



IRSC 2021

“ RAIL HOF ”

A DIGITAL PLATFORM FOR PROMOTING THE INTEGRATION OF HUMAN AND ORGANISATIONAL FACTORS (HOF) IN RAILWAYS

Virginie Papillault

UIC Manager

Human and Organisational Factors & Safety Culture

Jayne Yeo

ERA Project Officer

Safety and Operations Unit

HOF evolution in railway community

- Many technical innovations in the last 40 years,
- A plateau is reached in terms of improving safety,
- HOF are taken into account in other industries: aviation nuclear, healthcare, gas and oil industries,
- Systemic approach that integrates health, climate, environmental, cyber risks : the integrated safety,
- Human beings and organization at the “heart” of the system,
- UIC DNA is the exchange of good practices and feedback,
- Integration of HOF included in the 4th Railway Package

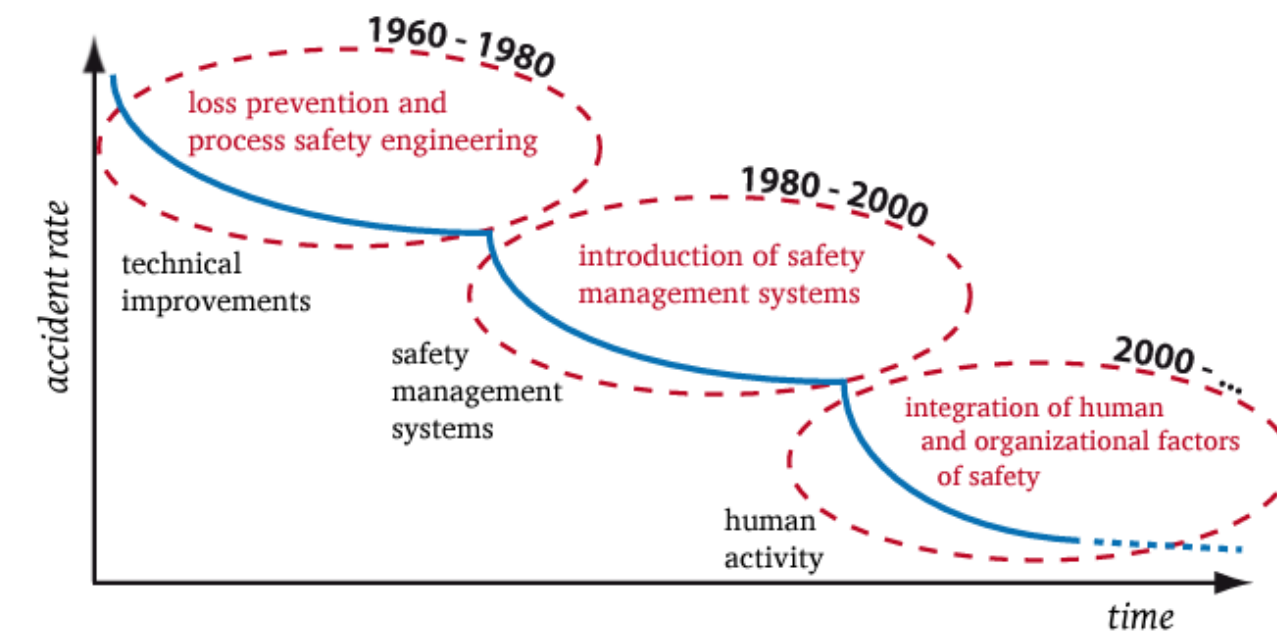


Figure 2 – Successive approaches to industrial safety

IAEA Report on

Human and Organizational Factors in Nuclear Safety in the Light of the Accident at the Fukushima Daiichi Nuclear Power Plant

UIC and ERA co-operate to improve the integration of HOF and to promote a Safety Culture approach in the EU-worldwide railway community

Existing HOF legislation in European Union

- **2 directives** to be transposed in national legislation refer to the obligation to take HOF into account:
 - **Directive 89/391**: encourage improvements in the safety and health of workers at work,
 - **Directive 2016/798**: on railway safety that leads RU and IM to integrate HOF in their SMS.
- **Regulation 2018/762** establishing CSM on safety management system requirements that has reinforced this latter obligation by imposing to include HOF in risk assessment and mandating the demonstration from the organisation to have a systematic approach to integrating HOF within their SMS.

Genesis of the RAIL HOF

- Starting point: ERA carried out a needs analysis starting by sending out a survey
 - an interest in Human & Organisational Factors (HOF) issues.
- In 2019 a **short questionnaire was sent** to all ERA contacts who had expressed an interest in HOF issues.
- 5 questions on what websites they consulted, what did they like or dislike about those websites
- In order to reach a wider audience regarding HOF in railways **it was decided to create a virtual platform**

A link between regulation and operational HOF issues

- New legislation: requires a **systematic integration of HOF** within the safety management systems,
- More than that, sharing knowledge and experience on “**driving change**”, from **HOF theory** to **concrete operational integration**,
- Importance of considering the roles and responsibilities of ERA and UIC: **this cooperation enables** benefits for the entire railway community



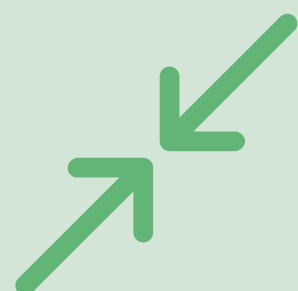
The complementarity between the roles of UIC and ERA



UIC with its **worldwide membership**, brings practical, transparent, confidential and trustable exchange of good practices, allowing the railway community to produce **guidances and Acceptable Means of Compliance (AMoC)**, ensuring their ownership and responsibility.



ERA is not only **the EU regulator** but, by working closely with the sector, ensures the harmonised implementation of the legislation through **dissemination, training and guidance**



To create synergies between the 2 organisations ERA and UIC are about to sign a **Framework Agreement**

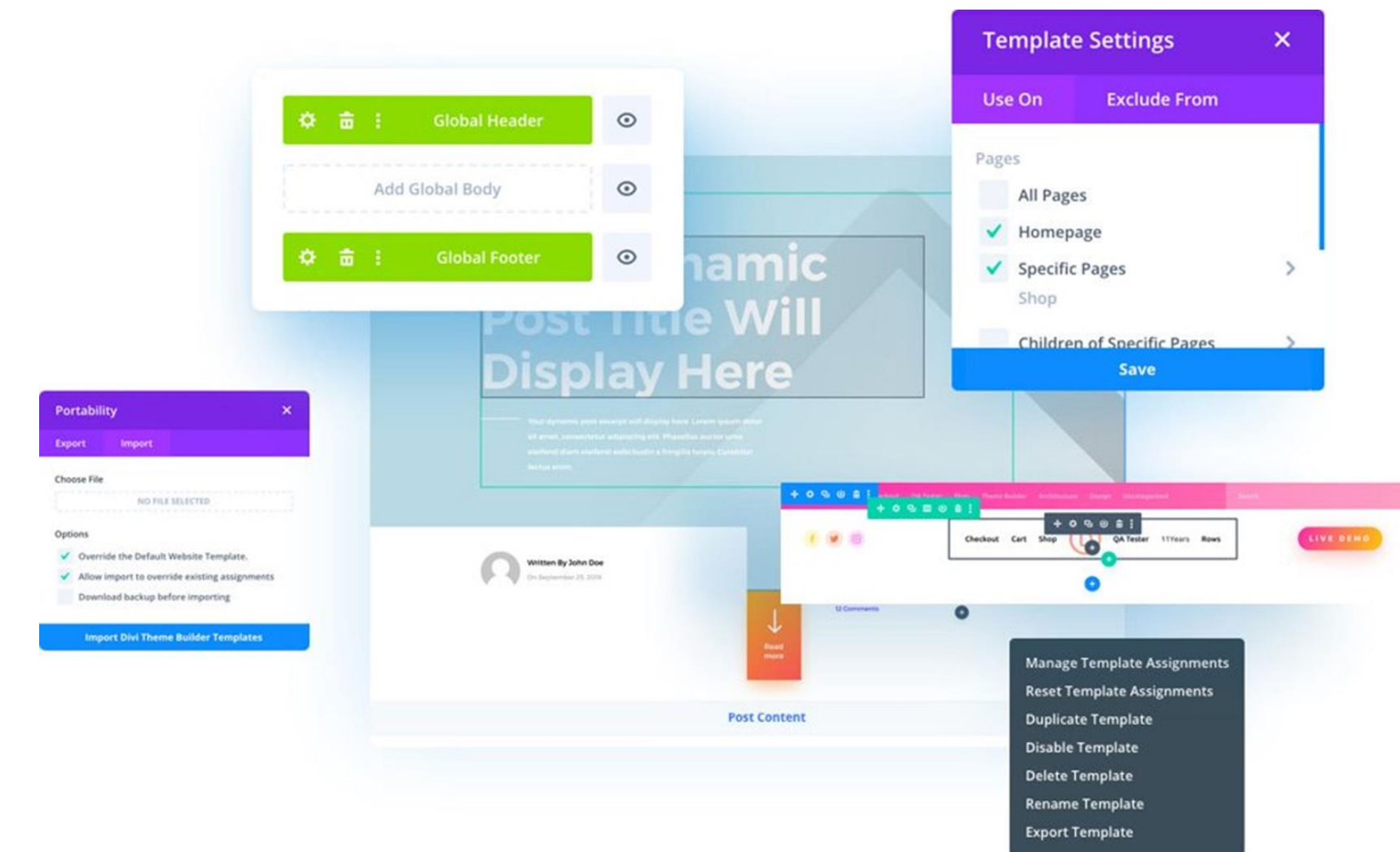
ERA and UIC concrete cooperation for Human and Organisational Factors (HOF)



- ERA and UIC work together to promote HOF in railway sector
- 2 main objectives:
 - Raise awareness of the importance of integrating HOFs into railway safety and,
 - Provide the sector with tools and knowledge
- Joint coordination between ERA and UIC: **the RAIL HOF Digital Platform.**

Functional requirements of the RAIL HOF

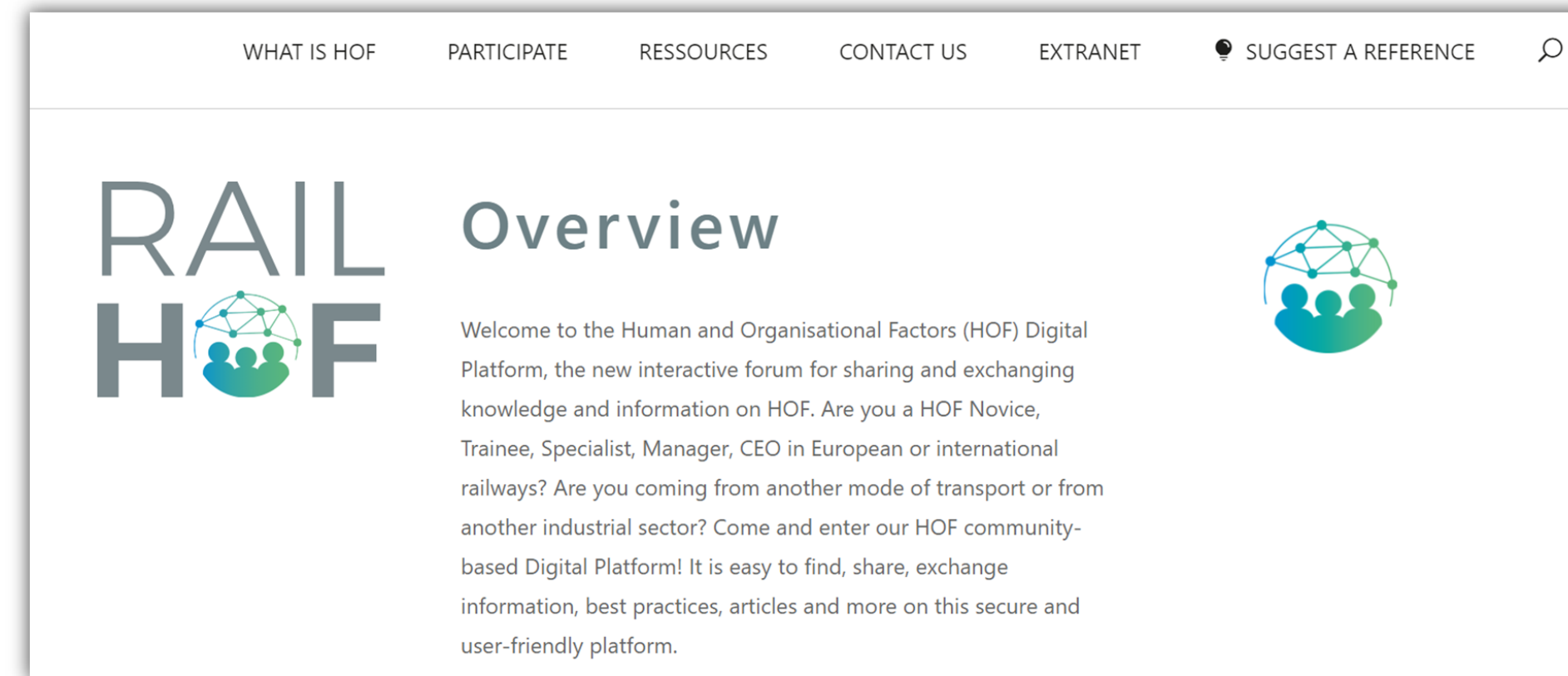
- Engage the intended audience, the virtual platform will have to be **flexible**
- **Practical examples of how HOF can be taken into account in operational activities**
- **Ease of navigation and a good search engine**
- **Trust in the site content with valid and useful information**



Concretely RAIL HOF Digital Platform will be

A website

- the entry point to access all resources and information



A social media strategy

- a linkedIn group to develop the HOF community of experts

Linked in

- Essential professional network to increase a professional network
- Offering all the features to develop a community of experts
- Increasing its visibility through better referencing by search engines

A member's area

- to manage the events, create forum or sharing working documents

- Management of meetings and events**
 - UIC communication lever
 - Possibility of public display on the UIC site
- Creation of forums**
 - In a few clicks
 - Possibilities to reach other groups on the extranet (large community of railway experts)
- Secure Working area**
 - Use of an Extranet group
 - Security, confidentiality for working documents

What Rail HOF Digital Platform will be?

- A global railway community-based platform to connect railway HOF specialists and non-specialists.
- A forum for learning and exchange of knowledge, experience, and best practices.
- An interactive and lively platform
- Contributions from the European and worldwide railway community and other industries.



Presentation of the RAIL HOF beta version

The screenshot shows the RAIL HOF website. At the top, there is a navigation menu with links for 'WHAT IS HOF', 'PARTICIPATE', 'RESSOURCES', 'CONTACT US', 'EXTRANET', and 'SUGGEST A REFERENCE'. A search icon is also present. The main content area features the RAIL HOF logo on the left, which includes a stylized globe with people icons. To the right of the logo is the heading 'Overview' and a paragraph of introductory text. Further right is a circular icon depicting a network of people. Below this is a large banner with three colored boxes (blue, green, and grey) containing questions and call-to-action buttons. The background of the banner shows a crowd of people.

WHAT IS HOF PARTICIPATE RESSOURCES CONTACT US EXTRANET SUGGEST A REFERENCE

RAIL HOF

Overview

Welcome to the Human and Organisational Factors (HOF) Digital Platform, the new interactive forum for sharing and exchanging knowledge and information on HOF. Are you a HOF Novice, Trainee, Specialist, Manager, CEO in European or international railways? Are you coming from another mode of transport or from another industrial sector? Come and enter our HOF community-based Digital Platform! It is easy to find, share, exchange information, best practices, articles and more on this secure and user-friendly platform.

Are you interested in HOF?
Do you want to learn about Human & Organisational Factors? Safety culture, non-technical skills, health and safety, more?
Join us on this international and diverse network which captures in one place the valuable and enriching information and material, either academic or practical railways-oriented, on the organizational and human factors that you need.
[I want to know more](#)

Are you involved in HOF activities?
You want to learn about Human & Organisational Factors? Safety culture, non-technical skills, health and safety, more?
Join us on this international and transversal network which capitalizes the valuable and enriching information and material, either academic nor Railways oriented, on the organizational and human factors that you need.
[Join us on LinkedIn](#)

Are you an HOF expert?
Are you a Rail Human and Organisational factors expert, a Rail Safety expert, a Railway Head of safety, or other? This space is made for you. Here, you have access to confidential information and can even create or participate in a discussion forum to initiate conversations and exchanges with your peers.
[Join our members area](#)

Presentation of the RAIL HOF beta version

The screenshot shows the RAIL HOF website interface. At the top left is the RAIL HOF logo. The navigation menu includes: WHAT IS HOF, PARTICIPATE, RESSOURCES, CONTACT US, EXTRANET, and SUGGEST A REFERENCE with a search icon. The main content area is titled "What is HOF?".

What is HOF?

The Human & Organisational Factors (HOF) also named Human Factors are a scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and other methods to design in order to optimize human well-being and overall system performance" (International Ergonomics Association).

HOF integrates knowledge in social sciences such as Management Science, Psychology, Sociology, Design Science, Political Science, to enlarge the scope of study and investigation while considering organisational, institutional, cultural or political contributors to safety. The term 'organisational' has been introduced to highlight the organisational level of analysis and not only the individual level although obviously organisations are composed of individuals. (European Railway Agency)

Besides supporting the integration of safety at the design stage, the HOF approach provides concepts and methods to identify the gaps between the task (work as prescribed or expected), and the activity (work as actually performed or experienced and reported by workers). These gaps, whether concerning the task or/and the activity are problematic as they are a source of residual risk and need to be taken into account. (European Railway Agency).

This allows a better managing of workplace reality in complex organisations such as railway socio-technical systems, which is critical to lead to safety improvements. (European Railway Agency).

- What are HOFs in concrete terms? +
- Are there definitions of HOF? +
- Is occupational health part of HOF? +
- Where can I find practical and concrete examples of HOF? +
- May I share good practices and HOF experience on this website? +
- Does taking HOF into account really have an impact on safety performance? +
- Taking HOF into account is now mandatory, but how can I do in practice? +
- Is change management part of HOF? +

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Presentation of the RAIL HOF beta version





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Thank you for your kind attention.