

## ITALO SAFETY CULTURE ASSESSMENT

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### FOURTH RAILWAY PACKAGE AND SAFETY CULTURE

In 2016, the concept of safety culture was introduced in the fourth railway package. While the main vector to improve railway safety had been most exclusively the implementation of a safety management system (SMS), the importance of cultural aspects, as a necessary informal “ingredient” for sustainable safety management, has now been recognised, and a legal basis has been established.

Furthermore, the common safety methods on safety management system requirements (Regulation EU 2018/762) state that the top management shall promote a “positive safety culture” and that the organisation shall provide a strategy to continually improve its safety culture.

Safety culture refers to the interaction between the requirements of the Safety Management System, how people make sense of them, based on their attitudes, values and beliefs and what they actually do, as seen in decisions and behaviours. A positive safety culture is characterised by a collective commitment by leaders and individuals to always act safely, in particular when confronted with competing goals.

In May 2021 Italo cooperated with ERA as partner and took part in the first large-scale survey on rail Safety perception in Europe, the European Rail Safety Climate Survey – ERA SCS. In order to improve a positive safety culture within the Company, Italo have administrated a customised questionnaire according to its activities, context and structure, elaborated by ERA, to all Italo Staff, with the support of Eco-Consult, which is a consulting company.

At the same time Italo made an in-depth Work-related Stress Assessment, addressed to “homogeneous groups of workers”, which led to the definition of specific organizational and cultural dynamics.

Between the end of 2021 and the begin of 2022, data have been analysed, shared and communicated among Italo workers. This process has permitted to improve the knowledge of safety culture in Italo and also to set up an action plan in order to develop the strengths and to enhance the weakness that have emerged. During this process both managerial and operational areas cooperated to achieve common goals. In particular, they worked together to build an increasingly reliable system, in which they could integrate different experiences about technical, relational and leadership aspects.

The training is an ongoing activity, that will end at the end of 2022. The effects of this work will be analysed in 2023.

## **THE RESULTS OF THE SURVEY ERA-SCS AND WORK-RELATED STRESS ASSESSMENT: AN INTEGRATION OF DIFFERENT TOOLS.**

The challenging phase of the Sars-Cov 2 pandemic has forced worldwide companies to survive during the shutdown of productive activities. Between 2020-2021, Italo has implemented the external collaboration after a long period of forced redundancy fund. One of the main activities was the involvement in ERA project, that included the administration of a questionnaire and a Work-related Stress Assessment which both aimed at the promotion of a positive safety culture. Therefore, have been introduced different tools to detect workers' perceptions of safety in the workplace and prevent psychosocial risks, within a context that has gone from a total block of activities to a new phase of restart, based on rigid legal requirements for the containment of Covid risk.

The ERA-SCS Survey was administered to all Italo employees. 805 employees completed and submitted the questionnaire, which brings the response rate to 59%.

The ERA-SCS- survey is based on European Railway Safety Culture Model. The model is made up of two components: the railway safety fundamentals which are principles that shall be fulfilled by any railway operating company to maintain safety and sustainable performance; and the cultural enablers which shape the company's organisational culture.

The overall results, that have not being distinguished among different groups, showed that the perceiving of positive safety culture was at a moderate level. Among "Fundamentals" there are 76% of positive answers and 10% of negative answers (76-10); among "Enablers" the result is 70-8. If we distinguish the components, the one which has got the highest score is "To control major risks" (79-10); moreover there are five components at a moderate level; at a lower level there is "Understand workplace reality" (74-13); followed by "Reinforcing" (62-13) and "Interacting"(69-6).

The results have been differentiated according to the working population, defining 4 different groups: On-Board Staff, Operations, Staff, Security.

We focus on "On-Board Staff" and Operations. They are the larger group, composed of all employees who work on-board (Train Drivers, Train Managers, Recovery Plant Operator) and the ones who manage operations (operations room, maintenance, training, regulations, trainers). All of these groups have got a good positive safety culture concerning the procedures to be implemented and the organization of the safety system. However, there are some critical issues for what concerns two components of "Enabling Factors": Interaction and Reinforcement. They refer to the way the workers interact in both informal and formal way, how they share the rules of the way they are together safely through behaviours and expectations.

The analysis of results revealed areas of improvement concerning the relationship between workers and managers, and their relationship with other parts of the organization.

Some of the problems that emerged from the analysis needed insights among the groups:

- what did the negative answers about the management mean?;
- how did it have an impact on the dynamics inside the organization?;
- what was the perception and the attitude of the management towards this?

In addition, the factor “cooperation with colleagues” needed to be better understood starting from the results of the component “Interaction”: in which sectors and why there are some issues?

The above mentioned questions were also taking into account in the Work-related Stress Assessment. Stress can be defined as the result of an inconsistency between production objectives and organizational culture.

The stress risk assessment in Italy is mandatory and it’s regulated from Legislative Decree 81/08 and subsequent amendments. This project has been assigned to Eco-Consult S.r.l, that has a wide experience in this field. The working team, that guided the assessment, was composed of Human Resources, Health & Safety, the Buyer, the Workers Representatives for Safety, the Head of Prevention and Protection, the Company Doctor and external consultants ECO-Consult. A preliminary work-related stress assessment was carried out in a first phase through the administration of the National Institute for Insurance against Accidents at Work (INAIL) Checklist to each homogeneous groups and through a trend analysis of 10 objective indicators. The answers to the checklist were given by the group, together with some managers of the homogeneous groups of workers.

The group has highlighted some aspects that needed to be investigated more deeply, throughout an assessment of workers’ perception, that could give a different perspective of the first assessment. For this reason was made an in-depth work-related risk assessment, throughout an interview to 7 executive leaders (Top Management), 2 Focus Groups to the Middle Managers and 23 Focus Groups to a sample of workers, divided thorough different homogeneous group of workers. 174 employees joined the Focus Groups (104 Operations and 69 Staff).

The collected data has been analysed through a content analysis, and it has been used a grid, coming from international literature about, work-related stress. The areas contained in the grid were: demand, control, management support, colleagues support, relationship, role, changing management.

Overall, the Work-related Stress Assessment involved around 200 Italo’s employees (including RLS, Security Staff, and HR) among a population of 1400 employees.

The results helped to define some specific issues, that have important link with the safety culture. We are going to focus on the results of Operations group, leaving aside the contents of Staff group, since they are less related to safety issues.

Focus Groups were conducted online in November 2021, in a phase of new start and reopening of the Italo activities.

The most important issues emerged in the Operations team among the second-level managers and workers. These issues concern both the quality of the service and the way the accidents were managed during the pandemic. We are talking about the management of human resources.

The managers were asking spirit of self-sacrifice and respect of procedures even if these last are often modified and updated by state regulation. On the other hands, workers were talking about some issues of daily work, in which some processes were not so functional. They felt like they were not being heard. Some issues were linked to the overlap of new commercial services (as if the pandemic period was actually over) together with emergency and safety procedures closely related to the management of the pandemic period.

At the time of the in-depth work-related stress assessment, there was a clear pressure between managers and workers about the change in the management of human resources.

The requests of management development that came up from the work-related stress assessment were:

- How to face the current conflicts?
- How to transform a conflictual attitude in a comprehension of the reasons behind that?
- What solutions are required?

The link between the Work-related Stress Assessment and the ERA-SCS questionnaire seemed to be more clear now: the component Reinforcement (that talked about the relationship between workers and management) was in trouble. This was due to the fact that the dynamic of change had not been addressed as it deserved. This was obviously due also to the pandemic period. The interaction (based on cooperation and shared values among workers) was in crisis. These dynamics represented a risk for the positive safety culture, because they were affecting the sharing of safety procedures. The Work-related Stress Assessment has raised that a strict fulfilment of the rules was not possible on-board, because there were some strong contradictions impossible to solve (especially between safety procedures and commercial procedures). Furthermore, these problems were perceived as something that couldn't be communicated to the Top-management. So the individual responsibility remained a strong reference point, but at the same time it was interpreted as the intention, of the organization, to not take responsibility of the real struggles on board.

At the same time, the Work-related Stress Assessment has revealed the strength of the team works: individual workers could find an asset in their own team or department. This is a great motivational aspect that Italo has managed to build over time, thanks to the high quality of the service, the importance to safety and technical expertise. This made it possible to set up teams in which reliable references are clear, in particular when they are facing emergencies. The pandemic period thus has brought out some alerts on the sense of belonging between teams, but at the same time groups felt that the workers could be still open to change.

## **A PARTICIPATORY PLANNING: THE “WORLD CAFÈ” METHODOLOGY**

From January to March 2022 the groups met 5 times, strengthening the collaboration between Health & Safety and Human Resources areas, in order to define three central steps for communication: a first phase of confrontation between the workers representatives for safety concerning the overall results emerged from the surveys; a communication planning toward all the company workers, about the ERA-SCS results; followed by a project of participatory planning that involved the Italo management of the three divisions: Operations, Staff, Stations.

In this phase it was necessary to involve the Top Management in the exploration of emerged data, in order to build an institutional commitment concerning new improving actions. This work has been organized by the World Cafè methodology in April 2022.

World Cafè is an “interaction technique” for the team work, that allows participants to interact in an efficacy mode, about specific themes. It promotes an “incremental and circular discussion”, which means an exchange that is enriched and completed as the

participants “rotate” at regular intervals from a thematic table to another, adding and integrating the contributions expressed by the other participants previously. This process allows team works to be made aware of information in a modality that, in the same time, stimulates the construction of a new organizational culture, in order to give meaning to principal dynamics characterizing the functioning of the company.

During the World Cafè the following aspects have been explored: how to deal with the relationship with workers; what prospects for management coordination, coherent with Human Resources management objectives; how to intervene on functionality and application of procedures; which corporate vision to build in the medium-long term.

We underline that these themes were strongly consistent with the output of the assessments, in particular with culture of positive safety survey, in which the “Reinforcing” and “Interaction” components resulted more critical than others.

The outputs of team work during the “World Cafè day” have been transformed into a useful material ( for planning a specific training action: the increasing of management competences of Operations Middle Management would have permitted to achieve better outputs on other sectors, in particular with Operations Staff.

The evaluations evidenced that for the Management there was a complex and conflictual issue: the need to translate the strategic line demanded by the company toward workers and the need to transform the increasing complaints of workers in feedbacks. In other words, it was demanded to Managers to apply some new soft skills and not only technical ones. That skills concerned communicative and relational aspects in particular, fundamental both for the management of workers and for the construction of a solid managerial group. At the same time, the group seemed to disagree on how to manage these relationships and how to make them consistent with each other. The considerations that emerged from the Work-related Stress Assessment were: how to face current conflicts? What solutions to propose toward the Management and workers?

## THE MANAGERIAL GYM

The path, called Managerial Gym, provided meetings (Round Tables) with Directors and Top Management, with the purpose to give importance to the training. The Top Management assumed a role of commissioner of the training work. The training sessions have been organised in thematic Workshops, addressed to the two groups of Middle Managers, real laboratories aimed at acquiring specific skills. The principal focus of training were: group coordination skills; communicative competences; problem solving skills.

The Department Managers were the direct users of the training, about 30 people. In daily work, they are in direct contact with the operators on the front line: Train Managers, Hostess and Steward on board, Train Drivers, Station Staff. The training methodology has a psychosocial nature, characterised by a strong active dimension of experiential exercises, followed by a more theoretical part, centred on the dichotomy “working for task/working towards goals”.

The hypothesis that guided this work was that the railway context, traditionally oriented by the application and respect of procedures and by a strong technicality, is closer to a working for tasks than a working towards goals. The first is based on the achievement of an output related to clear procedures, in which to rely on the most suitable person. It is an

approach referred to the best matching between a person and a job. It is an approach that tends to build an high contextual functionality. In second case, working towards goals presupposes the coordination for a common goal, that implies the definition of everyone's work to achieve the goals. The difference with the first modality is that in this second modus operandi the goal to achieve is build according to the reality of a team, in terms of competences and motivation: in this case managing the teamwork has got a primary importance. The training proposes a better integration between the two modes of work.

At the end of the training a series of learning assessments will be planned, 3 and 6 months after the intervention.

In terms of verifying the output of the training, the work will be completed with the analysis of some functioning indicators, exported in part from INAIL methodology on Work-related stress assessment, the so-called Sentinel Events , in part from the railway context and the safety management system, such as accidents, near misses, non-conformities. Moreover, to assess some qualitative aspects, the focus group methodology will be used again.

The quantitative analysis of the data and the selection of the indicators to analyse make the intervention consistent with the idea that work safety and the risks prevention (accidents, injuries and work-related illnesses) concern a continuous adaptation between workplaces and human factors. In our assumption, especially for a group technically high-qualified (ability to manage and to plan analytics tools, risk prevention and non-conformities), it will be useful to create a space for critical reflection on the relational challenges. It will allow to create more collaborative team works with a particular attention to the feedbacks.

The data that emerged during the meetings will be shared with the Top Management in order to ensure coherence between corporate strategy and managerial skills.

## CONCLUSIONS

The purpose of this project is to improve the safety culture among Italo employees, including a motivational changing that engage also Operations Staff. As we have widely discussed, the underlying assumption is that the increase of managerial skills leads to the achievement of these goals.

First of all we are interested to verify if is it possible to achieve a change in managerial skills, differentiating Top and Middle Management. Secondly, we want to figure out if these changes affected Operational Staff, in terms of motivation and in terms of an improvement of positive safety culture. It is possible that this last aspect it will take more time to be understood and verified. The results of the upcoming measurements will orient us. Future survey will guide us.

In conclusion, we want to underline that this work of Action-Research can lead to results and changes not predictable: it is possible that additional project will take place after this. The core of this work is based on some cross-cutting aspects to the company, which include competence, attention to human resources and intention to deal with the changes. This is an attitude that Italo is developing, from a first phase of "start up" characterized by an enthusiasm and an acceleration of some processes, to a second phase of consolidation, growth and differentiation. In the middle of this process Italo has been through the pandemic that has boosted this natural process.

We believe that these processes contribute to the development of the organization in terms of ongoing dynamism.

**Keywords:** Assessment; safety; work-related stress; training; management