Effective B2B Integration

Challenges, practicalities and keys to success

Dale Vile, Freeform Dynamics Ltd, September 2012

Effective business-to-business (B2B) integration is key to the performance of supply and demand chains, which in turn impacts the competitiveness of companies and economies as a whole. So what's the state of play in this area, and how can organisations optimise their trading activity?

Key Findings

Effective B2B integration goes hand in hand with good business performance
The highly interdependent nature of business in many industries means the way in which organisations communicate and transact across supply and demand chains has a big impact on business performance. It is therefore not surprising that a recent study involving 201 medium to large UK and Dutch organisations demonstrated a strong correlation between B2B integration effectiveness and both financial performance and business development activity.

But shortcomings are acknowledged by many, and driving improvement can be hard
Efficiency and responsiveness issues are not uncommon, with challenges frequently reported in areas such as partner on-boarding, routine transaction automation, exception handling, and simply keeping up with the pace of change in an ever evolving B2B environment. However, despite being aware of the cost, operational, and decision-making impact, business and IT managers in under-performing organisations are often faced with a range of barriers that can appear quite daunting.

Top performers illustrate how to break the problem down into more manageable pieces
When we look at what those with the best overall B2B capability have in common, i.e. what they are doing 'right' to drive results, we are able to distil out six factors that make a difference:

- Clarity on business value, i.e. considering the full range of benefits that can be achieved, not just the ones that are obvious and easily measurable
- An inclusive strategy and mind-set, with a view to enabling electronic trading with the long-tail of trading partners, as well as key customers and suppliers
- Adequate systems foundations, doing the necessary groundwork to deal with core application limitations and disjoints between internal systems and information, but without boiling the ocean
- A platform approach to integration, phasing out or avoiding custom integrations as much as possible to drive reuse, consistency, automation and visibility
- The right B2B solution partner(s), conducting due diligence to ensure a good match with your requirements and culture, as well as the necessary skills, experience and commercial terms
- Appropriate funding and commitment, paying attention to ownership and responsibility, and allocating the budget and resource needed to break the cycle of reactive investment

Proactivity is the key to ROI
With many organisations reporting pressure and incentives from key partners to trade electronically, you are likely to be spending money on B2B integration one way or another. With this in mind, the trick to achieving good ROI is to invest on your terms rather reacting to others' agendas.

The study upon which this report is based was designed, interpreted and reported by Freeform Dynamics. Feedback was gathered via a telephone survey of 201 senior business and IT managers from the UK and Netherlands completed in August 2012. The study was sponsored by Liaison Technologies.

CONTENTS

Introduction 3
B2B Integration Fundamentals 3
The current state of play 4
A closer look at performance 6
Optimisation practicalities 8
Clarity on business value 8
Inclusive mind-set and strategy 9
Adequate internal foundations 10
The right enabling solutions 11
The right solution partners 13
The right level of commitment 14
Discussion 16
Appendix A: Study Overview 17
About Freeform Dynamics 18
About Liaison Technologies 18
Terms of Use 18

Introduction

People often generalise when writing history. This is reflected in the story of the IT industry frequently told in today's sales and marketing presentations. According to the narrative, IT first hit the business mainstream in the 1980's, starting out in the back office. Process automation was then implemented across the rest of the organisation during the 90's, with people, businesses and markets all getting joined up via the internet in the 2000's.

Now, the story goes, we are in the decade of social media, big data and analytics. Having automated everything, our attention has turned to dealing with the information explosion and making use of all that raw intelligence we have accumulated over the years.

The trouble is that just like the history of nations, which is often written around the lives of the elite, the history of IT we usually hear only reflects activity in the relatively small group of highly progressive organisations that are well-resourced and have invested heavily in modern technology. Even then, it's still rare to come across anyone regarding their business as 'fully automated'. Reaction to the notion that automation has been largely taken care of is usually "I wish".

Back in the real world, the history of most mainstream organisations is defined more by piecemeal investment over the years in tactical solutions that have not always lived up to the sales reps' promises, all implemented in an environment of limited time, finite budgets and conflicting priorities.

With this in mind, when we set out in a recent primary research study to investigate how organisations are doing in the important area of business to business (B2B) integration, we were careful not to make any assumptions. We didn't want to fall into the trap of just focusing on the elite performers or the glamorous part of the equation such as high tech communications and cloud based exchanges.

As we shall see, based on feedback from 201 IT and business professionals working in medium and large organisations across the UK and Netherlands (Appendix A), streamlining the way in which businesses collaborate and transact is dependent on getting a lot of the less glamorous basics right.

Before exploring that, however, let's make sure we are clear on what we mean by B2B integration.

B2B Integration Fundamentals

The area of B2B integration is primarily concerned with how businesses trade with each other electronically. For the purposes of our study, we considered the following activities:

Trading partner on-boarding
Includes setting up everything necessary to commence trading with a specific partner

Product/service information exchange
Includes transferring/synchronising descriptions, specifications, images, regulatory data, etc

Routine transaction handling
Includes day-to-day creation, transmission, capture and acknowledgement of transaction data

Transaction exception handling
Includes errors, inconsistencies and exceptions, and associated escalations or remedial actions

Automation beyond the mandatory and obvious
Includes integrating the 'long tail' of partners, not just the demanding and high volume ones

Visibility of performance
Includes the analysis of individual suppliers, the supplier base as a whole, and benchmarking

Adaptation to evolving requirements
Includes process and system related change requests originating internally or from partners

While this may not be an exhaustive list of B2B integration activities, it provides a good basis upon which we can consider performance across a range of sectors. So how are people doing?

The current state of play

In the simplest terms, B2B integration capability can be assessed based on the level to which supply and demand chain transactions have been automated. While some might expect this level to be high given the capabilities of modern technology and communications, especially in sectors such as manufacturing, distribution and retail, the reality is that things are extremely variable (Figure 1).

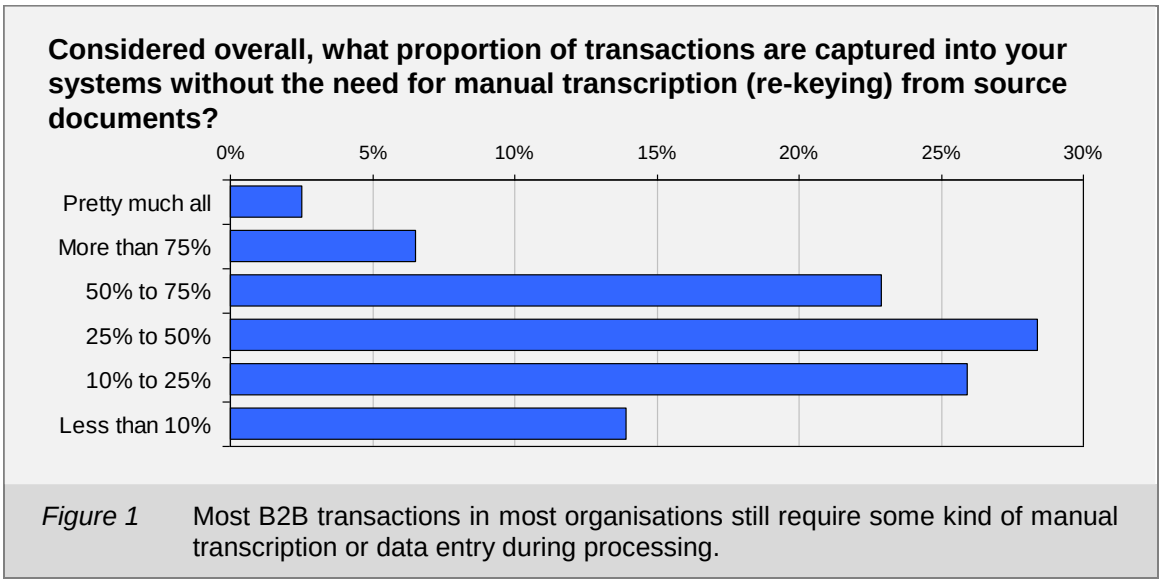


Figure 1 Most B2B transactions in most organisations still require some kind of manual transcription or data entry during processing.

The most telling observation from this chart is that most B2B transactions in most organisations still require some kind of manual processing to complete. Indeed only 5 organisations from our sample of 201 said they had all but eliminated manual transcription steps.

This picture is consistent with that seen when we look at the relative emphasis on different transaction mechanisms in use across our sample base. While automated techniques have clearly been adopted significantly by some, there's still a lot of reliance on email based communication and even the exchange of paper documents in quite a few cases (Figure 2).

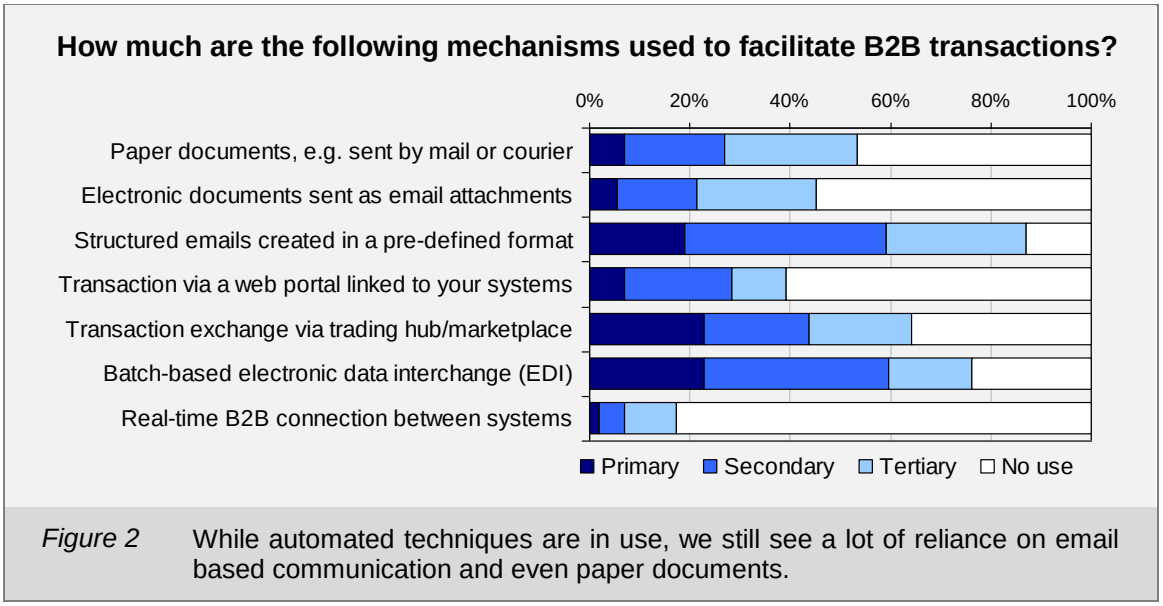


Figure 2 While automated techniques are in use, we still see a lot of reliance on email based communication and even paper documents.

What's also clear is that automation efforts, where they are made, tend to be focused on a subset of trading partners, with fewer than half of the partner base being 'integrated' on average (Figure 3).

How many of your trading partners would you say are 'integrated', i.e. able to transact in a structured electronic manner?

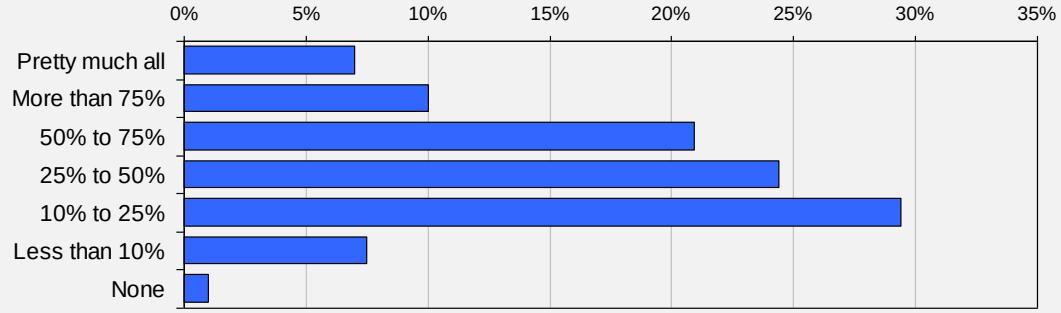


Figure 3 B2B integration efforts are typically focused on a subset of the partner base, such as particularly demanding customers and high volume suppliers.

This kind of picture reflects the way in which activity in this space is often prioritised. First to be dealt with are 'must do' integrations, e.g. when a key customer mandates certain capability as a condition of doing business. Around a third of respondents cite 'pressure from key trading partners to transact electronically' as a reason for B2B integration work, for example. Another common situation is where the number of transactions is particularly high with a given partner. Where this is the case, introducing a level of automation, even if it's a custom point-to-point integration, can significantly improve things in the context of a single partner relationship.

That said, when we look at factors like the speed and efficiency of core B2B integration processes at more of an overall level (i.e. across the entire partner base), the picture is very mixed, with some organisations doing well but many struggling to achieve a good level of performance (Figure 4).

Thinking of how well things work, how would you rate your current B2B processes and systems in relation to the following?

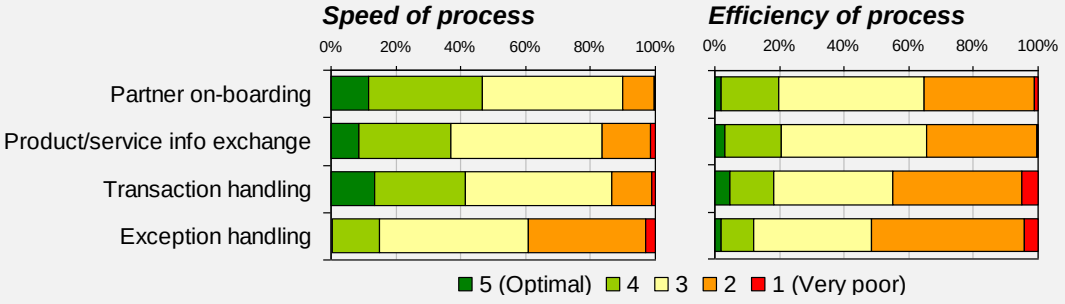


Figure 4 The performance of core B2B trading processes is generally very variable, with a high reliance on manual processing often constraining efficiency.

What's notable here is the difference between speed and efficiency, with performance in relation to the latter being generally lower than the former. This is consistent with organisations continuing to rely on a lot of manual processing, i.e. processes still being very people-centric in many cases.

Such a high reliance on human intervention in turn leads to some other issues beyond basic responsiveness and efficiency. Manual processes are generally more error prone, more difficult to change (in comparison to modern rules-based software, for example), and harder work to monitor and report against. When we look at performance and capability in relation to factors such as these, we again, not surprisingly, see an extremely patchy picture (Figure 5).

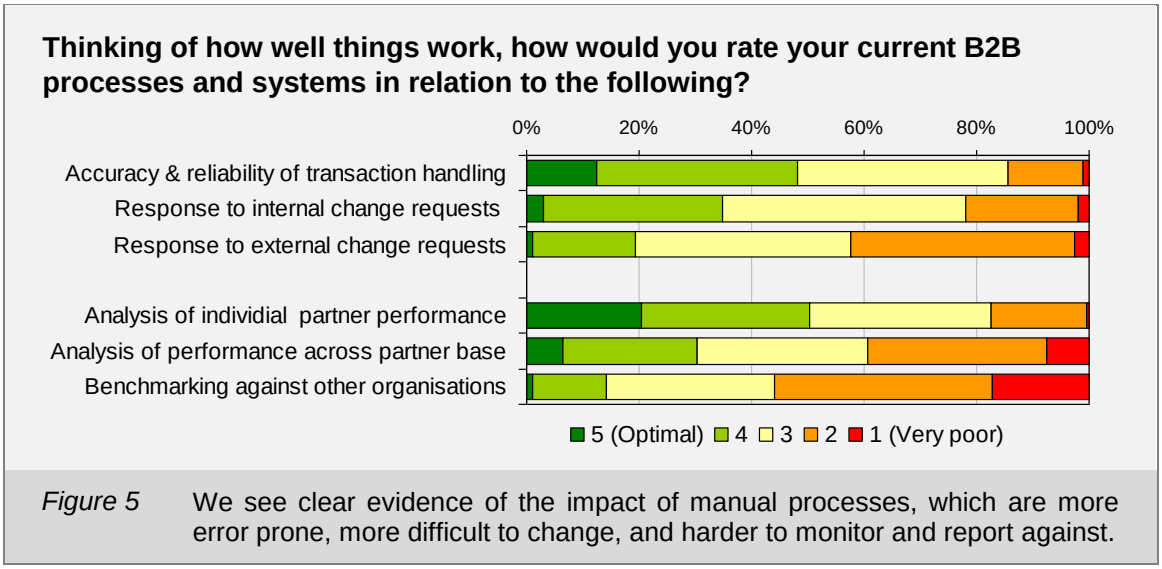


Figure 5 We see clear evidence of the impact of manual processes, which are more error prone, more difficult to change, and harder to monitor and report against.

So if that's the overall picture, how does performance vary across organisations of different types in different scenarios? In order to explore this, we had to do a bit of clever analysis.

A closer look at performance

You may have noticed that a lot of the data we have been looking at is based on response scales (e.g. 1-5 scores). By averaging these scores across relevant responses, we are able to produce an index, which in turn allows us to group organisations based on their overall performance (Figure 6).

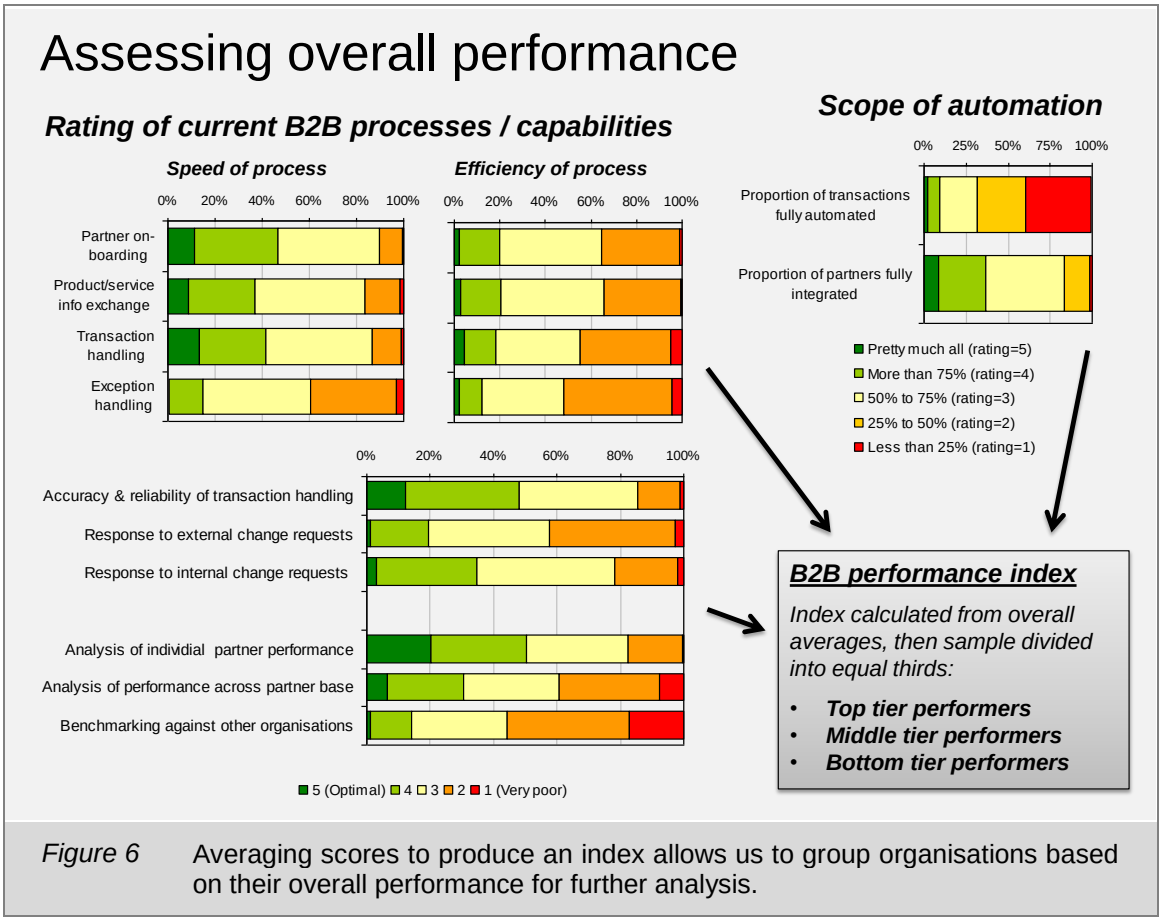


Figure 6 Averaging scores to produce an index allows us to group organisations based on their overall performance for further analysis.

Categorising organisations based on performance in this way allows us to very easily compare and contrast different segments. We can then see, for example, that larger organisations, who typically have more IT skills and resources in place, tend to perform better on average than smaller ones, but that relatively little difference is observed between the two geographies surveyed (Figure 7).

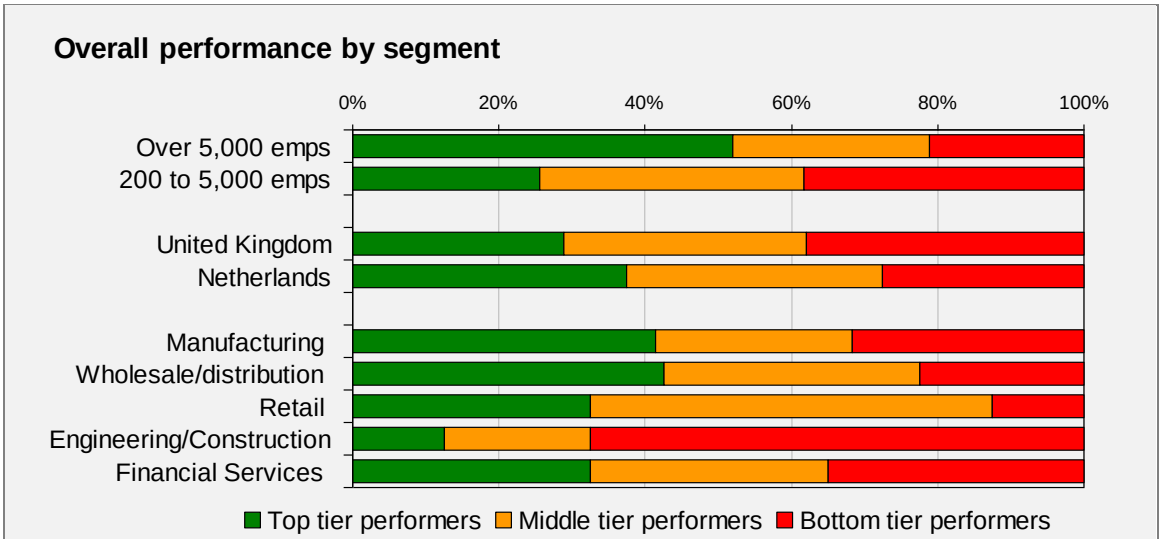


Figure 7 Larger organisations fare better, but whichever way we cut it, it's clear that many organisations have a lot of room for improvement.

What's also clear from this chart is that the Engineering and Construction sector is behind the curve (compared to other sectors included in the study). This is likely to be down to a heavy reliance on subcontract based fulfilment, and activity often being very project rather than process centric. Both of these factors give rise to more transient relationships with trading partners.

Whichever way we cut it, though, it's clear that many organisations have a lot of room for improvement, and most of them explicitly acknowledge this. Generally speaking, under-performers appreciate they are behind the curve, and are clearly dissatisfied with their capability (Figure 8).

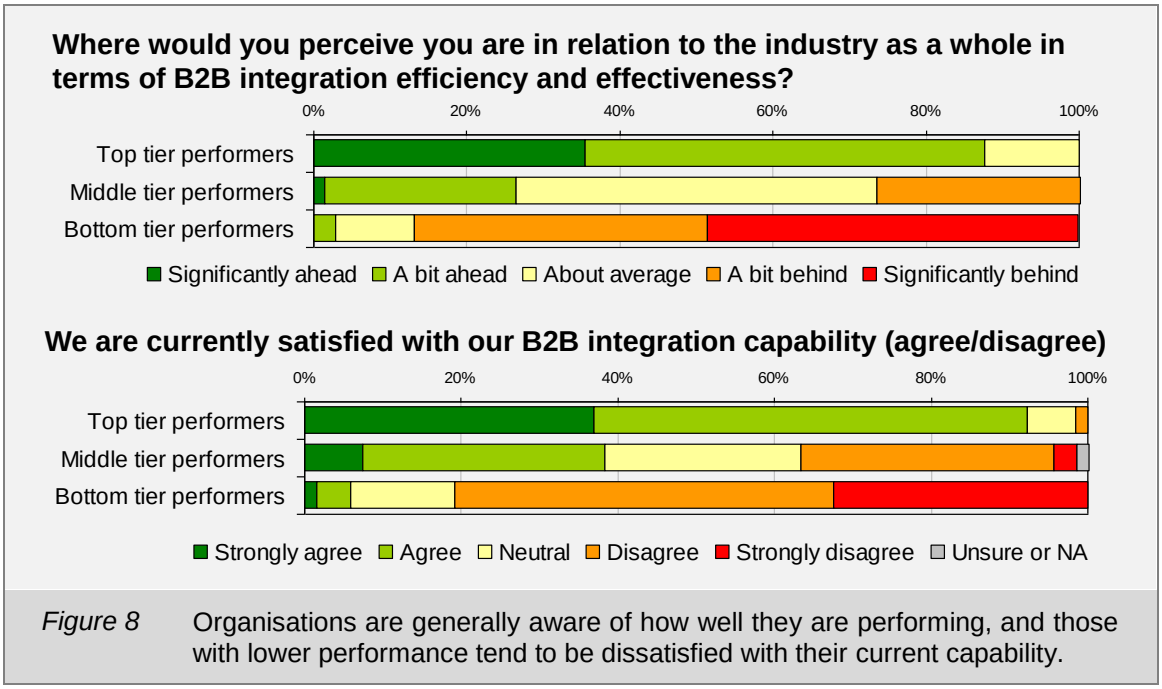


Figure 8 Organisations are generally aware of how well they are performing, and those with lower performance tend to be dissatisfied with their current capability.

This picture begs the question of what is standing in the way of many organisations achieving better results, and where improvement is necessary, what can be done practically to optimise the B2B integration environment.

Optimisation practicalities

It would be nice to think that some silver bullet existed to vanquish all B2B integration evils. Unfortunately, though, you can't just go out and buy a software product or pay for a service that will magically optimise everything. Our study suggests there is a lot more to it than that.

In order to explore this, we spent quite a bit of time analysing the differences between our different performance groups. The idea was to figure out what the better performers have in common, i.e. what they are doing 'right' to drive results, and equally, what poorer performers are generally having problems with.

What we discovered is that success is dependent on a number of key factors (Figure 9):

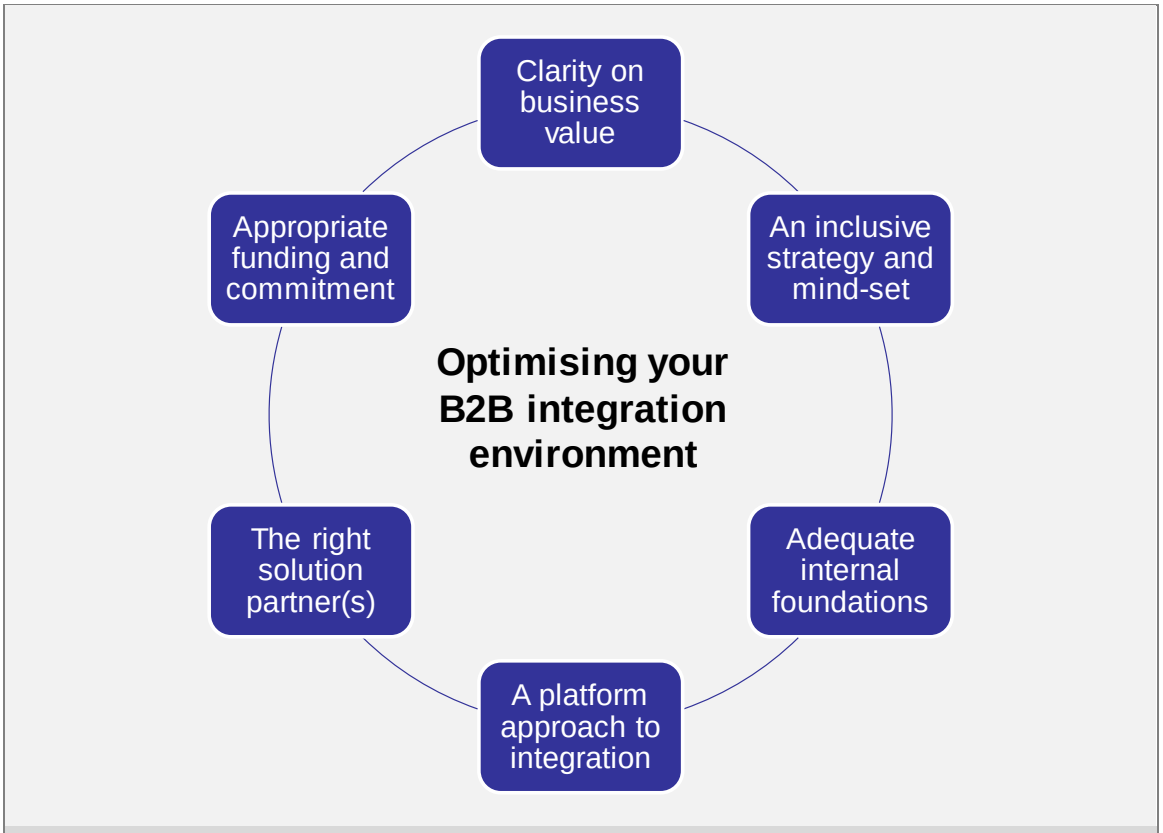


Figure 9 Optimising your environment requires a range of factors to be addressed.

Let's walk through each of these factors in turn, looking at how feedback from participants in the study can provide a steer on what's important in relation to each.

Clarity on business value

Most organisations involved in B2B trading activity broadly understand the areas in which optimised integration can potentially benefit the business.

However, when we compare the perception of benefits between different groups, we find that higher performers generally have a much more complete picture and a higher appreciation of what can be achieved (Figure 10).

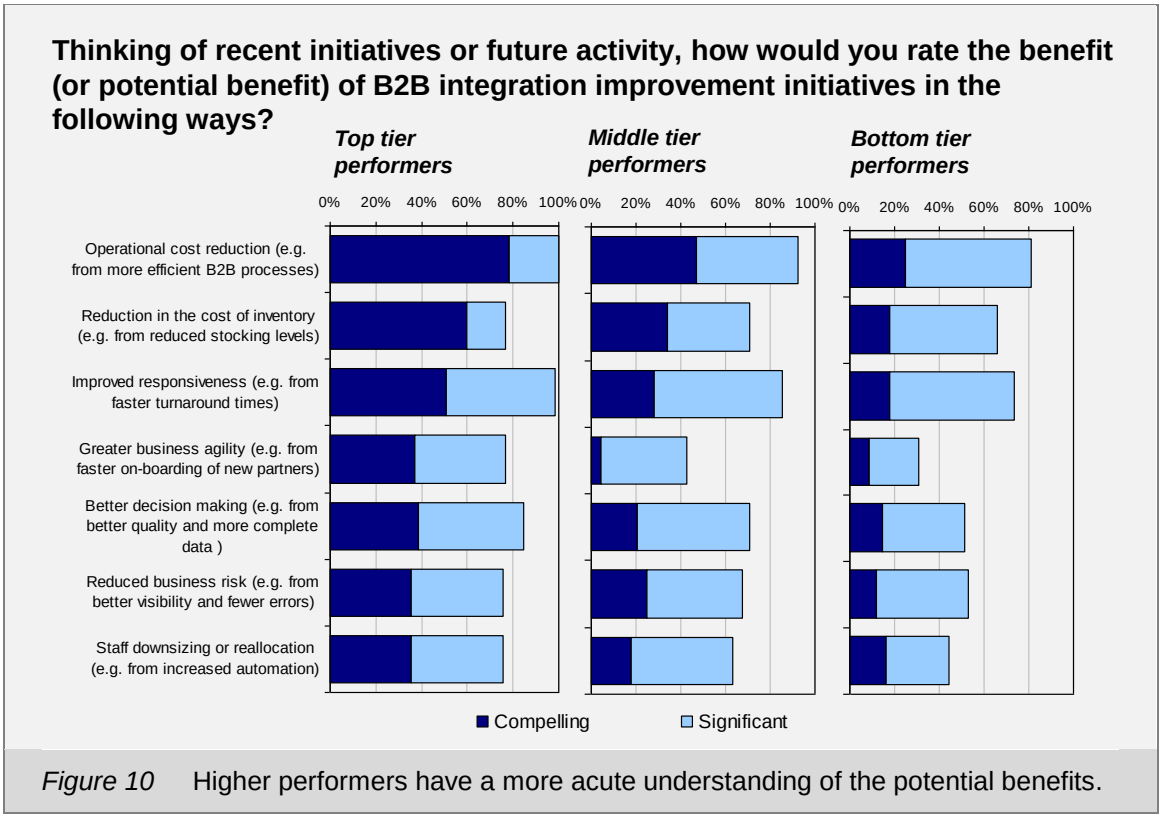


Figure 10 Higher performers have a more acute understanding of the potential benefits.

Top tier performers are three times more likely than their bottom tier counterparts to describe operational cost reduction benefits as 'compelling', and have a similarly more acute understanding of the value in relation to most other areas. This would suggest that benefits often only become clear in hindsight, i.e. once you have been through an improvement initiative. Data such as the above is therefore invaluable for those currently in the process of evaluating their position and making a business case for investment.

If you are going through this at the moment, the lesson is that it's important to look beyond the obvious and think through the full impact of an optimised B2B integration environment and the improved operational visibility that naturally comes with it. This includes hard cost savings as a result of headcount being freed up or inventory being lowered, for example, but also less quantifiable (though still very compelling) benefits that stem from more informed business decision-making, an ability to act on decisions more quickly and flexibly, and an ability to deal more effectively with risks along the way.

Inclusive mind-set and strategy

Something that comes across strongly from those that are more committed or advanced is the mind-set of inclusion. By this we mean setting out to achieve harmonious integration with as many trading partners as possible. The logic is clear – the broader the scope of your B2B integration activity, the more you can drive efficiency, responsiveness, flexibility and visibility.

Here are some comments from respondents that reflect this inclusive spirit:

> **Large Distribution Company:**
>
> *"We are driving innovation through our supply chain. We take the experience and expertise that we have gained from dealing with large retailers and we apply that downstream to our suppliers."*
>
> **Large Retailer:**
>
> *"Our policy is to empower business partners; show them that this is a great way to conduct business and they will want to do it."*

Midsized Logistics Firm:

"Big strides have been made in recent years in logistics and distribution. Even our drivers all use handheld devices."

Midsized Financial Services Firm:

"We have been using electronic trading for some time, and aim to expand the user base and to keep driving away from paper and batch-based transactions."

Midsized Retailer:

"We have well-established electronic links to our main suppliers. We are now setting up links on our website to encourage customers and smaller partners to join into our electronic community. Small initiatives such as getting someone to agree to receive a monthly newsletter by email or receive invoices via email are the first steps towards bringing them on board."

This last comment is interesting. While some big retailers and others at the top of supply chains can mandate electronic trading as a condition of doing business, the most mature organisations tend to take more of an empathetic and motivational approach to getting partners on board. This is particularly important when we consider how much partners are often constrained by limited resources, time, skills and systems capability (Figure 11).

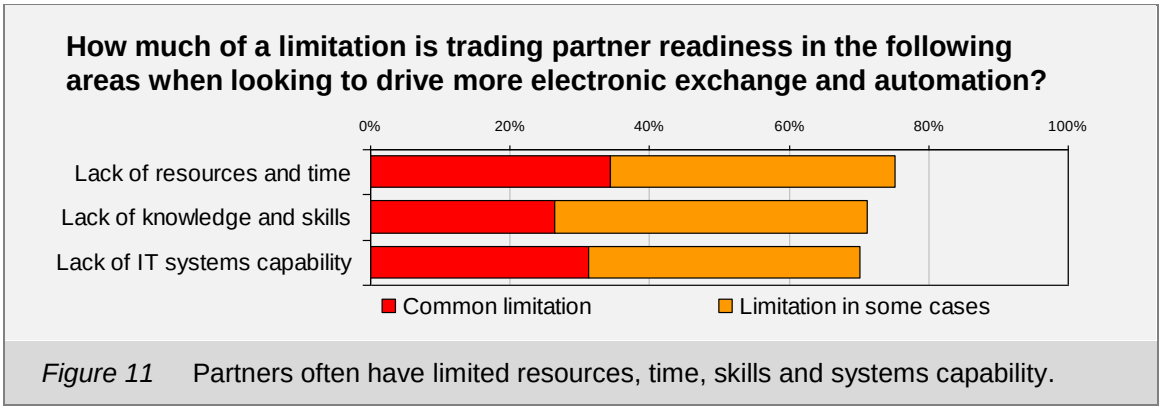


Figure 11 Partners often have limited resources, time, skills and systems capability.

We'll return to this a little later when we look at B2B solutions, but suffice it to say for now that if you want to reap the benefits of electronic integration, particularly when it comes to hooking up smaller suppliers, you will generally get better results if you take an enablement approach, and assume at least some of the responsibility for putting the necessary facilities in place.

However, to pull this off requires the right kind of systems and processes, and this all starts with making sure some of the basics are taken care of from an internal perspective.

Adequate internal foundations

If we think about the fundamentals of effective B2B integration, a lot of it boils down to moving information and documents around in an automated and properly tracked manner. The ultimate sources and/or destinations for electronic documents, transaction records and product/service data are the internal applications you use to run your business. These include CRM, ERP, SCM, and other core business systems, along with their associated databases and information stores.

The upshot is that success with externally facing integration work is to one degree or another going to be dependent on the internal systems and information landscape being in adequate shape. It's no good trying to automate across the whole order, pick, despatch, receipt, invoice and payment cycle, for example, if your internal systems are not open enough to get data into and out of them easily in the required formats.

Similarly, where the transaction cycle is dependent on multiple systems, as is usually the case, the last thing you need is fully automated B2B integration that simply shifts the bottleneck to an alternative set of manual processes necessary to work around internal disjoints. This can easily

happen if your internal systems are not well enough integrated, or if they store information in different ways (e.g. different coding systems) or to varying levels of quality and completeness.

The evidence suggests that if you don't have the necessary foundations in place, you are going to struggle to achieve an acceptable level of B2B performance (Figure 12).

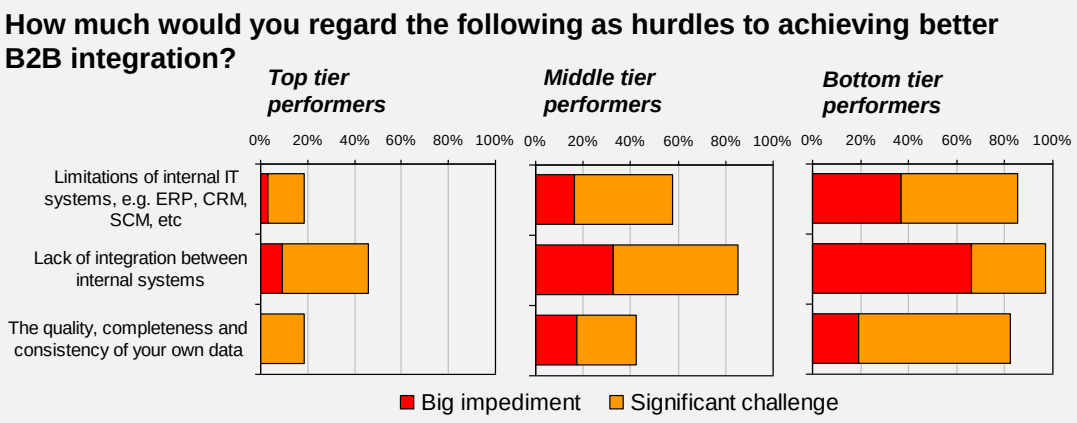


Figure 12 Poor internal systems and information can seriously undermine performance.

In practice, it is clear that internal systems and information related issues may well need to be dealt with before outward-facing integration work can commence in any meaningful way, which is something to bear in mind when scoping B2B improvement initiatives. The challenge, however, given that fixing all of your internal challenges could be a bit like trying to boil the ocean, is figuring out how much internal work needs to be done to support your short to medium term B2B integration goals.

Fortunately, this is something that professional services firms who are engaged in B2B improvement programmes continuously can frequently help with, especially if they have experience working across the internal/external boundary from an integration perspective:

> **Midsized Manufacturer:**
>
> *"Implementation of B2B trading is relatively straightforward, but integration to your in-house processes is not. That is the big role for service vendors."*

The right partner can advise on what needs to done, but as importantly, will often be able to tell what can deferred or left 'as is' without undermining your B2B integration efforts.

Paying attention to such matters up front will help to prevent 'scope creep' and integration projects running over time and over budget, or more seriously, running out of money and stalling altogether, risking a negative impact on supplier relationships as well as failure to deliver expected benefits.

The right enabling solutions

The roots of B2B integration lie in custom developments to enable electronic hook up with key customers or suppliers. While this kind of proprietary point-to-point approach can be valuable in the context of a single relationship, particularly if the traffic between organisations is high volume, such an approach is impractical across the whole of the supplier base. This is an important consideration when you realise that the distribution of transaction value and the spread of transaction cost are different. As one of our respondents put it:

> **Midsized Distributor:**
>
> *"It is quite straightforward to establish B2B links with the main customers and suppliers who are pushing this along. However, they represent a large % of our value, but a small % in terms of the volume of transactions. It is our small customers and suppliers who are the key to success in this area."*

The reality is that the cost per transaction in the 'long tail' of your partner base, i.e. customers and suppliers that might be essential, but you trade with in relatively low volumes, is often substantially higher than for key partners.

This is where modern technology can help – specifically B2B platforms that provide a framework which supports multiple ways of communicating and exchanging data, but according to a consistent set of rules, workflows, information maps, back-end integrations and analysis tools. The overwhelming majority of our top tier performer group have moved in this direction, mostly using in-house managed B2B platforms, but with over half taking advantage of service provider managed platforms to at least one degree or another (Figure 13).

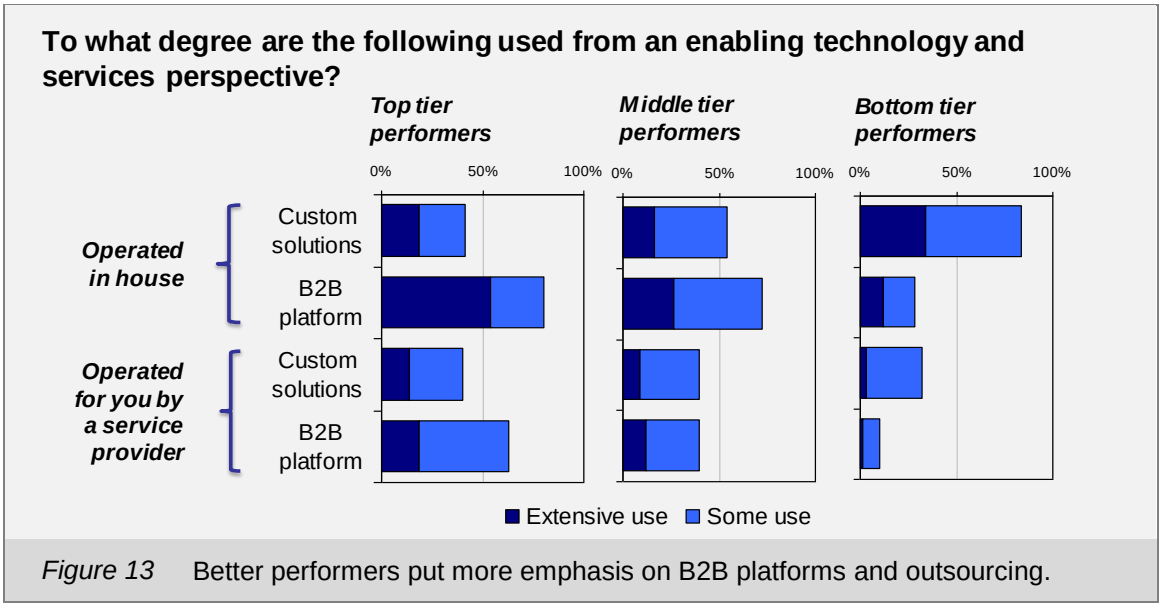


Figure 13 Better performers put more emphasis on B2B platforms and outsourcing.

These patterns make absolute sense. Using B2B platforms rather than custom applications means less reinvention of the wheel. Both internal and external integration points are dealt with in a more consistent and streamlined manner, with differences between systems managed via metadata-enabled mapping of information sets and rules-based workflow, for example.

Apart from making automation much easier to implement, and enabling the scope of integration to be broadened (i.e. a greater percentage of partners to be included), the platform approach also has advantages in terms of responsiveness. Initial on-boarding of trading partners can be dealt with much more rapidly, as can subsequent changes as systems, standards and processes evolve. The minimisation of custom code then has obvious benefits in terms of reduced maintenance overhead and improved reliability.

In addition to systems-level integration capability, B2B platforms often also enable portal based access for less sophisticated trading partners to transact in a more direct manner, reducing the level of transcription required internally, along with all of the associated overhead and risks. Indeed the benefits of portal level integration are often underestimated. Minimising the amount of manual effort involved in on-boarding and transacting with the 'long tail' of smaller partners, for example, can eliminate a significant amount of cost and hassle for both parties.

> **Large Insurance Firm:**
>
> *"We operate a trading platform for our broker community worldwide. We want to expand this and the brokers are enthusiastic about joining it."*
>
> **Midsized Car Dealership:**
>
> *"Electronic trading with the car manufacturers is obligatory and they will supply the software in order for you to do this."*

Turning to the question of in-house versus external systems and resources, the increased emphasis of higher performers on the use of outsourcing confirms the benefits that service providers can often offer in terms of advanced integration technologies, operational best practices, and simply economies of scale from an infrastructure and manpower perspective.

While outsourcing may not be right for every organisation or scenario, the truth is that B2B initiatives can often be quite draining on time and resources, so use of external skills, experience and personnel can mean the difference between a major project being feasible or not. Thereafter, letting a service provider take care of the mechanics of transaction handling can reduce operational overheads on an ongoing basis, freeing up personnel to focus on core business related activities.

This discussion of technology and services brings us onto the topic of selecting the right B2B solution partner (or partners) to work with.

The right solution partners

Respondents in our study collectively have significant experience with a range of different vendor types. The quality of those experiences, however, have varied quite widely, with large outsourcing firms particularly standing out as being more of a challenge to work with (Figure 14).

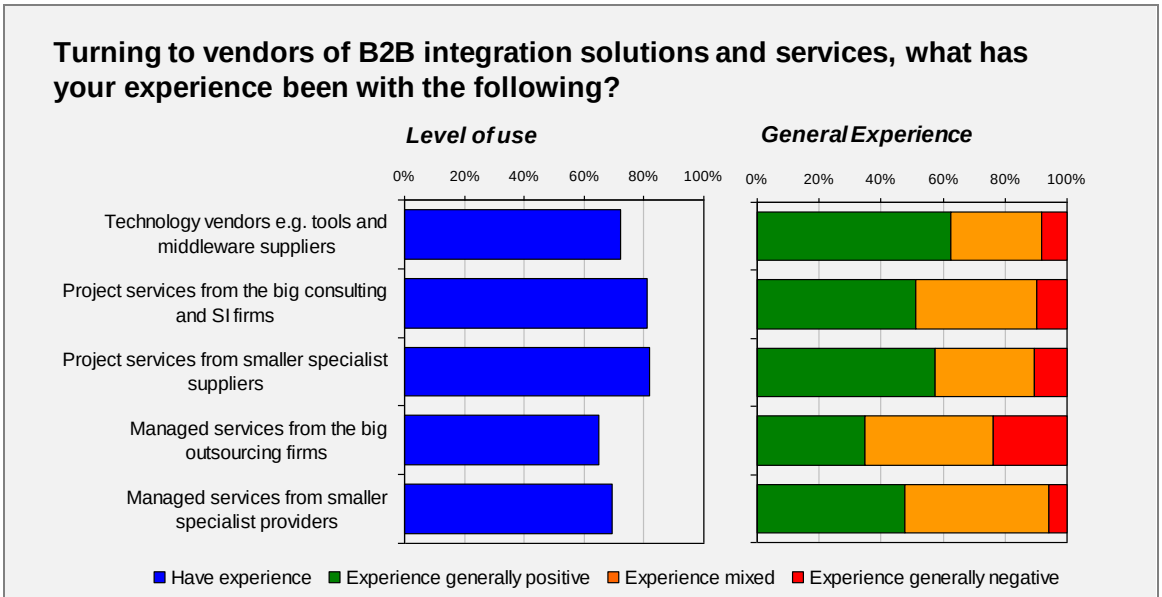


Figure 14 Experiences with B2B solution and service providers are very mixed.

While the picture is just about net positive overall, there are clearly almost as many mixed or poor experiences as there are good ones, highlighting the need to pay serious attention to supplier selection in this space.

We can get a feel for some of the potential issues that can arise from engaging B2B solution providers from respondent comments such as these:

> **Midsized Retailer:**
>
> *"The reason to use an external supplier is to remove the burden on internal resources, but this is not always what happens."*
>
> **Midsized Distributor:**
>
> *"They do the easy bits well and the not-so-easy bits badly."*
>
> **Midsized Financial Services Firm:**
>
> *"They must reduce complexity, cost and risk."*

Large Distributor:

"Contractual arrangements should be more flexible."

Large Retailer:

"Costly fees can be a problem in that you are offered a low-cost software package, but have to pay high on-going fees and charges."

Large Manufacturer:

"Vendors need to be more realistic and honest in terms of the difficulty of B2B integration"

Looking at the more structured feedback provided, however, highlights how frequently different types of issues arise (Figure 15).

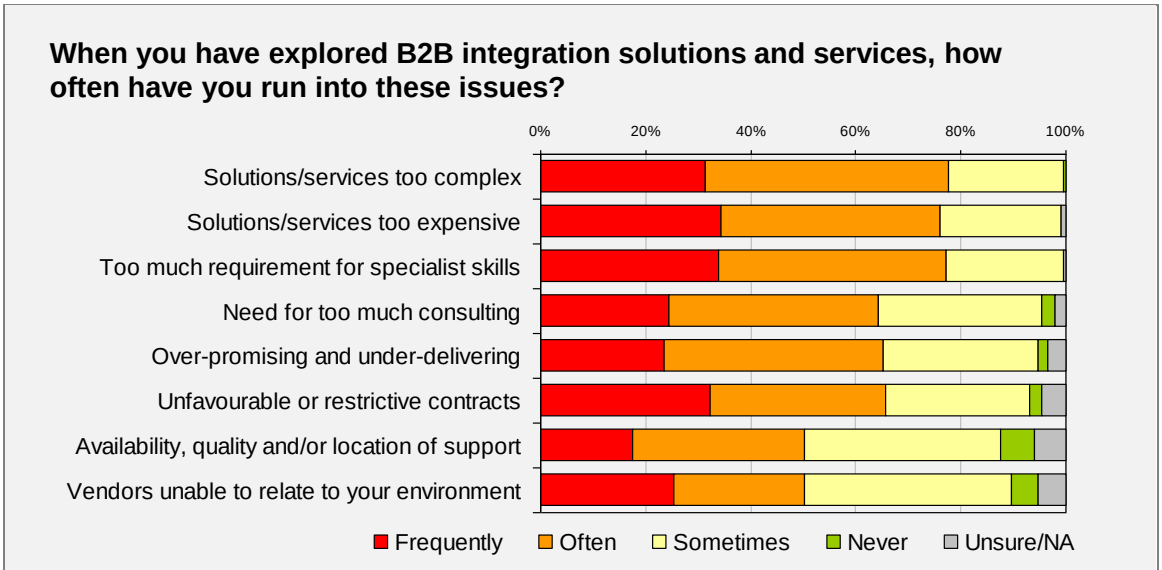


Figure 15 It is important to be aware of the potential solution provider issues.

As with all scenarios in which an external supplier is engaged on a significant initiative, however, it takes two to tango, and poor experiences are not always down to just a failure to deliver on the part of the vendor or service provider. With this in mind, it's important that you as the client ensure the right level of commitment and backing is in place for your B2B integration activities.

The right level of commitment

Improvement activity in some organisations will be stimulated to a degree by 'must do' imperatives that force some kind of action (Figure 16).

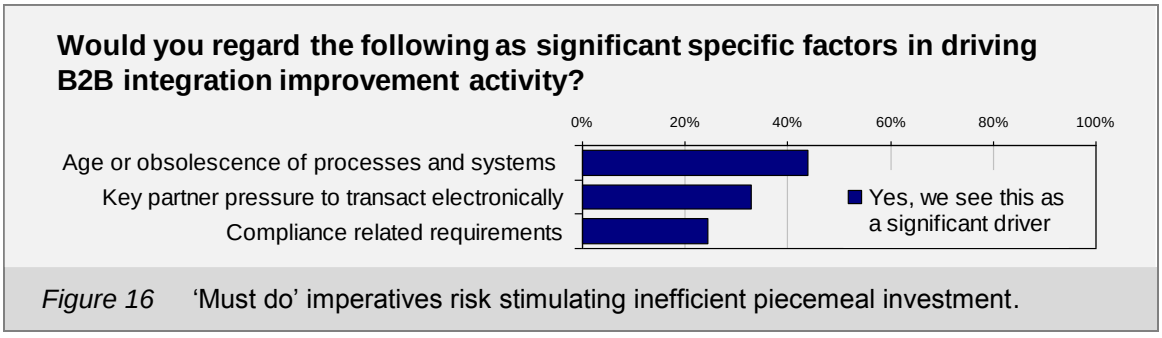


Figure 16 'Must do' imperatives risk stimulating inefficient piecemeal investment.

This is all well and good, but the danger here is of reactive, piecemeal and inefficient investment – the very approach that has often led to some of the systems and information disjoints we were

discussing earlier. When activity is reactive, e.g. when a big customer is leaning on you to hook up electronically, there is then sometimes a tendency to throw a tactical requirement to a B2B vendor and let them sort it out for you.

None of this is conducive to building an efficient, effective and harmonious B2B trading environment, in fact the danger is that you end up aggravating problems and issues.

Those in our top tier performance group minimise these risks in a couple of important ways; they make sure ownership of B2B performance is properly defined, and ensure an adequate level of internal skills and knowledge so that requirements can be evaluated in an informed manner and acted upon appropriately (Figure 17).

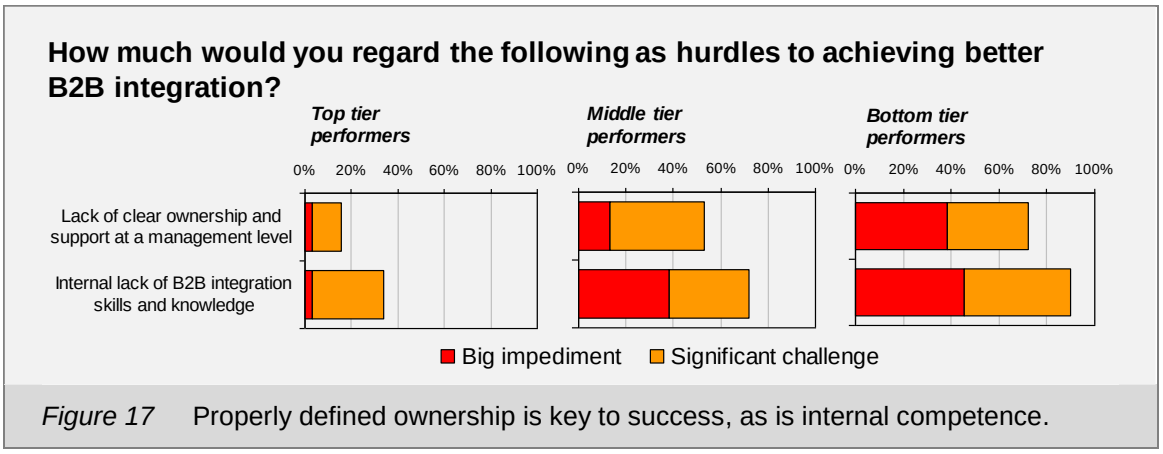


Figure 17 Properly defined ownership is key to success, as is internal competence.

But whether it's skills, resources, investment in technology, or implementation of external services, there is the obvious but critical need to allocate an appropriate level of resource and funding, and this comes through strongly in the data (Figure 18).

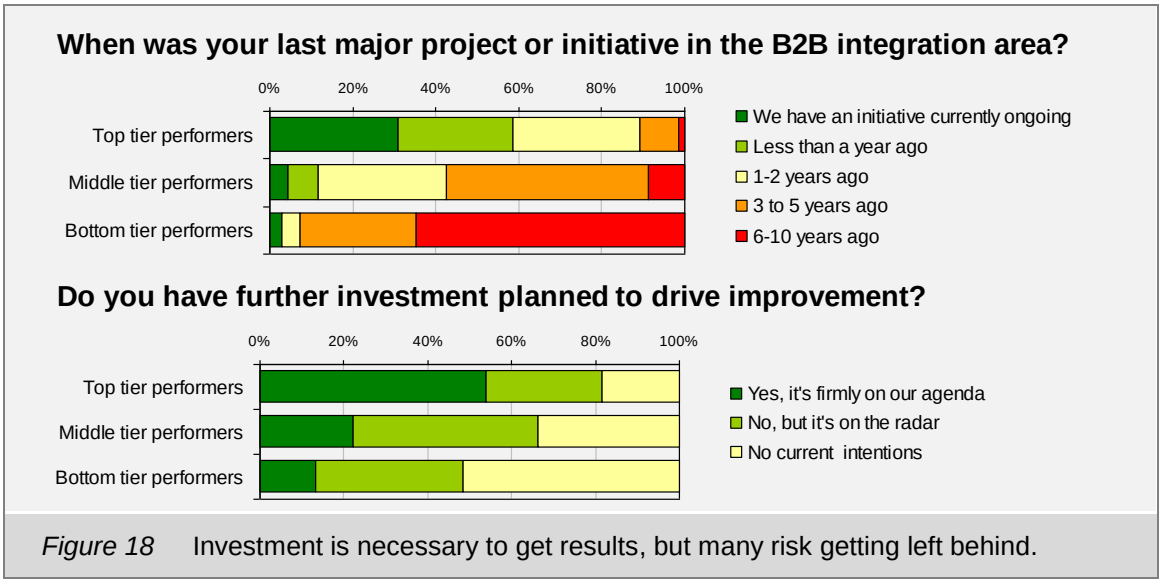


Figure 18 Investment is necessary to get results, but many risk getting left behind.

Organisations that have invested more recently are clearly in a better position, but it is also notable that those with the best level of current performance are more likely to continue investing. What we are seeing here is the same phenomenon we saw earlier manifesting itself in a different way – i.e. the more organisations invest in optimising their B2B integration activities, the more they appreciate the value of doing so.

This brings us full circle back to the importance of having a clear understanding of business value, which is where we started our discussion of B2B optimisation back on page 8.

Discussion

The results of the study, with many organisations only achieving a modest degree of B2B automation, may be a surprise to those who assume that technology and communications advances have solved most of the problems that exist. However, anyone who has been involved at the sharp end of getting supply and demand chains hooked up electronically will probably relate to our findings pretty well. In the real world of trading communities, it's not just about industry standards, middleware, marketplaces and new cloud options.

As we have seen, getting results depends on setting the right goals, laying the right technology foundations, and making sure you have paid proper attention to ownership and commitment issues. The often overlooked area of internal systems and information integration is a critical part of this, as is choosing the right mix of B2B solution providers.

But is it really worth doing anything beyond simply responding to key customers and suppliers when they demand that you put electronic trading in place to continue doing business with them?

Well apart from minimising issues with systems and information disjoints, custom code development and maintenance, and the hassle of doing everything in a reactive manner, investing more proactively and coherently can elevate the role of B2B integration to that of an enabler of growth and business development (Figure 19).

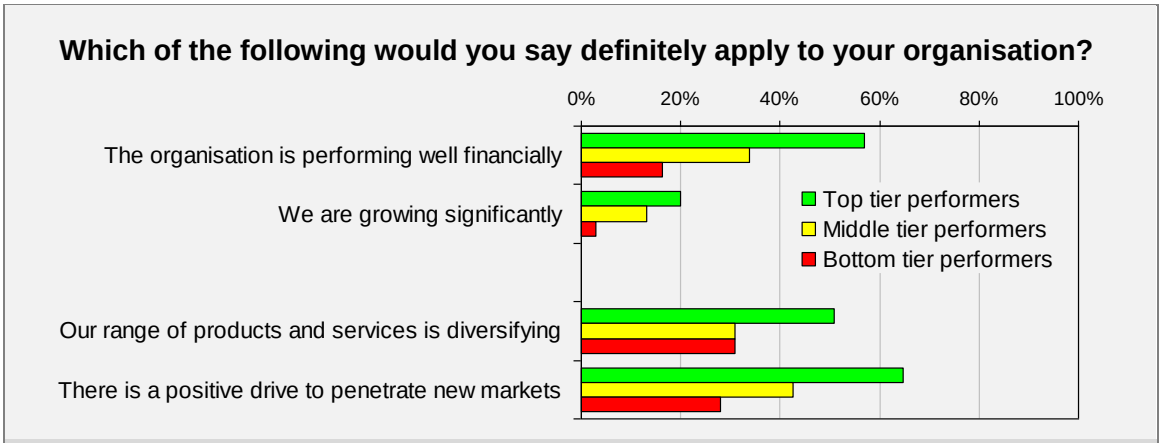


Figure 19 B2B capability is higher in better performing organisations, and where a significant amount of business development activity is taking place

While we need to be careful about assuming cause and effect from data like this, it probably isn't a coincidence that top tier performers are three times more likely to be doing well financially than the bottom tier, and four times as likely to be growing. As we can see, effective B2B is also aligned with business development activity such as diversifying portfolios and driving into new markets.

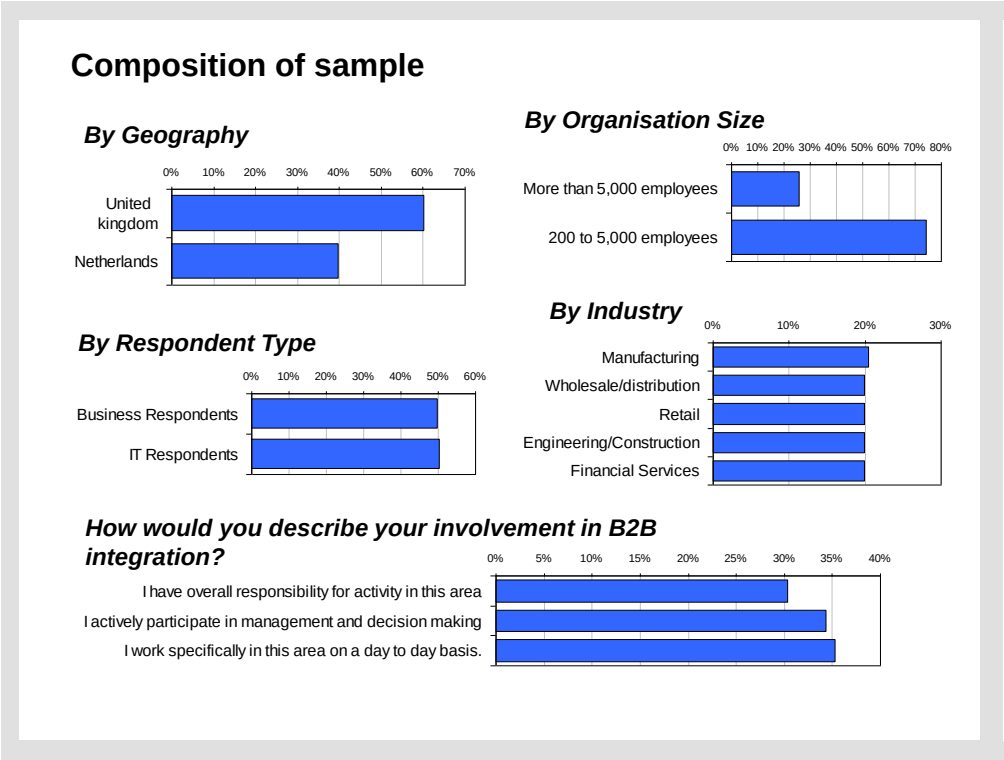
Against this background, we hope the contents of this report prove useful as you plot your own course and plan your next B2B improvement initiative, and it only remains for us to thank the 201 participants in our study who contributed their time so generously and with such good humour. Your input has helped to generate some great insights into what really makes a difference in this highly important area.

Appendix A: Study Overview

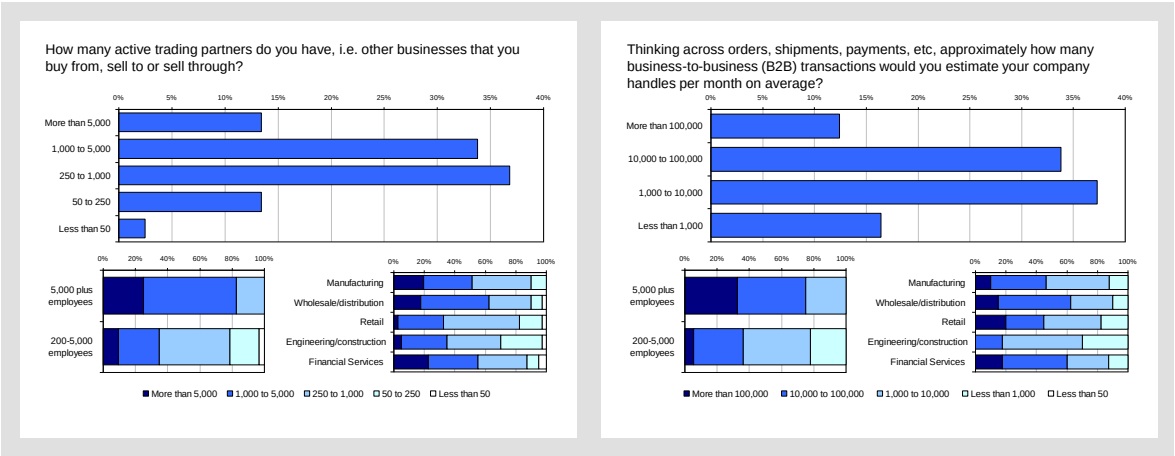
The research study upon which this report is based was completed in August 2012. Responses were gathered from a balanced sample of 201 senior IT and business professionals via telephone interviews. Participants were qualified into the study based on their involvement with B2B trading, regardless of how sophisticated or otherwise their support systems and processes were in this area.

Large and mid-sized organisations from five key industries across the UK and Netherlands were represented, providing a view of B2B trading activity in two key Western European markets. More details of sample distribution, including segmentation based on numbers of trading partners and monthly transaction rate, are provided below.

The sample distribution was as follows:



Key trading metrics associated with our sample:



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The company's solution portfolio includes business-to-business and enterprise application integration project outsourcing, cloud-based master data management (MDM), data harmonization, data security, a service oriented architecture-based B2B integration network, and premiere managed services.

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