emission aircraft by 2035

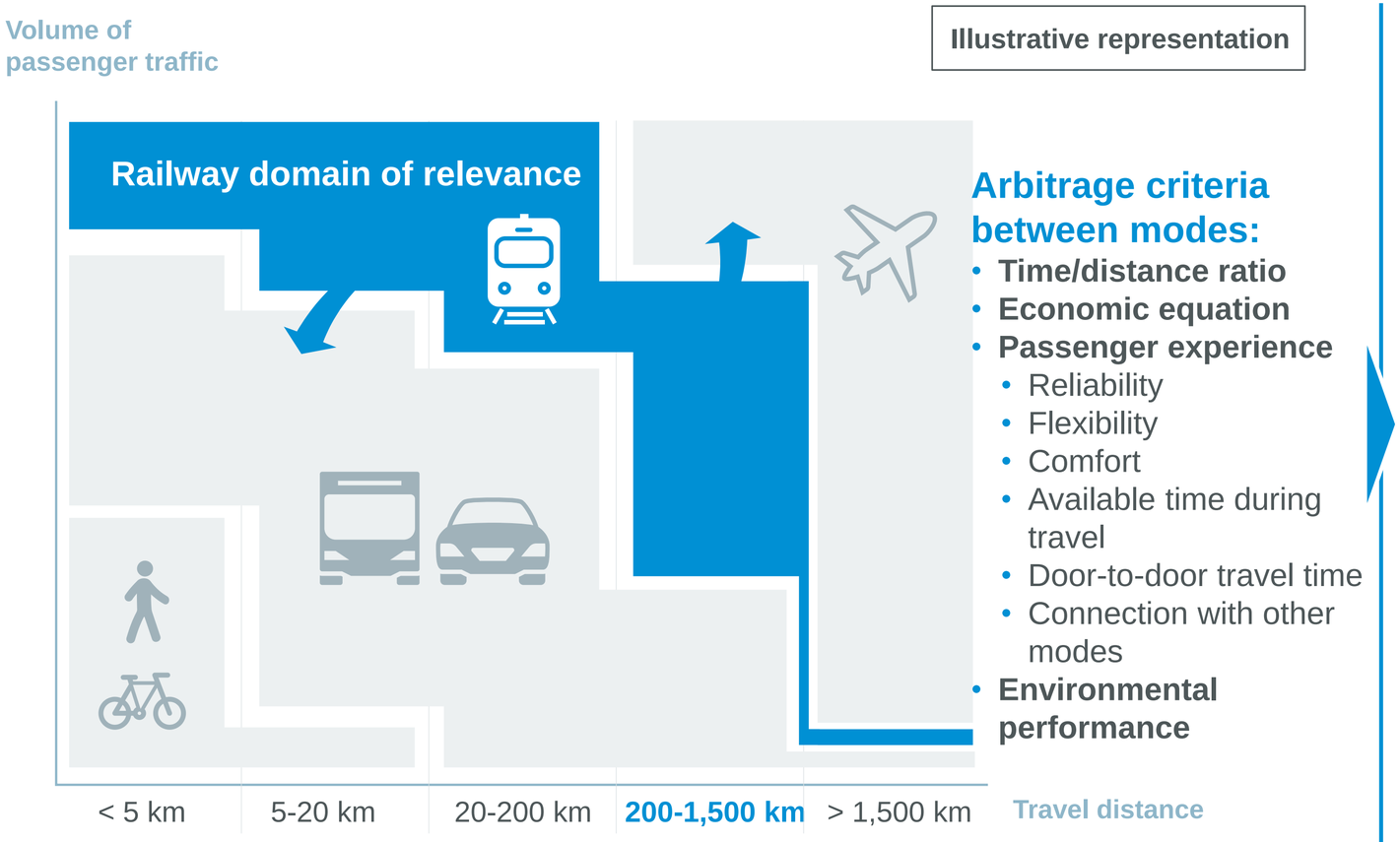
Democratisation of electric vehicles: expected to represent 30% of new commercial vehicle registrations in 2030

Acceleration of investment in breakthrough technologies (e.g. AI, autonomous driving) performed by OEMs to access **new markets**

B. Recommandations

These recommendations are aimed at increasing rail modal share by securing and expanding its domain of relevance

Target of the recommendations



Arbitrage criteria between modes:

- **Time/distance ratio**
- **Economic equation**
- **Passenger experience**
  - Reliability
  - Flexibility
  - Comfort
  - Available time during travel
  - Door-to-door travel time
  - Connection with other modes
- **Environmental performance**

Target: achieve conditions for rail to increase its modal share…

- … by **securing its natural domain of relevance**, leveraging its **core advantages** (e.g. more reliable, more comfortable) in a context in which **rail's domain of relevance is expanding**, driven especially by environmental concerns
- …by **expanding its domain of relevance**, addressing rail's **key pain points** (e.g. high price perception, limited connection to other modes)

Consequences of changes in mobility

Teleworking

- Fewer trips in near suburb
- Changing schedules and peak days: Tuesday and Thursday instead of Monday and Friday
    - Concentration of railway resources over 3 days
    - New pricing policy (subscriptions)
    - Flexibility in working hours: half-days
- Change in residence: attractiveness of rural areas, medium-sized cities and remote suburbs (30% of teleworkers want to leave their homes permanently in the city
    - Fewer trips to the suburbs
    - More regular medium and long-distance trips (once or twice a week) Longer travel duration: on-board services
    - Work areas on-board and in stations

Consequences of changes in mobility

Environmental awareness

- Shame on flying: modal shift from air mode to rail mode
- Longer rail journeys, especially if weekly
  - High-Speed trains: increase in travel time ➡ increase in distances ➡ investment in long-distance lines
  - Development of night trains
- Passengers looking for new services:
  - More comfort
  - Rolling office: 5G, WiFi, etc.
  - Meals on board or in the station
  - Night trains: comfort, hours adapted for business, services (shower on board, connectivity...)

Recommendations

Recommendations – **Railway undertakings**

Railway undertakings

- **Adapt tariffs and fares** on high-speed, commuter and regional railways to account for new mobility behaviours (e.g. subscription models, new passes adapted to passengers travelling 2 days a week, ancillary services to attract new customers)
  - Economic Equation
- **Adapt long-haul and regional rail offerings** to address evolving customer expectations and compete with other modes in their own domains of relevance (e.g. night trains, mid-speed trains)
  - Customer experience
- **Develop onboard services** emphasising natural competitive advantage: for business and leisure
  - Customer experience
- **Develop intermodality** outside of natural domain of relevance through “coopetition” with airlines, road mobility providers (car, rental, ridesharing players), public city transport and micromobility – both physically and digitally (e.g. booking, ticketing)
  - Customer experience
  - Multimodal cooperation
- Gear **innovation toward environmental transition**:
  - Progressively abandon diesel traction in favour of electrification, hydrogen- or battery-powered trains (already in use in Germany)
  - Take advantage of energy efficiency opportunities within operations
  - Environmental performance
  - Innovation
- Leverage **digital capabilities** to **fluidify information to passengers** (e.g. applications providing real-time information)
  - Innovation

Recommandations

Railway Undertakings goods

- **Invest in the development of new long-distance lines to develop supply and promote intermodality**
  - Develop the corridors
  - Investing in bottlenecks

Economic equation

- **Improve traffic management for better quality of service and greater flexibility**
  - Implement time harmonisation processes: automation, digitalisation, path construction

Customer experience

- **Develop on-board services that enhance the competitive natural advantage for business and tourism travel** (5G, smart windows, bicycles, etc.)

Customer experience

- **Optimizing the use of infrastructure**
  - Ensure alignment of work
  - Ensure nodes are designed for intermodal connections

Customer experience

- **Develop intermodality through cooperation with other modes**
  - Supporting road rail projects
  - Provide a good market view
  - Carrying out concrete cooperation with operators, freight forwarders and carriers

Multimodal cooperation

Innovation

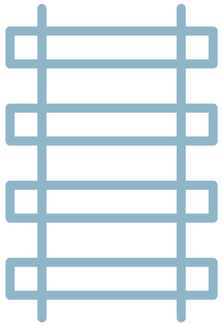
- Leverage digital opportunities to streamline information to freight customers (such as applications providing real-time information)

Innovation

Recommendations

Recommendations – **Infrastructure managers**

Infrastructure managers



- **Invest in the development of new long-distance lines** (e.g. in Eastern Europe, Asia, U.S.) to develop offering, **as well as on key nodes of the network favouring intermodality** (e.g. railway infrastructure in ports for freight)

  Innovation; Multimodal cooperation

- **Improve communications and signalling** to digitalise infrastructure, e.g. by replacing and combining old existing switch posts with new ones covering a broader perimeter and governed by AI to optimise capacity

  Innovation; Infrastructure

- **Improve traffic management** for higher service quality and greater flexibility via additional **digital automation capabilities**

  Innovation

- **Improve environmental performance of infrastructure:**
  - **Green hydrogen/recharging infrastructure**: build hydrogen or battery-charging infrastructure to service trains where lines are not electrified and increase size of electrified network where relevant
  - **Circular economy**: embed principles of the circular economy into renewals and construction activities, integrating this dimension into contracts with supply chain
  - **Promotion of renewable energies** in the overall value chain (e.g. GO – Guarantee of Origin, PPA – Power Purchase Agreement)

  Environmental performance

- **Optimise use of infrastructure,** e.g. through maintenance optimisation to increase infrastructure availability overnight or development of long-distance, high-speed freight trains (particularly in order to support ecommerce growth) where relevant

  Infrastructure

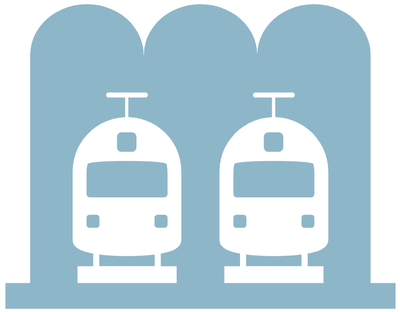
- **Invest for greater resilience against natural hazards** as more climate events due to global warming are expected

  Innovation

Recommendations

Recommendations – **Railway stations**

Railway stations

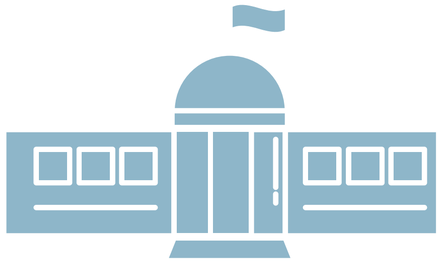


- **Improve conditions for intermodality**: infrastructure (soft modes, flow management) and services (luggage, ticketing, etc.)
  - Infrastructure
  - Multimodal cooperation
- **Develop eco-friendly stations** (energy, materials, etc.)
  - Environmental performance
- **Reshape spaces in stations** to account for new mobility behaviours (e.g. co-working spaces) and to take into account health safety
  - Customer experience
  - Infrastructure
- **Rethink asset sharing schemes** and **pricing mechanisms for operators** to **ease the entry of competitors** and ensure the **economic viability** of the entire network (including small and large stations)
  - Economic Equation
- **Review pricing mechanisms for retail and services** to leverage passenger flow as an asset while **developing new revenue streams** (e.g. use of station space for urban logistics)
  - Economic Equation

Recommendations

Recommendations – **Transport authorities**

Transport authorities



Railway financing

- **Support investment in infrastructure** (e.g. long-distance lines, high-speed development) and **in new technologies and alternative propulsion**
- **Support mobility and railway undertakings** – long-distance, regional and commuter **–** to improve rail's economic equation for passengers while maintaining acceptable costs for the community

Environmental performance

Economic Equation

Railway organisation/regulation

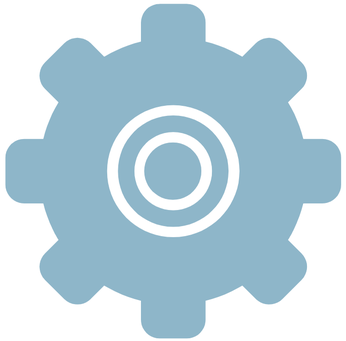
- **Foster intermodal cooperation**: use incentives or regulation to foster coordination between transport modes, particularly in the context of autonomous cars
- **Create conditions for positive competition**
  - Select regulatory framework adapted to situation: open access when relevant; PSO otherwise
  - Define scope of PSO, enabling profitability for operators
  - Support initiatives to facilitate access to essential facilities, information/data and rolling stock
- **Improve data transparency** regarding passenger traffic, load factors, service levels, etc.
- **Environmental transparency:** improve knowledge of the external effects of transport and their quantification and improve the fiscal policies dealing with these impacts (provide a level playing field for all modes and internalise external costs, e.g. CO2 pricing)
- **Develop sector-wide approach forcing cooperation** between operators, infrastructure managers, manufacturers and public transport authorities to define railway systems that facilitate extension of rail’s scope of relevance: light trains/light infrastructure

Multimodal cooperation

Recommendations

Recommendations – **Rolling stock OEMs and railway supply chain**

Railway supply chain



- Focus on building equipment suited to **changing customer expectations and mobility behaviours** (e.g. train as a working space with greater comfort, better connectivity, etc.) – especially in a context in which other modes are investing in this area (e.g. autonomous cars) and also for longer duration of journey

  Customer experience

- Develop **more environmentally-friendly equipment** (rolling stock as well as the entire supply chain for rolling stock and infrastructure) and **create a more responsible supply chain** by collaborating with suppliers in a proactive way

  Environmental performance

- Focus on rolling stock **design to take into account the experience of Covid-19 crisis** (air-conditioning, materials, passenger flows, cleaning…)

- **Enhance production agility** (e.g. accelerating production cycles) and **equipment scalability** to anticipate technological breakthrough

  Innovation

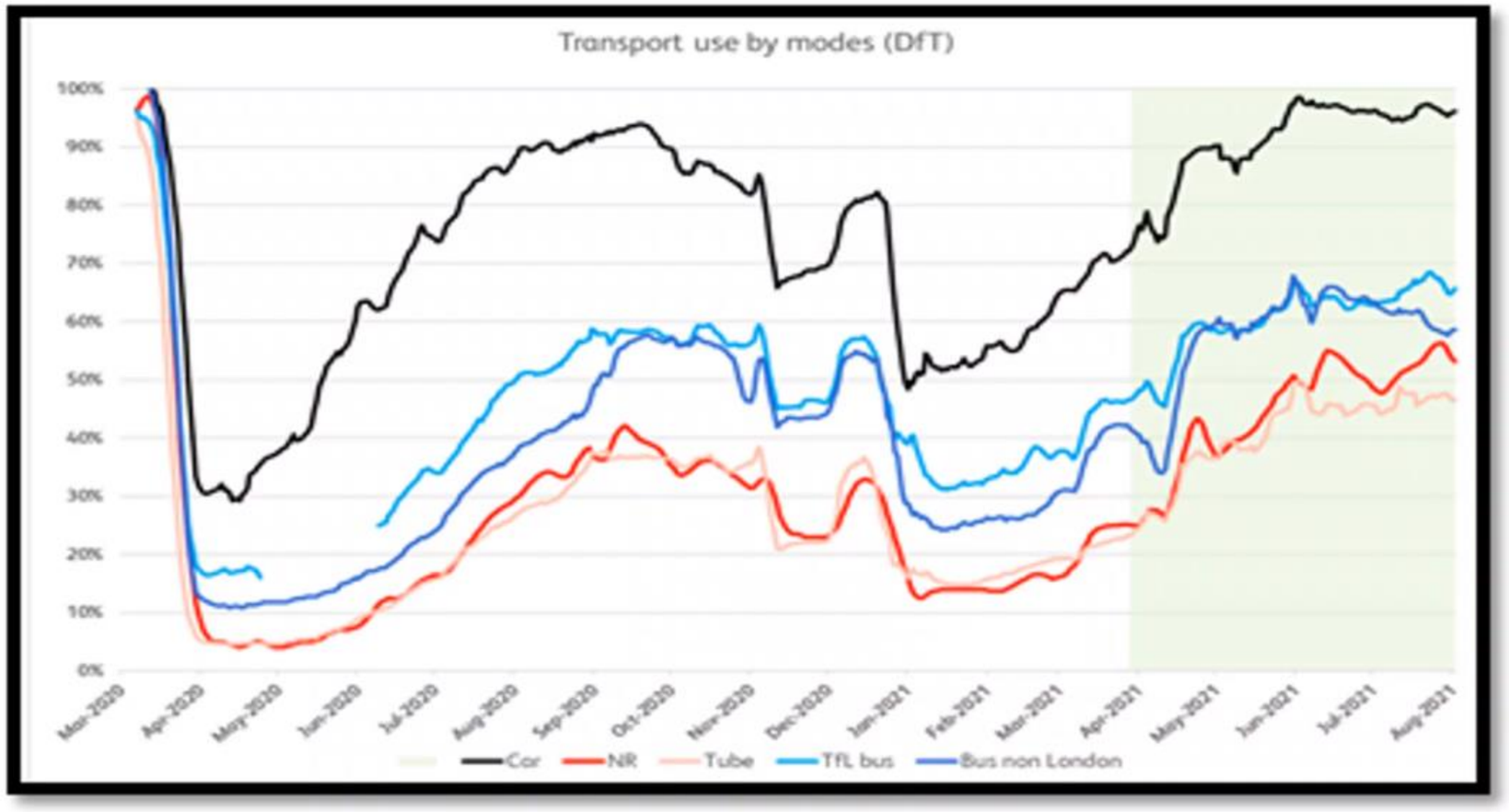
- Develop research programmes to **build and maintain high-speed lines at a lower cost** (e.g. with increased pre-fabrication of elements)

  Economic Equation

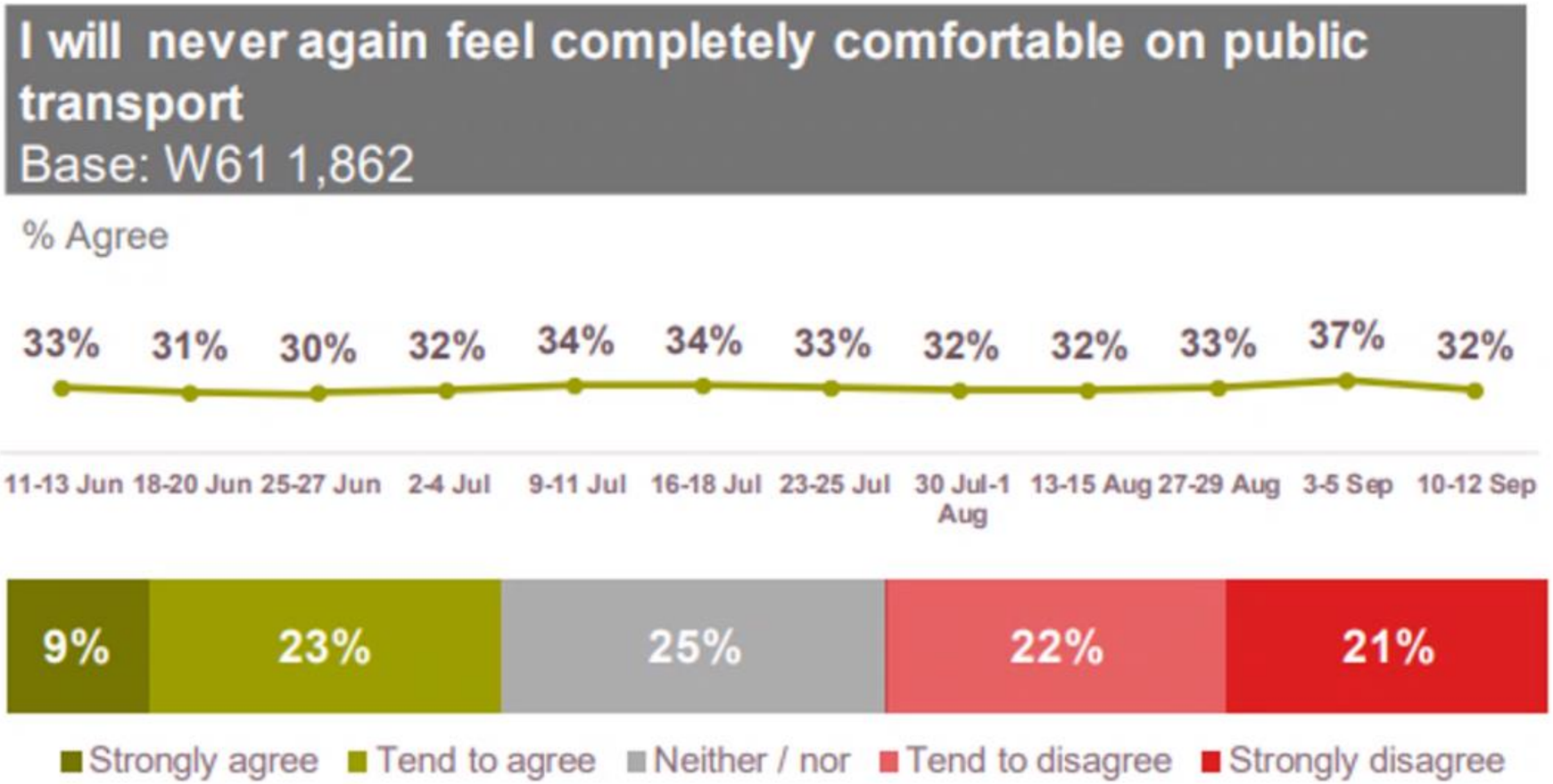
- **Ensure technological convergence** with the enforcement of international standards in relation to technology

  Innovation

The modal answer: the triumph of cars? Case of London (source EPF)



The challenge: one third of travellers are reluctant to take public transport



Restore confidence to passengers

Safety

Reassurance

Be in control

Seamless travel

Security

Comfort

New working habits

Have clear information

Cleanliness

New services

Individual environmental and social concerns

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#UICrail

Philippe LORAND
Senior Advisor UIC High-Speed
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Thank you for your attention.

Travel safety during COVID-19 for passengers travelling long distance by train and other modes

Torben Holvad, Team Leader, ERA Analysis and Monitoring Unit

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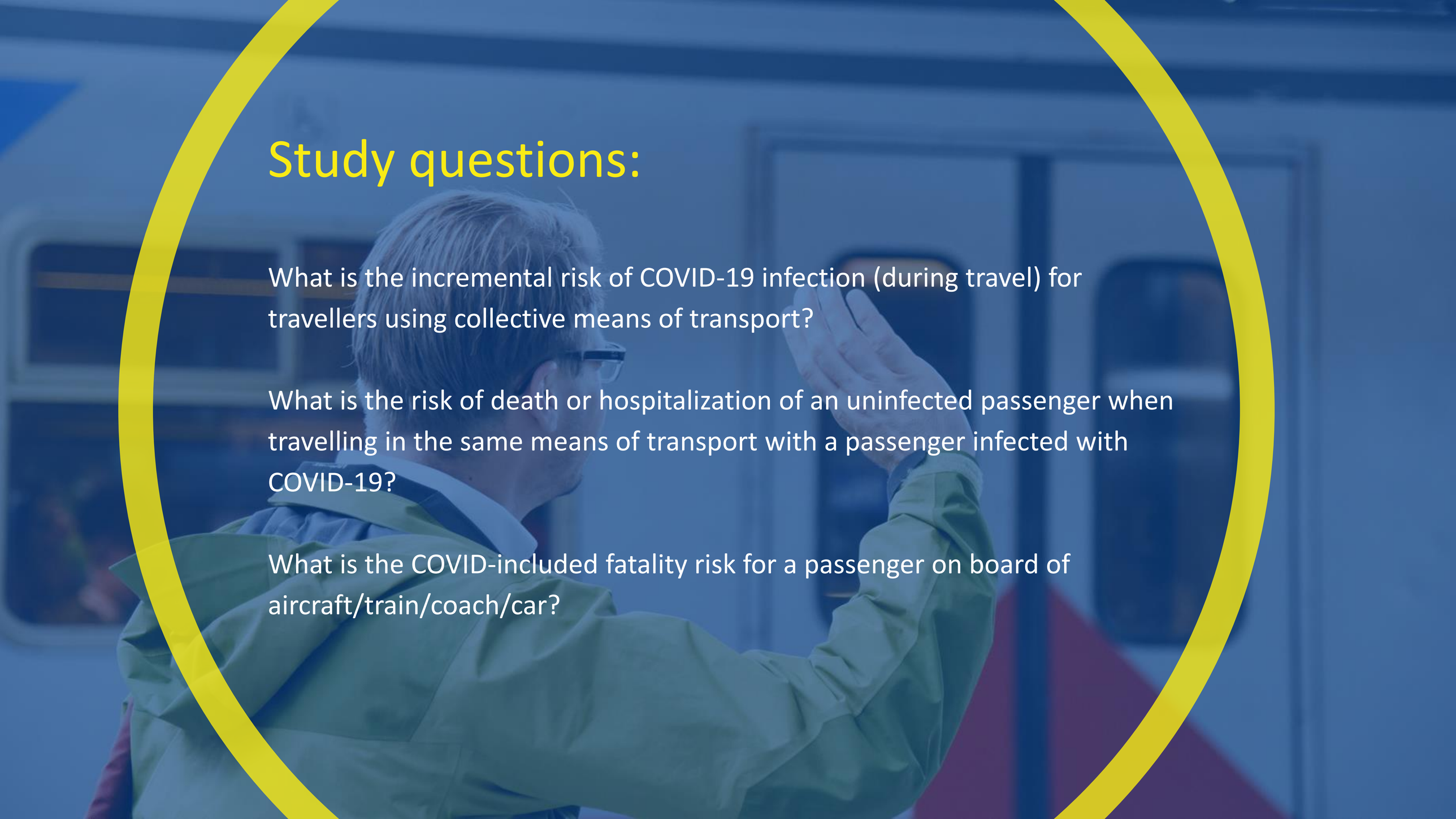
Topics to discuss:

- Study questions
- Scope of study
- Modelling the incremental risk from COVID for passengers
- Assumptions
- Study findings
- Study limitations
- Conclusions

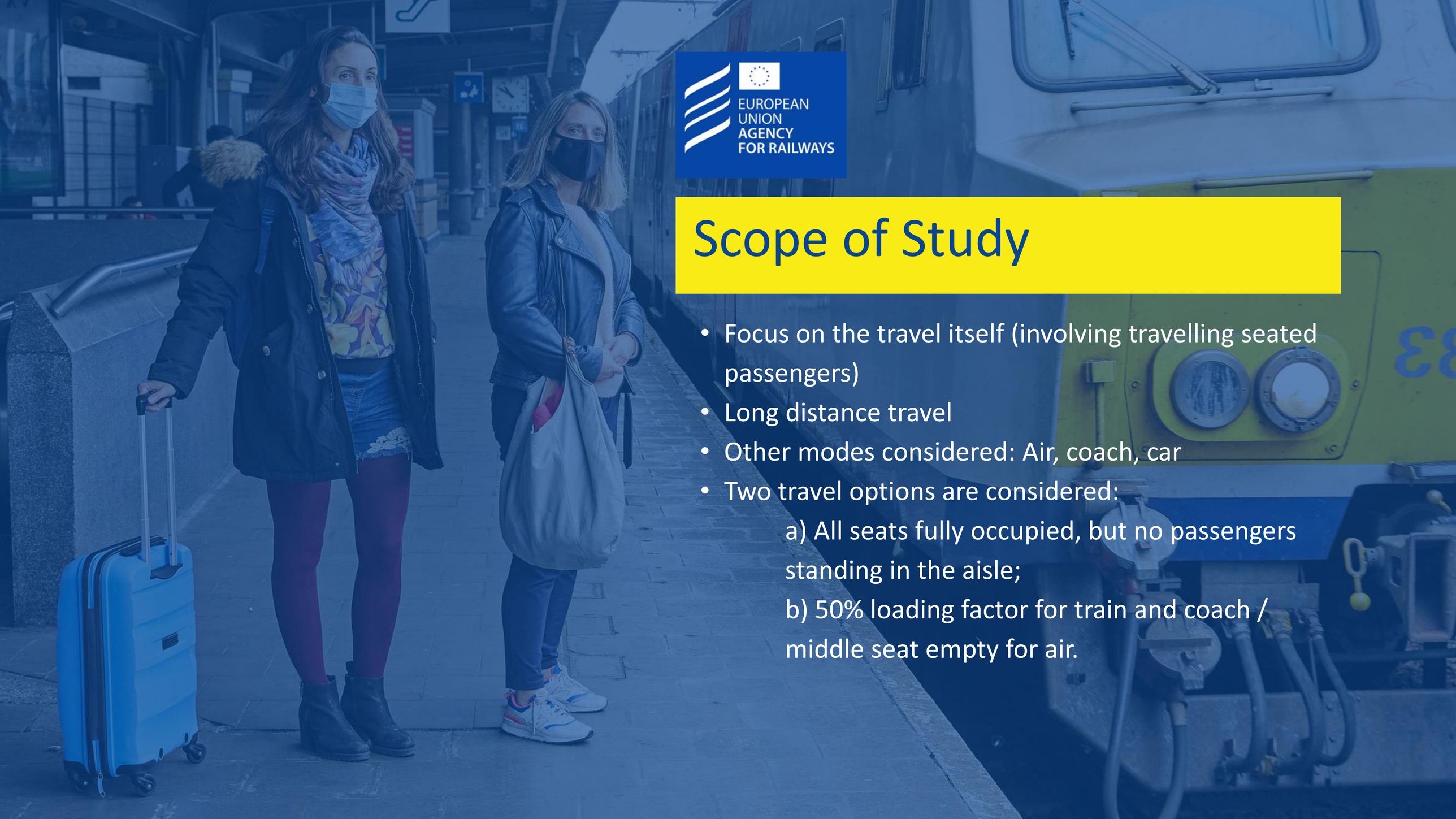


Study questions:

What is the incremental risk of COVID-19 infection (during travel) for travellers using collective means of transport?

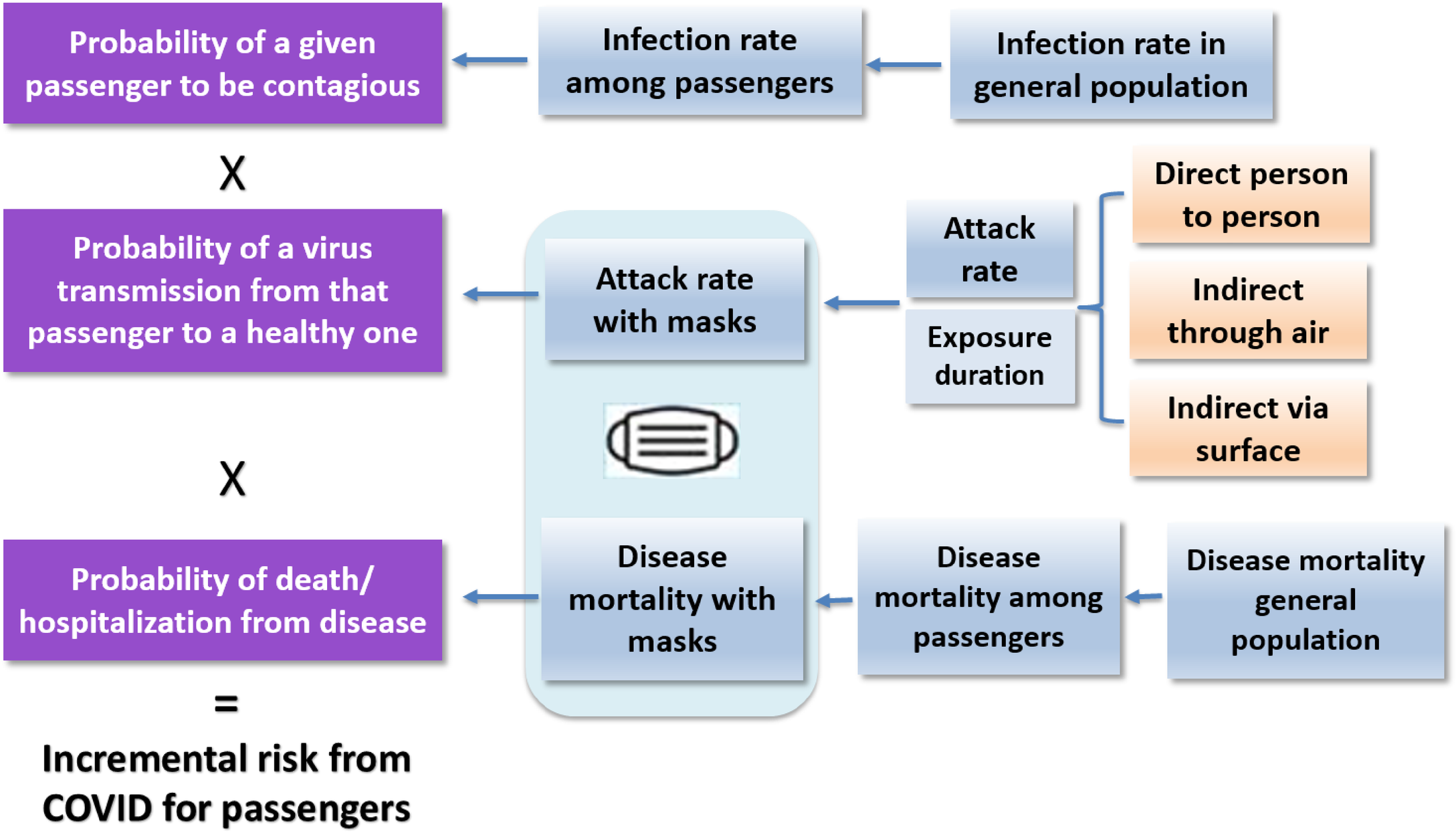
What is the risk of death or hospitalization of an uninfected passenger when travelling in the same means of transport with a passenger infected with COVID-19?

What is the COVID-included fatality risk for a passenger on board of aircraft/train/coach/car?



Scope of Study

- Focus on the travel itself (involving travelling seated passengers)
- Long distance travel
- Other modes considered: Air, coach, car
- Two travel options are considered:
  a) All seats fully occupied, but no passengers standing in the aisle;
  b) 50% loading factor for train and coach / middle seat empty for air.


Probability of a given passenger to be contagious
Infection rate among passengers
Infection rate in general population
X
Probability of a virus transmission from that passenger to a healthy one
Attack rate with masks
Attack rate
Exposure duration
Direct person to person
Indirect through air
Indirect via surface
X
Probability of death/ hospitalization from disease
Disease mortality with masks
Disease mortality among passengers
Disease mortality general population
=
Incremental risk from COVID for passengers

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Main assumptions:

All passengers are wearing masks during the journey,
and masks are highly effective at preventing transmission of COVID-19.

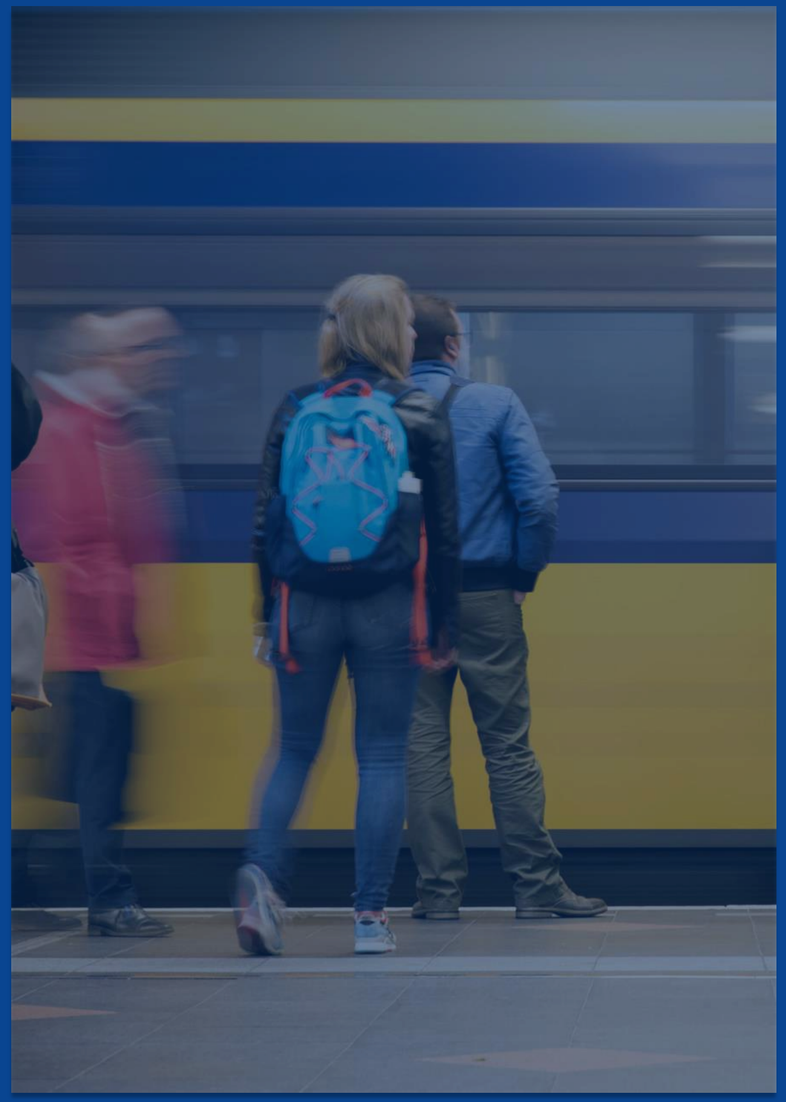
The prolonged exposure is considered to be equal to at least 15 minutes of co-travel time, whereas the proportion of passengers travelling unseated (standing) for this type of journey is considered nil.

We further assume that there is a rather limited risk of infection from a contagious passenger not seated nearby.

Study findings

Travelling on board of shared means of transportation at times of high COVID-19 infection prevalence among the general population implies a new specific mortality risk to passengers.

However, in all scenarios modelled for rail and at the current infection prevalence in the population, it remains somewhat lower compared to the overall travel risk for individual travellers, here notably those travelling in a passenger car.

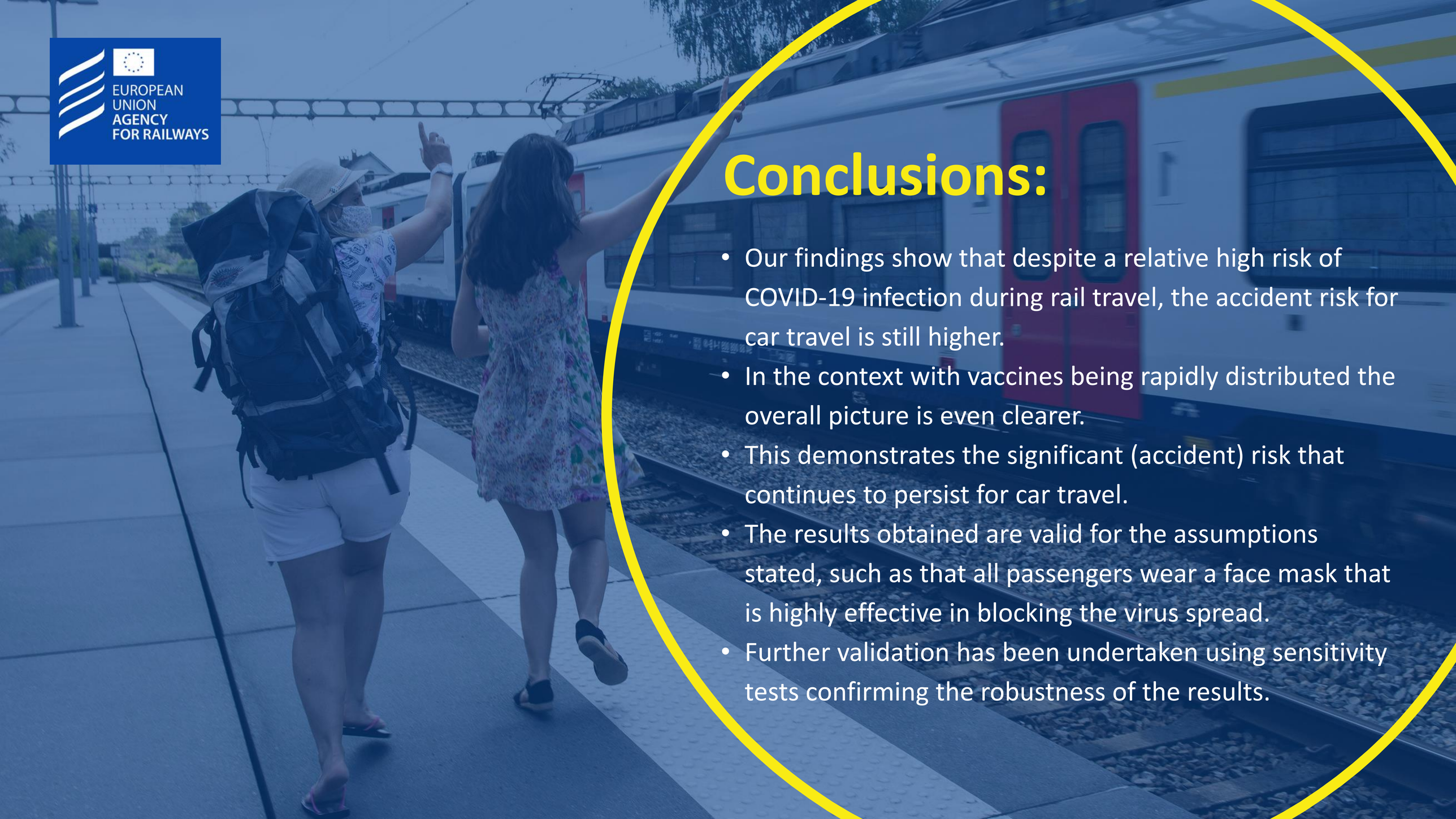


Study limitations:

In this study, we have not yet been able to quantify the probability of short-range airborne and fomite transmission, lacking sound empirical evidence.

The quantification of risk in this study relies on assumptions as stated earlier.

Preliminary analysis on the relative risks comparing rail and car travel for shorter journeys seem to show similar results as the ones examined in-depth in the paper. A future study could explore this in more detail.



EUROPEAN UNION AGENCY FOR RAILWAYS

Conclusions:

- Our findings show that despite a relative high risk of COVID-19 infection during rail travel, the accident risk for car travel is still higher.
- In the context with vaccines being rapidly distributed the overall picture is even clearer.
- This demonstrates the significant (accident) risk that continues to persist for car travel.
- The results obtained are valid for the assumptions stated, such as that all passengers wear a face mask that is highly effective in blocking the virus spread.
- Further validation has been undertaken using sensitivity tests confirming the robustness of the results.

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UIC AFRICA

Webinar - 30th September 2021

New global approach onto Safety in Railways, since the COVID-19 Pandemic

Frédéric HENON
Head of Operations and Safety

September 2021

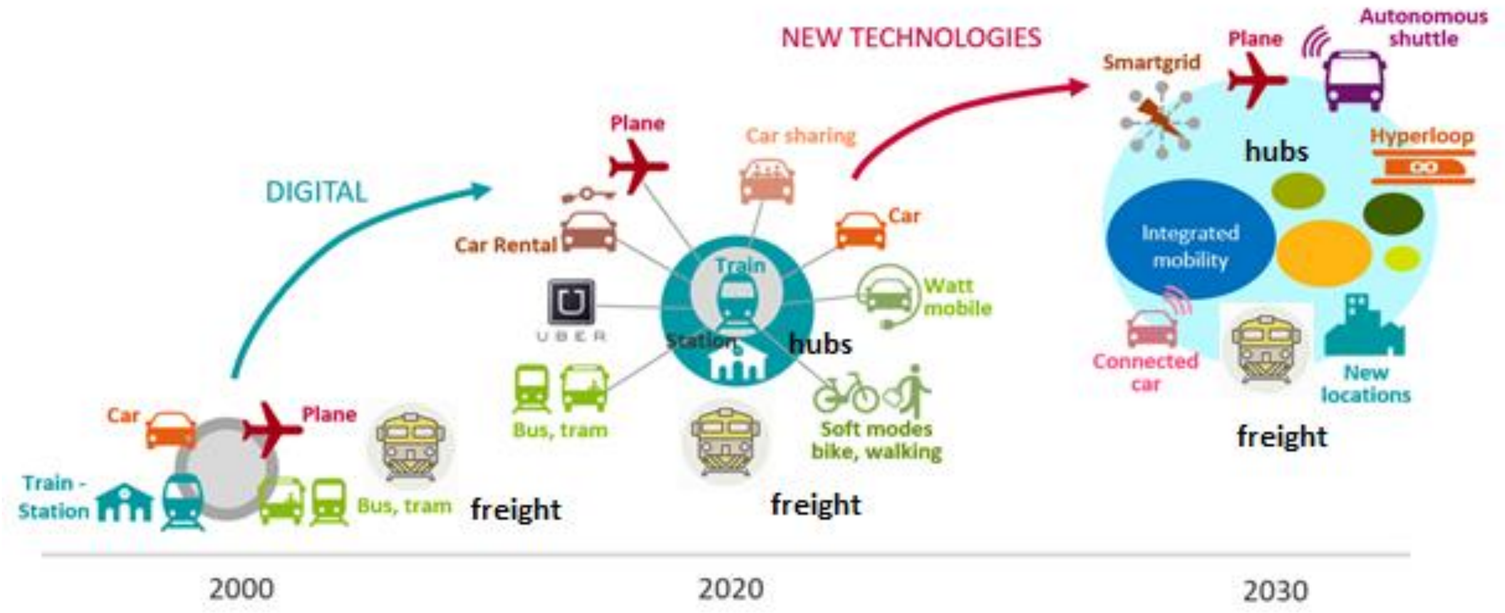
INTRODUCTION

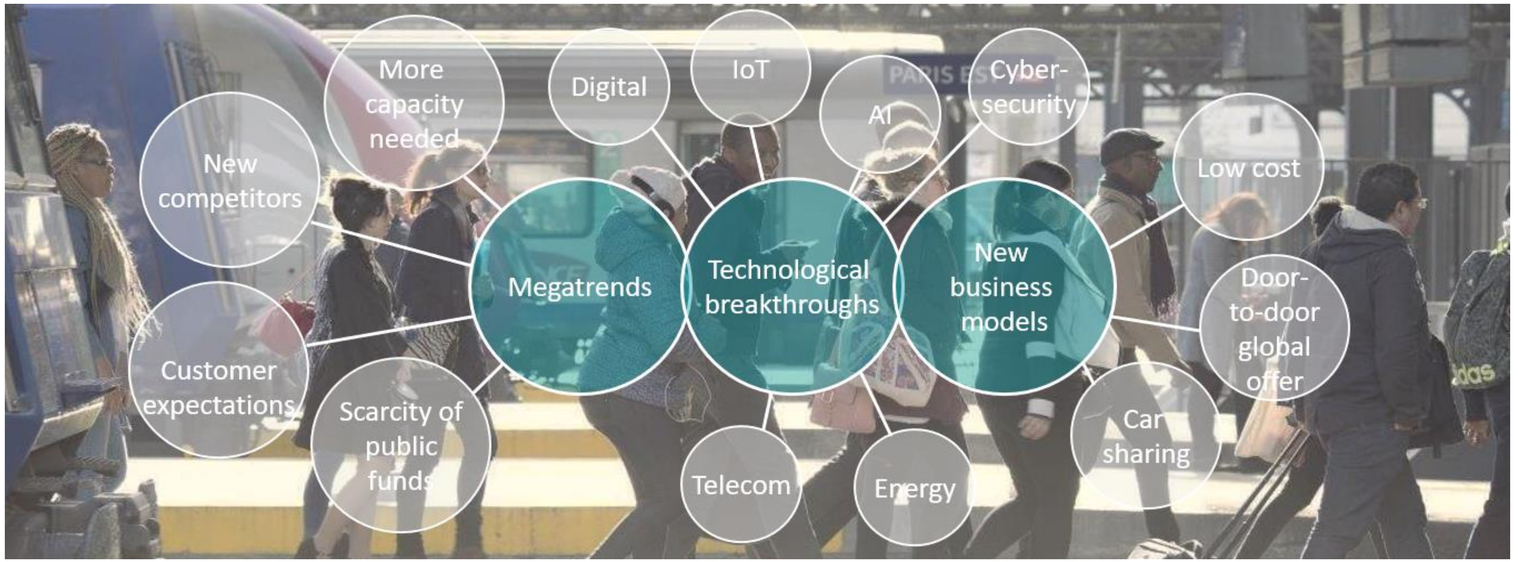
Frédéric Hénon – Head of Operations and Safety - UIC

- 1991-2005 - Eurotunnel (Channel Tunnel Rail Link, railway system commissioning phase, and start of operations in may 1994). Successively « French Railway Planning Officer », « Train Crew Leader », « Duty Operations Manager », and « Head of Infrastructure Maintenance Logistics »
- 2005-2009 - RFF (Reseau Ferré de France) as Operations and Maintenance Manager
- 2009-2013 - EPSF (French National Safety Agency), as Interoperability and Safety Officer, working mainly with French Transport Ministry and ERA for the development of TSI's and CSM's. Was at this time Railway Inspector for the IGC (intergovernmental commission) for the Channel Tunnel.
- 2013-2017 - Eurostar HS, deputy Head of Safety / Head of Railway Operations Planning and Performance.
- 2017-2020 - SNCF Safety Directorate, working on the settlement of a reformatted safety culture with the SNCF group. SNCF delegate, ex. UIC Safety Platform Steering group, ERA and other bodies for the development of safety culture , safety leadership, risk model, etc.
- July 2020 - Head of Operations and Safety – UIC

entitled with a Mathematics Degree, and a Master in Transportation's Economy

FROM DIGITALIZED TO INTEGRATED MOBILITY





The Covid-19 crisis has influenced multiple long-term railway megatrends

In an exclusive interview, Terry Wykle and Dimitri Van Hecke, IT specialists at Infrabel, speak with Leah Hockley, *Global Railway Review*'s Junior Editor, to discuss how Infrabel's existing artificial intelligence solutions were utilised and adapted during the COVID-19 crisis to protect the health safety of its workforce.

Credit: Infrabel

> *"It's easy as a human to forget to keep the distance of 1.5m in common areas and so on, so it's just a reminder to help people"*

Bombardier announces rail and e-mobility Innovation Centre in Sweden

The Railway and e-Mobility Test and Technology Centre will focus on next generation of electric propulsion technology in pursuit of a cleaner future for transportation.

The White Paper

3 Sustainability & social concerns

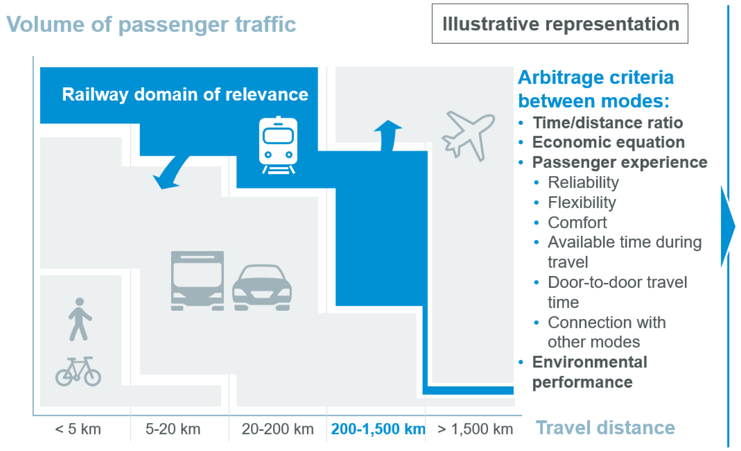
Reinforcement of **individual environmental and social concerns** in the context of Covid-19 – increasingly challenging mobility behaviours

1 Evolution of mobility behaviour

The Covid-19 crisis has heavily affected mobility with **new working habits** (e.g. acceleration of **remote working,** decrease in **business mobility), health** and **environmental concerns** (driving **growth in soft mobility** modes for instance)

- Reduce vulnerability and exposure (to disasters),
- Enable the identification, resistance, absorption, adaptation and recovering from shocks while maintaining essential functions,
- Involve all stakeholders in risk reductions through co-creation,
- Increase capacity to respond to shocks through emergency preparedness.

Has produced a number of recommendations aimed at increasing the railway modal share by securing and expanding its domain of relevance



Target: achieve conditions for rail to increase its modal share…

- … by **securing its natural domain of relevance**, leveraging its **core advantages** (e.g. more reliable, more comfortable) in a context in which **rail's domain of relevance is expanding**, driven especially by environmental concerns
- …by **expanding its domain of relevance**, addressing rail's **key pain points** (e.g. high price perception, limited connection to other modes)

« SAFETY AS A SERVICE » IS THE NEW DEAL FOR THE SYSTEM ?

Digitalization in railways is coming of age:

- **Increase of the amounts of data** collected
- must benefit also for an **even better safety management of the railways**
- towards an increasingly **complex world**, increasing the **uncertainties and the limits of models**. At the same time, digitalization increases the feeling of total control. Illusion?

New societal issues to be considered:

- Serious accidents are less and less tolerated on the railways
- Railway engineering for safety is of high integrity
- Pandemy Covid-19 :
  - Health and Safety of people and customers: **top priority n°1**
  - Health and Safety of the workforce: **idem**

New topics to be included:

- **Cyber-Security** becoming a mandatory criteria for safety
- **Green Deal / Climate Change / Environment** and related consequences and objectives
  - Establish a crises and risks typology
  - Adopt crisis and risk-oriented planning methodologies
  - Data as a resource

Digitization of safety management is a global effort that paves the way for "**Safety as a Service**"

DIGITALISATION

CYBER-SECURITY

GREEN DEAL

SAFETY AS A SERVICE IS ALL ABOUT THAT

CLIMATE CHANGE

HEALTH & SAFETY OF STAFF AND CUSTOMERS

Biggest challenge for the industry of tomorrow: properly positioning the cursor between full control and adaptability to hazards

« SAFETY AS A SERVICE » IS THE NEW DEAL FOR THE SYSTEM ?

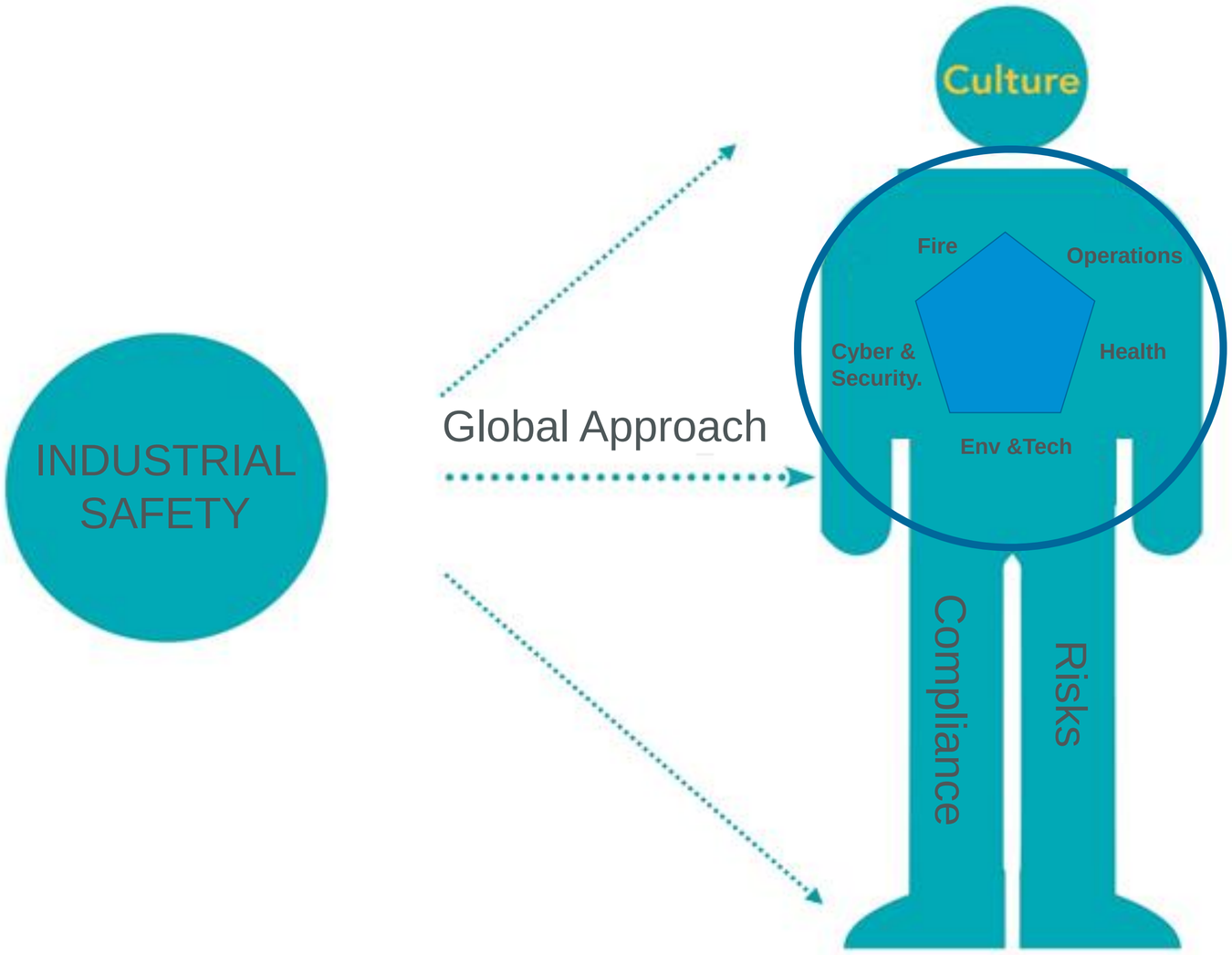
- **Planning** a resilient mobility system, which includes research on the types of crises and their impacts on mobility, the adoption of a scenario-based approach in planification, and the constant monitoring of the urban mobility ecosystem conditions ;
- **Enabling** a resilient mobility system, through an appropriate governance model for the system and infrastructures, and based on the necessary data to be collected and operated ;
- **Providing** a resilient mobility system, by ensuring the needed infrastructure, services and network management are in place.

Building more resilient organizations

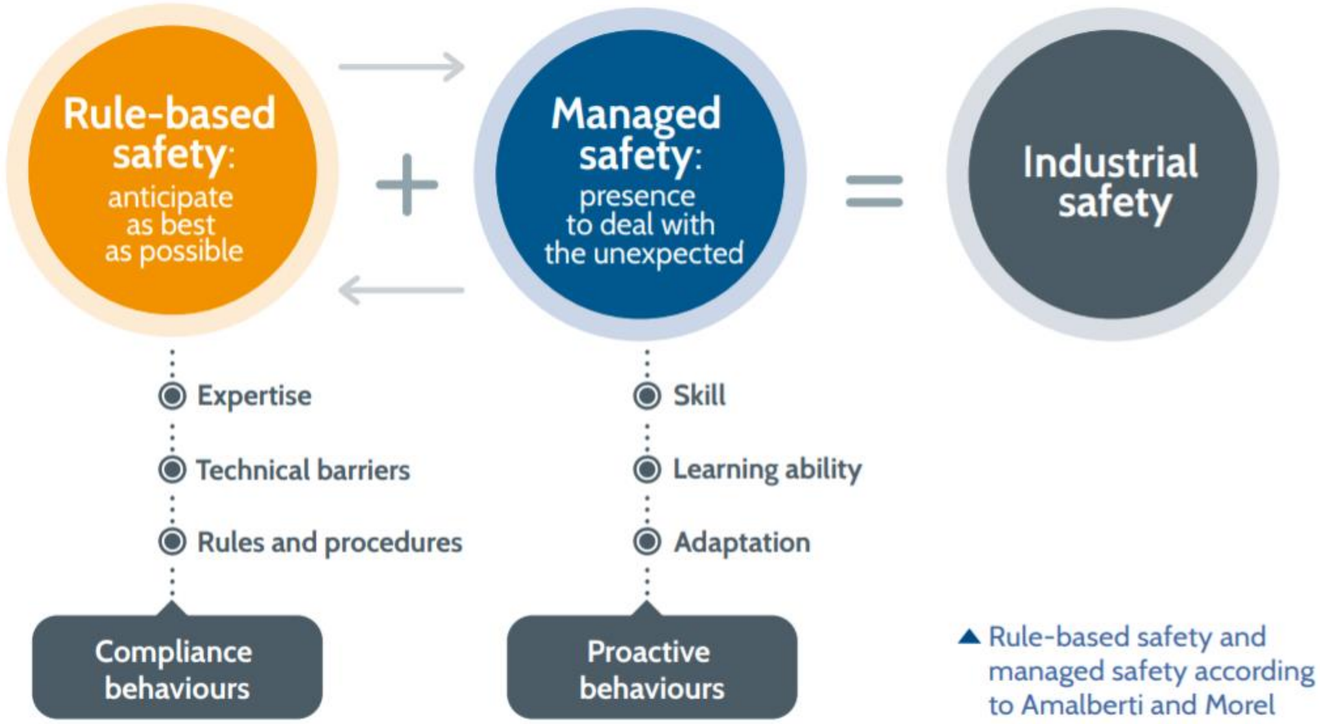
Resilience is the ability to **survive, evolve and adapt to hazards, changes and crises**. In this model, the survival of the system - and therefore its safety - does not suppose the absence of deviations **but their control**, their permanent compensation.
When the deviations can no longer be compensated for, decompensation is going.
Resilience depends on **the management of margins, sensitivity to signs of turbulence announcing limits**, the progressiveness of the loss of control and its recovery.
It is a **matter of compromise** between the different survival requirements of the organization.

To address any type of catastrophe disrupting the mobility system, must covers a **wide range of aspects,** from planning to monitoring, including the implementation **through different services and governance models**.
Therefore, steps to set up or improve the local mobility system are covered, and research requirements are investigated for all modes and services, physical and digital.

SaaS MEANS ... INDUSTRIAL SAFETY



INDUSTRIAL SAFETY



▲ Rule-based safety and managed safety according to Amalberti and Morel

- balance between rule-based and risk-based safety
- depends and varies according to the industry involved

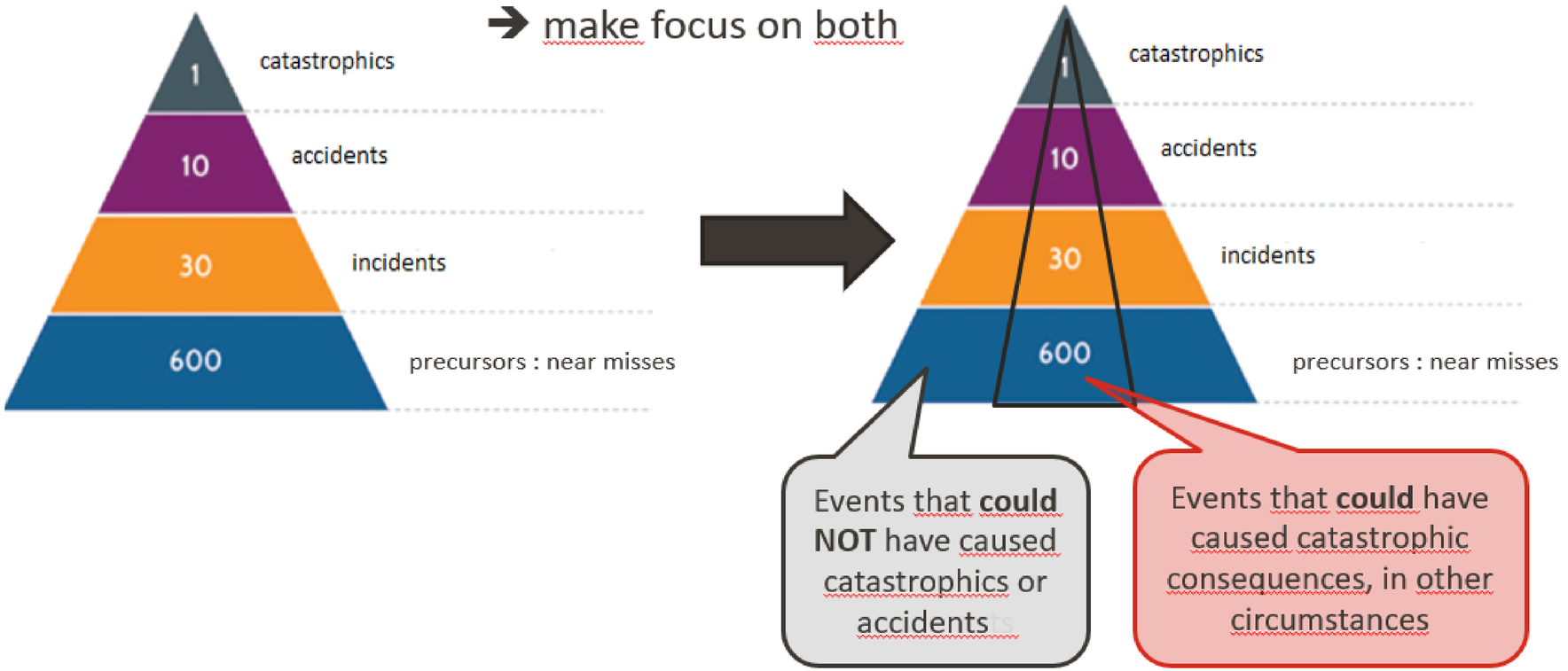
BIRD's ACCIDENT PYRAMID WEAKNESS

Get to know everything, including near misses

but also

Get to know what could have been catastrophic

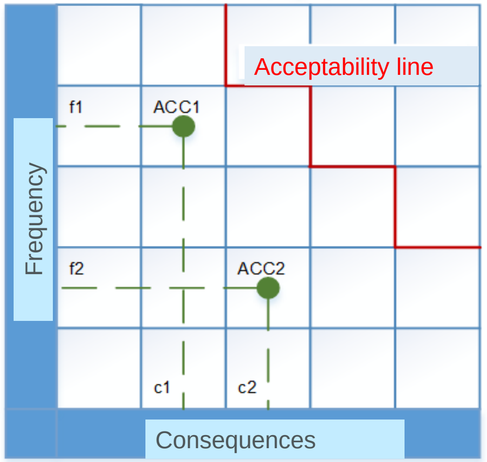
➔ make focus on both



- Inaccuracy of the "Bird" Pyramid predictions, at the edge of industrial systems safety cycles, becoming more and more complex
- Focus in reducing minor incidents that influence on major accidents

PRIORISATION OF SAFETY MEASURES
« SAFETY INDEX »
UIC SAFETY DATABASE INSPIRATION

1. Method involving a **risk matrix**



2. Method leading to a **hierarchy** of risks

Hierarchy of accident-related risks

$r_{ACC1} = f_1 * c_1$
$r_{ACC2} = f_2 * c_2$
...
$r_{ACCi} = f_i * c_i$

3. Method assessing cost/**efficiency** of measures

Hierarchy of measures (m) in relation **to** their cost-benefit analysis (rce) results

rce_{m1} = costs of measure m1 / reduction of risk per m1

rce_{m2} = costs of measure m_1 / reduction of risk per m_1

rce_{mi} = costs of measure m_1 / reduction of risk per m_1

GSI = ∑ (((Cv x Cn) + Ca) x Cr)

Cv	Type of victim	
1	Fatality : passenger	8
2	Serious Injury: passenger	4
3	Fatality: staff	8
4	Serious Injury: staff	4
5	Fatality : LC user	2
6	Serious Injury: LC user	1
7	Fatality: unauthorised	2
8	Serious Injury: unauthorised	1
9	Fatality: other	4
10	Serious Injury: other	2
11	No victim	0

Ca - Type of accident		
1	Train collision with an obstacle	2
2	Train collision with another train	7
3	Derailment	7
4	Individual hit by a train	1
5	Individual falling from a train	1
6	Electrocution by overhead line or third rail	1
7	Fire in rolling stock	4
8	Accident involving dangerous goods (no release)	4
9	Accident involving dangerous goods (with release)	7

Cn - Number of victims	
0 No victim	0
1 One victim	1
2 between 2 and 5 victims	2
6 more than 5 victims	3

Cr - Causes	
1 External causes	1
2 Internal causes	2

3 strategic focal points

Enhance customer experience by adapting to new mobility and consumption behaviours and leveraging the advantages of rail vs other modes

Improve rail's economic equation: optimisation of cost of production of the entire system to enable lower fares for passengers, maintain operators' profitability and allow investment to prepare for the future while maintaining acceptable costs for the community

Increase environmental performance: while road and air transport modes are currently under greater scrutiny, we expect environmental requirements for railways to increase eventually as well

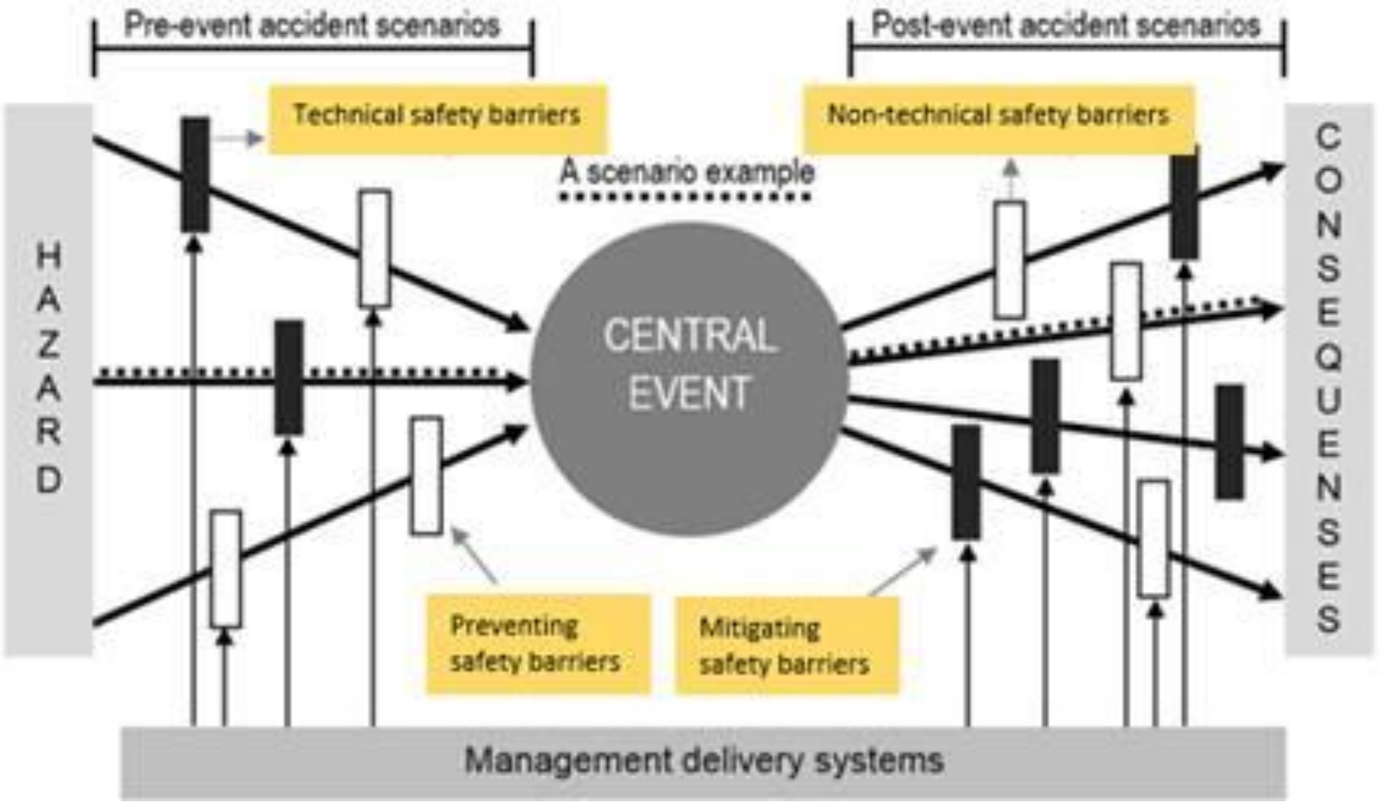
3 operational enablers

Innovate both in terms of customer service (e.g. addition of new services, improvement of marketing capability) and in terms of production enhancement (e.g. improvement of service reliability), to also gain more agility in a context of uncertain changes in customer habits

Invest in infrastructure in order to increase capacity where and when needed and ensure service quality, reliability and smooth connections between travel legs

Foster "coopetition" with other modes: competition when they are in rail's domain of relevance, but **cooperation** when areas of relevance overlap (e.g. when rail and air need to be combined for a specific route) to enable a "door-to-door" offering

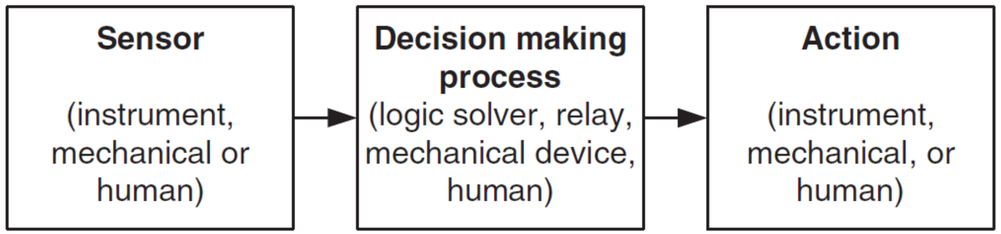
How to deal best in monitoring all criteria : the Bow-Tie ?



Global railway definition for Safety Barrier

Active and passive protection layers is to take an action in order for it to achieve its function in reducing risk in the global railway industry:

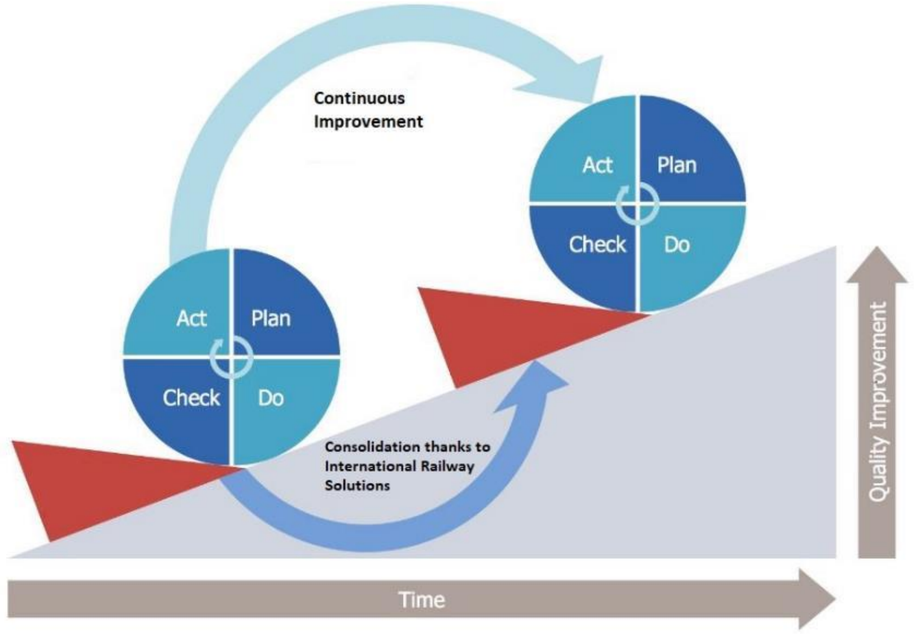
- Generic enough to cover different safety and barrier systems and usage
- Simple and accurate for easy use
- Clear enough to facilitate exchange and digitalization.



Next to UIC input

We require direct industry involvement for developing:

- Safety Organisation Architecture
- Common understanding of a “safety barrier”
- Augmented Bow-Tie
- BaseData on Risk Analysis Production process



Acceptable Means of Compliance AMoC, Trainings, Tools, Guidances :

- **Technical standards**
- **Organisational Standards**
- **Managerial Standards**
- **Operational Standards**

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Thank you for your attention.

Q/A Session

Panel 2: Health & Safety challenges during COVID-19, network experiences

Moderator: Ali Chegini

Marcus Dacre
RSSB

Christian Gravert
UIC-UIMC

Frédéric Villot
SNCF

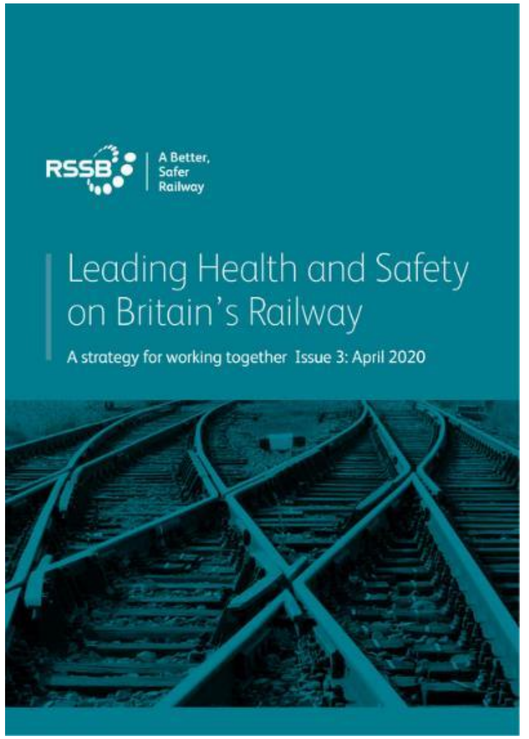
Masayoshi Toyohara
East Japan Railway Company

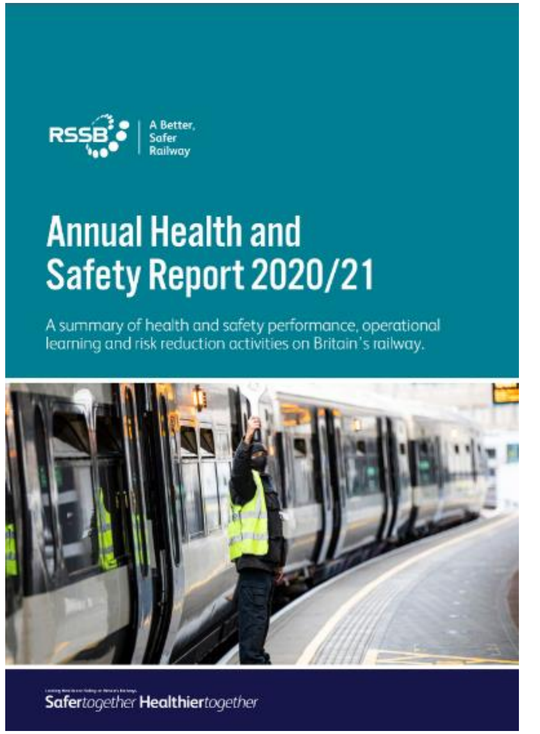
Health & Safety in GB Rail

Marcus Dacre
Head of Risk and Safety Intelligence
RSSB

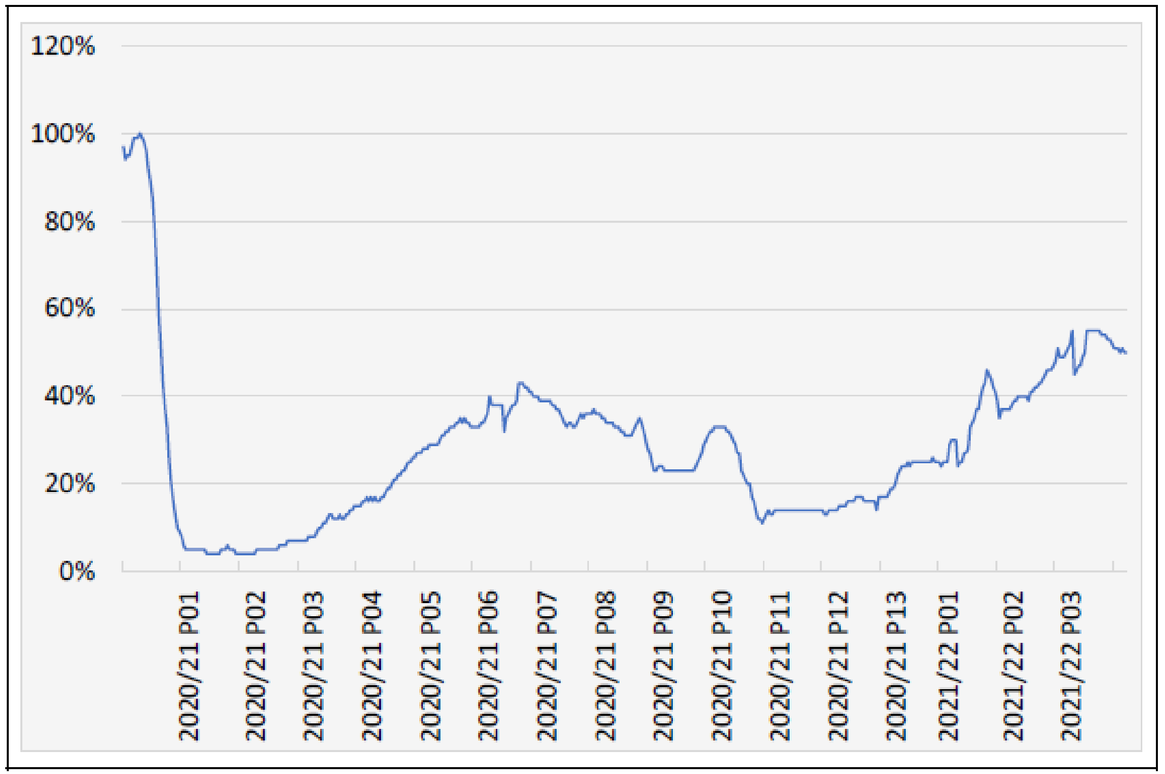
marcus.dacre@rssb.co.uk

Leading Health & Safety on Britain's Railway



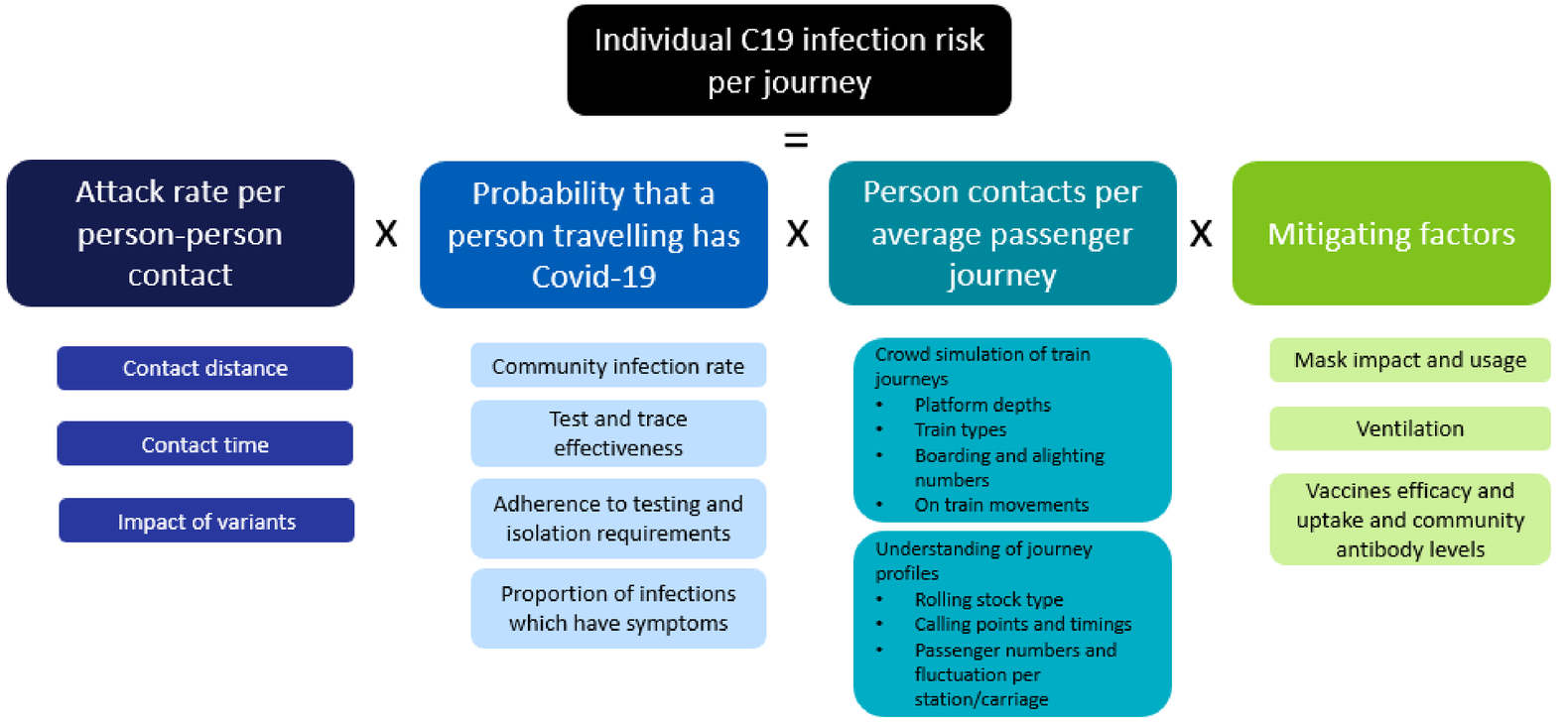


Impact of covid-19



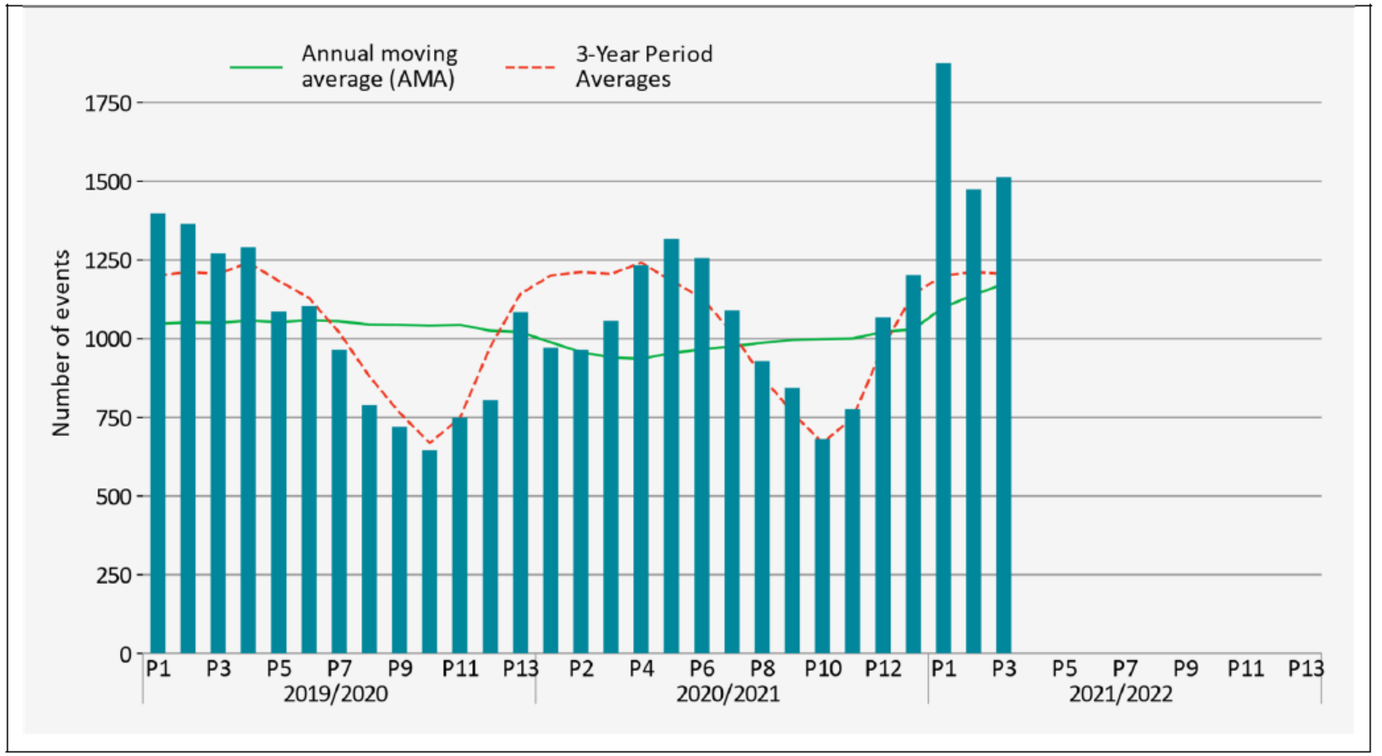
Passenger journeys (source: DfT)

Focus on health



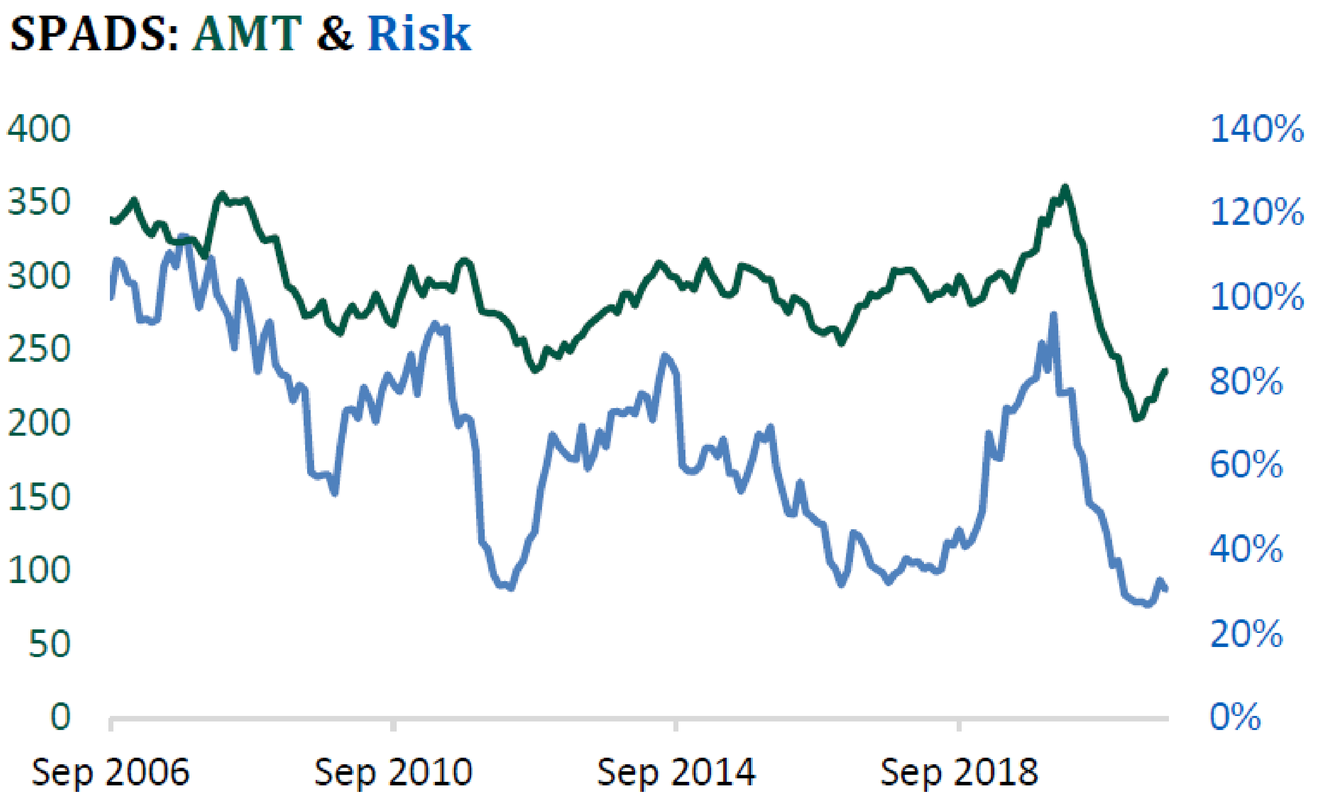
RSSB Covid-19 transmission model

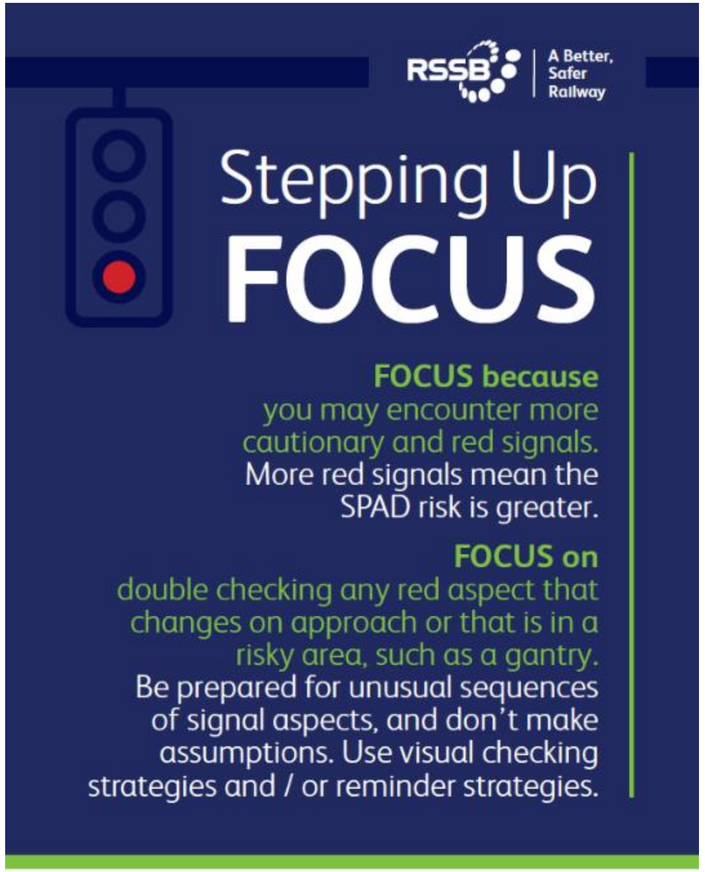
Safety impact of changes in lifestyle and public behaviour



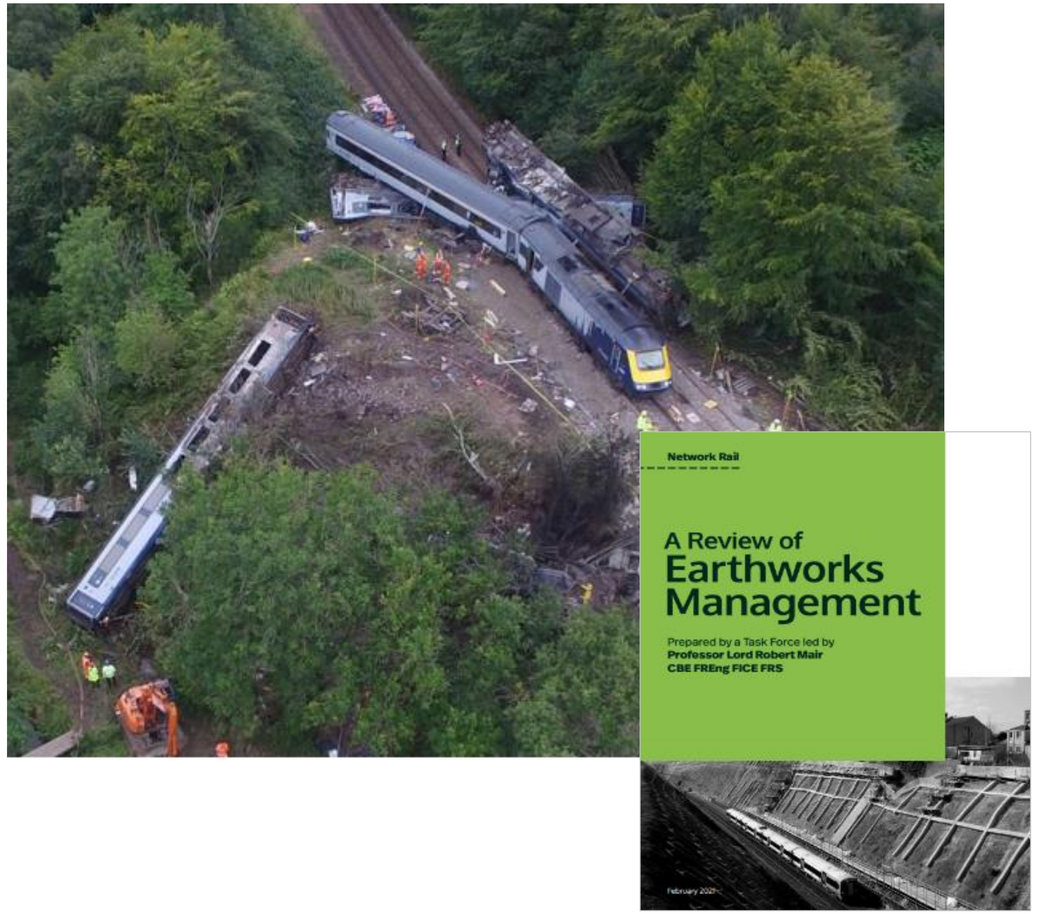
Trespass incidents

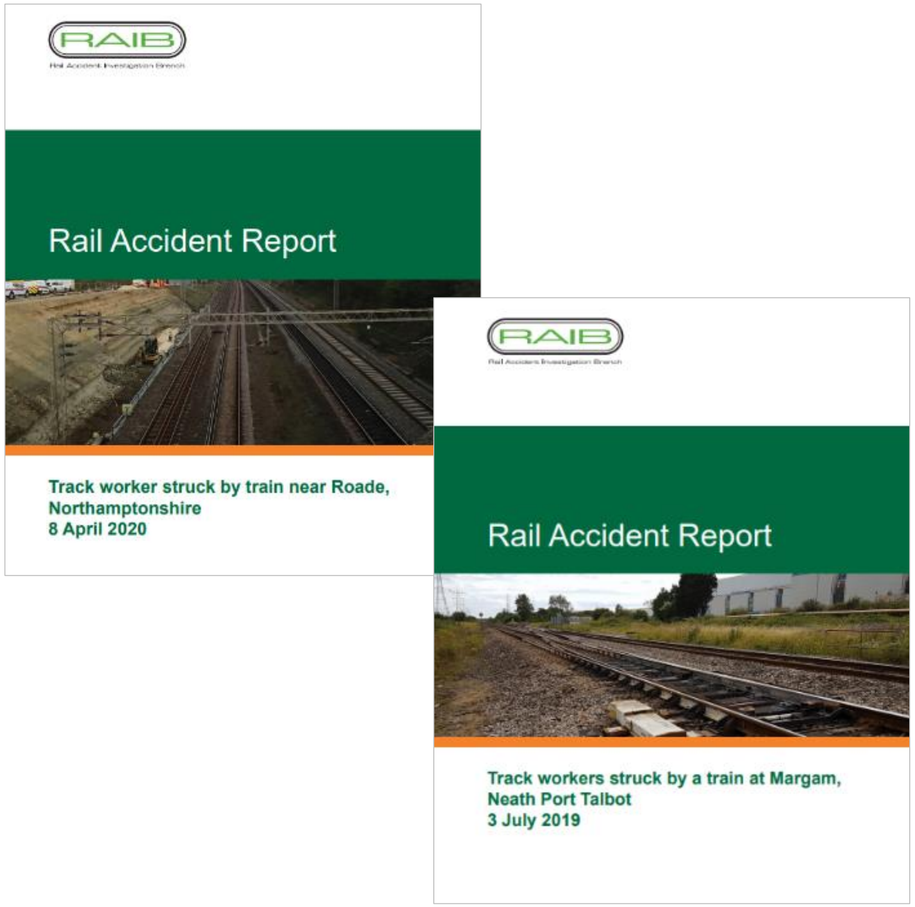
Operational safety



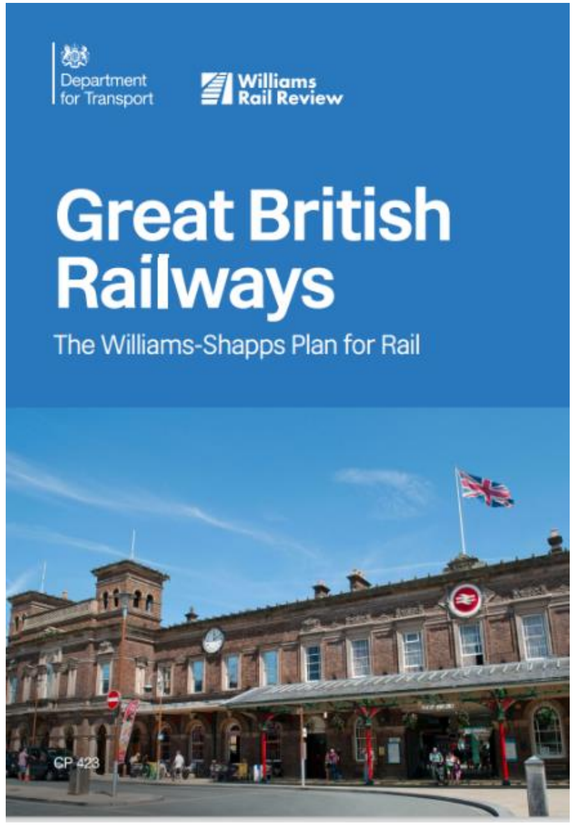


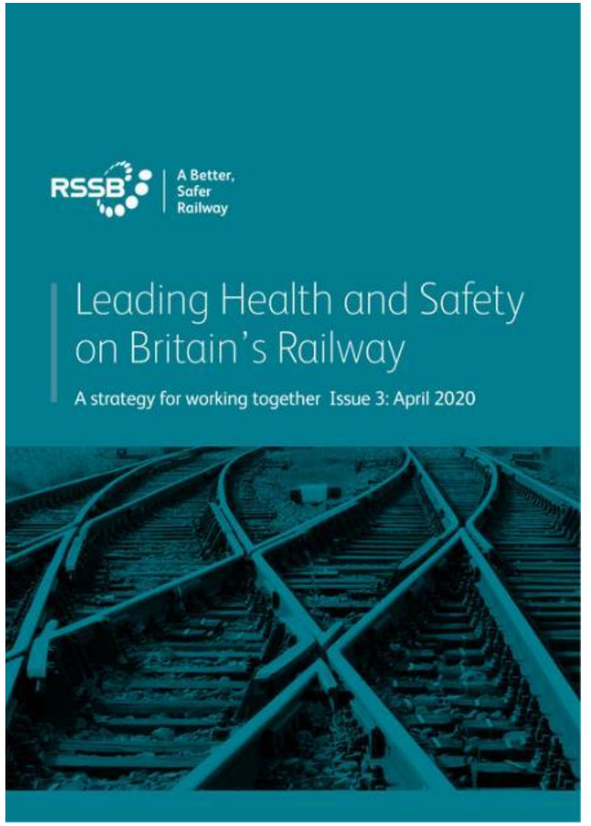
Pre-existing safety priorities



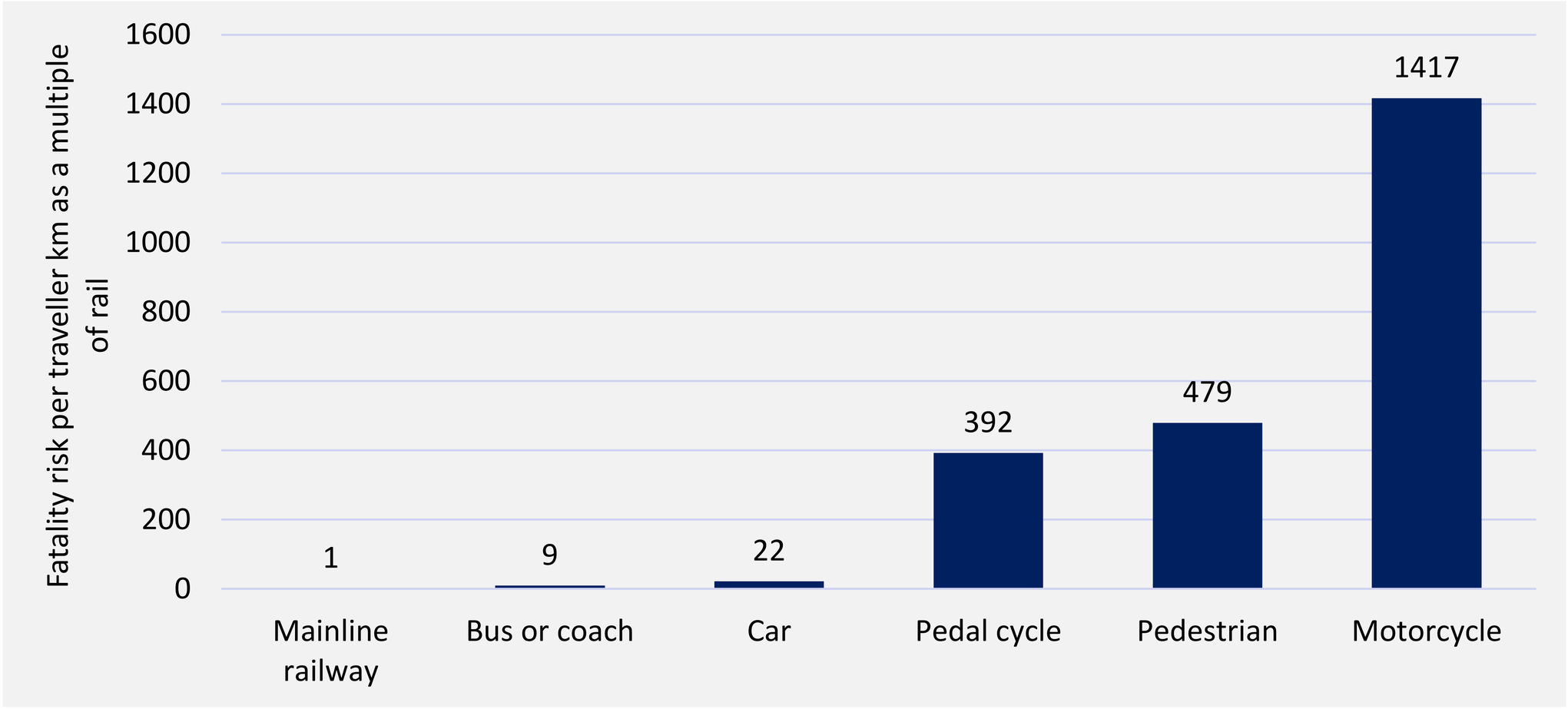


Long-term challenges





Rail is a safe and sustainable mode of travel



Thank you

visit www.rssb.co.uk or contact marcus.dacre@rssb.co.uk

Long-distance train service in pandemic times

Results of DB’s epidemiological study

September 2021 | DB Fernverkehr AG | Frankfurt/Main | Christian Gravert

Agenda

DB Long-Distance continued a reliable offering despite the SARS-CoV-2 pandemic in 2020 and ensured the mobility of 81 m travelers

DB Long-Distance in 2020

Revenues:	€ 2.88 bn
EBIT:	€ -1.68 bn
Passengers/year:	81 m
Volume sold:	24 bn pkm[1]
Employees (FTE):	18,794
Fleet:	318 ICE, 176 IC
Trains:	>800/day

- DB Long-Distance provides fast, comfortable, convenient, and eco-friendly travel within **Germany** as well as to and from **14 European countries**
- **Daily scheduled ICE, IC,** and **EC** services are the backbone of the DB Long-Distance portfolio
- DB Long-Distance is progressively **increasing and modernizing its fleet**, with more and longer ICE 4 trains, IC 2 trains (from Bombardier and Stadler), ECx trains along with modernized ICE 1 and ICE 3 trains
- **18,794** employees are working in **8 different business areas**[2],
- DB Long-Distance contributes to **protecting the environment** through **100% electricity from renewable sources,** energy-efficient new trains, and a completely **CO_2-neutral** ICE plant

1 passenger kilometres 2 train driver, train crew, maintenance, on-bord catering, logistics, shunting, operations, administration & governance

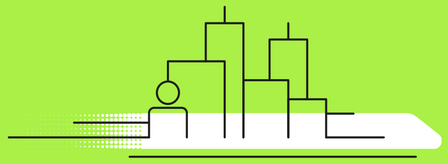
All numbers are fiscal year 2020; fleet and FTE year end 2020

Source: DB Long Distance company presentation 2021 / P.FVE

DB’s overarching strategy: GERMANY NEEDS A STRONG RAIL SYSTEM

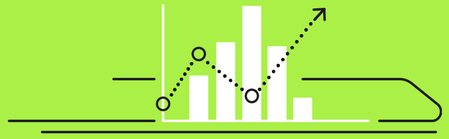
For the climate:

DB will reduce total carbon emissions by 10.5 million metric tons each year, the equivalent of the annual carbon footprint of one million people.



For people:

DB will double long distance patronage to over 260 million passengers per year – reducing the number of car trips in Germany by 5 million and domestic flights by 14,000 every day.



For the economy:

DB will raise the market share of rail freight transport from 18% to 25% – the equivalent of 13 million fewer truck trips per year in Germany.

For Europe:

DB will build Strong Rail to achieve a connected Europe.

Source: DB Strong Rail presentation

Agenda

1 About DB Long Distance

2 **Safe travel during the pandemic**

3 Study design

4 Study results

5 Summary & Outlook

6 Annex: Literature overview

Extensive hygiene measures were implemented to ensure safe journeys throughout the pandemic

Examples of current and past activities of DB Long-Distance during the pandemic

- Introduction, adjustment, and optimization of **hygiene rules and measures**, always based on current **scientific and governmental guidelines and recommendations**
- **Planning** (since 04/2020) and **conduction** (since 06/2020) of two **prospective scientific studies**, one regarding infection risks in trains (cf. this talk) and one on the dispersion of droplets and aerosols in train carriages
- Provision of **on-purpose SARS-CoV-2 tests** for employee groups in case of discovered infections (since 06/2020)
- Twice a week **provision of rapid antigen self-tests** for all operational staff (since 03/2021)
- **Operation of an online test-center** to facilitate supervised self-tests for operational staff on trains in case they are required by regional governmental regulations (e.g. for necessary overnight stays; since 04/2021)
- Setup and operation of 10 **Deutsche Bahn vaccination centers** (06/2021 – 08/2021)

Agenda

1 About DB Long Distance

2 Safe travel during the pandemic

3 **Study design**

4 Study results

5 Summary & Outlook

6 Annex: Literature overview

Several partners and stakeholders had to be coordinated for a successful study implementation in a limited amount of time

Study partners

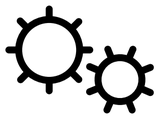
- DB Long Distance (sponsor)
- DB's Chief Medical Officer
- Charité Research Organisation (scientific realization)
- PIMA Health Group (medical service provider for the sample collection)

Stakeholders

- Laboratories (sample analyses)
- Courier services (sample logistics)
- Data protection officer (handling of personal data)
- Works council (representation of staff interests)
- Executive personnel
- Ethics review committee (external review of medical studies on ethical considerations)

>1000 train attendants, train drivers and maintenance workers at 4 locations passed 3 test rounds at a distance of 4 months each

Study design



- Selection of a **fixed proband group** via **representative random sampling**
- Study participation on a **voluntary basis**
- **Longitudinal study** with three test rounds at a distance of four months to respect possible future changes of the occurrences of infections (dates: June/July 2020; October 2020; February/March 2021)
- Participants who left the study after a test round were replaced by randomly chosen successors
- Test of probands on **acute SARS-CoV-2 infections** via PCR test of throat/nasal swabs
- Test of probands on **past underwent infections** via antibody blood test (Anti-SARS-CoV-2-ELISA IgG)
- Derive **epidemiological insights** based on a questionnaire

Probands

- Selection of **>600 train attendants**, **>200 train drivers** and **>200 maintenance workers** (about 7% of DB Long Distance's staff)
- A **particular focus** is laid on **train attendants** because of their numerous variable contacts with passengers
- Train drivers and maintenance workers act as a reference group from the operational division
- The probands are based at the **four locations** Berlin, Frankfurt/Main, Hamburg, Munich

Agenda

Results from all three test rounds do not provide any evidence of a higher infection risk of on-board staff (with frequent contacts)

PCR test
for acute SARS-CoV-2 infections

1st test round Jun/Jul 2020	**1,072** DB staff	→	**1** tested positive
2nd test round Oct 2020	**1,078** DB staff	→	**5** tested positive
3rd test round Feb/Mar 2021	**1,035** DB staff	→	**3** tested positive

Antibody test
for past SARS-CoV-2 infections

1st test round Jun/Jul 2020	**1,064** DB staff	→	**20** tested positive
2nd test round Oct 2020	**1,076** DB staff	→	**26** tested positive
3rd test round Feb/Mar 2021	**1,014** DB staff	→	**66** tested positive

Overview of test results

Positive antibody test results 3rd test round:

On board service
6.8%

Train drivers
3.9%

Maintenance workers
8.5%

Increase of antibodies between the test rounds goes along with the occurrence of infections in the general population

- The proportion of train attendants with **laboratory-confirmed SARS-CoV-2 antibodies was at no point significantly raised** during the study in comparison to the other operational staff.
- Based on the study results, there is no sign of an increased infection risk of on-board staff of trains – given **all current hygiene rules and measures are followed** (Note that passengers were not directly tested).
- These results could be an indication that the **safety measures** for **train attendants** and **passengers** decrease the risk of infection (e.g. obligatory covering of mouth and nose).
- Given the random sample, the **results** of the study are **representative** for the population of the tested staff.

Further results do not propose a negative dependency to a possibly higher infection risk on board of trains

Further results

- Observed **antibody persistence** (ca. 84% after 4 months) **relates to other studies**.
- Over all test rounds, **about a quarter to a third** of the staff that was tested antibody positive **reported to not have shown any typical symptoms**. Such asymptomatic courses of disease are an indication to follow safety measures independent of the occurrence of symptoms.
- The **discipline of wearing masks continuously increased** over time in all three employee groups.
- A significantly **higher rate of infections** (proportion of participants with at least one positive test result) was observed in the third test **round for participants who live in households larger than two persons or together with children**.
- Diabetics are tendentially more often affected.
- Differences between locations could not be observed in general, however, there was a significantly lower infection rate in Hamburg in the third test round.

Results of the first test round are publicly available [13], as well as English translations of the reports of the second [15] and third [16] test round.

A scientific journal publication is submitted for peer review.

The comparison to the general occurrence of infections in Germany does not suggest a higher risk of infections in trains as well

Comparison to other studies

- **Seroprevalence** (proportion of antibody positive tests) in the 1st (2nd) test round was **1.9% (2.4%)**. In other studies:
  - in the **public sector** in the city of Bremen (April/May 2020): about **2.1%** (most comparable situation to 1st round)
  - in **heavily affected areas** about **6-16%** (Gangelt – April 2020, Kupferzell – June 2020, Bad Feilnach – June 2020) and **1.7-4.4%** (Straubing – September 2020, Berlin – November 2020)
  - in Munich (two test rounds, in April-June 2020 and November 2020-January 2021; representative for local population): first round **1.8%** with an **increase to 3.6%** in the second round [19]
  - of **blood donors in Germany** (between April and October 2020): monthly seroprevalence between about **0.6 and 1.7%** (note: some groups of people are excluded from donating blood)
    (Sources can be found in [13], German short report on the study in [14])
- A **derived factor for undiscovered infections** from these results yields an assumed **infection rate of 6.5 – 17.7%** for Germany (as of 1 March 2021)
  - The **study's infection rate of 8.5%** lies within these bounds at the lower end.
  - Therefore, also this **comparison does not suggest an increased infection risk** in trains.

(Only rough approximations are possible as there are differences in the demographic structure and changes in Germany's test strategy over the course of the study.)

Ongoing monitoring of current scientific results and new insights in public transport support the hypothesis of no increased infection risk

LUQAS

The project **LUQAS – air quality in railway carriages** (**LU**ft**Q**u**A**lität in **S**chienenfahrzeugen) by DB Long Distance in cooperation with the German Aerospace Center (Deutsches Zentrum für Luft- und Raumfahrt – DLR) took place between July and October 2020 with the aims to

- investigate the **droplet and aerosol dispersion** in carriages
- derive and assess **safety measures** against possibly existing infection risks (wearing of a **mouth and nose cover,** effect of the **ventilation rate**)

Results:

- High ventilation rate (air exchange rate in ICE train carriages > 8/h) **quickly dilutes aerosol concentration**
- No difference between heating/cooling mode
- **HVAC system in combination with mouth&nose cover reduces droplet and aerosol concentration significantly**

Studies/ Literature

- Announced results of a recently published epidemiologic **study that involves commuters** (experimental group: **public transport users vs.** control group: **users of other individual mobility**) provide evidence of a **non-existing difference regarding the occurrence of infections** between both groups (investigation period of 4 weeks in Feb/Mar 2021) [17, in German]
- **Modeling results** on the infection probability by airborne infection in enclosed spaces via aerosols yield **only a slightly increased risk of a 3h public transport long distance journey** (assuming 50% occupancy) **in contrast to** the base scenario, which is **1h of grocery shopping** (assuming 80% utilization). [18, in German]

! Much **higher risk** is reported for **fitness studios** or **office buildings** without wearing masks.

Agenda

Our results suggest: Railway long distance travels are safe, also during this pandemic

Key findings

- DB's **epidemiologic study** does **not show any evidence** for an **increased infection risks** of staff
  - with **frequent customer contact**
  - and **long detention times on board of trains**
- The **LUQAS study confirms** the positive effects of
  - **covering mouth and nose**
  - in combination with a **high air exchange rate** by the HVAC system
- **Robert Koch Institute** (Germany's public health institute) **endorses the results** in their publication on the strategy "ControlCOVID" (https://www.rki.de/DE/Content/InfAZ/N/Neuartiges_Coronavirus/Downloads/Stufenplan.pdf?__blob=publicationFile; in German)

Ongoing effort

- Continuous **examination of newly published study results** with a focus on public transport, especially on long distance railway services
- **Biweekly self conducted testing** for operational staff began in March 2021
- **Occasion-related cohort testing** of operational staff will continue as well
- **DB's vaccination centers** all over Germany started operations in June 2021

Questions?

Agenda

DB has released several publications on the topic of SARS-CoV-2 infection risks on trains

Review of literature, discussion of HVAC, early implications

- C. Gravert, P. Nagl, H.-P. Lang, F. Ball, A. Schöllmann, and S. Jeschke, “Preliminary Implications of COVID-19 on Long- Distance Traffic of Deutsche Bahn,” Deutsche Bahn AG, Jun. 2020. [Online]. Available: https://www.researchgate.net/publication/342353367_Preliminary_Implications_of_COVID-19_on_Long-_Distance_Traffic_of_Deutsche_Bahn.

DB Long Distance study reports of 1st/2nd/3rd test round

- C. Gravert, P. Nagl, F. Ball, and T. Körner, “Update on SARS-CoV-2 Infection Risks in Long- distance Trains,” Deutsche Bahn AG, Oct. 2020. doi: 10.13140/RG.2.2.14207.64165.
- Charité Research Organisation GmbH, “Longitudinal study of corona infections and corona immunity in different occupational groups at Deutsche Bahn Fernverkehr AG: Interim Epidemiological Report after second test series,” Jan. 2021. [Online]. Available: https://www.researchgate.net/publication/349116335_Longitudinal_study_of_corona_infections_and_corona_immunity_in_different_occupational_groups_at_Deutsche_Bahn_Fernverkehr_AG_Interim_Epidemiological_Report_after_second_test_series.
- Charité Research Organisation GmbH, “Longitudinal study of corona infections and corona immunity in different occupational groups at Deutsche Bahn Fernverkehr AG: Final report after the 3rd test series,” May 2021. [Online]. Available: https://www.drks.de/drks_web/AttachmentDownstreamServlet?ID=f59ac2c4-22e7-409d-a810-3fcd24c2909c&LOCALE=de&FILENAME=English_Translation_210511_Coronastudie_DB_Abschlussbericht_final_V4.0.pdf

LUQAS

- DB Systemtechnik GmbH, Kompetenzzentrum Aerodynamik und Klimatechnik and Deutsches Zentrum für Luft-und Raumfahrt e.V.,Institut für Aerodynamik und Strömungstechnik, Abteilung Bodengebundene Fahrzeuge, “Untersuchungen zur Ausbreitungswahrscheinlichkeit von Aerosolen im Fahrgastraum von Schienenfahrzeugen”, (in German) Dec. 2020. [Online]. Available: https://www.dlr.de/content/de/downloads/2020/kurzfassung-abschlussbericht-luqas.pdf.

There is only scarce evidence in the scientific literature for an increased infection risk with respiratory diseases in train services

Infections in trains

Before the emergence of COVID19 only **scarce literature on airborne transmitted infections in train services**, e.g.:

- **Meta study** from 2016 identifies only few literature on concrete infection events [1]
- In [2] a **positive correlation** between the **duration** of London Underground train rides and the **occurrence of coughs and sneezes** is described, whereas **no increased infection risk** could be identified for **frequent users (commuter)**
- The authors of [3] describe the **transmission** of Influenza during a **train ride in China** to which 22 infections could be associated. However, 13 occurred not until **travel durations of 10-30 hours.**

In relation to **SARS-CoV-2** only **few evidence** was found

- See [4] (“Preliminary Implications of COVID-19 on Long-Distance Traffic of Deutsche Bahn”)

Infections in other means of transportation

- Infections with SARS-CoV-2 on **cruise ships** were observed at the beginning of the pandemic [5]
- SARS-CoV-2 infections in a general **transport context** (in China) are described in [6], the **infection rate** compared to the contact frequency is **very small**

First profound results of scientific studies on the occurrence of infections with SARS-CoV-2 show only minor infection risks in transportation

Studies on SARS-CoV-2

- Concrete infection events with SARS-CoV-2 from the **analysis of infection clusters** and/or transmission routes
  - **public transportation plays only a minor role** (but: difficult traceability)
  - **Germany** ([7], status 11 Aug 2020): 19/7864 clusters (90 cases) transport related, none in trains
  - Austria ([8], status 26 Mar 2021): about 65% of all cluster cases (except Vienna) could be identified in calendar weeks 06/2021 to 11/2021 with 0.1-0.2% transport relatedness
  - France ([9], status 12 Nov 2020): 48/9055 clusters (357 cases) transport related (plane, boat, train)
  - Japan ([10], status April 2020): 1/61 clusters transport related (infection in a plane)
- [11] describes a correlation concerning SARS-CoV-2 in **high speed trains in China** with questionable causality deduction
  - **Infections cannot be clearly associated with the train ride**, a familiar context is highly probable (travelling during Chinese New Year; highest infection rates depend on the travel relation and not on the duration)
  - methodological deficiencies (dropping of data points in the regression analysis; only very few data points/overfitting issues)
- SARS-CoV-2 infections that possibly occurred on a **flight** from Israel to Frankfurt [12]
  - Flight at an early point in time **without obligation to wear masks**
- Other literature in [13] (Publication of DB Long Distance regarding the first test round)

Literature

(1) A. Browne, S. St-Onge Ahmad, C. R. Beck, and J. S. Nguyen-Van-Tam, “The roles of transportation and transportation hubs in the propagation of influenza and coronaviruses: a systematic review,” *J Travel Med*, vol. 23, no. 1, Jan. 2016, doi: 10.1093/jtm/tav002.

(2) L. Goscé and A. Johansson, “Analysing the link between public transport use and airborne transmission: mobility and contagion in the London underground,” *Environmental Health*, vol. 17, no. 1, p. 84, Dec. 2018, doi: 10.1186/s12940-018-0427-5.

(3) F. Cui *et al.*, “Transmission of Pandemic Influenza A (H1N1) Virus in a Train in China,” *Journal of Epidemiology*, vol. 21, no. 4, pp. 271–277, 2011, doi: 10.2188/jea.JE20100119.

(4) C. Gravert, P. Nagl, H.-P. Lang, F. Ball, A. Schöllmann, and S. Jeschke, “Preliminary Implications of COVID-19 on Long- Distance Traffic of Deutsche Bahn,” Deutsche Bahn AG, Jun. 2020. [Online]. Available: https://www.researchgate.net/publication/342353367_Preliminary_Implications_of_COVID-19_on_Long-_Distance_Traffic_of_Deutsche_Bahn.

(5) L. F. Moriarty, “Public Health Responses to COVID-19 Outbreaks on Cruise Ships — Worldwide, February–March 2020,” *MMWR Morb Mortal Wkly Rep*, vol. 69, 2020, doi: 10.15585/mmwr.mm6912e3.

(6) L. Luo *et al.*, “Modes of contact and risk of transmission in COVID-19 among close contacts,” *medRxiv*, p. 2020.03.24.20042606, Mar. 2020, doi: 10.1101/2020.03.24.20042606.

(7) S. Buda, M. an der Heiden, D. Altmann, M. Diercke, O. Hamouda, and U. Rexroth, “Infektionsumfeld von erfassten COVID-19-Ausbrüchen in Deutschland,” *Epidemiologisches Bulletin*, no. 38, pp. 3–12, Aug. 2020, doi: 10.25646/7093.

(8) Österreichische Agentur für Gesundheit und Ernährungssicherheit, “Epidemiologische Abklärung Covid 19,” *Epidemiologische Abklärung Covid 19*, Status Mar. 26, 2021. https://www.ages.at/themen/krankheitserreger/coronavirus/epidemiologische-abklaerung-covid-19/.

(9) Santé publique France, “Point épidémiologique hebdomadaire du 12 novembre 2020,” Santé publique France, Nov. 2020. [Online]. Available: https://www.santepubliquefrance.fr/content/download/295161/2790075.

(10) Y. Furuse *et al.*, “Clusters of Coronavirus Disease in Communities, Japan, January–April 2020 - Volume 26, Number 9—September 2020 - Emerging Infectious Diseases journal - CDC,” doi: 10.3201/eid2609.202272.

(11) M. Hu *et al.*, “The risk of COVID-19 transmission in train passengers: an epidemiological and modelling study,” *Clin Infect Dis*, Feb. 2021, doi: 10.1093/cid/ciaa1057.

(12) S. Hoehl *et al.*, “Assessment of SARS-CoV-2 Transmission on an International Flight and Among a Tourist Group,” *JAMA Netw Open*, vol. 3, no. 8, pp. e2018044–e2018044, Aug. 2020, doi: 10.1001/jamanetworkopen.2020.18044.

(13) C. Gravert, P. Nagl, F. Ball, and T. Körner, “Update on SARS-CoV-2 Infection Risks in Long- distance Trains,” Deutsche Bahn AG, Oct. 2020. doi: 10.13140/RG.2.2.14207.64165.

(14) “‘Studie der DB Fernverkehr AG zu Corona-Infektionen und Corona-Immunitäten ihrer Mitarbeiter (COVID-19)’ beim DRKS,” *Deutsches Register Klinischer Studien*. https://www.drks.de/drks_web/navigate.do?navigationId=trial.HTML&TRIAL_ID=DRKS00022359.

(15) Charité Research Organisation GmbH, “Longitudinal study of corona infections and corona immunity in different occupational groups at Deutsche Bahn Fernverkehr AG: Interim Epidemiological Report after second test series,” Jan. 2021. [Online]. Available: https://www.researchgate.net/publication/349116335_Longitudinal_study_of_corona_infections_and_corona_immunity_in_different_occupational_groups_at_Deutsche_Bahn_Fernverkehr_AG_Interim_Epidemiological_Report_after_second_test_series

(16) Charité Research Organisation GmbH, “Longitudinal study of corona infections and corona immunity in different occupational groups at Deutsche Bahn Fernverkehr AG: Final report after the 3rd test series,” May 2021. Accessed: Jun. 09, 2021. [Online]. Available: https://www.drks.de/drks_web/AttachmentDownstreamServlet?ID=f59ac2c4-22e7-409d-a810-3fcd24c2909c&LOCALE=de&FILENAME=English_Translation_210511_Coronastudie_DB_Abschlussbericht_final_V4.0.pdf

(17) www.besserweiter.de, “Pendler-Coronastudie der Charité,” May 10, 2021. https://www.besserweiter.de/pendler-coronastudie-der-charite.html (accessed May 17, 2021).

(18) M. Kriegel and A. Hartmann, “Covid-19 Ansteckung über Aerosolpartikel – vergleichende Bewertung von Innenräumen hinsichtlich des situationsbedingten R-Wertes,” Feb. 2021, doi: 10.14279/depositonce-11387.2.

(19) K. Radon *et al.*, “From first to second wave: follow-up of the prospective Covid-19 cohort (KoCo19) in Munich (Germany),” *medRxiv*, p. 2021.04.27.21256133, Apr. 2021, doi: 10.1101/2021.04.27.21256133.

LESSONS LEARNED BY SNCF

THROUGH COVID 19 PANDEMIC CRISIS

LESSONS LEARNED

1 REMOTE PILOTING OF A CRISIS

2 LOGISTICS

3 HUMILITY

4 COMMUNICATION

HUMILITY

1. **An issue with no known solution**

2. **All knowledge will evolve through time**

3. **Each decision made has to be reconsidered at each new discovery**

1. **Elaborate new guidelines in accordance with new finding**

1.REMOTE PILOTING

REMOTE PILOTING OF A CRISIS

1. **Building a multi functionnal team :**
1. Doctor, preventer, communicant, HR manager,

2. **Using teams as a tool to interact, tchat , discuss**

3. **Creating a sharepoint to share documents**

4. **Ensure a synthetic collective approach of the risk**

2.LOGISTICS

LOGISTICS

1. **Find provider :**

select avalaible provider to ensure supply of masks , hydroalcoolic gel

2. **Using a global plateform to collect goods**

3. **Create the network to deliver good where they are needed**

4. **Elaborate a financial rate to all companies**

3.HUMILITY

HUMILITY

1. **An issue with no known solution**

2. **All knowledge will evolve through time**

3. **Each decision made has to be reconsidered at each new discovery**

1. **Elaborate new guidelines in accordance with new finding**

3.COMMUNICATION

COMMUNICATION

1. **Ensure a fluid communication**

2. **Elaborate all needed support, text , and guidelines**

3. **Display a hotline to be able to answer any question**

THANKS FOR YOUR ATTENTION

Our countermeasures during and post pandemic

EAST JAPAN RAILWAY COMPANY
Paris Office

Masayoshi TOYOHARA

ver. September 30, 2021

JR EAST AT A GLANCE

Metropolitan

High Speed

Regional

Network: **7.401 km**

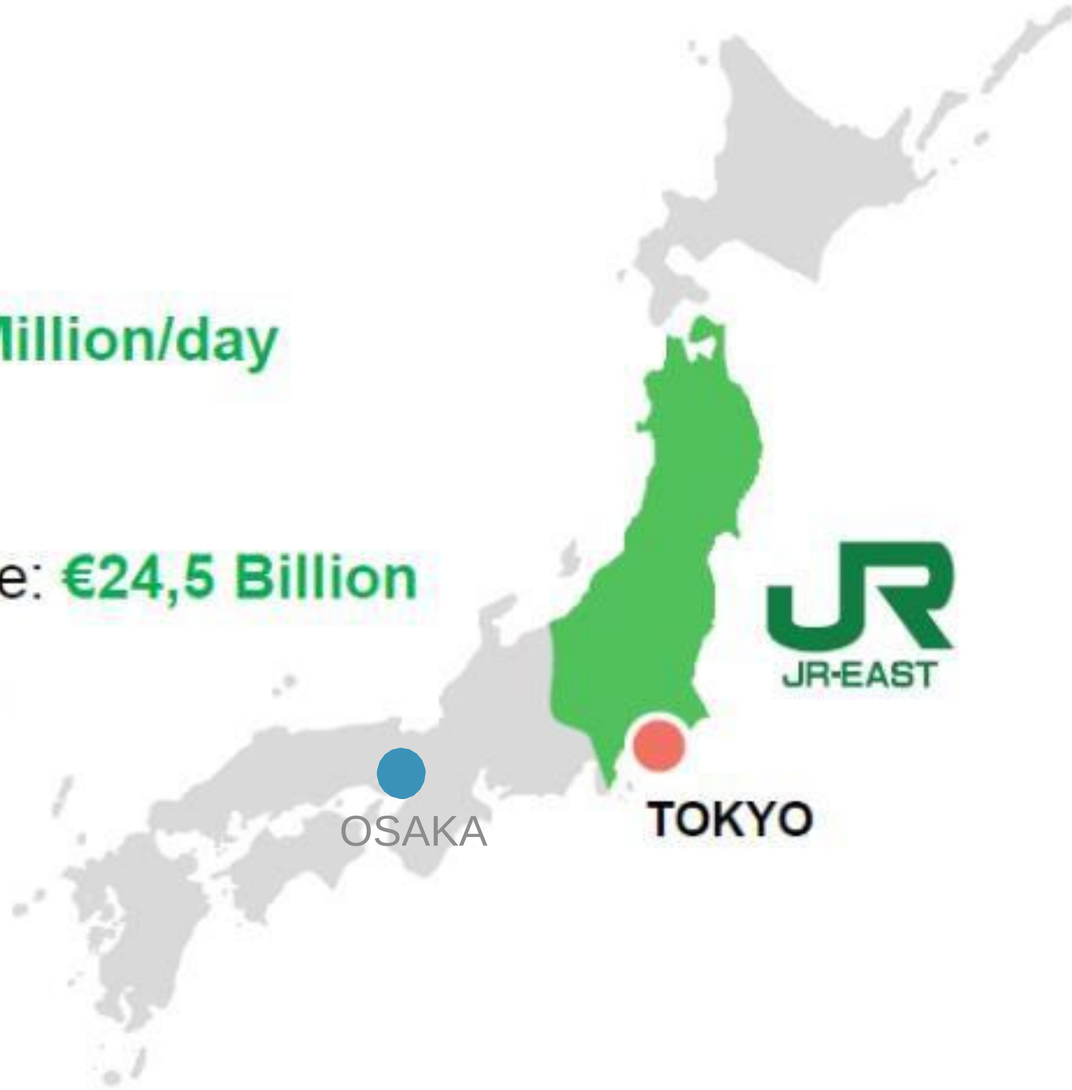
No. of Passengers: **17,8 Million/day**

No. of Trains: **12.296/day**

Annual Operating Revenue: **€24,5 Billion**

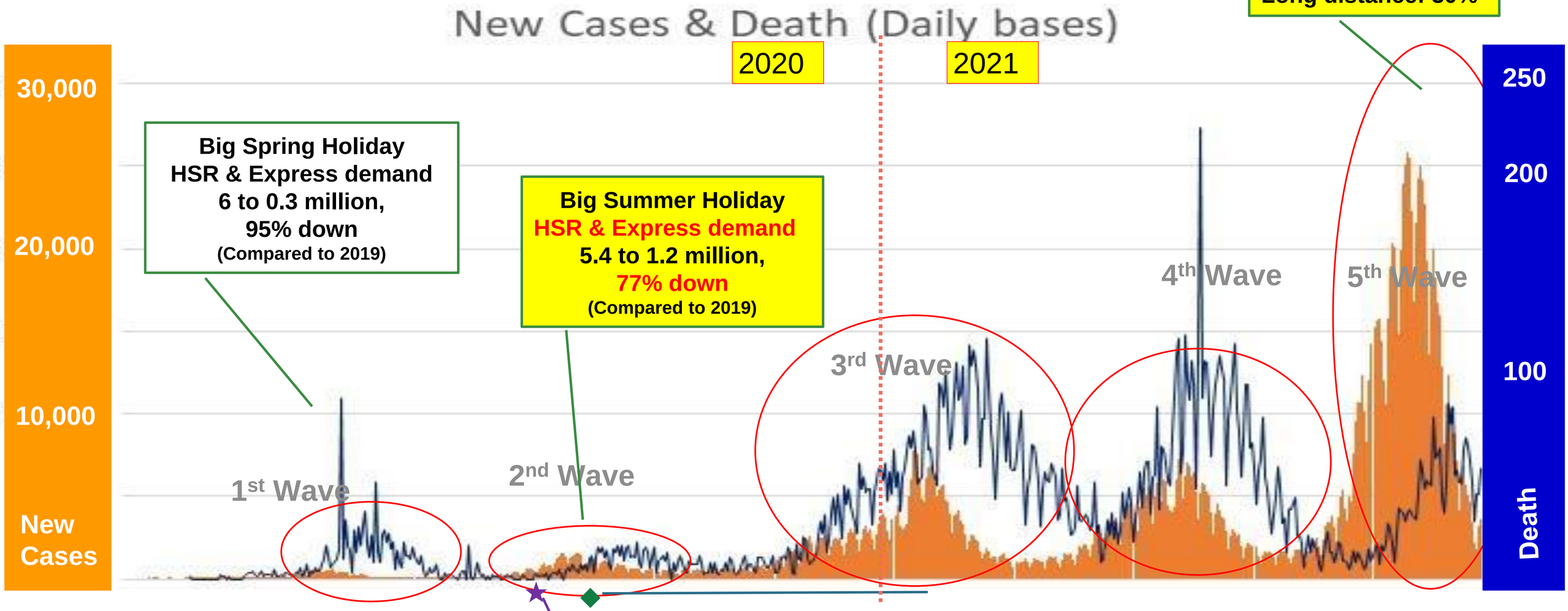
No. of Employees: **56.100**

*Data as of March 2020
**Calculated by 1 € = 120 JPY



Situation in Japan & JR East

Ridership
Commuter : 70-80%
Long distance: 30%

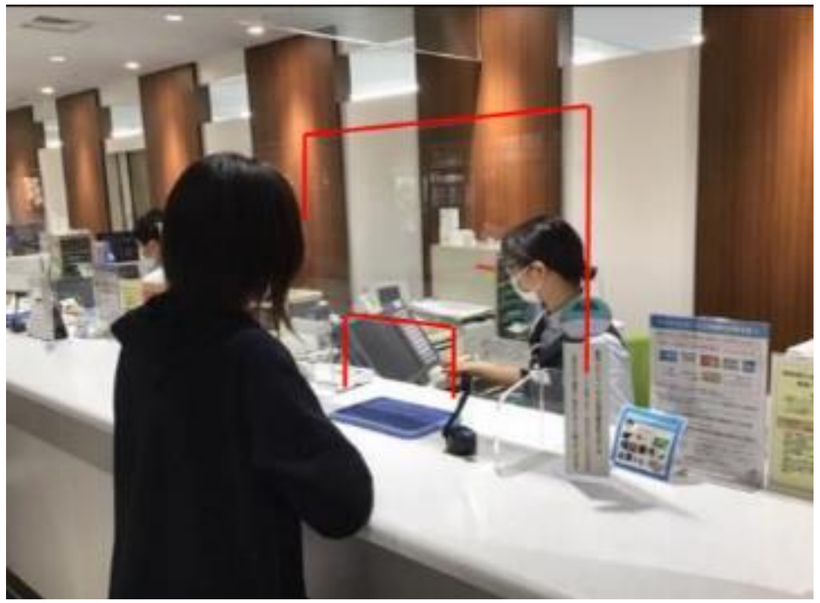


★July 22, Travel discount campaign started by Government

◆JR East started SHINKANSEN 50% discount ticket campaign (Aug 20 – Marc 31)

Our countermeasures during pandemic

Measures for close contact



Station staff

- Mandatory to wear masks and frequently washing hands
- Installed Plastic barrier at ticket counter

Keep Social Distancing

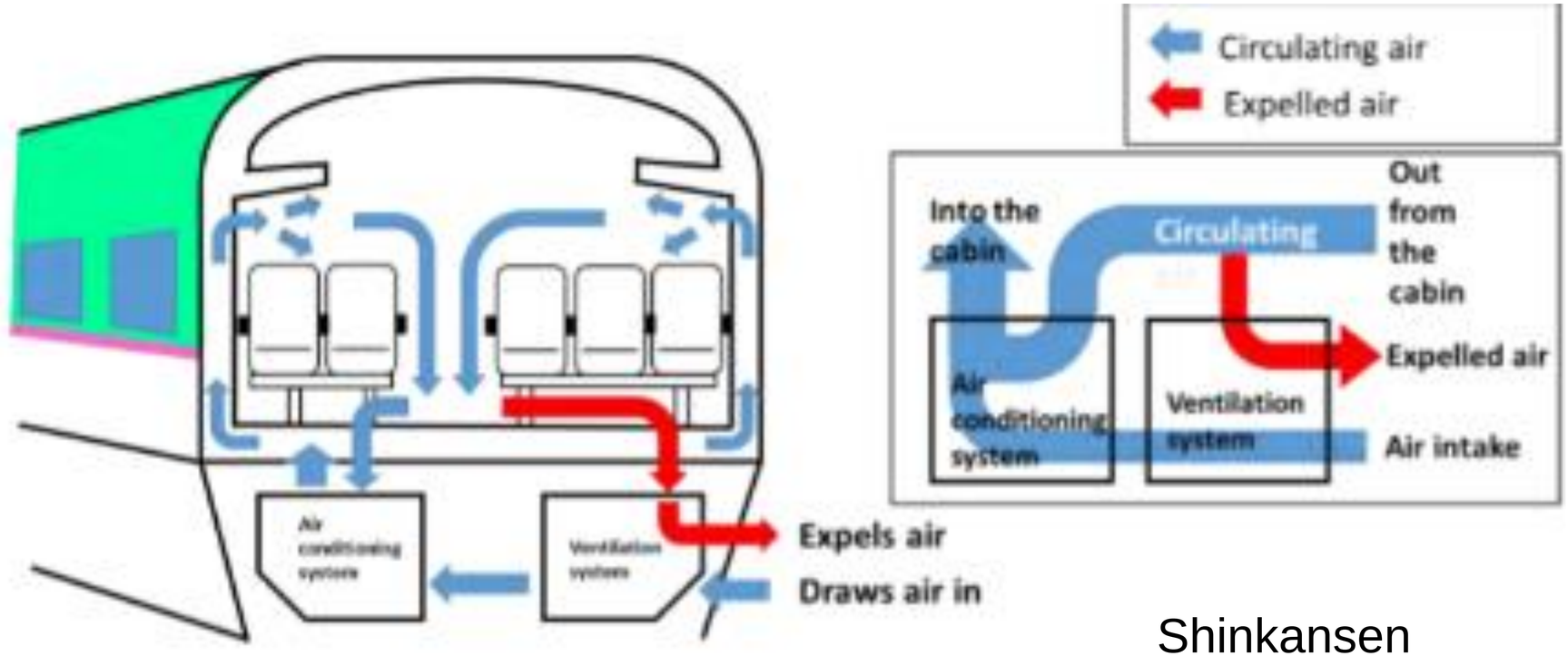
- Marking sticker for queue on the floor every 1.5 m

E-ticket (Contact less ticket)

- JR East launched “Suica*” service as advanced **non-contact** intelligent card in 2001.

* Suica: **S**uper **U**rban **I**ntelligent **CA**rd

Measures for Closed Space



Shinkansen

Ventilation system of train

- It takes about 6 to 8 minutes to replace fresh air

- We inform about ventilation by using Brochure, Website, SNS
  https://youtu.be/WKjubjILZjs （JR East Official You Tube　English ver.）

Measures for Crowded Place

Serving congestion level information

- Customer can take real-time information of congested car and station by JR EAST smartphone application
- It has already provided as customer service since 2014 before Corona crisis

UIC COVID-19 Task force Guideline

https://uic.org/covid-19/

Our challenges post-pandemic

Big damage to JR East

- JRE FY 2020 income lost about **€ 4.8 billion deficit**.

Note: FY2018 was **€ 3.8 billion** profit, FY2019 was **€ 2.7 billion Euro** profit

Note: JR East has never received any financial support from government

- Passenger kilometers in FY 2020 is forecasted:

SHINKANSEN	**: −64%**	**(** 33.5 bn to **8.2 bn)**
TOKYO Area	**: −27%**	**(**107.2 bn to **77.8 bn)**
Others	**: −32%**	**(** 5.5 bn to **3.8 bn)**
Total	**: −34%**	**(**135.4 bn to **89.7 bn)**

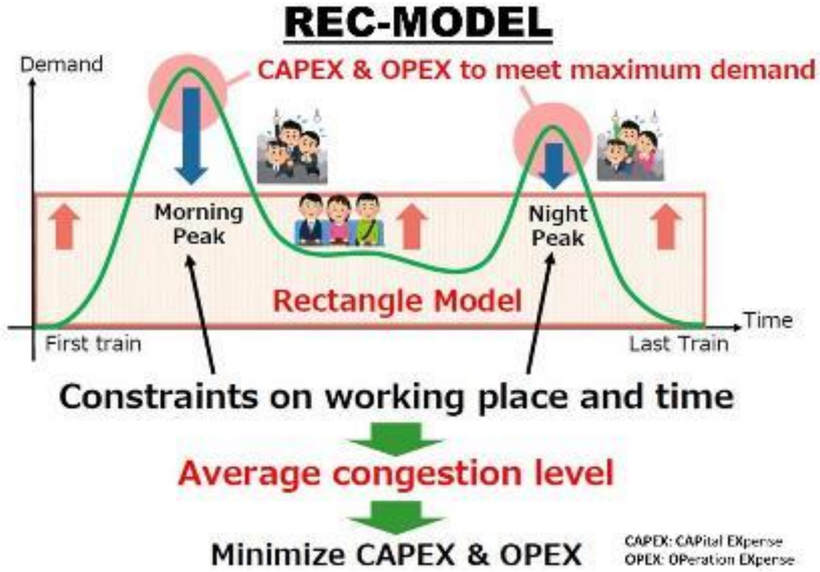
*As the effect of the COVID-19 pandemic on basic revenues cannot be accurately estimated at the present juncture, it has been treated as special factor.

Creating New business model

Station work

WORK × VACATION

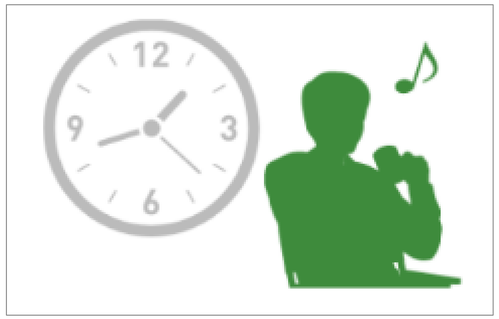
WORCATION



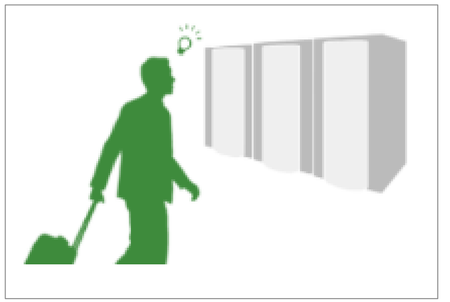
RECtangle Model

“STATION WORK“

Call quiet space



Take a rest



Wait for train

In 2021 September, **257** locations.
In 2023, we aim for **1000** locations

“WORCATION”

WORK × VACATION

Railway

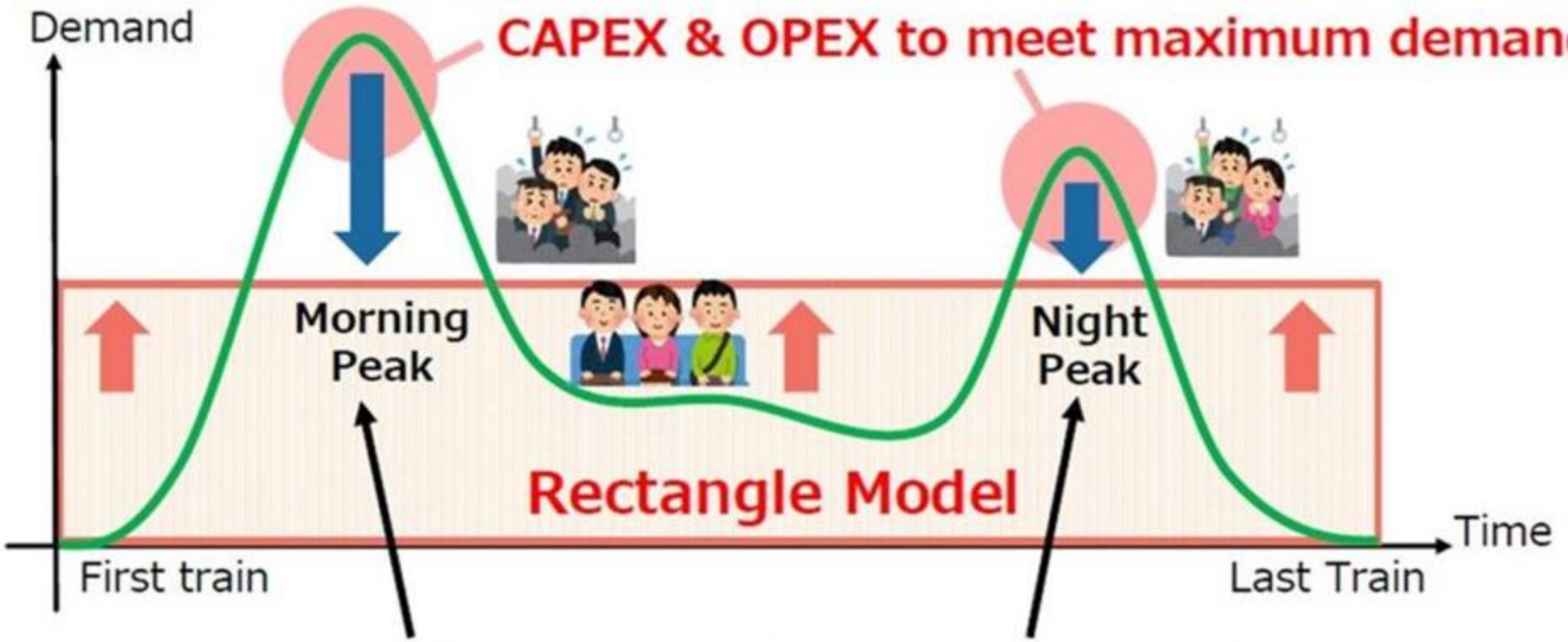
Our subsidiary HOTEL

Car rental

Trip

Remote work

RecTangle Model



Constraints on working place and time

Average congestion level

Minimize CAPEX & OPEX

CAPEX: **CAP**ital **EX**pense
OPEX: **OP**eration **EX**pense

One example of RECtangle Model

☞Reducing Passenger flow during peak time by “Suica”

No-contact IC ticket “Suica” from 2004

モバイル Suica

86 million active user
Mobile Service available from 2006

"Suica" can be used for various purposes

Early time
(1 hour)

Peak time
(1.5 hour)

Late time
(1 hour)

※Depends on stations

15 points

※15 yen≒0.12€

20 points

※20 yen≒0.16€

Available charge point as money

Available use point in online shopping mall

Available use point in MaaS App

The clocks have gone forward ten years.

We will take it as a challenge for sustainable growth and

passengers will be back on the track

Merci de votre attention!

Thanks for your kind attention!

Specificities of African countries, examples of Morocco, Cameroon and Côte d’Ivoire

Achibane Lahcen
ONCF

Pascal Miny
CAMRAIL

SITARAIL

LES JEUDIS DU RAIL AFRICAIN

Enjeux du système SST : Cas de l'ONCF

Jeudi 30/09/2021

PLAN

01 La SST à l’ONCF avant la pandémie

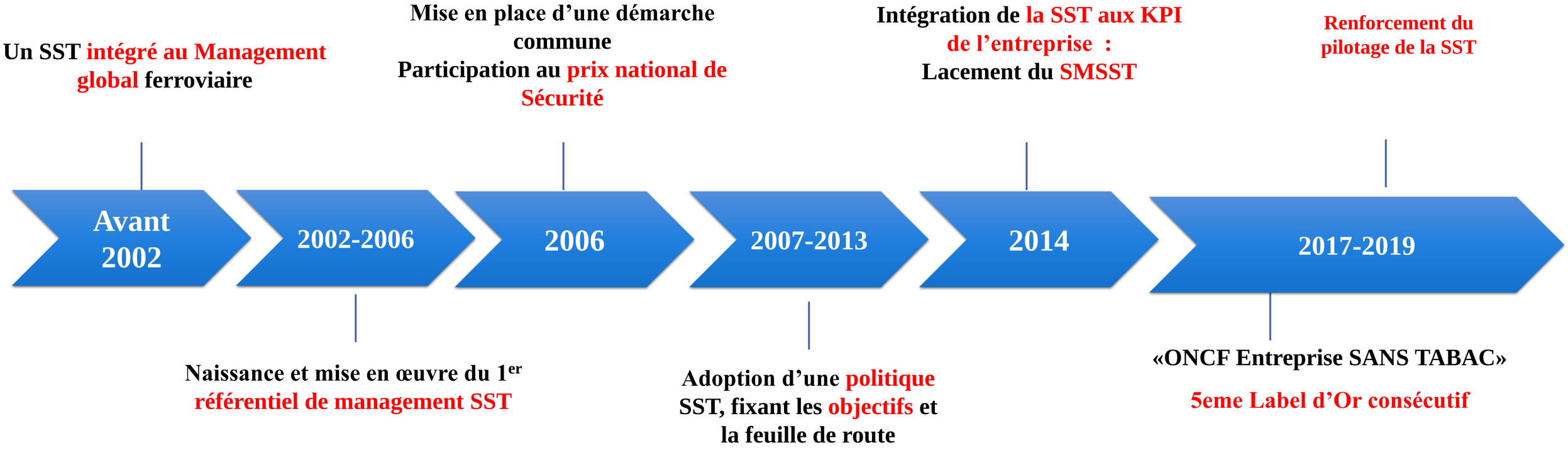
02 La gestion de la pandémie et de la reprise

03 La SST après Covid-19 et enseignements tirés

04 Les perspectives d’avenir

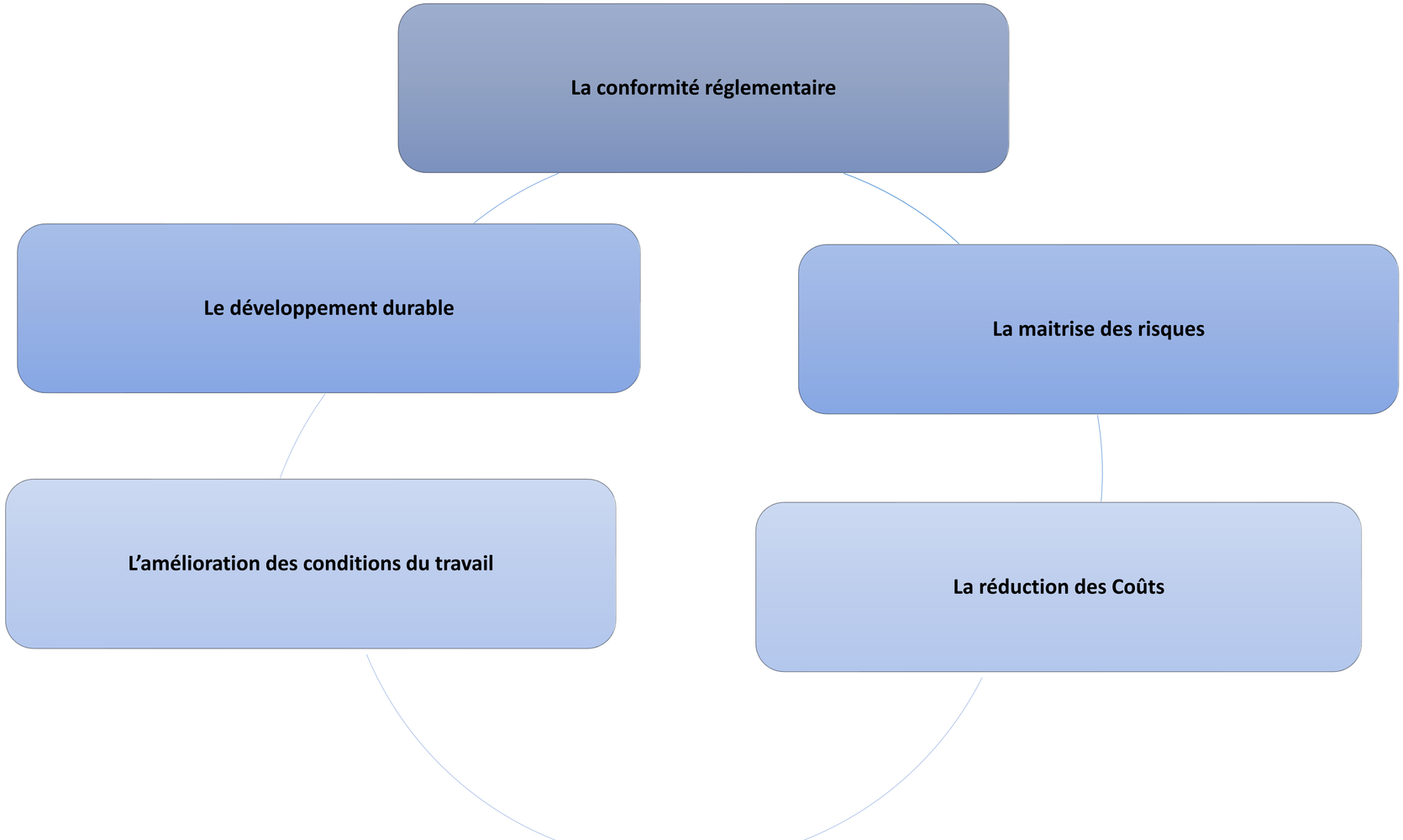
1- La SST à l'ONCF avant la pandémie

Quelques repères historiques



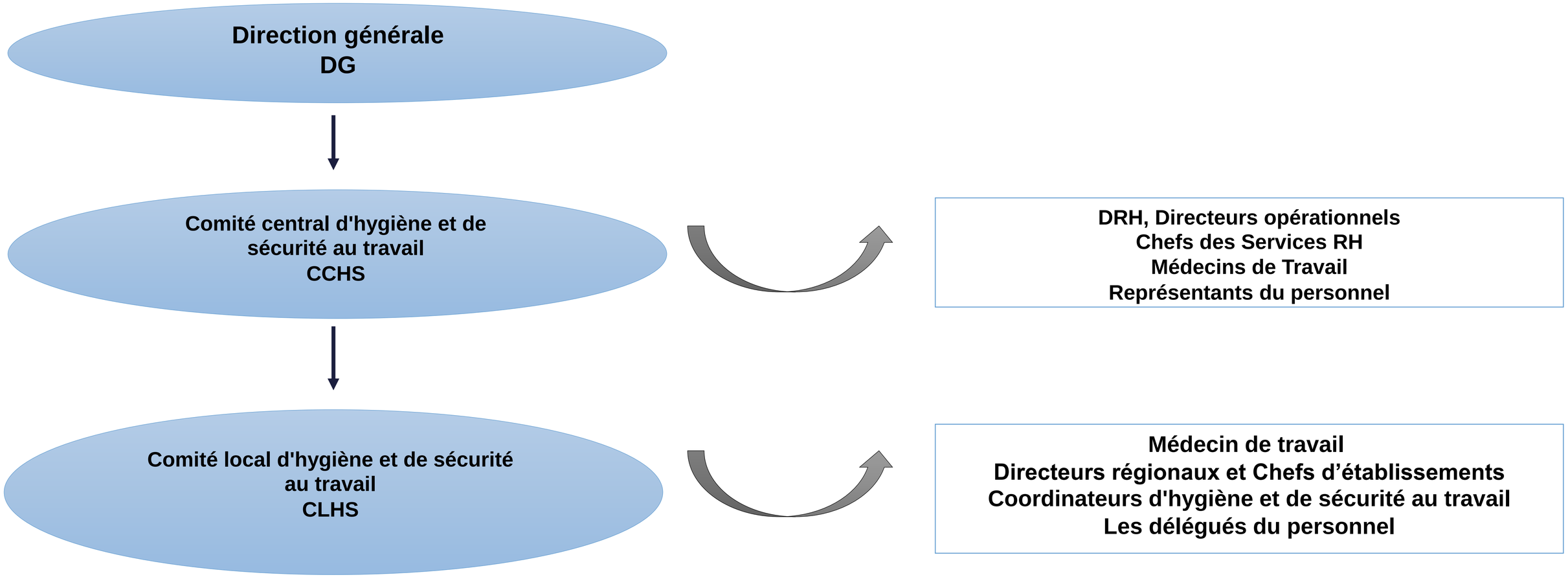
1- La SST à l’ONCF avant la pandémie

Objectifs stratégiques visés



1- La SST à l’ONCF avant la pandémie

Des structures de pilotage appropriées



1- La SST à l’ONCF avant la pandémie

Réalisations phares

Un référentiel règlementaire qui gère la SST à l’ONCF.

L’identification des dangers et évaluation des risques (cartographies des risques)

La formation continue en santé et sécurité au travail

Campagnes régulières de la santé et la sécurité au travail

Portage stratégique et opérationnel par toutes les structures de l’organisation

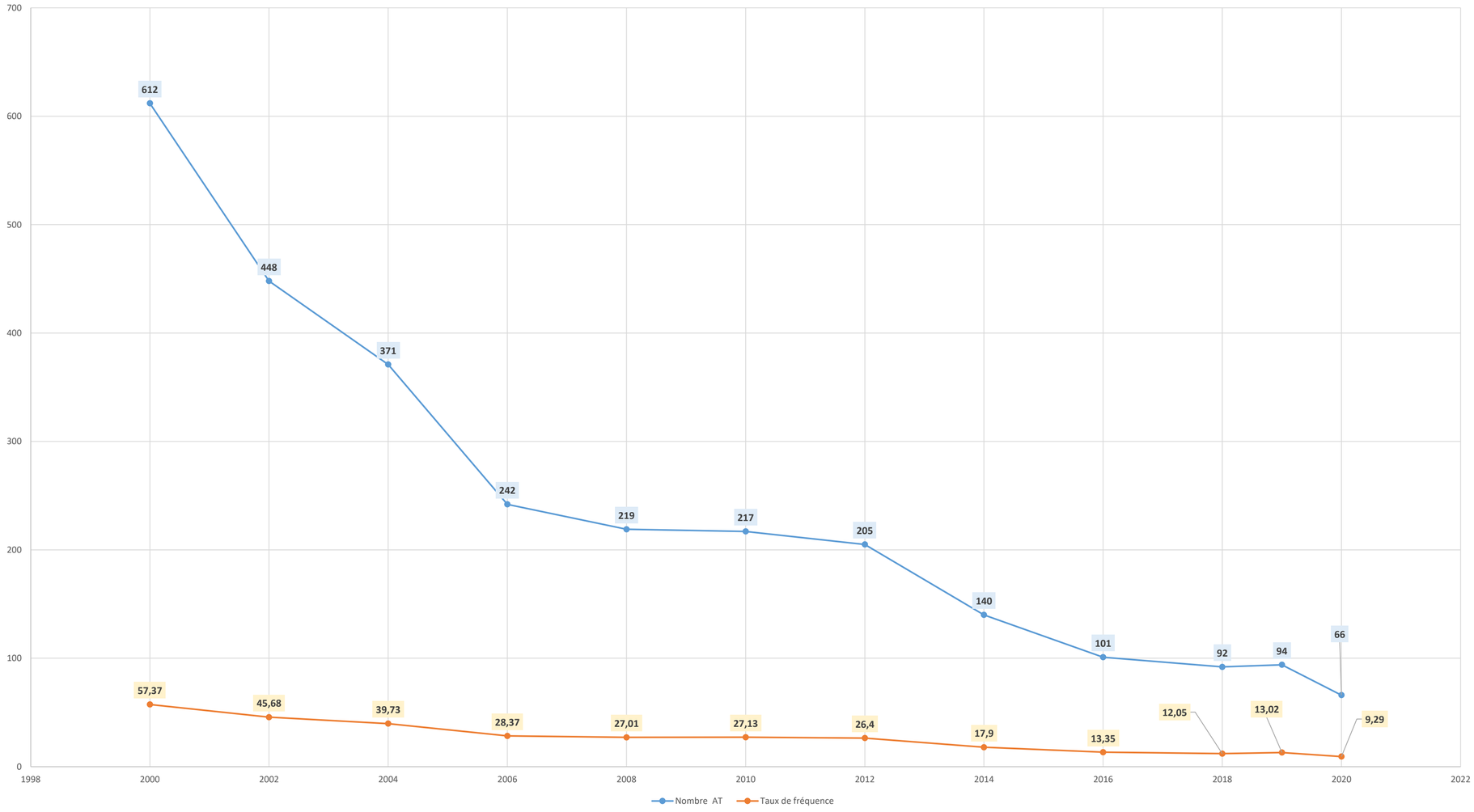
Amélioration continue des conditions de travail et réduction des accidents de travail.

35 trophées au prix national sécurité

Le label définitif ’’Entreprise sans tabac ’’

1- La SST à l'ONCF avant la pandémie

Evolution des accidents de travail



1- La SST à l'ONCF avant la pandémie

Analyse stratégique

Forces

- ✓Culture de la sécurité (première valeur de l'office)
- ✓Culture des systèmes de management
- ✓SST au cœur des protocoles d'accord avec les PS
- ✓Plusieurs trophées de la sécurité
- ✓Existence d'instances opérationnelle CHS, CCHS, chargés d'hygiène, médecins du travail
- ✓Labellisation de l'ONCF ' Entreprise sans tabac'

Opportunités

- ✓Engagement du top management
- ✓Adhésion au projet d'entreprise (2025)
- ✓Disponibilité des compétences
- ✓Consolidation du climat social
- ✓Amélioration de l'image de marque
- ✓Valorisation du budget alloué à l'hygiène et SST
- ✓Accroissement de la performance de l'office

Points à améliorer

- ✓Renforcement de la décentralisation
- ✓Renforcement de la coordination
- ✓Culture SST
- ✓Intégration du système de management

Menaces

- ✓Exigences clients et bailleurs de fonds
- ✓Impact sur l'activité Voyageurs et Fret
- ✓Impact sur l'image de nouveaux produits

PLAN

01

02 La gestion de la pandémie et de la reprise

03

04

RAPPEL DU CONTEXTE

Sur Hautes Instructions de Sa Majesté Le Roi, Que Dieu L'Assiste, notre pays a mis en place une série de mesures efficientes et rigoureuses pour contenir la pandémie du coronavirus 'Covid-19', endiguer sa propagation et limiter ses différents impacts. Elles sont d'ordre :

- **SANITAIRE**
- **ORGANISATIONNEL**
- **SOCIAL**
- **ECONOMIQUE**
- **FINANCIER**

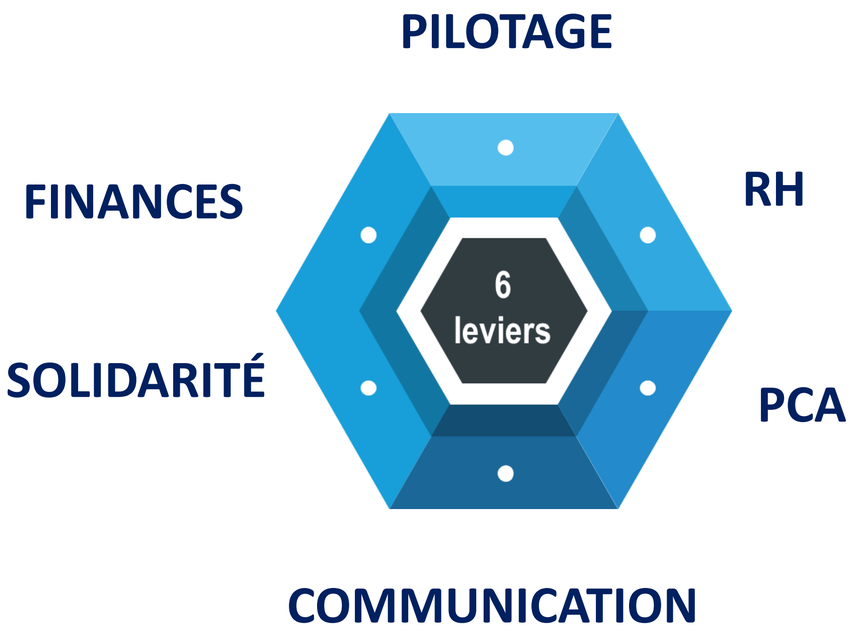
Anticipation | **Résilience** | **Mobilisation** | **Solidarité** | **Réactivité**

2- La gestion de la pandémie et de la reprise

2.1- Plan d’urgence

Il a comporté de multiples mesures structurées en

6 leviers d’intervention:



2- La gestion de la pandémie et de la reprise

2.1- Plan d’urgence

PILOTAGE

- La mise en place de la **Cellule de Veille** pour le suivi de la situation, la définition des actions à mener et leur priorisation
- L’accélération de **la digitalisation** ouvrant de nouvelles perspectives d’organisation du travail à distance pour l’avenir
- La fermeture des **centres de formation**

- La réduction des présences en privilégiant **le télétravail** pour les métiers qui s’y prêtent
- L’adoption d’un **plan d’optimisation** du train de vie (suite baisse significative du trafic)
- Le déploiement d’un **plan de travail** adapté à la période de confinement

2- La gestion de la pandémie et de la reprise

2.1- Plan d'urgence

RESSOURCES HUMAINES

- Mise en place d'une **consigne sur les règles d'hygiènes** adaptées aux spécificités des sites et à la circulation des trains
- Dotation des entités en **produits désinfectants, de nettoyage et en masques** avec édition consigne d'usage et de gestion
- **Formation & sensibilisation** des **coordinateurs** et **chargés d'hygiène** des établissements ONCF à l'échelle central et régional

- Mise à la disposition des collaborateurs des moyens nécessaires au **télétravail** : continuité de l'activité dans les meilleures conditions
- **Dématérialisation** du traitement des dossiers et adaptation des procédures

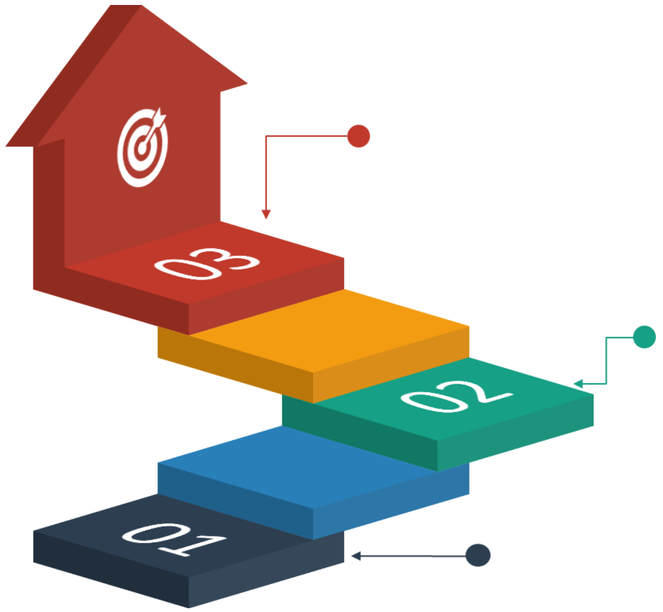
2- La gestion de la pandémie et de la reprise

2.1- Plan d’urgence

2- La gestion de la pandémie et de la reprise

2.1- Plan d’urgence

COMMUNICATION

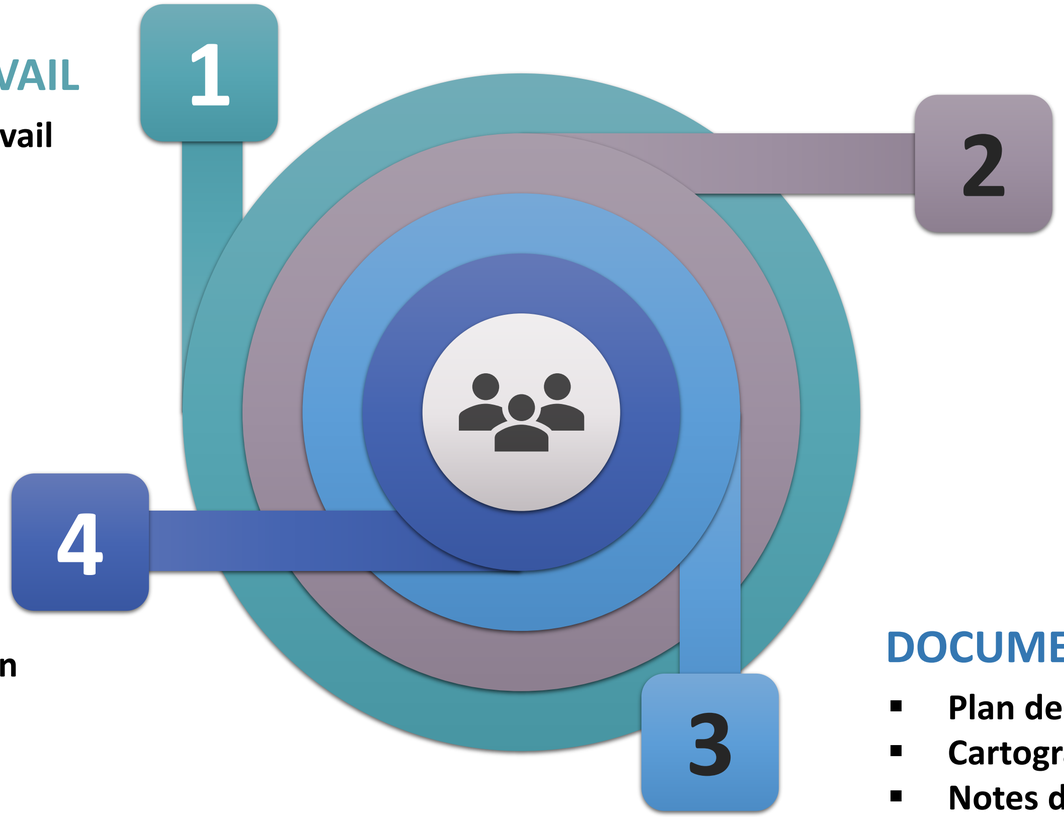


- La mise en place d’un **plan de communication urgent et spécial** adapté au contexte ayant comme cible les collaborateurs ainsi que les parties prenantes de l’Office
- Ce plan avait pour objectif **d’informer, sensibiliser, communiquer** sur les mesures à prendre, tout en s’inscrivant dans les efforts déployés par notre pays
- Son déploiement s’est effectué en ayant **recours aux différents canaux possibles**: communiqués, capsules, affiches, notes d’information…

2.2- Déconfinement

ORGANISATION DU TRAVAIL

- Organisation des espaces de travail
- Télétravail /meeting à distance
- Désinfection des locaux et du matériel roulant



COMMUNICATION

- Communiquer au niveau de plusieurs canaux pour rappeler la vigilance
- Réalisation et diffusion de flyer
- Diffusion d'un Guide de déconfinement

FORMATION ET SENSIBILISATION

- Formation à distance du personnel paramédical et des référent SST pour déployer le plan de prévention ONCF
- Renforcement de la sensibilisation des collaborateurs : webinaires…

DOCUMENTATION

- Plan de prévention Covid-19 ONCF
- Cartographie des risques Covid-19 ONCF
- Notes de sensibilisations et de prévention

2- La gestion de la pandémie et de la reprise

2.2- Déconfinement

Trois cellules de pilotage

01

Cellule Centrale de veille (CCV)

Elle pilote les opérations de reprise des activités et assure la coordination au niveau national des actions sur le terrain. S'assure que toutes les mesures nécessaires à une reprise des activités, en matière de santé et de sécurité au travail, ont été réalisées.

02

Cellules locales de veille (PCR)

coordonnent toutes les actions au niveau régional et mettent en œuvre les décisions de la (CCV) en matière de santé et de sécurité au travail et de gestion de la circulation des trains.

03

Cellules de veille (établissements)

Veillent sur l'application rigoureuse et respect des mesures de prévention et de protection prises.

2- La gestion de la pandémie et de la reprise

2.2- Déconfinement

Actions de prévention

Réduire au maximum la mobilité et les déplacements des collaborateurs

Suspendre les formations et leur remplacement par des formations à distance

Suspendre tous types d’évènements divers engendrant des rassemblements dans les locaux de l’Office

2- La gestion de la pandémie et de la reprise

2.3 Actions de protection

COVID-19

- **Limiter la propagation du virus**
  - ❖Suivi rigoureux de la situation pandémique à l'ONCF : Indicateurs journaliers des contaminations (Collaborateurs/ Sous-traitant)
  - ❖Prise en charge et suivi des collaborateurs détectés positifs ainsi que des collaborateurs en contact par le service médical de l'entreprise.

- **Réussir l'immunité collective**
  - ❖ Réalisation des compagnes de sensibilisation et de vaccination
  - ❖Suivi journalier de la situation de vaccinations des collaborateurs.

94%

PLAN

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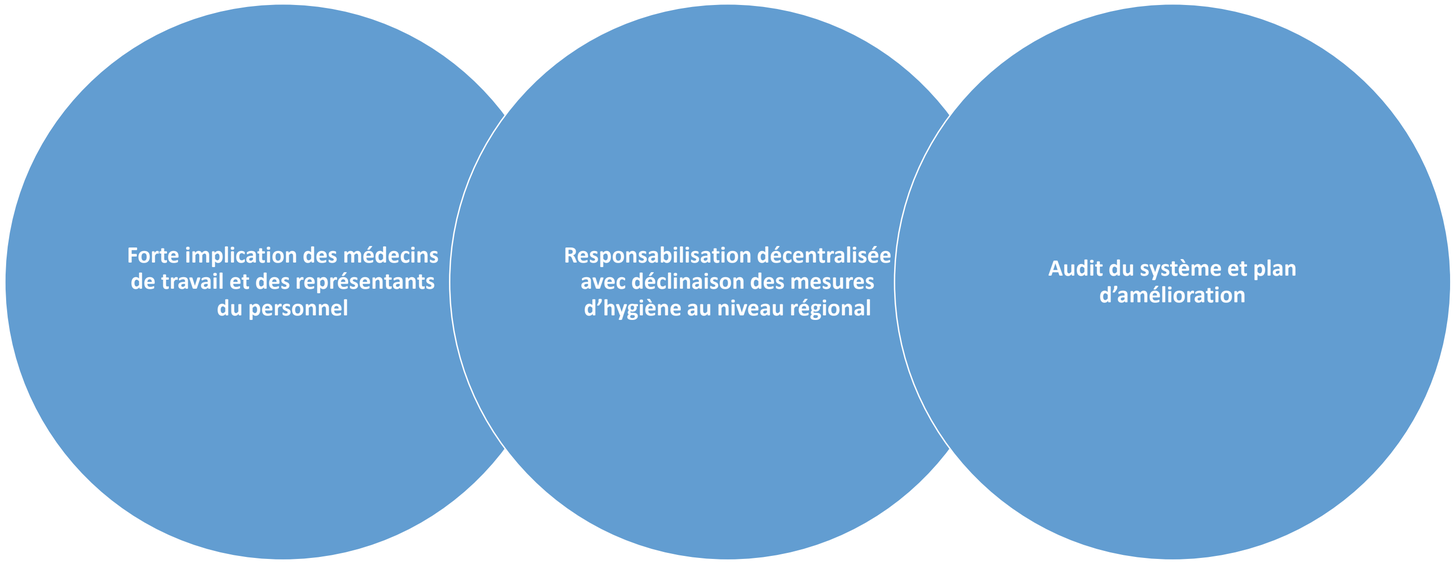
03 **La SST après Covid-19 et enseignements tirés**

04

3- La SST après Covid-19 et enseignements tirés

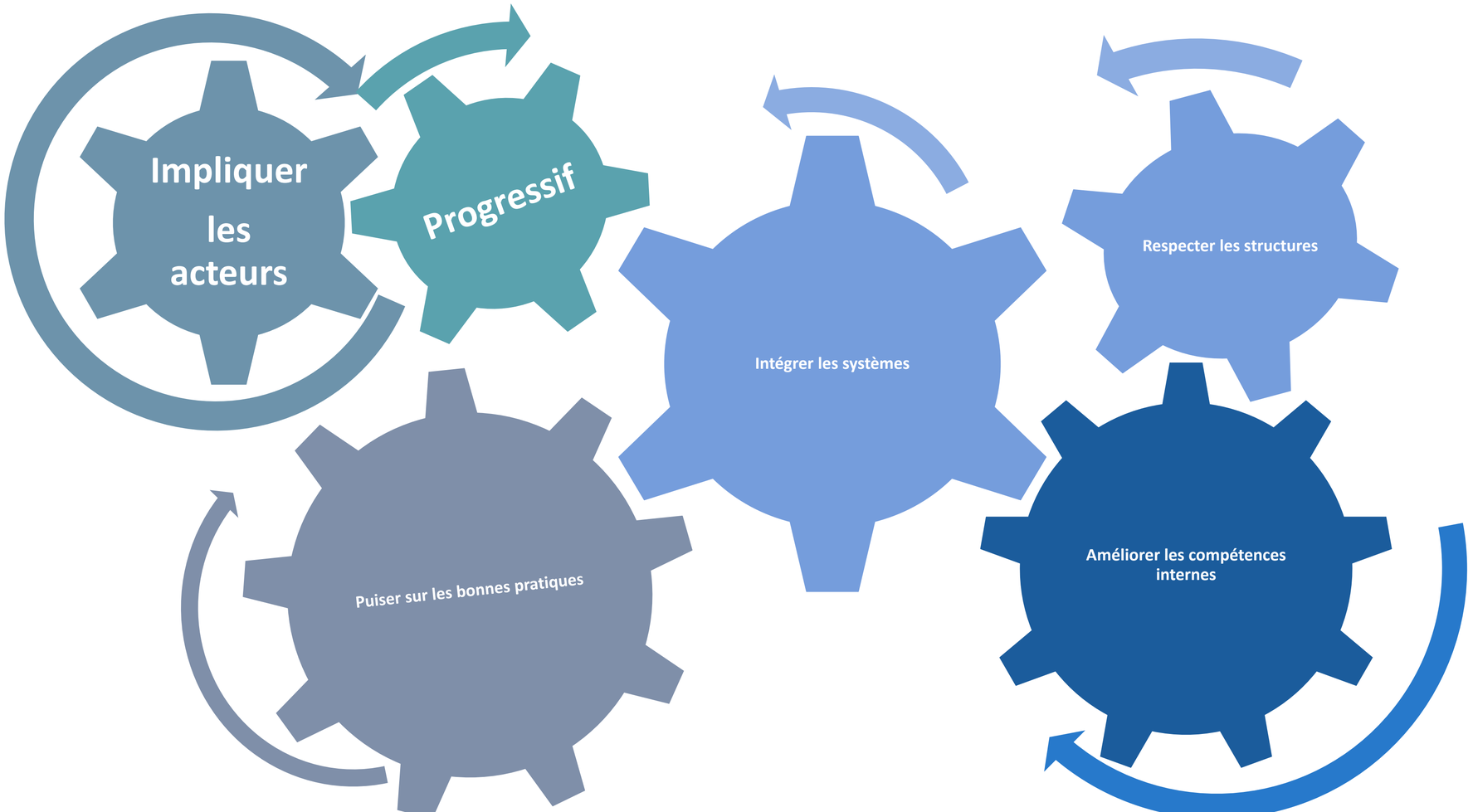
Retombées sur le système de SST



La mise en place des mesures spécifiques liées à la COVID-19 a permis d'améliorer le système de santé et de sécurité globalement et instaurer de nouveaux dispositifs maintenus après le retour

3- La SST après Covid-19 et enseignements tirés

Une nouvelle stratégie SST



Système de management SST selon le Plan de prévention ONCF

➢ **Leadership et engagement**

Politique | Rôles, responsabilités et autorités au sein de l'organisme | consultation et participation

➢ **Elimination des dangers et réduction des risques**

Détermination des exigences légales et autres exigences | Identification des dangers et évaluation des risques et opportunités | Actions à mettre en œuvre face aux risques et opportunités | Objectifs et planification des actions pour les atteindre

➢ **Préparation et réponse aux situations d'urgence**

➢ Maitrise des risques sanitaires

Besoins clients Voyageurs

- Transport du personnel
- Nettoyage - Désinfection
- Accès au site
- Hygiène des salariés
- Organisation des horaires de travail
- Restauration
- Aménagement et organisation des espaces de travail

Parties intéressées exposées

Acquisition de biens et services | Pilotage du changement

Amélioration continue

Événement indésirable, non-conformité et actions correctives

Evaluation de la conformité

Surveillance, mesure, analyse et évaluation

Revue de direction

Compréhension de l'organisme et de son contexte

Besoins et attentes des parties intéressées

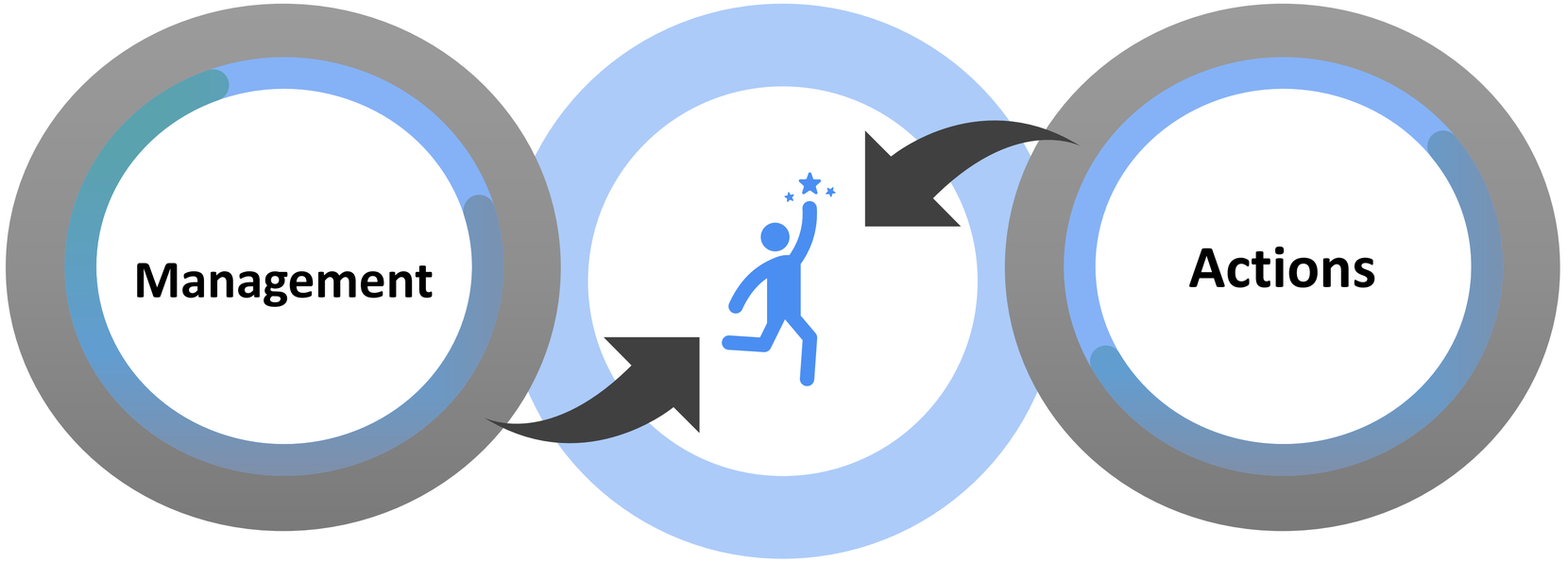
Périmètre d'application du système de management

système de management

Audit interne | Information documentées | Communication | Sensibilisation prise de conscience | Compétences | Ressources

3- La SST après Covid-19 et enseignements tirés

Enseignement tirés



Agilité
Réalisme
Pragmatisme

Digitalisation et dématérialisation
Développement interne des compétences
Travail à distance

3- La SST après Covid 19: Enseignement tirés

Enseignement tirés

COVID-19

Améliorer la gestion des crises

Assurer l'approvisionnement en moyens de protection

Améliorer l'accès à l’information et la digitalisation

Capitaliser sur les bonnes pratiques

Développer la souplesse et la flexibilité managériale et l’agilité organisationnelle

PLAN

01

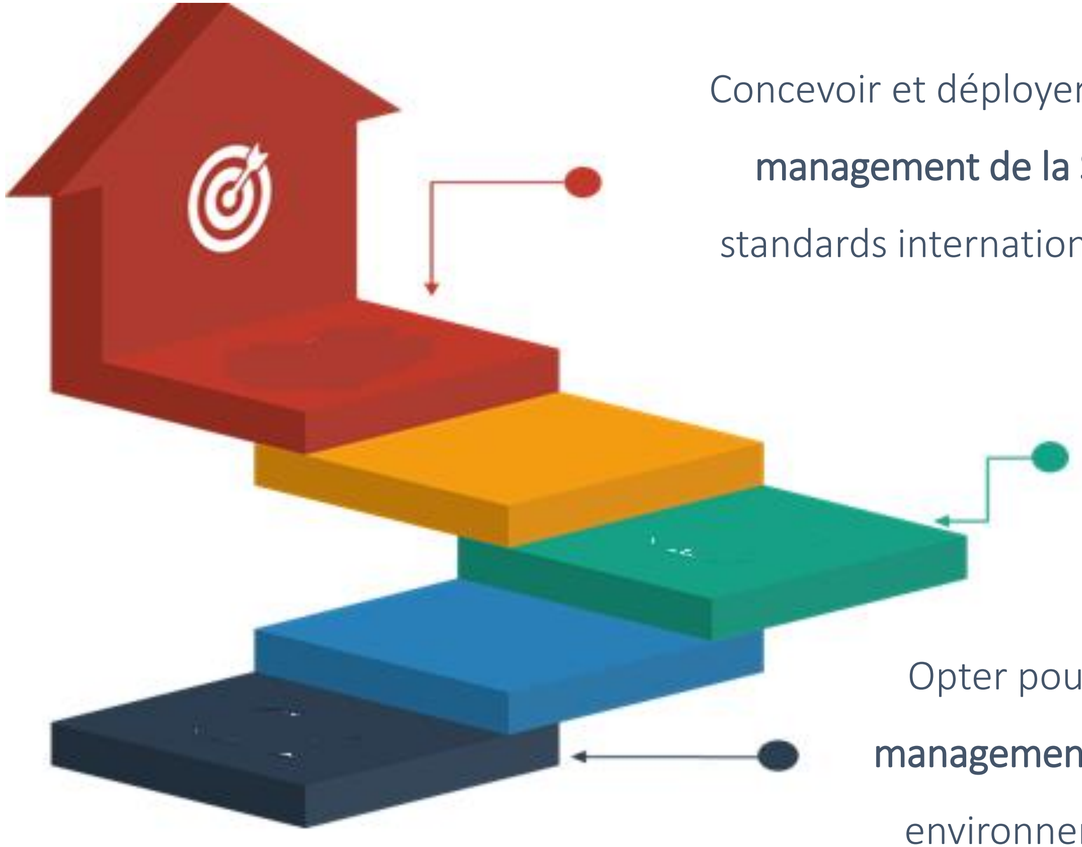
02

03

04 **Les perspectives d’avenir**

3- Démarches à venir

COVID-19



Concevoir et déployer un **système de management de la SST** selon les standards internationaux **ISO 45001**

Promouvoir la **culture de la santé et de la sécurité professionnelle,** prévenir et gérer les **enjeux liées à la santé mentale**

Opter pour un **système de management intégré** : qualité, environnement, SST, RSE…

COVID-19

Enjeux du système SST : Cas de l'ONCF

LES JEUDIS DU RAIL AFRICAIN

Merci pour votre attention

Jeudi 30/09/2021

« Les Jeudis du rail Africain »

CAMRAIL ET LES NOUVEAUX ENJEUX DE SANTE ET SECURITE DEPUIS LE COVID-19

Douala, le 30 septembre 2021

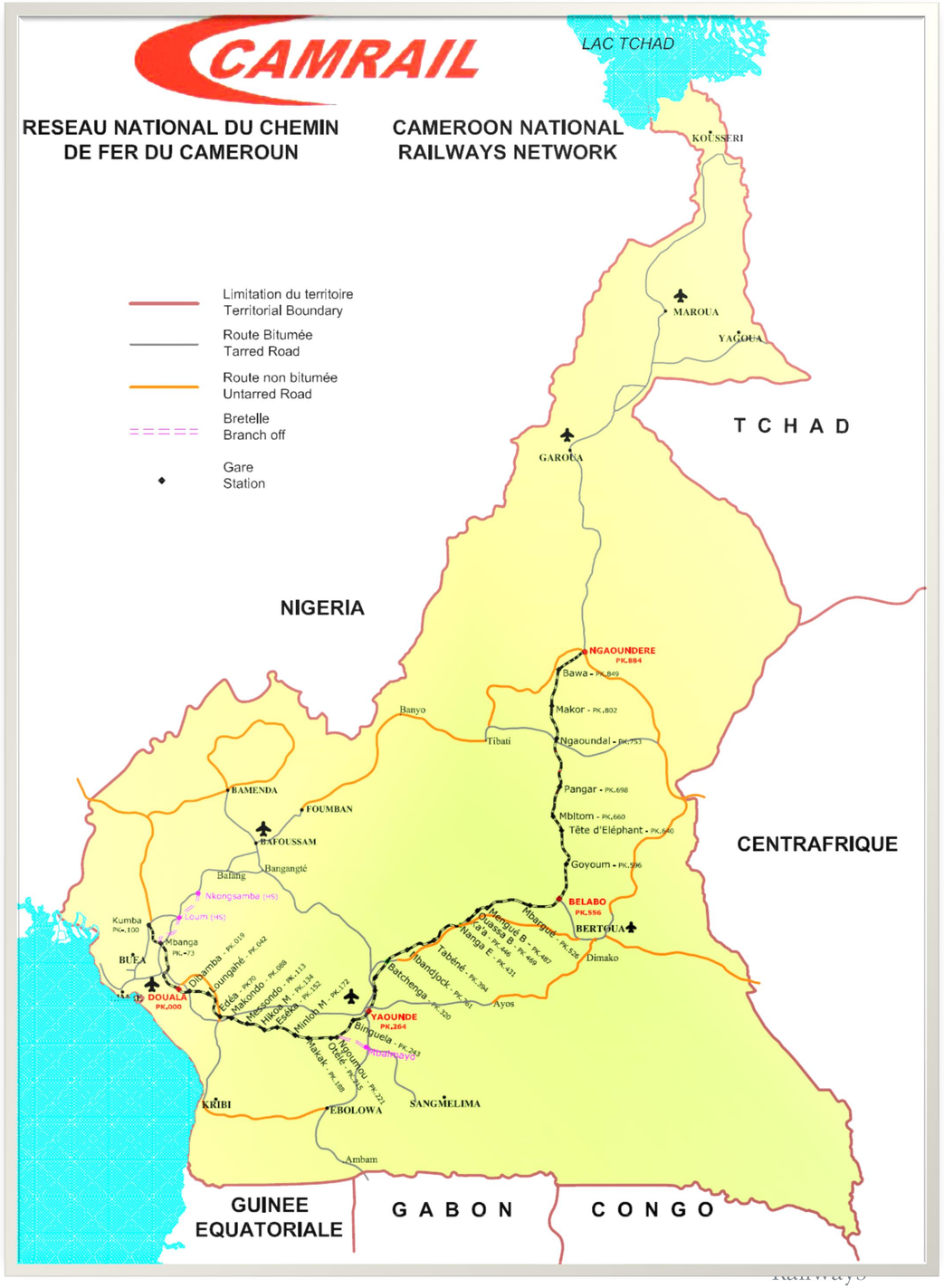
Pascal MINY, DG CAMRAIL

I- NOTRE RESEAU…

- **TRANSCAM 1: DOUALA – YAOUNDÉ : 263 KMS : 15 CANTONS**
- **TRANSCAM 2 : YAOUNDE – NGAOUNDERE : 622 KMS : 18 CANTONS**
- **LIGNE OUEST : DOUALA – MBANGA – KUMBA : 99 KMS : 3 CANTONS**

TOTAL DU RESEAU : 1. 000 KMS - 36 cantons

575 000 voyageurs / *An*
1 650 000 tonnes de fret /An



II- NOTRE DISPOSITIF DE PREVENTION
(Mesures de réduction des risques liés au Covid)

- II- 1 Mesures sanitaires
- II-2 Mesures organisationnelles
- II-3 Nettoyage des locaux
- II-4 Equipements de protection individuelle
- II-5 Formation et information

II. 1- MESURES SANITAIRES

- Mise en quarantaine des malades & suivi médical
- Testing des cas contacts & suspects
- Maintien en alerte de toutes les formations sanitaires, partenaires de CAMRAIL, le long du réseau pour l'évacuation et/ou la prise en charge des cas suspects ou avérés
- Alimentation permanente des distributeurs de solutions hydro alcooliques et prise de température avant tout accès aux postes de travail et maintien des points d'eau avec du savon et de l'eau de javel pour le lavage des mains
- Présence de 02 salles (04 lits) d'isolement des malades au Centre médical CAMRAIL de Douala

II.2- MESURES ORGANISATIONELLES

- Mise en place d’un référent Covid
- Evaluation des risques de contamination
- Restriction des déplacements professionnels
- Interdiction des réunions (pas plus de 05 personnes), et encouragement des réunions en ligne
- Mesures de distanciation au travail
- Visite médicale préalable pour toute reprise de travail après une maladie, congé…
- Maintien de l’organisation de la fluidité des opérations d’embarquement et de débarquement, afin d’éviter les regroupements de plus de 50 personnes dans les quais, les halls d’embarquement et les salles d’attente.
- Maintien de l'interdiction de la vente des places debout dans les trains voyageurs.

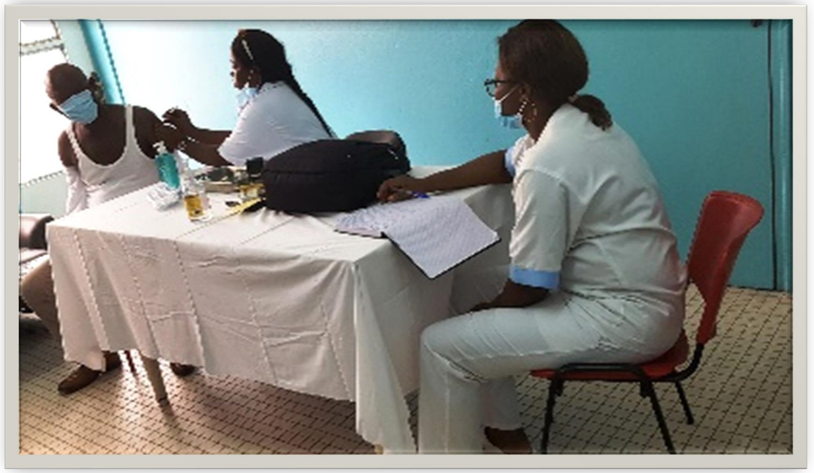
II. 3 – NETTOYAGE DES LOCAUX

- Désinfection permanente des surfaces à usage fréquent dans les différents bâtiments et mise à disposition régulière du savon dans les toilettes

- Désinfection des bureaux et postes de travail des salariés contaminés

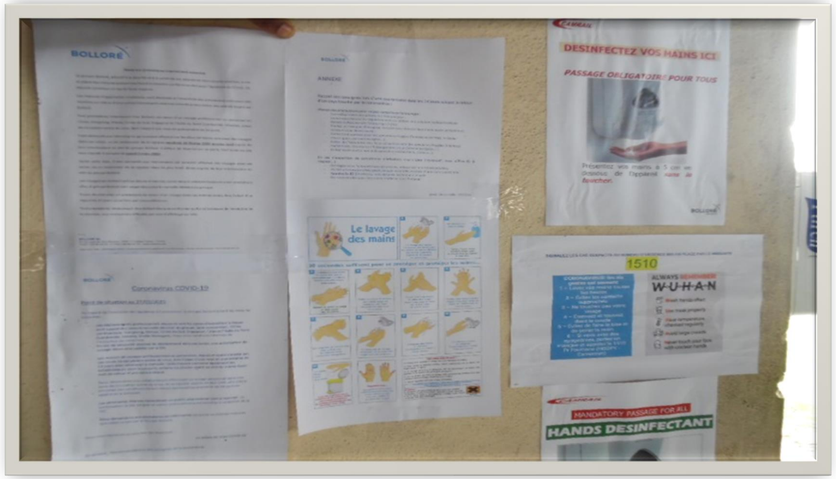
II. 4 – EQUIPEMENTS DE PROTECTION INDIVIDUELLE

- Port obligatoire du cache nez sur le lieu du travail
- Mise à disposition des gangs, des masques et autres cache nez au personnel
- Protection des secouristes du travail



II. 5 – INFORMATION & FORMATION

- Conception des messages d'information adaptés au personnel (Avis au personnel…)
- Multiplication des messages de prévention par le personnel médical et des ressources humaines
- Renouvellement permanent des affiches de sensibilisation sur l'ensemble du réseau
- Poursuite des actions de sensibilisation à quai et à bord des trains voyageurs
- Introduction d'un volet sensibilisation Covid-19 lors des réunions matinales de sécurité sur l'ensemble du réseau pour le personnel et les sous traitants
- Recommandations pour préserver la santé et la sécurité des secouristes du travail

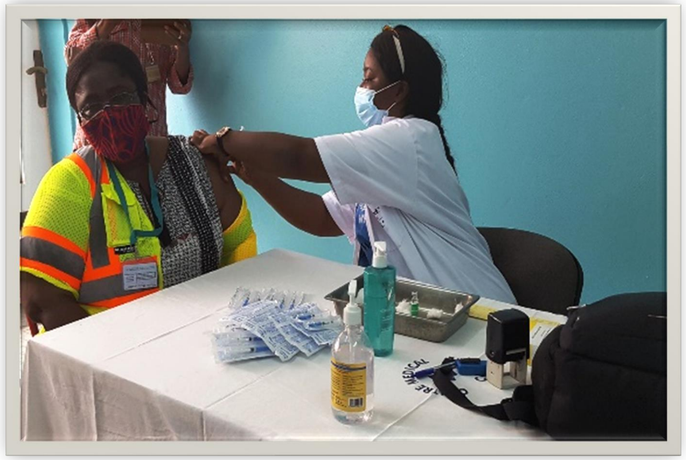


III- NOTRE DISPOSITIF DE SUIVI DE L'ETAT DE SANTE DES SALARIES

- Présence d'une unité de vaccination au Centre médical CAMRAIL de Douala et encouragement à la vaccination dans les districts de santé (hôpitaux publics) le long du réseau
- Mise en alerte de notre service de santé au travail
- Mise en place d'un parcours de suivi des malades
- Réorganisation et adaptation du travail
- Multiplication des tests virologiques et sérologiques
- Participation aux actions de dépistage et d'encouragement à la vaccination

IV- CONCLUSION

Pendant cette période de pandémie, la nécessité de maintenir à flot la production tout en assurant la protection des employés sont désormais au cœur des préoccupations du management de CAMRAIL



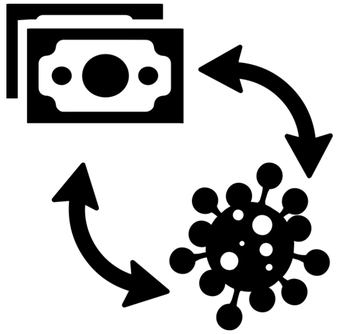
Les défis de santé et sécurité face à la COVID-19

SITARAIL

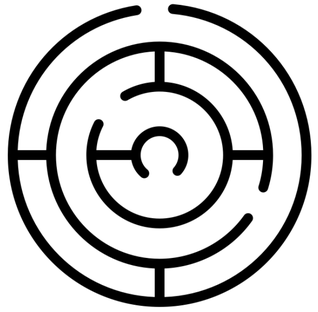
Les jeudis du rail Africain du 30/09/2021

SOMMAIRE

Les mesures prises



L’impact économique de la pandémie



Les défis de demain

Les mesures prises

Au niveau des états

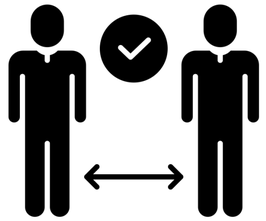
Au niveau de SITARAIL

Mesures prises par les Etats

Face à la situation de la pandémie mondiale, des mesures ont été prises par l'ensemble les états de la Côte d'Ivoire et du Burkina Faso. Ces mesures ont eu un impact direct pour l'ensemble des entreprises comme SITARAIL.

Confinement des populations

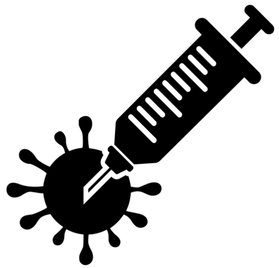
Port obligatoire de cache nez en public



Distanciation sociale

Lavage régulier des mains

Fermeture des frontières terrestres et aériennes



Campagne de vaccination

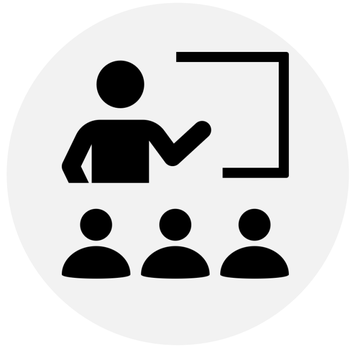
Mise en place de campagne de dépistage

Promotion du télétravail

Mesures prises par SITARAIL

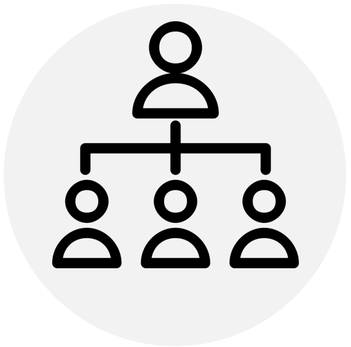
Prise en charge

1er cas détecté le 17/06/2020



Sensibilisation terrain

De mars 2020 à maintenant



Formation à la sensibilisation

41 collaborateurs formés comme relais de la campagne de prévention

Décembre 2020

Sensibilisation en ligne

Déploiement conjoint d'un E-learning de sensibilisation CAMRAIL/SITARAIL

Du 05 juillet 2021 au 05 octobre 2021

Focus 1 - Les points clés de la sensibilisation terrain

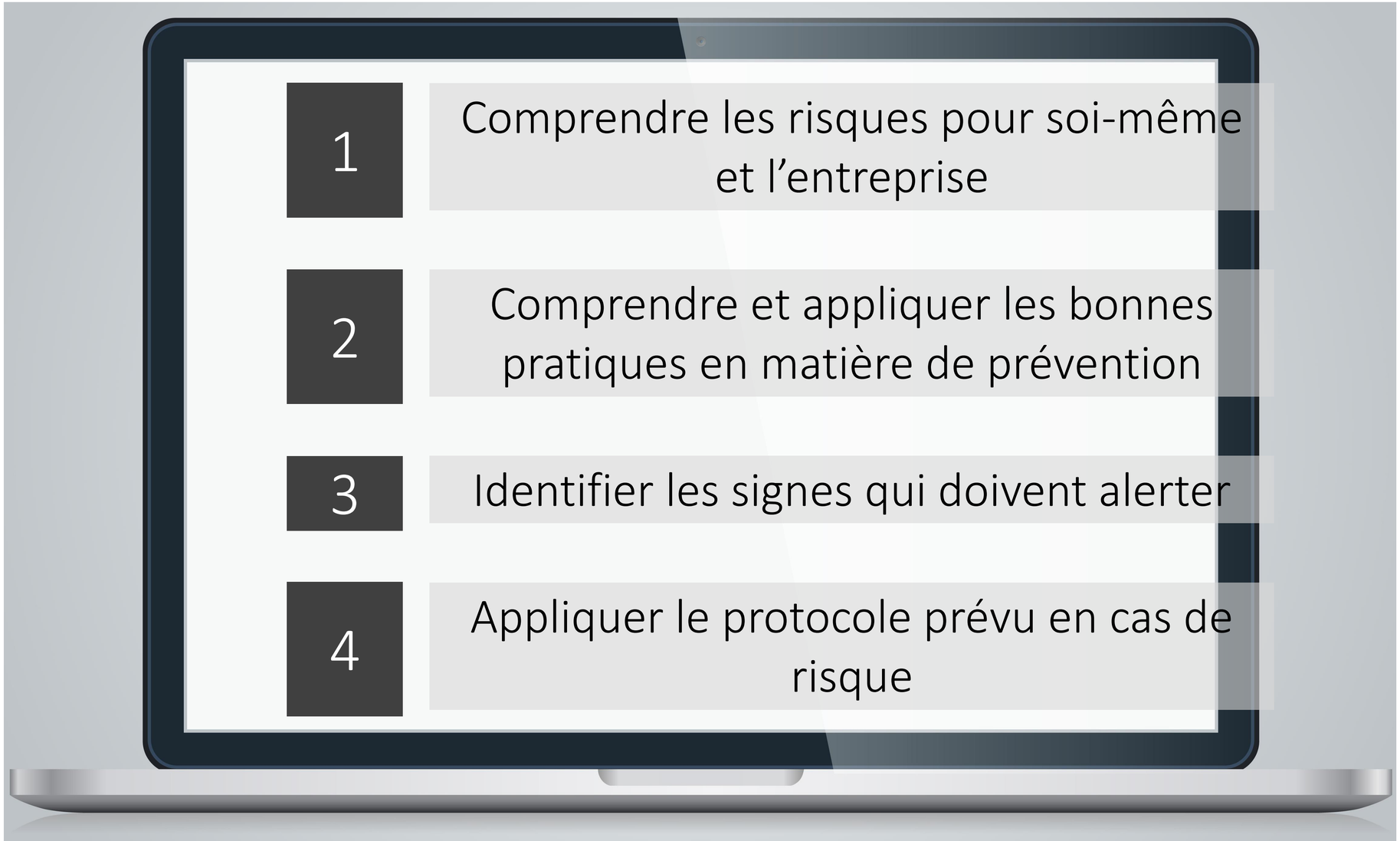
Les voies de transmission de la maladie

Les moyens de prévention

(lavage des mains, respect des mesures barrière, vaccination)

Focus 2 - La synergie Bolloré Railways

En synergie avec CAMRAIL, nous avons créé et déployé un module E-learning de sensibilisation et avons mis en œuvre une deuxième grande campagne sur terrain pour insister sur l'importance de la vaccination. Le module E-learning vise 405 collaborateurs pour SITARAIL.



Les Conséquences économiques

Sur le plan organisationnel

Sur l’activité voyageur

Sur l’activité marchandise

Conséquences sur l'organisation

- Mise en place d'une cellule de crise au niveau régional et au niveau de la société afin d'adapter les différentes dispositions en fonction de l'évolution de la pandémie.
- Acquisition de masques, thermomètres, d'équipements de lavage des mains.
- Obligation du port du masque sur tous ces sites de travail.
- Gel des embauches et des investissements sur 2020.
- Mise en congés des agents sur 2020.
- Réorganisation des ateliers et services en deux groupes pour limiter le nombre d'individus présents sur les lieux de travail sur le 1er semestre 2020.
- Promotion du télétravail sur le 1er semestre 2020.

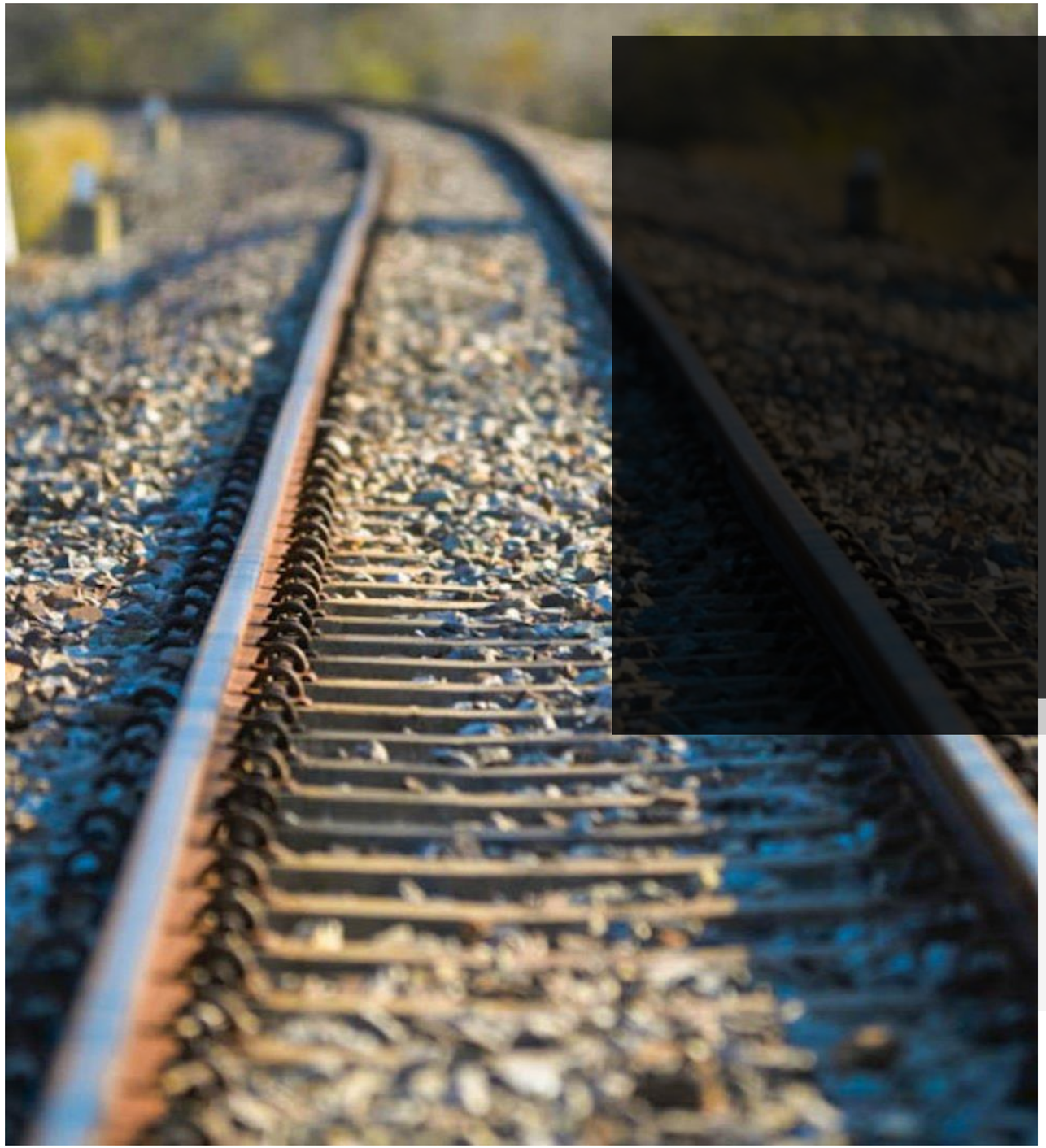
Conséquences sur l'activité voyageur

- L'arrêt de cette activité depuis le 21 mars 2020 du fait de la fermeture des frontières terrestres entre la Côte d'Ivoire et le Burkina Faso jusqu'à ce jour.
- En cas de réouverture des frontières, il sera nécessaire de tenir compte des éléments suivants :
  - Visite complète des voitures voyageurs et réalisation des travaux nécessaires à leur remise en service.
  - Identification des dispositions à mettre en œuvre dans le cadre des mesures de prévention et de lutte contre la propagation de la pandémie.

Conséquences sur l'activité marchandise

Au dernier trimestre de l'année 2020, la faiblesse des consommations dans le monde notamment en Europe et aux USA entraine des tensions sur la disponibilité des conteneurs pour le transport des marchandises. Ces tensions suscitent un dérèglement de la chaîne logistique qui se traduit par :

- Un renchérissement de +300% du fret maritime entre l'Asie et les autres continents notamment l'Afrique.
- Un rallongement des délais d'approvisionnement, avec beaucoup de retards dans l'arrivée des bateaux.
- Une baisse des stocks marchandises générales et conteneurs à transporter par rail sur le premier trimestre 2021 (les armateurs privilégiant les destinations à rotation rapide pour leurs conteneurs.



Les défis

En matière de santé et de sécurité

Les défis en matière de santé et de sécurité au travail

- Respecter et faire respecter les gestes barrières recommandés par les autorités sanitaires,
- Prendre en charge les cas positifs,
- Décider des mesures adaptées à la continuité de l'activité en prenant en compte les consignes sanitaires nécessaires pour garantir la santé et la sécurité des salariés,
- Associer à ce travail les représentants du personnel,
- Nettoyer et désinfecter toutes les surfaces et tous les points de contact,
- Adapter les lieux de travail et protéger les travailleurs (réaménager les dortoirs des conducteurs dans le respect des mesures barrières, etc.),
- Limiter ou suspendre les visites sur le lieu de travail.

Merci

Q/A Session

Conclusions

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Thank you for your attention.