

Chapter 2

Rational: Innovation and Game-Changing Products

Rational provides an example of a company that has made innovation and continuous improvement the cornerstones of its strategy. Rational, a maker of professional cooking equipment, relentlessly pursues improvement in all its processes. Moreover, it strives to make its own products obsolete by offering a radical innovation with a step-change improvement every 7 years or so. The result is world market leadership for this medium-sized company.

2.1 The Rational Way

2.1.1 Anyone Can Cook

Cooking on a large scale is nothing like the process that takes place in the domestic kitchen. A professional kitchen is a job-shop or batch-processing factory in which large quantities of food must be hand-crafted to a consistent standard and delivered quickly and efficiently. It runs on discipline and teamwork, with its staff exposed to high levels of stress one minute and the boredom of mindless routine chores the next. That, at least, is the traditional view. These days, a growing number of professional kitchens employ modern appliances that can save a great deal of the painstaking manual work. They can even banish the stress and anxiety created when a sauce curdles or a hundred soufflés deflate.

Rational, a medium-sized company based in Landsberg am Lech, Germany, is one of the world's leading manufacturers of this new generation of professional kitchen equipment. It is not a name most people would recognize as a maker of ovens; but then Rational does not supply the household market. In the catering trade, however, the Rational brand name is recognized instantly – or rather its products are. The company is famous among professional chefs for its Self-Cooking Center (SCC) and its Vario ovens (also known as VarioCooking Centers or VCC).

Rational is a remarkable company for a number of reasons. One of the more surprising is that fact that it has just two product lines – in defiance of what many business-people would consider common sense. In many industries, this would indeed be a risky strategy, but Rational's chosen environment is not a fickle market subject to changing whims and fashions. People need to eat, and kitchens need to cook: there will always be a demand for ovens. Rational CEO Dr. Gunter Blaschke explains, "We're not interested in producing umpteen products: just one or two

perfect ones. We want to be the Michael Schumacher of catering equipment and excel in our own area of expertise.”

The products that Rational has developed are certainly ahead of the competition in terms of technology, quality, and performance and this is reflected in the company’s market dominance. Although a relatively small enterprise – group turnover in 2006 was €284 million – the company claims the lion’s share of the world market for professional ovens at around 52%. Blaschke declares that the secret of Rational’s success is simply an “obsession” with the end-user. Central to the company philosophy is the need to instill customer benefit-awareness into every employee. This starts with R&D, which is driven by customer feedback. “Our products give customers solutions that help them to increase their profits and to improve their workspace and simplify the cooking processes” says Blaschke.

Founded in 1973, the company revolutionized the industry when, in 2004, it launched the SelfCooking Center as the last word in labor-saving, super-efficient and high-quality ensuring kitchen appliances. A highly engineered product incorporating advanced electronic control systems and built-in international cooking intelligence, the SCC can be used for an array of different cooking and baking methods. According to Rational, this one unit effectively replaces 50% of a kitchen’s traditional appliances while occupying less than half the space (Fig. 2.1).

The SCC brochure invites users to “rediscover the pleasure of cooking ... forget stress and routine chores” – a temptation that is surely hard to resist. And it’s true; with the SCC the cooking process has been reduced to simply keying-in the type of food to be cooked and the desired cooking result, for example, browning level from light to dark and cooking level from rare to well done. The equipment does the rest: using internally coded knowledge of 40 national cooking and eating habits, it automatically identifies the type of food placed inside it, registers size



Fig. 2.1. Demonstration of the SelfCooking Center

and loading quantity, and automatically calculates the ideal cooking process to meet the result specified. Training, according to Rational's brochure, is "absolutely unnecessary ... even a non-professional can use the SelfCooking Center with no problem [and achieve] perfect results, consistent every time."

Hard on the heels of the SCC came the VarioCooking Center, an even more versatile variation of a similar self-cooking concept. This machine – a tilt pan, boiling pan, and deep-fat fryer all in one – is made by Rational's French subsidiary, Frima (Fig. 2.2). Cooking time, temperature, and complex cooking procedures are monitored and when it is time for some human intervention – for example, to turn the lamb chops – the cooker alerts the chef. The whole process is monitored every second to ensure the exact degree of cooking is achieved.

Thus Rational's products effectively de-skill many traditional kitchen functions and are a boon to any mass-catering organization. Fast-food outlets therefore have embraced the SCC and VCC concepts with enthusiasm. Perhaps surprisingly, so has the world of *haute cuisine* – the one area where attempts to de-skill and automate the food preparation process might be expected to meet with some resistance. Nevertheless, Rational SCC and VCC cookers are used by establishments as diverse as Fort Knox, Buckingham Palace, and the Kremlin, as well as many top restaurants, including those of revered French chef Paul Bocuse. Every day more than 85 million meals are prepared in Rational machines in countries the world over: about 80% of the company's products are exported – the majority to Europe, the United States, Japan and China – a trend that is on the rise.



Fig. 2.2. Demonstration of the VarioCooking Center

2.1.2 Success to Date

Rational's desire to produce just one "perfect" product, one within Rational and one within FRIMA, rather than a whole range of diversified products, means that all its R&D effort is concentrated into a very narrow field. The result is a highly advanced machine incorporating technology that is continually reviewed and updated. Without another product line with which to spread the risk, Rational has to ensure that its products are at least one step ahead of the competition in all respects. By focusing exclusively on one product and one customer category, Rational believes that it has achieved a 5- to 7-year edge on the competition. As long as it maintains its lead, Rational can expect to reap the rewards from a loyal and satisfied customer base, increasing sales, improving profitability and, it hopes, widening the gap between itself and its nearest rival.

Rational participated in the IEA competition twice: the company won a second prize in 2002 for its lean "one-piece flow" in production and its innovativeness. In 2006, Rational was declared the overall winner due to its lean management and continuous improvement philosophy applied everywhere, in all parts of the company including its internal administrative departments, and its repeated breakthrough innovation capability.

Over the past 6 years, the company has grown by more than 50%; between 2001 and 2006 (the most recent available figures) turnover increased from €167 million to €284 million. Annual growth over the past decade has been consistently in the region of 10–15% and the company notes in its 2006 Annual Report that there is disproportionate growth in new markets: "The usual ranking still applies for countries with the strongest economies in the world: first USA, second Japan and third Germany. However, China has now overtaken France and the UK." Rational has identified the key markets for future growth as China, the USA, Japan, India and Russia. Nevertheless, even in its home market of Germany there is no sign of a slowdown. In 2006 the company sold over 5,800 appliances and, with growth there still in double digits, for Rational Germany remains the market with by far the strongest sales. In the first 9 months of 2007, Rational posted sales of €236 million – 19% higher than the previous year's figure of €199 million. Sales in the third quarter rose by 19% to €82 million.

2.2 The Strategy

2.2.1 Knowing the Core Competence

All successful manufacturers can define their markets fairly clearly, but most have more than one string to their bow. Not Rational, however. Rational prides itself on

being entirely dedicated to one central function: the basic human desire to eat away from home. This defining role is set out clearly in the company's 2006 Annual Report:

Our core expertise is the transfer of thermal energy to all kinds of food. So we do not see ourselves first and foremost as a machine manufacturer but as innovative problem-solvers for our customers

and:

We are specialists because we know that we can serve our well-defined target group most effectively and clearly by concentrating all our efforts on an important central need of this target group and solving their problems – better than others can – in an optimum manner. ... From our knowledge as specialists, we set out to create *more* value to the customer, which creates, in turn, more customer acceptance and loyalty – it's a positive spiral.

This target group comprises professional chefs; and because the company believes it is important for its staff genuinely to empathize with its customers, all members of Rational's sales force are chefs too. Trained chefs are employed not only to sell Rational's cookers but also to help in their design and development: physicists carry out basic research, design engineers work on product design, but it is a team of chefs, food scientists and nutritionists, researching practical applications, that keeps the whole process tuned into the "customer's operational world." By maintaining an intimate relationship with its target group, Rational aspires to become part of their "world" in the hope that its devotion will be rewarded with their loyalty. This intimacy with the customer base enables Rational to quantify its potential market very accurately and plan its growth strategy very clearly. The company estimates that the potential market comprises 2.5 million customers; of these, only 500,000 are currently using combi-steamers. Rational therefore has a clear idea of its growth potential and a clear strategy for fulfilling it.

2.2.2 Reaching the Customer

For most of the company's history, Rational's approach to marketing has followed the customary strategy of canvassing and developing new business. In 2006 Rational's marketing took an additional direction, focusing on increasing the loyalty of its existing customers. To an outsider, the desire to increase the loyalty of an already loyal customer base looks like a waste of effort. But for Rational, which has only one product line, keeping ahead of the competition is essential and that is best done by ensuring that your customer base always prefers your product, and by continuously increasing the recommendation rate of highly satisfied customers to their colleagues in other kitchens. Rational is therefore constantly endeavoring to intensify its relationship with its customer base.

In 2006, Rational commissioned market researcher TNS Infratest to carry out an independent customer satisfaction survey. The result was a "resounding vote of confidence among SelfCooking Center customers" with Rational ranked in the top

10% of the best German companies across all sectors. The SelfCooking Center itself earned the top customer satisfaction score of all: 96 index points; the satisfaction level of customers who also own and use a rival appliance was only 23 index points. The conclusion drawn by the survey was that customers can derive up to four times as much benefit from the SelfCooking Center than with a competitor's combi-steamer, at the same purchasing price level.

The Infratest survey identified 84% of SelfCooking Center owners as “apostles” – loyal, satisfied, and willing to recommend the product to others. This score was nearly twice as high as the average figure obtained by Infratest in an industry-wide survey. These customers are Rational's best salespeople; they must be looked after, reasoned the company. So in 2006 Rational set up its Club Rational, an on-line club for the company's 150,000 apostles around the world. Club Rational is an Internet-based platform on which customers can access advice and exchange ideas as part of an elite community of SelfCooking Centre users. Recipes, a technical help-desk, and other instantly accessible features are backed with more tangible benefits – such as a free SelfCooking Center seminar to help users get the best from their equipment.

With an estimated 53% share of the world market, one of Rational's biggest challenges is to maintain its lead. Ironically, because of the company's very high market penetration its customers generally feel they have little choice but to buy Rational goods – a perception that can generate negative feelings towards the brand. This is a well-documented phenomenon, best illustrated by the widespread criticism leveled at software giant Microsoft, which some see as abusing a near-monopoly position in the world of computing. Rational has never been the subject of accusations of anti-competitive business practices (still less legal proceedings on that score) but it is sensitive to the public perception of its dominant market position. It has addressed this very cleverly by developing a multi-brand strategy for its products. Rational therefore uses dozens of different names to penetrate overseas markets; for example, in France Rational products are sold under the Frima label, in Europe it is Metos, and in Japan it is Fujimak. Besides creating a more varied image for the company, this strategy effectively generates more “noise” in the market and helps the company open up new market segments.

2.2.3 Building the Product

Rational's Landsberg factory is divided into two plants, one in which components are manufactured and another in which ovens are assembled and finished. During the assembly process, a single worker – in the company's terminology a “collaborator” – is responsible for each individual oven, from the incoming order through to the finished product that leaves the factory, 3 days later, tagged with the collaborator's name. It is a classic lean manufacturing process, physically separated into four factory aisles, one for each major product variant, with a high level of

flexibility to allow adaptation to customer requirements. “Each assembly zone is responsible for its stock and capacity planning, depending on the orders it receives,” says Chief Technology Officer (CTO) Peter Wiedemann.

Name-tagging individual products not only benefits traceability and quality control but also increases a worker’s tendency to identify with the product and take pride in its production. The production line set-up is also a classic example of postponement strategy, designed to respond to individual customer requirements. As assembly progresses, the product specification options increase from an initial 24 variants to nearly 1,000 by the end of the process. But despite this high degree of flexibility and variation, the collaborator system reduces the risk of product defects creeping into the assembly process to the extent that, by 2005, Rational recorded a defect level of just 30 ppm (parts per million).

Key components for the product range are sourced from 148 European suppliers on a maximum lead time of 7 days. The supply chain is not only essentially local but also long-term and Rational works closely with its supply partner in order to optimize product specification and supply set-up. Suppliers are evaluated against a range of key performance indicators, benchmarked and scored accordingly. These data are fed into the annual supplier review exercise and shared with the supply chain. Rational works with its suppliers to solve any problems identified through this exercise and issues a quarterly newsletter to keep suppliers informed of general production issues. As a company with little vertical integration, Rational is highly dependent on the quality, reliability, and productivity of its suppliers for its success. So instead of continually pushing for lower purchase prices, which can often lead to costly and risk-laden changes in supplier, Rational works in partnership with its key suppliers to meet shared objectives and to re-engineer products when required.

In keeping with its philosophy of continual improvement, Rational’s new product development strategy is reviewed every 6 months in relation to customer feedback – or “application counseling” – gathered from the sales and marketing team. “It is the connection between application counseling and product management that generates ideas for continuous improvement,” says Blaschke. The aim is to generate a constant flow of new ideas so that product obsolescence revolves on a 7-year cycle. “We ask the customers regularly how happy they are and check then with the support people and the application counselors. We constantly ask the customer for ideas for modify the product and we constantly modify all processes – it’s no good just modifying the plant; all processes have to follow suit,” says Blaschke.

Product development and modification produces many beneficial improvements to a new product in the first 2 or 3 years after its launch; after that, further development effort delivers decreasing returns. After 6 of 7 years, a product will have reached its optimum development stage and a “quantum leap” in product innovation is required to re-energise the market, keep customer loyalty keen and follow the desired growth curve. “We must never get into market saturation,” says Blaschke.

Rational has an applied science department of 25 people, a product development department of 25, an application counseling group that advises salespeople on complex customization problems, and product managers who perform the marketing function. The heads of all groups meet twice a year for strategy discussions. Quantum leap innovation is driven by challenging goals set by management. In order to come up with the initial idea of the self-cooking center, the management team started with a necessary trend toward simplification. Blaschke: “Our old product had more and more dials and parameters, they overtaxed the customer and were too hard to use. We needed to find a way to recognize and program trends and patterns into the machines.” The vision became “a machine with only one button.”

At first, the chefs were resistant: it would be impossible, no one knew the patterns in *haute cuisine* cooking. But management insisted. Then, the applied science group ran trials for an entire year, recording cooking modes and outcomes in the lab in hundreds of trials. And they did find patterns. They exploited these patterns by constructing a database with a multi-dimensional space of temperature–humidity–pressure–gradient–radiation (and more) parameters, like a control surface in car engine management. Finally, they hired software specialists who translated this knowledge into control software for an intelligent cooking center. As the machine was now software driven, the usage of the hardware became simpler.

In the end, they did not get down to just one button. Nor did they reach their original 26% hardware cost reduction goal. But the machine became much simpler to operate for the customer, much more flexible and functional, and they reached a 23% cost reduction. The original management challenge had forced them to abandon their old assumptions and develop a machine that was initially thought to be impossible.

To get to this point you need to be relentless. Whenever someone said, “I can’t do it,” the answer from management was, “Why? What’s stopping you? What are alternatives? If this doesn’t work, can we think of something else that will work?” Over time, this has created a culture where everyone pitches in, and where people do not give up. They almost always find *some* way around the problem. And people like it.

Currently, the innovation team is thinking about the next breakthrough. We cannot say what it is, but once again it involves a management challenge aiming at an identifiable revolution of the customer’s workday that would result in a large value increase.

2.3 Leadership

The system works because it is infused with leadership rather than just management.

We develop our people to achieve things that no other company can do.

Never copy what others do.

– Günter Blaschke

Rational is co-managed by Dr. Günter Blaschke, the CEO, Peter Wiedemann, the CTO, and Erich Baumgärtner, the CFO. They have adjacent offices, putting their head round each other's door numerous times every day to coordinate informally. "There are no walls here," says Blaschke.

Peter Wiedemann is "Mr. One-Piece Flow," the force behind Rational's encompassing lean management philosophy, which they started in production and have applied successively in all processes, including administration. Erich Baumgärtner joined Rational in 1998 as CFO, arriving from Digital Equipment with a broad international experience in finance and administration. Günter Blaschke comes from the marketing and sales side. He joined Rational as managing director in 1997 from boiler manufacturer Vaillant, becoming CEO in 1999.

The company Blaschke joined was successful and profitable, but had reached a stage in its development where complacency threatened to undermine future growth. Customers seemed satisfied with the product, and the sales effort was losing focus. "When I got here and saw the German sales force, they all sat in their offices and had a secretary and made one customer call per day and could not explain the product. I insisted on five visits per day," says Blaschke. His new regime was a shock to the system:

They tried to brazen it out and even mobilized customers against me – so I made them suffer. They bargained with me; then they despaired – the pressure was too high. Then finally they looked around and saw that things had improved. They became motivated and things quickly became better. Now they believe that after change things get better. When we stop changing they get nervous ... No compromises. We discuss until we have consensus for a great customer solution. Trust.

The lackluster sales team Blaschke discovered when he joined the company is no more. Rational's internal organization and the ethos of individual responsibility for the product are deeply ingrained in the 150-strong sales force and monitored closely by senior management. Each sales executive is given a monthly classification related to the number of visits made, sales concluded, and future client prospects established. "This allows us to identify quickly any change in a particular area of the market and adjust our strategy accordingly," says Blaschke. Rational believes that "company quality means employee quality" and therefore promotes promising employees from within through a process of succession planning. A highly structured system of annual reviews, target-setting, and performance assessment helps the company identify employees who deserve and want to be promoted.

Blaschke's initial uncompromising stance with his sales team could easily have backfired: a demotivated and resentful workforce is even more dangerous than a lazy one. However, by painting a clear picture of what the future would look like and of the resulting benefits for each sales team member, by getting deeply involved in the change process himself, and finally by changing the management team, the risk became manageable.

What must have seemed a confrontational and negative approach a decade ago quickly yielded results and rewards for Rational staff. The corporate philosophy is one of personal development and the opportunity to grow and acquire new skills is

extended to all employees. “We continuously pull our employees upward; if you want to develop, you’ll be given the opportunity. We give people any targeted education they need,” says Blaschke. He believes that the skills and knowledge of Rational’s staff is the company’s most valuable asset and so developing the individual is central to the company philosophy.

“Leadership is more than management” is a company tenet. Leadership includes creating space for one’s people to encourage innovation, to be a role model, to build trust, to be consistent, and to serve the organization (not to rule). Just as Rational prefers to “pull in” sales by encouragement rather than “pushing” products to its customers, it also pulls in its staff by instilling the desire for personal career development and the acquisition of new skills. And just as individuals in the factory are given personal responsibility for the product throughout its production cycle, so Rational’s managers are expected to motivate their staff and lead by example. The maxim for Rational managers is: “Only if you have led by example yourself will employees follow your lead in the long term.”

Along with the leadership model, the management team pushes a continuous improvement culture into every part of the company. Everyone has a supplier, a process (for which he or she is responsible), and a client. For example, the controller’s suppliers are the CFOs of the country sales organizations; his process is the measurement, data transformation, standardization, and production of needed reports; and his clients are the CEO, the board, analysts, and everyone who needs the data for decision making. Everyone is responsible for increasing the value of their individual process to their clients.

As a result, everyone is looking for good ideas from anywhere (including end customers) and there are no committee decisions. Whatever tradeoffs must be negotiated across departments are quickly settled by the group of department heads concerned, who all know they need to get on, and who all understand the whole and not just their individual parts. When a conflict cannot be resolved by the process owners, there are no standard rules administered by a committee – conflicts are escalated all the way to the CEO, the CTO, or the CFO, who force the owners to resolve them (and tell them in no uncertain terms that they had better learn to act collectively, in the best customer interest, rather than bickering). This allows a very lean execution of operations strategy, cascaded in a personalized way from the executive team through their management team.

Within each process, Rational awards a ranking identifying the best performer – like a sports contest. For example, one controller today supports two countries in producing their annual reports (she knows their languages), and discusses content on business issues with the managers. This would have been unthinkable a few years ago. After a while, as a result of constant change, people redefine the boundaries of what the job means. “We continuously pull our employees upward. If you want to develop yourself, we’ll get you the opportunity. We give the employee *any* education he or she needs for the next step.”

2.4 Partners and Services

Our discussion of Rational's excellence has focused on innovation and continuous improvement of lean processes. This expresses a relative emphasis of excellence, but does not mean that Rational completely ignores the other vertices of the competitiveness diamond demonstrated in Chap. 1.

First, Rational complements its products with service offerings. A lean service organization delivers a speedy response to repair and maintenance needs and, more generally, delivers after-sales support. During the (targeted 7-year) lifetime of a technology generation, software upgrades are delivered repeatedly, free of charge. Just like a desk-top computer, the SelfCooking Center's electronic brain is capable of being upgraded, and members of Club Rational are entitled to regular upgrades free of charge. They simply order a USB stick, download the software, and their oven is instantly equipped with the latest specifications. The continued upgrades further encourage customer loyalty and increase re-purchase probability.

Second, Rational enhances its growth through partners. While the chefs who organize cooking events are Rational employees, sales are executed through a network of local distributors. After each cooking event, an average of 50% of the participants place an order within the following 6 months. The order goes to a distributor: distributors feel well supported through Rational's activities and generate further sales (without the huge investment in a full-blown in-house sales force), and at the same time Rational develops its own direct contacts with customers through these targeted high-impact cooking events. In addition, Rational administers customer satisfaction surveys on a regular basis, which further strengthen its knowledge of its customers and its relationships with them.

2.5 The Way Ahead

Many corporations, when looking towards their future development, couch their predictions in terms of the external environment. Their outlook is contingent upon prevailing economic conditions, subject to fluctuations in the market, and at the mercy of upheavals in the world markets. For some, this view might simply be a reflection of a prudent approach to business but Rational's distinctive corporate philosophy takes a rather different approach. Rational starts from the assumption that the most influential factor governing the company's future wellbeing is its ability to widen the technological gap between itself and the competition and to remain focused on the needs of its one defined target customer, the professional cook. Having identified the size of the world market, Rational needs "only" to keep its customers happy and to deliver the unique customer benefit message to more new potential customers year on year, in order to follow its projected growth curve.

With sales growth of 15%, and earnings before tax also at 15%, Rational was expecting to achieve gross earnings of €93 million in 2007. “I don’t see any limit to this sort of organic growth,” says Blaschke. “In an area where there’s still so much to do, we can’t help but progress. We still have to reach 80% of the potential world market, about 2.5 million kitchens.” The long-term outlook is to reach about a €1 billion turnover within the next 10 years by organic growth.

For Rational, growth in sales and earnings should not be confused with growth in corporate size. “We don’t want a large company structure, we want to maintain the ‘startup’ atmosphere, so we keep splitting the organization as we grow,” says Blaschke. Typically, Rational is made up of teams of no more than 250 people per unit. “We want to remain a flotilla of small, fast boats – each one responsible and with no way of hiding their weaknesses. Everyone is expected to improve his performance and share his best practice,” says Blaschke. Growth does, however, mean making and selling more SCC and VCC products, and with the two Landsberg factories now up to capacity, Rational is currently building a third plant on the site. This new 45,000 m² factory is designed to enable growth of up to twice the present production capacity – and for future long-term growth there is an option on a further 31,000 m². Representing an investment of around €20 million, the new factory is the largest capital investment in the company’s history. It is due to be completed and in production by the middle of 2008 and will provide 100 new jobs.

With its application of process-led thinking to R&D, sales, marketing, manufacture, after-sales, supply chain management, product development, and administration, Rational is able to create a high degree of customer value and generates a high level of demand for its products. This drives the company’s long-term expectation of growth in profitable sales, while the path towards this goal is cleared through continuous improvement strategies. The extent to which Rational meets customer needs through technical innovation is remarkable and provides convincing evidence of how successful the philosophy of becoming part of the customer’s world can be. The long-term goal – to reach out to another 2.5 million potential customers and achieve €1 billion turnover within 10 years – will require dogged adherence to Blaschke’s quest for continuous improvement: “If it’s finished, you’re finished,” he says. “We will still maintain the tension: no leaning back, no taking it easy.”



<http://www.springer.com/978-3-540-79183-6>

Management Quality and Competitiveness
Lessons from the Industrial Excellence Award

Loch, C.H.; Chick, S.; Huchzermeier, A.

2008, XI, 156 p., Hardcover

ISBN: 978-3-540-79183-6