Quality of jobs and Innovation generated Employment outcomes

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PlaneSpace: Liberating Employee Innovative Capacity

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QuInnE - ***Qu****ality of jobs and* ***Inn****ovation generated* ***E****mployment outcomes* - was an interdisciplinary project investigating how job quality and innovation mutually impact each other, and the effects this has on job creation and the quality of these jobs.

Drawing on the Oslo Manual, both technological and non-technological innovation were investigated. Through quantitative analyses and qualitative organization-level case studies, the factors, as well as the mechanisms and processes by which job quality and innovation impact each other were identified.

The QuInnE project brought together a multidisciplinary team of experts from nine partner institutions across seven European countries.

QuInnE Project Member Institutions:

- *Lund University, Sweden*
- *The University of Warwick, UK*
- *Universitaet Duisberg-Essen, Germany*
- *Centre Pour La Recherche Economique Et Ses Applications (CEPREMAP), France*
- *Magyar Tudomanyos Akademia Tarsadalomtudomanyi Kutatokozpont, Hungary*
- *Universiteit van Amsterdam, The Netherlands*
- *Erasmus Universiteit Rotterdam, The Netherlands*
- *Universidad de Salamanca, Spain*
- *Malmö University, Sweden*

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The QuInnE teaching cases and teaching notes are based on the confidential field research conducted in the context of the QuInnE project. They are written to provide material for training and class discussion rather than to illustrate either effective or ineffective handling of a management situation. Personal names and identifying information from the research cases have been altered for the purpose of confidentiality. The case studies and teaching notes have been developed in cooperation with RSM Case Development Centre of Rotterdam School of Management, Erasmus University (www.rsm.nl/cdc).

PlaneSpace: Liberating Employee Innovative Capacity

Introduction

On a warm September day in 2015, freshly returned from a stimulating conference on "Learning and Leadership" in the high-tech sector, Robert Dalman sat down at his desk. Dalman directed an aerospace manufacturing facility, MF1, the largest of several plants, for PlaneSpace, a leading European aerospace OEM. He glanced through the results of his plant's latest employee satisfaction surveys, and shook his head in dismay. The findings were very disappointing, but confirmed what he already suspected.

In the last 15 years, the plant had introduced "lean" production processes and completely overhauled its operations, to increase productivity and quality, while reducing costs. Major technological innovations such as 3D Computer Aided Design and Manufacturing (3D CAD/CAM) and Computer Numerically Controlled (CNC) machining had been introduced to make the plant ever leaner, causing an upheaval in organizational dynamics. The company had been highly innovative... Still... Dalman felt uneasy about the future.

Most employees had little input into the organisational restructuring, and could only yield to the imposed innovations. The employee surveys reflected the consequences: a dissatisfied workforce that collectively felt its contribution mattered little or not at all. Dalman's plant employees had lost pride and motivation. Productivity was stagnant. The plant was currently dedicated to a mature aircraft program that required few, if any, product or process interventions. Additionally, as the current aircraft program was nearing the end of its product life cycle, customer demand was stable and predictable. The employees -- and the plant -- were in a rut, and they had to get out of it as soon as possible. If any changes were to be made within this plant, it had to be now, before the next new aircraft program arrived.

Convinced of the innovative organisational ideas that had been presented at the recent Leadership conference, Dalman summoned his leadership team and made a proclamation: "Our thinking and our organisation are outdated. I want this company to become an innovative workplace. We need to change now!" But just how the plant could innovate to the satisfaction of its employees, while meeting the head office's demands for continued productivity, quality and cost efficiency improvements, was yet to be determined.

Company Background

PlaneSpace was a leading European aerospace OEM, and part of a large multinational group. It had several production sites within and outside of Europe.

In the last decade, maximising shareholder value had clearly become a priority for the company. Cost reduction and increased profitability were the primary focus. Overall production had increased, and revenues over the last three years were up by roughly 15%. The order books were full, and the backlog was equivalent to 20 times the annual consolidated revenue. Even if the ambitious EBIT targets were not always met, profits were also on the rise. The cost pressure had impacted the evolution of employment: while consolidated revenue had increased, the overall employment level had remained stable in the last three years.

The company had undergone important restructuring in the organisation of its production in the past 10 years. The industry overall was moving towards modularisation and outsourcing of work packages. The final product -- the aircraft -- was now being conceived as the integration of several sub-systems, or modules, that were increasingly outsourced to external suppliers as complete work packages, from conception and design, to production and final assembly. There was also an industry-wide trend to reduce the number of Tier 1 subcontractors to limit transaction costs. As an OEM and industry leader, PlaneSpace had been innovating constantly over the past years, introducing not only new technologies into its plants and supply chain, but process innovations as well.

PlaneSpace's manufacturing facilities were organised into component delivery teams. Each component delivery team could be dedicated to a specific aircraft programme, as was the case in Dalman's facility, or arranged by manufacturing technology clusters, depending on the optimum solution for each plant. Every plant was organised with production, engineering, quality, supply chain, manufacturing and logistics capabilities to ensure a seamless production flow of operations. A transversal “Industrial Systems” Centre of Competence was in charge of ensuring that harmonised and standardised processes, methods and tools were developed and implemented across the plants, in order to increase efficiency, based on best practices. Another transversal “Manufacturing Technologies” Centre of Competence was in charge of disseminating new technologies and innovation in manufacturing across the plants and preparing manufacturing solutions for future product evolutions. Following production by the respective plants, the various aircraft sections were transferred from the different sites to the final assembly lines. As the head of one department in Dalman's facility noted:

> We make segments for an old model of aircraft, which was even supposed to disappear earlier; so there haven't been big product or process innovations for a long time... As it is a declining aircraft model, investing in innovative processes is not a priority for [this facility]. Moreover, we have big problems in terms of respecting the deadlines, and in terms of quality. The ambiance is not good, different teams are fighting against each other...so [we need] a way to remobilise the workers, to give them some pride again.

Employment Structure

In 2015, PlaneSpace had more than 5,000 employees worldwide.

Dalman's manufacturing plant employed about 3000 permanent workers, of which roughly 330 managers, 1600 blue-collar workers, 90 apprentices (or equivalent) and about 600 temporary agency workers (of which 90% were blue-collar). Employee totals had increased dramatically between 2009 and 2012: the number of managers had risen from 180 to 330 (more than 80%), while the number of total employees had increased from 1900 to 3000 (more than 50%). Because the product was now in its mature phase, the facility was employing too many management and support personnel with not enough work to do in product and production design and development. Also, even if the overall number of management employees had increased in recent years, specific types of employees, such as the intermediaries between design and manufacturing, or certain supervisors in quality control, were becoming obsolete due to the new technologies that had been introduced in the factory.

The share of temporary workers had also increased dramatically in the last 15 years. In 2000, the number of temps represented less than 5% of the workforce. With the increased production needs and pressure for cost reduction, PlaneSpace had hired many more temps. The company reached an informal agreement with its employee unions to limit the share of temps to 20%. But according to some union delegates, the company cheated and calculated the share of temps based on total permanent workers, not just on blue-collar employees.

PlaneSpace was facing a labour shortage of skilled workers, in particular for CNC machine operators. As a result, an ambitious plan was being developed at regional levels with other manufacturing companies and regional institutions. Working with vocational training schools, the goal was to develop a 5-year forecast of employment and required skills for the region's metals-based manufacturing industries, so as to put in place the necessary policies and training programs.

As there had not been enough apprentices in recent years, PlaneSpace had begun working with the public employment service as well as local temporary agencies to develop a 10-month training and apprenticeship program leading to a certificate of qualification. Dalman's facility began recruiting young and middle aged workers from other sectors, with no background in aeronautics, and often, not even in the manufacturing sector. Although this new program appeared to be a satisfactory solution to the labour shortage in PlaneSpace, operators holding the certificate of qualification were, in the opinion of older employees and union delegates, less skilled than operators with vocational training credentials acquired in the educational system. However, the skill level required was now lower than before due to the digitalisation and lean processes that had been introduced to the plant, so this perceived decrease in skill level among newly recruited temps was not an issue.

In recent years, PlaneSpace, as many other companies in the aeronautics industry, had been very active in attracting women. Their share had indeed increased, but remained low.

Due to the industry shifts in outsourcing modules and work packages, the amount of work done in-house at PlaneSpace had also drastically decreased, from 80% of the total required workload to roughly 50%.

Industrial Relations and Social Dialogue

There were several unions present at PlaneSpace that participated in social dialogue and competed against each other for membership. About 80% of employees were unionised. A key trait of social dialogue at PlaneSpace was its high degree of formalism, as both the process and content of collective bargaining was highly institutionalised by legal rules. This formal process was the only way that unions and company management officially communicated and could reach agreement. To a large extent, this highly regulated communication prevented informal interactions between management and unions and stymied any shop-floor level cooperation that would have eased tensions between the two groups.

Addtionally, PlaneSpace was heavily "technocratic", which added to the formalism. The top management functions of the organisation were filled by graduates of the country's most elite schools. Scientific and technological skills, rather than a company role or title, were the key elements of legitimacy of power and hierarchy within the organisation. This technocratic culture was a core element of PlaneSpace's corporate identity as an OEM and industry leader, and was a source of pride for management, as well as respect for employees. In recent years, however, economic constraints and organisational concerns had led to increasing differentiation between technical expertise and managerial skills, with managerial skills gaining emphasis. Still, the company remained highly influenced by this technocratic culture.

In comparison to those at other large manufacturing companies, social relations were relatively good at PlaneSpace, both at the company and at the factory level. However, any movement towards a work environment based on higher worker involvement and better job satisfaction was notoriously difficult.

Because the unions were so divided, with different ideological backgrounds, and in competition for membership and support, their behaviour tended to be strategic, with some adopting radical positions to appear as the best defenders of workers' interests. As a result, social dialogue sometimes became a pure role-playing game, especially in its formal manifestations. The defensive stance of unions could help explain the often low quality of formal social dialogue: a vicious cycle emerged whereby management often tried to by-pass unions because they anticipated negative attitudes. As one manager stated: "It is true that the highly institutionalised process of social dialogue is often seen by managers as an obstacle, as a loss of time...because you have to go through heavy processes of consultation, in different committees..." Unions were often consulted only when the decision had already been taken, and generally reacted defensively -- opposing the plans and refusing to participate in the required meetings to implement change -- because they did not want to appear as collaborating with management. Even union members were wary of their leadership's defensive attitudes, and had the sense that unions were opposed to all change, with a negative impact on a

company's innovation potential. As one employee explained: "...the unions...are systematically opposed to any change."

Through the employee surveys, Dalman's leadership team was conscious of the reality experienced by workers, in particular the frustration of not being listened to. There was an urgent need to move forward from the rhetoric around employee autonomy and "empowerment", and to actually do something. Employee bitterness was summarised by one technician: "We [technicians] are often not consulted. The message seems clear: we are not intelligent enough to understand, and we are unable to bring anything to the firm."

However, union delegates themselves acknowledged that part of the problem was the tremendous cost pressure: "In the past, the optimisation of profitability was not the priority. It wasn't just employee performance, but also employee well-being, that were important." The short-term focus on cost reduction had become predominant.

One of the company's principal strategies had been the adoption of new technologies, meant to bring about significant improvements in productivity, but at the expense of employee-initiated incremental innovations. The organisational changes required from adopting these new technologies were implemented in PlaneSpace's customary top-down, "planning and control" mode of functioning, as opposed to a "process and learning" style of organisational change. One machine operator, also a union delegate, expressed his opinion: "There is a loss of innovation... You don't have to think, you just have to follow instructions."

Modes of Innovation

As a major player in the oligopolistic aircraft production market, PlaneSpace was required to have a strong innovative capability. R&D played therefore a crucial role. However, the innovative process at PlaneSpace, like its organisational structure and culture, remained mostly centralised, vertical and top-down. Decisions, as well as ideas, came from the top. The company showcased both the STI (Science and Technology) mode of innovation, as well as the Doing-Using-Interacting (DUI) mode of innovation. The former emphasised R&D and access to explicit codified knowledge through the use of digitalized and automated workspaces, while the latter made use of tacit knowledge -- employees' insights and experience -- for problem-solving and learning, and generally reflected a more decentralised and horizontal organisational structure. But as one HR manager noted, "At PlaneSpace, we focus a lot on product innovation, and not enough on process-organizational innovations." While the STI mode of innovation was very important during the early stages of the product life-cycle, the DUI mode became increasingly important as the product matured; incremental innovations by continuous improvement were the main way to increase productivity and quality in the later stages of the product life cycle.

Because each new model of aircraft was in itself a product innovation, and because manufacturing processes and organisations had to be adapted to each new model, it was very difficult to separate product innovation from process and organisational innovation. The two were inextricably linked -- hence the term

"program" to designate the production of a new aircraft. Each new program required its own organisation and processes.

In the last two decades, the introduction of major technological innovations at PlaneSpace had resulted in equally significant organisational changes. In design and engineering, 3D Computer-Aided Design and Computer-Aided Manufacturing (3D CAD/CAM) made paper drawings superfluous, and facilitated both the design process as well as the transition from the design bureau to manufacturing. CAD/CAM also facilitated the adoption of concurrent engineering, which resulted in a 30% reduction in lead time of the whole production cycle, from concept to delivery. As one technician pointed out:

[Before], the whole bench was full of drawings and assembly instructions and a terrible load of paper... Now, building an aircraft, it's fantastic. Besides each aircraft, you have a computer... it's without paper drawings, the whole way...The risk of mistakes is minimised enormously, and you never work with an old set of instructions because changes are immediately recorded in the database. Drawings are never outdated. Before, you had to constantly check that you had the latest version. [Now], everything is in the computer.

As a result, some previously key jobs in design and engineering, such as translating design drawings to manufacturing plans, had become obsolete. Further, designers had to be retrained and new ones recruited to work with the new technologies.

In manufacturing, CNC (computer numerically controlled) machining had replaced hand-crafting parts. Machine operators, like some designers and engineers, had been retrained or let go. New operators were only trained on programming the machines, not on hand-crafting the actual parts. Many older employees felt that knowledge and skills were being lost. As one older operator noted: "In my generation, we started with manual turning. With this, you had a bit more feeling. You came closer to the material, you could see what was good and what was not. Youngsters, who only use CNC machines, they don't get that feeling. People older than me, they are phenomenal to turn manually. This competence is disappearing; it's a craft that disappears here." One manager added: "Frankly, I don't understand how [the operators] don't get bored. Before the CNC machines, the milling machine operators acquired a real competence. They were proud of their work, and it was legitimate."

In production, product management software had also been introduced, including MRP (material requirements planning) and SAP (systems, applications and products for data processing), to integrate and manage the supply chain, and increase efficiency.

HR had also undergone a digital revolution, resulting in a changed organisation. Previously, HR had direct contact with all levels of employees; some HR reps could even be found on the shop floor. This had almost completely disappeared, to be replaced by digital tools and a company intranet. One team leader quipped: "HR has been significantly reduced... I would suppress the 'H' in 'HR' -- it's not human anymore. Workers used to go see the local HR rep; now they have to use the intranet."

Digital tools were also used for training, performance evaluations, and internal recruiting and mobility. Employees were expected to take a lead role in managing

their own careers, and managers had a new role as "coach" to their subordinates. But beyond promoting employee mobility and empowerment, digital data collection was also intended to facilitate the company's management of an employee's competence, performance, development and learning.

The latest trend in technological innovation, a manufacturing execution system (MES), kept track of all manufacturing information in real time, receiving up-to-the-minute data from machine monitors, employee digital reports, and data from robots, to monitor work-in-process on the shop floor. Such shop floor reporting had previously been done on paper, by the employees themselves, only once or twice a day. With the new system, operators now had to indicate very precisely in real-time all the operations that they made. By detecting dysfunctions and wasted time, MES improved productivity and reduced lead times. One example: the MES had detected that for the manufacture of one part, operators had to leave their stations, cross the shop floor to retrieve an essential piece, and return. Fifteen minutes were saved when a container of the needed item was placed at each operator's station.

As underscored by the MES, management through indicators became highly developed at PlaneSpace. Reporting through indicators became the main activity of all levels of management. According to the director of one department, performance monitoring was greatly facilitated by new digital tools, and there were now over 200 key performance indicators (KPI) in use in the company.

The Introduction of "Lean"

With the introduction of these technological innovations in its facilities, PlaneSpace increasingly emphasised the pace of employee work, and set tight production and quality standards, with a focus on continuous improvement. In essence, PlaneSpace was becoming a "lean" organisation.

Lean techniques were crucial for PlaneSpace to:

- reduce costs, by identifying core functions and by externalising the non core ones;
- increase productivity, by rationalising and standardising tasks, in particular to cope with the increase in production, with some departments moving from small batches to mass production.
- better monitor, by increasing standardisation and formalisation of processes, the whole production process -- and beyond, the whole supply chain -- to avoid organisational dysfunction and to increase quality.

As one engineer put it: “As soon as the scale of production becomes important, you have to introduce lean reasoning."

Process-focused, lean techniques optimised the value stream, to eliminate waste and reduce lead times, both within and outside the company. Outside the

company, because PlaneSpace, as an OEM, had adopted lean thinking, suppliers in lower tiers were forced to adopt it as well, to adapt to the quality and production standards placed on them by their higher-tier clients.
Within the company, "lean" impacted all departments and services. But the "lean" characteristics adopted by PlaneSpace, with its strong technocratic and hierarchical organisation, contrasted sharply with the characteristics required of a "learning" organisation, with a more horizontal or decentralised structure at its core.

Work Organisation and the Impact of "Lean"

When the concept was introduced in the company, "lean" was presented by top management as an organisational innovation. Within manufacturing, one important aspect of "lean" was optimising the allocation of tasks, and the time allocated to each individual task, along the assembly. "Line balancing" methods were used to level the workload along the line to remove bottlenecks and excess capacity. The concept of "standard time**" --** the processing time required by an average skilled operator, working at a normal pace, to perform a specified task using a prescribed method -- was also used to determine the correct number of workstations and the processing time at each. Lean concepts were also used in reporting activities with the introduction of "visual management" -- using markers and colour codes -- to quickly detect and resolve issues by level of urgency. It was almost impossible to separate where digital innovation ended and organisational innovation began. One example was the Manufacturing Execution System (MES), a digital innovation for improving and monitoring the production process, which incorporated the lean concepts of line balancing, standard time, and visual management, and also assisted organisational management, by monitoring employee processes and performance.

When lean was introduced, both workers and unions were suspicious, as it appeared only as a way to elicit more productivity from the workers. As one HR manager noted:

> There are very positive aspects in the lean approach... It can improve work organisation, and even some aspects of working conditions... The problem is that it was only presented by top management as aiming at increasing productivity and competitiveness.

Union delegates and hierarchy, in particular, considered "lean" as the strategic use by management of the rhetoric of innovation -- i.e., the use of the term "innovation" to label an organisational change -- which, in fact, only aimed at increasing profitability. As one union delegate remarked: "What [managers] label 'innovation plan', we call them cost-cutting plans."

As could be expected, the adoption of "lean" at PlaneSpace was very top down and rigid, especially in its initial stages. As one manager explained:

> [At first], 'lean' was like a religion, with its gurus... We had to attend a two-week training session, everyone had to start with the same configuration... [It was] a fanatic form of standardisation. I remember that there were even instructions

> concerning how you had to arrange your office, concerning the spacing of your shelves, even the organisation of your desk! Those who were not exactly in the required format were stigmatised... the dogmatic rule of one best way...was permanent stress... Employees were unhappy, but they did not dare to say it.

Standardised processes and monitoring, applied to every department in the company, were felt by most employees as resulting in a decrease in autonomy, innovation, and to some extent, skills. In the new work organisation, job requirements seemed at times even contradictory, putting some employee groups, such as managers, in a double-bind. On the one hand, because of the heavier workload from increased reporting requirements, managers had to allocate more time to reporting, and consequently, spent less time with their teams. Monitoring with indicators clashed with the hands-on approach of direct interactions with team members and subordinates. As one director described of his management team: "They are more and more in their office checking indicators, and less and less on the shop floor." On the other hand, there was an increased focus on "soft skills": i.e. social leadership and coordination, which "monitoring through indicators" seemed to negate. This posed a particularly difficult dilemma for first-line managers. As a result, on the shop floor, "team leaders" were introduced (for 10-15 person teams), who were not really managers, as they did not have hierarchical power, but who were experienced operators charged with coordinating tasks.

The new organisation's focus on "management by indicators", facilitated by new digital tools, was also impacting the company's innovative capacity. Even engineers in the design bureau had a negative reaction. As acknowledged by one top manager: “It’s a brutal act to drive engineers -- they always want to be creative;" and from an engineer's perspective: "Just focusing on indicators may inhibit innovation.... You don't dare to make mistakes anymore."

Through technological innovations and lean production principles, standardisation and simplification of tasks impacted all the assembly lines. The consequence was a form of deskilling, with potentially negative consequences on internal mobility. As one operator remarked:

> In the past, you performed all the work tasks [for a given operation], and you had all the required competencies. Nowadays, new operators know only a small range of tasks; they don't have a global view over the whole process. They are less skilled, and it may be a problem to get promoted.

Further, because the production processes were now linked and monitored, workers were more interdependent, and experienced an increase in stress: responsibility for failure could now be attached to an individual rather than to a team. If the worker did not meet his deadlines, the entire production process would be disrupted. As one technician confided:

> Nowadays, any failure is seen as the responsibility of individuals, whereas before, responsibility was taken at a collective level and you could receive more support and help from your team. There is much less now also due to a lack of time. Even worse, when your colleague fails, you may even feel a bit relieved ('it’s not me, it’s him!'), and you may benefit from [a colleague's failure] because the resulting delay alleviates your own time pressure.

At shop floor level, the process of standardisation was eliminating the "craft" dimension of the job; i.e., the DUI mode of innovation, or the use of tacit knowledge gained with on-the-job training and experience to solve problems by a "do-it-yourself", hands-on approach. The new method of mobilising ideas and suggestions from the machine operators, in formalised meetings or with formalised tools, such as a mandatory and monitored "idea box", could not replace daily, on-the-job creativity for most employees. As one operator pointed out:

> Worker autonomy has been reduced, and consequently, their capacity to innovate. It's those who make the product who can contribute to improve it. The entire chain of competencies is important, from the engineer to the operator... To compensate, monthly meetings have been introduced, and 'idea boxes'...but it does not replace the good way: making improvements by mobilising the worker's intelligence on his job.

The employee idea box was an example of how PlaneSpace's heavy, top-down culture strangled any innovative initiatives from employees. Meant to encourage employee innovation, a suggestion box had been introduced on the shop floor. But employees were now made accountable for generating ideas in their annual performance reviews, and were required to have made at least two suggestions during a year. As could be expected in a technocratic organisation, there were actual forms to be filled in with every suggestion. So employees filled in the forms, twice a year as expected, even if they lacked any real ideas, and even if they knew it was pointless, as they rarely received feedback from management. Additionally, any ideas with potential that were found here could not be directly implemented at shop floor level, but first had to go through a bottom-up process for validation, before coming back down with approval from the top. Rather than freeing up employee ideas, the suggestion box had merely become another performance monitoring tool.

Operators increasingly felt that the quality of their work had decreased, which grieved them deeply, because their work had lost some of its meaning. Commenting on this sense of loss, one operator noted:

> It even happens that operators say 'I am doing shit'... or more often: 'I don't have time enough to do good work.' But management doesn't care. 'We do not need to surpass quality targets,' they say. 'Just meet them.'

As a result of technological innovations, the digitalization of the workplace and the continuous pressure from continuous improvement in the ever leaner organisation, employee job satisfaction at PlaneSpace had reached an all-time low. "Lean" had been implemented forgetting one key dimension of the original Japanese model: employee engagement.

Some department managers, however, were indeed listening to their employees, and had already realised that both individual motivation as well as collective engagement were key factors in developing a more innovative workplace from a lean manufacturing organisation. PlaneSpace needed to take a step back from overly "lean" techniques to adopt a more "learning" approach. One departmental manager in charge of organisational change commented:

> In the lean approach [as implemented here], you have a very detailed analytical assessment of tasks in order to optimise their definition and allocation... But it is a very segmented approach, which does not take account the value added by the collaborative dimension. So in our department, we were critical of this approach.

The reporting system made possible by digitalisation could reinforce "management by indicators", and give managers an excellent monitoring tool to precisely measure the individual performance of every operator in real-time. But that is not the choice that was made in one particular department. The manager explained the situation:

> It is not the technological tool in itself that's important, it's what you do with it. There are two modes of management: the 'monitoring' one, and the 'collaborative' one. If you use the tool just to monitor and to prescribe, you will lose the trust of employees, and their engagement, and they will find ways to manipulate the system, to comply with the imposed indicators but without doing what you really expected. [As] some uses of this tool could be catastrophic -- Big Brother! -- I chose not to use the system to calculate individual performances...I don't have to centralise all the data. Once, a manager from another department asked me: 'In your department, what's the result concerning this indicator?' I replied: 'Well, I don't know.' 'How come?' he asked, 'You don't know your job of manager!' I disagreed, because what was important in my mind, was that the given indicator we were talking about was [being used] in the team...to better control their own process.

The Quest for an Innovative Workplace

Dalman and his management team had been conscious for a few years already of the growing employee dissatisfaction, and that this was having a negative impact on innovation in the workplace. The results of job satisfaction surveys had repeatedly highlighted these problems. As one of Dalman's managers noted:

> The engagement surveys were carried out during three successive years, from 2012 to 2014. The results were not very good. Employees had the feeling that their innovative capacity, in a way, was not sufficiently taken into account; [that they were] a bit overwhelmed by bureaucracy. Some employee responses shocked top management, such as, if I summarise, 'I don't always understand what I do, but I am asked to do it.'

The HR manager added:

> The results of the job satisfaction survey in 2011 were not really good. So we introduced working groups on 'life quality at work,' and implemented some changes. Two years after, we carried out a new survey.... and discovered that the results had not improved! We realised the problem was much deeper...'

Some changes had already taken place to improve horizontal communication, and to foster the engagement of workers, such as the introduction in 2012 of "manufacturing multifunctional teams", which included employees from

production - including operators - and support functions, as well as from design and engineering. For several years already, Dalman had been researching organisational innovations, and was now convinced that, in his own words at the Learning conference, "Social innovation is as important as technological innovation," and even more that, "social innovation preconditions technological innovation."

Conclusion

As his leadership team paused for a break from its brainstorming session in the conference room, Dalman thought back to the key messages from his "Learning and Leadership" conference. One guest speaker, lecturing on boosting creativity and revealing hidden talents in employees, had explained that:

> You have to release employees' energies to empower them. Seek better performance, but above all, strive for happiness at work, because when you are happy at work, you are more innovative.

Changing the mode of management had also been a key topic:

> A manager must not impose. If you impose, people will oppose. A manager must cultivate his field of employees -- prepare the soil, provide the nutrients -- for the best results. The first lesson from companies in which employees enjoy freedom and responsibility of action is that workers really do their best for their firm.

His leadership team's brainstorming session had converged on a similar line of thinking, that "less hierarchy and more autonomy means more innovation." His top managers certainly had a few interesting ideas.

Then it dawned on Dalman: his line employees surely had some as well.
Did they know anything about "lean" and "learning" organisations, or was it enough that they *felt* the difference? Could they imagine an innovative workplace that would simultaneously increase their job satisfaction while increasing productivity and reducing costs? And, with so much mistrust in the past, but so much at stake for the future, at what point should Dalman involve the unions in discussing a new organisational concept for the company?