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Information in Action

Seizing the opportunity to improve front line operations

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Information is power, right?

Nowadays, organisations cannot help accumulating a lot of information from simply going about their daily activities. Whether it's correspondence or records of transactions with customers and suppliers, data generated internally as business processes are executed, or external feeds and other information from the outside world; it all builds up.

Of course, information accumulated needs to be appropriately managed and protected to ensure business continuity, regulatory compliance, security, privacy, and so on, and much IT industry activity is concerned with such chores. On the positive side, there exists the potential to generate significant business value from the effective exploitation of so called 'information assets'.

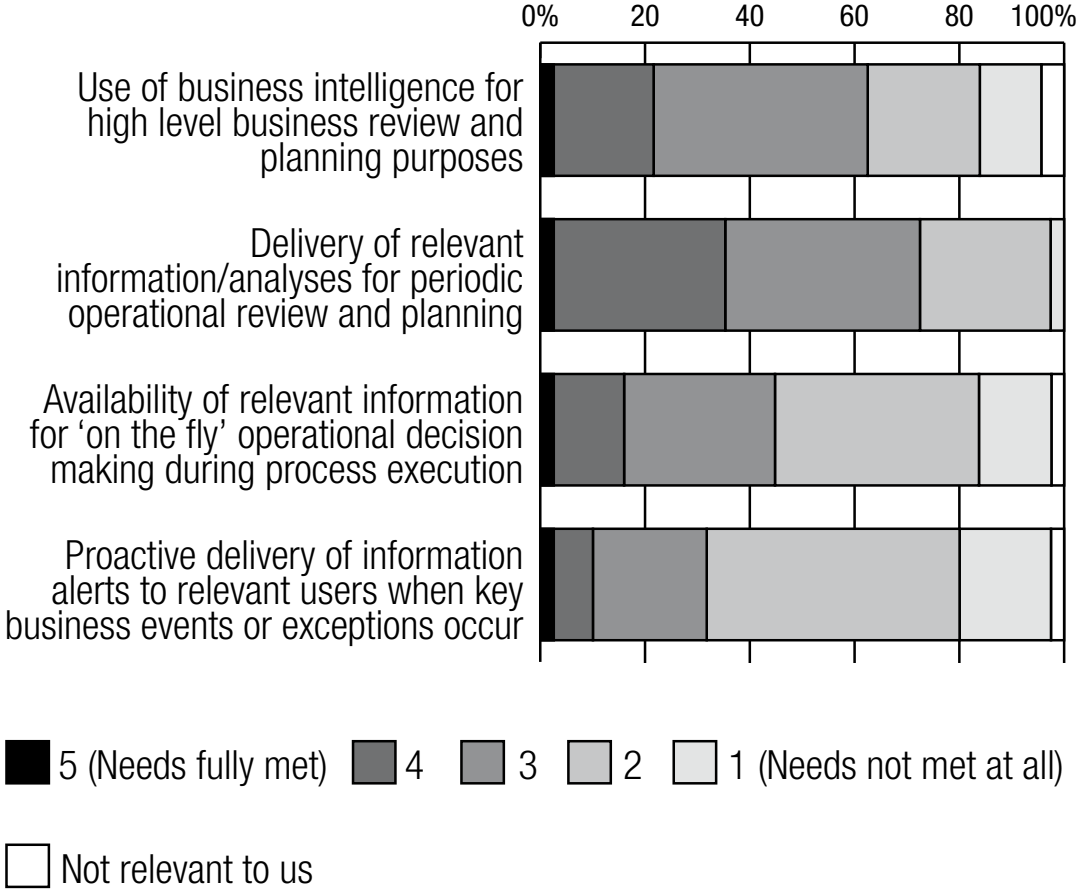
This can be achieved in various ways. Starting with the macro view, top level performance information and outside intelligence can be used for strategic planning and review.

Drop down a level, and good information can also help to steer activity on more of a weekly or monthly basis through periodic planning and review within the operational layer of the business. This has been the traditional centre of gravity for business intelligence (BI) initiatives.

Drop down one level again, however, and we get to the ongoing 'front line' exploitation of information on a transaction-by-transaction or event-by-event basis as business processes are executing.

While all of these levels are important, the degree to which information is used effectively at each varies considerably – and it is the effectiveness of information delivery to support more real-time decision-making that suffers the most.

How well are your needs actually being met in the following areas at the moment?



This chart was derived from a quick temperature check poll conducted as part of a Freeform Dynamics online interactive workshop in December 2009, but most will not need to look at the research to recognise the pattern we see here.

While there is significant room for improvement across the board in meeting information-related business needs, organisations tend to fare best in relation to periodic review and planning activity, which basically boils down to serving the needs of

middle management. Building on this foundation of capability, many are getting better at supporting higher level strategic activity, which is consistent with the frequently observed focus among both IT vendors and their customers on Enterprise Performance Management (EPM), including forward looking predictive analysis as well as tracking the past and the present.

The real weakness, however, is supporting anything that is dependent on the immediacy of information access, whether it's supporting 'on the fly' decision-making during process execution, or rapid alerting and response to business exceptions and other events. This is significant because it means that in most organisations, decisions on the front line are often being taken on the basis of assumption or a view of the business that may well be out-of-date.

Worse still, some front line situations requiring a decision to be made and action to be taken are simply overlooked, at least until they are picked up at a later date through the traditional periodic review process, by which time it is often too late to act.

Most would accept that more proactive information delivery is desirable, but the report card is not looking good. So, why aren't organisations generally delivering against this need?

Historical barriers and constraints

While many large organisations have implemented some kind of effective front line decision support in selected areas, very few have applied the principle on a broad basis. The following factors have contributed to this:

Inertia and lack of imperative

Business units and users have always lived with limitations when it comes to information access, and usually just accept these as the way things are, not just in their organisation, but across the industry. Few then waste their time worrying about limitations they regard to be normal and equally applicable to their competitors, so it doesn't occur to them to prioritise improvements in this area.

Organisational fragmentation

Businesses, especially large ones, can be very complex from an organisational perspective. Furthermore, different divisions and departments tend to focus on their own interests, defining their priorities and views of the world in different ways, and are often very protective of the information that 'belongs' to them. Add to this the fragmentation of responsibilities and budgets, and the inevitable political dimension, and over-arching initiatives that are dependent on cooperation and sharing can be very difficult to pull off.

IT systems fragmentation

Organisational fragmentation over time has typically resulted in systems fragmentation, with departments and divisions often implementing different solutions to do the same or similar things. Indeed, it is not uncommon to find disjoints and redundancy within even a single department. Effective front line decision-making is often dependent on information drawn from these various sources, but the lack of consistency, plus the varying degrees of incompatibility, results in a need for expensive integration work. This all too frequently makes improvement initiatives cost prohibitive.

Perceived technology limitations

One of the reasons for the excessive cost we have just mentioned has historically been down to the limitations of IT tools and methods, which over the years have evolved alongside the traditional silo approach to defining and implementing business support systems. Doing anything that cuts across the silos, dealing with the aforementioned disjoints, has generally meant a lot of manual effort.

Fragmentation across disciplines

IT departments are often fragmented in the way they organise themselves and align their resources and expertise. Operations staff don't have much to do with developers, the guys responsible for desktops don't talk to the server guys, and, particularly relevant to the conversation we are having here, those concerned with information management work separately from those focused on business process automation and management.

For all these reasons and more, the truth is that effective front line decision-making is the exception rather than the norm in most organisations today. Our concern in the remainder of this guide is how to reverse this.

Defining the vision

The vision for effective operational decision-making on the front line is actually very simple:

Vision

The comprehensive support of timely operational decision-making across the business as a whole, achieved through proactive alerting of front line personnel to significant events and exceptions, and the provision of relevant, complete, up-to-date and actionable information to the front line at the appropriate level and in the appropriate form for each given business process context.

The reference to 'across the business as a whole' is important. As we said earlier, this is not just about dealing with those situations in which front line decision-making is either critical or easy (e.g. because it is enabled by a standard application package); the aim is to enhance performance on a much broader basis.

It is also worth highlighting the notion of 'relevant, complete, up-to-date and actionable information', which basically boils down to making sure either an individual or an automated process is offered or fed just the right input – not too much or too little, nor just a partial view, and not too old.

Let's consider a few simple examples and look at some key principles, to illustrate what we are talking about.

Front line decisions in action

Here is an example of how front line decision-making differs from the traditional periodic review approach:

Example: Customer service performance issue

The traditional periodic review approach:

The monthly financial report indicated a drop in financial performance. Upon investigation, this was found to be due to a fall off in contract renewal rates over the course of the previous month. Further digging revealed that many customers had been complaining about poor service, which in turn was caused by resourcing problems in the call centre which had gone on for a week or more. The evidence suggested that customers who called in and experienced issues towards the end of their contract had often churned to a competitor. Steps were taken to address the problem, but not before significant loss of business.

With properly enabled front line decision-making in place:

The call centre manager was automatically alerted to a drop off in response times to below the acceptable threshold. She looked at the spread of calls across teams over the previous hour and immediately spotted the cause. A new product launch had been brought forward by a big agent, which had led to an increase in new customer registration calls a week before it was expected. Experienced agents were being tied up with form filling while customers with real issues were kept waiting. She quickly arranged for temporary staff to be brought in to cover the registration traffic. Within two hours, the experienced agents were freed up and back helping established customers.

The situation we describe here is deliberately hypothetical so we can illustrate the difference between how the two approaches

play out in relation to the same incident. While we would hope that not many call centres today are run as blindly as implied in the first scenario, the truth is that some are. More to the point, the example illustrates the old notion of 'closing the stable door after the horse has bolted', which highlights a common weakness of the periodic review cycle approach to monitoring and managing business activity. Too often, key developments and events within the business only become apparent when their impact turns up in some monthly report, by which time the damage is done or the opportunity has been missed.

Some key principles

The second scenario that was outlined, where front line decision support is properly in place, is clearly more desirable than the first, and illustrates some important attributes of effective operational decision-making. Firstly, there is the principle of proactive alerting in a timely manner when potentially important exception situations or events occur. There is then the use of relevant intelligence, both contextual (e.g. campaign information in our example) and up-to-date operational (e.g. the nature and spread of call activity over the previous hour) to make an immediate judgement on what needs to be done. Implicit in this, of course, is the existence of mechanisms for those on the front line to access this intelligence and act upon events easily and conveniently.

Considering the positives

While managing potential threats or issues is important, front line decision-making is also about exploiting opportunities as

they arise. Sticking with the call centre theme, for example, the announcement of a competitor going out of business could lead to an unexpected increase in call traffic as customers rush to the phone to find an alternative supplier. A similar resourcing problem might arise, but the motivation for fixing it quickly is now a positive one, i.e. to capitalise on an unexpected opportunity to acquire more business and market share.

Pushing the idea further

The scenarios we have been discussing so far illustrate situations in which a human being is using their knowledge and experience to assess the information available and make the appropriate decision. While you can probably think of many similar scenarios across your own business, there are almost certainly others in which it may not be possible for a human being to make such a value judgement.

Building on the principles we have been discussing, some of the real big wins in relation to front line decision-making come when the reliance on specific skills and experience of personnel is minimised. If there was a need for everyone involved to be an analyst, or even a competent manager, then there would be a limit to how far we could take things.

The trick to pushing the boundaries is to think less in terms of providing information passively, and relying on the individual to work out and assess possible courses of action, and more about embedding an element of analysis into the IT systems supporting the relevant process. That way, front line workers can be given a ‘steer’, which might be in the form of a

couple of alternative actions with some guidance on how to choose between them, or even a list of possibilities with the recommended one at the top, and others presented in order of preference should the first option not be possible.

With this kind of 'prescriptive' approach, even relatively unskilled personnel can be empowered to make decisions on the front line, avoiding the overhead of escalations and referrals, keeping activity flowing through the process, and both lowering costs and improving responsiveness. Here are some examples to illustrate the principle in action.

Examples of 'prescriptive' front line decision-making

Field service optimisation:

A maintenance engineer inspects a faulty piece of equipment, and reports initial observations via a mobile device. He then receives instructions based on immediate diagnostics together with predictions inferred from service history for this and similar equipment. Not only is the immediate problem fixed, but additional work is conducted to prevent likely future failure, avoiding the cost of a subsequent call-out.

Smarter customer management:

A customer enquires about a new mobile phone in a retail outlet, and when their name is entered into the system, it flags that they have mentioned the company multiple times on social media sites in a positive light. Based on this, the assistant is instructed to offer a discount and a more in-depth demonstration of the latest handsets and services, encouraging further online recommendation and additional sales within the customer's circle of influence.

And we can even go further than this in some situations, removing the human element altogether. Consider:

Examples of 'automated' front line decision-making

Customer self service:

The customer describes the symptoms of their problem via an online website and, based on rules derived from accumulated experience, receives instructions accordingly. Depending on the situation, they are offered remedial advice or given automatic authorisation to arrange an engineer call-out or product replacement. Costs are saved and the customer is happier.

Admin overhead avoidance:

A clerical worker enters data from a paper form in relation to a commercial transaction, and this doesn't match with other information held in the database. Based on rules defined from history and validated against compliance requirements, the mismatch is accepted and adjustments made automatically behind the scenes. Significant administrative overhead and cost to investigate and fix a trivial paperwork error is avoided.

So what's new?

Some reading this may be thinking they have seen it all before, and that there is nothing new being described here. Indeed they might be right in some areas of the business, particularly where packaged applications incorporating 'embedded analytics' are in place. There are also those bespoke systems that were designed with the notion of front line decision support embedded in them from the outset.

The question is how such capabilities can become the norm rather than the exception. To answer this, we need to consider how both business and technology contexts have evolved.

So what has changed?

A number of developments over the past few years are coming together to bring the notion of optimised front line decision-making into focus and make it more viable.

The evolving business environment

At a general level, economic pressures as a result of the recent downturn have led many organisations to look beyond the low hanging fruit when cutting costs, and to scrutinise many more areas of their business in the search for efficiency gains. Various aspects of front line operations have naturally come into the spotlight as a result of this.

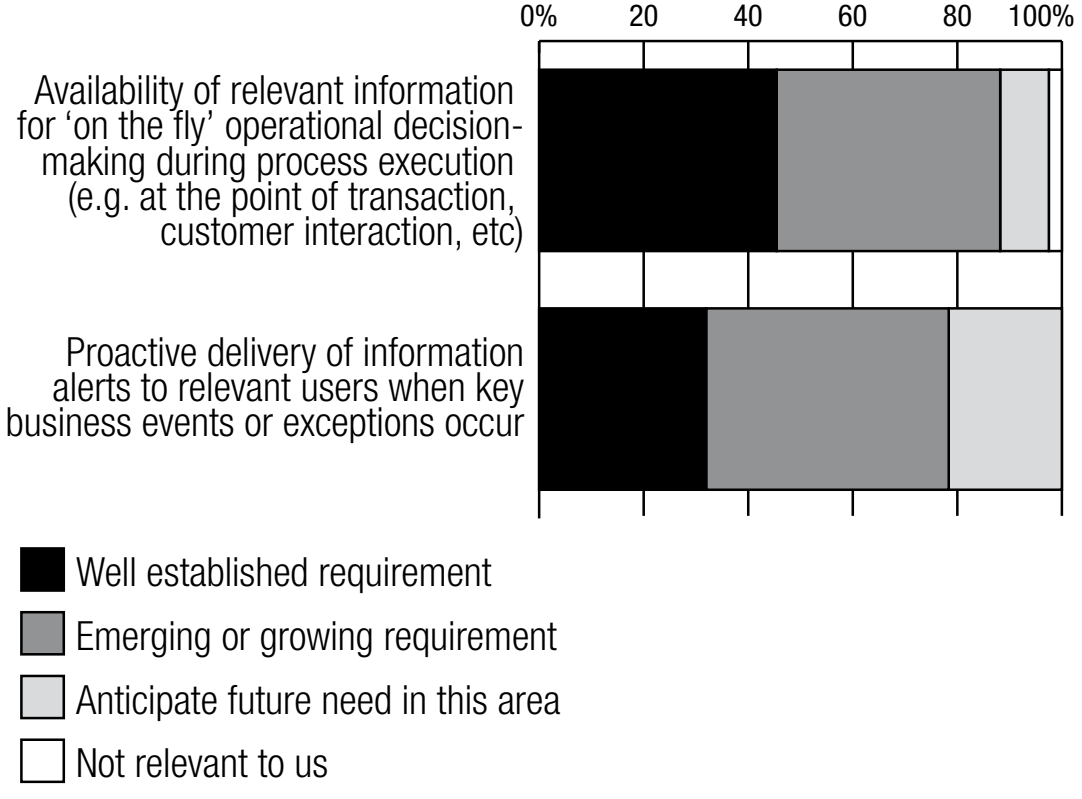
But the pressures on front line operations, which are typically where the business meets the outside world, have been steadily increasing anyway. In almost every market place the advances in communications (including the Web) together with the proliferation of intelligent and increasingly better connected devices that have become part of our daily lives, have increased both the pace and complexity of business activity.

Such developments have also had an impact on customer expectations. Whether in a business-to-business or business-to-consumer context, those with whom we interact expect us to be much more informed and responsive in our dealings with

them. And to make things even more challenging, there is simply much more information flying around and being stored in various places that we need to make sense of in an operational context.

All of this means that the traditional periodic approach to formulating and assessing business intelligence then adjusting our activities on, for example, a weekly or monthly basis, is no longer good enough. Accordingly, the need for better support on the front line is increasingly acknowledged:

To what degree is there a requirement for the following in your organisation?



This data is from the same temperature check poll cited earlier, and is consistent with anecdotal discussions with IT and business leaders within large organisations, as well as the experiences of larger IT vendors and consulting firms which are increasingly being called upon to help in this area.

All of this points to the 'inertia factor' becoming less of an issue and, indeed, the growing realisation among enterprises of a market-driven imperative to deal with some tangible threats and/or opportunities, depending on whether you deal with developments reactively or proactively.

Holistic thinking applied more broadly

Another big change that is relevant to this discussion is a general trend towards the application of holistic thinking and management more broadly across the business. This actually started during the 90s as organisations looked across operational silos to drive transactional efficiency; a wave of activity that was characterised by the rapid growth of the Enterprise Resource Planning (ERP) adoption.

This was followed by a subsequent wave of activity around data warehousing and business intelligence as organisations started to pull information together from disparate sources and pool it as a foundation for the kind of periodic review and planning-based decision support we have already discussed.

Then more recently, requirements around corporate governance and regulatory compliance have mandated the implementation of mechanisms to provide more comprehensive visibility across many parts of the business.

The impact of this trend has been a progressive breaking down of traditional organisational boundaries, or at least the acceptance of the need for certain initiatives that cut across them to be supported by the relevant business owners and stakeholders. This, of course, is an important prerequisite for dealing with

the front line decision support challenge beyond the reactive implementation of point solutions.

Technology advances

One of the challenges with information technology is keeping up with the pace of developments within the IT industry. Turn your back for a couple of years and you could easily miss the emergence of solutions and techniques that make the previously impossible, possible. Sometimes this is down to genuinely new capability offered by software, hardware and/or communications, but often it's the ongoing refinement of existing ideas that make advanced capability more accessible to the mainstream and lower the barriers to adoption, both practically and economically.

Put simply, we can do things today within the realms of the typical budget and resource constraints of a mainstream business environment that would have been cost prohibitive even two or three years ago. Particularly relevant to our discussion here are advances in the areas of Information Management (IM), Business Process Management (BPM), and Service Oriented Architecture (SOA), all of which have something to offer when it comes to the implementation of effective front line decision support.

We will consider some of the specifics in these areas in a moment, but mentioning them here does highlight one final challenge that often needs to be addressed.

Joining the dots of IT

While we would never suggest that all of the other traditional barriers to the implementation of effective operational decision-making have disappeared, things are moving in the right direction with most of them as we have discussed. Given that IT is critical to moving forward, however, it is notable that disjoints between disciplines within the technology domain itself still persist. In particular, the degree of cooperation and integration between those involved with IM, BPM and SOA, if such disciplines have been embraced, is often quite limited. This can be an impediment to progress; and if any of these is not in place, at least in spirit, then that too can be a problem.

To understand why this is, we need to consider the importance of taking an inclusive architectural approach to dealing with the front line decision support challenge.

Acting on the opportunity

One of the options for dealing with the emerging imperative is to continue with more of the same. By this we mean picking off those operational scenarios and situations which represent the greatest potential payback from investment in front line decision-making capability. Taking into account the aforementioned technology advances, the chances are that more projects of this kind could be tackled one by one as the capabilities offered by IT vendors allow things to be done more cost effectively.

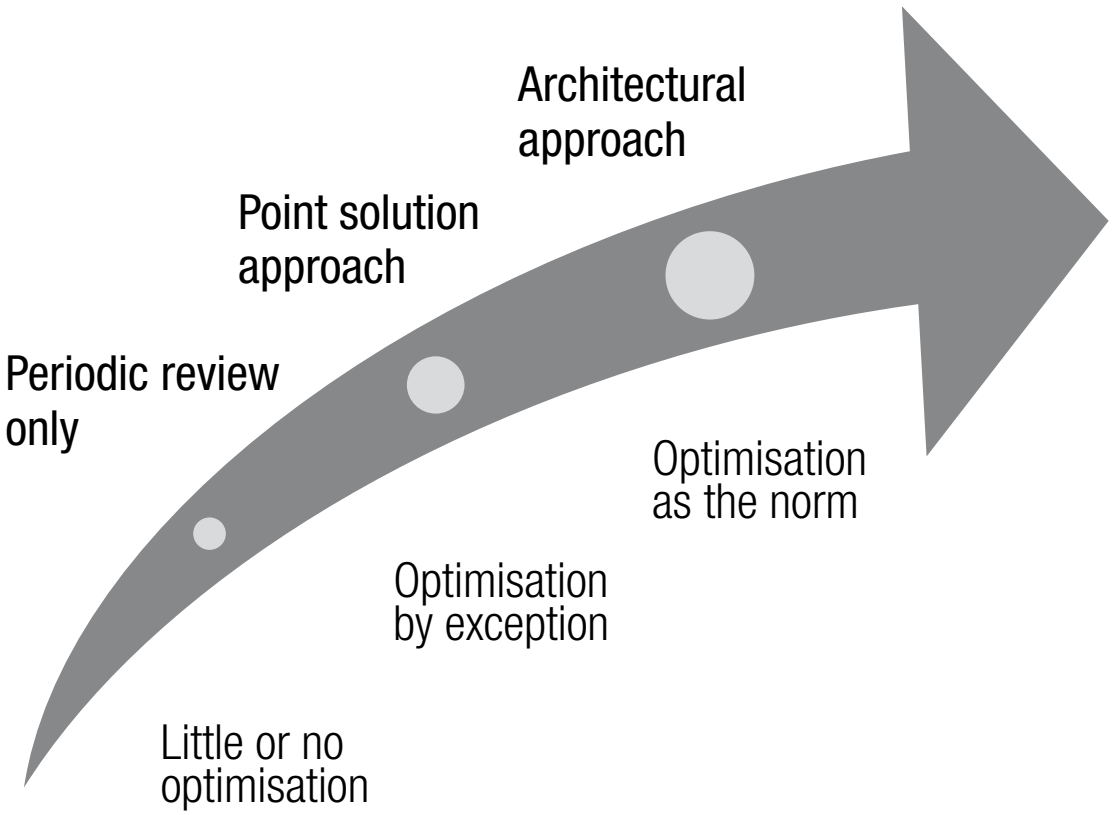
This approach, however, can only lead to modest incremental gains, as all we are doing is making the traditional piecemeal

approach a little more efficient. Indeed, you could even take the view that the likely outcome is the acceleration of fragmentation, which in turn could have a net negative effect as point solution benefits are mitigated by the problems associated with even more disjointed systems.

The importance of architecture

The trick is to take our notion of holistic thinking and apply it to the IT part of the equation, which means adopting more of an architectural approach in order to create an environment in which optimisation is the norm rather than the exception.

The journey to effective front line decision making



Architecture-driven transformation

Making the switch from a piecemeal to an architectural approach can totally transform both attitudes and practices. The combination of visibility and cognizance that comes about when relevant information is introduced at just the right time into business processes can lead to step changes in overall business efficiency, effectiveness and responsiveness when enabled on a broad basis. Expectations shift and the old style of front line decision-making based on guesswork and assumption is tolerated less and less as time goes on.

But this kind of transformation isn't brought about by some kind of magic or a single technology or solution that can be bought and deployed. The architectural approach is about applying the right mix of technology in the right way to achieve the following:

Consistent view of information assets

With information typically spread, and often duplicated, across multiple stores, there is a need to build a consistent view of what is in place. This can be achieved by mapping individual elements within individual databases onto an overarching set of definitions and structures. As an example, we might define a 'logical' customer record that in reality maps onto information held in multiple systems and/or physical locations, taking account of equivalences (e.g. 'Customer Number' in one database might be equivalent to 'Client ID' in another), and setting some basic rules for how to resolve differences when they occur (e.g. which address to use when records conflict). The term generally used to describe this kind of mapping is 'Master Data Management' (MDM), and while it is beyond the scope of this

guide to go into detail, suffice it to say that forming some kind of consistent overarching view of information that exists is an important part of implementing an architecture that supports front line decision-making in a broad and scalable manner.

Consistent approach to information harvesting

While techniques such as MDM provide an understanding of the data you have and how it relates to the business, they don't necessarily deal with the physical aspects of how that data is accessed. This is where various software tools and middleware come into play that bridge the gap between the maps and rules defined, and the range of access mechanisms required to dip into relevant information stores on demand as the business is executing. These take into account the nature of physical stores (e.g. DB2, Oracle or SQL Server relational databases, traditional mainframe file systems, content management systems, etc) and the way the data is structured. This is one of the areas in which some great advances have been made within the IT industry, and a lot of capability is available nowadays. The potential downside of this is that the IM technology market in terms of the depth and breadth of solutions on offer can be a bit daunting and difficult to navigate. Fortunately, however, some of the larger IT vendors provide coherent Information Management suites so that you don't have to work too hard to figure out what is required and how it fits together.

Consistent mechanisms for information serving

So far, we have very much been talking about the 'back end' of the equation, i.e. what is going on behind the scenes to pull information together into a form in which it can be used. The next

consideration is getting it to where it needs to be, at the right time, so it is available to support decisions. This is largely about how information is 'served up' to front line systems, whether these are bespoke or packaged applications, portal-based solutions, or even functionality embedded within desktop office tools. An important consideration here is reuse, the idea being to allow the same information to be surfaced conveniently in all of the different operational contexts to which it is relevant. This is an important key to implementing front line decision-making more broadly, as work done on one project to prepare and present information can be reused multiple times down the line, lowering both the cost and complexity of subsequent projects. A key discipline here is the aforementioned SOA, which essentially allows information access 'building blocks' to be created and reused wherever they are needed, based on industry standard integration mechanisms.

Coordinated approach to information integration

Of course the maps, access mechanisms and building blocks only represent the foundation for creating effective front line decision support systems. We need further mechanisms in place to control the delivery of the right information to the right place at the right time. In technology terms, the capability required here generally exists within the BPM domain.

It is here that we find modelling tools to help us define the flow of tasks and activities through business processes, and identify the points at which information-led decisions are made. Another aspect of BPM technology is yet more middleware, but this time it is responsible for controlling the flow of activity as business processes are executing. Such middleware is driven by process flows and business rules that fall out of the modelling

exercise. The job being done here is variously referred to as 'workflow management', 'process orchestration', 'business choreography' and a few other 'buzz' phrases, but it's essentially about managing the IT systems side of process execution.

Standing back a little, here is how it all fits together:

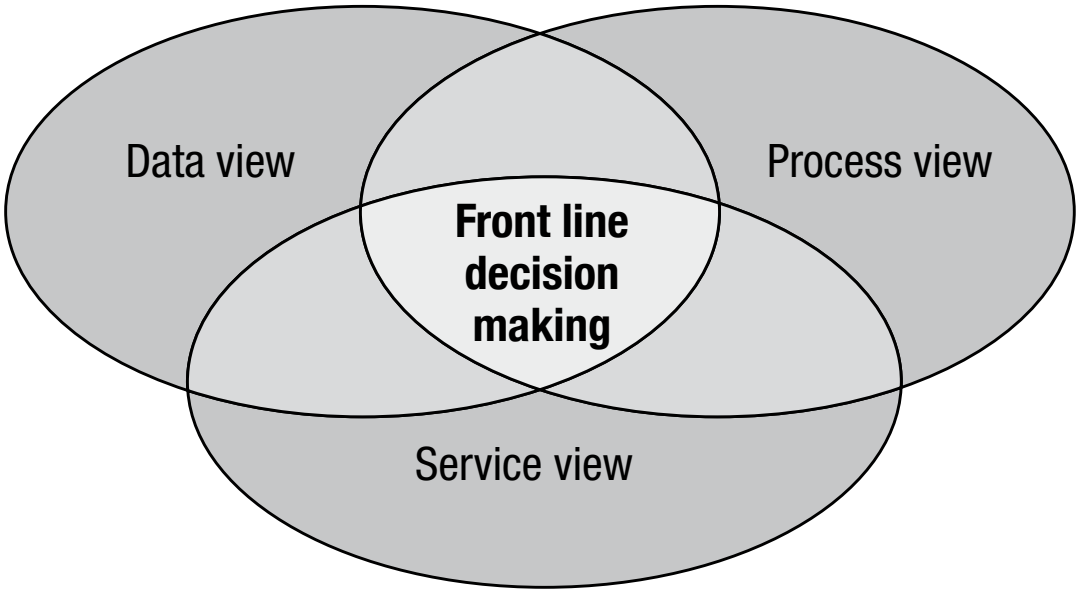
Architectural specifics

Information Management (IM)

Master data management
Storage and access
Business intelligence
Delivery framework

Business Process Management (BPM)

Process modelling
Business rules
Workflow management
Orchestration



Service Oriented Architecture (SOA)

Business alignment
Service modelling
Re-use framework

When looking at this picture, it should now be clear why we have highlighted the importance of taking a multidisciplinary approach to implementing a front line decision-making architecture. IM is about making sense of the information necessary to support decisions, and ensuring that it is available in an appropriate form when required. BPM is about defining the business process context and making sure the right information turns up in the right place at the right time. SOA is then about making sure that all of this is done in a consistent and reusable manner, enabling a 'snowball effect' as each initiative builds on the work that has gone before.

For those who have treated these disciplines as separate and discrete, a prerequisite for success will be breaking down some of the boundaries between teams, and getting everyone working together in a coordinated manner. If any of the three disciplines highlighted here are not formally recognised in your organisation, that is not necessarily a major problem, provided you have a structured way of analysing, designing and implementing solutions that properly acknowledge the process view and service view, as well as the data view.

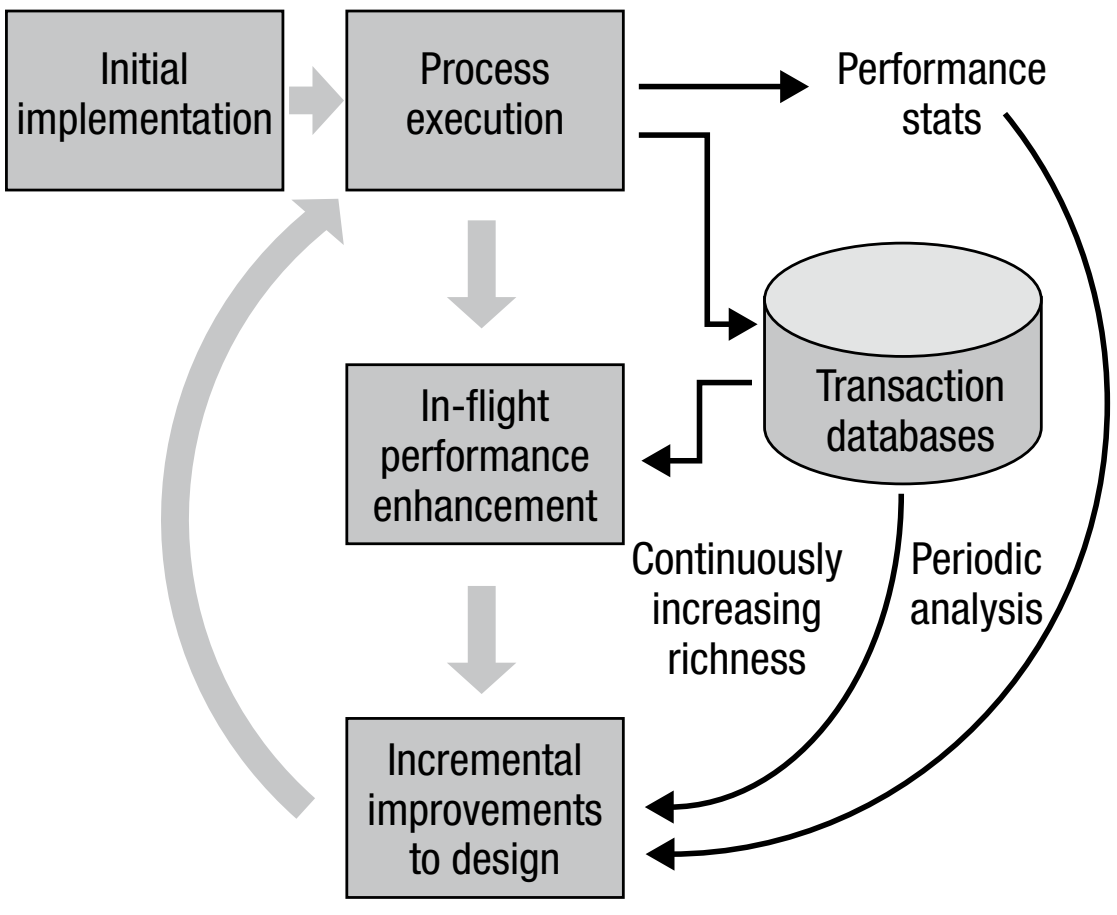
The important principle is that if improvement programmes are attempted purely as information management exercises, even though this is where much of the work will typically be required, the full benefits of the holistic architectural approach will not be realised, and improvements will be modestly incremental rather than transformational.

Continuous improvement

As discussed earlier, the business environment has become extremely dynamic. Furthermore, there is the general principle that the more information we accumulate, the more potential insights we can generate to tune the business by looking for trends and correlations that help us to understand cause-and-effect.

With this in mind, it makes sense to exploit the environment we have talked about creating by putting into place a continuous improvement cycle:

Continuous improvement cycle



On this chart, there are essentially two mechanisms at work.

The first is what we have called 'in-flight performance enhancement'. As processes execute, they add to the richness of information in transaction databases, increasing the accuracy of output from business rules if the right kind of middleware is in place. While we are reluctant to call this 'learning', there are some similarities in that the more a system 'knows', the more likely it is to provide effective steers and predictions. If rules are constructed using appropriate software, a degree of continuous tuning can be achieved with little or no human intervention.

The second mechanism is more akin to the periodic review approach to business intelligence, the difference being that the focus is very much on operational process-level metrics, such as cycle times, error rates, and so on. The idea here is to revisit previously optimised processes from time to time in order to check whether environmental or other changes have since undermined performance or created opportunities for further improvement.

As we can see, from both the breadth and multidimensional nature of implementation, and the potential to completely transform operational execution and drive continuous improvement thereafter, front line decision support initiatives are typically strategic in nature. It, therefore, makes sense to take as many steps as possible to maximise their chances of success. With this in mind, let's finish off by taking a look at the factors which are likely to make the most difference when scoping and driving activity in this area.

Keys to success

In addition to the fundamental prerequisite of adopting the right architectural approach and having representation from the key disciplines within the IT domain, there are a number of other practicalities that are important for success.

Management considerations

Take a holistic, long-term view of benefits

One way of thinking of the significance of an architectural approach to front line decision-making is to liken it to the impact of joined-up transaction processing a decade or more ago. After living with ERP for a while, for example, it was simply accepted that the completion of any transaction or task at any step in a business process would automatically move a job on without the user having to think about it, regardless of any organisational boundary that needed to be crossed along the way. The opportunity is to drive a similar fundamental shift in both capability and expectations, creating an environment in which it is taken for granted that any information relevant to a decision will be available no matter what the context. This may seem a long way off from where your organisation is today, in which it is likely that expectations are the opposite way around. So, it is important to look far enough ahead to the fourth, fifth, sixth, etc process that is enabled by an improved architectural approach in order to really appreciate the benefits stemming from consistency and reuse of information on the front line.

Secure the right sponsorship; involve the right people

In line with the previous point there is a fundamental requirement for staying power and commitment over the longer term, which will only happen with the right kind of executive sponsorship. It is therefore important for the vision we have outlined to be understood and accepted at senior management level, and for the long-term play to be bought into. Executive sponsorship is also important to ensure the necessary participation of stakeholders and key individuals from across the organisation, not just from different disciplines within the IT domain, but also from relevant roles in different divisions, departments and workgroups within the business. Without this, initiatives tend to degenerate back to the piecemeal approach as sight of the multidimensional big picture is lost. In terms of practicality, organisations that have already achieved success with driving their front line decision-making agenda often say it is better to cycle individuals through a virtual cross-functional steering group rather than setting up a permanent committee or team. The advantage of this is that it keeps everything lively and tuned in to the current dynamics of the business. Individuals that are taken out of their day jobs for too long run the risk of becoming detached from the realities of front line business execution.

Set realistic interim goals; deliver early and often

The way that initiatives in this area differ in spirit from the ERP implementations of the 90s is in the way in which returns flow from investment. With ERP, it was not unusual for little or no return on investment to be seen for literally years after the initial commitment to a programme, as everything needed to be

configured, tailored and tested to ensure all aspects of the system worked together effectively before it was possible to go live. With front line decision-making initiatives, while there might be some generic upfront preparation and investment, initial projects can start to take advantage of the architectural foundation very early on. All that is required is that the relevant subset of information has been included in the mix. Delivering payback early and often is therefore a key attribute, and interim goals should be set accordingly. When doing this, the usual principles of IT governance apply to ensure that the right projects are prioritised in the right order. As mentioned earlier, the continual enrichment of the architectural foundation layer as more information assets are embraced leads to a snowball effect, ultimately driving towards the vision of information-enabled optimisation being the norm.

Supplier-related considerations

Given the nature of architecturally-based transformation initiatives such as this, even the most competent management team and IT department is likely to benefit from outside help; not just with technology, but with know-how and professional services. When considering potential suppliers in this context, a number of things are worth considering:

Appreciation of the bigger picture

One of the perennial challenges with suppliers in the IT industry is that many of them tend to define the problem in terms of whatever they are selling or are capable of delivering.

When dealing with strategic plays such as this, it is therefore necessary to ensure that suppliers appreciate the bigger picture within which their technology or services need to fit. Larger suppliers tend to do this quite naturally, but it is worthwhile validating that smaller players will not try to skew things, either deliberately or inadvertently, on the basis that the world revolves around their offering or competency.

Industry knowledge and best practice know-how

While many would argue that back-office business processes do not vary that much between industries, there can be no doubt that very significant differences between sectors exist in the context of front line operations. At the very minimum, it is highly desirable that key suppliers understand your industry and are able to appreciate your constraints and accepted business practices, and relate to the way in which you define and prioritise problems and opportunities. Such industry knowledge is even more important if you are looking for advice and guidance on best practice. Things to look out for here are not just knowledgeable personnel and reference stories from similar organisations, but tangible assets such as relevant blueprints, models, templates and so on.

Basic technology hygiene factors

It is beyond the scope of this guide to go into detail on technology selection, but factors such as the solution maturity, adherence to industry standards, manageability, seamless integration with existing front line tools and applications, etc are all important.

Final thoughts

One of the considerations when writing this guide was that the majority of IT and business leaders have probably never considered the opportunities in the area we have been discussing. Indeed, we know from the snippets of research we have seen and anecdotal feedback from mainstream organisations that few have explicitly identified programmes and initiatives around operational decision-making optimisation.

Put simply, the role and impact of enabling pervasive access to relevant information on the front line is generally grossly underestimated. When considering the exploitation of information assets there is a tendency to look upwards to solving the needs of the executive suite, and few consider the cut and thrust activity taking place at the edge of the organisation. But this is where business is won and lost, customers are delighted or disappointed, edges are gained, and threats manifest themselves.

We hope that the discussion in this guide has at least drawn this to your attention, and provided some ideas for driving serious improvement in business performance in ways you may not have previously considered.

We wish you luck with your endeavours in this exciting and fast developing area.

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Information is power, right? Only if you can harness it and deliver it where and when it's needed.

Today, the effectiveness of information delivery to support real-time decision making in many organisations is hampered by historical shortcomings such as fragmentation and complexity, in both business and IT.

This guide offers a practical and actionable, multidisciplinary approach to improving the quality of information available in front line business scenarios in a consistent and reusable fashion.

If you are an IT or business decision maker looking to take the exploitation of information assets in your business to the next level, this guide is for you.