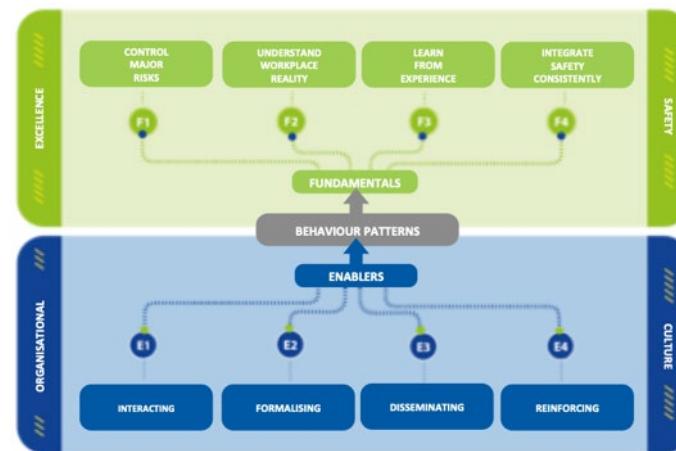


# The European Railway Safety Culture Model: Theory and Practice

## ERA Just Culture and Safety Culture Activities

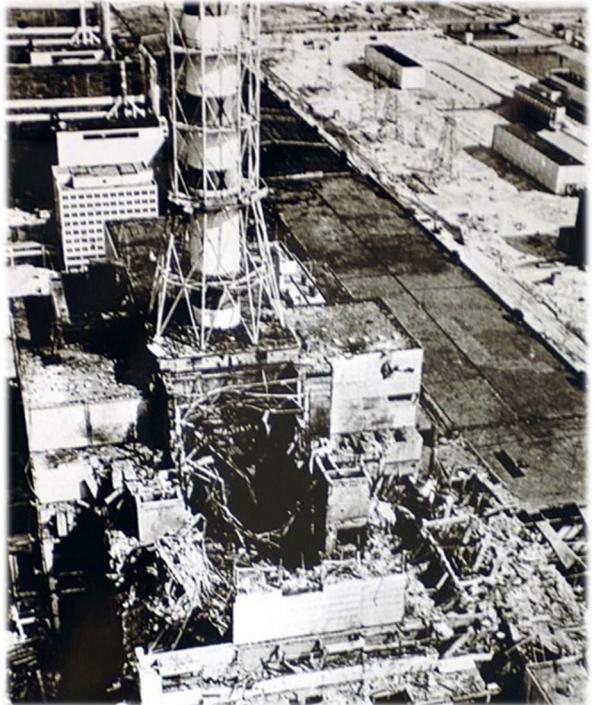
Dr. Grégory Rolina, Programme Manager

ES<sup>2</sup>-WS1-2020 - 29 October 2020



- **Background**
- **Model Specifications**
- **Design Process**
- **Model Building Blocks**
- **The Attributes of a Positive Safety Culture**
- **Safety Climate Survey**
- **Safety Leadership Training**
- **Current and Future Developments**
- **Conclusive Remarks**
- **Q&A**

## Background



**Chernobyl**  
**1986**



**Challenger**  
**1986**



**Clapham Junction**  
**1988**

*To an observer B, A\* is a **model** of an object A to the extent that B can use A\* to answer questions that interest him about A*

Minsky 1965



- Apply to any type of railway organisation or authority
- Distinguish and articulate two concepts
  - Organisational culture
  - Safety
- Balance between pragmatism and oversimplification

## Human and Organisational Factors Task Force



COMBOIOS DE PORTUGAL



Eisenbahn-Bundesamt

# TRAFFICOM

ÖBB  
INFRA

CFL cargo

DUTCH  
SAFETY BOARD

ZOS  
ŽOS TRNAVA, a.s.

ICSI  
Institut pour une culture  
de sécurité industrielle

UIC

ORR  
OFFICE OF RAIL AND ROAD

dp

SNCF

CRR  
AN COMISIÚN UM RIALÁIL IARNRÓID  
COMMISSION FOR RAILWAY REGULATION

RSSB

ANSF

Three meetings in 2018 to issue a first version of the model





## Workshops (IT, EL, ES, NL)



## Safety Culture Assessment (Nordjyske Jernbaner – DK, ADIF – ES)

## Design Process Pilot



### Full scale pilot on the EU model

- Workshop for Traficom inspectors

### 3 pilot organisations

- Volunteered to participate
- Different field
- Different size
- Steering groups
- Workshop: all organisations participating

F1. Ennakoiva turvallisuuden ja riskien hallinta	F2. Työpaikan todellisuuden ymmärtäminen	F3. Jatkuvan oppimisen edistäminen	F4. Turvallisuuden yhdistämisen liiketoimintaan

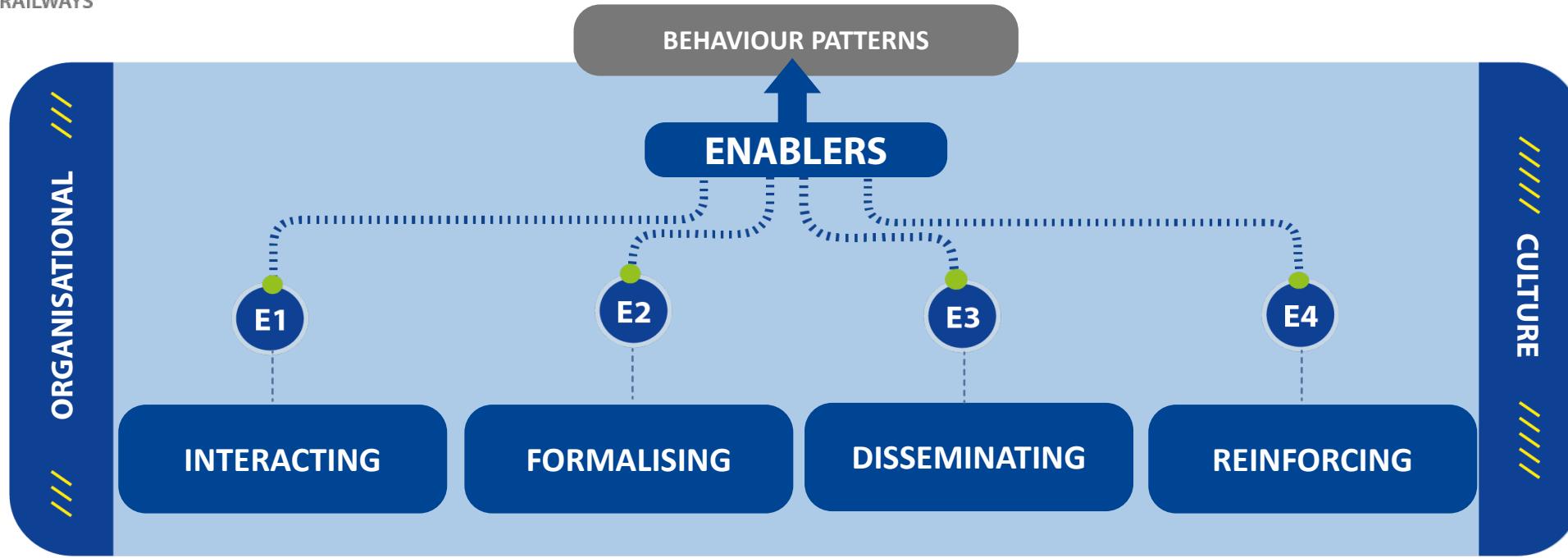
## Regulatory Oversight (FI, IE, CH)

## BEHAVIOUR PATTERNS

Shared behaviours (what we say and do)  
encouraged or discouraged, inadvertently or intentionally,  
by people or systems over time

Agnew & Daniels 2010

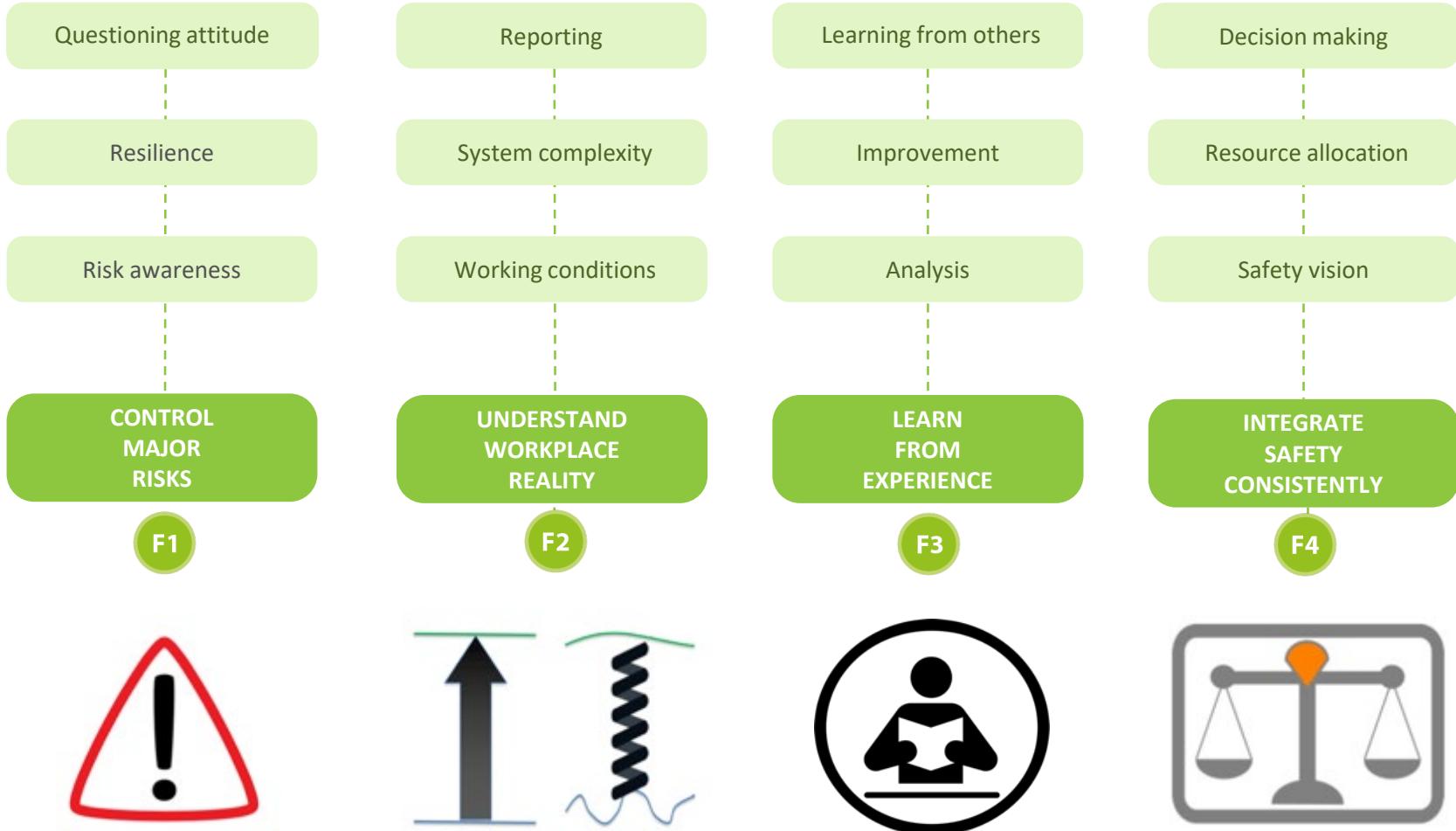




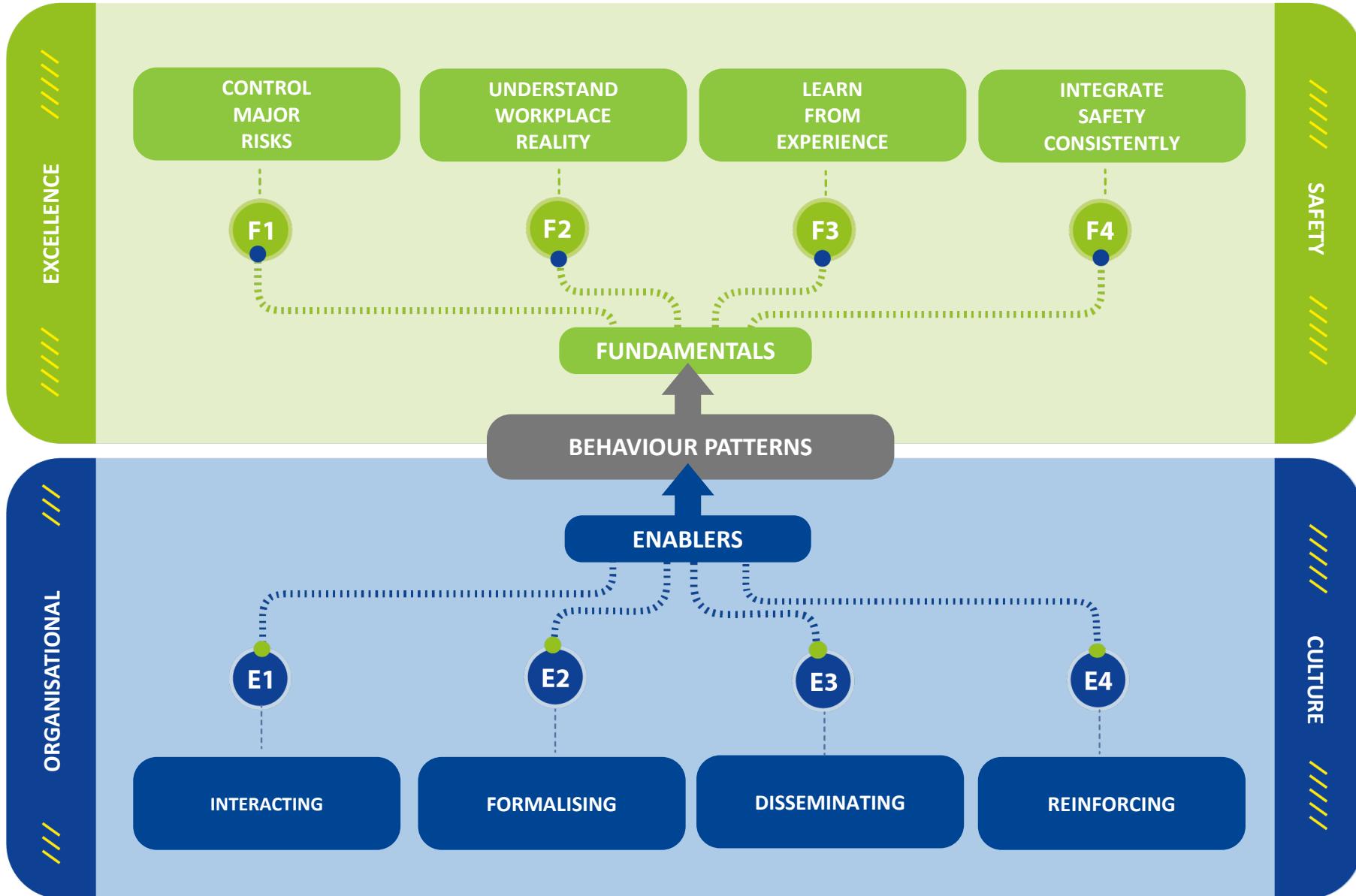
Adapted from Guldenmund (2015, 2018)

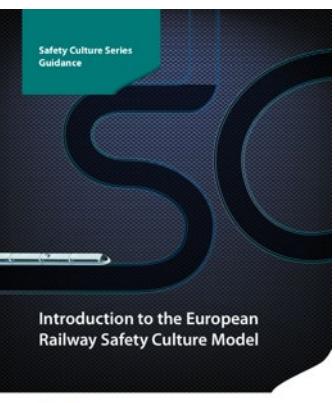
# Model Building Blocks

## Railway Safety Fundamentals

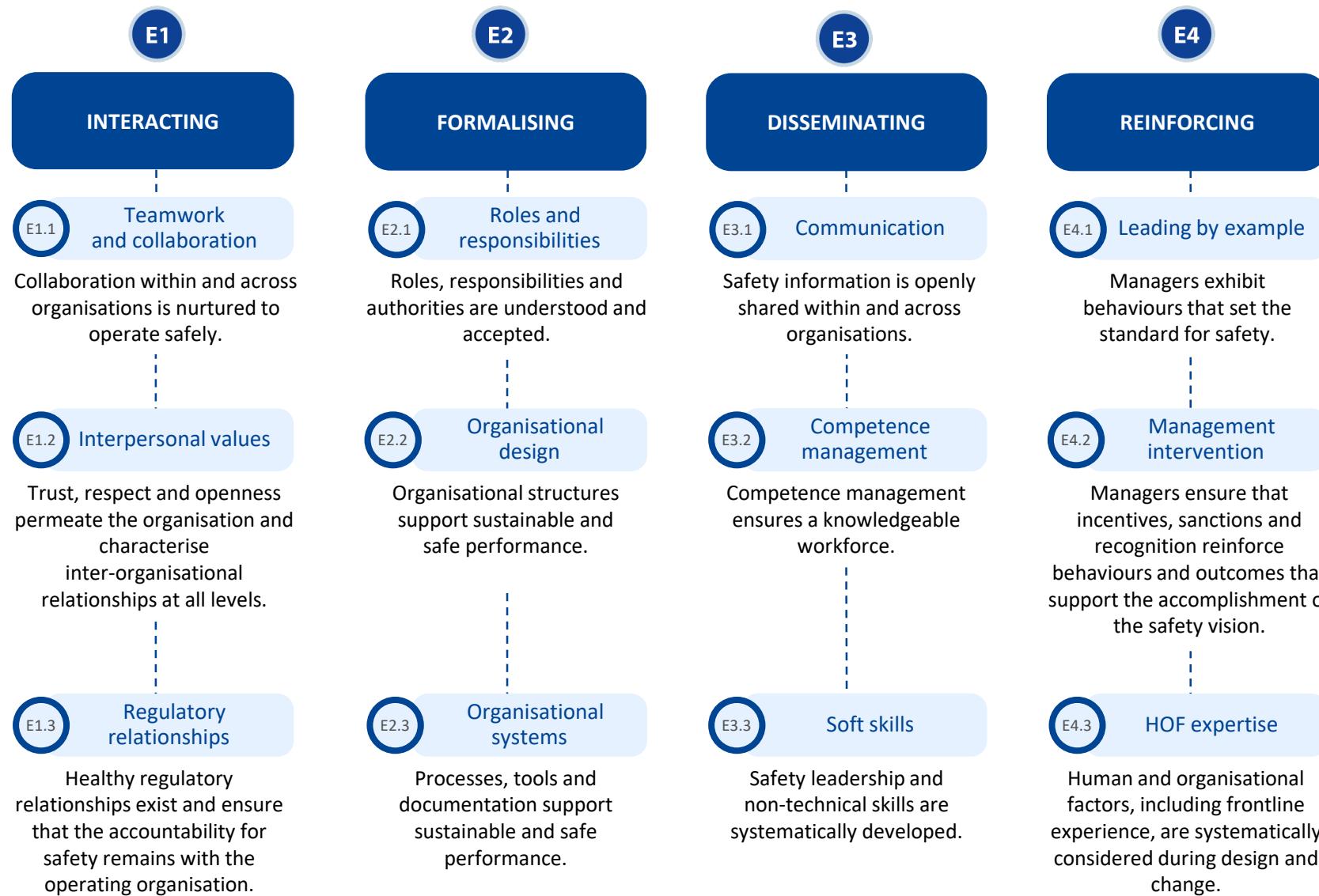


# European Railway Safety Culture Model





## Attributes of a Positive Safety Culture (2)

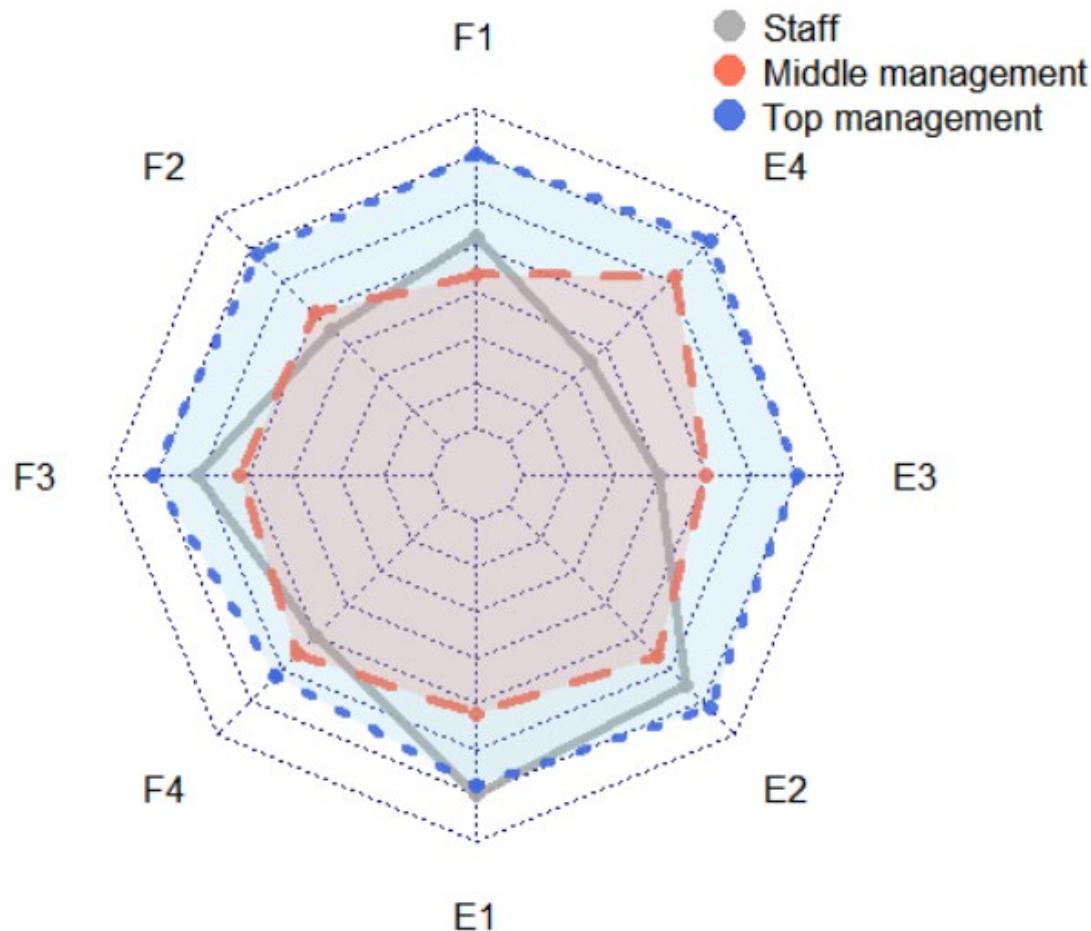


A safety perception survey targeting all European rail professionals to be launched during the European rail of year (2021)



EUSurvey

Example  
Visualisation of  
aggregated results  
(All questions /  
Management level)



## COMPANY

RU

IM

Manufacturer  
Service Provider

## AUTHORITY

NSA

NIB

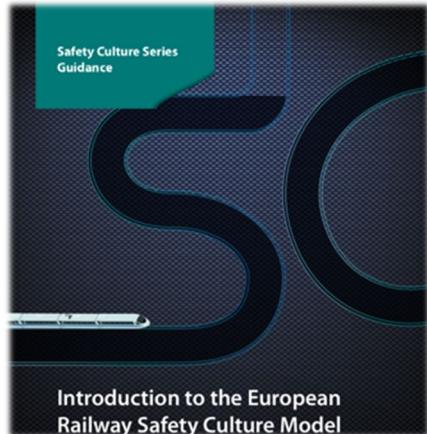
National administration  
European administration

2M+ staff

## Safety Leadership Training

- 1-day training targeting managers at all levels
- Various pedagogical methods / Emotional engagement
- Shaped by the professional film “Between the Lines” relating a real accident
- Designed in 2018, tested in 2019, currently deployed at **Thalys International, VR Group, Irish Rail, Ermewa**
- Dissemination through a train-the-trainers approach





**Guidance**

**Training**

**Report**

**Dissemination**



## Current and Future Developments

- Safety culture assessment
- Cultural change strategy
- Peer review service
- Regulatory oversight of safety culture
- European rail safety climate survey
- Safety leadership
- Just culture
- Human and organisational factors
- ...

## The European railway safety culture model

- Elaborated and tested with safety experts and rail professionals
- Articulates organisational culture with safety
- Addresses pragmatic company needs – still respects the complexity of culture
- Supports learning, cultural change and improvement strategy

## Conclusive Remarks



Visit our webpages  
[www.era.europa.eu/activities/safety-culture\\_en](http://www.era.europa.eu/activities/safety-culture_en)

Contact us  
[safetyculture@era.europa.eu](mailto:safetyculture@era.europa.eu)  
[gregory.rolina@era.europa.eu](mailto:gregory.rolina@era.europa.eu)



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