transversal
connecting people to knowledge

White paper

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Realizing return on investment for self-service knowledge

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1. Introduction

> "Most businesses want to see a project pay for itself after 12 months – **ours paid for itself after 12 weeks.**"
>
> **SHARON MILLARD,**
> HEAD OF CUSTOMER SERVICES,
>
> **mothercare**

This white paper explains how Transversal's clients are achieving huge return on their investment through the deployment of Transversal solutions.

Transversal's aim is to provide world-class self-service solutions that enable organizations to effectively deliver the best possible customer experiences, while boosting operational efficiency and profitability. This is achieved through a combination of our comprehensive and flexible knowledge management platform, specialized professional services and on-going reporting, analytics and support.

At the heart of Transversal's solutions lies the core technology that underpins all of our solutions – the Memory Engine™. The Memory Engine™ is the result of research and development by top researchers in Information Theory and Machine Learning from Caltech and Cambridge universities.

Transversal is unique in providing a business efficiency tool that rapidly delivers tangible benefits by automating interactions between people and information, resulting in:

- enhanced customer experience, attainment and retention

- improved contact centre agent productivity

- increased revenue through up-selling and

- cross-selling at the point of service

- increased self-service adoption

- reduced product returns and associated costs.

Return on investment (ROI) is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of a number of different investments. To calculate ROI, the benefit (return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or a ratio.

$$ROI = \frac{\text{(gain from investment - cost of investment)}}{\text{cost of investment}}$$

ROI is a very popular metric because of its versatility and simplicity. That is, if an investment does not have a positive ROI, or if there are other opportunities with a higher ROI, then the investment should be not be undertaken.

ROI is a vital piece of the measurement process but it is only one of a number of constructs that must be measured to assess the achievement of business objectives. Measurement must encompass the whole information process. In the past, this premise has been ignored and the focus has been on the processes that surround information, as if they were disengaged from people.

Transversal's ability to understand what people are trying to achieve sets us apart from other self-service and knowledge management technology vendors.

"Transversal's ability to understand what people are trying to achieve sets us apart..."

This understanding, combined with automating customer interaction processes, achieves huge savings, adds value and directly impacts the bottom line. Transversal's solutions drive value across a broad spectrum of operations by:

- deflecting calls, reducing costs and improving customer satisfaction

- encouraging customer transactions such as buying a product, changing account information or adjusting investments

- presenting targeted promotions and product recommendations based on the customer's enquiry, profile and history incorporating real-time analytics and business reporting.

2. Introducing Transversal

Transversal is a leading provider of online, multichannel and self-service solutions. Whether posting a question on social media, using the self-service technology on a website or on an intranet, customers expect a consistent, immediate and relevant response. Our key aim is to help our clients deliver an outstanding customer experience. To achieve this, we ensure that customers have less complex, more satisfying interactions.

Our approach, based on a comprehensive, centralized knowledgebase, means that we are helping organizations to capture knowledge and optimize people, processes and technology to offer customers an outstanding quality of care. We are also helping them to embrace current technology trends, incorporating mobile and chat, as well as exploiting the increasingly influential social media channel.

Our technology focuses on 'real-time decision support' – enabling organizations to analyse their customers' interactions across all channels, optimizing the engagement and starting to predict their customers' needs. This means offering a truly multichannel experience and supporting effective channel shifting as well as providing a robust, proven knowledge platform for all of your self-service solutions.

Using a core knowledge platform, Transversal can deliver a variety of solutions, each with their own access point. These can range from a public website to assist with online self-service that also allows escalation of questions via email and chat, to an enterprise site to support internal cost-centre functions – those departments that frequently receive a large quantity of repetitive questions.

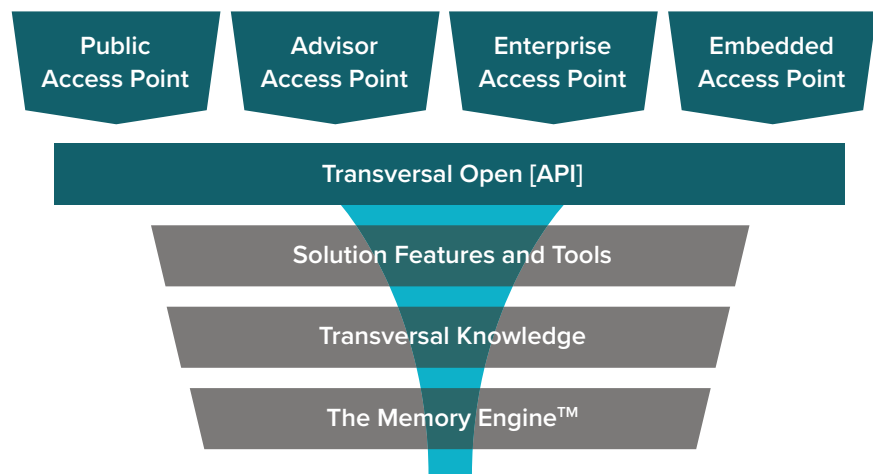"Our key aim is to help our clients deliver an **outstanding customer experience.**"

Figure 1: Transversal high level architecture diagram

Headquartered in Cambridge, United Kingdom, Transversal has a global operating presence and serves enterprise customers worldwide.

Some of the world's largest companies rely on Transversal to transform their call centres, help desks, corporate knowledgebases and web customer service operations into multichannel customer interaction hubs. Transversal solutions are used by numerous major clients including the BBC, Barclays, Bupa, Barclaycard, Churchill, Co-operative Bank, Direct Line, Fujifilm, Experian, J.P. Morgan, University of Liverpool, Marks & Spencer, Mothercare, National Express, Nissan, Nottingham Trent University, Ofcom, ScottishPower, Standard Life, University of Sheffield, Tesco, United Utilities, Woolwich and Zurich Connect.

3. Transversal Knowledge

Professor David MacKay's contributions in machine learning and information theory include the development of Bayesian methods for neural networks. His book Information Theory, Inference, and Learning Algorithms was published in 2003.
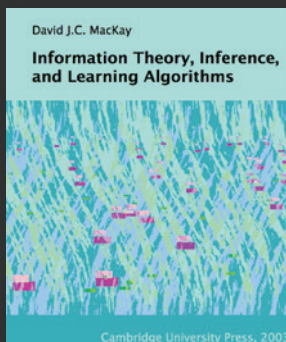
Transversal Knowledge, our principal product, is a knowledge management platform that enables you to exploit knowledge within, across and outside of your department or whole organization. It combines two key principles; driving value both into and from your collected knowledgebase through refinement, improvement and expansion, and then making that knowledge available to the broadest possible audience. It sits at the heart of all of our implementations and leverages two core Transversal technologies; the Memory Engine™ and Prescience™. These technologies work in parallel to deliver a more tailored user experience from an organization that understands what their customers, internal and external, want without them having to say it.

Out of the box, there are no limitations on how Transversal Knowledge can be accessed. The platform works across a broad range of channels, including web self-service, contact centres, chat and email, and ensures a smooth transition when channel shifting occurs, for example if questions cannot be answered via self-service and need to be escalated. It can also be seamlessly integrated into third party systems, ensuring your departmental or corporate knowledge can be made instantly accessible directly where it will offer the most value. This unique platform allows us to streamline all of your customer service functions. By automating processes across multiple access points, contact centres and internal operations, you'll be able to manage multimedia communications from a single, centralized point and respond in real-time.

3.1. How Transversal Knowledge works

The Memory Engine™ stores and recalls information in the way the human brain thinks, not the way a computer works. It uses Natural Language Processing, enabling users to phrase questions using natural language rather than keywords. It also uses a semantic, intelligent search mechanism that relates concepts, recognizing the meaning of words in different contexts. For example, if you were to search for 'when are oranges in season', 'orange' and 'season' would be recognized and the system would know you were talking about the orange that you eat. It would also know that you might be talking about jaffas, satsumas, mandarins, or any other variety of orange, and would be able to return results containing these words with decreasing levels of relevance applied. In contrast to other search technologies, the Memory Engine™ is not constrained to exact matching or manually entered synonym lists. From day one, it has a full understanding of all the words in the English language (and many others) and is able to use this to search not just on words, but on the concepts implicit within those words, just as a human would.

4. Measuring the value

> "If you can find a way of harvesting information and placing it in self-service, you can almost cut out the call centre itself."
>
> **JOHAN JACOBS,**
> ANALYST,
>
> **Gartner**

Research authority Gartner states the following: "In the current economic climate, renewed focus is being placed on reducing the cost of service, while maintaining quality. As such, the use of a knowledgebase for self-service can provide immense value in the web search and self-service function."

According to Forrester Research, the cost of an average phone support call is $33, while the average support email costs $10. The cost breaks down as the following: when a client speaks with a customer service representative, the cost is calculated as a factor of the employee's salary, plus 17% benefits, plus 25% overhead. This is in stark contrast to situations where the customer is able to access the information they need via a website or extranet, as companies pay dramatically less – approximately $1 per contact – with the costs involved limited to building, maintaining and hosting a self-service site.

Today's economic realities are driving organizations to seek efficiencies and improve productivity as everyone is expected to do more with less. Transversal Knowledge solutions are providing some of the world's leading organizations with remarkable business impact. The key is to capture the "know-how" within your business and share it with your employees and customers. Transversal clients have achieved benefits that profoundly affect their business such as:

- reducing unnecessary inbound contacts by up to 70%

- increasing online sales conversions by 50%

- dealing with seasonal peaks without having to "staff up"

> **"...robust KM is the only avenue to effectively and efficiently answer the exponentially increasing range of customer enquiries..."**
>
> **NATALIE L. PETOUHOFF,**
> SENIOR ANALYST
>
> **FORRESTER®**

- reducing agent training times from three weeks to eight days

- gaining unprecedented customer insight that accelerates product and service innovation.

Allowing customers to serve themselves has become the norm in our daily lives. As customers become more comfortable locating information themselves, they also become less reliant on calling or emailing the help desk, further reducing the load on the company's support staff.

Companies who are looking to introduce or improve a customer self-service implementation must plan for a multichannel strategy. They need to implement each channel with a long-term view and build a justification based on the value derived from that channel. Self-service solutions that are justified purely on load reduction, or on enquiry deflection, will fail.

An effective self-service interaction for either customers or employees can be 10 to 20 times less costly than the most efficient agent-enabled phone call. But to reap these savings, your online self-service needs to be more than just an FAQ listing or search tool.

Self-service goes far beyond simply answering questions. It can guide the customer towards completing transactions such as upgrading a service plan, buying a product or changing account information. You can even turn a service enquiry into a revenue opportunity by presenting targeted and appropriate information, promotions and product recommendations based on the specific profile of the customer and the questions asked.

Another key aspect of ensuring a successful self-service strategy is to apply and utilize a knowledgebase. A knowledgebase for self-service is one of the most important building blocks and is composed of a set of modules and functions enabling customers to service their needs via different interfaces.

A knowledgebase allows your call centre staff, customers and employees to access best practice advice and solutions to common problems in an online knowledgebase. The knowledgebase acts as an effective knowledge-sharing medium, boosting support productivity by leveraging collective knowledge and providing invaluable corporate knowledge to staff and customers.

ROI calculations must focus on potential revenue, as well as on cost deflection. The true value of knowledgebases for self-service is not possible without a long-term commitment to on-going fine-tuning and enhancing. The key focus in a knowledgebase for self-service is to achieve at least an 80% relevance of response, to ensure constant use and to avoid users abandoning the customer self-service environment. Therefore, it is critically important that natural language search tools, such as Transversal's Memory Engine™, can interpret and understand contextually the customers' needs.

Transversal provides an end-to-end self-service solution that encompasses online, call centre and internal corporate knowledgebases. This is invaluable to any organization looking to streamline its entire self-service process.

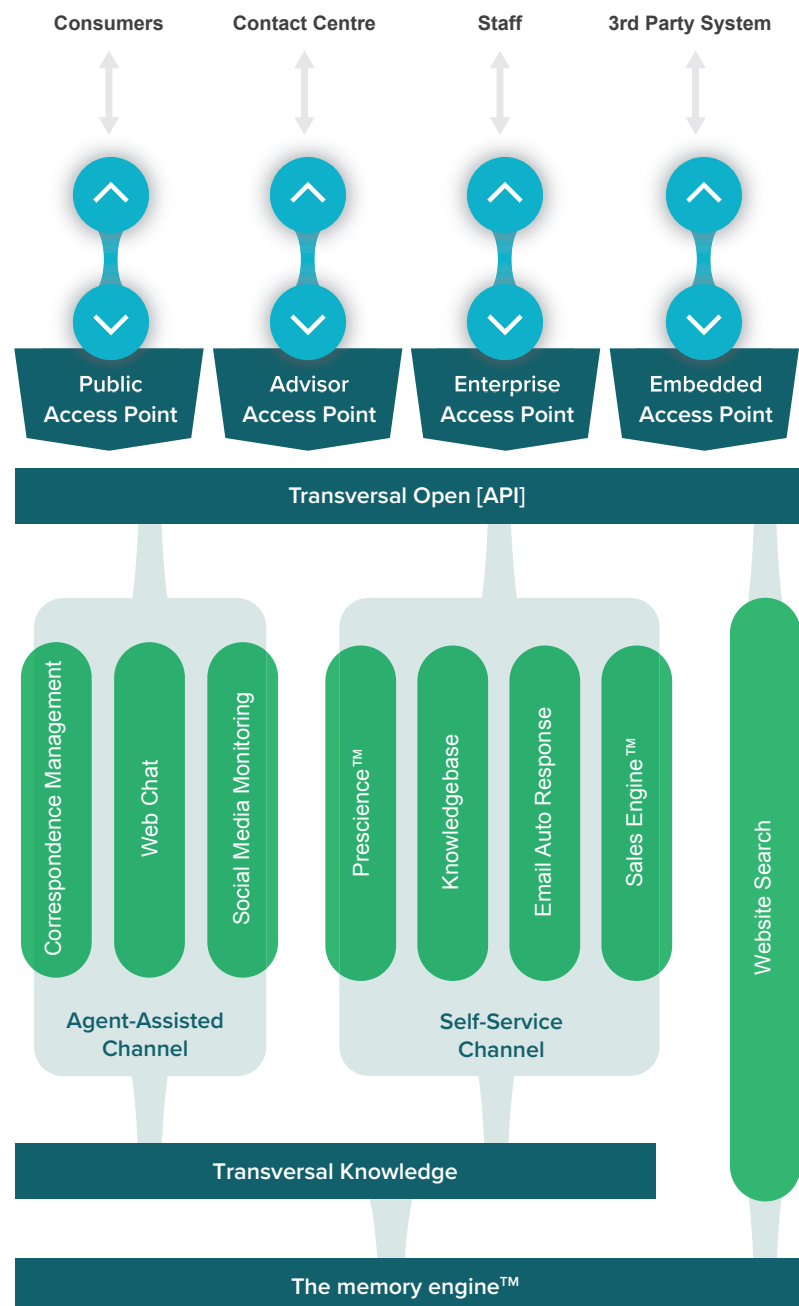End-to-end customer service requires many layers in a solution:

Figure 2: Transversal detailed architecture diagram

"...a feature-rich platform with award-winning, multilingual natural language search and navigation capabilities."

Transversal combines a feature-rich platform with award-winning, multilingual natural language search and navigation capabilities. It also offers comprehensive business reporting that helps you to better understand your customers' needs and preferences.

Furthermore, it is critical for a company to receive customer feedback, comments and complaints. However, many companies do not have a mechanism to gather that feedback and analyse it, much less to integrate that information back into their products and services.

The result of all this is growth in customer satisfaction and loyalty, while service costs diminish.

5. Highlights

Transversal's award-winning intelligent knowledge management platform provides you with an unparalleled set of modular features and functions:

Increase self-service adoption and deflect call volume

- Unique Memory Engine™ search technology – automatically understands questions asked in "natural language" without requiring content to be coded or programmed. Users can find answers through multiple methods, including full-sentence search, keyword search, crossreferences or category browsing.

- Contextual understanding promotes automated answers from knowledgebases, corporate knowledge repositories, multimedia, forums, documents and even transactional systems.

- Advanced Natural Language Processing technology performs analysis on both content and query to always deliver the best answer.

- Adaptive contextual understanding provides multiple options for prompting customers and helping them find answers – even when they are not sure what they are looking for.

- Automatically suggested related links provide dynamic navigation to enhance the user experience.

- Tailored result sets can be populated and controlled.

Decrease maintenance costs

- Dynamic, self-organizing knowledgebase – making it easy to add information. The knowledgebasecan be updated at any time or in response to questions from customers or staff. New content automatically prioritizes itself within the knowledgebase and is immediately available to customers or employees.

- Sector-specific rule sets for Natural Language Processing – allowing the search engine to understand specialist language and terms used.

- Content management – simple, powerful tools for content creation, quality control and scheduling publication.

- Personalized answers can be easily created, enabling you to give "multiple views" for any available content and restrict portions of a knowledgebase to defined user segments.

Uncover new sales opportunities

- Present targeted promotions and product recommendations based on the customer's enquiry, profile and history.

- Dynamic contextual analysis can enable every enquiry to become an up-sell and cross-sell opportunity by dynamically presenting both support and sales content.

Build loyalty

- Real-time analytics help to monitor the customer experience across every interaction, providing useful data points to spot opportunities to improve.

- Identify where customers and employees have issues; determine where content is missing or unclear.

- Guided interaction capabilities enable a customer's unique profile to determine the information and recommendations that guide that customer's experience.

- Contextual analysis lets you filter answers based either on what customers were doing when they first searched for information, or on enterprise information.

Integration and deployment

- Easy-to-use HTML editor enables staff to incorporate PDFs, images and links in content without needing to know HTML.

- Flexible and dynamic interfaces fit within any website environment to align with existing branding and business processes.

- Fully hosted solution — for companies looking for an end-to-end solution, Transversal will host the solution with a range of services: site optimization, on demand updates and uptime guarantees.

- Enterprise-class architecture — Transversal's award-winning platform is built on open standards SOAP, WSDL, .NET, web services and Service Oriented Architecture (SOA).

- Optional email management allows queries to be escalated from self-service to support staff. Email responses can be added to the knowledgebase. Features include: tracking ID, auto acknowledgement, agent desktop, intelligent routeing, SLAs, standard and customizable email response templates.

Multiple languages – currently available in 16 European languages. Translation workflow ensures consistency and compliance across multilingual knowledgebases.

Easy integration with existing IT and internet environments without additional plug-ins or downloads and supports all major browsers.

Delivered as a security-accredited, hosted service, there is no additional hardware or software required and no disruption to existing systems and infrastructure. The system is fully scalable and can integrate easily with existing infrastructure and systems and includes 24/7 automated system monitoring and backup.

Accessibility – meets at least level 2 of the W3C guidelines.

"

Even with budget constraints tightening, the demand for service is not decreasing. The power of customer demands is increasing, as multiple sellers compete for the same tightening share of the budget. Customer service requirements are heightened, and enterprises must streamline the customer experience and curtail associated costs, while adding the demand for service value and efficiency to the service or transaction.

Johan Jacobs,
Analyst

Gartner

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6. Real, measurable return on investment for our clients

The following are just some of Transversal's clients who have enjoyed considerable benefits and tangible measured savings by the deployment of Transversal solutions.

6.1. BBC Audience Services

BBC

BBC Audience Services is part of the British Broadcasting Corporation (BBC) which is the principal public service broadcaster in the United Kingdom. It is the largest broadcaster in the world with about 23,000 staff. Its global headquarters are located in London and its main responsibility is to provide public service broadcasting in the United Kingdom.

To help support BBC iPlayer's growth and development, retain audience users and encourage uptake, it was vital that users were able to get up and running with the BBC iPlayer quickly and easily. BBC iPlayer needed an interactive, web-based support solution that enabled users to find answers to their questions more easily online and thus reduce the number of emails from that source. The solution also needed to support BBC iPlayer's contact centre to enable the best possible service across all channels.

"To date, **less than 1%** of customers using the iPlayer Help service have sought further help."

NEIL DOHERTY,
HEAD OF SERVICE
DELIVERY
CAPITA

Over 99% of people using the iPlayer support service find the right answer first time without needing to send an email.

The proportion of users contacting customer service agents has decreased by 75% since the launch of online support.

Improved contact centre agent efficiency has led to a reduction in call-handling times and email-per-users rates. The vast majority of users now have their queries answered with the first email.

6.2. Mothercare

Mothercare, founded in 1961, is one of the UK's most iconic retail brands. Synonymous with children and parenting, the company has a reputation for specialism, quality, safety and innovation. Mothercare has over 1000 stores around the world and its 2009 group sales were £723.6 million. The Mothercare Group also encompasses leading toy retailer, Early Learning Centre (ELC).

The company is passionate about offering customers a multichannel shopping environment through retail stores, catalogues and the Internet. Delivering the highest level of customer service is at the heart of this.

Mothercare asked Transversal to address all three channels: web, contact centre and store. Transversal had already worked with Mothercare's sister brand, Early Learning Centre, on a separate web project and had earned rave reviews, both for the strength of its natural language search technology and for its expertise in tailoring that technology to individual needs. Transversal addressed each of the identified channels sequentially, as follows:

For customers

Mothercare relaunched its website in October 2008. This gave it the opportunity to introduce self-service. To match the tone of the site and to appeal to its target markets, Mothercare worked with Transversal to develop Ask Carrie, an online persona with a complex and intelligent knowledgebase sitting behind "her". Research showed that Carrie was an image that customers identified with, making her a trusted ambassador for Mothercare and a guide to the information they needed. Ask Carrie provided fast answers

to customer questions through natural language search technology that understood the context of what was asked.

For contact centre staff

Transversal created Ask Mothercare, a solution that provided access to all of the internal online systems through a single interface. Ask Mothercare shared the knowledgebase of Ask Carrie, thus simplifying maintaining information, while providing additional content unavailable to customers such as price fluctuations, product instructions and store details. This empowered Mothercare agents to excel at their jobs by putting the right knowledge at their fingertips.

For in-store staff

> **"...simplifying maintaining information,** while providing additional content unavailable to customers."

The final stage of the roll-out saw Transversal create a simple, low-bandwidth interface that enabled in-store staff to access the knowledgebase from their Point of Sale terminals. Before this, Mothercare had had to rely on a daily emailed spreadsheet to inform staff about the status of Collect in Store orders. Transversal enabled Mothercare's fulfilment team to upload this spreadsheet to the knowledgebase and automatically convert it to searchable content. Through their Point of Sale interface, staff could then search for any customer order by number and/or name.

Customers are currently asking 2000 questions per day through Ask Carrie; only 3.5% escalate their queries to other channels.

Since its launch, Ask Carrie has answered over 600,000 questions.

Emails and calls to the Mothercare contact centre have decreased by 30%, allowing staff to concentrate on answering complex queries.

Ask Carrie has made an important contribution to the overall business. Of Mothercare's UK sales, 18.5% are now delivered through direct channels and overall direct sales increased by 25.5% in 2009. Direct sales made up £107.3m of 2009's Group sales of £723.6 million.

The implementation of Ask Mothercare has benefited productivity, morale and overall customer service. 100% of emails are now answered within 24 hours, against 30% prior to launch.

Ask Mothercare went live in July 2009 and agent satisfaction surveys and feedback were overwhelmingly positive. Agents have better first contact resolution, contacts per transaction have gone down and outbound calls have decreased. Call length has increased as more complex queries are being dealt with, leading to a more rewarding working experience for staff. In 2009 inbound email volumes decreased by 15,000, against a background of growing sales. This represents a workload reduction of 15% across the team, alongside other productivity gains that are difficult to quantify given the expanding nature of Mothercare's business.

7. Gartner research findings: "Make customer self -service a top priority in 2013"

Recently published research from the analysts Gartner, entitled "Make Customer Self-Service a Top Priority in 2013", examines the highlights for 2012 and confirms that customer self-service should be a top priority in 2013 for customer service directors and CIOs.

Key findings from the research suggest the following:

- 72% of customer service costs are agent salaries, making these the primary target for cost reductions.

- Companies are shifting away from point solutions towards vendors that can offer multichannel solutions, with a specific focus on web-based knowledgebases and web chat.

- The CRM market overall continues to grow, with knowledgebases and chat growing at a greater rate than the rest of the market.

- Companies who invest large amounts of money in transactional self-service systems (e.g. account management, ticket sales, etc.) are failing to realize the full benefit of their investments when they do not provide a self-service knowledgebase alongside this to support the system.

As many as 60 – 75% of customer transactions could be managed through self-service. Gartner estimates that, through 2015, at least 80% of organizations that fail to plan their web self-service implementations will incur higher customer service costs and will not achieve the savings and benefits expected.

8. Final thoughts

Not from us but from our clients...

The Transversal product provides immediate answers to questions via the FAQ knowledgebase. To date, less than 1% of customers using the iPlayer Help service have sought further help. In addition the continuous innovation demonstrated through our technology partnership with Transversal has resulted in this technology meeting the needs of the vast majority of users wanting tickets for BBC shows and answers to general queries on almost every aspect of the BBC so consistently demonstrating its value to the service we provide the BBC.

Neil Doherty,
Head of Service Delivery

CAPITA

BBC Audience Services runs 24/7 and we were seeking effective self-service capabilities that would free staff time and enable them to have a greater focus on value-added services. Transversal's technology has been integral to helping us achieve this goal. Extending the contract with Transversal has made perfect sense."

Jonathan Rush,
Head of Business Development

CAPITA

Working with Transversal has helped underpin our online growth and has given us unparalleled insight into our customers' requirements through the ability to analyze the questions they are asking.

Nicola Morrison,
Online Manager

SCOTTISHPOWER

transversal

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