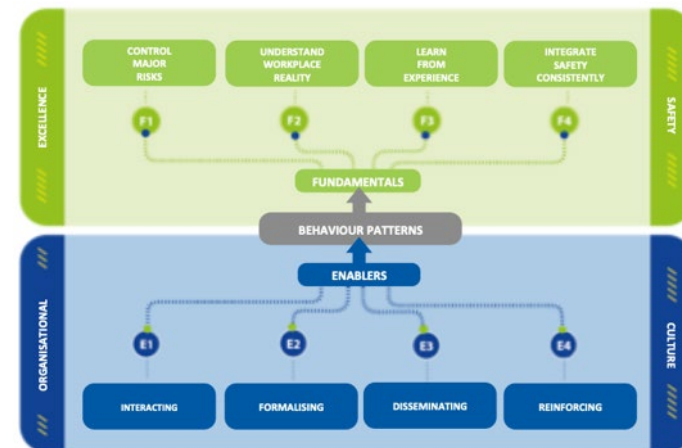


# The European Railway Safety Culture Model: Theory and Practice

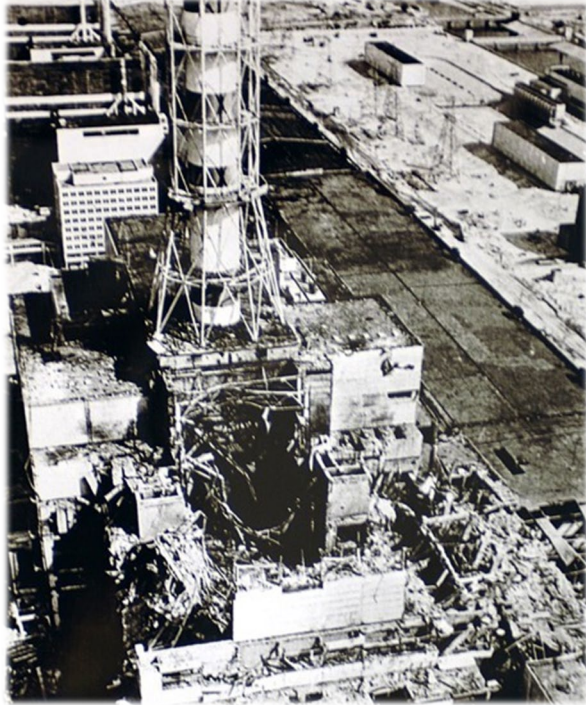
ERA Just Culture and Safety Culture Activities

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**



**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



TRAFICOM



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

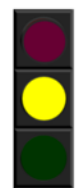
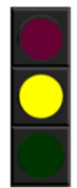




### Full scale pilot on the EU model

- 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 yhdistäminen liiketoimintaan
			

**Regulatory Oversight**  
(FI, IE, CH)

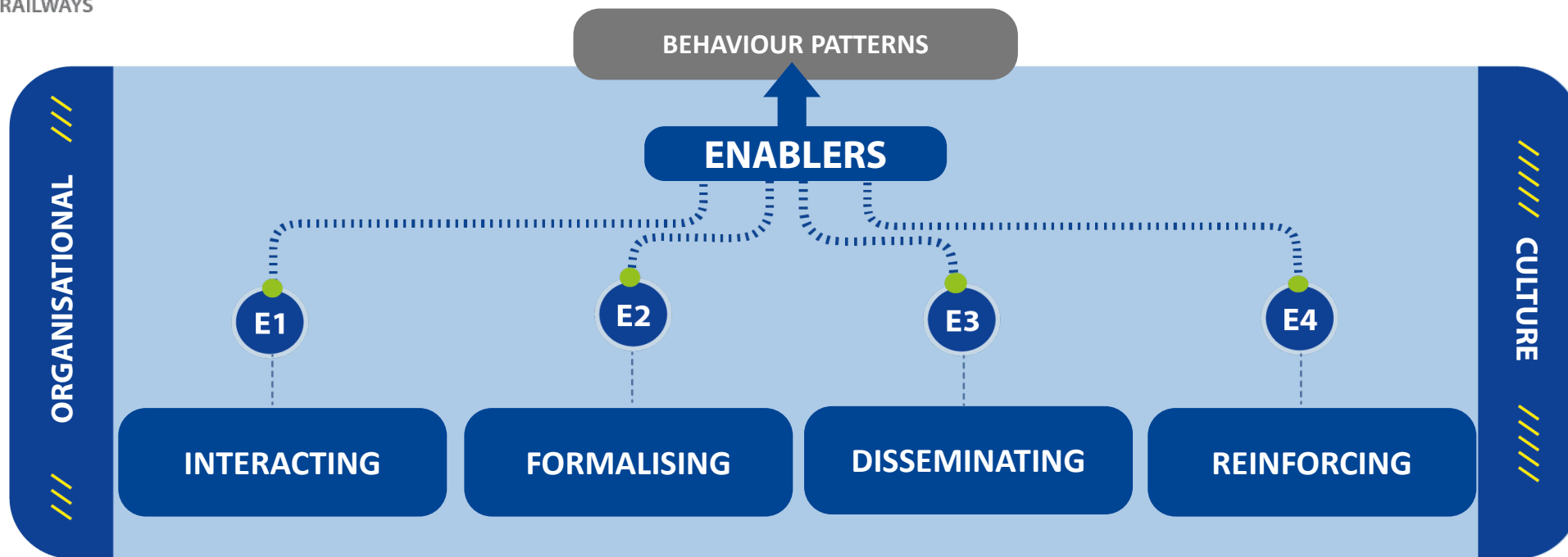
## BEHAVIOUR PATTERNS

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

Agnew & Daniels 2010



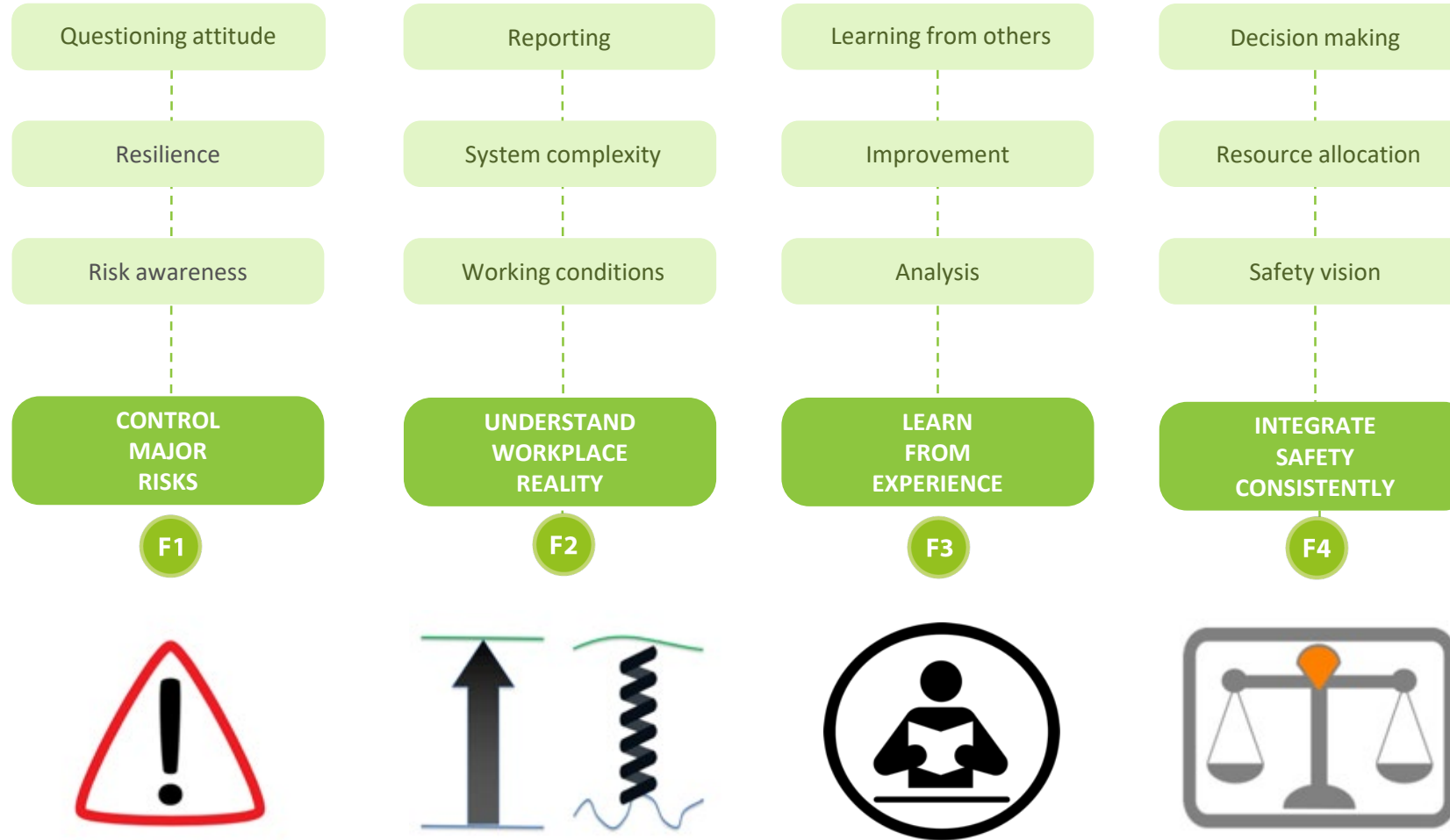




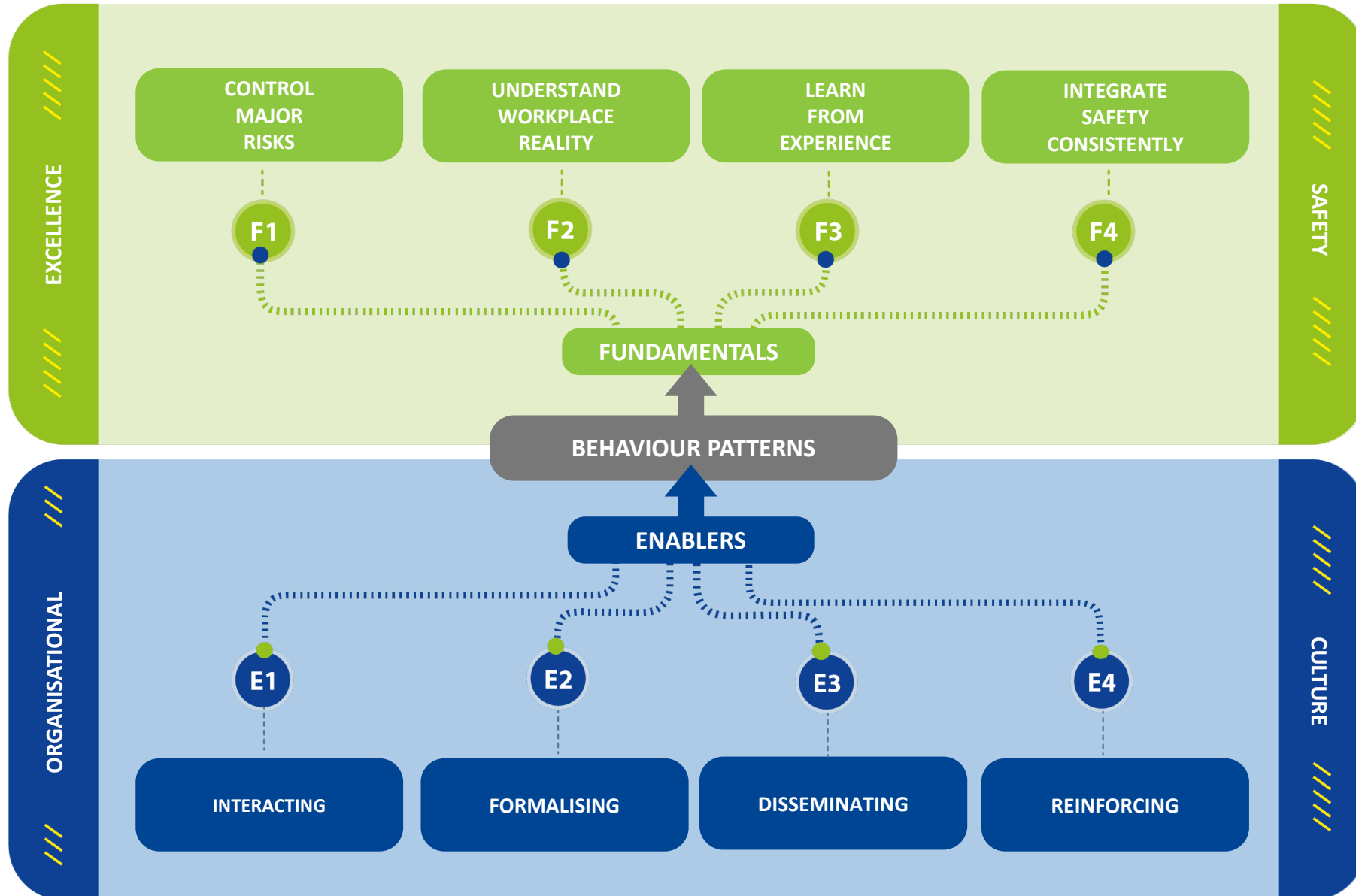
Adapted from Guldenmund (2015, 2018)



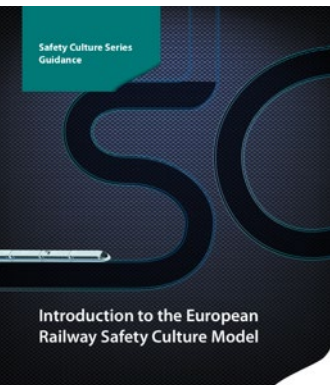
# Model Building Blocks Railway Safety Fundamentals



# European Railway Safety Culture Model

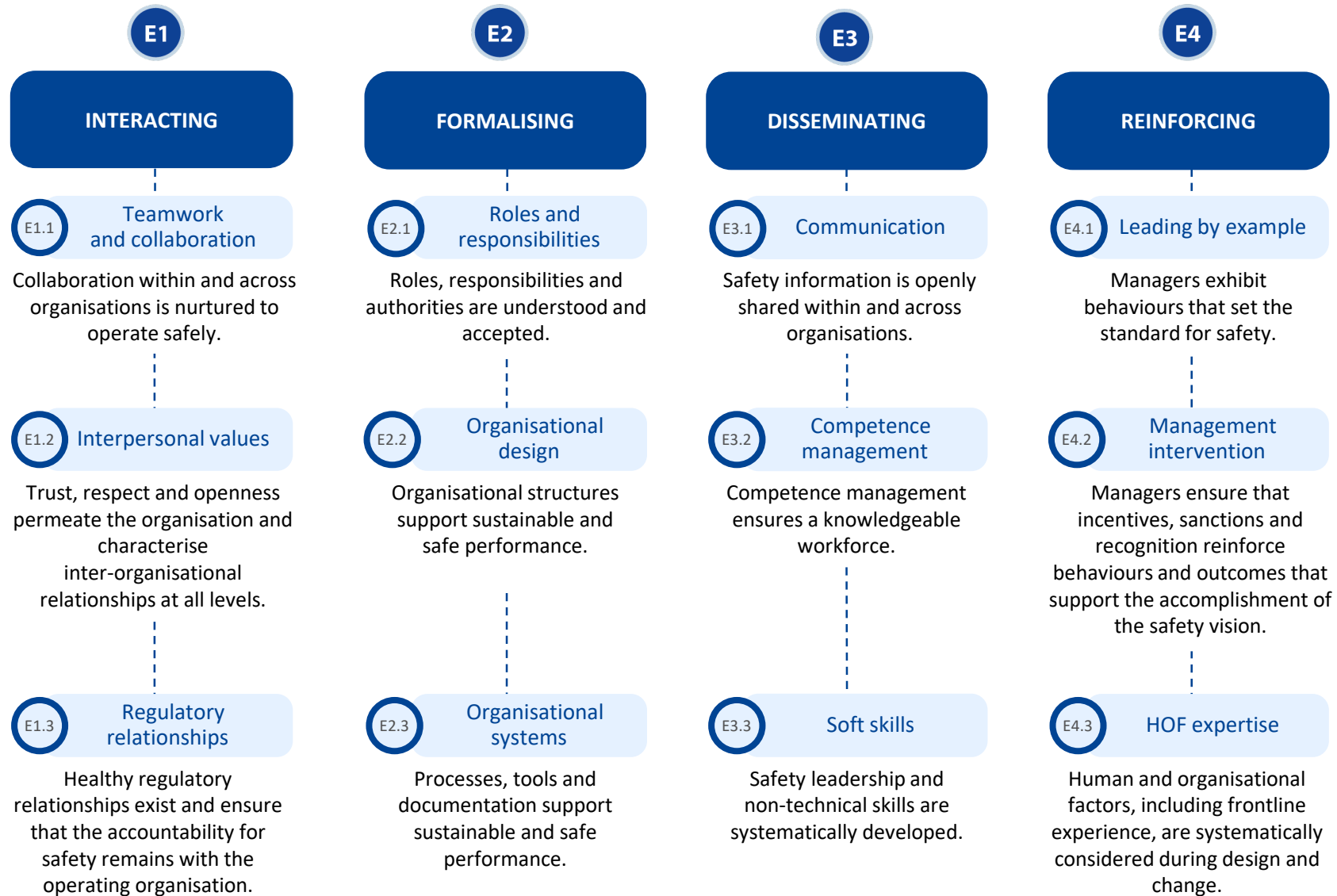


# Attributes of a Positive Safety Culture (1)





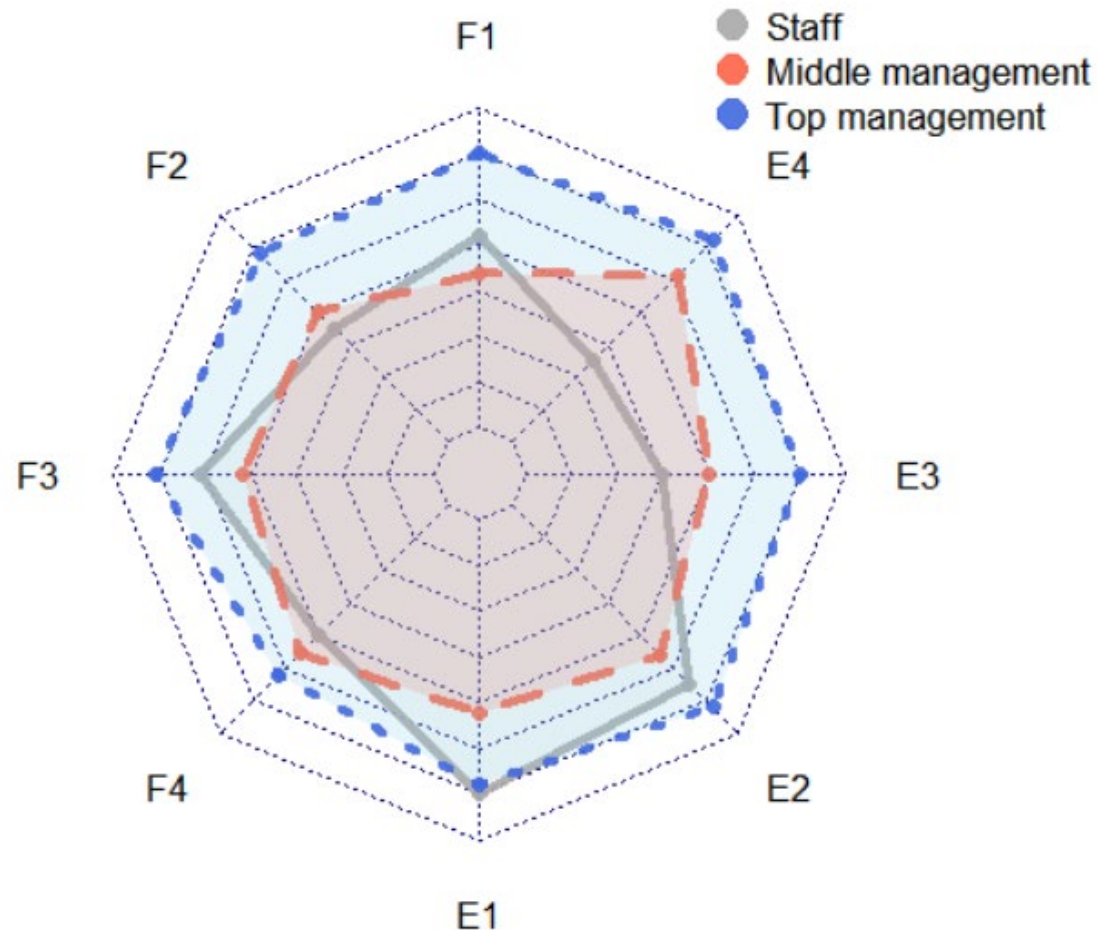
## Attributes of a Positive Safety Culture (2)



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



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





## 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)

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