How to develop safety citizenship dynamics to increase the workforce participation in the safety promotion and improvement.

A research action conducted in BASF Italy

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Safety Citizenship - a research action
at the Pontecchio Marconi BASF Site*

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PROSAFE Project in Pontecchio Marconi

Cooperation between BASF PM and Industrial psychologists of the University of Bologna led to a Project named “PROSAFE”: the aim of the project is to tackle the willingness of each and every person to put in place proactive behaviour on safety at the workplace.

PROSAFE focuses on proactive mindset of each employee.
PRO-SAFE: Model background

HOW TO TRANSLATE OUR ORGANIZATIONAL COMMITMENT TO SAFETY INTO PROACTIVE CITIZENSHIP BEHAVIOUR?

- **Prof. Zohar** (member of the American Psychological Association, Academy of Management, Society of Industrial and Organizational Psychology, and Stress and Anxiety Research Society):
  
  “Safety Climate is a key element to enable people to generate proactive behaviour on safety, leading to a kind of Safety Citizenship”

- Human willingness and motivation to behave proactively on safety are key, especially in a multi-skilled and complex environment with a high level of flexibility

- PROSAFE is a model that highlights the weaknesses to be tackled, in order to improve the proactive behaviour on safety

→ Proactive safety orientation improves safety outcome
PRO-SAFE Project Pontecchio Marconi
Presentation Summary:

Section 1 - Organizational safety culture & climate.
Section 2 - Safety leadership: managers & supervisor as safety motivators.
Section 3 - Proactive motivations for safety.
Section 4 - Safety citizenship behaviors.
The concept of safety climate…

The emergent expression of the organizational culture for safety

“Safety climate is a unified and shared set of cognitions and perceptions held by workers regarding the priority of safety of their organization”

…it reflects the centrality of safety in every aspect of the organizational life:

- leadership/supervision, training, communication, team-work managements...

…it reflects the commitment by the top management toward safety of workers

- priority over competing operational goals such as production speed and costs

…it reflects the value of safety beyond the technological design of the workplace, roles and tasks.
The impact of safety climate…

Why is so important to be studied?

… it affects people intentions and motivations
(as it informs which kind of actions are really expected and rewarded!)

… it affects safety level of work behaviors

… it affects bottom-line / lagging indicators of safety
(e.g. accidents, lost workdays, money cost)

… over time, it may assumed as one of the best “leading indicator”
because it does allow to predict safety performance by organization before potential negative consequences

➡ Safety Climate affects people safe behaviors and safety outcome indicators
Safety climate measurement

How can be measured? Why it is so useful?

- Safety climate questionnaire analyzes 3 managerial dimensions generally followed to promote safety in the organizations:
  - a) declarative (i.e. informative/training tools; poster campaigns...)
  - b) active (i.e. inspections; penalties; audits...)
  - c) proactive (i.e. participation; collection of suggestions)

- Safety climate questionnaire can:
  - help to reveal areas of weakness in advance of adverse events
  - support proactive actions like risk assessment & hazards identifications
  - give practical indications to refine existing activities of risk management

→ Safety Climate predicts safety performance over time
"A broad set of behaviors by managers and supervisors which communicate the priority of safety of their organization"
Only “Authentic Leadership for Safety” express safety climate at every level of the organizations...

Safety climate is a multilevel phenomenon

- Managers, middle-managers and team supervisors are the primary agents of safety climate in organization (or safety motivators)

- At every hierarchic level of the organization, team-leaders are safety-gatekeepers because they can interpret, express and enacting the priority for safety in different ways

- You need to create alignment of leadership at different levels and areas of your organization

- Otherwise, employees develop conflicting values and behaviors

➡️ Leaders need to “walk the talk”: coherence in communicate their values!
“Authentic Leadership for Safety”: which behaviors?

**Standard-focused approach**

- CONTROL
- REWARD

Preventive Orientation

SAFETY COMPLIANCE

(lost avoidance)

**Participation-focused approach**

- COACHING
- SUPPORT

Promotion Orientation

SAFETY COMMITMENT

(safety improvement as a goal)

Survey 2010: Critical in Pontecchio plant!
Section 3 – Proactive safety orientation

“a broad set of cognitive-motivational states by individuals and teams which serve to proactively manage safety issues in the work-place like anticipate risks, prevent accidents, spontaneously create a virtuous process”

SUPERVISOR
AS SAFETY GATEKEEPER

SAFETY CLIMATE IN THE ORGANIZATION
Leading indicator

Values

Motivation

SAFETY CITIZENSHIP

PROACTIVE SAFETY ORIENTATION

Behaviour
Proactive safety orientation (PRO-SAFE model)

The model measures worker’s mindset for safety through surveys and focus groups, highlighting the area of improvement.
PRO-SAFE: Measure and weaknesses in PM

Each of the 6 psychology dimensions are fundamental to obtain/maintain a high level proactive safety.

In Pontecchio the main weakness was that people didn’t think they could really influence safety: equipment, processes, bosses, destiny...were, in their view, in charge for safety, not them or their peers: “Low perceived influence and responsibility over safety issues”.

PM outcome of survey: people delegate responsibility for safety
Section 4 - Citizenship for safety

“a broad set of extra-role behaviors which may not have necessarily a direct impact on injuries events but which helps to promote an organizational context which support safety attitudes and behaviors.”

In order to improve the organization, citizenship is more important than just compliance with existing procedure and standards.
8 safety leadership training sessions held by psychologists for shift/area leaders – 12 leaders involved. Mainly focusing on their role to increase participation.

16 focus groups, held by psychologists, involving operators to analyse near hits on field, as a way to implement a kind of “Safety Citizenship” – 64 people involved.

Peer advice on safety and leaders as coach.
Standard approach

- People assume they are trained and nobody gives advice or asks peers for best practice sharing
- Bottom-Bottom; Bottom-Up flows are sometimes seen as a threat or a waste of time by leaders
- Compliance, adherence to norms reinforced with reprimand more than with reward
- Issues are verbally communicated to leaders, bad feeling about doing it, fears of being finger pointed
- Registration of events, no reference to participative attempts

PRO-SABE approach

- Peers are checking and advising each other in particular for simple manual tasks
- Leaders as a coach, peers as a source of localized expertise, knowledge
- Structured rewarding, dinners, invitation to site leadership team, active part during safety day etc., aiming to reinforce participation
- One to One meeting with leaders to facilitate coaching and openness on safety
- Structured Near Hit/Miss structure, root cause analysis started by the workers: completeness of report ranked from 1 to 5.

Multilevel cultural change towards “Safety Citizenship”
PROSABE Project Pontecchio Marconi

Results

- People even chat about safety at the coffee machine.
- Near Hit reports + 400%
- Slight improvement of the quality of Near Hit reports.
- 400 days W/O LTI good result for Pontecchio even if it is still below our and BASF target.

Good results and feedback: journey to be continued
**PROSABE Project Pontecchio Marconi Weaknesses**

- Too much theoretical.
- Participation limited almost to a production unit UTS1.
- Examples were not Pontecchio focused.
- Quality of near miss reports still to be reinforced.
- **Worker tool-box not sufficient**

“Io non so comunicare, dare feedback, c’è un gran casino, è difficile…c’è il capo che lo deve fare…..”

**Motivation needs competencies: Non Technical Skills**
From PROSABE 1 to ..... «Safety Citizenship Program»

PROSABE 1
• Questionnaire
• Focus Group
• ......

SAFETY CLIMATE

Proactivity
MOTIVATION: Behavioral Change Setup

NO

YES

Situational awareness
• Communication
• Decision Making
• Team Work
• Leadership
• ......

NTS

NO

YES

Safety Citizenship

«Safety Citizenship Program»
What is a Non-Technical Skills?

The NTS are the cognitive, social and personal resource skills that complement workers’ technical skills, and contribute to safe and efficient task performance.

- Situation awareness (attention to the work environment)
- Decision-Making
- Communication
- Teamwork
- Leadership
- Managing stress
- Coping with fatigue

«Cockpit Resources Management» 1979

Tool-Box to support behavioral change in a proactive environment
Non Technical Skills (NTS):
How they affect proactivity and citizenship?

- Situation awareness
- Decision-Making
- Stress-management

Cognitive skills
- Situation awareness
- Decision-Making
- Stress-management

Social skills
- Communication
- Teamworking
- Leadership

Appropriate OSHA systems (e.g. safety reporting & rewarding systems)

Proactive orientation

Safety citizenship