Foreword

Aligning IT to your business objectives is a simple statement to make but we are all aware that it is much harder to deliver in reality. BMC dedicates itself to producing software to help but there are clearly other factors to consider and address. Our research shows that one major factor is the communication gap that exists between CIOs and the Board of major organisations across Europe. The ability of the senior operational management and the technologists to talk, think and behave as one is strained. This difficulty in communication is clearly an obstacle to aligning IT and business goals.

There is no tool or off the shelf solution to solve this communication gap, however, I hope this management guide will crystallise the problem, advise on how it can be addressed and provide examples of successful CIOs who have bridged the communication gap.

It is essential for European business that we build this bridge and I commend this guide to you.

Hans van Stek
Vice President, Europe, Middle East & Africa
BMC Software
The communication gap between business leaders and information technologists is a permanent theme in the history of computing. Despite half a century of trying, the two parties still find it hard to connect with each other. Business managers find it hard to define what they want - because they do not have the technical knowledge to know what they can have. And technologists - wrestling with the complexities of modern IT networks - inevitably frame their solutions in terms of the technology.

But with business and technology now so closely intertwined, something has to give. Modern businesses rely so much on information technology, that the communication gap must be bridged. If not, what is seen as the current misalignment between business and IT will jeopardise many organisations' plans to expand and compete effectively not just in Europe but globally.

It will not be easy. The communication gap is enshrined in the mythologies of business and IT. If a new application does not deliver on its promise, business managers will blame IT for not fully understanding what was required. In turn, IT people will blame the business folk for not clearly saying what they wanted in the first place. Both are probably right.

This guide examines the causes of the communication gap and offers some possible solutions. A 2004 survey, sponsored by BMC and carried out by Winmark, shows how seriously many in the industry now view the gap. The study helps to define where the problem areas lie and gives some insights into how they may be overcome.

The guide also looks particularly closely at the role of chief information officers in bridging the gap. Three successful CIOs share their experiences and explain how they are working in different ways to achieve better alignment between business and IT. David Taylor, author of the best-selling book ‘The Naked Leader’ provides a rallying call based on his valuable experiences as a successful CIO to advocate how businesses can be more effective in aligning IT with strategic goals.

Where did it begin?
The communication gap is nothing new. It reaches back to the very beginnings of computing and is generally accepted as the way things are. Indeed it is part of the mythology of modern life. The gap probably begins in education - partly as a result of early specialisation. Scientists and engineers are labelled as serious and over precise; artists and philosophers are soft and vague.

In the 1960s the late Professor Edsger Dijkstra, one of the founding fathers of modern software, noted that a good command of spoken and written language was an essential quality for a successful programmer. He was highly critical of the low level of linguistic achievement among the science undergraduates he had in his charge. How could they possibly explain the complexities of the science they were engaged in if they could not express themselves properly? How could they know what was expected of them if they could not understand what they were being told?

The professor was an archetypal ‘techy’. An accomplished mathematician, he was the acknowledged inventor of structure programming, the root of today’s component-based software.

But despite his triumphs as an innovative technologist, he was passionate about the proper use of language. In IT, the main language is English and one of
Dijkstra’s most treasured possessions was the Complete Oxford Dictionary. It is perhaps no small coincidence that his witty and incisive papers are catalogued on the Web under the heading “In Pursuit of Simplicity: The Manuscripts of Edsger W. Dijkstra”.

Dijkstra recognised that building effective software depended on clear communication between technologists and those they were working for. And with technology at the centre of modern business, clear communication in both directions is more important now than it has ever been.

**Different worlds, different priorities**

There have, of course, been many attempts to bridge the gap. Even in the early days of commercial computing, the creation of roles such as ‘business analyst’ was a recognition that technologists and business people needed a mediator and a translator. Despite continuing efforts to overcome this communication problem for the last 40 years, it seems we are no closer.

**There are good reasons**

The two groups face different challenges and, as a result, think differently. Business people must deal with the ‘real world’ challenges of satisfying customers, negotiating contracts and keeping ahead of competitors in the market. These are essentially hard to define concepts – even more complicated to translate into lines of code.

By contrast, technologists cannot afford to be undefined. They are charged with supporting complex tasks with precise and efficient IT. Inevitably, this means they think differently about problems and how they may be solved. What they perceive as elegant and efficient code is, to the person who has to use it, a system that does not do what it is supposed to.

It is little wonder, then, that the two groups appear to live in different worlds and speak different languages. Historically, bringing these two worlds together has proved to be difficult - indeed, so far, impossible.

**IT can lead the way**

The initiative must begin with IT leaders. They are the ones in the best position to understand the conflict and, as our CIO case studies show, the solution is often no more than simple common sense. Sitting down with a stock control clerk for a day and seeing how they work is probably more valuable than studying endless process diagrams. The stock control clerk operates in the real world where real things happen - not inside a mathematical model of an abstract business process.

Most important of all, technologists must not see themselves as separated from their colleagues. They are all working for the same company with the same ends; to be more competitive, to be more efficient, to increase profits and to gain a reputation for top customer service.

CIOs can take the first step by encouraging their staff to become a central part of the organisation they work for and stop talking about their colleagues as ‘customers’ and ‘end users’. They are colleagues - fellow workers - striving for the same goals. True alignment between business and technology can only flow from a culture that sees itself as integrated.

So forget about integrated business processes and start thinking about integrated business culture.
CIO profiles:
Bridging the communication gap

1. Carol Olney, head of IT, Cable & Wireless

Cable & Wireless (C&W) is one of the world’s oldest communications companies with offices in 60 countries. IT is central to many of its operations and the key to making it work is simplicity, according to Carol Otley, head of IT at C&W.

"We are guilty of making it all sound so complex when we need to demystify the technology. The business does not want to know the ins and outs of the technology - they want to know what it can do for them," she says.

"When members of my team are in the back office, they can talk about technology as much as they like. But when they sit down with the business, they must talk to them on their terms. They just need to be normal - to be human, that's all."

She believes that strong leadership in IT is essential for alignment between the business and IT:
"The way I am doing it is to lead by example. I spend a lot of time sitting down with business colleagues and seeing what they do. Members of my team shadow the business functions and ensure that we keep up to date with what they need. You need to get into the hearts and minds of the people we are doing this all for."

Otley also sees a strong role for education in solving the communication gap:
"You have to show how the technology can help them by engaging with people - running courses and workshops helps to get the message across."

While she accepts that bringing IT and the business together is a tough task, she is happy with the progress C&W is making:
"We are getting there. The trick is to work out how to provision services and get a real linkage between key performance indicators and the functionality we are providing."

Technology, she concludes, should be in the background: "Success to me is when I am at a board meeting and no one talks about technology."

2. Simon Linsley, head of consultancy development and business Services, Royal Philips Electronics.
(Before he took on his current role, Simon Linsley was head of IT at Philips Lighting for ten years.)

IT should take a strong commercial role in business, says Simon Linsley, head of consultancy development and business services at Philips.

"When I took over as head of IT at Philips Lighting, I wanted to run IT within the business. I did not want to talk about IT projects - but about business projects with fiscal targets," he explains.

Philips Lighting is part of the giant Royal Philips Electronics group, which employs 161,000 staff in 60 countries. Annual revenues are over 30 billion Euros.

Linsley goes on to say that IT and the business should be closely intertwined:
"It is essential that we should not only be involved in IT, but in the business processes - there should be no sense that IT is divorced from what the business is trying to achieve. IT is not an end in itself - it must contribute. We are all in business to make money and IT must be a part of this."

He says IT leaders need to project what they do more effectively and sell the potential of the technology. At the same time, they should approach their business colleagues with humility:
"We must be careful not to be arrogant. But many CIOs do not sell themselves and their team effectively as services. They need more commercial acumen."

Linsley also says IT is often perceived as a cost centre - when it should be seen as a potential source of profit:
"We have immense spending power but we are seen as not having a commercial perspective."

Like many IT leaders, Linsley wants to see more formalised career structures for IT staff - including proper professional qualifications:
"I am a great believer in accreditation and defining what qualifications are needed to fill a particular role. The British Computer Society (BCS), for example, should be in a position to provide accreditation. Many techies do not understand the business processes, for example."

While he acknowledges the 'communication gap' between IT and business, he sees no easy solution: "Communication is about personal skills - it's about building relationships with business colleagues. It is not the amount of time you spend, it is the quality of the time. Are you talking about the business or about the technology? CEOs are only interested in how much it will cost and how much they can save - how they can get the best value for money."

3. Henrik Kiertzner, head of IT, Arup.

Arup, one the world's leading engineering and consultancy companies, has helped to shape our modern world with high profile projects from rebuilding Coventry Cathedral in the 1960s to the Channel Tunnel in the 1990s. Founded by Sir Ove Arup in 1946, the company has grown to employ 7,000 people worldwide with an annual turnover of more than £400 million.

Unsurprisingly, as a heavily 'knowledge based' organisation, Arup makes extensive use of IT. Global director of IT, Henrik Kiertzner, acknowledges the challenge of supporting an organisation with such diverse needs. Alignment between IT and business is essential and ensuring good communications is key to success.

"It's a linguistics problem as much as anything else. We have to get business people and technologists speaking the same language. I am the IT director of a global infrastructure so I have to keep an eye on the wider issues that involve the whole business," he says.

Kiertzner refers to techy talk as 'T-shirt' - language that IT specialists use and wear to identify each other - and says that the complexity of modern IT makes it difficult for business people to understand what the technology is capable of: "There are aspects of IT which are really everyone's problem so we need to understand 'T-shirt'. One of the principles we are losing is elegance and economy in design which makes it harder to explain what IT is. So business must have understanding of what we are trying to do."

The role of an IT leader, he goes on to say, is to maintain a high-level vision of how IT and the business work together: "The whole thing is too big for one person to understand so you need to get specialists in IT. But you also need people to fly at 100,000 feet and see the big vision."

He wants to see better qualifications for technology specialists and points to recent initiatives by organisations such as the British Computer Society (BCS) as positive steps:

"It is incumbent on IT to stop being a 'trade' and become a 'profession'. The BCS is moving from being very academically driven and beginning to bring in enterprise qualifications, which is good."

Kiertzner also sees advantages in a hands-off management style: "You cannot fit IT into a straightjacket so I try and impose the minimum on the anarchy. We tend to think of CIOs as technologists - but they are really about commoditisation and containing costs."
Everyone knows it, many people write about it and CEOs hope that IT leaders will do something about it: how can IT at last take its place at the very heart of their organisations?

IT leaders feel separated from the very people they are employed to help and to serve. Most believe this isolation is because the importance of IT is not recognised and it is seen as separate from the day-to-day running of the organisation.

But any separation from the ‘business’ is of an IT leader’s own making and it is within their own control to do something about it. Stark as this may seem, it really is time to make the future different from what it used to be. Traditionally, it meant to appreciate the problem we face with business alignment, meet and hold conferences to discuss it, then go back to our workplaces and do what we have always done - only to get what we have always got.

As IT leaders, we now have a chance to do something different. We can learn from the views of chief executives and do something about them - or not. We could model the three CIO case studies - or not. And most of all, we can take control of our own future through a specific set of actions - or not.

The future is totally in our own hands. Through a specific set of proven, powerful and pragmatic actions, any IT leader can very quickly build new levels of trust, value and alignment with their organisation.

I invite all IT leaders who want to be as one with their organisation, who want to be seen as part of an organisation’s success and, above all, who want to reinvent their role - please stand up, your time has come.

Aligning business and IT strategies

Business and IT strategies are rarely matched. Business plans often leave IT behind, giving a low perception of IT. Alternatively IT may pioneer leading-edge technologies for which the business itself is simply not ready.

The most effective method of achieving balance is to bring IT strategy and business strategy together. Corporate strategy must develop with full involvement from the CIO. IT strategy reflects the business vision in some areas and drives it forward in others. Both plans will then be mapped on to each other.

The final strategy combines what the business wishes to achieve with how it will do so. Each goal, project and activity is tied to an IT delivery plan and every IT project is defined with clear business aims, resource and benefits.

In addition to improved planning and understanding by all involved, contentious issues such as ownership, prioritisation and delivery can be more fully explored and explained.

As it develops, the areas previously known as ‘IT’ and ‘business’ will begin to merge. It makes it easier to measure IT value, because it is directly related to business value and can be measured in real financial terms. When reasons for IT spend are explained in such hard commercial language, the perception and influence of the IT department will rise.

Ensuring that IT has a real, measurable business value - and how to measure it

One phrase I hear repeated, time after time is - ‘There is no such thing as an IT project.’ So what do so many
IT departments do? We carry out ‘IT projects’ - in infrastructure, IT networks etc. etc.

There is indeed no such thing as an IT project, full stop. So, every single project, action and activity can and must be related to one of the following benefits:

- Financial - an improvement in income, reduction in cost, improvement in profit or increase in shareholder value
- Customer delight - better customer service that can be measured
- Morale - improved motivation of people
- Reputation - higher standing in your industry, in commerce, your community or the world

These are the only four benefits to any organisation. So focus all that you do, as an IT leader, on one or more of these and alignment will no longer be an issue.

Advice from the CEO for the CIO

Be in no doubt, most CEOs do not believe that IT delivers real business value. I was recently speaking at a dinner for the top European CEOs which led to a discussion of the four positives that CEOs want from IT leaders and the four negatives IT should avoid:

Positives
- Take your place at the heart of the organisation. Stop using the term ‘the business’ to mean everyone else in your organisation - you are the business.

Negatives
- Projects must deliver faster and be more flexible. I want projects delivered in days not weeks. IT is the last great manual industry and this must change now. Invest in automated code generators.
- Don’t keep asking for higher and higher budgets every year, unless you can provide real, measurable, third party verifiable proof that you are worth it. Where is your proof? Provide it, no excuses.
- The answer’s ‘no’ but what’s the question? Whenever I want something, why is the answer ‘no’? Make it ‘yes’ and we’ll start from there. Your colleagues will avoid you if you keep rejecting them! Offer alternative ways of achieving what is needed.
- Don’t embarrass me or any of my colleagues about our lack of knowledge of technology. You may find...
acronyms fascinating, I don’t. People who hide behind them are not being clever - quite the reverse. Ensure your people use words their parents would understand.

Performance and perception
Most IT leaders or members of the IT team perform well. Indeed, Service Level Agreements confirm this, with the ‘system’ exceeding targets and all service indicators being delivered.

If only this mattered in building the reputation of IT in the eyes of the organisation, in moving closer to the heart of an organisation. But it does not. The most significant sentence in my entire contribution to this report is this next one, please read it, re-read it and take it on board.

Alignment with your organisation and how highly you are trusted and thought of are not decided by what you do, they are determined by what people think that you do.

The only caveat I would add to that is that as an IT team your performance does need to be reasonable in delivery, attitude and results.

As IT teams, we judge ourselves and justify our existence, based on our performance, in clear ways built on logic, while others judge us based on their perception, in clear ways built on emotion.

The illogical world of logic
Let us look at some of these logical justifications:

- **Benchmarking / Best Practice**
  - **The Investment**: Let’s spend cash to find out what the industries and other companies have found out to be the best, risk-free way to do something and then let’s do the same.

  - **The Cost**: Let’s do the same things that many others have already done and ensure that while we may make fewer mistakes, we will forever swim in the sea of conformity.

- **Service Level Agreements (SLAs)**
  - **The Cunning Plan**: We’ll tell people how we are doing every month, using precise terms that no one can dispute.

  - **The Problem**: As human beings we don’t use these terms to decide if we are receiving great service - ‘I went to an Indian restaurant last night; it was, eh, satisfactory. And did you see that movie last week? It met my expectations’.

  (Other choice: Build relationships, make sure your peers catch you doing things right and spread your reputation by their word of mouth, not yours.)

- **Outsourcing or offshoring**
  - **The Opportunities**: Give IT to IT specialists, offload our problems and save money. Pass development to areas of the world that will do it cheaper.

  - **The Dangers**: IT is the business and the business is IT. Outsourcers face exactly the same challenges that you do - the same skill shortages, staff morale and delivery issues. Outsourcing may save money short-term, it does not, long-term. Offshoring separates IT development from the IT department and in a world where we want closer alignment, introducing yet another degree of separation may not be the answer.

  (Other choice: Outsourcing and offshoring have happened because somehow, we have become the last great manual industry. The advent of proven, guaranteed application generators means we can save money, redeploy staff and redefine our roles and perception.)
The power of perception
Focus on improving, better still, transforming, perception and you will be popular. You will become the supplier of choice in your organisation. In other words your business customers will want to use your services rather than feel they are being forced to do so.

How can this be done - fast?
It is essential to make friends in key areas of your business. The most powerful way to do this is through something I call Hidden Account Management. Neuro Linguistic Programming (NLP), the global science of human behaviour, tells us that how we think and feel is governed by something called association i.e. the meaning of an event will depend on what we associate with it. If you hear a piece of music on the radio which you heard on a special night out with your first love, it will immediately trigger the feelings you had at that time.

Now let’s look at the IT context. When I first started in IT, it didn’t matter what our ‘internal customers’ thought of us; they never saw us. Then we had to become customer focused. When anything went wrong we had to run around the company, saying ‘We have a problem, I’m sorry.’ The effect was to associate, in the company’s mind, the appearance of anyone from IT with a problem.

Hidden Account Management takes the principle of NLP association and combines it with our lessons from history to make sure our companies consistently catch us doing something right!

Draw up a list of the most powerful decision makers in your company - the people in whose hands your future sits. Actual numbers will depend on size of company. Include personal assistants and that guy in underwriting who has been here 25 years and holds more power than his job title suggests. Then list the top communicators in your department. And now for the magic - simply match each person on the left, with one on the right. The person on the right (in your team) has one aim - to make sure the person they are ‘managing’ catches IT doing things right, time and time again.

This is the most powerful and proven way to raise perception in your company. But it must be kept secret (hidden). Rotate the people you allocate every two months and don’t use this to replace traditional account management. Account management focuses on areas and departments, while Hidden Account Management focuses on people.

The active promotion of IT services and results, is a priority for IT leaders. For years IT has suffered poor perception. Now we have a way, not only to reverse the trend, but to see its reputation soar.

Transforming your processes around the needs of your customers
All of your internal procedures must serve your company and, therefore, your customers. IT must remove its obsession with the mechanics of internal process and ensure they serve our purpose and not a software supplier or consultancy. There are no right or wrong ways to structure your organisation - just achieve the best balance for your customers and costs and run with it.

Ensure your frontline people have the freedom to intervene and override processes that may not be working. For every process, ask yourselves, so what? Process software works only if you install it alongside a leadership/cultural transformation programme. If your people decide a system will not work, it won’t.

As you read this, have a look at the organisation chart for your company. It is probably vertical, has
impressive sounding job titles and totally irrelevant to your external customers.

Now, take a look at your IT department, areas of ownership and responsibility - are these geared towards driving your organisation forward, in conjunction with your peers and business colleagues? Perhaps not.

What can we choose to do, to ensure that we are totally ‘customer’ focused?

**Internally…**

- **Deliver, deliver and deliver**  
  Prioritise all major projects (everything cannot be a number one priority). Make sure that the benefits IT says it will deliver actually are delivered, by ensuring a business leader takes responsibility. Be specific, get a real figure and record it.

- **Leadership of change**  
  As an IT Team, you are best placed in any organisation to facilitate successful change inside your organisation. This does not mean that you should take control of change but you must place yourself at the heart of the process; ensure that change happens effectively, by bringing all relevant people, teams and departments together.

- **Introduce project leadership**  
  Forget traditional and boring project management and put your projects in the hands of inspiring communicators, who are action driven and who keep their heads while all around are losing theirs. And learn lessons - both from the projects that don’t go well and those that do.

- **Location**  
  Are you still behind three armour-plated doors that would not look out of place in a jeweller’s shop? If you are, get out fast! IT ‘suppliers of choice’ are located close to other departments in an organisation.

- **Recruit people from outside of the IT industry**  
  Recruit people with a broad range of skills. More IT Leaders are being recruited and promoted from non-technical backgrounds. Communication and relationship building are two of the top skills for IT departments who are suppliers of choice.

**… and externally?**

- **Take ownership of your web activities and prove your worth**  
  Keep your website clear, simple and uncluttered. Also, install the latest customer prediction management systems, so you can predict what your customers will do next.

- **Ensure your information systems provide one view of your customer**  
  That way your sales department won’t be wasting their time chasing someone who is being pummelled by your finance department for payment of an overdue account.

- **One database**  
  If a customer calls you once with new information, they expect you to make the change needed. They will be frustrated if they have to keep repeating themselves to different parts of your organisation.

**Communication**

Building trusted relationships, and strong internal networks, is critical to your success. Here is how to do it, fast:

- **Identify the key dozen power-players in your organisation, hold one-to-ones with them and offer to help them achieve their greatest need. Then deliver.**
• Master the basics of body language or Neuro Linguistic Programming (Free download of NLP available at www.nakedleader.com/nlpinachapter)

• If you want to be on the Board, your CEO has to trust you – to do this he or she has to like you. If you don’t get on with your CEO, forget being on the Board in your present organisation.

• The power of any communication is how the messages are received, not in how they are given.

• Before all project and management meetings, have the issues being raised completely sewn up beforehand. No decisions are ever made in these forums anyway, all you are doing is saving time.

When presenting, your audience will be asking themselves the following questions, as we each speak, in this order of importance:

• Does this person really believe what they are saying - therefore do I trust this person, therefore do I like them?

• What’s in it for me, personally?

• What’s in it for us as a team and organisation?

Culture

Everyone talks about organisational change, to no avail. Organisations do not change, people do. Organisations cannot choose, as they do not exist outside of the legal sense being simply a collection of people who have come together, at a particular time, with a purpose.

We do not move forward in our organisations, in my opinion, unless we realise one thing above all else. An organisation can never reinvent itself; it can never change, and can never do anything – only its people can.

As leaders, how do we do this?

Winning over the minds, and hearts, of the majority of people

When you share an idea, or a vision, your people fall into three camps:

• Some will be with you, they always are

• Most will be unsure – these are your key people

• Some will be against you – they are against everything

The key, absolute and total focus must be on the first two groups, ensuring that as many people in the first, win over as many people in the second.

And you will never, ever do this through intellectual discussion, or logical persuasion, you will only ever do it by enabling those people to make the choice for themselves.

For how to handle the negatives in your team, see ‘The Naked Leader’ book, or download the chapter free at www.nakedleader.com/negs.

The IT leader is dead, long live the Operations Director

In this next business age, there will no longer be a CIO, because IT will be truly as one with, and totally integrated with, the organisation (at last).
The Operations Director

- Ensures that all operations work smoothly around the needs and demands of your customers;

- Is responsible for what technology does, not what it is – and how it can transform the company and customer experience;

- Speaks in business English at all times, and commands respect as a business person at all levels in the organisation;

- Influences perception of what is happening – never refers to Service Level Agreements or utters the word ‘user’ (only one other industry has this term – the drugs industry!) or ‘the business’ – you are the business;

- Runs projects as a profit centre - every activity must be a business project and you must take on the role of ensuring benefits are delivered - in conjunction of course with the relevant functional owner.

The Operations Director has three key skills: Agile and fast-moving – delivers projects in days not weeks; business and financially aware; a leader of leaders.

Your future – Your choice

Never has IT faced a bigger challenge, and there will be winners (people promoted to positions of business influence) and losers (people who leave or stay where they are).

And that choice is yours, and yours alone – no excuses please.
Summary: Building an integrated business culture

“There is a clear method for bridging the gap between IT and business. By focusing on customer needs, IT organisations can determine the best way to meet those needs. They can explicitly define services and measure those services in business terms. This process is called Business Service Management (BSM).”

Understanding Business Service Management, white paper from BMC Software.

As we have seen earlier in this guide, successfully bridging the communication gap between IT and business draws on a wide range of disciplines and resources. The results of the 2004 survey showed, for example, that the barriers ranged from IT over-promising to lack of resources and poor channels of communication. These are challenges which can be overcome by strong and innovative management. Our CIOs reveal in their profiles that management style is also important. They all agree that close personal communication between IT and business managers is clearly essential. And David Taylor advocates a radical change of attitude from IT chiefs to embrace the business before the technology - even recommending that non-IT managers be considered for top IT roles.

Alongside these essentially cultural changes in management attitude, sits a broad portfolio of methodologies and tools which can facilitate successful change.

By combining cultural change, sound methodology and good technology, organisations can begin to build an integrated business culture.

Cultural change

IT usually responds to the business challenges with technology initiatives in a piecemeal fashion. While each initiative can make a valuable contribution in its own right, often, it is over-sold as a complete solution, when, in reality, it is only one part.

Grid computing, virtualisation, services oriented architecture (SOA) and business process automation are examples of such initiatives (see appendix). They are all worthy in their own right - but incomplete.

Researcher IDC says that, together, these initiatives may be defined as ‘Dynamic IT’ - where IT resources can be switched according to application demand. More importantly, IT resources can be mapped more closely to business processes. Their contribution to increased business value can, therefore, be quantified.

This lies at the heart of the cultural change that needs to occur if IT is not only to meet the expectations of the business - but anticipate and exceed them. Business executives are not interested in the technology - only in what it can do.

CIOs, therefore, must begin to construct a flexible IT infrastructure - based on dynamic IT technologies - to support a dynamic model of IT. But it must also cultivate a culture which ties technology investment to genuine business benefit. This means re-casting the traditional model of IT ‘service’ in terms of real business functions and processes.

Business Service Management

The concept of delivering IT as a set of services is, of course, central. In practice, this means that IT, even within a single organisation, must behave as a service provider. Wherever services are consumed or provided across organisational boundaries, the ability to regard resources as services becomes a prerequisite to long-term successful relations.

For many years businesses have, of course, used Service Level Agreements (SLAs) both to define expected service levels and to measure the degree of success of IT in meeting them. Traditionally IT has used a technology-driven approach to service levels. It defines SLAs in transactions per second, megabits per second, megabytes of storage and percentage availability. But as experience shows it is quite possible to meet all of the agreed technical SLAs and still fail to satisfy the business needs.

Clearly, the end-user experience cannot be measured at the technology level. To understand the end-user’s perspective, the services they use must be monitored at the point of delivery. While it may not be feasible to track this directly on the user device, we can get very close by monitoring service requests and responses.
Technology to achieve this is now mature and can indeed go further. It can apply charges at the service level, filter and prioritise service requests and implement the business policies. This type of monitoring can spot when SLA problems occur, but on its own it does not have the 'intelligence' to resolve them.

A complete approach to business service management starts by understanding the business objectives. From these derive the required performance and availability characteristics at the level of the corresponding IT services. This can then be modelled to the physical and software resources that will be required to meet these objectives. The management of the physical and software resources can now be accomplished with concrete business-related goals in mind, with the appropriate device-level monitoring to ensure technology goals are being achieved.

This is, of course, a dynamic IT environment. It is not a case of fix and forget, but an ongoing process to accommodate change in business goals, process models, application architecture and physical deployment. As more advanced use is made of technologies such as grid computing, the mapping between user services and the underlying physical infrastructure will be subject to frequent changes. Automated workload balancing can constantly redistribute portions of the workload to optimise the use of resources.

Routes to Value
The transition from a technology-oriented culture to an integrated business culture is a huge challenge. Not only does it demand a fundamental change in the way IT sees itself, it also demands a change in the way business sees IT. IT must justify its technology investments in terms of real business value. At the same time, business must learn to define what it needs from IT in a different way.

BMC Software’s Routes to Value approach helps meet this challenge. It defines eight specific paths to achieve the transition to a business service management environment and deliver a quantifiable return on investment.

Briefly, the eight Routes to Value are:

1. **Service level management** - aims to strengthen IT’s ability to define and measure SLAs and meet user demands by managing the relationships between IT resources and the customer experience.

2. **Incident and problem management** - links service desk and event management to prioritise and align service support with business operations. Implement robust knowledge base to eliminate the impact of recurring incidents and enable user self-service.

3. **Infrastructure and application management** - uses a standardised management method to monitor, manage and to optimise availability and performance proactively across mainframe and distributed systems, databases, on-line and batch applications.

4. **Service impact and event management** - Maps technology components and services to business processes to prioritise IT actions based on their business impact and to prevent business disruption proactively.

5. **Asset management and discovery** - enables IT to locate, categorise and manage the lifecycle of all assets in the IT infrastructure. Use detailed asset information to allocate existing resources more effectively and to justify future purchases.

6. **Change and configuration management** - enables IT to gain control of the IT environment, ensure consistent configurations across the enterprise. It also enables management of the entire change lifecycle to reduce service impact of unplanned or unmanaged changes.

7. **Capacity management and provisioning** - enables IT to match capacity to business needs and improve efficiency of resource use to avoid capacity shortages or underutilisation. It can also predict requirements and provision resources dynamically to meet service level agreements while minimising costs.

8. **Identity management** - enables organisations to manage identities and access privileges centrally both to reduce operational cost and to assure that access to all distributed IT systems is co-ordinated with business policies and regulations set for the organisation.
Conclusion

Organisations can make more effective use of their IT investments by moving to a managed service model. BMC Software identifies four clear benefits:

1 **Improve quality of service.**
   IT can focus on the IT infrastructure that matters most to the business. Using the Business Service Management (BSM) approach, IT can continuously monitor and manage specific applications and systems that support critical business processes.

2 **Respond fast to business needs**
   BSM gives companies unparalleled business agility. Organisations have the information they need to prioritise investments and embark on new initiatives with confidence. IT managers can manage the impact that IT changes have on the business and the impact new business requirements have on IT.

3 **Reduce operating costs**
   BSM can help reduce costs by aligning resources with business objectives. IT managers can decide when, where and how to apply IT resources to deliver results and reduce the resources required.

4 **Protect and enhance revenue**
   BSM enables organisations to concentrate on issues with the highest revenue or strategic impact. With technology aligned to business objectives, achievable service levels can be established and maintained. As a result, organisations can maximise revenue uptime and business effectiveness.
Appendix:
Dynamic IT technologies explained

Grid computing (or virtual platform)
Grid computing aims to give IT considerable freedom to balance workloads across the available physical resources by virtualising the platform. The virtual platform provides a software layer that masks differences in the physical platform from the hosted applications. It enables physical resources to be added or removed from the applications in response to changing workloads or priorities. Seasonal or daily trends can be exploited by redeploying off-peak spare capacity to carry out other work, such as compute-intensive financial modelling tasks that otherwise could not be cost-justified.

As the ability to re-provision a physical platform to accept a different workload becomes more effective, we should expect to see minute-by-minute workload balancing becoming the norm.

Service Oriented Architecture (SOA)
SOA aims to define IT resources as services which can be initiated by passing a technology-independent message, and return the required response in the same technology-independent way. The most business-visible uses for this approach are to create composite applications and to automate business processes.

Composite applications provide new levels of business functionality by rapidly assembling existing applications (which have been “faced” or “exposed” as services) plus a minimum of new components into a composite structure that appears to the user as a single application. The richness of scope of the applications reduces the potential for errors to be introduced by eliminating unnecessary human interaction, and avoiding the need for application integration.

Business Process Management (BPM)
BPM automates the sequence of activities (both application-driven and human activities) across a multi-step process. This also eliminates much potential for error as well as reducing the end-to-end process execution time and enabling the business to make rapid changes to processes without significant investment in system changes or staff training.

Federated database (or single view processing)
The purpose of federated database technology is to provide users, analytic tools and applications of all types with a consistent view of all the information that is relevant to the task at hand. The requirement has been well recognised for many years (particularly the need for a single view of customer information), yet the complexity of our IT environment has created so much fragmentation of information that the task is daunting and the technology needed to achieve more than a partial delivery is still evolving.

Requirements for federated database technology continue to accelerate, with unstructured data sources (such as contacts and emails) now regarded as important sources of information along with structured data sources such as databases. At the same time the number of types of application (and therefore the number of ways in which the data is to be accessed) also continues to grow, now extending to search engines and text systems as well as more traditional business intelligence tools.

Self-managing systems
One side effect of our complex IT environment is the growth in the number of skill-sets that need to be maintained in order to support the existing workload. This is an important factor in the cost of maintaining the IT environment as each individual has a limit on the number of skills that can be learned and kept current. The evolving solution is for systems management products to work co-operatively with applications and application platforms so as to remove the detailed level of technical knowledge required, and to permit management at the logical level through establishing business policies in rule sets.

The aim is that software should install with a single click, should be self-configuring, self-tuning, self-securing, and self-healing when errors occur.
The communication gap research

In 2004, BMC Software surveyed 447 senior IT decision makers across Europe (Austria, Benelux, France, Germany, Israel, Italy, Nordic region, Portugal, South Africa, Spain, Switzerland, UK), to identify the difficulties businesses face in achieving Business Service Management (BSM). The results should sound alarm bells in every IT department. Only 48 per cent of those polled agreed that there is a close alignment between IT and business. Strangely, only five per cent disagreed strongly, with the remainder in the neutral zone. While the result is open to interpretation, the underlying message is that over half have at least some problems with alignment.

Closer examination of the numbers reveals why this might be so. Firstly, the perception of what applications areas are the most important for IT to support, vary enormously. A quarter of the multiple response sample cites billing and accounting as the 'most critical business process' supported by IT. Sales, customer services, human resources and 'other' each represent around 15 per cent. Only seven per cent nominated marketing and, most surprising of all in the age of the Internet, only five per cent see e-commerce as the most critical application.

Whilst one would expect some differences between organisations on what is seen as the most important IT application, the scope of variation in the survey suggests a degree of confusion in the IT function. Similarly, there is significant variation in what is seen as the dominant role of IT, with 35 per cent citing 'critical business support' and 34 per cent citing 'operational support'. Only 15 per cent saw IT as giving their organisation a 'unique competitive advantage' and ten per cent saying 'administrative support was the top IT priority. It could be argued that these are all different ways of describing what IT should be doing - supporting the business. Clearly the perception varies.

The speed of business change is also a challenge for IT. Over half (53 per cent) of those polled said their business objectives change in under two years with the majority of change falling between the six months and two years mark. Only 26 per cent reckoned their business took five or more years to change. With such short timescales, many traditional IT projects - say, between 12 and 18 months in length - could well be obsolete before they are built. Interestingly, the vast majority of the sample said that business changes were passed on to IT through formal channels. Only five per cent said that they did not get to hear about changes in the business. Despite being informed of

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<th>Most critical business process relying on IT</th>
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<tr>
<td>Billing &amp; Accounting</td>
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<td>Sales</td>
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<td>Customer Services</td>
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<tr>
<td>Human Resources</td>
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<td>Other</td>
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<tr>
<td>Marketing</td>
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<tr>
<td>eCommerce</td>
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Base: 1131 (multiple responses accepted)
Source: Pan-European survey of IT Managers, completed 2004
changes, however, many IT leaders don't get to know about them quickly enough. Only 38 per cent said they were told about changes in time for IT to respond fast enough. Twelve per cent definitely do not and the remaining 50 per cent have some issues with how fast they get notice of changes.

Clearly, greater alignment between business change and technology change is still a major challenge for many organisations. The likelihood of failure is increased if IT cannot move fast enough to accommodate business change.

The direct cost of failed IT systems can be high. Although 60 per cent of the sample said they had not incurred costs through failed IT, the remaining 40 percent showed costs varying from a few Euros up to 10 million Euros.

The most revealing results of the survey, however, are those relating to what needs to be done to bring IT in line with the business. Surprisingly, 14 per cent say nothing needs to be done. But top of the list, with 24 per cent, the solution is to 'improve communications'. Lower down the list suggestions include 'understanding business objectives', clarification of priorities, better relationships and understanding roles in the company. All of these ultimately come back to better communication between IT and the business.

It is very clear from the results of this survey that most IT leaders understand that the dislocation between business and IT comes back to the traditional communication gap. It is also clear that they recognise that this gap must bridged. Their challenge is for IT to find a way to do this.

What needs to happen to ensure closer alignment?

- Improve communications: 24%
- Nothing: 14%
- Better/more investment/money/bigger budget: 10%
- Understanding business objectives: 7%
- Make priorities/views clear: 5%
- Stronger/better relationships: 5%
- More staff: 4%
- Better/more training: 3%
- More time: 2%
- More meetings: 2%
- Understanding roles within company: 2%
- More understanding of technology: 2%
- Quicker involvement: 1%
- Decisions take too long: 1%
- Other: 17%

Base: 442 (multiple responses accepted) - exc DK/No Comment
Source: Pan-European survey of IT Managers, completed 2004