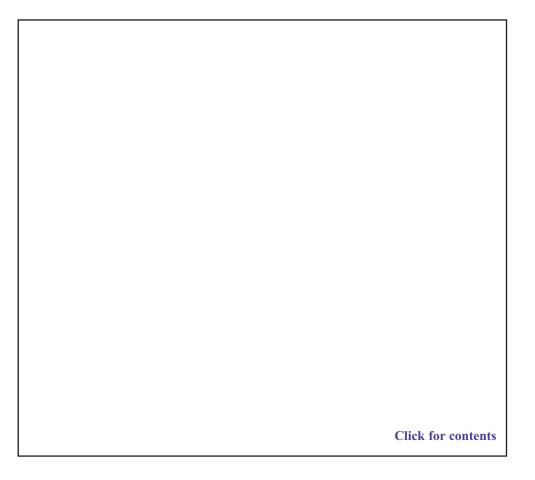


Work organisation and innovation

Case study: FAVI, France



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Background to the organisation

FAVI is an SME based in Hallencourt in the Somme, a *département* in the Picardy region of France. It is a pressure die-casting company specialising in copper alloys that currently employs 406 people. The company designs, optimises, smelts, machines and assembles copper alloy pieces. Interns can at times account for 10% of the workforce. Founded in 1957, this *société anonyme* (public limited company) with a capital of €960,000, is part of the AFICA Group, which purchased FAVI in 1971.

FAVI is in a healthy financial position, with a return of more than 15% over the last 25 years. In 2010, FAVI generated a turnover of \notin 75.5 million, 32% from export markets. Today, FAVI generates 80% of its turnover through the automotive sector, supplying one in two cars in Europe with gearbox forks on a sub-contractual basis. As a European industry leader, FAVI supplies almost all European automobile manufacturers (Renault, PSA, Fiat, Opel, Audi, Volvo, Volkswagen, etc.). In a sector in which the threat of delocalisation is very real, only the quality of the company's products, its specialist skills, and its competitiveness (with the exception of the evolution of the cost of raw materials, FAVI has not increased its prices since 1995) can explain its current success.

FAVI generates 13% of its turnover in the industrial sector for clients such as ABB and Bayard, 5% of its turnover on the high-performance electric engine rotor market for clients such as Leroy Somer, Grundfos and Sew Usocome, and approximately 2% of its turnover in the recycled machining chips market.

This means that FAVI is the world leader in the injection of cuprous alloys and the European leader in the manufacture of gearbox forks. FAVI's central goal is a rather unusual one: to remain in operation in Hallencourt in order to protect jobs in the local area. The former head of FAVI, Jean-François Zobrist, used to say that, 'like the tree in the car park of the Hallencourt factory, FAVI's ambition is to stay rooted and develop in Hallencourt, its native land'. In order to support the company's continuing existence at Hallencourt in a sector that has been hit hard by offshoring, FAVI has developed a three-pronged innovation strategy focusing on products, processes and organisation. Indeed, FAVI's management are convinced that innovation and quality are key to their ongoing success.

The first element of the company's tripartite strategy is **product-market innovation**. In terms of the analysis of Prahalad and Hamel (1990), Favi has a competence-based strategy. In other words, the company exploits its key competences in order to launch new products. Owing to its specific expertise, which consists of moulding copper alloys at temperatures in excess of 1,000 degrees centigrade, FAVI has, over the course of its history, successfully developed a series of product-market innovations. For example, in the postwar period FAVI began to sell sanitary products (washbasin siphons), before moving into water counters, for which there was huge demand at a time when the construction industry was booming. In the 1970s, competition from Asia in the market for sanitary products and water counters started to pose a threat. FAVI identified a new opportunity for manufacturing brass gearbox forks for the European automotive industry. This new product guaranteed continued growth for FAVI from 1989 to the present, with the workforce expanding from 140 to 440 employees at the height of its activity. Meanwhile, the company decreased its level of production in the traditional sanitary and water counter sector, specialising instead in top-end products.

While FAVI became the European leader in the European gearbox fork market in the 1990s, the SME sought new opportunities based on its competences in the field of smelting, machining and assembling copper alloys. In 1995, the current technical and sales director, Dominique Verlant, who was a salesman at the time, identified an opportunity. A number of industrial companies were looking for a way of improving the conductivity of rotors for electric motors. A research and development project involving a Picardy-based engineering school and workers from FAVI with unique expertise in smelting was launched in 1997. This led to the introduction, in 2000, of a new electric motor rotor with conductivity improved from 3% to 6%. This cutting-edge product, consonant with the firm's philosophy of sustainable development, has enjoyed continuous growth. Ten million units have already been sold.

Aware that the automotive market had reached maturity, FAVI pursued its conquest of new markets and, in 2008, a new research project was developed with a view to developing a range of antimicrobial products¹ (door handles, light switches, hand-holds, etc.) for the hospital sector used to counter nosocomial diseases. These products were set to be introduced to the market in late 2012.

The second element of FAVI's three-part strategy to innovation is manifested in a quest for **continuous improvement in processes** and the certification of those processes. FAVI has achieved ISO 9001-2000 and after becoming the first European foundry to gain ISO 14001 certification in 2000, FAVI also became the first French company to obtain OHSAS 18001 certification (health and safety at work). In 2008, FAVI was also the first European foundry to obtain ILO OSH 2001 certification and in 2010 the company was awarded the Peugeot Quality Trophy.

The third element of FAVI's three-part strategy is **work organisation innovation**. FAVI's production management system is based on a series of mini-factories. This innovation has been rolled out gradually over a period of 25 years.

FAVI has not developed a traditional HR management strategy. The main recruitment criterion is an ability to meet FAVI's managerial principles: being at the service of the client, being autonomous and responsible, and giving the best of oneself in order to ensure that the company succeeds. A large number of training courses are offered to FAVI's employees (regulating equipment settings, quality control, safety, etc.) and in-house training is provided by the most experienced operators. Lastly, the objective of the remuneration system is to strengthen the unity of the employees as a group. The FAVI system is based on a profit-sharing scheme: 7% of the profit before taxes is shared equally. The financial *intéressement* system offered to employees means that they can potentially receive between 13 and 15 months of salary annually.

¹ The antimicrobial properties of copper have been known since Antiquity.

Nature of the innovation

In the automotive subcontracting sector, which has been hard hit by delocalisation, FAVI is the undisputed leader in the gearbox market. Guided by the imperative of protecting local jobs and safeguarding the company's future, the SME is convinced that the key to success is to ensure that it is organised, via the mini-factories, with the aim of serving its clients uppermost in mind. Jean-François Zobrist coined the motto 'Par et pour le client' ('By and for the client').²

The organisation's mission is manifested through the use of mini-factories, each one dedicated to a particular client. Consequently, the hierarchical structure of the factory is flat with only two hierarchical levels (the factory director and the 'leaders' of the 12 mini-factories). The idea of these mini-factories came from Zobrist, who began observing the way in which the company functioned after his appointment as technical director. He quickly recognised that FAVI was mechanistic in its operations and people management. Things seemed to be set up on the assumption that people were inherently bad. Workers received messages of distrust, job insecurity and reward akin to piece work. Zobrist was an advocate of the ideas expressed by Douglas McGregor in his 'Theory Y', which is based on the assumption that people are innately good and that they like working. Consequently, the autonomy of individuals and trust between operators and managers are essential.

Each mini-factory is an island of production located in a particular area of the factory containing all the equipment and processes dedicated to a particular client (PSA, Renault, Volvo, Audi, etc.). Often, the logo of the client, painted in distinctive colours, is displayed in the mini-factory. Such units contain 20–35 operators, a leader and a salesperson who acts as a project head, and a productivity sponsor. Recently, mini-factories have introduced a quality correspondent and one maintenance technician in each mini-factory.

Lastly, the technical expertise of each mini-factory is supported by back up functions: the design office, the laboratory, equipment, R&D, IT, etc.

The introduction of the FAVI mini-factory system and the values that it represented was accompanied by a new technical vocabulary. 'Teams' became 'mini-factories', 'workers' became 'operators', 'supervisors' became 'leaders' and the salespeople became the representative of the client.

The operator

The autonomy of the operators is the cornerstone of the FAVI system, because everything must be done to ensure that workers can take decisions in real time with a view to giving clients the highest quality of service possible. Operators, who produce an average of 1,800 pieces a day, are responsible for their supplies and for maintaining their equipment. Nevertheless, a certain degree of flexibility is permitted: according to one operator, 'the work rate must be respected, but if one day it isn't, we simply make a note of why work stopped'. All forms of monitoring have been abandoned, because the company believes that trust is more productive than monitoring. Everyone is encouraged to monitor the quality of their own work. In fact, FAVI's management recognises that added value comes from the operators: 'They take a piece in their right hand and return it, finished, in their left; they are the people who provide all the added value', says Dominique Verlant.

One productivity sponsor noted that every member of the mini-factory must work to ensure that his unit 'does more, better, and for less'. Operators are encouraged to submit 'progress projects'. These projects can improve quality of products, productivity, security, or work conditions. Every month, a jury hands out prizes to two of these 'progress

² FAVI internal document.

projects' (a $\in 1,000$ first prize and a $\in 500$ second prize), and at the end of the year the mini-factory that has suggested the largest number of ideas receives a reward. The jury is composed of a group of leaders, salespersons and operators which change every year. One of the operators interviewed won a $\in 1,000$ prize for an idea concerning a modification to the machining system used for gearbox forks. Previously, in order to machine a gearbox fork, two machines had been required. The operator's project introduced a modification to the first machine so that it would no longer be necessary to use the second machine. The modification made it possible to increase the rate at which gearboxes were produced.

The leader

Since operators are central to the operations of the mini-factory, it is the responsibility of leaders to listen to their concerns and support them in their efforts to be autonomous. The mission of leaders is to protect existing jobs. Leaders are always former operators who have shown potential in terms of organisation and leadership. They manage their mini-factories in an autonomous fashion. They are responsible for health and safety issues; ensuring that the environment is respected; work organisation; deadlines and planning; salary increases; organising holidays; defining hiring requirements; inducting new recruits; managing investment; procurement; managing and running numeric machine tools on a daily basis; managing internal and external quality incidents; maintenance; defining and running 'progress plans'; and for improving quality.

On a day-to-day basis, leaders receive orders directly from their clients. The mini-factory must organise itself autonomously so that it can deliver the right pieces to the client at the right moment. The leader decides if the mini-factory should work with one, two or three operator teams. If a leader requires more operators, colleagues in other mini-factories will be asked to supply them. The system is based on a form of mutual adjustment between leaders. If there is a lack of personnel, leaders place a request for interns with the Human Resources department.

The salesperson

The salesperson's role is to be permanently in touch with client concerns and to pass client requirements on to operators in the mini-factory. The salesperson is the client's 'one-stop shop' and has complete responsibility for the client relationship cycle, according to the technical and sales director. Depending on the various phases of this cycle, the salesperson is a technico-salesman, a project head in the industrialisation phase, or a productivity sponsor of the minifactory, tasked with ensuring that the prices agreed with the client make it possible to achieve the desired margin. Salespeople have a global responsibility for all projects and are entitled to act autonomously. They only sell what can be produced, which prevents the emergence of traditional tensions between salespeople and the production team.

Since 2008, salespeople have had their offices inside their mini-factory, which enables them to make changes and adjustments on a day-to-day basis. Salespeople regularly hold meetings with clients, and every opportunity is taken to ensure that operators also talk directly with clients whenever possible.

Before the introduction of mini-factories, FAVI's capacity for respond to client demand ranged from poor to nonexistent. For example, salespeople had to wait weeks before the design office informed them whether it was possible to fulfil client orders. Support functions were often carried out by intermediaries who, rather than creating added value, slowed the system down. This traditional organisational approach, complete with a technical director, foremen, team leaders, workers, and an array of support functions, was regarded as overly focused on the internal functioning of the enterprise rather than the needs of the client. The innovation of the mini-factories was triggered by an extraordinary commercial opportunity. Peugeot lodged an order for gearbox forks, which accounted for 20% of FAVI's turnover in 1989. The question arose of how this order should be managed: should successive eight-hour shifts be organised to keep the factory running around the clock? Should the foundry be enlarged? Should additional foremen be hired? Instead, Zobrist decided to create an autonomous unit to manufacture pieces ordered by Peugeot so that it could respond to the client's needs without disrupting the rest of the production process. The concept of the mini-factory emerged.

Process of implementing the innovation

Today, FAVI has 12 mini-factories, all with increased autonomy. The process of implementation of the mini-factory approach has been incremental over the past 25 years. The concept of the mini-factory first emerged at FAVI in the late 1980s and it was rolled out in three separate phases: the mini-factory tutored by experts (1989–1996); the autonomous mini-factory (1996–2004); and the mini-factory with increased autonomy (2004–2011).

Phase 1: Mini-factory tutored by experts (1989 to 1996)

In the initial implementation phase, the mini-factory innovation concerned approximately 30 staff. Over the course of the following years, new mini-factories were set up as contracts were obtained. Over the next five years, new mini-factories were founded and the old mode of production was phased out, giving way to a production process entirely articulated around the concept of mini-factories. Step by step, the whole workforce was affected.

However, a great deal still had to be done to ensure that the idea became a genuine innovation. Before reaching its current state, the original mini-factory concept first introduced in the 1980s went through a number of changes, as the innovation was introduced incrementally.

In the first version of the approach, responsibility for production, planning, equipment maintenance, investment, and HR functions was devolved to the mini-factories. On the other hand, procurement, quality control and maintenance were, unlike today, support functions. The former managers were opposed to the change and it was Zobrist who insisted that these managers should become experts in the various support functions and act as advisors to mini-factory leaders. In this initial model, salespeople were not physically present in the mini-factories, but, rather, worked in the site's administrative sector with the sales director.

The implementation of the innovation was supported by prolonged training programmes for operators and leaders: 'As leaders, we had a lot of training sessions and management conferences,' recalled one of the leaders. Meanwhile, operators followed courses in safety and how to operate digitally controlled equipment. All staff also attended a conference on market-driven design held by Professor Shiba, a Japanese total quality management (TQM) expert when he visited Hallencourt from Japan. A large number of meetings between mini-factories and their clients were also held at Hallencourt or on client sites. Similarly, study trips to Japan, Poland and Latin America were organised for around 20 salespeople, leaders and operators every year in order to discover how successful foreign firms work. Conferences, training sessions, and visits to trade shows and enterprises were regularly organised to 'bring the outside inside' and find new ideas to increase productivity, improve quality and unearth new market opportunities.

Phase 2: The autonomous mini-factory (1996–2004)

According to the leaders and operators interviewed for this case study, by 1996 the mini-factories were working completely autonomously. 'By 1996, we had attained a high level of autonomy. I decided to get in the car and go to Citroën to talk about a quality problem. I didn't have to explain anything to anyone,' a leader recalls.

By then, leaders also no longer worked in tandem with experts, or, in other words, the former managers. In 2004, the last managers to have worked within the framework of the old system retired, marking the definitive end of an era.

From then on, the major challenge was to embed the system and successfully integrate new recruits, particularly interns, who guaranteed the flexibility of the system. Zobrist continued to deliver speeches to the company's employees. Furthermore, he went to the factory every day to talk to operators at their workstations, constantly reminding them of the rules of the game. Relations between peers also played, and continue to play, a key role. One operator commented

that: 'established employees show the interns and new recruits how to fix the machines; people help each other a lot, we explain how things work at FAVI'.

Phase 3: Mini-factory with increased autonomy (2004–2011)

In 2004, Zobrist designated Dominique Verlant as his successor. Hired in 1985, Verlant had started out in the design centre, before becoming a salesman, and later moving on to become sales director. He initiated a new series of incremental innovations between 2004 and 2011 in order to eliminate the support functions hindering the autonomous running of the mini-factories as rapidly as possible: 'Every time there's a separation [between functions], there's a risk that the devil might wriggle into the gap', he said. By 2011, he had introduced almost all the support functions (procurement, quality control, maintenance) into the mini-factories and thereby further increased their autonomy.

The first stage of the suppression of support functions was launched in 2004, when the decision to suppress the procurement department was taken. To ensure that the mini-factories were more autonomous, they were made responsible for procurement and decentralised warehouses were integrated in the mini factories. Whereas previously the warehouse frequently ran out of stock, the mini-factories could now control their own output and ensure that stock levels were correct.

After the loss of an important market owing to a lack of communication between a salesman and his mini-factory, in 2008 Verlant removed the sales department as well. From then on, the salespeople were directly integrated into their mini-factories to make it possible for them to deal immediately with any issues relating to quality and client service. The salespeople interviewed for this case study believe that this development facilitated communication with operators and the leader. In 2009, the quality control function was also integrated into the mini-factories: 'Client complaints had become rare (less than two per month) and when a client phoned to talk about a service quality problem, the salesman became the quality control manager for his mini-factory and was thus able to play his role as the client's unique point of reference to the full', said the director.

In 2011, maintenance sponsors were integrated into the mini-factories. Their job is to ensure that the mini-factory is always operational so that client orders can be met.

To sum up, it took a period of 20 years to implement the mini-factory concept. In 1989, Jean-François Zobrist had the intuition that an organisational system dedicated to satisfying clients by means of autonomous mini-factories would enable the SME to guarantee its continued existence. As a charismatic leader, Zobrist was to play a key role in explaining the way in which the mini-factories were to function. He imposed new operational norms (being unconditionally at the service of the client, being autonomous and responsible, trusting in the capacity of the operators to maintain high standards in terms of quality, permanently focusing on progress, concentrating on guaranteeing the company's prosperity, etc.). Employees who did not accept the system were let go. If managers used to a traditional hierarchical system were invited to leave the company. The appointment of Dominique Verlant as Managing Director triggered a new series of incremental innovations aimed at making the mini-factories even more autonomous.

Reactions and challenges

At first, the changes introduced by Jean-François Zobrist were not met with universal enthusiasm. It was the middle managers rather than the workers who were opposed to the new system. This was because, in terms of the changes being made, they were the ones at risk. For example, at first the middle managers rejected decisions to end the payment of individual bonuses based on productivity as these decisions went against long-established practice in the classical organisation. The middle managers feared disorder, a loss of productivity and a decrease in their personal authority. Previously they had had the power to assign bonuses to the operators. With the mini-factories, they lost this power as there were no more individual bonuses. Initially, a number of middle managers formed a kind of opposition front and a number of them left the company. These departures made it easier for Zobrist to introduce the mini-factories.

The resistance from the remaining middle managers was overcome through removing them from the hierarchical structure and offering them promotions in support roles.

The new system at FAVI also came up against opposition from the support functions whose skills and authority were compromised by the innovation. For example, in recognition of a time lag between the design office responding to salespeople concerning whether or not the firm could meet client demands, Zobrist requested that the salespeople reply directly to their clients and describe the product ranges on offer without asking the manager of the design office, as was previously the case. In response, the manager of the design office resigned.

More recently, the introduction of maintenance functions in the mini-factories caused a number of problems linked to technical specialisations, because the technicians are not multi-skilled. However, solutions were found. In the case of maintenance, the maintenance agent fulfils a varied role in the mini-factory, and whenever his expertise is called upon (mechanics, hydraulics, electrics, depending on the situation) by another mini-factory, he knows that his input will be reciprocated at a later date.

Operators have generally been more positive about the introduction of mini-factories. Initially, they regarded the new approach as providing a framework for relations that were simpler and more straightforward than those with which they were familiar in other industrial contexts, in which 'things were handed around from one boss to another'. They found that communication circuits were more efficient: 'we don't have to make several requests to get something.' The fact that operators are closer to the representatives of functional departments is also a source of satisfaction: 'There's the leader, the quality control agent, and the salesperson who deals with dispatch all in the same office, the same sector. [They are] closer and therefore more reactive.'

Indeed, employees who are well established at the company find it hard to imagine working in any other way. One operator, now in his 23rd year at the firm, said that he had always been familiar with the FAVI system: 'It's always been based on the same principle – there's always been a leader, a quality control agent; we've always worked like that.'

Impact on employees

Although there is no procedure for measuring the effects of the work organisation changes – such a procedure would run counter to the management's philosophy – the employees interviewed for this case study said they were generally satisfied. FAVI seems to be a popular employer, for a number of reasons of which the management system is a major one.

The management system was often mentioned, notably by leaders, who are its main beneficiaries. One of the leaders noted: 'I joined in 1985 as an operator, and I was only supposed to stay for a year; the reason I stayed longer was the management system implemented by Mr Zobrist'. Other factors, such as autonomy, the quality of equipment, and proximity to clients were also mentioned as reason for worker satisfaction, even if operators did not mention them as frequently as leaders.

Human resource policies are another reason why operators are supportive of the FAVI system. There is a low level of formalisation in the HR approach with guidance provided only on the management by objectives, references to company values, and mutual adjustment (informal and transversal discussions).

However, there are a number of exceptions to this rule of low level of formalisation in terms of HR approaches, notably with regard to health and safety, an area in which the rules must be respected at all times. In fact, health and safety provisions have stepped up for employees. As one leader explained, comparing the previous and the actual organisation: 'Back then, people got a lot of chips in their eyes; we didn't have any protective glasses; we didn't have gloves. Now protective glasses are obligatory; safety shoes are obligatory; it's a long process.'

The mini-factory system also changed the structure of employee remuneration. Shortly after joining the company, Zobrist got rid of all bonuses and incorporated the average bonus amount into basic salaries. Under this collective bonus system FAVI employees are paid 13 or 14 months of salary over the course of the year. Moreover, there are individualised forms of remuneration in the shape of various 'trophies' solemnly and publicly handed out, during carefully organised ceremonies, to deserving employees. Employees appreciate these bonuses because they reward their spirit of initiative and are coherent with the culture of the company, in which innovation plays a central role.

The traditional notion of career progression has also evolved. There are now no defined career plans in the company, so people are not forever trying to climb the management ladder. Everyone can gain fulfilment in the post they occupy.

However, opportunities for promotion do exist: the director's career, and those of the leaders bear witness to this fact. Thus, operators know that FAVI provides opportunities for advancement and is capable of expressing its recognition. As one employee explained: 'Yes, we can always progress. I began as an operator and then became a quality control agent.' Nevertheless, these possibilities are restricted by the fact that there are so few hierarchical levels. Operators believe that this disadvantage is compensated for by the autonomy that they enjoy.

In fact, responsibility is central to the FAVI system. The managing director commented: 'People aren't always trying to get to a position of responsibility, because they assume responsibility naturally, in their field of activity. The leader is responsible, in his mini-factory, for providing a service to his client, for managing his staff, his investments, his progress plan.'

These forms of informal adjustment can also be found amongst operators when, for example, they reflect collectively about changes to be made to the equipment on which they are working. Thus, according to one operator interviewed, discussions concerning improvements are held 'with the people operating the machines, because not everybody works in the same way'. Individuals organise the way in which they work. For example, they take the decision to change machines if necessary without waiting for a leader to authorise them to do so.

This flexibility to make certain changes without prior formal negotiations or discussions with management allows workers to avoid fatigue and repetitiveness.

Due to the simplified organisational structure (there is only one hierarchical level between a director and an operator), close, direct relations between employees are fostered. This increases learning and encourages mentorship. It also improves response time to clients as FAVI's structure is simple and largely integrated into the mini-factories, a factor that limits risks of conflict and accelerates the decision-making process.

Collective productivity requirements encourage solidarity between workers. Levels of solidarity are high: help is reciprocal (one operator explained: 'We help out our mates whenever they have a problem').

Impact on the organisation

The mini-factories innovation involved the whole organisation. It modifies the modes of coordination and the overall client structure, and bears witness to a strong company culture which is, notably, defined in contrast to more traditional organisations.

The FAVI system is based on the autonomy of the mini-factories, and the important role of their leaders, who act almost as individual 'bosses' in autonomous entities. The system is highly decentralised. The leader takes operational decisions on a day-to-day basis in the mini-factory: procurement, planning, HR issues, etc., whilst other strategic decisions are taken by managers higher up the hierarchy. This was, for example, the case when the decision was taken to remove the central procurement warehouse: 'there is no procurement department for external supplies; it's the leader who, using a Kanban system, takes delivery of a palette. The order is sent directly to the supplier who delivers the product. There are what we call shop floor procurements in each of the mini-factories. We don't have a centralised warehouse anymore.'

The concept that the client is at the very core of operations is implicit to the very architecture of the organisation. In order to encourage close relationships, each mini-factory is dedicated to one or more clients. Gradually, all the internal elements precluding close relationships with clients were eliminated. For example, the procurement department has been suppressed. The introduction of a quality sponsor in the mini-factories represented a desire to do away with all forms of separation which could generate costs and cause dysfunction.

Moreover, the salesperson acts as a spokesperson for the client within the organisation. It is an organisational choice: there is a salesperson in each mini-factory. Amongst other things, the salesperson oversees productivity issues; indeed, many of the innovations produced by the operators derive from the quest to reduce costs on behalf of the client. The client is also involved in the process of allocating rewards (bonuses) to operators when they suggest improvements to production procedures.

In this regard, represented by the salesperson, the client is in direct contact with the leader and all the other actors in the mini-factory: operators, quality sponsor, etc. This approach encourages a stronger relationship with the client.

Generally speaking, the employee tenure is stable. The turnover rate is low and 38% of the personnel have been with the company for over 15 years. The interesting nature of the work and good working conditions are frequently cited as reasons for this. Another contributing factor is the shortage of alternative jobs in the surrounding area.

The responses of the interviewees indicated that FAVI's company culture is very strong. This culture promotes a unity that surpasses the singularities of the mini-factories. This culture is also strongly expressed by means of a comparison with other factories with which FAVI employees are familiar, in which they could have worked, or in which they could currently be working, or other suppliers which do not have the same qualities or operational approaches. It is interesting to note that these differences are particularly evident to the operators, many of whom have the impression that they are very different from their counterparts in other similar companies, both in terms of their day-to-day activities, characterised by a higher degree of autonomy, and by their relationship with the hierarchy and the firm itself.

In terms of company culture, we also observed a high level of commitment, expressed through anecdotes demonstrating devotion to the cause, for example a willingness to work extra hours to fill unexpected client orders.

Similarly, the collective values of the firm seem to be strong. Operators not only have a high degree of individualism associated with their autonomy, but they also feel that they are part of a collective and are thus capable of working closely with their colleagues, giving and receiving help in a spontaneous way.

Lessons learnt and future plans

The managerial innovation underpinning the FAVI system appears to have been implemented successfully. The lessons that can be drawn from it are linked both to its 'people friendly' approach to organisational life, and a commitment to a high standard in the field of production and a permanent dynamic of innovation. The current challenge is to ensure the continued existence of this innovation.

FAVI provides an example on a small scale of the kind of transformations observed at a larger, industrial scale. Attention should, in this context, be drawn to the emphasis placed on productivity and responsibility for individual actions, the efforts made by the organisation to empower its employees, the desire to narrow the gap between decision-making and action, and the fact that planning, execution and monitoring are all under the responsibility of the mini-factory.

An original aspect of FAVI is that the various levers of the organisational dynamic (empowerment, reactivity, innovation) are dependent on all the actors in the organisation, particularly the operators, who are aware of their responsibilities and display a high degree of commitment to the firm.

Furthermore, the FAVI system is based on the replication of all the firm's functions within the individual mini-factories. This approach is designed to ensure that there is, as far as possible, a bridge between various functions (for example, the procurement and quality control functions have been integrated into the mini-factories). Clients thus appear to be genuinely at the core of the organisation, represented in a number of different ways: not only by the salesperson as project head and productivity sponsor, by also by the quality control manager responsible for checking procedures and the application of standards such as ISO 9000.

The firm has expanded and the FAVI system has adapted to that growth by means of the regular addition of new minifactories dedicated to new clients. Nevertheless, two issues arise: firstly, the pursuit of growth – just how many minifactories can be introduced, and will informal communication still be viable if the firm continues to increase in size? The second issue is the relationship between the director and the employees – how will the relationship between the director and the leaders and operators be affected? In effect, the replication of various functions (quality control, HR, salespeople, etc.) in individual mini-factories leads to a loss of specialisation and to less expertise being shared within single organisational units. However, it should be possible to continue to share expertise in an informal manner.

The challenge of client relations

FAVI has retained its management system in spite of a pronounced trend toward rationalising and standardising clients in the automotive industry. It is becoming increasingly difficult to keep in close contact with clients. As one leader noted during the interview for this case study: 'We're no longer able to "bring the outside inside". Because, you know, the structures have changed, orders aren't the same as they were. We now have to deal with highly educated young people with three years at Peugeot, Citroën and Renault, who are governed by figures. So, I think that customer relations and human contact is somehow no longer a priority for them.'

While at FAVI responsibility is focused on the leader of the mini-factory and the salesperson, elsewhere in the automotive industry the decision centre is now the purchasing department rather than the production department as it was until a few years ago.

The challenge of renewal

Introduced to their new function by Zobrist, leaders gradually familiarised themselves with it in conjunction with him. The question of their replacement will inevitably be posed in the near future because their average age is now rather high. One of the leaders interviewed commented that it was hard to imagine being replaced other than by a process of internal promotion: 'I think that someone who had always worked in the old way would find it difficult. I'm not saying that he wouldn't be able to adapt, I just think that he would find it hard to.'

Conclusion

It is rare to come across organisational innovations with as many distinctive features as the FAVI system. Paradoxically, the FAVI system provides an example of a major innovation developed patiently and incrementally over a period of more than 20 years. It is an organisational approach that goes against the grain of most current models. The strong growth of the firm has not led, as in other organisations, to a formalisation of operational approaches and to the development of a techno-structure. The opposite is the case. But, simultaneously, FAVI has produced a kind of distillation of many of the most recent organisational innovations: the flattening of structures, making employees more responsible, the client-focus approach, the calling into question of the usefulness of procedures, and the effort to ensure that the decision-making process is as close as possible to the action.

As noted above, the originality and strength of the mini-factory management approach could, in the future, turn into a weakness. This is because, in the final analysis, the FAVI 'system' is less a system *per se* than a wager on the way in which people behave. At both FAVI and at the company's clients, people can change, and the conception of their role in the production process can evolve. As we have also seen, these evolutions have generated three major challenges (the challenges of organisation, client relations, and renewal) that FAVI now has to face.

Reference

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