



EMCC case studies

Textiles and clothing sector: Royal TenCate, the Netherlands

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Royal TenCate is a leading multinational textiles company located in the east of the Netherlands, whose core business is textile technology, ‘intelligent textiles’ and geotextiles. Since its establishment, which dates back to the 18th century, the company has successfully transformed itself from a traditional weaving and manufacturing company into a modernised multinational company producing high value-added materials. A central priority for the company is its focus on innovation and technology. At the same time, Royal TenCate places a strong emphasis on training and educating its employees through measures such as its in-house training programme. Key challenges for the future include global competition, pressure from low-wage countries in Asia and new demands for labour skills and competencies in the production process.

Company profile

Royal TenCate (hereafter ‘TenCate’) is a leading multinational company involved in textile technology, ‘intelligent textiles’ and geotextiles. TenCate is rooted in the towns of Almelo and Nijverdal in the east of the Netherlands, where its origins can be traced as far back as 1704, from when the first official documents of the company date. Since then, the company has grown both organically and through mergers and acquisitions, emerging as a leader in the niche markets of intelligent textiles and textile technology. TenCate has undergone a process of transformation from being a large, traditional weaving and manufacturing company to becoming a multinational company that combines textile technology with related chemical processes to produce high value-added materials.

Main products, markets and customers

TenCate’s mission is to produce ‘materials that make a difference’ – that is, high-grade textiles that provide the company’s customers with added value in their products. To achieve this, TenCate places a strong emphasis on innovation, so that it is always able to offer state-of-the-art solutions.

The company's activities are based on four main areas:

- safety and protection;
- aerospace;
- sport and recreation;
- infrastructure and the environment.

Within TenCate, the different segments are divided into eight groups, each of which has its own products, applications and world markets. The divisions are as follows: protective fabrics; outdoor fabrics; aerospace composites; armour composites; geosynthetics; industrial fabrics; grass; and technical components.

As a multinational company, TenCate has production facilities across Europe, North America and Asia. However, a large proportion of its production operations still take place in the Netherlands, where the company's headquarters are also still located.

While the company's main products differ according to the division in question, all products are a result of the combination of advanced textile technology and related chemical processes. Types of products include artificial grass, carbon-fibre composites for use in the aerospace industry, fireproof and bullet-proof materials, soil stabilisers and geosynthetics for use in dykes.

Because of the company's diverse nature and global focus, it operates mainly in international markets. However, these are primarily niche markets, as TenCate's products are directed towards customers who want solutions tailored to their specific needs rather than off-the-shelf products. The term 'niche market' refers to specific markets providing highly specialised products, in which only a few producers and end-users typically operate. The products are therefore characterised by a high degree of functional specialisation. TenCate seeks to become and remain the market leader within its particular niche market areas.

TenCate is primarily a business-to-business company – in other words, it sells mostly to other businesses and not to private consumers. The company's main customers are larger industrial companies, such as those operating in the aerospace industry, which use TenCate materials as part of their own products. Other important customers include public authorities, such as police services, fire brigades and the armed forces.

Economic results

An overview of TenCate's financial turnover, results and number of employees is shown in Table 1.

Table 1: *TenCate turnover, results and number of employees, 2002–2007*

	2001	2002	2003	2004	2005	2006	2007
Revenue in €1 million	620.0	602.1	569.6	641.0	686.5	770.5	886.0
Operating results in €1 million	14.9	23.9	28.7	34.6	38.5	50.1	69.4
Net profit in €1 million	-5.7	31.1	20.3	23.6	30.5	76.0	46.4
No. of employees	3,625	3,278	3,245	3,634	3,578	3,532	4,020

Source: *TenCate Annual Report 2006; TenCate press release and presentation of annual figures 2007*

The results in Table 1 are a clear reflection of the growing size of TenCate. The company has expanded during the last five years, with a rise in both revenue and operating results. Most significantly, the net loss in 2001 was transformed into a sizeable net profit in 2006. However, such growth has not been realised through expansion of the workforce. Although the number of employees fluctuated in the period 2001–2006, in more recent years the company's employment level has stabilised. One possible explanation for TenCate's growth may be the company's focus on technology and innovation and on offering high value-added solutions to its customers. Other possible explanations could be related to the fact that TenCate's operating plants have become increasingly automated, with the introduction of more sophisticated weaving mills. This has enabled the company to increase its productivity. As a result, in 2007, TenCate experienced a significant growth in the number of employees.

External relations

TenCate is the single dominant company in the region and, due to its multinational nature, has no local suppliers, customers or competitors to interact with. Instead, the company seeks to actively engage in strategic alliances and networks with relevant companies and organisations, both nationally and worldwide. For example, TenCate's Grass division has entered into a worldwide strategic alliance with a leading marketing organisation regarding artificial grass systems for sports applications. TenCate hopes that this alliance will improve its access to markets, as well as enhance support for the organisational set-up of the company.

In addition, Tencate cooperates with external research institutions, knowledge institutes and universities, in order to keep up with technological developments in its field of production and possibly identify new products, innovations, technologies and markets.

Moreover, the company's relations with suppliers and customers are the focus of a specific value chain management approach (see below).

Company development

Restructuring

Since its establishment in the 18th century, TenCate has undergone many changes in its organisational structures. Right from the mergers of two competing companies in eastern Netherlands in the mid-19th century up to today's multinational company, TenCate has been experiencing a continual process of restructuring and adapting to change. In recent years, this has manifested itself in the company's plans to incorporate the two production plants in Nijverdal and Almelo into a single site. The initiative, referred to as the 'Nijverdal-Noord Master Plan', began in 2006 and represents a significant step towards cutting costs and raising efficiency in the Dutch branch of the company. Also in 2006, TenCate implemented a new organisational model, focusing on managing the worldwide value chains in which the company operates.

Regarding the TenCate brand, the company launched a process in 2005 to streamline its communications both internally and externally and to highlight the strengths of the company. In terms of the brand portfolio, all products have been combined into a single brand, with a new visual identity. With all of its markets and products grouped together under the one brand, TenCate expects to be able to achieve a stronger and more clear-cut position in the market.

The role of the social partners in TenCate's restructuring process depends on the country in question. In Europe, there has been extensive cooperation with the trade unions during activities such as takeovers and mergers. Outside of Europe, this cooperation has tended to be somewhat lower: in Asia and the developing countries, for instance, the social partners have played only a minor role, as they often do not exist or do not have the same influence as their counterparts in Europe.

Localisation strategy

With regard to the current localisation of production sites, TenCate's strategy has been to retain the production of highly technological and high value-added products in the Netherlands. Despite the higher production costs in Europe, this can be justified on the basis of the workforce's skills. Nevertheless, with the increase in more commodity-like products, production is also moving outside of Europe – typically to East Asia. This process is ongoing, whereby innovative products, because of technological development, become commodities and hence the specific production is moved eastwards to low-cost countries. As TenCate still wishes to keep a large part of its activities close to its markets – which are located mainly in Europe and the United States (US) – the company does not intend to scale down its current production activities in the Netherlands. Therefore, the challenge for TenCate is to ensure a continual influx of high value-added, innovative products which can be mass-produced in Europe.

The company is also seeking to broaden its market base. In this respect, it may become necessary to strengthen its operations in Asia – both in terms of production facilities and marketing or distribution organisations.

The process of relocating certain activities will have implications for the company's employees. Although the production facilities and sites will remain, the products being made and mode of production may be very different. This requires that the employees become flexible and are able to adapt to change, especially as the work is changing from traditional, labour-intensive industrial work to more capital-intensive work. TenCate has implemented several training initiatives to help employees cope with these changes (see below).

Business strategy

The core element of TenCate's business strategy is to concentrate on product-market-technology combinations, which offer substantial potential for growth. To achieve this, the company has developed a so-called 'buy and build' strategy. This involves strengthening existing activities and acquiring businesses offering technological, market and/or product synergies. TenCate's focus is thus on expanding the core activities which offer growth potential, while selling off its non-core activities.

In recent years, this strategy has resulted in the acquisition of companies such as Polyfelt, which specialises in woven and non-woven geotextiles and has been incorporated into TenCate's Geosynthetics division. In addition, the company has acquired Roshield, which provides weapon-protection solutions primarily for military use, incorporating it into its Advanced Composites division.

The 'buy and build' strategy is complemented by a 'fit it or exit' strategy, which ensures that only core activities are retained within the TenCate brand. Other activities are potentially divested once they have become profitable and can generate a satisfactory income.

TenCate also looks for growth potential and possible ways of strengthening its position in the value chain. The management of TenCate's value chain is based on four components:

- innovation – through the development and production of high-grade materials with specific functional characteristics and high quality demand, high-calibre production resources, TenCate seeks to be a leader in innovation and technology;
- cost leadership – TenCate follows a dual strategy to achieve a balance between cost leadership and differentiation; this also entails a gradual increase in the proportion of customer-specific products and specialties;
- differentiation – as a multinational company involved in many different markets, TenCate aims to have a constant stream of new products and to develop new applications for its materials;

- end-user marketing – although it does not deal directly with end-users, TenCate seeks to draw inspiration and attract attention from the challenges that it identifies in end-user markets.

TenCate's strategy has implications for the company's future skills needs. In particular, it requires employees to be flexible, both in connection with acquisitions and divestments, where an inflow and outflow of workers – possibly with a different work culture – can be expected, and in the context of a strong emphasis on innovation and differentiation. At the same time, the focus on cost leadership means that some labour functions cannot be located in Europe; this is particularly the case in relation to the labour-intensive production of commodity-like products.

Main changes and challenges

Overall, TenCate has experienced many changes in its external environment in recent years. Markets have changed, consumer requirements have become stricter, legislation has been changed and environmental standards have become tougher.

A decade ago, TenCate was at a crossroads. Either the company sought to become an innovative company with high value-added production or it could continue producing and weaving textiles in more traditional ways. The company chose the former option and TenCate was transformed into a high-tech company, probably ensuring the company's survival. Due to the high labour costs in Europe, it is unlikely that TenCate would have remained competitive in the long term if it remained the same.

The fluctuations in raw materials and energy prices have always posed a challenge to production companies such as TenCate, and this is likely to continue in the future. However, by implementing value chain management measures, the company seeks to address this challenge. Among other things, the company's position in the value chain has been broadened, making it closer to both suppliers and consumers. This has been achieved mainly through acquisitions, where both supplying companies and research and development (R&D) facilities have been acquired. In addition, TenCate has also enhanced its internal marketing and distribution resources.

New demands to produce in more sustainable and environmentally friendly ways have also become part of TenCate's focus. Most of the Dutch production sites have now received the International Organization for Standardization (ISO) 14001 certification to comply with high environmental standards. **ISO 14001**¹ is the leading international standard for environmental management. To comply with this standard, companies have to identify and control the environmental impact of their activities, products or services, continually improve their environmental performance, and implement a systematic approach to setting environmental objectives and targets, to achieving these targets and to demonstrating that these goals have been accomplished.

As already outlined, the implications for the skills needs of TenCate are that employees must be flexible and ready to adapt to a changing external environment. As the focus on high value-added products is likely to increase, employees will need to have their capabilities for innovation strengthened.

¹ http://www.iso.org/iso/iso_catalogue/management_standards/iso_9000_iso_14000/iso_14000_essentials.htm

Working conditions

TenCate places a strong emphasis on having good working conditions for its employees. This entails not only ensuring that health and safety are paramount at the production sites and that the physical working environment is of sufficient standard, but also providing a package of benefits suited to the particular employee and their position in the company; such benefits include social security, and insurance and pension schemes. Regarding the physical safety of the employees, this is addressed through free access to basic medical equipment at the company's sites and through the provision of training to a number of employees in handling preventive measures.

Another measure is the Whistleblowers' Scheme – an initiative which was introduced in 2006 to allow employees to safely report any errors or misconduct occurring at TenCate's premises.

At the same time, TenCate suppliers from developing countries are required to sign a 'code of conduct', stating that they will comply with the United Nations (UN) declarations of Human Rights and Children's Rights, as well as the International Labour Organization (ILO) agreements on child and forced labour. Annual visits are carried out to verify the suppliers' adherence to this code of conduct.

Meanwhile, in the Dutch branches of the company, a former profit-sharing system – whereby employees in the Netherlands would earn a fixed percentage of the company's total profits – has been phased out. This system meant that employees in the Netherlands were effectively earning money on their overseas colleagues' work. The decision to abandon the scheme was in recognition of the global nature of the company, which had sparked a discussion between management and employees about how to best change the company's wage policy to suit all parties.

TenCate's general wage policy is diverse and depends on the function and job position of each employee. The company usually seeks to reward loyal and efficient employees who meet the desired performance standards. This is achieved through striking a balance between fixed salaries and performance and incentive-related measures.

Industrial relations

TenCate has implemented an extensive system to ensure that its employees are able to participate in discussions regarding the company. This system is based on representative consultation and involves a number of elected employee representatives who consult with the company's management on various issues, such as: implementing a code of integrity; recommendations regarding the selling off of auxiliary businesses; absenteeism policies; the life course savings scheme; and matters that may affect the employment situation at TenCate. The system is structured so that all divisions of TenCate have their own elected representatives. At the top level, the Central Works Council deals directly with management about company-wide issues.

Employees' involvement in managerial decisions thus appears to be highly formalised. Besides this formal organisation, measures are also in place to allow for employees' informal involvement. This typically takes place at lower levels in the organisation and through the daily interactions between workers and mid-level managers. TenCate's Human Resource (HR) departments actively seek to ensure that all employees are able to voice their opinions, thus encouraging employees' commitment and loyalty to the company.

This system has helped to ensure a smoother restructuring process, involving the shift from traditional to innovative production, as the dialogue between management and employees has succeeded in resolving many of the questions and insecurity raised by the employees regarding their jobs. In general, the cooperation between management and the employees/trade unions is deemed favourable. Trade union coverage within TenCate varies between the different

divisions, but generally stands at about 25% – which is considerably lower than the levels of 60%–70% recorded over the last 10 years.

Profile of workforce and skills needs

The current composition of the workforce in the Netherlands reflects TenCate's position as both a high-tech company and a production company. Roughly three-quarters of the personnel comprise skilled or unskilled workers who are directly involved in production, while the remainder work in administrative or R&D positions.

Similarly, about a quarter of the employees have a higher education, while three-quarters have a low or medium-level education.

Many of the workers who are directly involved in the production process have joined the company directly from school at a relatively young age – some of them when they were as young as 16–20 years of age. This means that they have no formal education, but have been trained on the job in their various tasks – a fact which can, of course, make them more vulnerable to redundancies, as they may face difficulties in finding other jobs later on.

About 10% of TenCate's employees are temporary workers, the majority of whom are skilled or unskilled workers who have been hired or laid off due to fluctuations in demands.

Recruitment and retention strategy

Traditionally, at least in the Netherlands, TenCate has drawn a large proportion of its workforce directly from local regions. As one of the region's largest companies, TenCate is an important source of employment for many people living in the area. While this is still the case, it may not always be the situation due to technological developments and the changing composition of the workforce.

To ensure a stable inflow of higher-skilled workers, TenCate actively seeks to maintain its image as an attractive employer among higher-skilled employees and to engage in dialogue with them. This is primarily achieved through road shows at universities and higher educational institutions throughout the Netherlands.

Besides the potential, albeit not yet realised, shortage of higher-educated employees, TenCate does not envisage any shortage of employees.

The changing intake of employees will also influence the training and education requirements within TenCate. In particular, there is likely to be a demand for more and perhaps better in-house training and education, so that the company remains an attractive employer and retains its new employees. Other retention policies will be in line with the policies on working conditions outlined above.

Current and future skills needs

The current composition of the workforce reflects TenCate's current skills needs. However, these needs are likely to change in the future, which means that employees will also need to change, adopting a more flexible and competitive mindset.

TenCate predicts that it will be extremely important in the future to instil in workers a better understanding of the production process, ensuring that they are aware of their place in this process and of their contribution to the final product. Of course, it will also be important for workers to have skills in machine operating, although such skills are more likely to be regarded as basic skills in the future.

As the company is expected to grow and change over the coming years, new employees and management skills will be important. More technical and information and communication technologies (ICT) skills, and being able to operate increasingly sophisticated machines, will be particularly important for plant workers, while new management and organisational skills will be a priority for those at management level. For all employees, it will be crucial to be able to continually innovate and translate R&D into the production process.

Language skills may also become more important, although more than likely for mid and upper levels of management rather than plant workers.

At the same time, the composition of the workforce is likely to change, with the company hiring more higher-educated workers. It is estimated that the current ratio between low-to-medium and higher education levels of 75 to 25 will change to a ratio of 50 to 50 or even 40 to 60.

Company responses to skills needs

In response to the predicted future skills needs, TenCate has implemented a wide range of measures. As a rule, when a new employee is hired, TenCate provides on-the-job training. Accordingly, an old employee is assigned to work with the new employee for between six and eight weeks, teaching them how to operate the machinery; this system is used for both permanent and temporary staff.

TenCate already offers formal training, focusing on both professional and personal aspects of working life. Much of the training is also focused on giving employees an understanding of the production processes and their position in such processes.

In terms of the changing composition of the employees' educational profiles, this will mostly be achieved through the hiring of new staff. Internal training will be used in some respects, but is not deemed suitable for all employees. This issue, of course, also points to the possibility of job cuts; however, it is unlikely that this will pose a real problem, as a considerable number of employees are set to retire in the coming years. As a result, Tencate does not envisage the need for a greater number of redundancies in the future.

Internal mobility – that is, moving from one position to another within the company – is an option that TenCate makes use of frequently. Often, this is followed up by training for the individual employee so that they can fill the new position.

Sub-contracting of activities and importing skills from other countries is not part of TenCate's strategy in responding to the company's future skills needs. The only exception in this respect is in instances where parts of the production are moved to low-wage countries; however, this only occurs when the production sites in the Netherlands are operating at full capacity.

Training strategy

As outlined, TenCate places a strong emphasis on training and educating its employees. This is reflected in the so-called TenCate People Programme – an in-house training programme designed for employees at all levels of TenCate and paid for by the company. The programme offers possibilities for training suited to the individual employee's position in the company – from executive and management levels down to employee and traineeship modules.

Besides its in-house training programme, TenCate participates in the formalised LIFT group in cooperation with other textiles companies in the Netherlands. This programme offers recognised formal education and training on all levels of the industry.

To enhance the TenCate People Programme, the company has developed an active learning programme in close cooperation with the nearby TSM Business School in the city of Enschede in eastern Netherlands. This programme aims to strengthen the knowledge and skills of management. It focuses on projects relating to the strategies, tactics and operations of TenCate. Among the programme's objectives is the promotion of innovative capability, entrepreneurship and situational leadership. Before commencing the programme, all participants are required to undergo an individual development assessment. The active learning programme seeks to increase cooperation across the different divisions of the company. This is important given the highly diversified nature of TenCate, where cross-divisional cooperation can often be difficult.

Finally, TenCate stresses that employees are not expected to change overnight. Rather, change is viewed as a continual process, and the company actively tries to inform the employees about future amendments to help make the transition as smooth as possible.

Innovation

TenCate seeks to stimulate and structure technological innovation, as well as product and process development, to enable the company to occupy long-term, leading positions in the markets in which it operates.

To help this process, an 'ideas box' has been placed in most production and R&D sites, both physically and electronically. At the same time, the TenCate People Programme stresses innovation and entrepreneurship for both managers and workers. The cross-divisional components of the company's education and training measures are another way in which TenCate seeks to raise the innovative potential of the company. Overall, TenCate tries to promote an open culture for progress and innovation.

As a result of its active involvement in promoting innovation and entrepreneurship, TenCate was awarded the Erasmus Innovation Award in 2007 by the University of Rotterdam. The company received the award due to its efforts to connect social and technical modes of innovation and thus integrate different perspectives, such as those of suppliers and end-users, into the final products.

In line with its focus on end-users, TenCate also views its product users as a potential source of knowledge on the needs and concerns of markets. However, this does not mean that TenCate deals directly with end-users; rather, the company makes the market aware of the possibilities and thereby seeks to exert an influence on the specifications, quality criteria and/or functional requirements of end-users. In addition, the company maintains a transparent brand policy, in which specific functional characteristics are clearly communicated.

Research and development

Given TenCate's strong focus on technology and innovation, the company has deliberately chosen to have its own R&D departments. Only in this way can a leading multinational company ensure that it remains up to speed with, and at the forefront of, the technological developments in its field of production.

TenCate's R&D facilities are located throughout the world, depending on the physical amenities and location of the production facilities. Moreover, as the market size differs between countries –for example, the markets for protective fabrics and armour composites are much larger in the US – the location of R&D facilities may be influenced by this.

For instance, TenCate has recently acquired an R&D-intensive company based in the United Kingdom (UK). However, the company will not be relocated to the Netherlands, but will instead remain in the UK. Nevertheless, the expertise and technology of this company will be transferred to all relevant parts of TenCate.

The company also maintains extensive cooperation with research institutions, universities and other companies. In addition to its own R&D facilities, TenCate operates like a networking organisation, combining different sources of technology and expertise and integrating them into new products. Moreover, to ensure that confidential information is not leaked to competitors, TenCate has drawn up a ‘code of integrity’, specifying the rules for cooperating with external partners. This code of integrity also protects the company from losing sensitive knowledge through employees leaving the company, who may for example go to work for direct competitors or start up their own business.

Future challenges

TenCate is an example of a company that has transformed itself from a large traditional textile-weaving company into one of the world’s leading manufacturers of intelligent textiles and high value-added textile products. This has been achieved through a process of modernisation, where the focus has been on upgrading both physical equipment and labour skills, while making innovation and technology a central priority. Some challenges still persist nevertheless. Most notably, such challenges include global competition, localisation issues as a result of ongoing pressure on costs – mainly from low-wage countries in Asia – and new demands for labour skills and competencies in the production process.

TenCate has initiated a series of measures to deal with these challenges. These include: new recruitment strategies to attract higher-educated personnel; training and education of its existing personnel, both through internal courses and through more formalised education in cooperation with educational institutions; and closer dialogue with the workers and social partners involved in the process.

SWOT analysis

The company’s main strengths, weaknesses, opportunities and threats (SWOT) are identified in Table 2 below.

Table 2: *SWOT analysis*

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Knowledge intensive • Flexible • Strong market focus and end-user marketing • Leading market position in multinational niche markets • Economies of scale that enable extensive investment in new technology 	<ul style="list-style-type: none"> • Need for further reduction of costs and increased efficiency in European sites • Asian part of organisation could be strengthened 	<ul style="list-style-type: none"> • New and tighter regulations on safety and protection • Existing markets are growth markets • Hyper-fragmentation in markets could make room for new functional materials • Product differentiation • Emerging markets • New technology (materials science) 	<ul style="list-style-type: none"> • Dependence on purchasing side and temporary shortages of raw materials • Rising costs of raw materials • Fluctuations in oil prices

Source: *Interviews with TenCate personnel; TenCate Annual Report 2006*

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Sources

Interviews

Interviews were conducted in January 2008 with:

Marketing Support employee, Martine Kok

Head of HR at Advanced Textiles, Peter van der Linde

Head of Corporate Communications, JHH de Carpentier Wolf

Reports

TenCate Annual Report 2005

TenCate Annual Report 2006

TenCate press release: *Annual Report 2007*

TenCate presentation of Annual figures 2007 (see

<http://www.tencate.com/TenCate/Corporate/documents/IR%20data/presentations/Jaarcijfers%202007%20Engels.pdf>
(1.39Mb PDF))

Website

TenCate website: <http://www.tencate.com>

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