

# Visions of a Pole Position: Developing Inimitable Resource Capacity through Enterprise Systems Implementation in Nestlé<sup>1</sup>

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Leveraging capacity to take an organization to a position where its competitors cannot challenge its authority is an aspiration for most global organizations.

Enabling creation of such capacity by implementing strategic information systems is a strategy with its own share of risks. Admittedly, such risks can pale into insignificance with the gains that fully functional enterprise-wide systems can produce.

The resource-based view of the firm may be used to appreciate the nature of capacity that can be created to propel an organization like Nestlé to become a leader in a market characterized by fierce competition.

Multinational organizations can achieve a non-replicable capacity and may use the key nature of foresight to support the development and deployment of the enterprise system across several locations around the world.

## Introduction

Foresight is undeniably an intrinsic part of the leadership of a multinational organization like Nestlé, as it is likely to define Nestlé's position in the market and ensure that it is able to sustain such a position over succeeding business cycles. It is clear that initiatives vary among leadership and organizations as a result of foresight. Usually, new initiatives indicate the germination of foresight among leadership. Like the real world of business, most new initiatives also have risks of failure. Admittedly, it would be in the nature of the foresight of the leadership to plan and execute such a plan, launching new initiatives that would provide significant competitive advantage. While launching new products is a type of innovation that enables an organization to respond to market expectations, yet the exploitation of internal resources (Galbreath, 2005) may be able to provide much more long-lasting advantages. Such mechanisms can also trigger accrual of superior performance. The resource-based view (RBV) of a firm contains a couple of dimensions that could be used to explain how such an advantage can become sustainable over future business cycles. Using RBV it may be feasible to substantiate an organization's resources through its assets and capabilities. Whilst assets are easily replicable, capabilities can garner advantages that may provide an organization with a more enduring advantage as they are hard to copy (Wu *et al.*, 2006).

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The introduction of enterprise resource planning (ERP) or enterprise systems (ES) in Nestlé is one such capability that was central to the foresight of Nestlé's leadership. Zhang and Dhaliwal (2009) argue that IT-enabled supply chain management is, to a significant extent, influenced by obtaining institutional context. At the time, the institutional climate within Nestlé was fragmented among regions and it was difficult to develop and deploy strategies, which were largely driven by local agendas among the different locations around the world. According to Galbreath (2005), the introduction of new IT capabilities produces tangible and intangible resources for the organization. It is worth noting that intangible resources in the case of Nestlé could have played a major role in its global success. Liu *et al.* (2013), in their study in China, show that IT infrastructure and IT performance can add distinctly to a company's firm performance. Competition among resources is a major theme within resource analysis among firms. Rivard *et al.* (2006) argue that complementarity of resources is key of firm's performance. Complementarity among resources is argued by Rivard *et al.* (2006) to be the foundation of firm performance. Such a view highlights the strategic necessity of developing resources. The foresight of the leadership within Nestlé might have been motivated by such a strategic necessity when they supported the long-term development of enterprise systems and their subsequent rollout over 70 locations around the world. Stoel and Muhanna (2009) argue for a distinction between aggregate and specific IT capacity. In the context of Nestlé IT systems were distributed in all of its locations around the world. However, before 2002, Nestlé faced major challenges in trying to map resource use in the regions. Stoel and Muhanna's (2009) explain the advantages of developing specific IT capacity to drive supply chain operations.

A key issue that demonstrates the strategic foresight of the Nestlé leadership is the formulation of the IT strategy not as a standalone activity but as a business objective. Leidner *et al.* (2011) have shown that ambidextrous strategies including IS innovation tend to have superior firm

performance. A key risk associated with the failure of IT initiatives is the danger of plummeting stock market value of a company's shares. Within such a context, Bharadwaj *et al.* (2009) contend that the leadership would be keen to ensure that a company like Nestlé succeeds as otherwise they would also lose out on the falling stock value of their interests. **Table 1** lists the key literature examined.

## Methodology

We decided to use Nestlé as a case for this research as it was a multinational company with IT utilization across several geographic locations. Using GLOBE, the company's top management first of all attempted to gain greater capacity to monitor and control productivity within far-to-reach contexts. Second, by enabling the use of GLOBE, various efficiencies that connected the supply chain and the consumers of Nestlé products were consolidated on a worldwide basis. An inductive case study approach was adopted for this study (Yin, 2003). Narrative contributed by the second author, who was a key player in the ERP implementation at Nestlé, formed the central plank on which the story was structured. The four facets of supply chain management formed the basis on which the story was orientated, as this seemed to be the most important ambit alongside others: Finance, Factories, HR & Payroll, and Sales & Marketing. Nuances within a continuum of expectations and experiences were captured within the narrative.

Apart from the CEO of the time Peter Brabeck, all Nestlé personnel interviewed have been anonymized to protect their privacy. The study benefited from a range of confidential documentation used to provide both micro-as well as macro-dimensions of the research. The study was connected to the micro-dimensions of a major successful ERP implementation in a multinational organization spanning operations in 70 countries. The study is led by business implications rather than technical aspects of systems development. Despite major reservations in the literature on the need for organic development and the

Table 1. Key RBV extant research

Research owner	Focus	Method adopted	Limitations	Implications
Galbreath (2005)	Tangible and intangible resources have been examined. Specific strength is the analysis of the nature of intangible resources.	Hypothesis testing.	Convenience sample; respondents mainly middle-level managers, some of whom did not have adequate knowledge of all resources; all 56 firms were Australia-based.	Resource impact on firm success may be higher when examined as part of an interconnected system rather than when examined individually.
Liu <i>et al.</i> (2013)	Impact of IT capabilities, i.e. flexible IT infrastructure and IT assimilation on firm performance, has been examined through a conceptual model.	Survey-based hypothesis testing through educational institution contacts of managers in industry within China.	There may have been other IT or organizational abilities that could have influenced firm performance. Second, the study was entirely based within China. Therefore it is probable that the results may not be generalizable to organizations in other geographical locations. Third, the study is based on individual respondents whose views may have been inherently subjective.	Although IT capabilities do not have a direct impact on firm performance, they do have an indirect effect through absorptive capacity and supply chain agility.
Rivard <i>et al.</i> (2006)	Complementarities of strategy as a positioning perspective encapsulating competitive strategy framework and the resource-based perspective is assessed.	Using a model that included the effects of IT support for business strategy and IT support for firm assets on firm performance was tested through a survey of 96 SMEs.	Work is directed to the SMEs and hence the outcomes may not be meaningful to generalize for large multinational organizations. Cross-sectional as opposed to longitudinal nature of research design implies that true causal relationships between research constructs cannot be inferred.	Complementarity as opposed to competition of IT influences on business strategy and firm performance. Role of IT conceptualized in terms of the strategic necessity perspective.
Stoel and Muhanna (2009)	RBV contingency approach focused on 'fit' between type of IT capability/resource a firm possesses and the demands of the industry in which it competes. Influence of industry characteristics of dynamism, munificence, and complexity were examined to assess their impact on each type of IT capability.	Hypothesis testing using quantitative accounting measures.	<i>Information Week's</i> ranking of organizations is the key to this study; obviously this may not be entirely reliable.	The need to distinguish between aggregate and specific IT capability. Appreciation of IT capacity using a more granular measure is probably able to account for variations in performance.

Table 1. Continued

Research owner	Focus	Method adopted	Limitations	Implications
Leidner <i>et al.</i> (2011)	Firms with defined IS strategies (either IS innovator or IS conservative) perform better than those without defined IS strategies.	Survey-based testing of developed model.	Survey-based research so cross-sectional data has led to inability to establish causality between independent and dependent variables. Sample was not entirely random and it was from a single industry, so results cannot be generalized across industries.	Firms that attempt to be ambidextrous are associated with the most superior performance.
Bharadwaj <i>et al.</i> (2009)	Effects of IT failures on the market value of firms.	Sample of 213 newspaper reports of publicly traded companies that occurred during a 10-year period.	Study is based on a number of assumptions that may not obtain in reality.	Senior executives who hold stock options and have interests in the company would be against the company losing value in the stock market.
Wu <i>et al.</i> (2006)	IT-enabled supply chain capabilities of IT advancement and IT alignment are firm-specific and hard to copy across organizations.	Based on data collected by surveying supply chain and logistics managers in various industries. Hypothesis testing was used to validate the study.	First, study relied on cross-sectional data. Collecting data over different time periods using participating managers could have yielded richer results. Second, framework was tested using a single informant from each organization. Third, used perceived measures of market and financial performance by managers.	Proper deployment of IT resources in supply chain communication system can help realize the benefits of IT through building higher supply chain capabilities in such areas as information exchange, coordination, activity integration, and supply chain responsiveness.
Zhang and Dhaliwal (2009)	Processes by which firms adopt technology for operations and supply chain management or critical factors that may influence the operational value firms gain from IT-enabled supply chain management.	Questionnaire survey method. Hypotheses testing, association analysis between factors through partial least squares approach. The work used a structural equation modeling technique to examine model and hypotheses.	Primarily focused on China-based firms. Organizations outside China may have different consequences of technology adoption. Low response rate is also another facet that may not be representative of the whole picture.	IT-enabled supply chain management is to a significant extent contingent upon institutional factors.

realization of regional aspirations, this study could clearly demonstrate a development of capacity that emerged with the use of a one-size-fits-all approach. In hindsight, it might seem that successful ERP implementation probably could happen only through one-size-fits-all visualizations.

### Role of ERP systems for Nestlé within IS/IT infrastructure

As far back as 1990, Nestlé took a strategic decision to deploy SAP as its ERP provider. Throughout the 1990s, the bigger Nestlé businesses in the UK, France, Germany, Italy, Spain, and the USA started to implement modules of SAP. By 2000, there was a lot of SAP experience and knowledge within Nestlé and the above countries were well on the way to running significant parts of their businesses on SAP. The corporate decision was 'If you can implement it (a certain functionality) using SAP then you should' (rather than building it from scratch). Bespoke systems design and development was by now seen as slow to implement, expensive to build and maintain, and, crucially, lacking in the sort of integration SAP was famous for providing.

In late 2000, the main Board (the 'EBM') at the headquarters in Vevey, Switzerland decided that a centralized project — called 'GLOBE' — should be funded to design a SAP template which would provide standard functionality covering all parts of the Nestlé business: Finance, Supply Chain, Factories, HR & Payroll, Sales & Marketing. This was a very bold move, demonstrating foresight by the leadership of Nestlé — it involved 700 people, mostly drawn from areas within the actual business rather than the various IS/IT departments — and was publicly stated to have a budget of \$2 billion attached to it. By 2005, all Nestlé departments were told they would implement this template. Aggressive timelines were drawn up for all 70 countries where the company operated. All 250,000 employees would be affected. This was the start of the biggest ERP implementation in the world.

At the outset, it was clear that CEO Peter Brabeck was not only the chief sponsor but also, and very importantly, passionate about the aims and objectives of the project. Indeed, he went so far as to say that GLOBE would be his chief legacy to the company and that his success as CEO should be judged by the success of GLOBE. With hindsight, this demonstrates the type of foresight that the CEO brought to the development of GLOBE.

It is important to understand two things at this stage — one concerns Nestlé's culture at that time, the other in regards with the way the project was presented to the heads of the individual Nestlé businesses (the 'Country Managers' Annual Conference,' in early 2001).

The culture had always been that the individual businesses in each country were 'king.' They had almost total independence on a day-to-day basis. Once the annual business plan had been signed off by HQ in Vevey, the CEO in a country was free to do largely as (s)he pleased. This was the way the company had always been, would always be, and was indeed seen as a strength by senior Nestlé people; it was, in fact, the conventional wisdom that the company had been successful down through the decades because of this independence. Staff from 'the Center' had to ask for permission to come and visit a country and their requests could be turned down. There was a 'Technical & Standards' team for IS/IT at Vevey, but this was very weak and the major Nestlé businesses certainly did not follow its guidelines nor did they rely on it for advice. Therefore, an order to implement a template-based design from the Center was hugely countercultural.

The second point is to do with the project's marketing. Brabeck understood very well that he would be 'going for broke' by having such an ambitious and expensive vision. Therefore, from the very beginning, GLOBE was always presented as 'not an IS/IT project', but a way of allowing the whole company to benefit from the 'Best Practice' that GLOBE would discover within the company and spread throughout it. This phrase was delivered over



and over again: 'GLOBE will deliver common Best Practice, using common data based on common infrastructure.' It would allow 'the company to be big on the inside so it could be big on the outside' — in other words, economies of scale which Nestlé should have been enjoying (but not prior to GLOBE) would result from everybody doing the same things in the same ways.

## Principal dimensions of supply chain

### Sales order processing

As an essential part of any business, this is the nodal point where all the back-office supply chain dealing with making and distributing finished products meet the front-office processes carried out by the sales people, namely 'getting an order.' Nestlé had as many different ways of doing sales order processing (SOP) as there were countries. Performance in this area was highly variable — the key metric was known across the whole company rather obscurely as 'Case and Line Fill Rate' (CLFR) measuring what percentage a customer actually received on time of what they had ordered. Competition in the fast moving consumer goods (FMCG) arena is fierce — Unilever, P&G, KJS, and Nestlé are all engaged in an intense struggle for what is delightfully called in the industry 'share of throat.' In addition, the supermarket chains increasingly determine the terms of trade and can make life very difficult for each of these producers. The CLFR metric was thus seen as key for Nestlé — the target was to get everybody up to 97.5%. But what was the starting position? The difficulty in implementing a standard way of working here is well illustrated by the fact that it took time to agree exactly what was meant by an 'order.' The principal difficulty was in answering the question 'At what point do you say you have sold something?' Some countries put orders onto their sales statistics at the point the salesperson, out in the field, took the order with the customer. Some did it at the point that the products on the order were confirmed as being in stock and, therefore, the order could be fulfilled.

The other possibilities included: when the order was picked and assembled in the warehouse; when the order was in transit on the truck; when the order had been delivered and a signed proof of delivery (POD) had been obtained from the customer; when the invoice was generated and sent out; when the Accounts Receivable department either received payment or sent out a dunning (reminder) note. For various reasons, the design team said it should be at the point that the POD could be entered into the system and legal ownership of the product passed from Nestlé to the customer. Most countries prior to GLOBE operated order-definition policies which were 'ahead of' POD and hence they took a one-off hit when implemented because they lost several days' sales and this became one of the most difficult political issues that had to be overcome with the CEO and Sales Director of each country.

### Purchasing

Purchasing in most companies is a straightforward business area — both to understand from a process point of view and to implement from a technology point of view. In order to understand the commercial opportunity that purchasing represented for Nestlé prior to GLOBE it is important to assess two aspects. The first is how fractured the company was at every level when it came to buying things. This was, in turn, the case because of the way the company had grown over the decades since World War II, through acquisition rather than organically. This meant that major 'old' Nestlé countries like France, Germany, Italy, and the UK had accumulated different businesses with different ways of working, and had their own lists of suppliers which nobody had ever asked them to merge or rationalize. These countries were effectively 'food conglomerates' that were not really coordinated from a purchasing point of view. The different divisions ('Grocery,' 'Food Service,' 'Water,' 'Pet Food') did not talk to each other about any aspect of their spending (or anything else commercial, come to that matter). The second crucial point is the scale of spend. Nestlé SA, in the early 2000s,

was spending approximately \$35 billion on raw materials (known as 'directs') and 'indirects' (i.e., phones, office supplies, consultancy, training, etc.). Three levels of purchasing coordination were possible for any given spend:

- *Worldwide.* Obviously, this is the best option, if possible; but frequently it was not possible, for all sorts of reasons. For major directs like coffee and sugar it was possible and some element of coordinated purchasing was taking place prior to GLOBE, but this was very limited.
- *Zone.* Nestlé had recently reduced the number of zones from five to three. The new zones are Europe (EUR), the Americas North and South (AMS), and Asia, Oceania, and Africa (AOA). Most purchasing should have been possible at this level — prior to GLOBE, none was.
- *Country.* This level was not very desirable as an end result in itself, but it would have been an improvement in most countries.

Although, in many respects, it is a very mundane area, the GLOBE Purchasing Team, ably led by a very aggressive American called Spaulding, came up with the team motto 'Find the money, Get the money, Keep the money.' In other words, they knew all sorts of savings were possible if everything was organized differently. In many respects, the savings would result from organization redesign rather than directly from implementing GLOBE. But, certainly, GLOBE would help, and vast sums could be saved on the \$35 billion. Subsequently, it became clear that Spaulding's motto was correct — more business benefit (i.e., bottom line savings) resulted from purchasing changes than from any other area. GLOBE guaranteed that people could not buy anything through some local 'back-of-a-lorry' approach because all purchases required a purchase order (PO) and the system did not let anybody generate a PO against a supplier that was not on the list of approved suppliers; this list was controlled by the Zone people.

### Distribution

In GLOBE terms, this was always called 'Materials Handling' (MH). The scope included any and all handling of finished product (only), that is once a factory had shrink-wrapped a pallet it was an MH responsibility to shift that pallet from the factory gate to whichever warehouse was supposed to receive it. Also, and more obviously, it was an MH responsibility to shift pallets that formed a customer's order from the warehouse to the customer's premises. There was wide variation throughout Nestlé prior to GLOBE. Most large countries had outsourced this, many smaller countries had not. Some were using big centralized warehouses with high levels of automation for 'put-away' and retrieval. Some, the ones who typically had already done some SAP implementation, had some degree of integration of MH with the factories and with the SOP department. At the other end of the spectrum, many were not using any sort of system at all.

Another challenge was that a key decision from GLOBE was that MH should mark out the warehouse floor, and pallets should be put away in a strictly controlled and rotated way. This was aided by an accurate floor plan which would allow for as much automation as the country was capable of dealing with (this automation, the micro-management of the warehouse floor, would always be done by country-specific software that had to interface with GLOBE via defined APIs, but which was always separate from SAP). In addition, every warehouse had to be able to deal with part-pallets because SOP was going to deal in part-pallets. This issue, which is difficult to deal with technically, had always been fudged in each country, and there was no single way which was recognized to be effective in all situations.

To make matters worse, there was a real-time problem. The factories produced finished product, large amounts of it in most cases (hundreds of tonnes daily), and space to store it temporarily was always in short supply. The MH team had to supply trucks at just the right rate in order to keep up with what the factory made. If there were few

trucks the factory rapidly ran out space and, in extreme conditions, would have to stop production until the backlog was brought under control. If there were many trucks, the factory ran out of parking and turning space. How did MH know when to send trucks? They were receiving SAP messages throughout the day from the factory as each pallet was produced. If the messages were delayed, then chaos was not far behind.

The final challenge was that the SAP module that provided this MH functionality at this time was very poor and those subsidiaries that had already tried to implement it did not like it and were pushing to use something else. Although the business benefits came from integrating MH backwards with the factories and forwards with SOP were very large, all areas implemented the relevant SAP modules. Integration was far more likely to happen than in a situation where a mix-and-match approach was taken.

In the choice of a package software vendor it is important is to check how flexible they will be about making changes in the same software when the basic functionality does not do what you want. In fact, it is not close and, even when you have explored and exhausted all the configuration options to try to get it to accommodate your needs, it is still some way off the minimum that you need. In these circumstances, SAP offer you their 'SDP' — Strategic Development Program. This means that you write the spec and they will deliver what you want. They will incorporate it into their standard product over time so that you are not left with a maintenance headache and your company will be benefitting from this extra capability ahead of your competition. This is not a free service, and in fact it is very expensive. By 2001, SAP was sufficiently dominant in the packaged software marketplace that very few of their customers were ever offered the SDP option. Nestlé was one example however (it had just signed what was SAP's biggest single deal) and the MH module was upgraded in line with what was wanted. In fact, at one stage, Nestlé had five SDPs underway concurrently.

### Demand and supply planning

This process area dealt with two very different parts of the business. The 'Demand Planning' (DP) part was the new term for 'Sales Forecasting.' As the term implies, this was traditionally been carried out by the Sales and Marketing area. There were very large variations in how this forecasting was done — variations in the level of detail, whether it was done by stock keeping unit (SKU) or by groups of 'similar' product, and variations in the time range, whether it was done for a few months ahead or as GLOBE demanded for the next 18 months. Many smaller countries hardly bothered to do DP at all. They simply attempted to sell whatever their own factories had made for them or they imported product from Nestlé businesses in other countries.

What GLOBE proposed was a complete and fundamental overhaul of this area of activity. A new Demand and Supply Planning (D&SP) team was set up in each Nestlé business. Its responsibilities were to come up with an overall plan for every SKU for a rolling 18-month horizon. The DP was to be agreed by a multidisciplinary team composed of Sales & Marketing, Production, Finance, and Supply Chain people. This team had to meet every month and adopt the agreed plan formally as the common set of numbers that the entire business was to work. However, this was not done rigorously in any Nestlé business at the time — not even in the very large ones such as the USA, France, Germany, or the UK.

In order to complete the revolution, GLOBE introduced a very complex piece of SAP to the newly created planning team. The SAP module name was APO — Advanced Planning & Optimization. It was a very new module within SAP and was used by just a few end-user companies as a result. At the time, there was very little consultant expertise and no other company was attempting to use APO in such a central way by putting it at the heart of the supply chain. If the introduction of APO as part of GLOBE failed, then the whole of GLOBE failed. The central job that the planning team now had was to fit together two halves of a very complex 'onion,' namely



what the company thought it could sell and where/how/when that (long) list of products would be made. In order to 'nail' what was seen as an area which the business as a whole had always executed very poorly, the decision was taken by the design team within GLOBE to do both halves of the planning at a very low level of detail.

## Manufacturing

Nestlé sees itself as a manufacturer of branded product — two key themes are already apparent, namely that the brand is important, and the product has to be made in the first place. All Nestlé products are made by Nestlé factories. The tradition of excellence in manufacturing is part of the company's culture — in essence, Nestlé people think they can make everything, from the infant formula milk powder through to pet food, better than anybody else. The several hundred Nestlé factories around the world all had a long-established history of making high-quality product but, as was common in the rest of the business, **there were big variations in the way in which this manufacturing was done from the process perspective.**

GLOBE brought seven big changes to the factories — some organizational, but most of them technical in nature. The biggest one was that part of the D&SP continuum (described above) the **factories now had to make to order in a very controlled way** and in a way which was completely alien to most of them. Traditionally, the **factory manager's main objective** was twofold: **firstly**, to keep his **factory working as close to 100% capacity throughout the year**; **secondly**, to keep his **unit costs as low as possible**. The second cost-based objective followed naturally from the first objective via very pronounced economies of scale. And both objectives came from the factory manager's very acute understanding of the political realities of 'production,' that is factories seen as 'busy' and 'efficient' were more likely to remain in existence than those which were not. GLOBE challenged this world view very directly. In the post-GLOBE view, **the factory was told what to make by the planning team.** The factory lost

ownership of the key high-level plan — the Master Production Schedule— which said how much of each product would be made each week for the next 18 months. The factory had ownership of a new GLOBE-introduced low-level plan called the **Detailed Production Schedule**. This was determined by the MPS and was simply a more detailed extension for the next 2 weeks and gave the factory information on what to make line by line and shift by shift. Given that GLOBE demanded a very detailed 'factory mapping' to be done prior to go-live (i.e., how many lines, what capacities, how many people, what shifts, etc.), the **DPS could be generated automatically and then tweaked by shift supervisors** ('team leaders') at the time it was used. From being a 'law unto themselves,' the **factories suddenly found themselves very constrained and on the receiving end of lots of 'instructions' generated by other people.**

Furthermore, not only did the factories not make their own production targets any more, but the targets themselves were redefined and made more rigorous. In the same way that SOP was measured by the CLFR report, the factories had always seen their own external measurement as the MSA (Master Schedule Attainment) report — in other words, what the factory actually made compared with what it was supposed to make. In the past, the factory had controlled all three variables of this metric — what the original target was, what had actually been achieved, and how the report did the calculation between the two. It was common for output tonnages to be 'massaged' and put in to different production periods in order to make the factory 'look good.' **GLOBE's calculations were, by comparison, very strict and the report itself was now not in the hands of the factory management team.** The start and end-of-month dates were fixed in the **calendar and the factory could not vary them.** Across the entire Nestlé world 400 factories stopped using a variety of calendars for production periods and universally adopted the calendar month as the unit of time for production. **The effects of this change on staffing were considerable.** The same sort of change was also made for

quality control. The practice of 'backflushing' was simply not possible within a GLOBE-managed factory. Backflushing occurred whenever the factory simply went ahead and made whatever it could and then made the supply targets 'fit' what had been produced. Backflushing was common where raw material supply was unpredictable, or where line outages took place, or where factory discipline was low — wherever a poorly managed or unmanaged situation caused variation from what was expected in theory. The regime that GLOBE brought simply made this impossible. The DPS was determined almost exactly from the MPS and factories either made what was expected or they did not at all, but they could not make something outside of the plan.

The quality control process under which all of this activity was carried out was likewise immutable. The quality sampling regime was decided in advance, as were the tolerances for what was acceptable for color, weight, material composition, and so on. All these data were put into the manufacturing part of GLOBE and used directly by the quality team in the factory. Pallets of finished product could only be released to the MH ('distribution') people in the warehouses once all the quality tests associated with a particular product had been passed.

Finally, the factories had a layer of management taken out. The team leaders, who were effectively in charge of the lines at the point where production was actually carried out, now reported directly to the factory manager instead of indirectly via somebody else. This gave the factory manager a lot more work to do in terms of day-to-day operations. The logic for the 'delaying' was argued on the basis that the factory manager now had less 'strategic' work to do, that is less work deciding how budgets, targets, and reporting would be aimed for each year.

## Conclusion

As shown by Galbreath's (2005) research on which resources matter the most for firm success, it is obvious that the intangible capacity created within Nestlé by the

knowledge and experience gained by the staff implementing GLOBE transformed it into an organization with non-replicable resource capacity. Training 700 staff members in Vevey, Switzerland to use a single system that would get rolled out across all 70 regions was the foresight of Peter Brabeck. It reiterates other international research on ERP that illustrates the support of top management as key. For instance, Ngai *et al.* (2008) studied projects across 10 different countries and regions using 18 critical success factors where 'top management support' and 'training and education' were the most frequently occurring parameters for successful ERP implementations. Contemporary with the GLOBE implementation at Nestlé, Sarkis and Sunderraj (2003) at Texas Instruments demonstrated that, similar to Brabeck, constancy of vision and standardization of internal processes and important IT systems to support market needs were the foundation of success.

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**Peter Neale** is an IT professional with extensive industry-based experience of developing information systems. He was involved in a leadership role in the development and deployment of SAP-based ERP systems within Nestlé. Consistently being active in teaching, learning, and practice have been Peter's interests beyond his working career. Being an accomplished reflective practitioner is probably an appropriate description of Peter's abiding interests in the evolution and application of information systems to address industrial challenges.

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