Matfer Bourgeat: 202 years of innovation and still the world number one

by

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Overview

Matfer Bourgeat, the world leader in equipment for the food industry, has gained recognition for making inventions for 202 years. This tradition of innovation has made it possible for the company to develop internationally from the time when the company first started, and to remain the leader in this area while establishing manufacturing sites in France and staying independent. However, the current rapid changes in its markets have forced this middle-market, family-owned company to reinvent its management of the innovation process. Matfer Bourgeat, which normally only deals with intermediary clients, must establish a closer relationship with its end users, understand their needs, and analyse the emerging trends which are redesigning consumer practices. If it does not, then even its most innovative innovations will not come to fruition. Consequently, Matfer Bourgeat has carried out wide-ranging internal, cultural changes, while taking advantage of the academic progress made in innovation management. At the same time, it has taken the features unique to middle-market companies into consideration.

Report by Sophie Jacolin • Translation by Rachel Marlin

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Christophe Midler: Not only did the collaborative work undertaken between Matfer Bourgeat and the École Polytechnique's Management Research Centre (CRG: Centre de recherche en gestion) transform this middle-market company's process of innovation, it also widened the spectrum of academic work at the CRG. We have been interested in innovative organisations for a long time, but our work focussed for the most part, until recently, on large groups and start-ups. When we invited Tony da Motta Cerveira to join the 'Project - Innovation - Design' Master's programme, we were able to analyse a situation which is representative of middle-market companies, where there is both success and fragility. In terms of turnover and employment, middle-market companies occupy an important place in the industrial fabric of both France and Germany. Their performance is renowned, but this should not mask their inherent fragility. In recent times, they have experienced more bankruptcies than Small and Medium-sized Entreprises (SMEs), because as they operate in more globalised and competitive markets, they also face greater competition. Can the creative methods developed by the academic world for large groups, especially car manufacturers, be applied to them to their advantage?

The Matfer Bourgeat saga

Tony da Motta Cerveira: Matfer Bourgeat is a family-owned, independent company. It is the result of 202 years of innovation and manufacturing in France. This world leader in equipment for the food industry operates in four strategic areas: small kitchen utensils; tableware; meal distribution furniture and fittings; and hotel equipment. With one thousand employees spread over six industrial sites specialising in the metal working industry and plastics processes, it has a turnover of 200 million Euros. The seventeen thousand items in its catalogue cover a range of clients from crèches to luxury hotels. Some of its latest innovations include plastic moulds resistant up to temperatures of 250°C, and washbasins which distribute just 21 centilitres and comply perfectly with hygiene protocols in kitchens.

The Matfer story began in 1814 when Charles Trottier, a boilermaker and tinsmith, had the idea of supplying copper moulds to professionals in the baking industry. He quickly diversified his offer and presented it in his own catalogues. He concentrated on developing his business internationally, and by 1850, Matfer already had clients in Constantinople (Istanbul), London and St. Petersburg. In 1862, the company started suppling the Russian Tsar. The company's overseas success was helped by the growing reputation of French pastry chefs working abroad who were unable to find the innovative tools and techniques which they needed, but which Matfer supplied in France. When Charles Trottier's son took over the family business in 1862, he made it even more productive before selling it to one of his colleagues in 1899 who successfully publicised Matfer's innovativeness at numerous gastronomic salons and fairs.

Having worked with copper and then tin plate, Matfer developed innovative skills in plastics, and from 1977 onwards supplied French pastry chefs with more hygienic and robust utensils, followed by moulds made from plastic polymers. In the beginning of the 1980s, the company had subsidiaries throughout the world, notably in Japan and the United States. Today, there are fourteen subsidiaries in charge of managing projects to open or renovate luxury hotels.

In the middle of the 1980s, Matfer embarked on a period of external growth and acquired companies specialising in tableware and crockery. This diversification enabled Matfer to become closer to its end users as well as interior designers and distributors, and was part of a vertical integration strategy. In 2002, it bought its main competitor and world number two, Bourgeat.

These acquisitions gave Matfer Bourgeat an extremely broad product range, but also meant that the company was in direct competition with a variety of companies, each of which was at the cutting edge in its field.

The transition from invention to innovation

Christophe Midler: When Tony da Motta Cerveira and the CEO of Matfer Bourgeat, Patrice Mora, asked the CRG to work on a project of our 'Project - Innovation - Design' Master's programme, they were more concerned with revealing the fragilities of their company than its successes. We decided to carry out a strategic analysis of Matfer Bourgeat.

Innovations without clients

It turned out that the Group's clients were also fragile. Turnovers of companies which had once been thriving were now decreasing. The catering market has been turned upside-down because consumer habits have changed. The size of meals has diminished (meals no longer necessarily consist of a starter, main course, and dessert); the time spent eating a meal has decreased (on average, a lunch today lasts 31 minutes compared to 1984 when it lasted 1 hour, 34 minutes); and ordering take-away food is becoming more popular than eating a meal in a restaurant. Despite these changes, clients still demand quality, generous helpings and a fun experience. The 'bistronomy' concept (bistrot-style gastronomy) is successful, and is an area of stiff competition because innovations can be copied on the spot. As a result of these changes, Matfer Bourgeat's CEO realised that his company risked losing its position as market leader if it did not undertake major changes. We discussed such change from the point of view of innovation processes, in the knowledge that the 'low cost' scenario was out of the question for Matfer Bourgeat which positioned itself as a 'top-of-the-range' company.

Our analysis of the existing process highlighted three sources of innovation: benchmarking (study of the competition); lead users; and in-house inventions. Paradoxically, Matfer Bourgeat continued to make innovations, but did not reap any benefits from them financially. Its new products struggled to find clients or, conversely, were copied very quickly. The company won one competition after another, but its innovative ideas did not appeal to the market.

New Front Cooking is a good example of this situation. This is a polyvalent, mobile cooking unit which enables chefs in luxury hotels to cook meals at guests' tables, and is clearly an innovation. Unfortunately, Matfer Bourgeat sold this product in the same way it would if it were a blender, without attempting to encourage clients to be interested in it or praising the innovative changes which this new type of mobile catering unit could produce.

Until this point, a 'product committee' existed at Matfer Bourgeat which decided whether or not to launch an innovation, following which there was a development phase which included feedback from a very small number of consumer tests. We decided to improve this approach by introducing three new stages. At the beginning of the process, we introduced a so-called 'exploration process' to direct creativity and determine whether an idea was successful. This is followed by a 'predevelopment' stage which is improved by consumer feedback collected from meetings of focus groups. Finally, there is a 'deployment phase' which is essential for the largest sorts of equipment.

This work resulted in the creation of a target process which identified three possible forms of improvement. Firstly, it was important to differentiate and identify the problems in the innovation process. Next, one had to choose the most suitable means to be used to assess projects before they were developed. The final step was to put in place the management tools which could direct the paths which the innovation could take.

'Decision committees' which worked with the heads of the subsidiaries were established throughout the process. Their job was to capitalise on ideas, even those which had been previously dismissed.

New creative rituals

Because the Matfer Bourgeat Group is made up of a large number of companies each with its own culture, the implementation of a common process was extremely important in order to establish a collective innovation culture which could be shared among all the entities. The organisation which we implemented may be seen by some as a white elephant, but it intends to establish innovation rituals.

In the exploration phase, we applied the principles of the École des mines' C-K design theory (or Concept-Knowledge theory) developed by Armand Hatchuel and his colleagues[1]. This method of creativity invites people to open up the realms of their imagination, advance into the unknown and remove the apparatus which hides new sources of value. In this way, for example, we analysed the 'bistronomy' concept in terms of the likely conditions which would encourage consumers to repeat their 'bistronomy' experience, and which 'smart objects' could be part of this new approach to cuisine. This exercise was a novelty for a company which until then had not carried out advanced studies into social and technological market trends.

There is now a research-innovation-development committee whose members choose paths which they think should be followed up, by basing themselves on tools which are able to assess the value of ideas.

The predevelopment stage is the opportunity to create 'dirty prototypes' which are not very sophisticated, but are sufficiently advanced to be tested in the kitchen, and to discard ideas which may look attractive, but are not water-tight. One has to emphasise the user experience, a practice which follows the logic behind 'design thinking'.

As far as the development phase is concerned, it incorporates both a design exercise and an exercise to scale up the innovative system, thereby involving not only the product, but also its environment (including power and water hook-ups, etc.).

Our new approach is to analyse the strategy which led to the creation of the New Front Cooking equipment in order to understand why it failed. In so doing, the team redesigns both the product and its marketing process in an iterative way.

This new approach completely changes the role and implication of different professions in the innovation process.

A transformation under way

Tony da Motta Cerveira: We presented the company's plan to the staff on February 10th, 2015. It was important to make the transition from invention to innovation, in other words to transform great ideas into commercial successes, and, ideally, to set in motion a repeated innovation dynamic[2]. For a year, we had been preparing our engineers and 'marketeers' for a change in our design methodologies in the hope that we would become closer to our customers. Twenty of our employees had been trained in design thinking and subsequently, we were able to launch four projects in the predevelopment stage. After the new approach was announced, about thirty employees received training in the C-K design method. Since June 2015, research committees have been set up in each division.

By June 2016, we had a portfolio of eighty projects, about ten of which used the C-K exploration method. In the case of the 'bistronomy' concept, for example, the eighty designs which we made initially were whittled down to seventeen products in the predevelopment phase.

We tried to pool our knowledge and skills by arranging for employees to move between sites, depending on the relevant projects in place, and this gave rise to some interesting 'cross-fertilisations'. 'Marketeers' and engineers are now no longer the only ones in contact with innovations.

This new creative approach, which acknowledges the role of users, enables us to identify possibilities which our traditional process would have missed. For example, after six months of development of plate covers (to keep food warm), we carried out a reverse engineering exercise and conducted consumer tests, and, in the end, did the complete opposite of what we had initially intended. Having started with eight criteria identified by the user as being useful characteristics, the number increased to twenty-four using five sub-criteria. During this process,

1. Le Masson, P., Weil, B., and Hatchuel, A., *Strategic management of innovation and design*, Cambridge University Press (2010).

2. Chapel, V., *La croissance par l'innovation intensive : de la dynamique d'apprentissage à la révélation d'un modèle industriel le cas Tefa*l, École des mines de Paris, 1995, Paris.

we discovered that our idea to lighten the parts of the plate cover was counter-productive: in mass catering, under a certain weight, plate covers are too light and do not stay on conveyor belts. If we had launched the product in the way in which we had designed it in the beginning, it would have been a failure.

Putting theories to the test in middle-market companies

Christophe Midler: For the first time, due to Matfer Bourgeat, the CRG has tested the robustness of innovation methodologies in the specific context of middle-market companies. The results have been rather encouraging.

Let us consider the theory regarding the direction that innovations can take, as has been developed in the automobile industry. It states that innovations which originate within or outside a company should not follow the same path in the company. Different directions exist because innovations are not identical, but for this diversity to be managed efficiently, it should be simplified by making innovation categories. This theory proved to be very useful when we designed Matfer Bourgeat's approach to innovation, because Matfer's innovative sources were very different, ranging from innovative propositions from famous chefs to radical innovations aimed at improvement from the company's personnel.

Similarly, the C-K design theory and the principles of open innovation have fulfilled their purpose by making this middle-market company aware of use-value. Deployment engineering techniques, which we had used at Renault with regard to its electric cars[3], as well as the profit-sharing theory of sociologists Michel Callon and Bruno Latour, were also used effectively, and were efficient vehicles for creating change.

The family-owned nature of the Matfer Bourgeat Group and the relatively small size of its workforce helped its CEO to manage actively the changes and initiate them at a speed which would have been impossible for a large group. In just seventeen months, we advanced from an initial strategic diagnosis to the implementation of processes and their application by trained staff.

Unlike start-ups, middle-market companies accommodate their agility with relative stability. They are capable of changing strategy quickly, but they are less affected than start-ups by major upheavals in their environment, such as the withdrawal of an investor.

In conclusion, it would appear that middle-market companies are a favourable breeding ground for implementing modern concepts of innovation management. These companies would be best advised to put them to good use in view of their inherent fragility.

3. Von Pechmann, F., Midler, C., Maniak, R., Charue-Duboc, F., "Managing Systemic and Disruptive Innovation: Lessons from the Renault Zero Emission Initiative", *Industrial Corporate Change*, 24 (3) pp: 677-695 (2015).

Innovation: a lever for internal change

Question: *How did an organisation which had been known for its innovations for two centuries agree to revise completely its creativity process? Were the personnel resistant to change?*

Tony da Motta Cerveira: Each of our industrial sites reacted to this approach in its own way. The process was adapted after various discussions and negotiations. Some sites do not use our selective tools for innovative ideas and prefer collective decisions. Other sites which are already well structured use them. This shows that not all the sites were equally content with the scheme, and felt that this approach raised the question of each site's role in the innovation process. In any case, the CEO was convinced that all the employees should take part, and that it was out of the question to leave anyone out of the process. When we realised that some members of the personnel had difficulties understanding the methodology, we analysed the reasons, asking ourselves, for example, whether it was a question of skill. Frequently, in order to solve the problem, we suggested training programmes with external consultants. We did not hesitate to call on support to help our staff.

Q.: *How many employees were involved in this approach in all your sites in the world? Did some of them have to leave their usual work programmes in order to devote their time to it?*

T. da M. C.: The research/intervention committee was made up of just three people, and today, there are only two of us who work exclusively on innovation; a former project manager and myself. The CEO wanted all the personnel to commit themselves to the innovation process, including the blue-collar workers. Part of one of our products, the Prep Chef, used to cut and slice fresh produce, and was the idea of a plastics factory operator. He devised a way of applying our injection techniques and stainless steel blade moulding techniques to create steel wires instead. The Prep Chef unit now has an additional camembert cutter which is intended for sandwich outlets.

The role of our foreign subsidiaries still remains insufficient. It would be a good idea to develop them further because they manage projects from A to Z for our foreign clients, which are generally luxury hotels. This would represent a major opportunity for us to implement innovations.

Q.: Was the underlying reason behind this innovation approach to align the many companies which the Matfer Bougeat group has acquired over time?

Christophe Midler: In management committee meetings, the CEO was quite clear about the importance of integration and sharing a common culture. It was also a means of making the different sites work together as they had not done before. It is obvious that after a wave of acquisitions, we could not grow externally any further. It therefore became necessary to revitalise growth internally by changing our product range.

Q.: *Do you think that this approach is already changing your company's culture?*

T. da M. C.: This transformation will take time. It will reinforce a strong cultural trait which already exists and which we share – the passion for taste – which is demonstrated, for example, by the meal which the members of the executive committee prepare together one Friday every month.

As for design culture, we have clearly noticed changes, but we have not yet reached our goal of changing all the inventions into innovations. That said, even at Bourgeat where engineering practices are extremely well

organised – 'dirty prototypes'[4] would not have been conceivable in the past – practices change. Now engineers put aside a few days to work on innovative projects rather than taking a few hours here and there.

Q.: *Have you estimated the cost of this project for your company?*

T. da M. C.: I do not know how to judge that because this process was very economical and mainly used human resources. The only truly identifiable – and reasonable – cost is the collaborative platform which we created to share the approach as widely as possible.

B-to-B-to-U-to-C…: trying to find the end user

Q.: *Who are your clients, and how do you help them to adopt your innovations, especially the most radical ones?*

T. da M. C.: Each company in the Group has its own type of clients. In Situ, our tableware department, deals with market intermediaries like Metro Cash & Carry; Vauconsant, which designs restaurant and canteen furniture, works with design offices; Bourgeat works with kitchen fitters; and Matfer works with Metro and small dealers. The CEO recommends a strategy of 'B-to-B-to-**U**-to-**C**' which, as well as the distribution (B-to-B) network, tries to incorporate the product **U**ser (the chef) and the restaurant **C**lient (the end user). We have decided to integrate the sales forces into part of the engineering processes and want them to involve their clients too. In keeping with design thinking, we are always trying to analyse the uses of our products more closely. For example, Matfer is collaborating with the Ferrandi School to design a product for apprentice cooks. For the first time, Ferrandi students visited our site and we also went to see them during their classes. Had we kept to our old methods, we would have suggested a finished product straightaway which they would not necessarily have accepted. Instead, we had a large number of informal discussions with them about their needs which gave rise to ideas and won over the future users to the product that we had suggested.

C. M.: Changes in eating habits are not characteristics associated with Matfer Bourgeat's direct clients, but of the end consumers with whom the company has no contact. One of the problems was to become closer to these end users by testing prototypes, for example. This is an important way to earn business which the CRG worked on with Valeo, among others. Suppliers to car manufacturers realised that it was in their best interests to develop a relationship with the clients of their customers, both to get rid of unnecessary requests and to assess the value of an innovation using consumer feedback, and then to sell it at the right price.

Strategic choices of middle-market companies

Q.: *Why does Matfer Bourgeat limit itself to professional clients and not invest in the top-of-the-range consumer market which is increasingly attracted by sophisticated 'homemade' products?*

C. M.: This choice needs to be addressed especially since others in the B-to-C market (such as Tefal and Seb) are starting to gain a market share with professionals. We mentioned targeting the consumer market in our strategic diagnosis to the CEO but he was inflexible.

One must realise that Matfer has very close partnerships with well-known chefs who have reputations to uphold and are advisors in the professional world, but whose influence does not extend to the general public. Tefal has a very different marketing approach: it invests in advertising campaigns and uses mass retail to distribute its products. Matfer Bourgeat's products are ten to twenty times more expensive than those that one can find in shops, even luxury shops.

4. Ben Mahmoud-Jouini, S., Midler C., *How physical artefacts contribute to design processes*, Academy of Management, Philadelphie (août 2014).

T. da M. C.: Matfer Bourgeat is an independent middle-market company whose CEO alone fixes the strategic goals. His aim is to make top-of-the-range products made in France for professionals. The means of production is geared to manufacturing small volumes and customised pieces. We would not be competitive enough for the retail market.

One of the C-K design theory exercises led us to devise mobile applications for chefs. Most of the research-innovation-development committee was in favour but the CEO thought that this approach did not fit well with the Group's strategy because it was too far removed from its core activities. This form of decision-making is also characteristic of family-owned companies.

C. M.: The CRG encountered the same sort of misgivings from large industrial groups. One such group took a year to admit to us that, as we had demonstrated, some of its choices had not been wise. Companies must come to terms with them. In any case, the process which we established with Matfer Bourgeat has given rise to regular discussions between them and us on issues of innovation.

Q.: *French chefs who open restaurants abroad emphasise that they are inspired by local products for their dishes. Are you also inspired by the ways that foreign companies function?*

T. da M. C.: I suggested to the CEO that we should design products for countries where there is a tendency for inventive cuisine, but he prefers the company to confine itself to designing equipment which is intended for French gastronomy, catering and baking.

'Bistronomy' chefs are keen to use utensils in their restaurants in France which they found during trips to Japan. We listen to them and satisfy their requests by undertaking negotiations whereby we buy material which we then sell. In this sector, we limit ourselves and do not practise reverse innovation (an innovation which is adopted in the developing world before being adopted in the industrialised world).

When the method stimulates innovations

Q.: *Do your innovative ideas come both from inside and outside the company? Are the suggestions subjected to a process which is equally rigorous regardless of where they originate?*

T. da M. C.: Within the company, we carry out incremental innovation on the one hand, and C-K design explorations on the other in order to take a share in the new market. Depending on the division, the ideas which originate inside the company are scrutinised to a greater or lesser degree.

The most innovative propositions are often those which come from outside the company. They come from chefs who cannot find the tools they need in the marketplace in order to make their creations. This is how Airbox, a mould which came about by the injection of air, creates foam for food preparations. The chef Patrick Friggeri asked us to devise this product after he had tried to assemble an air pump system (similar to that installed in aquariums) using lecithin to make a light mousse. It goes without saying that his device did not conform to any food hygiene rules! We really had to think hard so that his idea would comply with the market's hygiene and quality standards. Competitors in the 'Best Craftsman in France' awards also ask us regularly to create specific moulds which they have images of in their minds.

Q.: *Innovation committees often make the mistake of limiting the number of possibilities and favour ideas which appeal to everyone. This is why some companies have specific areas purely for creativity which are not subjected to any processes. As well as your methodology, have you maintained creative methods which are less formal and spontaneous?*

C. M.: In most companies, innovation processes rely on a selection exercise devised by these committees, but this approach stifles creativity. Our methods, on the other hand, especially the C-K design theory methods, aim to broaden the field of exploration and to encourage knowledge of areas where company culture does not want to go.

T. da M. C.: We take care not to progress directly from an idea to its manufacture, as we did before. This is why even spontaneous propositions are scrutinised. All the same, anyone who has an idea can submit a project to the research-innovation-development committee. This may even be an idea from the marketing department team which, for example, wants to conduct a project about benchmarking.

Let us can take the example of our 'bistronomy' concept. The starting point was to think up 'smart objects' for today's bistronomy. Firstly, we identified six needs which the objects could attempt to satisfy: making kitchen tasks easier; promoting the cooking profession; encouraging people to cook in an 'eco-friendly' way; making work in the kitchen safe; having small equipment; and making objects which last a long time. Each need gave rise to a range of possibilities. The last need, which was quite extreme, made us think of services whereby people exchanged objects and maintained equipment: this would probably not have come up in a traditional brainstorming meeting. This is a very different approach to that normally put forward by Matfer Bourgeat.

Another need was to design objects which make work in the kitchen safe. Can tools protect themselves against unsafe ways of handling? Can the tip of a knife which falls to the ground be spontaneously protected from breaking? Can a spoon which a chef continually uses to taste his dishes be made hygienic? We had never thought about these sorts of subjects, but because of the methodologies of deployment engineering and our commitment to our customers, we have been able to start to test products with users. I have no doubt that this will result in innovations which are even more attractive.

Presentation of the speakers

Christophe Midler: CRG (Centre de recherche en gestion) research director and professor in charge of the École Polytechnique's Chair of Innovation Management. His work focusses on the changes in large industrial companies with regard to innovation strategy, project organisation, and the design of new products. He has published numerous articles and works on this theme including '*Management de l'innovation de rupture, Nouveaux enjeux et nouvelles pratiques*' (co-authors Sihem Ben Mahmoud-Jouini and Rémi Maniak, published by Éditions de l'École polytechnique, 2012); '*Réenchanter l'industrie par l'innovation, l'expérience des constructeurs automobiles*' (with Rémi Maniak and Romain Beaume, published by Dunod, 2012); '*L'épopée Logan, nouvelles trajectoires pour l'innovation*' (with Bernard Jullien and Yannick Lung, published by Dunod, 2012); and 'Managing and Working in Project Society – Institutional Challenges of Temporary Organizations' (with Rolf A. Lundin, Niklas Arvidsson, Tim Brady, Eskil Ekstedt and Jörg Sydow, published by Cambridge University Press, 2015).

Tony da Motta Cerveira: director of innovations at Matfer Bourgeat, started as a design manager in a middle-market company. He took part in more than three hundred projects in seven years. Subsequently, he worked in organisation design and specifically in the organisation of innovation departments in companies. He has a Master's degree in Project - Innovation - Design from the École Polytechnique, and is a graduate of the Nantes Atlantique École de Design and former student of Sheffield Hallam University – Institute of Arts. His area of expertise is the management of creativity, the overhaul of the innovation process, and innovative design in complex organisations.

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