



INFRABEL

Expro

Expectations for an organisational solution supporting the plan of enhancing the positive safety culture of Infrabel


Bernard Penners

October 13th 2021





Summary

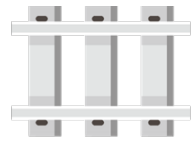
- I. Who's Infrabel?
 - II. Where we come from
 - III. The path we are drawing
 - IV. The heart of the plan
- 



I Who's Infrabel?



The Belgian rail network



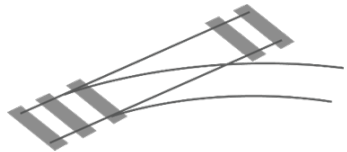
3,607

km of lines cover virtually the whole of the territory



1,700

active level crossings



4,057

points and crossings (main track switches) are activated by the traffic controllers



11.358

civil engineering structures (e.g. bridges and tunnels)



10,249

signals act as interface between the signal box and the driver



1

Railway Operations Center

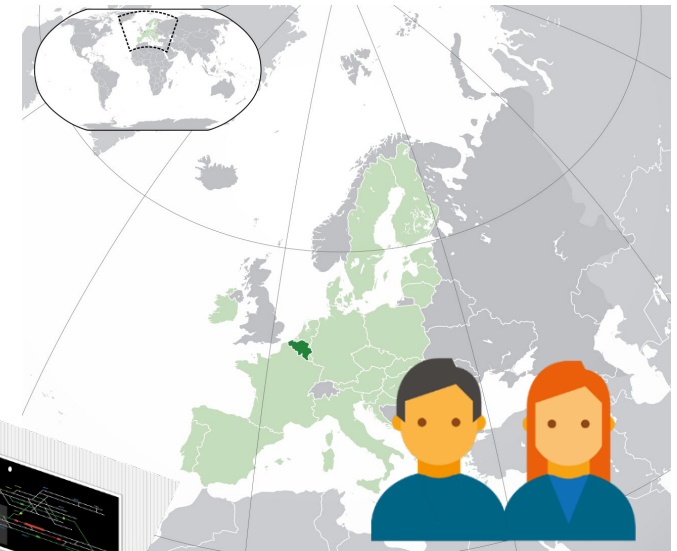
28

signal boxes

managing traffic in real time

4,500

trains (routes) on average are followed each day

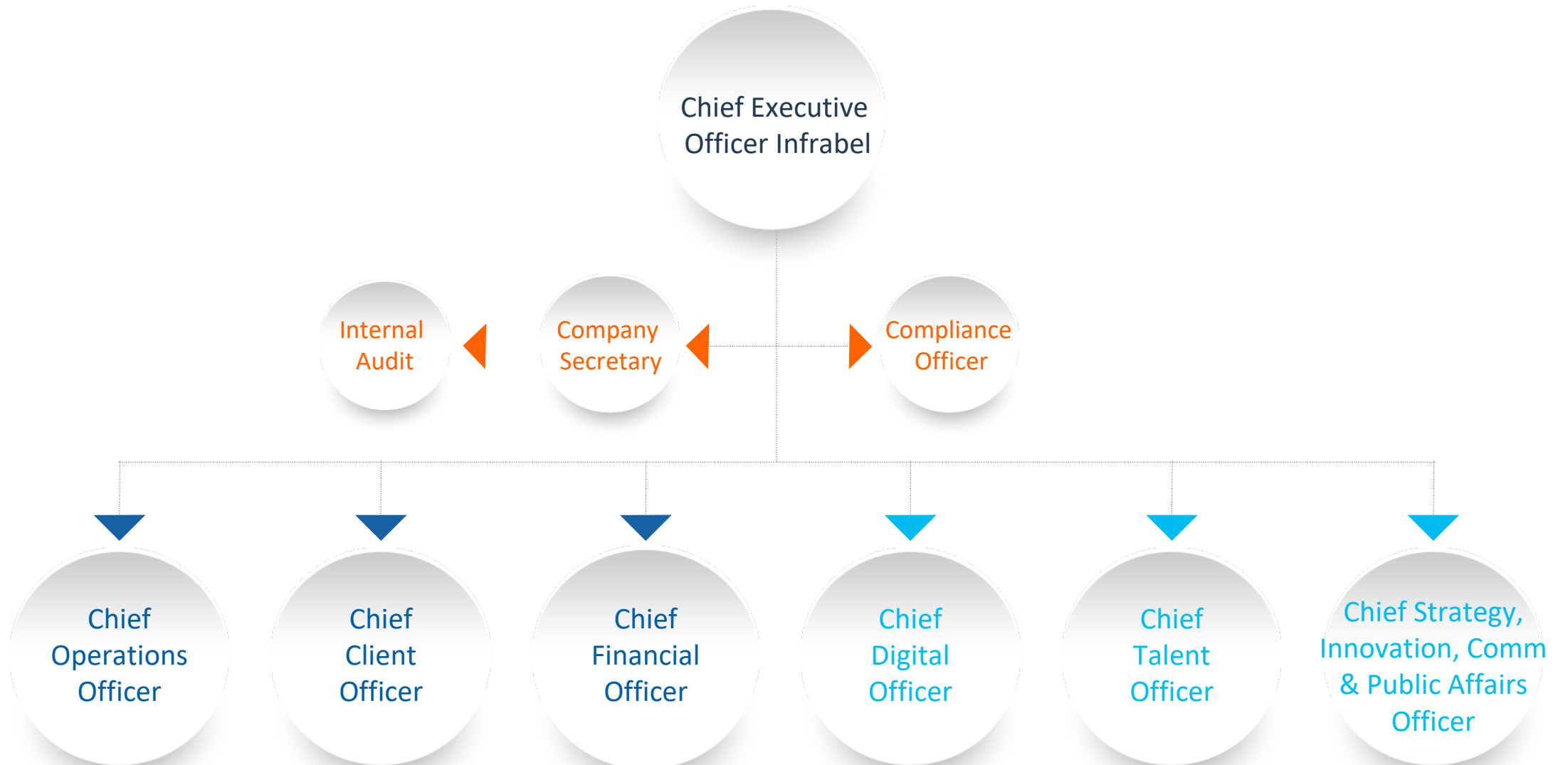


243,900,000 passengers per annum



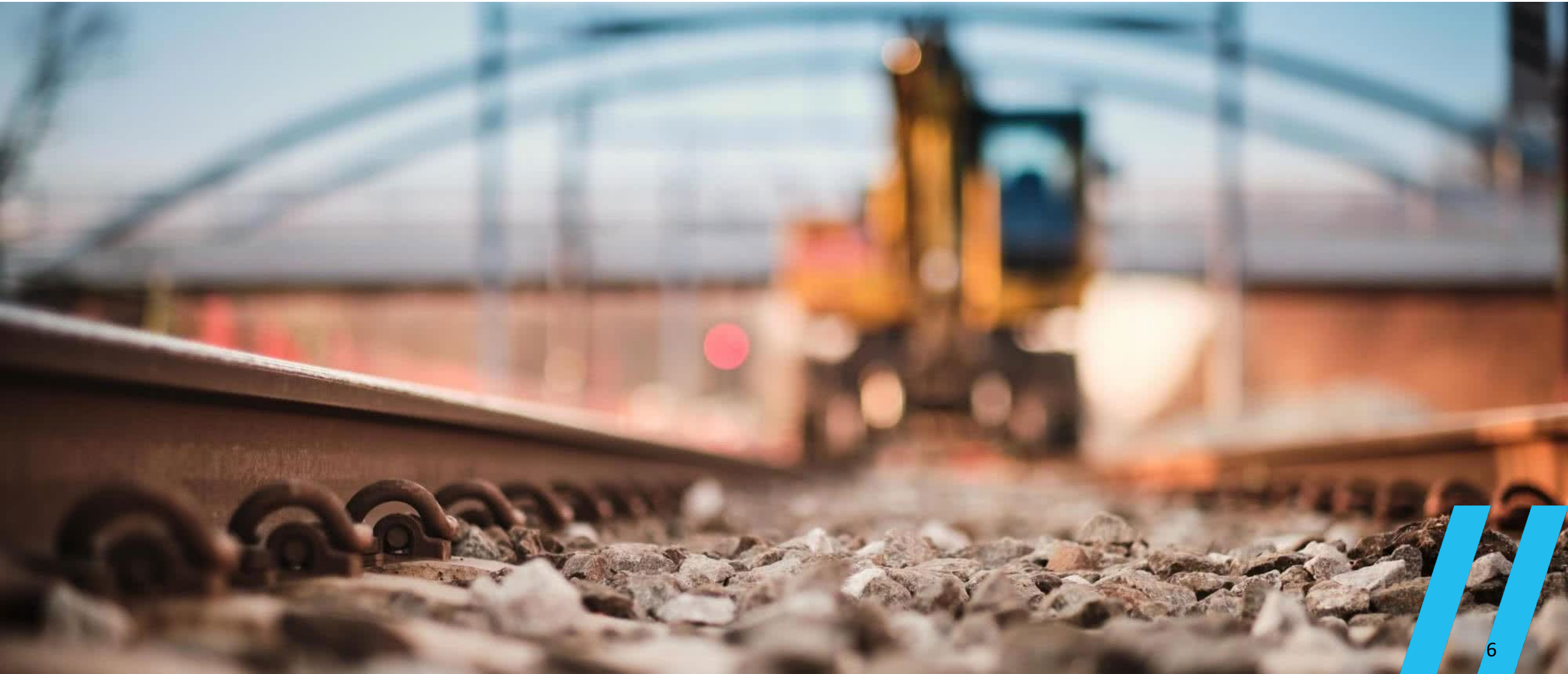
62,700,000 tonnes of goods transported by rail in Belgium in 2018

The Infrabel organisation





II. Where we come from



1. HOF evolution over 25 years

I. Integration of the law of Well-Being at Work (1990-2000)

Procedure of 3 green lights carried out by the Health & Safety advisor

1. Order (determine requirements)
2. Reception (verification of requirements and documentation)
3. Start-up (checking to meet requirements and the safely use)



2. HOF evolution over 25 years in Infrabel

- II. Awareness of the need for a safety culture
Buizingen accident and recommendation of the parliamentary commission
- III. Integrating psychology into safety management
- IV. The notion of fault disappears
- V. Different attempt to put in place safety culture plans adapted and accepted by Infrabel
- VI. EU 4th Railways package



15-02-2010



III. The path we are drawing



1. Starting point of the new HOF and safety culture project

I. Ergonomic approach

- Observing
- Questioning
- Understanding together

II. Set up a list of expectations together

- Trust
- Return of experience
- Event analysis technique
- Regulation (monitor design and use)
- Management model

2. A starting plan

Pôle	Pôles d'activités	Objectifs
1	Leadership	Develop a pro-active strategy
2	Just Culture	Make it easier to get feedback
3	HOF Analysis of Events	Better understanding safety events
4	REX	Maintaining the REX process
5	Rules	Making rules efficient

Pôle	Pôles d'activités	Objectifs
6	System	Gain an effective vision of Infrabel's safety culture
7	Risk awareness	Providing practical tools to improve human performance
8	Communication	Inform the organization and stakeholders
9	Support	Mastering the fundamentals of FOH in the organization and stakeholders

3. Priorities

I. Stabilization and consolidation of key elements

Leadership Just culture Learning organisation

II. Improve the achievements

Rex and Rules

III. Scientific exploration of needs

Measuring the safety climate

IV. Developing and maintaining skills

Disseminate the understanding of HOF

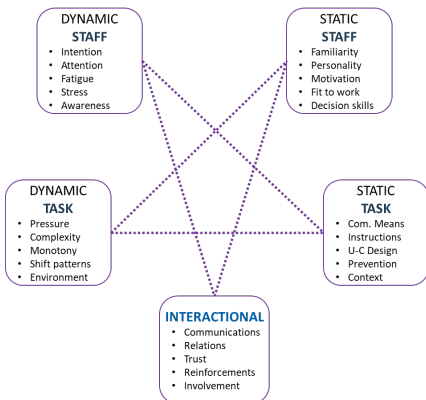
V. Integration development

Integrating HOF at the heart of the PDCA

4. Stabilization and consolidation of key elements

Safety policy

			Objectives	Actions
1		Leadership	Have a strategy based on systemic improvement of security	Develop a pro-active strategy
1	1		Understand management's expectations	Collection of managerial expectations 'Seeking support and coordinating our visions with the needs of management' Meeting with Bultinck
1	2		Establish by Excom a "safety culture" vision	Deliver ERA leadership training and communicate declared goals of excom leaders
1	3		Coordinate HOF plans and actions	Identify "safety culture" actions with other company actions
2		Just Culture	Facilitate feedback	Facilitate feedback
2	1		Facilitate spontaneous reporting	Activate the proposal to free speech
2	2		Involving stakeholders	Involve end-users/stakeholders a priori in day-to-day activities and in changes, adaptations, projects
3		Systemic HOF identification	Better understand safety events	Integration of HOF principles in event analysis
3	1		Helping to exploit Expros as a fundamental part of the REX	(Re) activate all Expro and improve expros
3	2		Integrate HOF into analytics	Develop and operate the 5x5 model
3	3		Make the Off Duty rule a FOH tool	Adapt Annex 2 of the "off duty" circular
3	4		Using the Safran method	Train and strengthen the use of Safran
3	5		Identify HOF in management and support processes	Auditing: safety leadership, risk assessment, change management, Organisational design, objectives, planning activities, staff competencies, live cycle of the assets, communications, evaluation and improvement, automation.



Involvement of stakeholders

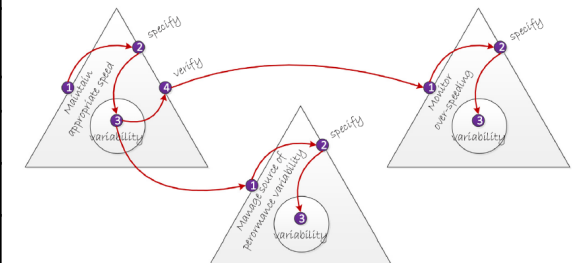


Fig. 4. Reference model for investigating over-speeding incidents, based on the SAFRAN logic.

5. Improve the achievements

PDCA

			Objectives	Actions
4		REX	Have a robust REX process	Improve the REX process
4	1	REX	Awareness of the REX HOF approach in the company	Communicate about the REX approach in the company
4	2		Feed the management review by the REX FOH	Feed the annual safety report with the results of the HOF
4	3		Follow up of the HOF risks	Set up a list of risks and HOF measures in the company
5		Rules	Having efficient rules	Integrate rules n into all stages of the system's life
5	1		Having rules more adapted to the activity	Removing from the rules situations not or poorly managed
5	2		Have understandable rules	Train authors in intelligible/understandable writing

Rules closer to reality

6. Scientific exploration of needs

ERA-SCS

			Objectives	Actions
6		System	Gain an view of Infrabel's safety culture	Effectively feed business strategy
6	1		Conduct the ERA Safety Climate Survey	Carry out the survey as a partnership after proposal to the excom and have the ERA Proposal validated
6	2		Exploiting the results of the Safety Culture Climate Questionnaire	Analyze 1st safety culture assessment, and use conclusions for implement the safety culture strategy

7. Developing and maintaining skills

			Objectives	Actions
Practically	7	Risk awareness	Have practical tools to improve human reliability	Develop and offer practical FOH tools
	7	1	Publish the orange booklet	Develop and propose a booklet of golden rules
	7	2	Integrating the individual notions of FOH into fundamental training	Provide introductory training about individual HOF (Physical/Intellectual/Bias)
Familiarize	8	Communication	Inform the organization and stakeholders	Ensuring effective communication on HOF
	8	1	Share targeted information on HOF with internal stakeholders	Organize ways to familiarize stakeholders with HOF
Educate	9	Support	Master the HOF fundamentals in the organization and stakeholders	Develop the principles and requirements of a HOF competency management
	9	1	Master the basics of HOF by the organization and stakeholders (ongoing training)	Targeted information on FOH to internal stakeholders: offices, divisions...
	9	2	Master specific FOH concepts	Provide training
	9	3	Ensuring the effectiveness of actions	Ensure the proper coordination of actions and objectives between them.

8. Integration development

Integrate

			Objectives	Actions
6		System	Gain an view of Infrabel's safety culture	Effectively feed business strategy
6	3		Systematically integrate HOF into each risk analysis	Assist risk analysis teams so that HOF are systematically taken into account
6	4		Systematically integrate HOF into projects	Assist project teams in taking into account the HOF for each project/adaptation
6	5		Systematically integrate HOF into management procedures	Write the missing elements in the internal rules

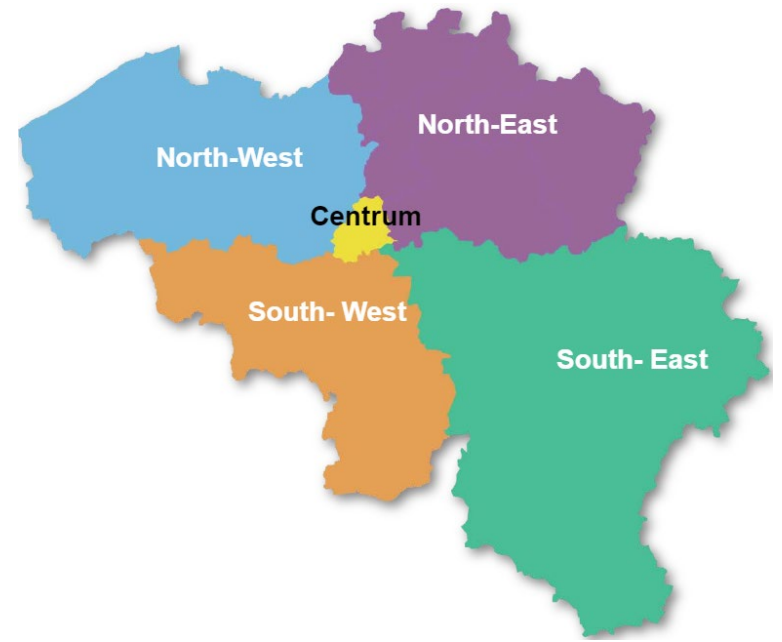


IV The heart of the plan





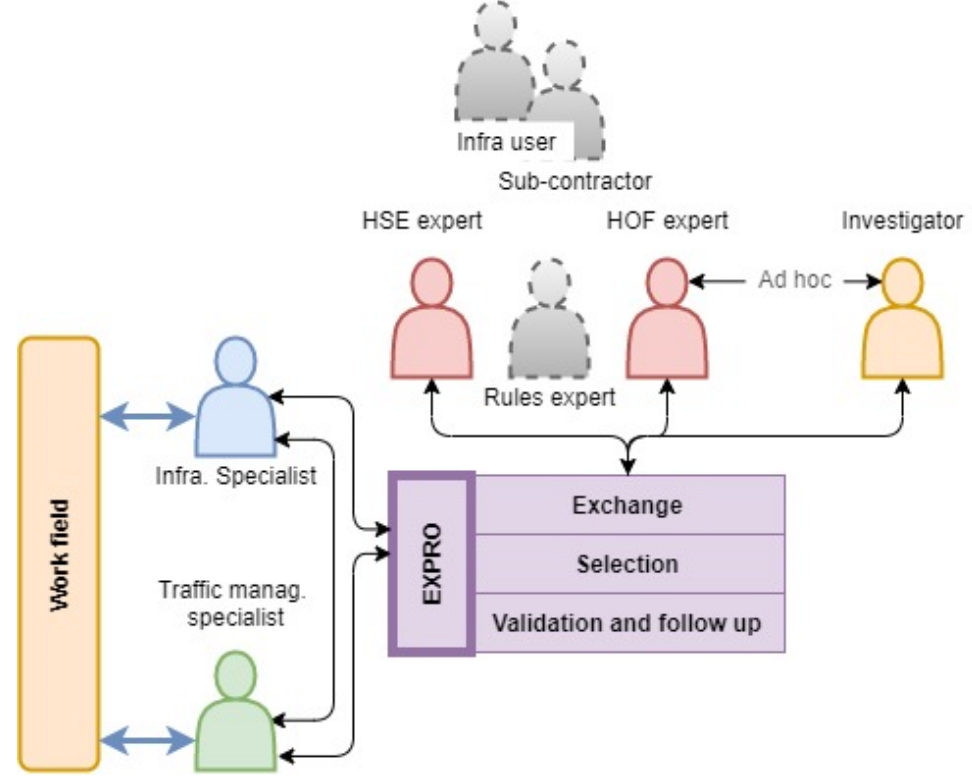
EXPRO



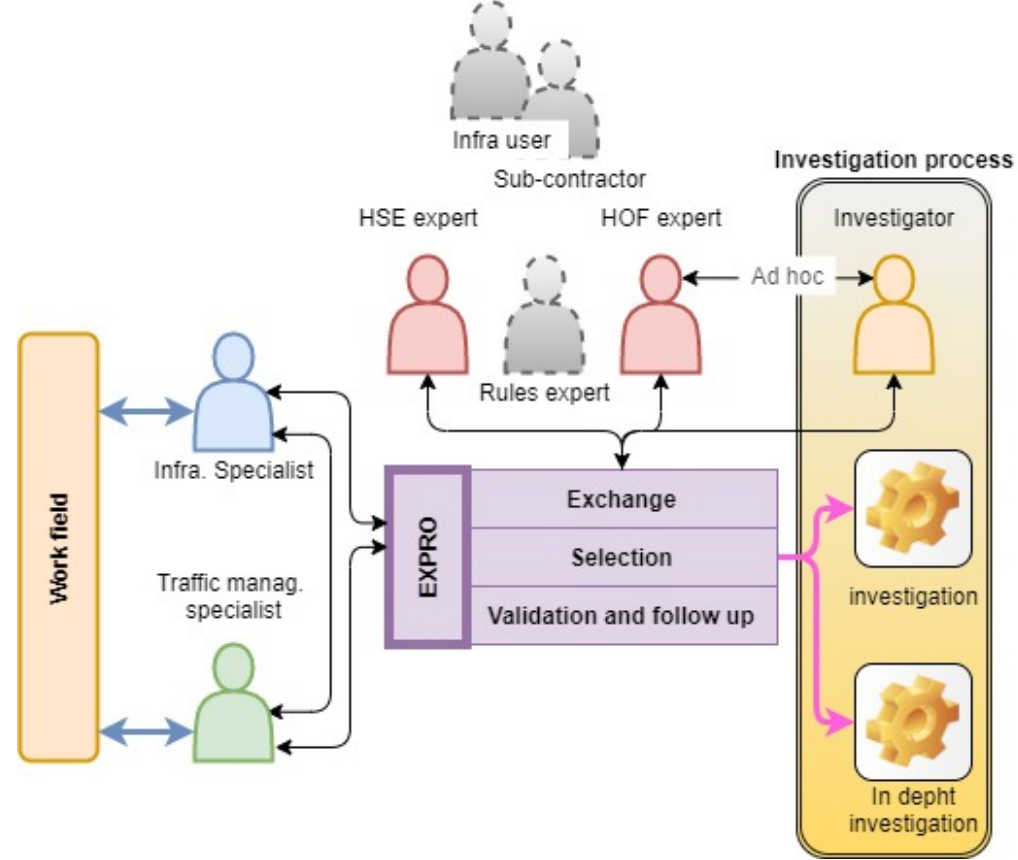
What to do?

EXPRO	Exchange
	Selection
	Validation and follow up

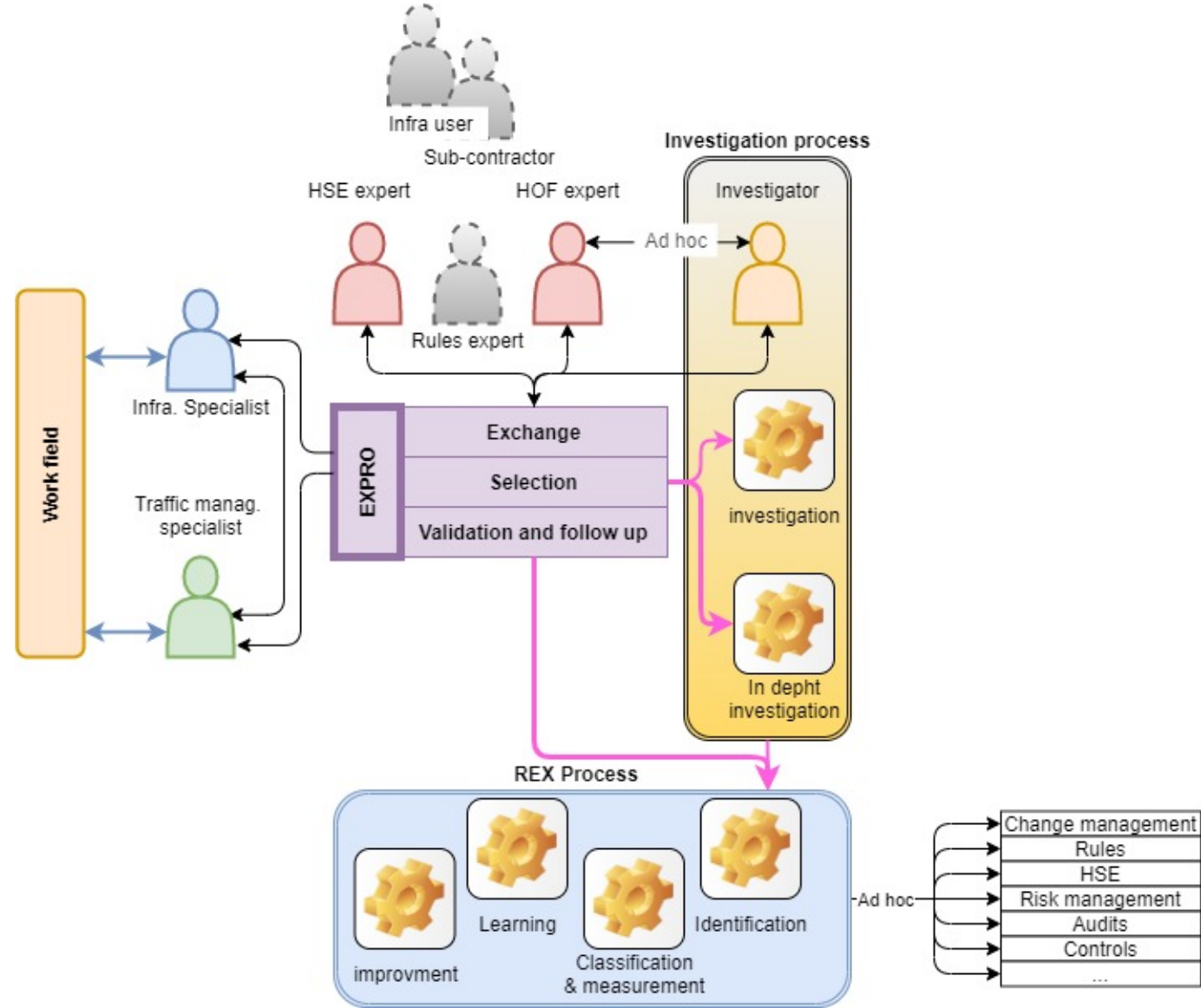
With who?



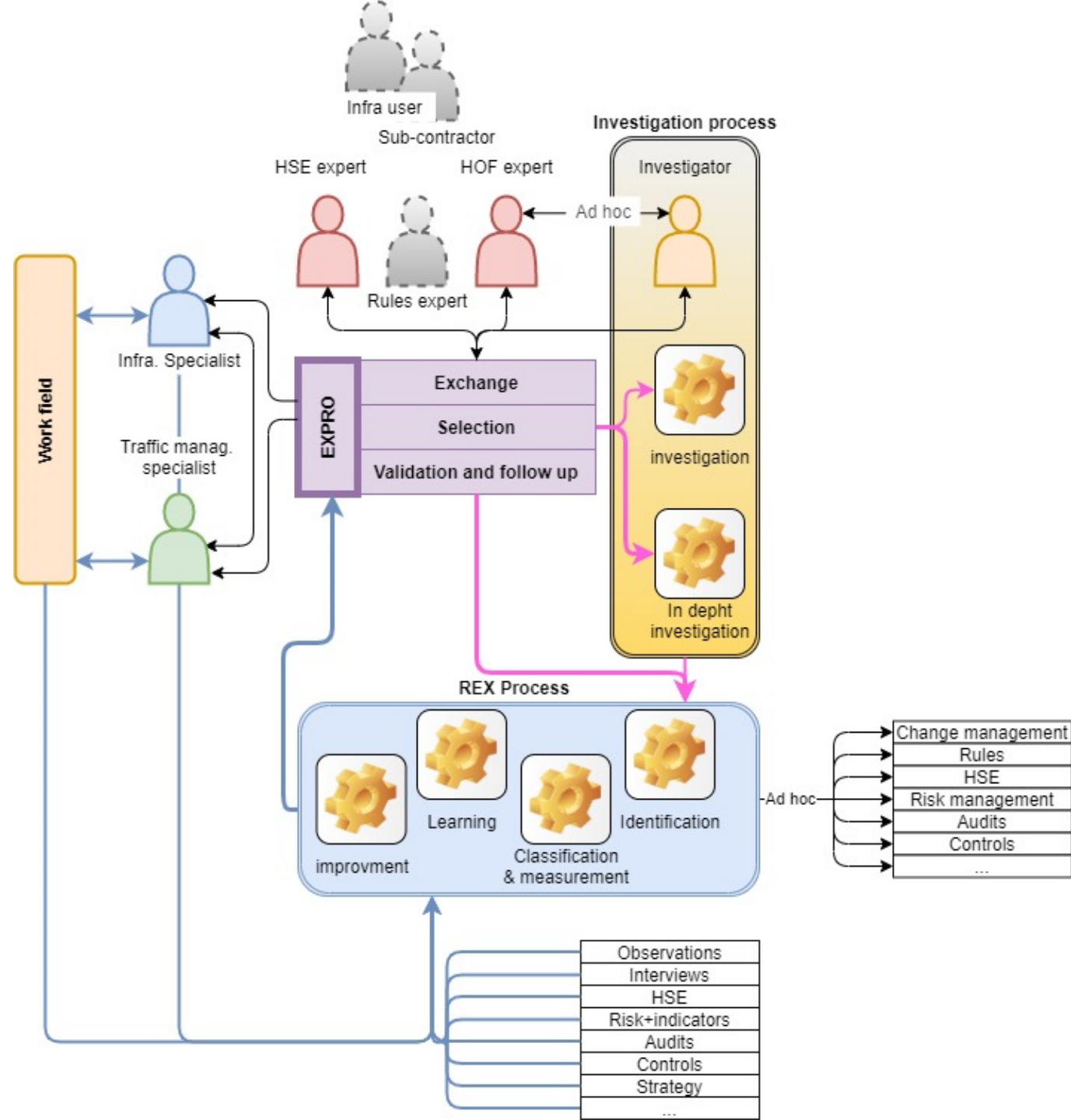
Understanding process



Return of EXperience process



Inclusive improvement process





1. First results

- Expro has not restarted in all regions
- In the regions already working with the Expro's
 - Colleagues become more interested and aware about HOF
 - Integration of the different actors is a positive point for the implementation of solutions/improvement
 - Information loop is shorter and then developing trust



Thank you for your attention

