

# BPM case study: The Carphone Warehouse

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This report examines the ongoing implementation of a range of TIBCO technologies at European telecommunications retail and service provider group The Carphone Warehouse.

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## Case study key facts

Company	The Carphone Warehouse – a £3.9bn* mobile phone retailer and broadband, mobile and fixed telephony service provider with presence in 10 markets across Europe. *(as at 31 <sup>st</sup> March 2007)
Industry	Telecommunications.
Current BPM goals	Automate broadband service provisioning across disparate systems; demonstrate to business teams how IT can support fast-changing business requirements with BPM technology.
Process scenarios	<ul style="list-style-type: none"> <li><input type="radio"/> Sequential workflow</li> <li><input checked="" type="radio"/> Straight-through processing</li> <li><input type="radio"/> Case management</li> <li><input type="radio"/> Content lifecycle management</li> <li><input type="radio"/> Collaborative process work</li> <li><input type="radio"/> Value chain participation</li> </ul>
Current approach	<p>The Carphone Warehouse is in the early stages of pursuing a BPM implementation hand-in-hand with a SOA initiative. The work is being driven primarily from within its IT organisation and is initially focusing on automating a set of “straight-through” business processes.</p> <p>Its strategy is to use early successes with the technology to showcase the possibilities of using BPM with key business leaders, and to show how the company’s senior management goal of driving efficiency can be realised by getting business and IT teams to collaborate in discovering, formalising and automating a much wider range of processes.</p> <p>Along the way, The Carphone Warehouse’s IT organisation is hoping to use BPM as a tool to drive a new level of engagement with business teams, some of which have historically preferred to implement their own ad-hoc business systems rather than work through the IT function.</p>
Outcome	<b>The Carphone Warehouse has already seen early benefits from its BPM implementation. Processes linking CRM and billing functionality are now in-place and are able to be changed much more quickly than would have been the case using “traditional” integration methods. In another project, a telecoms service activation process has been implemented centrally and made available to retail operations across Europe, bringing major time-to-market benefits for new products.</b>
BPM tools and suppliers used	TIBCO iProcess Suite, BusinessEvents, Business Works and Enterprise Message Service (EMS).

## Company background

The Carphone Warehouse is a European telecommunications retailing and service provision group, based in the UK. The company is large, and has a record of fast growth: in its last financial year it reported revenues of over £3.9bn, but is still growing over 30% year-on-year. It currently employs around 20,000 staff in eleven markets.

As its name implies, the company was founded as a mobile phone retailer. Since 1989, when the company began trading, its retail operation has grown to comprise over 2,500 stores in 11 countries. In 1994, The Carphone Warehouse also began to offer insurance services aimed at mobile phone users. Through a range of acquisitions over the past five years, The Carphone Warehouse has rapidly created a telecoms business offering fixed, mobile and broadband services that now delivers half its revenues.

In 2007 The Carphone Warehouse entered into a partnership with electronics retailer Best Buy in the US. The joint venture has launched dedicated Best Buy Mobile stores in the US, The Carphone Warehouse, and in return The Carphone Warehouse launched Best Buy's Geek Squad technology support services in the UK.

## Project background

The Carphone Warehouse's very fast historical growth, combined with the way that it's grown to date (blending "organic" growth with a very proactive approach to acquisition of businesses in order to enter new markets and territories), has resulted in a significant base of complex systems and applications. The speed at which the business has moved and changed has created an IT challenge to meet tactical business needs while at the same time providing a future-proof platform.

As is the case for so many large organisations, there came a point where the weight of "legacy" functionality became effectively unmanageable in the face of continuing business change, and in 2005, it was The Carphone Warehouse's billing system that was under severe pressure. A project to replace the system was set in motion.

When the project team began to perform rigorous analysis work on the existing system in order to draw up an exhaustive requirements list for a replacement, however, it became evident that the scope for replacement of the existing system wasn't just restricted to billing functions – the billing platform was also carrying out some customer relationship management (CRM) related functions, too. As a result, The Carphone Warehouse decided that as well as implementing a new billing system, it would also implement a new, distinct and separate CRM system. After a selection process, the company chose Chordiant for its CRM functionality requirements.

A service-oriented approach to implementing the renewed billing capability and integrating it with the new CRM capability was identified and promoted early on, by The Carphone Warehouse's Director of Architecture and Design. TIBCO products (Enterprise Messaging System and BusinessWorks) were selected for the SOA infrastructure.

The need for structured business process execution spanning CRM and billing functions was also identified early on in the project, and initially Chordiant's inbuilt workflow functionality was selected as the platform for this. However as the project unfolded, the importance of long-running processes, and asynchronous event-based flows – neither of which were a core focus of the Chordiant technology – became increasingly apparent. It was at this point that the project team decided to extend The Carphone Warehouse's investment in TIBCO technology to include the iProcess Suite (TIBCO's BPM technology offering) and BusinessEvents (TIBCO's Complex Event Processing offering).

## Implementation characteristics and status

The processes currently being implemented in the billing/CRM replacement implementation are focused on automating broadband service provisioning, and are prime examples of our “straight-through processing” scenario (see our report *Business process management: beyond technology* for more details). The billing/CRM implementation team has been working for around 18 months. The implementation work is done, and customers are now being migrated to the new system.

The Carphone Warehouse is using TIBCO’s iProcess technologies to define and coordinate long-running, stateful, system-to-system interactions; it’s using TIBCO’s BusinessEvents technology to handle other stateful interactions, where there’s a need for near-real-time processing.

The Carphone Warehouse realises that its initial use of TIBCO technology for straight-through business processes might seem a little odd, given that there are other technologies in the market that are better suited to implementing such highly automated processes; however, the aim is to rapidly expand beyond the initial iProcess implementation scope to include processes with much more human involvement, where iProcess is stronger. The IT department within The Carphone Warehouse is using the current billing/CRM replacement project to start demonstrating how BPM practice and technology can help improve process efficiency, and is now taking a proactive role in educating business teams in how a collaborative approach to BPM can pay dividends.

## The approach

Because of The Carphone Warehouse’s historical rapid growth and change, many of the company’s internal business processes haven’t been formalised or automated, and business process knowledge has been passed between business teams and individuals on an informal basis. It has also meant that the business focus for getting work done has been primarily on agility (“How quickly can we make this happen?” and “How quickly can we change what we’re doing?”), and less on repeatability or efficiency. Part of the manifestation of this business attitude has been that business teams have often preferred to “go it alone” while deploying new processes – creating their own personal or team-wide systems rather than incurring the extra time and cost of getting an IT group involved.

However as it has matured into a FTSE100 company, The Carphone Warehouse now has a top-down management directive to drive efficiency across the company in concert with innovation. The formalisation, repeatability and automation of key business processes are now a high priority.

Crucially for the IT organisation, the context for the growing desire for process efficiency within The Carphone Warehouse is an environment where “Shadow IT” teams (IT-savvy business professionals, working to create systems without the involvement of the formal IT organisation) prioritise agility over consistency, and prefer to work in an ad-hoc way, using a combination of email, personal productivity applications and macros, rather than repeatable, semi-automated processes. Business teams *want* control over business processes, and at the moment they have it. This means that the potential value of BPM for The Carphone Warehouse isn’t in enabling agility; it’s in maintaining a high degree of agility while injecting consistency and efficiency.

The challenge for the IT organisation in introducing BPM is to convince business teams that the technology involved won’t put too much of a brake on their ability to drive change, but that on the contrary it is an enabling agent of the control they have over running their day-to-day business.

## Strategy

The Carphone Warehouse doesn’t currently consider BPM as a strategic tool or a methodology: at the current stage of exposure to BPM, where the work so far has been driven by the IT organisation, BPM is seen primarily as a set of technologies. Correspondingly, neither The Carphone Warehouse as a business nor the IT organisation has yet defined a BPM strategy. At the moment, formal responsibility for business processes is not assigned to a specific team within the IT organisation, and within business management the structures that formally associate individuals or teams with key process responsibilities are within lines of business, not across the organisation.

However as commercial opportunities have started to galvanise a more rigorous approach to dealing with business processes, BPM is starting to gain weight as a business tool with potential to have strategic impact on the company. The IT organisation has realised that in order to drive value from BPM in the long term, it will have to work to firstly create awareness of BPM, and then to push it onto the agenda of senior business managers to create an environment where BPM can flourish.

## Architecture

The Carphone Warehouse's IT organisation has a quite a sizeable Enterprise Architecture (EA) team, but currently the remit of the EA team doesn't extend to the domain of "business architecture" that The Carphone Warehouse's enterprise architects see as the home of business process modelling efforts. In the context of The Open Group Architecture Framework (TOGAF) model, The Carphone Warehouse EA team currently focuses on Technology Architecture, Information Architecture and Solution Architecture. Rather than being able to directly shape business requirements through Business Architecture, the EA team has historically had to focus its efforts on shaping projects once they're underway – so that as well as delivering short-term value to the business, they're implemented in a way that allows the long-term value of the investment to be maximised.

However, the IT organisation sees BPM as a way for it to get more involved in business architecture work, and more involved towards the start of the analysis phases of change programmes. By positioning the use of a BPM approach to project analysis, design and implementation as a way to comply with top-down management pressure to increase business efficiency, it's hoped that BPM can be woven into more and more change programmes and through this route, EA can be transitioned into a practice that more effectively aligns the directions of business and IT teams.

Because use of BPM technology has emerged from an initial SOA-based integration project requirement within The Carphone Warehouse, the IT organisation is able to pursue BPM and SOA efforts side-by-side. Indeed, the IT organisation sees the implementation of TIBCO's iProcess technologies as a way to drive its SOA efforts: as it models and formalises processes, new requirements for services emerge.

Beyond the current billing/CRM implementation project, the IT organisation is considering the side-by-side implementation of BPM and SOA as a way to manage the incremental decommissioning and replacement of a legacy retail management system.

## Organisation and people

To date, The Carphone Warehouse's initial BPM implementation work has been very much driven by the IT organisation, but as it is rolled out and the team takes opportunities to demonstrate the tools used, it's looking to encourage business teams to take a collaborative role alongside IT teams in defining automated processes going forward.

A crucial organisational change recently made that is having a positive impact on The Carphone Warehouse's BPM initiative (and other IT initiatives) is the creation of a dedicated Business Change function. This function is hosted outside of the IT organisation as a business team, and is the new home for all business analysts and project managers. This is designated as a centre of excellence for managing business projects that impact IT, and is beginning to drive much more proactive engagement between business and IT teams as projects get underway, and giving the EA team much earlier access to project requirements and business cases.

A significant organisational issue for The Carphone Warehouse IT organisation in pursuing its BPM initiative has been getting the right technical skills in place. It's created a TIBCO technology centre of excellence internally, and trained a number of staff in the technology to help drive knowledge of the tools more broadly within the IT organisation. This is seen as important, even though the majority of "back end" service and application development work is currently outsourced to an offshore software development provider based in India. In-house technical skills are vital not only to enable use of BPM tools to orchestrate back-end services and applications. They're also crucial in order for the IT organisation to be able to effectively drive the work that the offshore provider is doing, and to ensure that the quality of the work is up to scratch.

## Governance

At its current stage, The Carphone Warehouse's BPM initiative hasn't yet evolved to the level that a governance framework would be required. By promoting BPM as a way of pulling business and IT teams together in the instigation and execution of change programmes, the company is hoping that its Business Change function and EA practitioners will together help good governance practices emerge.

In general within the IT organisation, there's a significant effort underway to implement practices in line with the Information Technology Infrastructure Library (ITIL) in order to improve IT service management and delivery. IT change management is a big focus for The Carphone Warehouse's IT organisation in its exploration of ITIL, and it is already considering how the use of BPM technology (where one of the key principles is enabling business teams to directly drive change in the behaviour of automated systems) might work in the context of a more rigorous change management approach. The balance between change freedom and control is a crucial issue within the company, because a critical success factor for any attempt at deploying BPM widely will be the ability of business teams to use the tools to quickly make (or at least, help to make) changes to automated systems.

The Carphone Warehouse's IT organisation is also looking at reuse in the context of its BPM initiative. It's not only considering reuse from the perspective of making process fragments available within design-time tools however: as mentioned above, BPM and SOA are being pursued hand-in-hand at The Carphone Warehouse, and automated processes are seen as potentially reusable assets in themselves. This presents an interesting conundrum that The Carphone Warehouse is currently investigating: in pursuing BPM, one of the main aims is to enable business people to make changes directly to processes. But if those processes are exposed as services which may potentially be leveraged as "building blocks" in future projects, how can business-driven change within these services be managed so that the expectations of the service consumers can be guaranteed?

## Technology and infrastructure

Given the cultural and organisational environment that The Carphone Warehouse's IT organisation is working within, a crucial feature of BPM technology for them is that the design tools must be easy to use for business teams – in order for these teams to accept BPM technology, they have to see how they can be free to make changes themselves without too much "help" from the IT organisation. TIBCO's Eclipse-based Business Studio (which provides design, development and simulation functionality for the iProcess Suite) is the toolset being used.

The Carphone Warehouse recognises that support for some standards (particularly those related to communication interoperability) is very important in a BPM and SOA technology toolset. For example, support for SOA is crucial for The Carphone Warehouse because they're using the technology to exchange information with external partners. However, in the context of standards for BPM model representation (support for the XPD standard, for example), as an organisation buying its technology from a "one stop shop", The Carphone Warehouse sees no real need.

Given that the current focus of the company's BPM initiative is straight-through business processes, integration of these processes with existing systems, applications and data sources is at the top of the list of technology concerns. The Carphone Warehouse is using TIBCO's BusinessWorks and Enterprise Message Service (EMS) to carry out integration between iProcess workflows and back-end resources.

The BPM implementation team isn't currently employing the simulation features of iProcess, but are expecting to use it as more processes are brought within the domain of BPM. Likewise, the team isn't currently using the Business Activity Monitoring (BAM) features provided through iProcess Insight or iProcess Analytics – but as the BPM initiative starts to take on more sophisticated processes, with increasingly heavy human participation, it's expected that these capabilities will be required.

## The results

The most obvious short-term benefit to The Carphone Warehouse of its BPM implementation thus far has been that a key technology capability it needed urgently (flexible automation of long-running processes linking billing and CRM functions) has finally been provided. With the iProcess technology in place, the IT organisation has found that implementing changes to rolled-out processes is “much quicker” than was possible previously.

In combining business process automation work with a SOA programme, The Carphone Warehouse has already created automated process definitions that are packaged as reusable services and made available for use within new business-driven IT projects. There’s already been one major success from this approach. In its retail business, the team has used the iProcess technology to deliver a reusable telecoms service activation process which has enabled the company to progress business expansion across Europe much more broadly and quickly than anticipated. The implementation cost just 20% of the original estimate, and the reduced cost for retail operations “in territory” has made it much easier to roll out new network deals and offers.

## Recommendations for BPM adopters

In carrying out this case study, we asked The Carphone Warehouse representatives to share any recommendations they’d offer to other potential adopters of BPM. Two points were highlighted.

Firstly, when you first scope out a BPM initiative, it’s crucial to determine the skills and resource profiles you’ll need to have in place – and get a number of your key technologists trained to use the technology to an advanced level as soon as possible. Using BPM technology to support business process requires a different thought process compared to using traditional developed business applications, and you can’t use standard application analysis and development skills to do the job. Currently The Carphone Warehouse has used professional services organisations to provide some of the necessary technical skills in order to build out solutions in this space rapidly, and plans to apply their in-house managed IT solution development capability to reduce cost going forward. Be aware that your technology supplier’s own professional services staff, although likely to be very proficient, are also very expensive resources and should only be used in short bursts.

Secondly, if you’re using a relatively new technology (as much technology related to BPM is today) be aware that product upgrades can introduce significant changes not only to technology, but also product architecture: you need to make sure you understand the full impact of an upgrade before you implement it in a live environment.

## Best practice insights

Although it's still early on its BPM journey, The Carphone Warehouse's IT organisation has uncovered a number of important best practice insights that you should think about in the context of your own BPM implementation:

Use the right tool for the job. Enterprise Service Buses (ESBs) and integration platforms are good at some things, but if you need to manage state throughout processes, you need specialised process management technology. And if you have a requirement for low-latency execution, don't assume that a "vanilla" BPM technology stack will be able to support you.

Understand the dynamics of the relationship between the IT organisation and the business teams driving key processes today, and look at how you can use BPM work and tools to help bring the two sides together to drive change more effectively.

Consider how business process discovery, analysis and design should fit into any business architecture or enterprise architecture programmes that are ongoing.

Look for opportunities to expose processes as services, so that they can be provided as shared resources to multiple process improvement projects, or rollouts of projects across multiple departments or locations.

Showcase early BPM successes to as many audiences as possible, and get people excited about how the approach can be used to both improve efficiency and enable agility. BPM becomes more powerful as a business tool the more it's used.