
Building the single market with information technology – lessons from a transnational IT implementation

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Abstract

The subject company operates in a vigorously growing sector of the packaging market, with plants in most European countries. But could this disparate business function as a single company in a single (European) market? This article sets out some lessons learned from a pilot transnational implementation of a strategic management information system, designed to counter entrenched national business thinking in one European company and its subsidiaries.

A true single market

In the early 1960s kids from the Mid West would roll into a service station in a 1956 Chevy or a beat up VW microbus and feed nickels and dimes into the bright red and white Coca-Cola automat. They would shout and holler until the tumbling coins triggered a profound rumble and the familiar waisted bottle slid down a chute from somewhere deep in the bowels of the machine. Dollar bills would lie on the counter and that bottle would determine whether those bills went out along the dirt prairie roads in the Chevy or back to town in the VW.

For the moulded glass bottles used to carry the names of the plants in which they had been filled. But as the bottle was transportable, an Atlanta bottle could end up in an automat in Albuquerque or Wichita. Those kids would place bets to see whose bottle had travelled the farthest. And though they did not realise they were doing it – they would be singing the praises of the American single market at the same time.

At the same time in Europe, we were locked into national business cultures, reinforced by differences of language, of currency, of barriers to trade which a few far-sighted individuals had only just begun to question. Even today, operating on a continental scale is not easy. Transnational barriers – both psychological and actual – may have begun to crumble, but they are still

formidable nonetheless. There are many companies that operate in several European countries; but the paradigm of one company, continental in scale, operating in one single market is still a hope rather than an expectation.

Nevertheless, there have to be pioneers. In this article we attempt to set out some of the lessons learned from a pilot transnational implementation of a strategic management information system designed to deal a heavy blow to entrenched national business thinking in one European company and its subsidiaries. These lessons may help others to go further and faster than we have gone. They may also help to evaluate the usefulness of information technology (IT) as a tool to integrate business processes across frontiers.

Our company operates in a vigorously growing sector of the packaging market. We have plants in most European countries and we face strong international competition. It is vital that we continue to increase efficiency wherever possible and the implementation of an electronic system for managing the business is part of this programme. Could the business be made to function as a single company in a single (European) market? That was our goal.

Such a system, later known as MIDAS, was developed and piloted transnationally in the UK and Spain, during 1997. The system provides disparate business units with a true transnational dimension through the use of a single common IT operating system. Based on standard SAP/R3 software, customised to take account of local operating



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environments, the project's business objectives were:

- reduction in manpower/improvement in efficiency;
- less waste in production, reduction in energy usage;
- management of the business in (semi) real-time;
- increase in facility to handle the transnational dimension.

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The problem with operating transnationally

There is a story that young Ivan was being educated in political theory. "What would you do if you had two horses?" asked the Commissar. "Why – I would give one to the state and keep one for myself" replied Ivan correctly. "And if you had two pigs?" asked the Commissar. "The same", said Ivan, smiling. "Then what about two chickens?" Ivan's face clouded over. "But you know I've got two chickens!" he protested.

The first lesson we learned was that, like Ivan, everybody believes that the concept of transnationality is wonderful in theory – but practice is another matter. We all understand national systems and these pose few challenges. Transnationality is associated with loss of control and with having to learn new systems – systems which are themselves initially experimental. So we found user resistance which had to be contested all the way. Despite this resistance we achieved solid results and it is these results that are now convincing the sceptics at every level.

Benefits of transnational working

MIDAS has permitted significant advances in all the above business areas. Efficient management of stock across many plants in several European countries was a prime objective. MIDAS offers the possibility to visualise stocks of material, finished goods as well as spare parts at a European level as opposed to country by country. Moreover, MIDAS now compares purchase prices across Europe automatically, thereby yielding further significant savings.

Manpower reductions have been achieved, notably in the area of invoice processing. In a later stage of the project we plan to bill selected transnational customers

electronically, through EDI, and this will add a further dimension to efficiency.

Increased efficiency is absolutely necessary for major companies to survive in an internationally competitive marketplace where customers exert, quite properly, a continued downward pressure on prices. Thanks to MIDAS, we now monitor production facilities in different countries from a central point and relate orders to production sequencing on a transnational basis. This allows extremely accurate financial control of production.

MIDAS has also enabled us to speed up monthly reporting procedures. Consolidated monthly accounts used to take until the eighth or ninth day of the month following to prepare. This has now been cut by almost two-thirds. Accounts are now available by the third day after the month end. This represents a substantial increase in our ability to react to operating changes.

Another benefit of MIDAS is that it allows us to model various alternative business strategies on a transnational basis – something that was impossible before. This is particularly useful in helping us to manage the business across Europe.

Overall, MIDAS is successful and fulfilling its objectives both nationally and transnationally. The decision to roll-out the system to other sites in other European countries has therefore been taken.

Implementation

The initial implementation timetable – at less than nine months – was short and there was slippage. In the event the system was implemented in little over a year. This, by any standard, was still a fast time. We learned from the implementation and we now have a template for future roll-outs to extend the "single company – single market" paradigm.

What follows is an account of how we planned this implementation, the problems we encountered and the lessons we learned from it.

Implementing on a transnational basis is difficult and complex. In this particular case the implementation period coincided with the group making a major acquisition. This put supplementary demands on the time of many key users which held up the implementation at certain points. The key lesson learned here is to ensure that your company does not make an acquisition during the time you are implementing a transnational IT project!

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The implementation was also unusual in that two sets of IT consultants were involved. One being responsible for overall design of the system and for supplying hardware, while the other took responsibility for customising the system and carrying through the implementation on a day-to-day basis. This decision, taken for good technical reasons, added complexity.

A second major decision was that there should be a “big bang” approach to implementation with no parallel running. All the relevant SAP modules were to be implemented together. In the event, with the turbulence caused by the acquisition, this proved impossible to achieve and we reverted to a gradual changeover which then had budgetary consequences.

Third, we adapted existing systems and processes wherever possible. To illustrate this, the finance processes were modelled on the UK business, whereas logistics were modelled on the business in Spain. This worked well, although we found that different approaches within the integrated SAP package entailed extensive subsequent customisation.

Although we did set up some transnational workshops to define new processes not covered by existing systems, the major part of the transnational system was created from modified national processes, rather than from brand-new processes designed uniquely for the pan-European environment. This caused certain difficulties. More and better pan-European communication and better project co-ordination might have improved the transnational view on processes.

However, we also did some things that proved highly successful. In Spain, we used an approach based on the requirements of key users who defined what they wanted from the system. This led to a system which matched what users wanted from it. This approach seemed to bring other significant benefits through users being closely involved in the implementation and in developing the capabilities of the system.

Problems encountered during the implementation

It is normal for projects to throw up problems and the MIDAS project threw up quite a few during the implementation. Many of these were attributable to the strategies discussed above and the difficult contextual circumstances arising from the acquisition. They well illustrate the pitfalls and complexities of transnational IT systems.

Communication difficulties

Communication difficulties included:

- Poor bilingual capabilities leading to misunderstandings.
- Different groups of consultants built around local management teams.
- Different financial controllers trying to insert their own business processes into the template without talking to colleague controllers.
- Poor communication with financial controllers leading to insufficient resource allocation.

Unsurprisingly, cultural and communications problems arose where implementation teams and users came from more than one country. Cultural problems exist independently of language and what may be accepted practice in one country – for instance, in the field of decision making and responsibility – may not be the same in another. Such cultural differences can be exacerbated where there is no common language.

Thus the project team could not count that something said would be listened to in another country. Still less that what had been heard would be understood and acted on. We found that matters nominally agreed were frequently later re-opened and disputed. Language often provided a cloak or excuse for more fundamental communications problems.

Project management

Difficulties included:

- Unplanned changes to teams.
- An over focus on national business processes in Spain and the UK which neglected the pan-European dimension.
- Lack of commitment to the project by managers at the implementation sites.

When we began, we felt that the project did not have the full support of all senior business unit managers. A number felt they had not been sufficiently consulted beforehand. Neither did they know exactly what was expected of them. In consequence, it was often difficult to get the co-operation of their staff who, naturally, had other priorities.

As a result we faced sudden changes to user teams if an individual had to be assigned to other duties. This could paralyse progress through absence of decision-taking authority. The answer, we concluded, was to involve local business managers in the early planning of the project and in the setting of commonly-agreed goals. This we are attempting to do in future roll-outs.

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If systems are seen as a mere extension of national business processes, then national users, and indeed project team members, become more entrenched in defence of their own national systems than they would be if working to a “European” model that does not “belong” to anybody. A symptom of this was that agreements accepted on a project team basis were not always implemented “back at the ranch” with the result that the status of decisions became hard to rely on.

We also had to manage expectations. Disillusionment hinders the development and usage of any new system and becomes its own worst enemy. A system whose short-term benefits are oversold may be a system with disillusioned users. Expectations need to be managed so that long-term patterns of success and benefit are uppermost in the minds of users.

We found that overcoming these difficulties required a substantial degree of compromise. But beware: while compromise may be a polite way of solving transnational problems it may create even greater difficulties in the future.

Resource constraints

Resource constraints included:

- Availability of key users.
- Availability of centralised database and processor support.
- Acceptance of too many learning curves among the team, i.e. the mix of skills was not sufficiently biased towards more experienced people.

The availability of centralised database and processor support is a typical problem arising from transnational working. The database and processor are not in the user’s own country but in a third country where the time zones and pattern of public holidays are different. Geography also diminishes the importance of problems, so that what is seen as a critical problem to a user in the UK becomes less vital at the end of a telephone line in Germany.

This kind of problem arose several times during the course of the implementation, undermining transnational credibility and again reinforcing the preference for being self-contained in one’s own country.

Without doubt both users and members of the implementation team were required to assimilate a lot of knowledge very quickly. The learning curve was steep and users inevitably expected the IT consultants to know everything. We found that full user documentation and training helped to alleviate this problem though it did not eliminate it completely.

Lessons learned

For the purpose of implementing in other countries we wanted to see what lessons there were to be learned and to change our approach wherever this was feasible.

The main lessons we learned were as follows:

- Involve people from all sites in the planning and management of the project. Managers have got to feel that they “own” the project and believe in the benefits that will flow from it. Under pressure they have to provide the resources that will see it through on schedule.
- Create strong central project management with responsibility focused on one individual with adequate authority. Do not divide responsibilities. The project team should also be located in one single place.
- Ensure that adequate resources are devoted to the project and that the need for these is understood and budgeted for. Always assume that operational priorities will remove part of the user resource. Therefore, schedule the project on a conservative basis.
- Where temporary resources are brought in, the purpose should be to support operations rather than the implementation itself. This increases commitment to the project and helps build internal system management. The expertise then remains within the business.
- Take steps to enforce agreed problem resolution procedures which highlight potential difficulties at an early stage. Ensure that all parties accept and implement solutions that have been agreed. Commitment to fixed procedures and targets must be achieved at the beginning of the project.
- An approach based on key users helps adoption of the system and reduces the need to employ external consultants to solve problems that can be rectified more quickly and more cheaply internally.
- The person in charge of a task must also be the one responsible for its delivery. The objective of a successful implementation needs to be written into such a person’s individual responsibilities.
- Take steps to recognise and minimise potential language difficulties. Ensure that the project does not relapse into separate local projects.
- Ground rules must be made explicit so that everybody can be clear exactly what changes to the system will be permitted and what the processes are for

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- implementing changes. This is vital both to maintain control and to ensure that changes in one business unit do not cause problems in another, especially where information is being shared.
- Strict procedures must be set up and adhered to. This requires effective communication between parties and effective sign-off procedures to ensure that everybody knows when a section of work is closed, signed-off and cannot be re-opened.
 - Such agreements must always be adhered to even for simple actions; otherwise the transnational consequences may be far reaching.
 - Critical attention should be paid to the authority levels of project team members and users. These should be enough to enable them to do their jobs but not enough to cause potential disturbance to other parts of the transnational system.
 - Daily meetings of the project team during critical parts of the implementation are necessary to ensure that communication is effective.
- People with commercial experience should be taken out of operations and put on the project team to ensure that the system fits actual user requirements. (This may be problematic if resources are scarce.)

Conclusions

The MIDAS information system has broken new ground. It is now in the process of being enhanced to provide for EDI links with both customers and suppliers on a selected basis besides being rolled out to other plants. This will give it a further dimension, helping to achieve integrated supply chain management across frontiers and building the single market across the European continent.

Our overall conclusion is that despite all the problems we encountered we nevertheless managed to complete the project successfully. We now have positive results and we are better prepared to tackle the next transnational project.