# PROMOTING SAFETY THROUGH RESILIENT ORGANIZATION MANAGERS: DIFFERENT WAYS OF BEING RESILIENT

***Fabrizio Bracco*, Camille Brunel[#] Tommaso Piccinno*, Amel Sedaoui[#], Dounia Tazi[#]***

***[#] ICSI * DISFOR***

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# PROJECT'S OUTLINE

- Joint proposal between DISFOR and ICSI

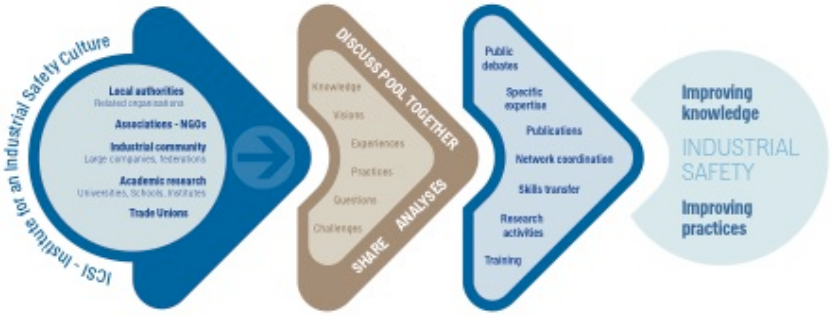
- SAFERA project objectives:
  - Promoting safety through resilient organization managers
  - Definition of the Non Technical Knowledge and Skills (NTKS) of a resilient manager
  - Development of a tool to assess the resilience attitudes of an organisation
  - Development of a training and tutoring package to enhance NTKS
  - Deployment and Testing of the training toolkit within industrial companies in France and Italy
  - Development of training of trainers toolkit and its deployment

# CONSORTIUM PRESENTATION

University of Genova
DISFOR
Department of Education Sciences

- Psychology research team investigating human factors and safety culture
- Long experience in safety research in:
  - Healthcare
  - Industry
  - Transports
- Current research in Non-Technical Skills for resilience


- French non-profit organisation (mid-2003)
- A crossroad between all key stakeholders concerned by industrial safety




Plurality is at the core of the ICSI approach

## RESILIENCE : LET'S DEFINE IT FIRST

"*A system is resilient if it can adjust its functioning prior to, during, or following events (changes, disturbances, and opportunities), and thereby sustain required operations under both expected and unexpected conditions*."

(Hollnagel et al., 2011)

## OUR ANGLE

- Resilience through its main ingredients : the capacity to notice, communicate and manage weak signals, before they transform themselves into strong and negative outcomes.
- Resilience as the continuous capacity to manage trade-offs

# 1ST IDEA : THE SAFETY EQUATION

- System's resilience depends on two factors : anticipating the foreseeable and managing the unexpected
- Successful safety intervention : Controlling the compromise and trade-offs between rule-based safety and managed-safety

**Ruled based Safety**

*Anticipate as much as possible known risks*

+

**Managed based safety**

*Coping with the unexpected*

=

**Industrial Safety**

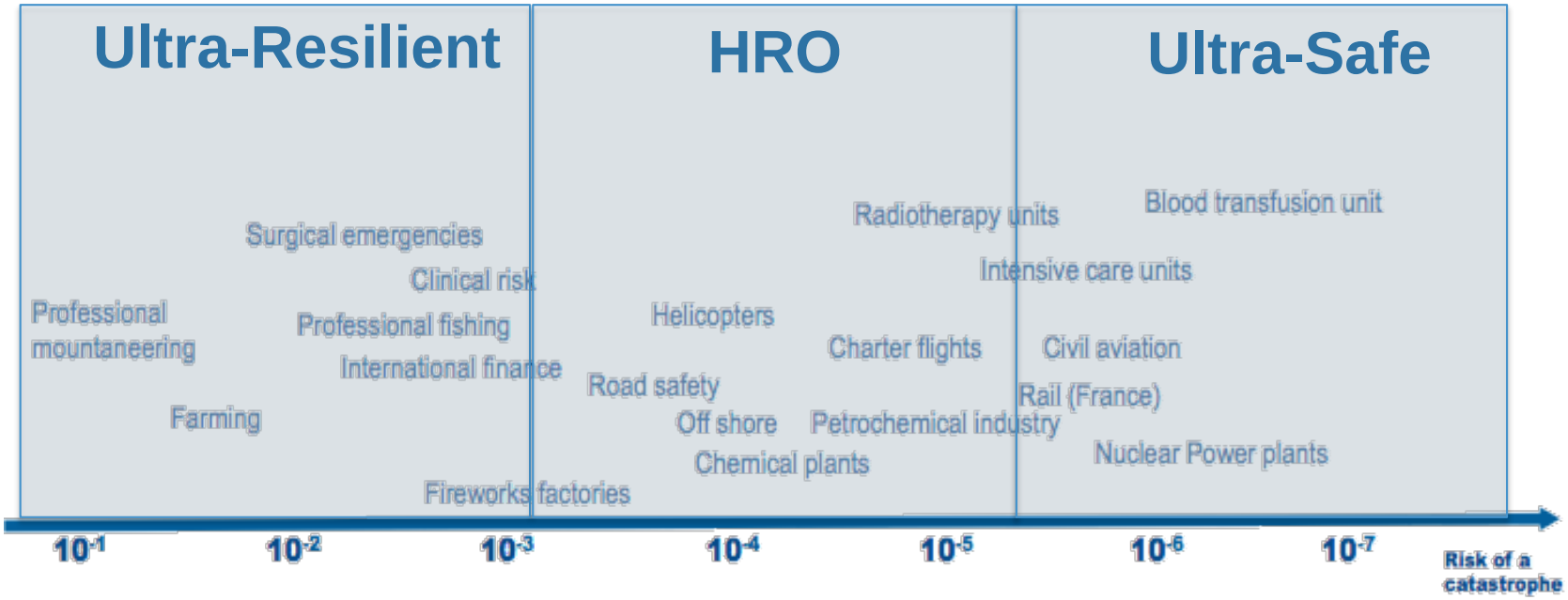
Micro-centred trade-off

*From R.Amalberti & G. Morel, 2008*

# 2ND IDEA : THREE CONTRASTED SAFETY MODELS RATHER THAN A UNIQUE MODEL THAT FITS ALL

ICSI
Institut pour une culture de sécurité industrielle

Macro-centred trade-off




***Highly exposed to risk***

Business model requires high risk exposure
Operators are trained to how to manage them. To survive this, there is a need for high expertise and initiatives

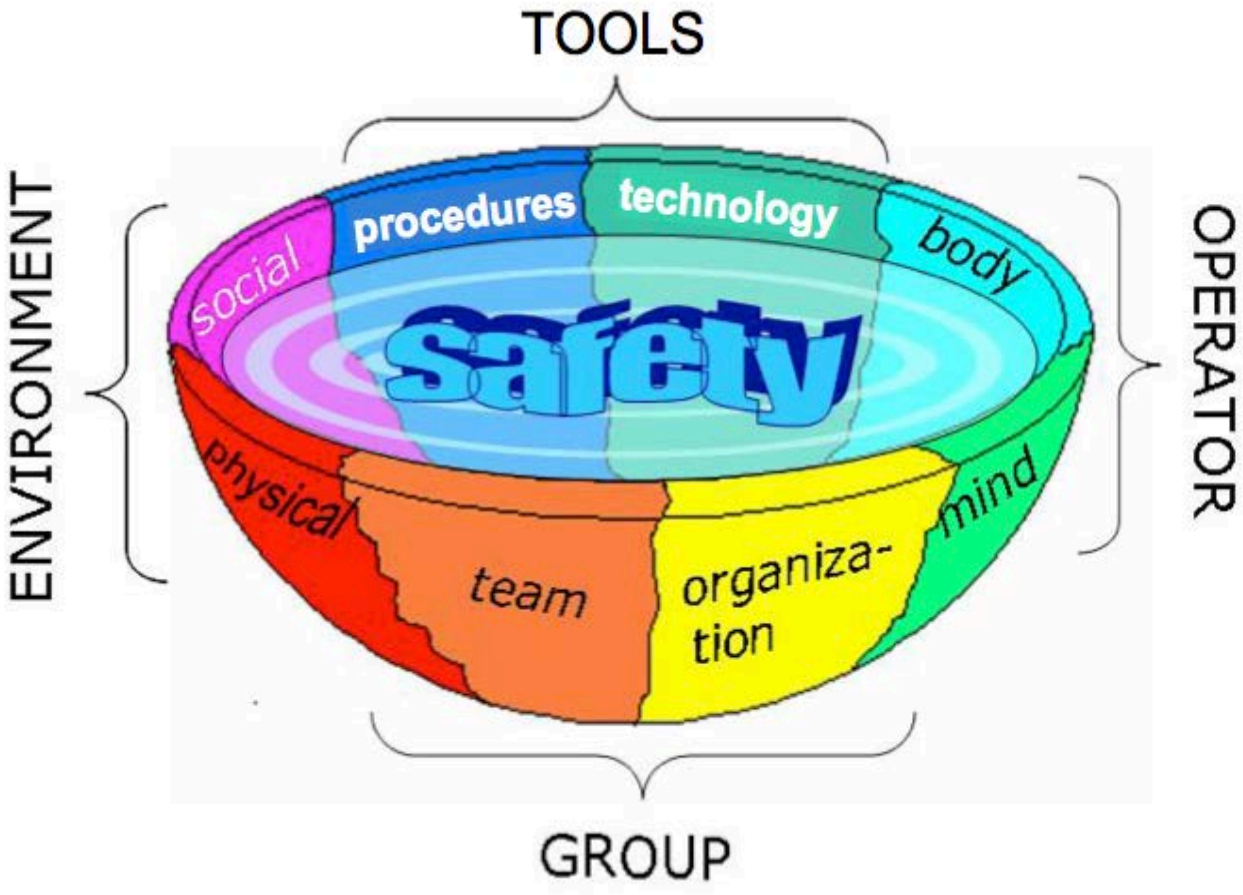
***Risk not sought but inherent to the activity***

Priority on teamwork, leadership, adaptation to unexpected conditions

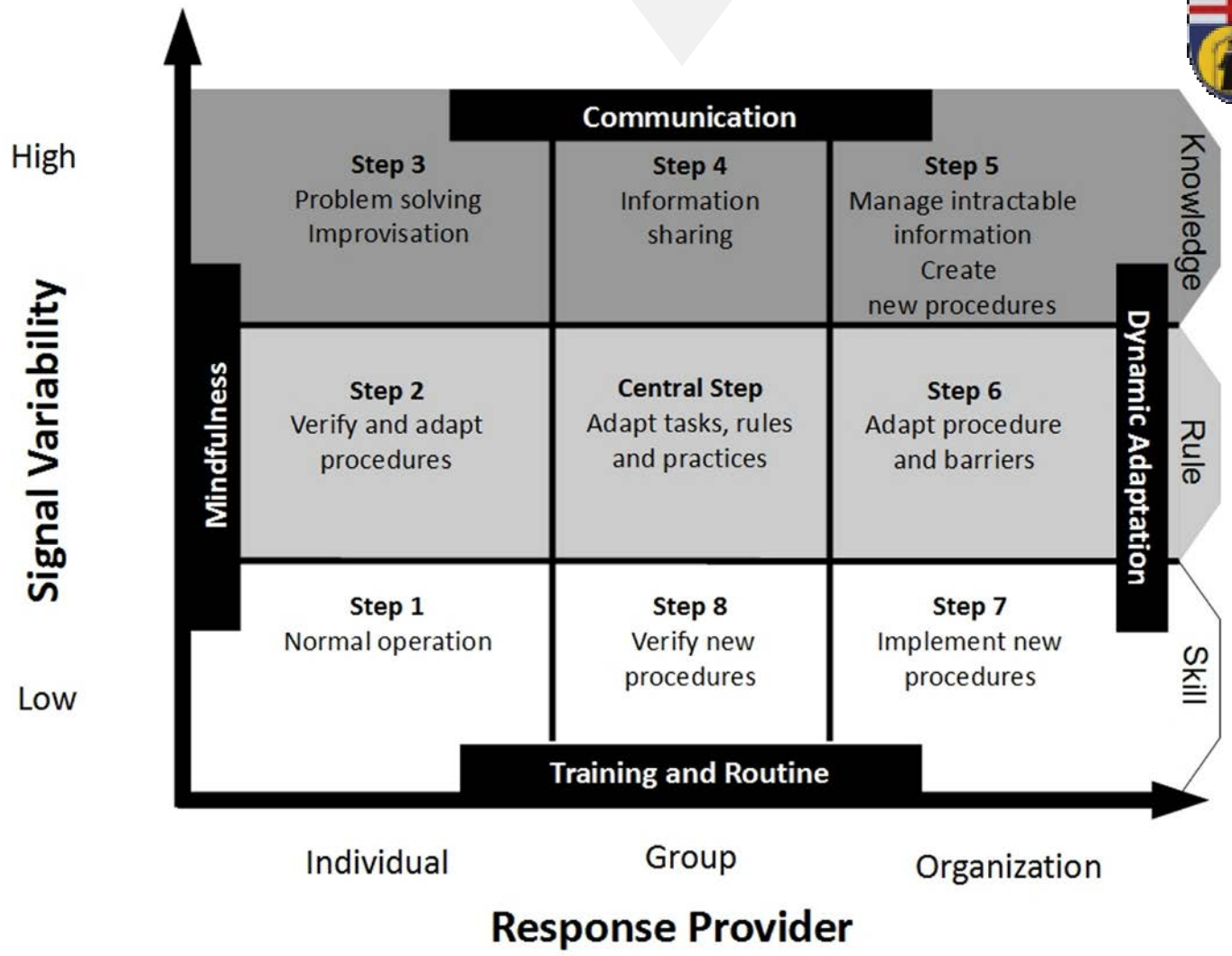
***Extremely protected from risk***

Operators are not exposed to risks (protection/avoidance) by means of a strongly organized / supervised work environment. Operators are expected to comply to rules

# 3RD IDEA : THE SAFETY BOWL – DYNAMIC INTERACTION BETWEEN COMPONENTS OF SOCIO-TECHNICAL SYSTEM



# 4TH IDEA : THE RESILIENCE MATRIX



# OUR JOINT MODEL

Micro-centred Trade-off

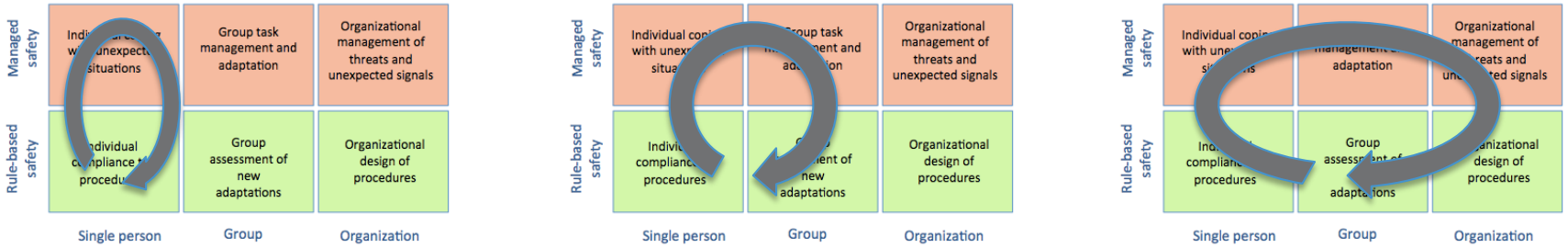
**Type of safety behaviours**

| | Individual | Group | Organization |
|---|---|---|---|
| Managed based safety | Individual coping with unexpected situations | Group task management and adaptation | Organizational management of threats and unexpected signals |
| Rule-based safety | Individual compliance to procedures | Group assessment of new adaptations | Organizational design of procedures |

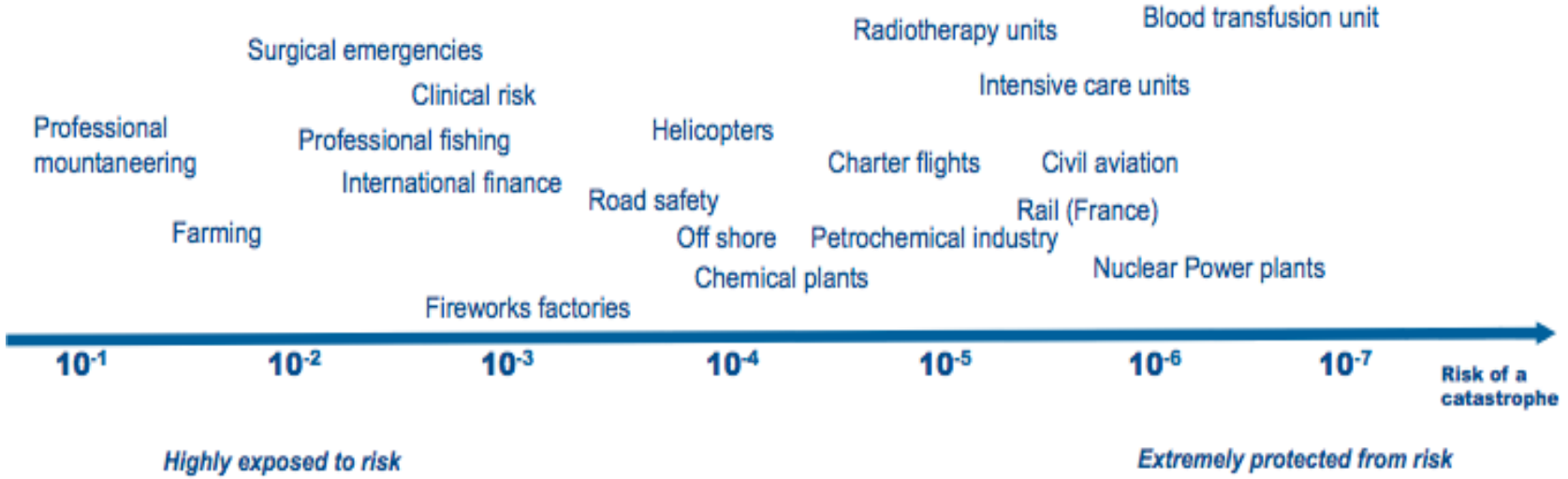
**Response providers**

Macro-centred Trade-offs

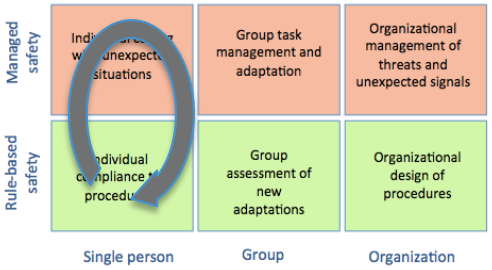
# OUR JOINT MODEL



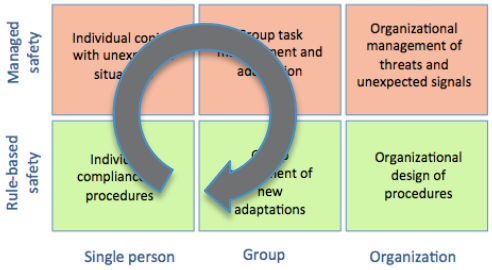

**Ultra-Resilient** **HRO** **Ultra safe**



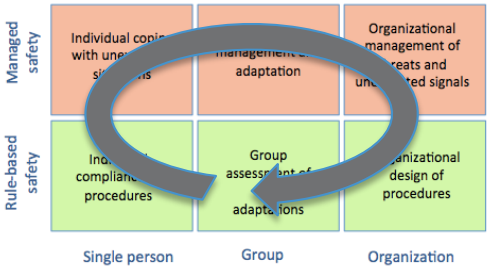
# SAFERA PROJECT: THE WAY FORWARD




**Ultra-Resilient**




**HRO**




**Ultra safe**

- Investigation of the NTKS, required from each resilient manager, in each safety model
- Test and validation of the training toolkit
- Training methodology suitable and tailored for each system

# THANK YOU FOR YOUR ATTENTION !

fabrizio.bracco@unige.it

Questions ?