



Servitisation, a word first coined in the late 1980s, involves manufacturers, developing services and solutions to supplement their traditional product.

CREDIT: MICHAEL KOWALSKI/SHUTTERSTOCK

The road to servitisation

SERGIO DULIO

We are all familiar with the concept of multinational companies as being large conglomerates having their headquarters in one country with subsidiaries and branch offices all over the world and thousands of employees. Normally, when these companies enter a new market or open a new operational site in a particular country, they impose their own corporate rules, manner of doing business and dealing with both employees and customers. In other words, they simply replicate the mother company in a place with a different culture, different social habits and environment. Be it right or wrong, this approach has certainly proved successful for many of the major companies that we know today, selling products ranging from consumer goods to cars, from power plants to electronics.

The history of ATOM is somewhat different. Founded almost 70 years ago in Vigevano, Italy, the company has, over the years, produced some of the

most widely used families of machines for manufacturing footwear. Indeed, machines such as its cutting presses became so popular that in countries such as India, 'ATOM' became the generic term for this type of machine. However, if we consider the size of the company and the niche market (shoe machines) in which it operates, it is hard to regard it as being a true multinational. Nevertheless, with two main design and development sites in Italy, a well-established manufacturing facility in China and branch and sale offices all over Europe, Asia and the Americas, the ATOM Group is certainly a leading brand in its sector.

Although the company has its headquarters in the old shoe making centre of Vigevano, its boundaries are neither in the city, nor in Italy itself. Its true operational perimeter is the entire world or, perhaps more precisely, 'the world of cutting', meaning that wherever a cutting demand in the general industrial sense exists, that is where the company expands its range.

A company with no real borders but a perimeter that is progressively and flexibly defined by the market. By adopting this global scope and by entering a variety of different geographical and industrial markets over the years, the company actually absorbed all their individualities with a cross-fertilisation approach between sectors and technologies that has made it a meta-national.

META-NATIONAL

A meta-national structures its market projection strategy in three distinct phases. *Sensing*, which means identifying and accessing all the available new competences, knowledge and technologies of a given market. *Connecting* all this new knowledge to create new products and services. And then, *Exploiting* them to obtain large scale industrial efficiencies while, at the same time, retaining flexibility and a high level of financial control. So in time the goal of the company in terms of its international

strategy, shifted from simply penetrating a market to one of learning from the world in general and transferring this learning into products in which the local technological, operational and functional lessons became part of the DNA of the machine itself.

This evolution from small provincial enterprise into a modern meta-national was strongly favoured by its initial focus on the shoe manufacturing industry. The coming of globalisation in the late 1900s meant that ATOM had to adjust to this new situation and follow the migration of shoe production as it increasingly moved to lower cost countries in order to maintain contact with the market. This sounds like an obvious step, but not all companies in its sector fully understood this necessity and only a few managed to put in place the most appropriate strategies.

Globalisation was therefore the first driving force in the company evolution; the second was diversification. From its position as a specialist supplier with a strong background in developing cutting systems for all the diverse materials used in shoe making, from delicate high quality leathers to the strongest and most difficult synthetic materials, it was relatively easy to expand and generalise such solutions into other industrial applications.

This is what has happened and, today, it has machines capable of dealing with cutting problems that span a variety of sectors besides the classical

shoe and leather goods domain. These 'industrial' cutting machines in fact account for a large share of company revenue and have allowed ATOM to overcome and survive the periodic difficulties and downturns of the shoe business and its abrupt migration from its original domestic backyard in which the company grew up to today's world of global manufacturing.

INNOVATION

Although developing the best corporate strategies or addressing the right markets are necessary conditions, you must also have the right products with the best technologies. You must also be capable of modifying with fresh innovation continuously in order to keep up with evolving market demands. So innovation is a mandatory factor in the character of a modern company and one strongly embraced by ATOM. Starting with the simple clicking presses that are still regarded in many countries as the workhorses of shoe manufacturing, its machines evolved into complex NC-controlled die-cutters when the first high performance and economically viable electronic controllers became available.

When the die-less cutting revolution arrived, it was among the early exploiters of the new cutting approach that aimed at completely eliminating pre-formed steel strip-knives to allow an immediate transfer from the CAD pattern design to cutting the corresponding shapes in the desired

materials. We all know how a technology initially aimed at sample making and small production runs became one where these machines are now regarded not only as an ideal complement to traditional die cutting but, in many companies, the preferred technology. Building on its early involvement, ATOM now offers a wide range of machines covering every aspect of die-less cutting.

Industrial enterprises are not unlike living organisms; they must continually change and evolve if they want to survive and prosper. Strong in one area of footwear technology, ATOM realised it also had to widen its technology spread so, in 2009, it acquired Main Group which specialised in injection moulding systems for unit outsoles and direct bottoming constructions. A leader in technology and market share in its own right, it is now a relevant element in the Group's market strategy. It also marked a return to the past in the sense that ATOM actually started out in 1946 as a producer of vulcanising machines for the manufacture of rubber soles. It marked, too, a further diversification step in terms of expansion towards other phases of the shoe manufacturing process and a passage from simple machines to a more complete system offering.

ATOMLab

This evolution into a true meta-national took a further step in 2013 with the opening of ATOMLab, a



S125C cutting press of the type that made 'ATOM' the generic name for this type of machine.



1685B Flashcutter – ATOM now has machines for every aspect of die-less cutting.



APP line for direct injection safety footwear typifies the new manufacturing concepts being worked on by ATOMLab.

Research and Innovation unit with the mission to work on the most leading edge technologies and develop and test new system concepts that the Group can then adopt. It has its own research facilities and it works in cooperation with the innovation teams of the Group's most important international clients as well as prestigious universities and research institutions in Italy and other countries.

The Lab has a set of very clear strategic goals the first of which is to maintain and increase technological leadership in the Group's existing cutting and injection moulding products. This requires constant attention to important technological trends, seeking out emerging ones and the ability to transfer innovations into the daily development flow of the company. As stated, involvement in two crucial phases of the shoe manufacturing process is forcing the Group to evolve more and more from a simple machine supplier to a process and efficiency supplier.

In order to succeed in that, knowledge gaps must be filled in those areas where the existing ATOM and MAIN Group R&D teams have no direct expertise. ATOMLab's mission is to fill those gaps by close collaboration with customers' advanced product and process concepts in a new form of innovation management partnership. This will act as a bridge between customers' research teams and Group R&D staff, expanding the horizon of intervention beyond the competence domains of the specific business units of the Group and

more towards applied research.

To achieve this, the appropriate staff is needed. ATOMLab has five dedicated researchers, all university graduates with specialisations in process automation and robotics, material science (polymers), electronics and computer science. These are supported by a mix of junior researchers and senior professionals to provide the best-balanced mix between updated knowledge and experience.

Besides the internal team, there is a supporting external ecosystem. This includes on the practical side a number of qualified partners including machine providers, last makers, mould makers and material suppliers that complete the value offering of the Group, with ATOMLab working as the hub. On the research side, the internal capabilities of the team are expanded and complemented by collaborations with universities such the University of Pavia (computer science and artificial vision) and the Polytechnic of Milan (RFID competence centre). This cooperation with academia is a funding block in ATOMLab's strategy as an effective cross-fertilisation approach between the two worlds of public and private research, formalised in different ways such as the issuing of research contracts on specific topics or the financing of PhD grants.

PROJECTS

At the moment ATOM is providing the budget for a three-year research by a PhD student on the interesting topic of human locomotion energy

harvesting. In its first two years of activity ATOMLab's team has been active in research in various domains. One is human robot interaction using the most recent generations of cooperative robots; others include computer vision, RFID tagging as the most advanced technology to track and monitor components in the manufacturing process, plus 3D printing and additive manufacturing, focusing on the disruptive potential they might have on products and their manufacturing processes.

More recently, new research lines were opened on energy harvesting and augmented reality as advanced and promising forms of man/machine interface. In February, the most important facility of all was announced; the APP (automated pilot plant). This features a complete, highly automated and robotised line for manufacturing direct injected safety footwear that incorporates a 24-station PU-PU injection carousel. Installed at the Lab's facilities in Vigevano, it is the archetypal implementation of the new manufacturing concepts being worked on and was officially opened and demonstrated during the last SIMAC exhibition. It will be used to consolidate and fine tune the most important enabling technologies of the future manufacturing solutions offered by the Group.

SERVITISATION

ATOMLab does not, however, only focus on technology and research, important though they clearly are. It is

also felt that the way in which technology providers approach customers is also changing. There is a need to establish new kinds of relationships, based on novel concepts such as the emerging servitisation paradigm. Servitisation is often viewed as the way in which firms provide an integrated package of both goods and services or add extra service components to their core offering. A differing interpretation, however, suggests that it is any strategy that changes the way product functionality is delivered. A still broader definition, is that servitisation is the innovation of an organisation's capabilities and processes to better create mutual value through a shift from selling products to selling product service systems.

For example, in the aerospace industry, engine manufacturer Rolls Royce no longer sells an engine to aircraft producers. Instead, it supplies a package of operating hours, performance monitoring and maintenance, so shifting the competitive challenge from pure price to long lasting relationships, quality and performance. Similarly in the automotive sector, the well known car manufacturer Mercedes Benz launched a service called Car2Go in which the company instead of just selling a car, offers a 'mobility service' in the form of a full package of attractive offers to its clients and supported by an APP to locate the nearest 'mobility device'. It effectively replaces the burden of property with a wealth of services that relieves the driver from the complications of ownership and that focus on the car's true function: mobility.

The transition of the traditional manufacturing culture to servitisation nevertheless poses enormous challenges at managerial, cultural and operational levels. From the classical transactional logic, companies must move to a new relational approach that aims at a stable relationship with the customer.

More specifically, in the footwear sector, machine producers have been accustomed to selling their products (machines) by talking to their customers about all the relevant features of their devices and their wonderful performance. In a servitisation scenario they listen to the message that comes from the client's manufacturing processes to offer them throughput rather than the hardware to obtain it and efficiency rather than the software to achieve it. In this scenario old-fashioned selling or maintenance contracts are superseded by SLAs (service level agreements) that replace an obligation on means with an obligation on results. A totally different scenario in which the mutual roles of machine users and providers are profoundly changed.

The world is changing at a bewildering speed, both socially and economically. Behind it all lie developments in modern technology which appear to have no limit. The way we create products and services bears no resemblance to 50 or even 25 years ago. And now, the traditional boundaries between these two are becoming blurred. Companies grew into multi-nationals, adapted further with globalisation to become meta-nationals and, some, are now developing a stage further to become servitisers. ATOMLab is in all respects the experimental facility that will eventually accomplish the ultimate evolution of the ATOM Group from national company, through meta-national to a servitiser for the footwear industry. 🌀



IT'S WHAT'S INSIDE...

ORTHOLITE® PROPRIETARY FOAM TECHNOLOGY KEEPS FEET COOLER, DRIER, HEALTHIER, AND HAPPIER. THE WORLD'S LEADING BRANDS TRUST ORTHOLITE TO OFFER THE ULTIMATE IN COMFORT AND PERFORMANCE AND TO DELIVER THE HIGHEST LEVEL OF CUSTOMER SATISFACTION.

- BREATHABLE
- MOISTURE-WICKING
- ANTI-MICROBIAL
- LONG-TERM CUSHIONING

Ortholite®
comfort from the inside out ortholite.com