



ISTITUTO NAZIONALE PER L'ASSICURAZIONE
CONTRO GLI INFORTUNI SUL LAVORO

SCIENCE-BASED POLICY MAKING IN OCCUPATIONAL SAFETY AND HEALTH

Scientific workshop

Parlamentino Inail

via Quattro Novembre, 144 – Roma

12 ottobre 2023

An evaluation exercise: a composite indicator to measure the OHS maturity of companies

INAIL

**Dimeila - Sezione Modelli organizzativi e sostenibilità
CTSS - Consulenza tecnica salute e sicurezza**

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Roma 12 ottobre 2023



“Methodological proposals and pilot investigation aimed at creating a model for the impact assessment of economic incentives for small and medium-sized enterprises for the improvement of health and safety levels in the workplace (ISI Calls) “

SURVEY

- **Beneficiaries**
- **not beneficiaries**
- **non-participants**

IMPACT ASSESSMENT

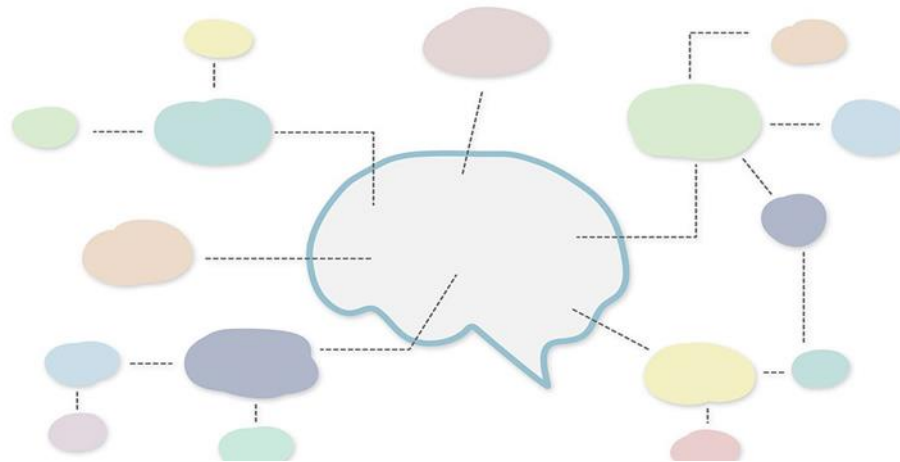
**Counterfactual impact
evaluation**

In-ISI



survey

Composite indicator of companies' OHS level

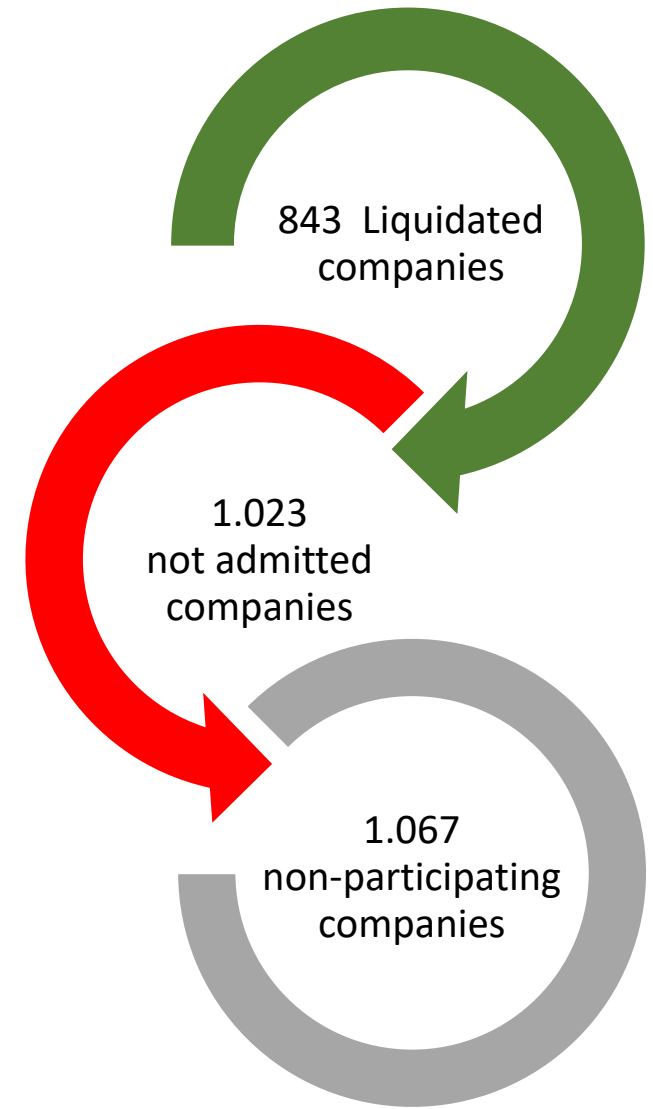


In-ISI



Survey

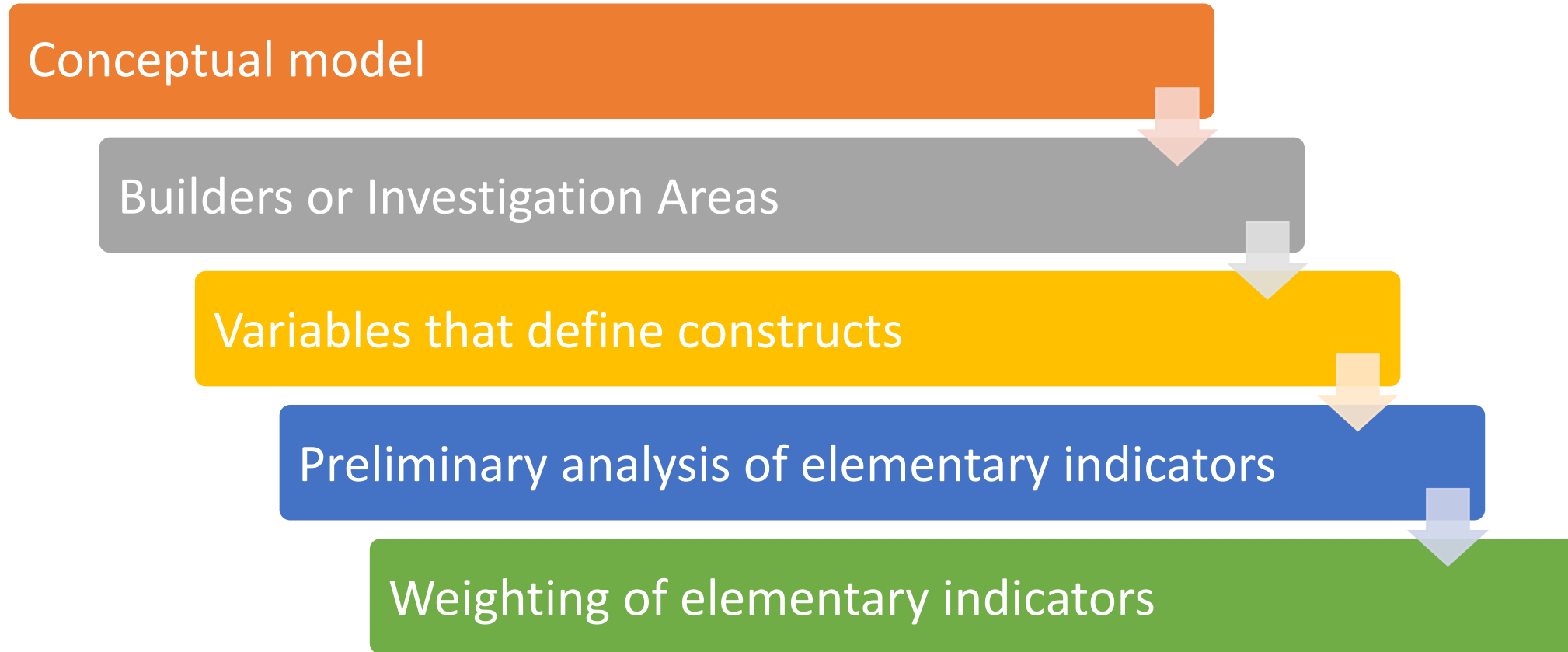
VALID INTERVIEWS
2933



Composite indicators

- ✓ They can not only represent a phenomenon but also be used as criteria and methods to arrive at an evaluation.
- ✓ They can indicate indirect measurements of complex phenomena that cannot be measured directly

COSTRUZIONE INDICATORE COMPOSITO



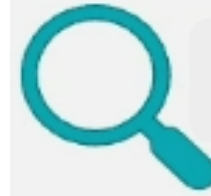
BUILDERS

Vision

Involvement

Training

Management



knowledge



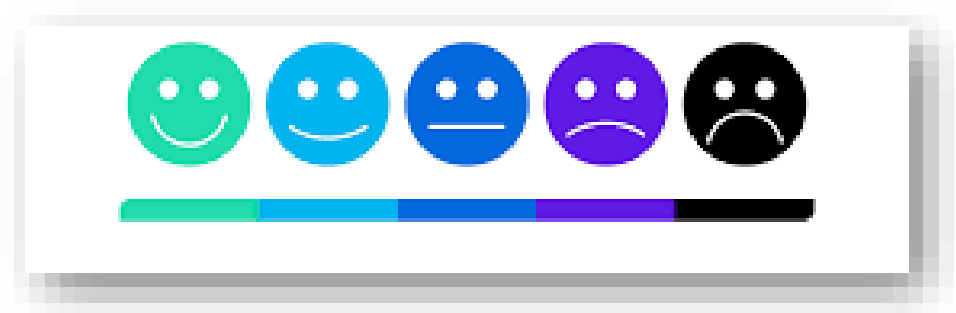
Implementation

SCALE

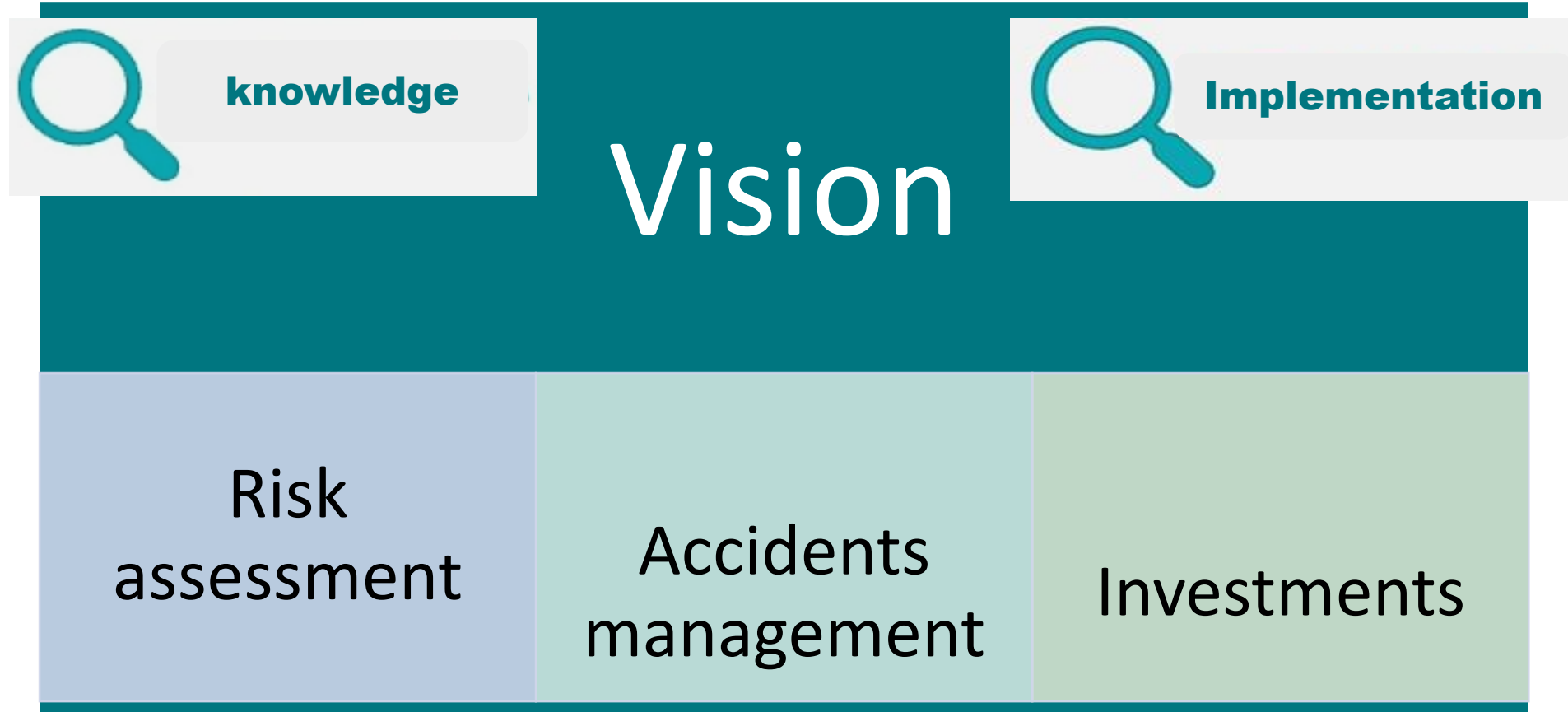
We used a 5 points scale

Each of the possible answers is associated with a score which generally ranges from 1 to 5

- ✓ 1 and 2 are negative values
- ✓ 3 is a sufficient value
- ✓ 4 and 5 are very positive values

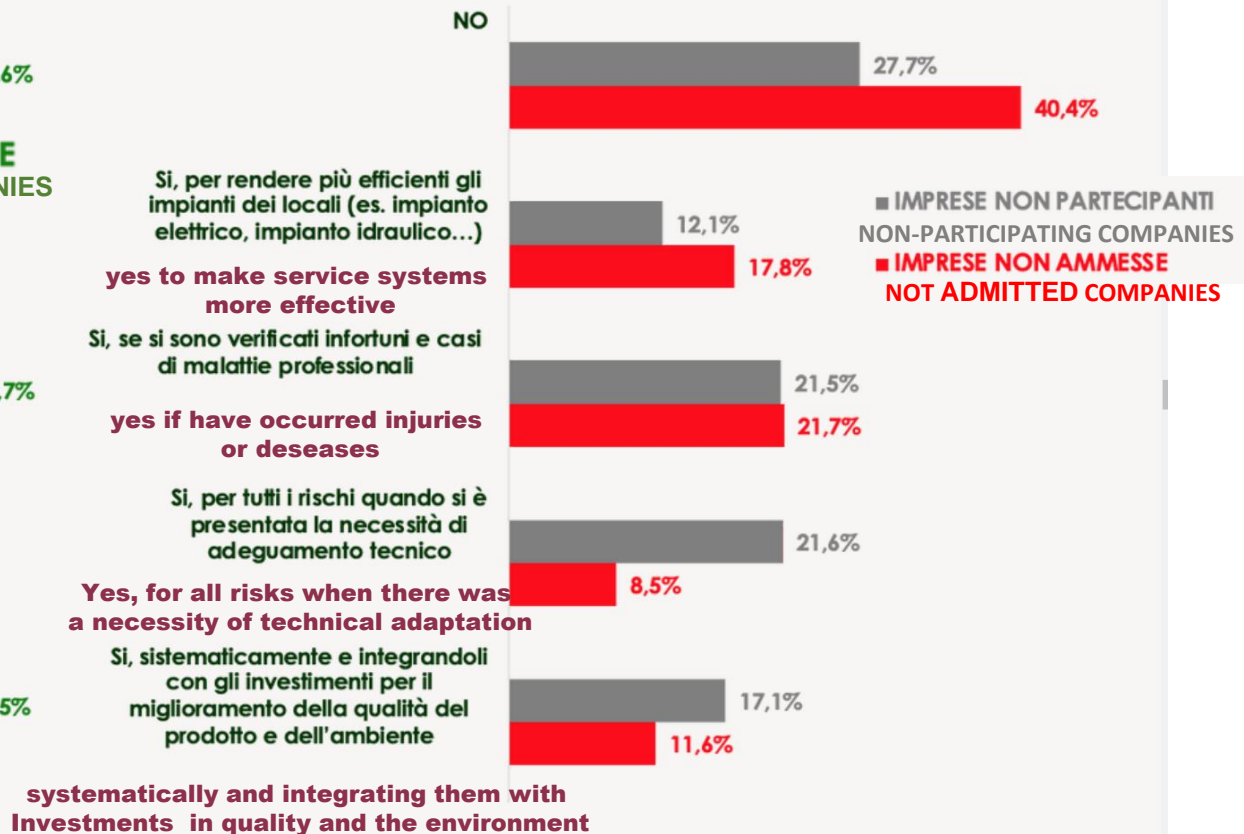
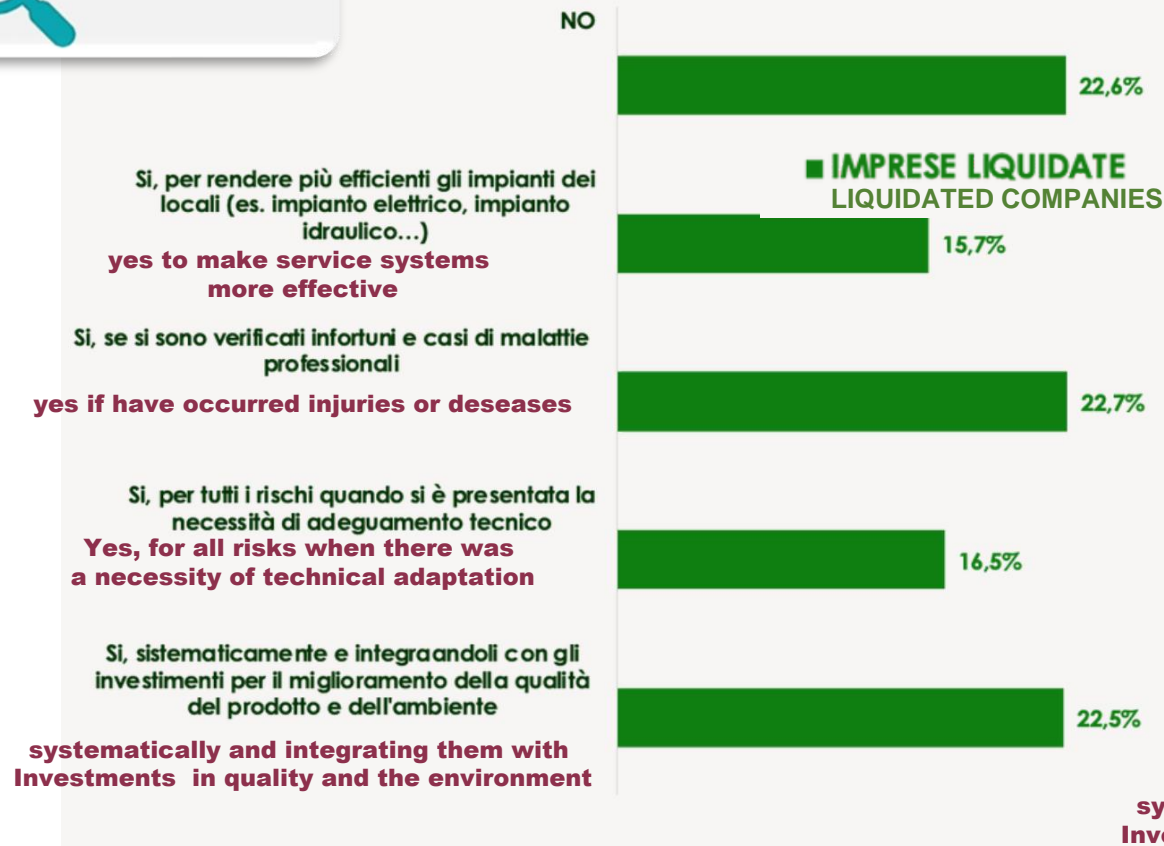


VARIABLES THAT DEFINE CONSTRUCTS

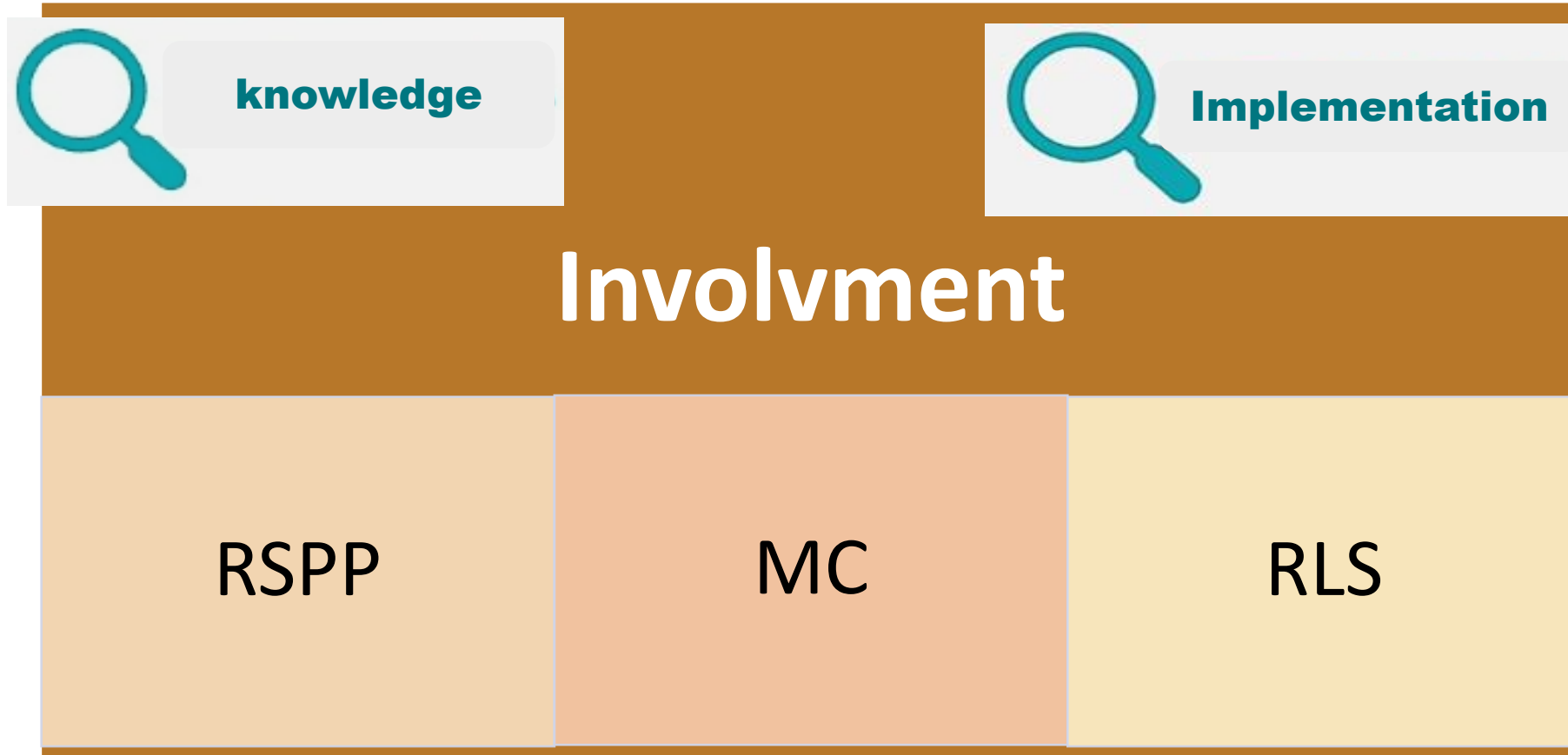


VISION

Has your company done investments in health and safety in the last 10 years?



VARIABLES THAT DEFINE CONSTRUCTS



HOW IS THE HEALTH AND SAFETY MANAGER USED IN YOUR COMPANY?

E' da lei interpellato ogni qual volta lo ritenga necessario in merito ai rischi
Is consulted whenever necessary

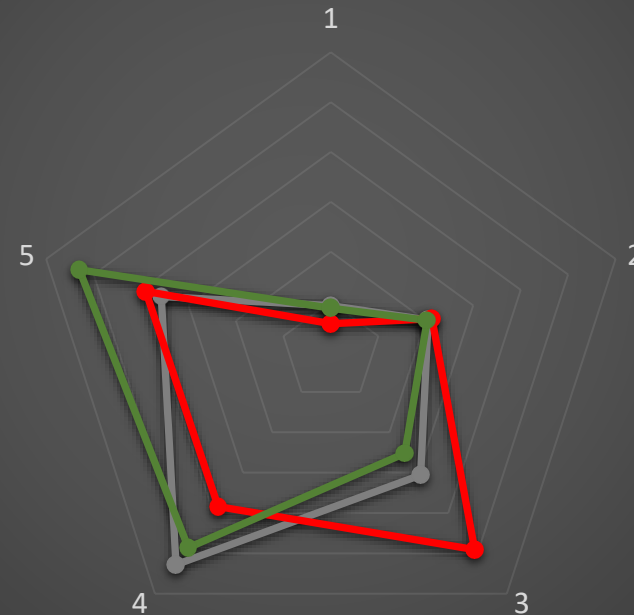
Visita periodicamente gli ambienti di lavoro e segnala eventuali non conformità
Periodically visits the workplace environments and reports any non-compliance

Fornisce supporto tecnico all'individuazione dei rischi
Helps identifying risks assessmentts

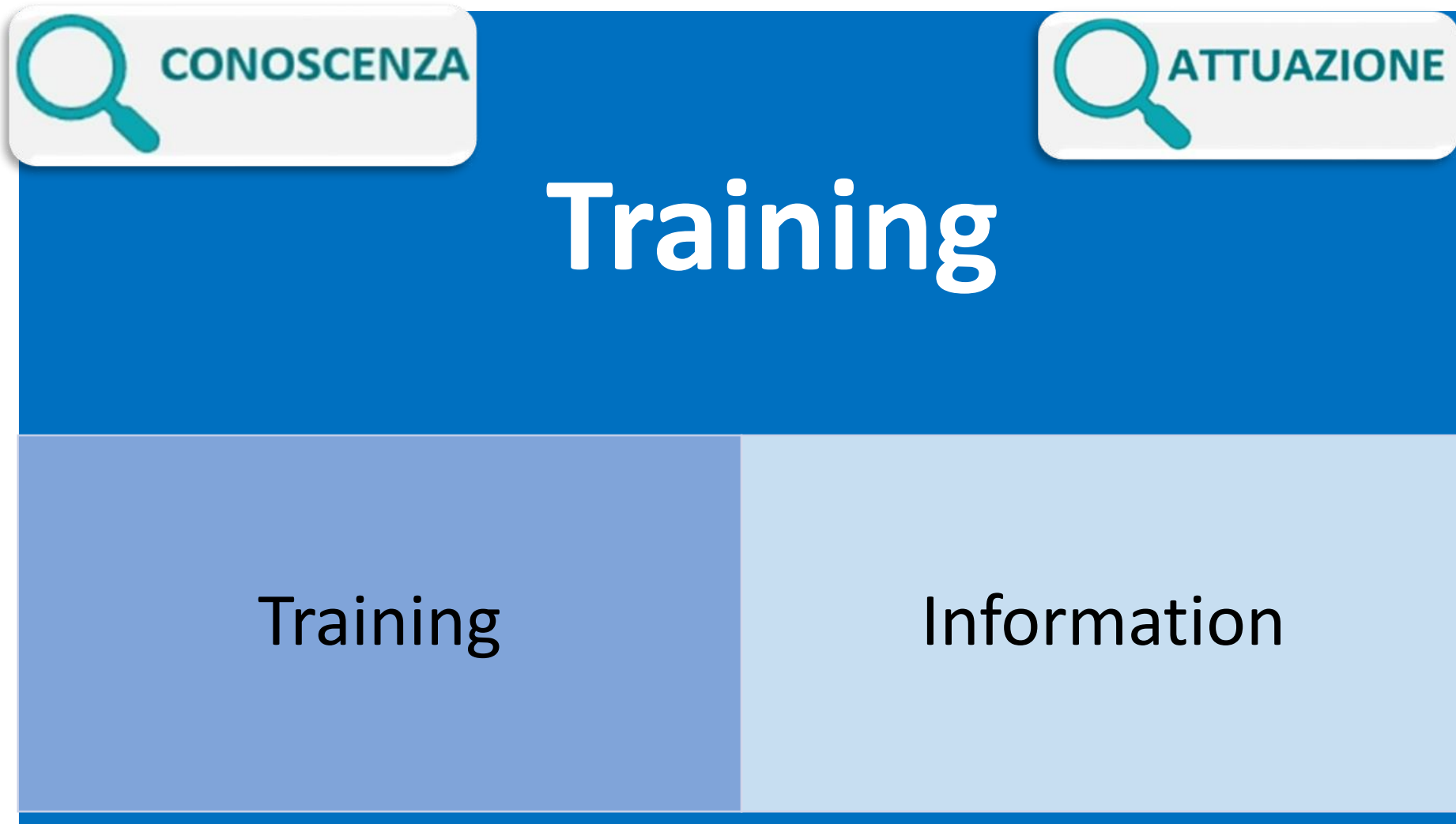
Collabora all'individuazione di misure di prevenzione e delle procedure di lavoro in relazione ai rischi aziendali
Collaborates in identifying prevention measures and work procedures based on company risks

Collabora alla programmazione dell'organizzazione del lavoro per la gestione della salute e sicurezza
Collaborates in the planning of health and safety procedures

NON PARTECIPANTI NON AMMESSE LIQUIDATE
NON-PARTICIPATING NOT ADMITTED LIQUIDATED

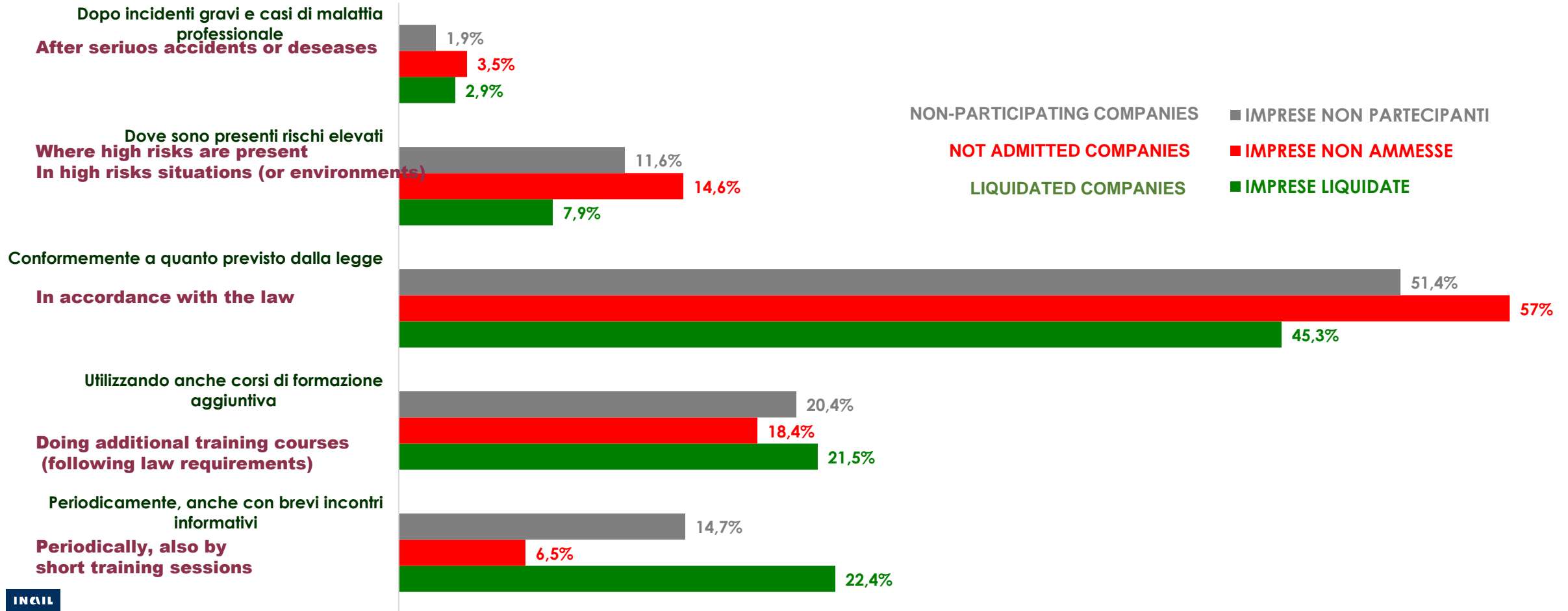


VARIABLES THAT DEFINE CONSTRUCTS



TRAINING

IN YOUR COMPANY THE HEALTH AND SAFETY TRAINING OF THE EMPLOYEES IS CARRIED OUT:



MANAGEMENT



knowledge



Implementation

MANAGEMENT

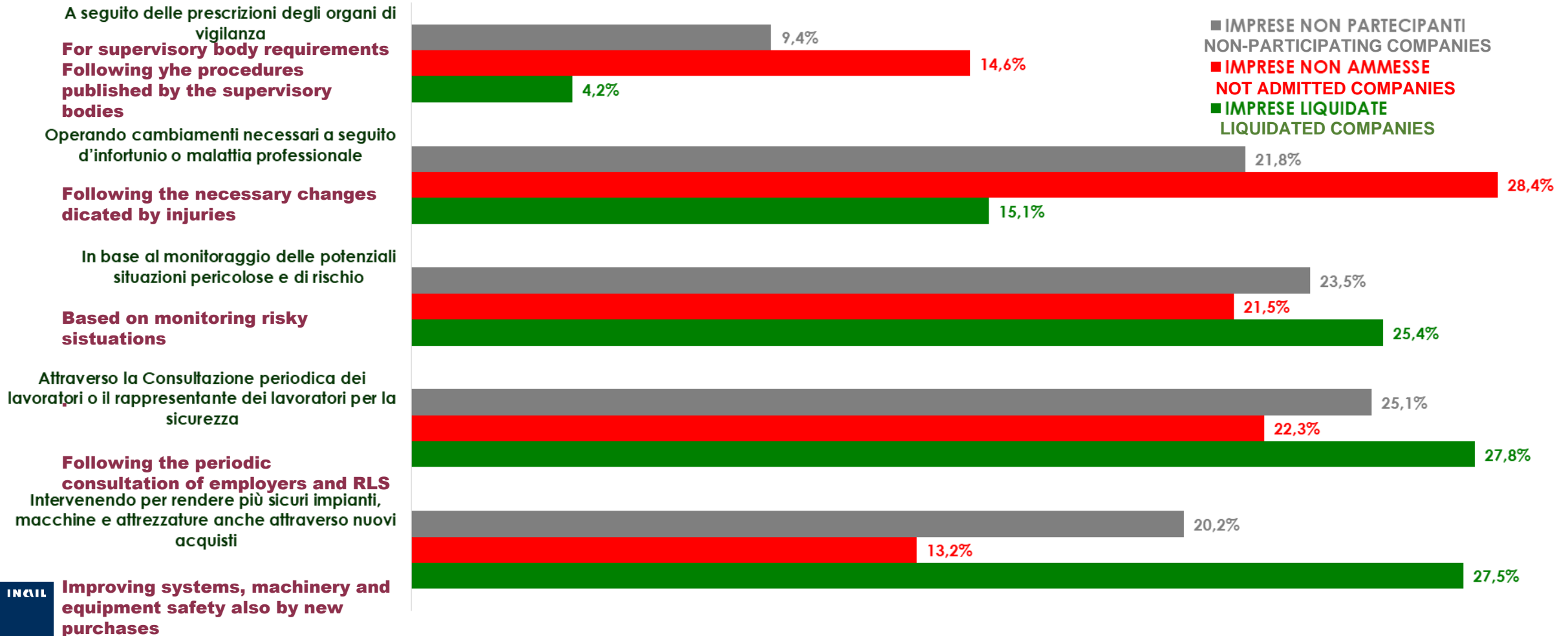
Operating
procedures

Emergencies
procedures

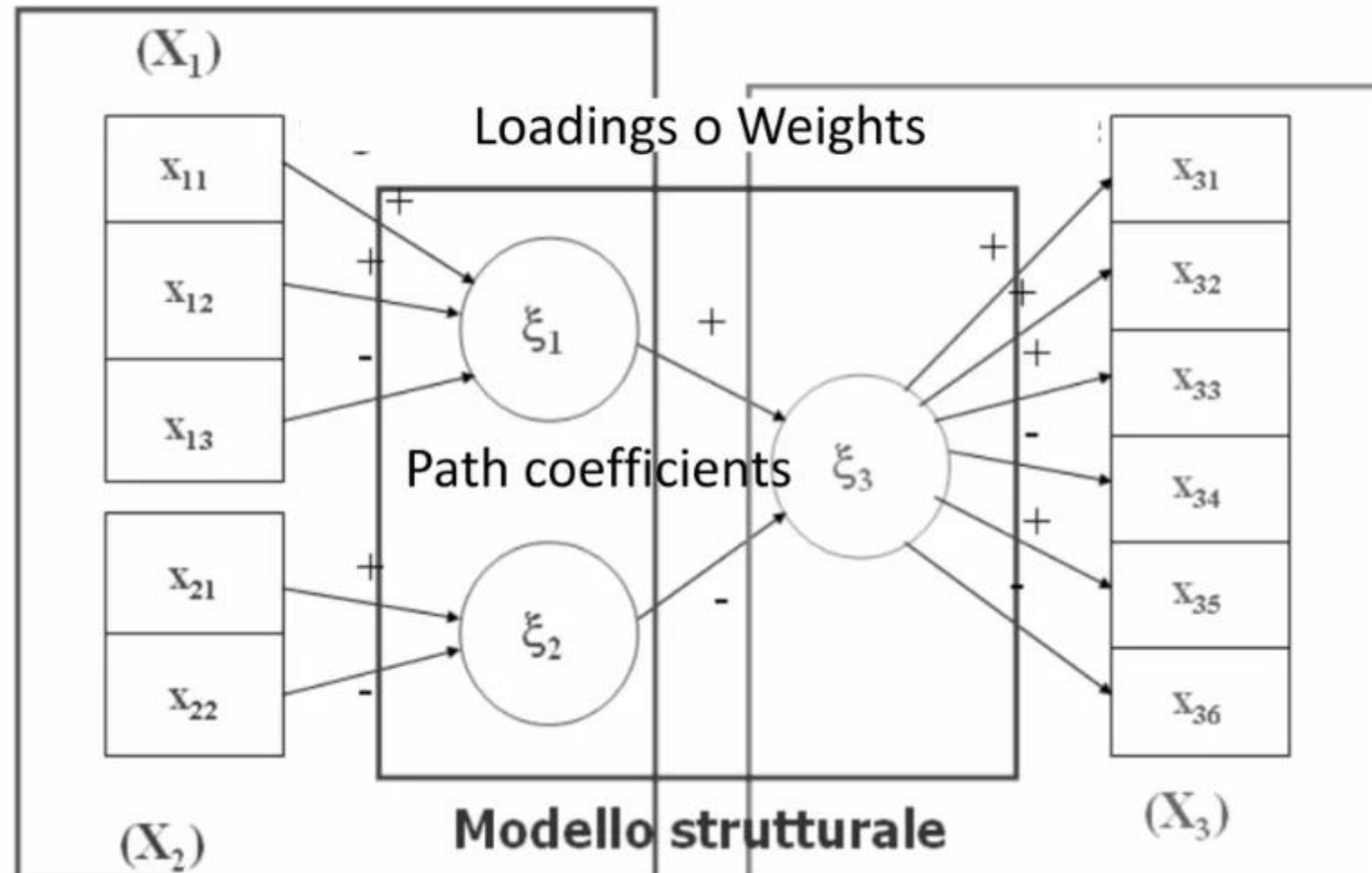
Improvement

MANAGEMENT

How do you improve health and safety measures in your company?



WEIGHTING ELEMENTARY INDICATORS



VISION

$$\alpha D_r + \beta D_i + \gamma D_m$$

D_r = Risk assessment

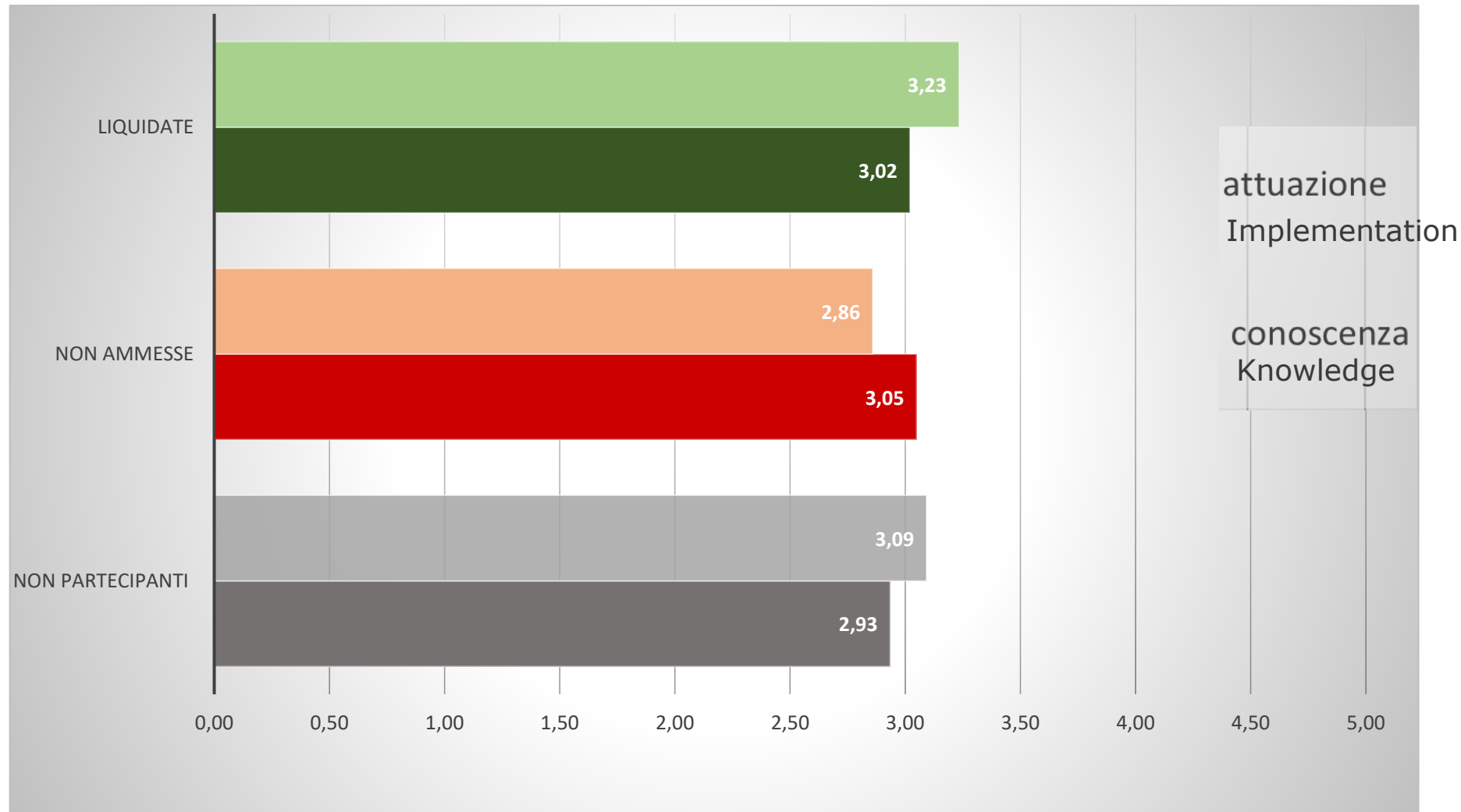
D_i = Accidents management

D_m = Investments

α , β e γ are the different weight given to the indices (1; 0,8;1,2)

We decided to give greater weight to OHS improvement policies

VISION



INVOLVMENT

$$\alpha \text{ DRLS} + \beta \text{ DMC} + \gamma \text{ DRSP}$$

DRLS = RLS

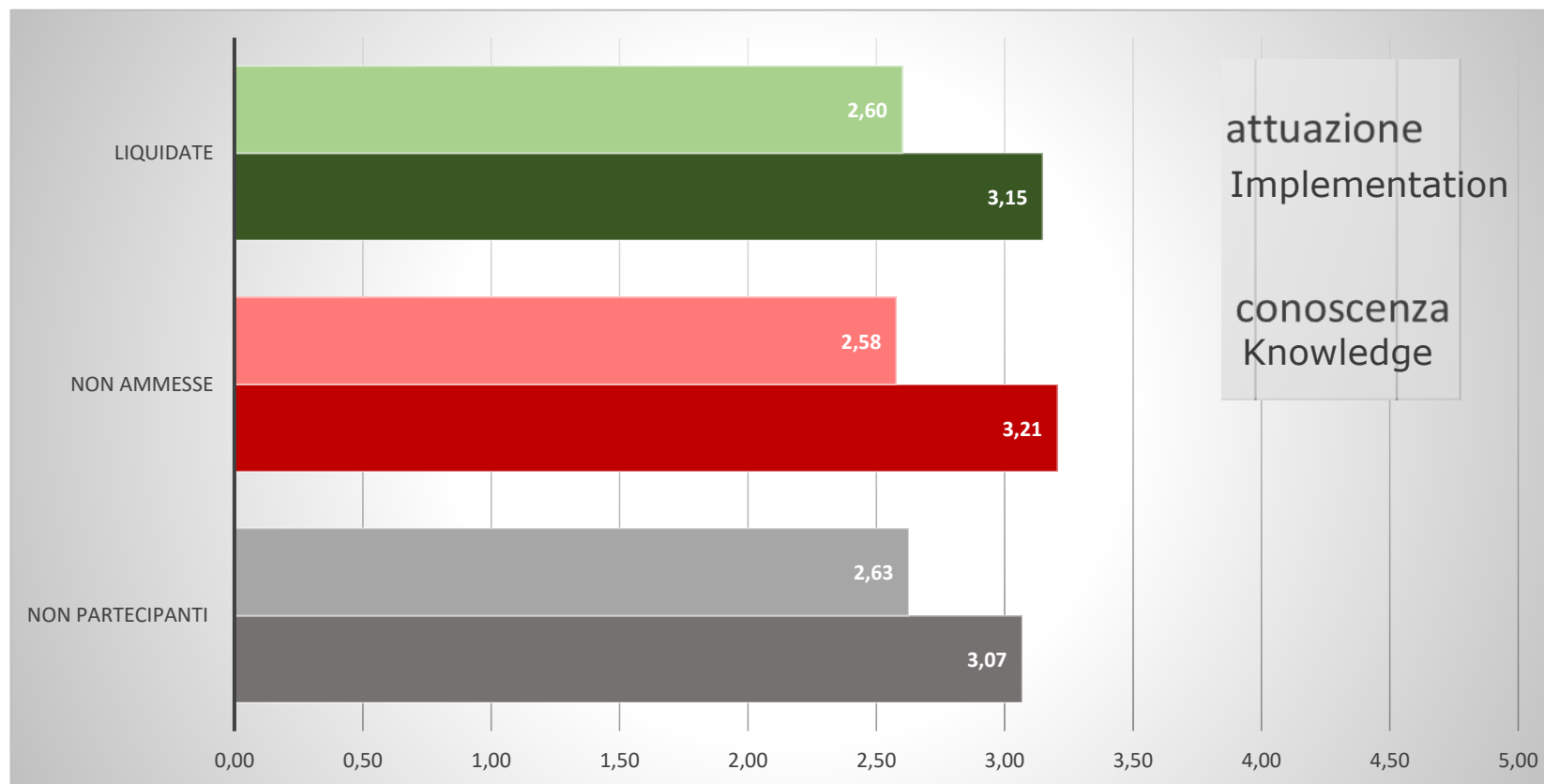
DMC = MC

DRSP = RSP

α , β e γ are the different weight given to the indices (1,2; 1 e 0,8)

We decided to give greater weight to RLS role

INVOLVEMENT



TRAINING

$$\alpha D_f + \beta D_i$$

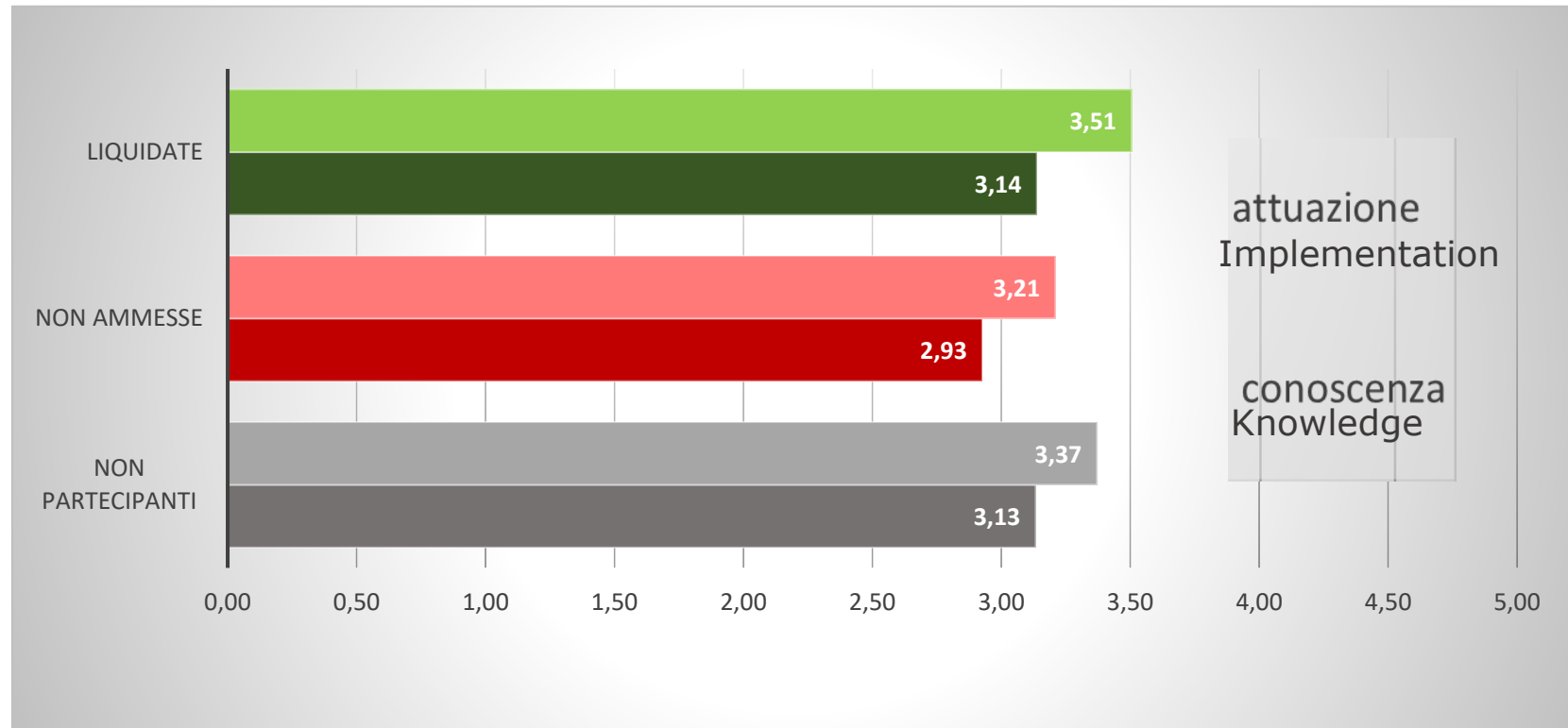
D_f = training

D_i = information

α e β are the different relevance given to the indices (0,8; 1,2),

We decided to give greater relevance to information compared to already widely regulated training

TRAINING



MANAGEMENT

$$\alpha D_m + (\beta + \gamma) D_g$$

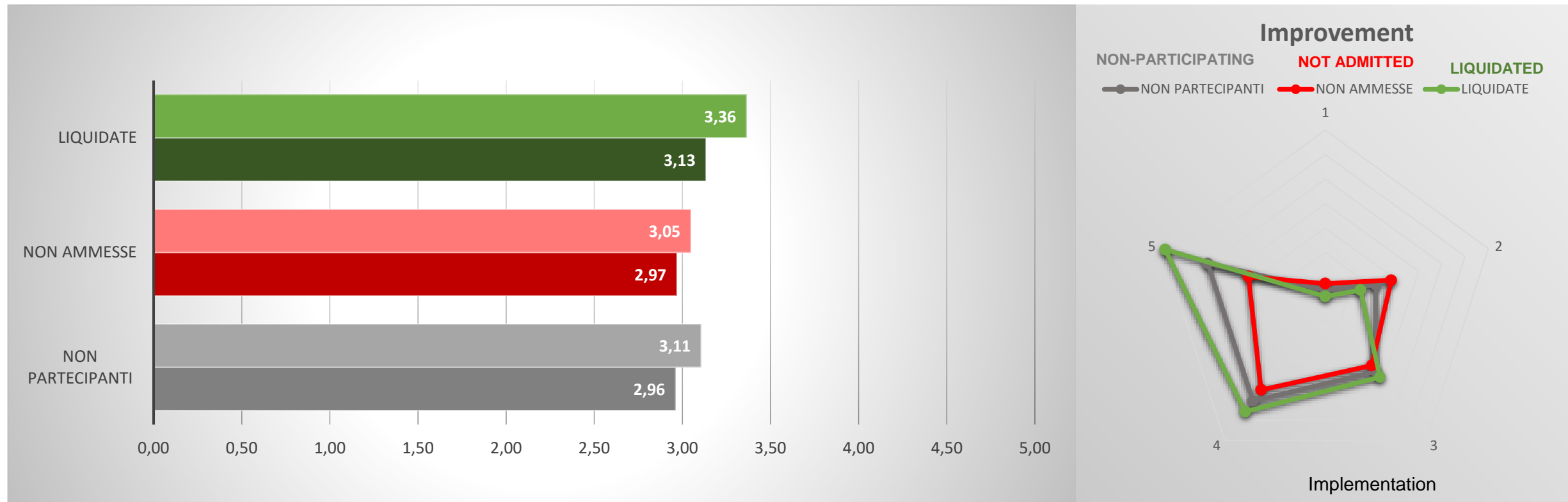
D_i = investments in OHS

D_g = management of OHS (work procedures, emergencies management...)

α , β e γ are the different weight given to the indices (1,2 for D_{20} and D_{21} ; 0,8 for D_{23} and D_{24} and 1 for D_4 e D_6)

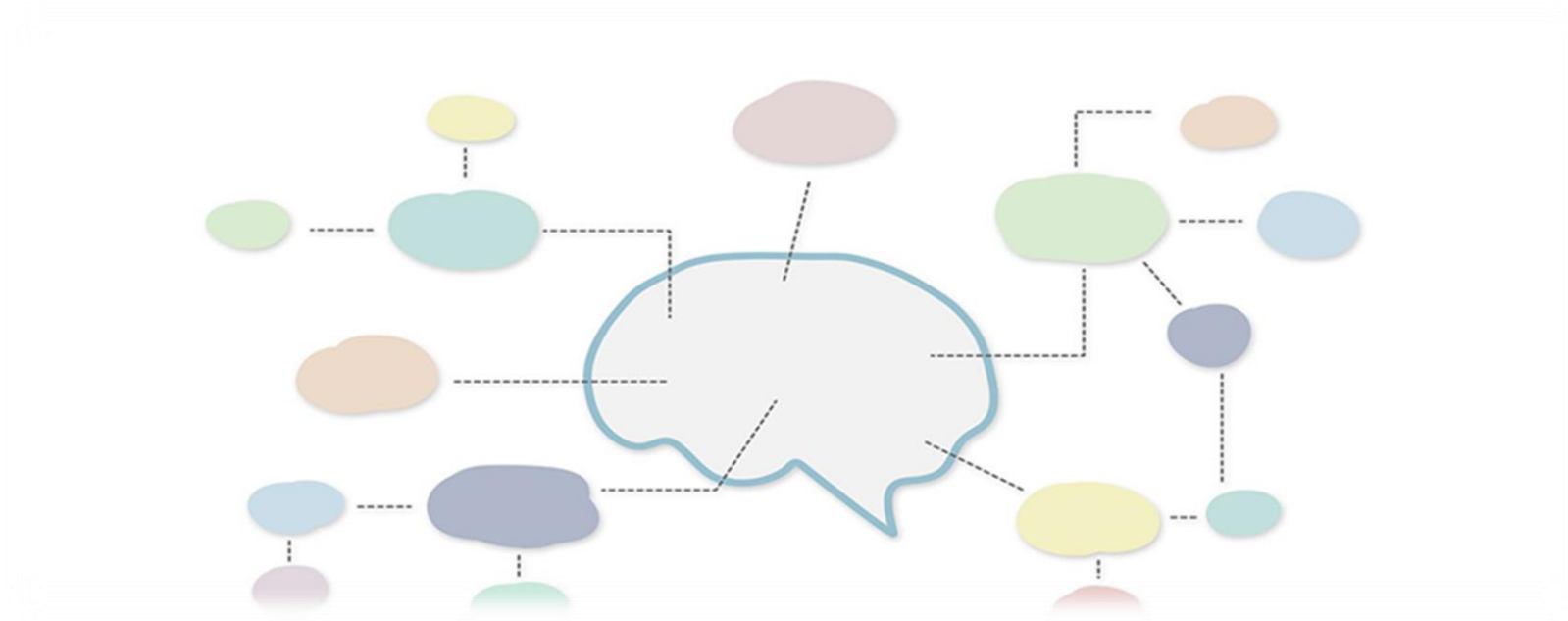
We decided to give greater weight to investment in OHS field

MANAGEMENT

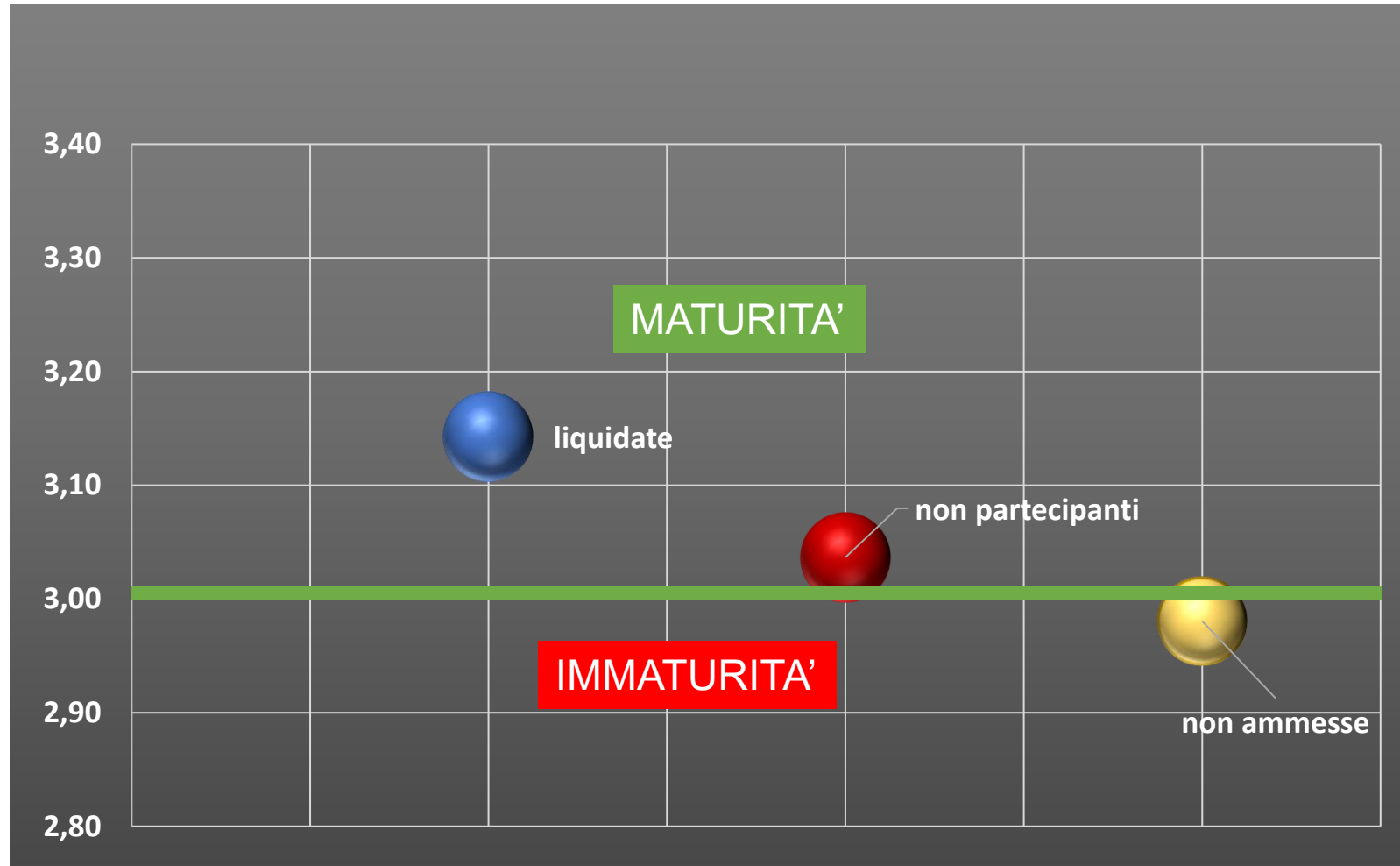


OHS INDICATOR

The OHS level indicator was obtained by averaging the four weighted indices.



OHS INDICATOR



OHS INDICATOR

- ✓ It may be useful to verify if the level of maturity of the organizations plays a decisive role in participation in tenders
- ✓ Adopted in future surveys, both ex ante and ex post, it can act as a conditioning variable to measure any ex post impacts (accident reviews) differentiated based on the initial maturity value
- ✓ Adopted in subsequent surveys, both ex ante and ex post, it can measure whether, compared to the pre-intervention, there are changes in the level of maturity



INCL

Thank you for your attention.