

BroadVoice

Broadening the spectrum
of employee voice
in workplace
innovation

National Report – Italy

Company case study M1

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Case study 1M

1. Company characteristics and state of innovation

Since 1984, the Solaro factory has been part of the Swedish multinational group Electrolux, which operates with seven production sites in Italy. This plant has focused on manufacturing dishwashers for various brands under the Electrolux umbrella for several decades. As the largest dishwasher production plant in Italy, it possesses extensive and proven expertise in this field. This experience has been crucial for successfully developing product and process innovations over the years.

In 2023, the Electrolux Italia Group achieved a turnover of over one billion euros (1,120 million euros) and employs approximately 4,500 people across its seven Italian sites. The Solaro factory produced 855,000 dishwashers in 2021, during the market peak of the Covid-19 period. This number fell to 587,000 in 2023 due to a negative post-Covid rebound, and production is expected to reach about 650,000 pieces in 2024. The factory's production capacity is actually larger, as it has previously reached peaks of 1 million units. In recent months, the market has experienced a further decline, prompting negotiations to address the production drop with available welfare support provisions. An agreement in principle was reached with the unions at the end of October 2024.

The plant had already navigated the crisis of 2008-2013 by implementing a partial reduction in staff and making new investments. The production cycle is divided into two main parts: the up-stream part, involves highly automated and capital-intensive mechanical processing, which is re-sponsible for producing the load-bearing skeleton of the dishwasher while in the downstream, the final assembly lines, labour intensive, the assembly of the components is completed. These lines maintain the architecture of traditional time-constrained assembly lines. They operate with a takt time of 90 pieces/hour and with cycle times of about 55 seconds.

In recent years, the Group has made the decision to redevelop its plants in Italy to facilitate the launch of new products and to effectively compete with non-EU manufacturers, particularly those from Asia and Turkey. At the Solaro plant, planned investments will focus on new automation technologies for mechanical processing and enhancements to the downstream assembly lines. The goal is to achieve a takt time of 108 pieces per hour while reducing the cycle time to approximately 35 seconds. The total investments for process and product innovation reached €26 million in 2023 and are expected to increase to €31 million in 2024.

From the perspective of the production system, the Electrolux Manufacturing System (EMS) has been implemented across the Group for about 20 years. This system is derived from the Toyota Production System and aligns with the initial or 'standard' lean model. The standard model is characterised by limited participation from technical staff while not extending to the workers directly involved in production. As stated in the latest Electrolux collective agreement of 23 April 2021, the following direct participation practices have been envisaged within the EMS: focused teams with workers involved in the same step of the production process, to monitor organisational efficiency and safety issues and propose improvements; workers' suggestions over executive and organisational issues possibly presented to their hierarchical superiors assessing their validity; problem-solving activities within cross-functional groups of workers; top-down information to all

workers about improvement proposals and actions; workers training on the system of shop-floor management. However, in the opinion of the RSUs interviewed, «the practices were developed in a limited manner, with minimal worker involvement, initiated and controlled by management».

2. Workforce characteristics and labour relations

The workforce is now made up of about 640 permanent employees, of which about 120 technicians and factory staff employees and about 525 metalworkers involved in mechanical processing and assembly lines. The staff is relatively old, with many employees having a long tenure at the company. The turnover rate is very low, primarily affecting younger workers, and the average age of employees is over 45 years. On average, employees have about 15 years of service with the company. In the mechanical machining department, upstream, which is more automated, the operators are mainly men with higher qualifications and professionalism. In contrast, the final assembly lines have a significant number of women, but the level of professionalism tends to be lower.

During the peak of the Covid-19 pandemic, around 140 temporary workers were hired, most of whom were much younger. However, only 12 of these workers – specifically in mechanical processing – were retained by the deadline. This was due to a decline in sales in the post-Covid period, which resulted in a significant reduction in production activities and the need to rely on welfare support provisions.

Industrial relations have a long history that dates back to the 1970s. They are characterised by a typical Italian contractual system, despite the 1990s experience with the introduction of joint technical committees and a labour-management supervisory board: a participative approach that has long been regarded as one of the most advanced at the company level. This approach, however, went into crisis in the 2000s. Each plant has a RSU that addresses local issues and participates in a group-level labour coordination structure. This coordination negotiates group-level collective agreements and supplementary contracts in collaboration with the national structures of the metalworking unions, namely FIM-CISL, FIOM-CGIL and UILM-UIL.

In recent years, a second-level collective agreement was signed in April 2021, along with several agreements for new factory investments. In October 2024, additional agreements are expected to be reached to reduce production activities due to the significant decline in sales following the Covid-19 pandemic. This may include measures such as a Redundancy Fund and Solidarity Contracts.

Currently, there are 11 members of RSU at the Solaro plant, and more than 80% of employees participate in their elections. Some RSUs are part of the national coordination. Approximately 35% of employees are union members, and the RSU members report they «feel very representative of the workers».

Electrolux Group has established a participatory model for over 20 years that emphasises representative participation through joint labour-management plant commissions. These commissions focus on various aspects of work, including health and safety, work organisation, gender issues, working hours, and part-time employment. The joint technical committee, known as CO.TE.PA, plays a crucial role in defining agreements related to work cycles, timings, saturation

levels, and the overall micro-organisation of work. Recently, a “Consolidated Regulation on Industrial Relations and Organisational Participation” has been agreed with trade unions and worker representatives, linking the activities of the joint plant commissions with broader industrial relations goals.

3. Direct worker participation practices and the interplay with industrial relations

The episode of direct participation on line 2 is part of the application phase of an innovative investment plan initiated by the Group for Italian factories. Specifically, for the Solaro plant, the plan was negotiated during a contractual round in autumn 2022. The agreement was signed by the group labour coordination in December 2022 and subsequently presented to all Solaro workers for a referendum in January 2023. The proposal received approval from a significant majority of the workers, with 88% voting in favour.

The agreement was based on an initial preliminary technical design for the new assembly line 2. It aimed for an ambitious goal of increasing productivity from the previous 90 pieces per hour to 108 pieces per hour, representing an increase of approximately 25%. This project was designed to implement various interventions, including automating certain activities and digitizing processes. It also involves adding new workstations. Key objectives include simplifying operations, reducing cycle times through task redistribution, and improving ergonomics. The organisational solution inherent in this technical model was historically based on fixed and stable workstations with limited rotation. According to company management, this initial technical project for the new product line (attached to the agreement) was developed collaboratively by the entire technical staff of the plant, utilising the technical expertise accumulated over decades of experience. However, during the negotiations, unions testified that there was a need in trade union and HR circles to involve workers more strongly in supporting the investment.

In fact, even if the Electrolux Manufacturing System (EMS) has aimed to involve workers in its objectives since 2008, according to the RSU and union leaders, «in practice this involvement was limited and conditioned by a hierarchical corporate culture».

In summary, it was deemed necessary to innovate traditional joint commission practices, which had previously involved only limited participation from technicians, by the direct involvement of workers in the new production line. In response to this need, the company management initiated an information campaign about the new production line, which included simulations of the workplaces (referred to a small pilot test).

The small pilot test, or the presentation of a proposal before the construction of the plants, is a significant innovation in the company’s investment procedure. Historically, new plants were constructed without prior discussion; only after start-up would discussions with unions be initiated within joint commissions. The concept of the pilot test was suggested to plant management by two external consultants appointed to support the entire participation project with an impartial stance between both parties. Their role included providing suggestions on the change process as well as on training and communication activities. As a result of these reflections, a clause was also included in the collective agreement, setting a productivity target of 108 pieces per hour and introducing new

forms of direct participation. The success of the referendum in January 2023 is considered by both the company and the unions to be «a success also linked to transparent communication with workers and the anticipation of technical aspects of innovation».

Specifically, the agreement provides for an experimental phase on a pilot assembly line as a preliminary step before extending it to the entire factory. The company believes that the success of the experimentation on Line 2 is necessary to extend investments to the other four assembly lines and to launch new products. Given these premises, the experimentation of Line 2 gains considerable importance for both the company and the union, as well as for the plant's future.

3.1 The “defreezing” phase (*April-October 2023*)

After the referendum approving the Agreement in January 2023 and with the goal of starting the new Line 2 in January 2024, the company, in agreement with the RSUs, initiates a participation project also focused on the organisational and management aspects of the new line. In particular, communication and training are essential to prepare people for change. To this end, external consultants suggest activating a preliminary training phase for RSUs and company technicians, aimed at opening a dialogue and establishing a common culture. This phase is called “defreezing” because it prepares people for a new way of participating in change through gradual involvement in the revision of the technical project. The defreezing phase includes joint training on participation for the RSU and technical staff before constructing the new lines. In previous decades, however, plant construction was completed first, with designs known only to the technicians, and only then were the workers introduced to the new line during start-up.

3.2 The “design review” phase of the Technical Project (*November-December 2023*)

Once the defreezing phase is complete and construction of the new Line 2 begins, a revision phase of the technical project is initiated. This phase includes both the organisational participation of representatives and the direct participation of workers. A joint labour-management participation commission critically analyzes the project and decides on methods for direct involvement of all line workers, about 120 people. Unlike contractual commissions, this commission includes the entire RSU (11 members), the technical staff (about 15 technicians), and the Production Managers. Direct participation begins with a detailed presentation of the technical project to the workers. The goal is to enable a design review through suggestions for technical, organisational and ergonomic improvements. The technical project is first presented to all workers across the two shifts (about 60 people per shift and about 20 internal logistics workers, totalling 140 people) and then explored in small groups. In these homogeneous groups, ranging from 3 to 7 people, an in-depth and specific analysis of the technical project is conducted with the individuals who will work on that segment of the line. The analysis is carried out by the small group of workers, the Production Manager, and the technicians who designed that section. RSU members are present at almost all meetings.

People directly involved in small groups, discussing the future of their workplace, ask many questions and provide numerous suggestions immediately, proposing technical, ergonomic, and managerial changes (about 120, mainly ergonomic, suggestions). Some recommend a different allocation of tasks among workstations and frequent task rotation. These small verification meetings re-veal a strong willingness to participate, with new solutions often shared directly with managers. The suggestions and decisions emerging from these meetings are of extraordinary importance, as

they are made before the full construction and start-up of the lines. Management also finds most of the suggestions valid, adopts them, and take immediate action for technical implementation. This mutual listening triggers a virtuous and structured cycle of feedback that is richer and more effective than previous methods set by the EMS.

The most relevant outcome of this verification process is that a final questionnaire shows the majority of workers request rotation between nearby and similar workstations as an essential tool to achieve the 108 pieces per hour goal. This near-consensus, along with the RSUs' support, convinces management and the technical group to abandon traditional constraints on rotation and instead encourage it during the start-up phase. According to statements from the RSU and HR, «it is precisely in this phase that workers' direct participation is most crucial and impactful, particularly in making rotation on new workstations an accepted practice».

3.3 Running-in/start-up phases (January-May 2024)

When operations resume in January 2024, the systems for the new line are largely ready, many suggestions have already been applied (about 60%), and the start-up can focus on field learning for employees and technology development by suppliers and technical staff in the "running-in" phase. Learning has two dimensions: each person must adapt to new tasks (reduced in number), new technical equipment, and the new rhythm with a cycle time of about 35 seconds instead of 55 seconds. Additionally, everyone must learn to work in technically adjacent positions that allow for rotation (from 2 to 7 positions depending on the section). This second phase of learning involves technicians and a master-apprentice mode in which one initially masters their traditional post and then learns on other rotating stations.

Simultaneously, the implementation of changes suggested in December is accelerated. New changes also arise from direct line experimentation, leading to a total of 246 modifications: of which, 153 relating to ergonomic, 23 cycle and 66 safety. The results of this technical-organisational commitment by management, workers and RSUs are remarkable.

Within three weeks, the production line, which starts with slower cycle times, begins to approach the target of 108 pieces per hour (see Figure 1). Production dips are usually caused only by technical issues. Additionally, the informal groups of 3-7 workers rotating every hour show increased cohesion and cooperation, which benefits both productivity and the workplace environment. In less than two months, the line stabilizes at 108 pieces per hour, a result that previously took 5-6 months to achieve under more challenging conditions. The consolidation of this objective parallels the company's capacity to implement workers' suggestions, totalling 246 reports, 94% of which were activated by late July. Notably, both organisational and direct participation continued even amid a sales decline and layoffs.

4. Overall impact of the practices and future prospects

With the development of the new line technologies, the consolidation of production at 108 pieces per hour, and the organisation of the work into self-managed rotation teams, the running-in phase concludes successfully. The joint labour-management commission collects and discusses key data on production ramp-up, line stoppages, suggestions, progress of solutions, rotation teams, technical interventions, and ergonomics. Rotation teams number 15 in the first shift and 13 in the second, involving up to about 84% of line staff. The joint participation commission decides to share this data

with the two shifts on the new line 2 and gathers worker feedback through an anonymous survey, asking for a comparison between the traditional line and the new one on aspects such as work quality, fatigue, workstation configuration, rotation teams, and technologies. The survey reflects a strong preference for the new 108 line, which is seen as less tiring than the 90-piece line, and for the new working method (Figure 2). Most workers also appreciate the new forms of participation and hope they will be maintained (Figure 3).

An important result pertains to workplace ergonomics, a priority for workers with high personal and company seniority and low turnover. Many have worked on assembly lines for decades and experience physical strain.

The OCRA method for ergonomic workplace assessment, agreed upon by all parties, showed that traditional lines had many positions with physical risks (acceptable risk in only 42% of workstations, very low 46%, low 11% medium 1%). OCRA evaluations carried out by an external body on the new line show significant improvements (acceptable in 69% of workstations, very low at 27%, low at 4%, medium eliminated). These evaluations were based on employees occupying the same post for a full 8-hour shift, though 84% of workers requested and practiced self-managed rotations every hour, significantly lowering all OCRA indices due to diverse limb movements required by the different workstations.

In summary, the impact of direct participation can be encapsulated in three main points:

- In regard to the company's objectives, the representatives from plant management reported that: «Direct participation not only enabled a swift and efficient increase in productivity (108 pieces/hour) and consolidated the technological investment, but it also demonstrated that integrating new technologies with new organisational forms can yield significant productivity gains» even in traditional, high cost contexts producing "mature" products like household appliances.
- As for working conditions, according to the external trade union leader: direct participation not only enhanced work quality in terms of ergonomics and fatigue through suggestions, but «it also expanded workers' autonomy and social connections» through self-managed rotation teams, increasing workers' versatility and skills. Participation has cultivated awareness, responsibility, and an entrepreneurial culture. RSU members observe «workers' attitude on line 2 has shifted towards greater responsibility and proactive engagement with labour issues».
- Regarding Industrial relations: A significant improvement in the company climate has been achieved. A new form of participation has been piloted through the joint participation commission, and it has demonstrated that «a new model of industrial relations can be envisioned, linking collective bargaining over industrial plans with organisational and direct participation of workers in production sites », as stated by the external trade union leader.

Regarding the outlook, the RSU members express the most critical view, fearing that «once line 2's start-up is complete, management may revert to hierarchical practices and sideline the RSU and workers, especially amid the current market downturn. This experience's positive lessons may be forgotten».

- External trade union leaders signing agreements with the company, however, highlight «the importance of linking a major agreement to an ambitious investment plan for the sector's industrial future through innovative forms of direct and organizational participation». A trade union representative participating in the national workshop of January 23, 2025 interestingly highlighted

that his/her organisation has not been able to effectively communicate the value of the agreement and translate it into an increase in trade union density rates.

- Plant management believes the project's success could inspire «future investment models and contribute to more participatory, less confrontational industrial relations», hoping for an evolution of the lean model toward a more collaborative production system with increased dialogue among technical staff, RSU members, and workers.

5. Summary of the case study

Our case study concerns a manufacturing company and, in particular, examines a significant experience of direct worker participation at an Electrolux factory in Solaro (Monza - Lombardy), where dishwashers are manufactured.

In 2022, the management of the international Electrolux group planned a significant investment in the Solaro factory, including technological innovations in both the upstream sheet metal processing plants and the final assembly lines. The goal is the launch of new digitised products, volume growth and a leap in productivity. The collective negotiations were lengthy and ended with the agreement of January 2023 approved by referendum, which paved the way for the investment. This agreement aimed to achieve a substantial increase in hourly productivity on the new lines, from 90 to 108 pieces per hour. It also included plans to expand the workforce through new hires, as well as the development of training programs and initiatives for worker participation. The implementation phase of the new lines and the application of the agreement was overseen by a steering committee involving all the RSU members and company managers. This setup activated the direct participation of the workers on the new line (about 120 workers).

Participation developed along three key lines: 1) Information and preliminary training on the new equipment; 2) Workers' suggestions for improving the company project, focusing on safety, fatigue, quality, and productivity; 3) Creation of self managed, multipurpose rotation groups that ensure the sustainability of the new cycle time; these groups manage their own rotations every hour and engage in mutual training for the new jobs on which they rotate.

Some difficulties emerged after the Covid-19 pandemic, due to a decline in production activity and the use of social shock absorbers. This situation is still causing significant concerns among the worker representatives, who have noted certain attitudes from the company that raise fears about a regression in the participation processes that were previously put in place.

Overall, though, the impact of direct participation practices at Electrolux (Solaro) is significant and can be summarised in three main points:

1. Regarding Company Objectives:

- Direct participation enabled the company to quickly achieve the targeted productivity thereby solidifying its technological investments.
- It demonstrated that integrating new technologies and organisational structures can lead to substantial productivity gains, even in traditional settings, high-cost environments, and in industries regarded as 'mature,' such as household appliances.

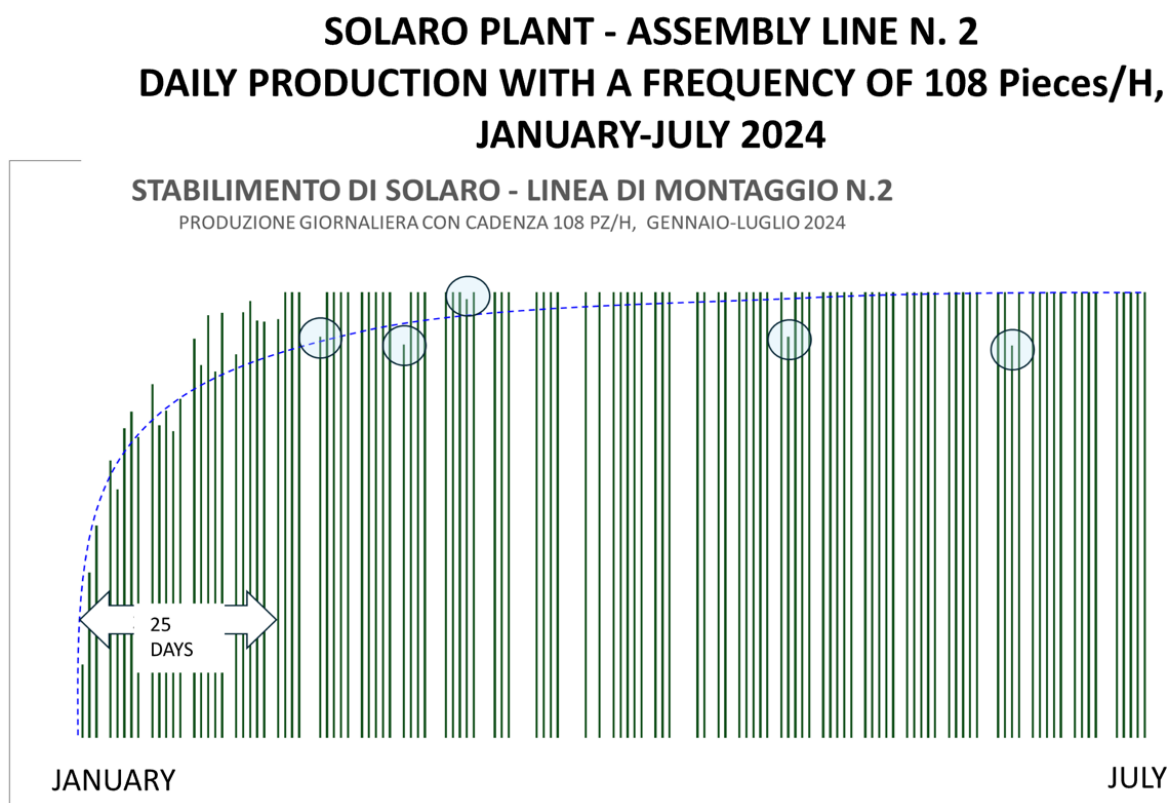
2. Concerning Working Conditions:

- Direct participation resulted in marked improvements in work quality, particularly in terms of ergonomics and reduced fatigue.
- It significantly enhanced workers' autonomy, versatility, professional skills, social interaction, and sense of responsibility.

3. With respect to industrial relations:

- There was a considerable improvement in the company climate.
- A new participatory model was tested through the establishment of a joint labour-management 'participation' commission.
- This approach illustrated the potential for a new industrial relations model that effectively combines collective bargaining on industrial plans at central/corporate level, with organisational participation and direct involvement of workers at production sites.

Figure 1. Production rise



Production reached a stable rate of 108 pieces per hour after the first 25 days, with productivity dips attributed to technical issues.

Figure 2. Workers' opinion, Comparison between cycles, before and after

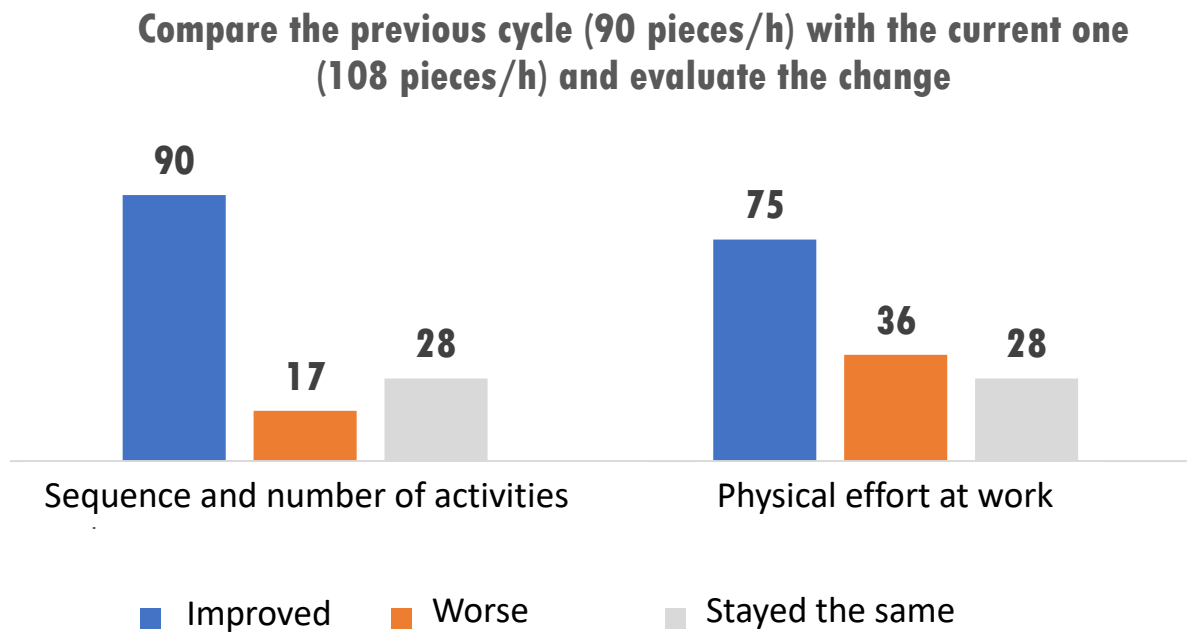


Figure 3. Workers' opinion: Evaluation of direct participation

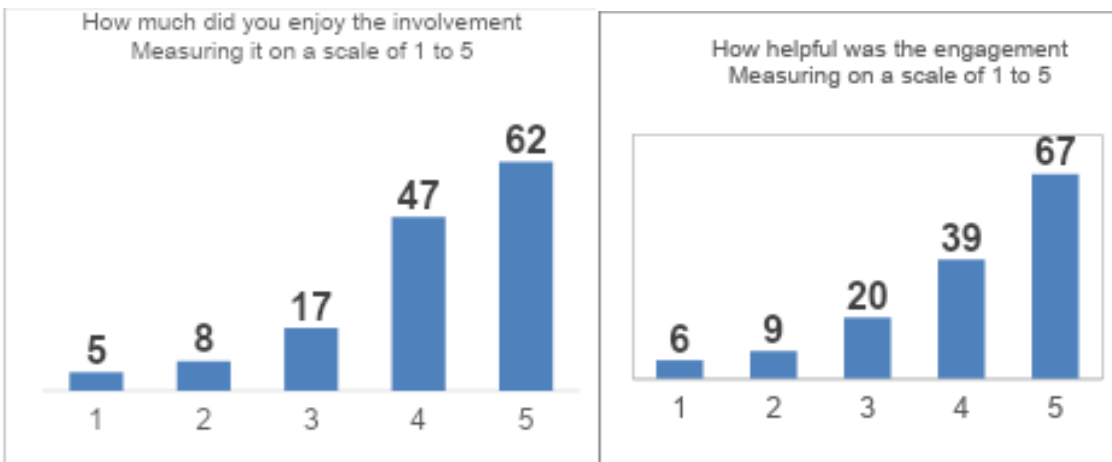


Table 1. Case M1 in brief

Company characteristics	Company context. Case 1M is the large Italian plant of a foreign multinational group, which has been producing medium and high-end dishwashers for 50 years.
	State of innovation. At the analysed plant, Industry 4.0 innovations have been implemented in mechanical processing (upstream phases) and internal logistics. Planned investments focus on new automation technologies for mechanical processing and enhancements to the downstream assembly lines through

	advanced systems incl. robotic arms, collaborative robots, etc. At the plant a shop-floor management system, derived from the Toyota Production System, is implemented and aligned with the initial or 'standard' lean model. The standard model is characterised by limited participation from technical staff while not extending to the workers directly involved in production.
Industrial relations	Trade union density rate at the company level. 35%. All the major sectoral trade unions, FIM-CISL, FIOM-CGIL and UILM-UIL, have members in the plant.
	Workplace labour representation structure characteristics. The plant is covered by a RSU composed of 11 members.
	Company-level collective bargaining. Industrial relations have a long history that dates back to the 1970s. Each plant has a RSU that addresses local issues and participates in a group-level labour coordination structure. This structure negotiates central/group-level collective agreements in collaboration with the national trade unions. The group has established a participatory model in Italy for over 20 years that emphasises representative participation through joint labour-management commissions at plant level. These commissions focus on various aspects of work (e.g., health and safety, work organisation, gender issues, working hours, and part-time employment).
Direct worker participation	Direct participation as the subject of organisational tools. Within the framework of the shop-floor management system: 1) Focused teams to monitor organisational efficiency and safety and propose improvements; 2) Workers' suggestions over executive and organisational issues possibly presented to their hierarchical superiors assessing their validity; 3) Problem-solving activities within cross-functional groups of workers; 4) Top-down information to all workers about improvement proposals and actions; 5) Workers training on the system of shop-floor management.
	Direct participation as a vehicle for workplace innovation A participatory innovation project was initiated by management in the beginning of 2023 in agreement with the RSU members and thanks to the expertise of two external consultants. It entailed firstly, 1) training addressed to both the RSU and the technical staff involved in the planning of the innovation project, and later 2) the redefinition and final approval of the innovation project by a joint labour-management commission (composed of both RSU members, technical staff and production managers). The same commission decided over further direct participation practices, like 3) information about the project to all workers involved, followed by 4) in-depth analysis of the project within small groups of workers. In these groups, workers formulated suggestions for improvement and most of them supported the idea to implement rotation between adjacent workstations. Many of these suggestions were immediately incorporated by management in the start-up phase of the innovation project, where indeed 5) self-managed rotation teams were tested. That phase was moreover monitored and assessed by the joint labour-management commission. A 6) survey was launched to gather workers' feedback on the new work organisation.
The role of industrial relations in direct worker participation	The latest company-level collective agreement (signed in 2021) listed a series of direct participation practices, though unilaterally designed and implemented by management. By contrast, within the framework of a specific innovation project (aimed at simplifying operations, reducing cycle times through task redistribution,

	and improving ergonomics), and thanks to support of two external experts, the RSU members took part in a joint labour-management commission which designed the final technical project and decided over specific direct participation practices aimed at enabling the change. RSU members moreover attended the meetings of small groups of workers aimed at analysing the technical project and providing ideas for improvement. Finally, the commission also monitored and assessed the start-up phase of the project, entailing the testing of self-managed rotation teams.
	Model of integration b/w direct participation and industrial relations Mainly democratic (participatory) model since worker representatives, with the support of two external experts, managed to contribute to the planning, implementation and monitoring of a reorganisation project and related direct participation practices. However, this kind of procedures never occurred before.
	Breadth and depth of participation Worker participation in Case 1M boasts a good degree of breadth and depth. As regards the depth, both industrial relations and direct participation are well developed throughout the company and its sites and cover various issues. As regards the breadth, some participation practices are linked with one another, since, for instance, workers in small groups proposed to implement self-managed rotation teams and the commission composed of RSU members, technicians and managers was charged of defining direct participation practices and monitoring them. Overall, direct participation practices have been implemented also in coordination with worker representatives, who have contributed to their definition (within the framework of broader innovation project) and monitored their implementation.
Difficulties	1) A traditional culture relying on hierarchical management and top-down innovation; 2) Traditional, contractual approach to industrial relations
Impacts	1) Direct participation enabled the company to quickly achieve the targeted productivity thereby solidifying its technological investments; 2) Direct participation resulted in marked improvements in work quality, particularly in terms of ergonomics and reduced fatigue; it significantly enhanced workers' autonomy, versatility, professional skills, social interaction, and sense of responsibility; 3) There was a considerable improvement in the company climate; a new participatory model was tested through the establishment of a joint labour-management 'participation' commission.
Future prospects	The RSU members fear that management may revert to hierarchical practices and side-line the RSU and workers, especially amid the current market downturn. External trade union leaders highlight the importance of linking a major agreement to an ambitious investment plan for the sector's industrial future through innovative forms of direct and organisational participation. Plant management believes the project's success could inspire future investment models and contribute to more participatory, less confrontational industrial relations. Overall, both the company and the RSU members plan to continue in a way that will be defined later, aiming to find a win-win solution