

Is Self Service the alternative to Offshoring?

Who should read this document?

This paper is addressed to directors and managers of customer service and Contact Centre operations, and financial directors.

For the purposes of this paper, Self Service is defined as follows:

Automated technology that enables customers and employees to easily and seamlessly choose their desired means to access a service, or part of a service, engage with that service at any time and from any place, without the need to interact with a human customer service representative.

Examples of Self Service technology are as follows:

- Automated voice services using a touch tone telephone (“Press 1 to pay your bill”)
- Automated voice services using speech recognition (“Please say the name of your required destination”)
- Self Service using the internet (flight bookings, bill payments, and so on)
- Self Service using SMS/Text messages

Executive Overview

Contact Centres have revolutionised the way the world does business. Companies have been able to generate substantial economies by creating a single point of interaction with their customers.

Moving these operations offshore where labour is cheaper was expected to enable further significant savings. But a growing number of pioneers have found offshoring carries unacceptable downsides. And in fact many high street brands are now repatriating their Contact Centre operations as they seek to re-connect with local knowledge, undo the damage to relationships and stem the flow of customers to rivals. But still the pressure to reduce costs continues.

There remains a certain level of distrust, and even dislike for Self Service. Many people believe that Self Service equates to a frustrating, impersonal experience where a caller is presented with a long list of options - press 1 for this and 2 for that.

But the reality is that Self Service technology has moved on apace in the past three years and has opened up a raft of automated services that can increase customer satisfaction and reduce operational costs. Used in the right way it can generate substantial savings while helping to build ever stronger brand trust and loyalty.

Multi-Modal – what you want, how and when you want it

Self Service is expanding its role and enabling customers to interact by simultaneous use of multiple channels such as speech, web, email, Skype and SMS. (This multi-channel interaction is referred to as “Multi-Modal” in this paper.) Self Service gives customers access to a company’s systems and lets them carry out transactions or get information when they want it and how they want it, all without the involvement of an agent. The technology for recognising speech has also moved on considerably; “conversations” with automated systems that feel natural are now possible, and there are many examples of successful implementations of this technology.

A good understanding of why people are calling is vital: If they are looking to complete a basic transaction where the agent provides little added value, or perhaps calling to place an order using part numbers or catalogue details, then these processes could be automated. And if there is an opportunity to cross sell and up sell, then the caller can be passed over to an agent at the end of the transaction.

Securing Information

There is an even more compelling reason to use the Self Service technology emerging, and that is for the purposes of data security. There have been several well documented cases in the UK whereby contact centres have been infiltrated by criminal elements, and personal information has been stolen for the purposes of identity theft and fraud. In these scenarios, an automated system is by definition more secure than a live customer service representative.

The possibilities for Self Service are endless – the automated systems do not get sick, take tea breaks, lunches or holidays, and they make resource planning a lot easier and more predictable.

Our prediction is that organisations that adopt Self Service intelligently will prosper, while those that don't will lose their customers to competitors who use Self Service to serve them better, faster and more cheaply.

Offshoring – the hidden cost

The continual pressure to reduce costs has been the single most profound influence on call centres for a decade or more.

It has shaped human resources planning, had a fundamental impact on the technology used in call centres, and had an overarching influence on day-to-day operational issues.

Ultimately, the need to reduce cost has driven increasing numbers of call centre operators to locate sites offshore where much lower hourly labour costs and less stringent employment laws looked like they would give an instant bottom-line advantage.

But offshoring came with a hidden price tag - customer dissatisfaction. Callers became disenchanted by the difficulties of talking to agents for whom English was a second or even third language, who had little or no knowledge of local geography and customs, and who had nothing more than a superficial understanding of the product or service being supported. Customers complained of poor service and frustration and began voting with their feet, taking their business elsewhere. Suddenly, the pioneers of offshoring found themselves on the wrong end of marketing campaigns by rivals. NatWest Bank, for example, capitalised on customer disillusionment with offshore Contact Centres by promising defectors an entirely UK delivered service.

For many, offshoring became not just unfashionable but a commercial liability, and the offshoring tide turned. In fact, ContactBabel surveyed opinion regarding offshore contact centres and predicted their decline back in 2003. Many high-profile UK companies have since repatriated their call centre operations. Some 14% of the UK's near-6000 contact centres are currently outsourced, totalling 581,000 agent positions.

This number is predicted to rise, but much more slowly than was originally expected as companies re-think their strategies and explore alternatives to offshoring that enable costs to be cut. Prime among them is Self Service.

Why Self Service?

Self Service is at least eight times less costly than using agents to handle customer transactions during normal business hours. Out of hours, the differential is greater still. For organisations handling high volumes of complex and repetitive customer interactions the savings delivered by Self Service can be huge.

As a result Self Service frees local agents from repetitive tasks, enabling them to concentrate on using their in-country knowledge and expertise to add value through complex customer care, support and cross and up-selling. Morale rises, costly staff turnover is reduced, leading to consequent cuts in recruitment costs. This argument is even more compelling when you look at the costs of employing agents:

According to ContactBabel research in 2006 the attrition rate of agents in the UK averaged 23% per year, causing a major problem for many contact centres. At the same time agent salaries have risen; with new agents getting 3.9% more, while experienced agents are up by 8.2% and team leaders receiving 6.0% more.

Furthermore, the research showed that in recruitment of agents:

- 57% of Contact Centres have trouble recruiting the right staff
- 60% of agents have no previous Contact Centre experience and
- 33% of agents quit the Contact Centre for a completely different type of job

But Self Service is not just about achieving massive reductions in the cost of agents. It is also about building revenues by strengthening customer relationships and building the customer base. Customers served consistently well through whatever channel they choose to interact are more loyal and more likely to recommend.

They want a “hassle-free” experience, and may not necessarily want to speak to an agent. They just want to get things done quickly and efficiently. According to a Datamonitor survey in 2005, 64% of European and US consumers agreed they have less leisure time than previously and found it difficult to manage daily obligations. By utilising a well implemented Self Service, customers who know what they want to achieve can reduce the time spent completing transactions and will come back time and again.

Five years ago, when the concept of Multi-Modal Self Service as we understand it today was first being recognised, the limitations in supporting systems meant pioneering organisations had to be rather modest in their ambitions. Even so, Self Service applications such as ticket booking, real-time timetable checks, brochure requests, share price queries and password resets were becoming prevalent.

The new Self Service

The technology advances we will cover in the next section of this primer have opened up the range of business types and challenges that Self Service can address. Today, the first organisations are deploying truly Multi-Modal Self Service solutions, using one or more Self Service channels to front common business processes and back-end systems. Customers of a bank, for example, might use either a web browser or an automated voice system to manage much of their entire banking relationship, including funds transfers, bill payments and mobile top-ups. And this is only one example. Other organisations from across the range of public sector, retailers, airlines, manufacturers and telcos are embracing Self Service and reaping the rewards.

And this brings up a major point: security. ID fraud is a very real threat, especially where so much personal data and particularly credit card details are passed to an agent, whether by web, email or phone. The agent may be tempted or even threatened to behave criminally. With Self Service a number of security features can be added in, such as key words or voice biometrics (to be covered later in this paper.) By automating this aspect, agents are no longer privy to all of the secure information, so the potential for fraudulent behaviour is greatly reduced.

It should be remembered too that Self Service is not an exclusively external customer-facing concept. It can be equally effective serving internal business processes such as IT help desks and HR functions for example, or order submission by field workers. Automation frees up staff to engage with more complex problems. Organisations become faster and more responsive.

Although each organisation is necessarily different with its own business model, processes and customer preferences, the move to Self Service is typically a phased process, beginning with a focus on part or all of one channel and moving over time to include one or more others.

Case Study – Dial-a-Phone

In a very competitive market, UK company Dial-a-Phone, has built an innovative Self Service model that has helped it keep ahead in the mobile phone market.

Dial-a-Phone sells mobile phones and service packages via its Contact Centre and the web. The company is paid by service providers for every customer it delivers, but bears the cost of advertising, order processing, fulfilment and post-sales support. In Dial-a-Phone's Customer Service call centre, agents were fielding some 4,000 calls per day from customers seeking information about delivery dates, billing and other account information.

In a 3-phase approach over a couple of years Dial-a-Phone began implementing Self Service to help cut the cost of these overheads and reduce the amount of time spent handling routine calls.

The first phase introduced voice recognition technology to automate security checks for post code and date of birth. With around 95% of calls this information was successfully checked with the database and fed through to screen pops so that agents knew who was calling. This simple implementation shaved off 27 seconds from agent call handling and customers were happy too, as they got through to an agent more quickly.

Messages that were personalised for the caller were added in phase two. Having recognised the customer in Step 1 the database could now intelligently select where the customer might be in relation to the life of their phone and play a pre-emptive message to answer their query. For example, if the caller placed an order for a mobile phone recently, the automated system will provide them with an updated status of their order. Not only did this increase automatic call handling by 10%, it also meant that fewer of the simple enquiries went through to an agent.

In the final phase – natural voice - the automated solution poses an open question to callers "How can I help you?" Certain keywords in the caller's spoken response determine the next action to be taken. A response such as "my phone is faulty" triggers the database to search for the type of phone, network carrier and how long the customer has owned the phone. It may then advise the customer that relevant paperwork will be in the post or where to send the faulty phone. At the same time the customer record will be updated.

Importantly the web is also in line with these services and customers now have 24 hour access to Dial-a-Phone however they choose to be in touch.

Today over half of the calls received by Dial-a-Phone are handled by natural voice. Meanwhile their web traffic has increased from 5% to 65%.

All of this adds up to a significant change in the way Dial-a-Phone do business: Customers can call or access Dial-a-Phone's website at whatever time suits them and agents can now spend time resolving issues that require human intervention.

Self Service - the key technology enablers

People like to talk. Although Web, e-mail and SMS (text) continue to grow in importance as interaction channels, it is voice that still predominates, voice where the major advances in technology have been achieved, and voice where major development efforts are still concentrated.

It was voice that first gave us Self Service some 30 years ago. Interactive Voice Response (IVR) systems enabled callers to select from pre-recorded spoken options by pressing numbers on their phone keypad.

Early IVR systems were fairly elementary – capable of little more than driving callers through a rigid process such as directing them to an appropriate agent. Even so, the cost benefits were already obvious and easy to quantify. Today, IVR systems have reached the point of being truly interactive. Two key technologies have combined to bring IVR systems to this current level of sophistication. They are speech recognition and text-to-speech conversion.

Speech recognition enables callers to interact with an automated system in much more complex ways. Rather than simply pressing the phone keypad, callers speak their preferences. The more advanced systems can even understand callers ringing from a noisy environment such as a city street or a car.

Callers listen and speak in natural language to navigate their way through the options to the service they require. Some types of transaction such as event booking and bill payment can be partially or entirely automated, showing clearly, for the first time, just how powerful Self Service can be. Customers get what they want quickly and without the intervention of an agent. Operations can be all-hours, 365 days a year, without the huge cost overhead of staffing.

Text-to-speech-conversion makes IVR systems more interactive still. Information stored in a computer database is retrieved and converted

into speech in response to what the caller says. Rather than a narrow range of pre-recorded responses, callers hear dynamic content specific to their actual question or request. Synthesised speech models such as television or radio personalities are now frequently chosen to reflect the brand and personality of the company, or to flatter the preferences of the caller. Quality is nearly on a par with that of a professionally produced linear recording due to advances in expressive audio processing.

Email, web and SMS (text messaging) channels are similarly able to respond automatically to natural language questions with natural language answers from a database.

This means that today, organisations handling high volumes of customer interactions - and therefore ideal candidates for Self Service - have four primary channels (voice, email, web and SMS) through which a partial or full solution can be achieved. The availability of practical, proven technology has moved the debate on. Already one leading online shopping brand has seen its traditional base eroded by another retailer who provided Self Service for quick, fast customer service and accessibility after initially dismissing it.

Now the question for many organisations is not whether to introduce Self Service - but how quickly.

Where Is Self Service Going?

The enduring need to control costs will continue to be the main driver for Self Service deployments. Rising customer expectations and the need to keep up with competitors are secondary but nonetheless important factors. The pace of deployments will increase and the breadth of solutions will expand as the advantage seized by early adopters triggers a ripple effect of catch-up in every vertical market sector. Organisations that have proved Self Service on part or all of a single channel will apply it to one or more other channels, giving customers more choice and flexibility.

There are many factors signalling that Self Service technologies will inevitably be deployed on a massive scale, these are:

- Increased focus on Security
- Technology evolution
- Social evolution

Increased focus on Security

In 2006, the Home Office Identity Fraud Steering Committee estimated that identity fraud is costing the UK economy £1.7 billion per annum, up from £1.3 billion from a previous study in 2002. There is no question that this is a growing area of concern in the UK, with new criminal offences introduced in 2006, and the Government citing identity fraud as one of the drivers behind the introduction of a National Identity Scheme (Identity Cards).

A key issue affecting the Contact Centre industry is fraud from within, which can occur in a number of ways. There have been reported cases of individual agents taking customer sensitive data from the Contact Centre environment for the purpose of credit card fraud or identity theft, including the capture of security details during the identification and validation portion of a phone call. There have also been reported cases of organised gangs placing people in call centres with a view to stealing customer data.

The Contact Centre also has to ensure adequate measures are in place to deal with calls coming in from the public. Proper measures must be in place to be confident that people are who they say they are.

There is a strong case to support the use of Self Service technologies as one part of a contact centre's strategy to combat identity fraud. An obvious application of this technology is identification and verification, meaning that a caller is validated via an automated system rather than by a live agent, which eliminates the need for the agent to gather sensitive information such as passwords and account numbers. Using this technology, a call can be passed to a live agent after going through

security, and the data accompanying that call can be presented to the agent in such a way that sensitive data is removed or hidden. The agent need only know the essential information to complete the call. Another advantage of automated identification and validation is that all callers are treated in the same way. An automated system does not have a "bad day", or can not be rushed or pressured. On a similar note, an automated system will not provide multiple "hints" to enable a caller to get through security.

Self Service technology can also introduce an additional security factor, above and beyond the traditional measures of account ID, Passwords, PINS, and so on. Biometric technology – the automatic recognition of the unique distinguishing characteristics of each human body to identify individuals – is advancing rapidly on all fronts, including voice analysis. In fact, scientists have identified seven features that make each human voice unique, including vocal tract length and shape, vocal cord length (pitch), gender (breathiness), nasal cavity size and shape, speaking rate and intonation, language, dialect, and accent.

No surprise then that financial service companies are in the vanguard of using this new technology. Individuals committing identity theft may be able to obtain sensitive information like passwords, and mother's maiden name, but they cannot fake the voice of another person. Forward-thinking organisations have already worked out that the deployment of voice biometrics is a hit with customers who are happy to know that their valued identities and transactions are protected by an additional layer of security.

Technology Evolution

Further advances in speech recognition and text-to-speech technology will narrow the gap between human-to-human interaction and human-to-machine interaction. Consumer acceptance will rise, partly as a result of these advances, but also as organisations learn to use Self Service more intelligently and more sensitively.

From a technology point of view, however, mobility is arguably one of the biggest trends that will impact on the adoption of self service. As mobile devices continue to get smarter and smaller, and wireless access becomes more ubiquitous, Self Service interactions will become increasingly accessible. Customers of a travel company, for example, might book flights and hotels using a combination of speech recognition and screen taps, receiving simultaneous audio and visual feedback. The productivity gains for both customers and organisations using Self Service will be substantial.

Social Evolution

The youth of today are accustomed to “Multi-Modal” communication. Their use of technologies such as the internet, SMS and instant messaging is high, and they switch from one form to another with ease, depending on the situation. They may send an SMS to one friend, while participating in an instant message conversation with another friend at the same time, and in the background they are accessing a social networking site such as MySpace or Facebook.

For this generation, communication via a machine interface is part of their daily experience and one that will be expected as they become paying consumers. In fact, one may argue that for this generation, a conversation with a live agent may not be the preferred contact method.

Boosting the Brand

The initial reasons for adopting Self Service may be related to cost, and may be further driven by concerns around security, advances in technology or changes in the way people interact. But there is also ample opportunity to use Self Service in ways that can boost the brand of the company.

One of the ways to do this is to turn Self Service on its head and “push” it to customers via outbound contact. One could argue that this is not really “Self Service”, but there are ways of using Self Service technologies in ways that are very proactive for the customer base.

Think of all the reasons that people ring into contact centres. How many of these calls are initiated due to a change in status, or to check the progress of a transaction (to check an account balance, for example, or to track a recently placed order)? In many cases, the organisation already has the answers to these queries. Why not “push” them out to the customer in a proactive way, before the inbound contact is initiated?

Organisations deploying Self Service will increasingly use the opportunity created by technology advances to offer automated outbound or ‘push’ services to customers in order to create value and differentiation.

Cutting Waste and Adding Value

Outbound Self Service will become increasingly common as organisations work out how it helps them cut waste, or fraud, or to add value to customer relationships in a non-intrusive way. For example, dentists and doctors already enable on-line booking of appointments and send e-mail and text reminders to patients. Credit card companies will use outbound Self Service to ask consumers to confirm that they, and not a fraudster, have just made a high value purchase. Used in this way, Self Service will help build customer loyalty for brands and organisations.

There is also the opportunity to use Self Service in a very personal way to improve the inbound experience by more tightly integrating Self Service front-ends, customer relationship management and back office systems.

For example, a Self Service system can recognise a caller from their number, retrieve their transaction history and welcome them by their preferred title and name, having already determined the most likely reason for their call using the information assets from the back office.

Finally, in the case of voice Self Service, the brand of a company can be boosted in a very direct way through the selection of a “voice” that reflects the image that the company wishes

to project. If the target market is youthful and energetic, then this can be reflected in the choice of artist used to record the caller greetings, and in how the messages to callers are phrased. The technology now exists to fully sample the voice of an artist, such that tailored messages can be created at a later date using speech-to-text without the need to bring that artist back into the recording studio. For example, a company may wish to use the voice of its own CEO to welcome all callers and play tailored messages to them, or there may be a celebrity who is a good fit with the brand image of the company.

Moving to Multi-Channel Self Service - Getting it right

So what are the features that distinguish best-practice Self Service from bad? What does it mean to get Self Service right?

In a January 2007 report, The Aberdeen Group confirmed that the greatest challenge facing organisations moving to multi-channel is a lack of cross-channel integration of data.

Jam IP's view ...

Our first rule of best-practice is therefore:

- **Consistency** – all channels should use the same business rules and be unified at back-end systems. Customers may choose different channels for different types of transaction. The Self Service solution should provide the organisation and the customer with the same up-to-date view, and the same workflow, across all channels.

Other key rules are:

- **Start off with a pilot** – the most successful Self Service projects are those that start small and gradually build. Pick one area of the business, or a portion of your calls, in order to get a view of the reactions of your customers and your staff. This will also allow time to tune the system to your needs. A logical first step may be to automate the identification

and verification of your callers, since it provides obvious security benefits. This approach also avoids large up-front capital expenditure. In the case of Dial-a-Phone, the rollout of the technology occurred over three separate phases.

- **Choice** – customers must be offered access over the most appropriate channel, or mix of channels.
- **Understanding** - human behaviour is complex and varies from individual to individual, as well as more generally across ethnic, demographic and geographical groups. Good Self Service is built for this environment and is easy for everyone to use.
- **Help** – first-time users should be automatically offered a walk-through. Don't leave them to work it out on their own!
- **Educate** – Self Service benefits customers too. Tell them how.
- **Listen** – take customer feedback (verbal and behavioural) seriously and be prepared to make changes.
- **A get-out** – always give customers the option of bailing out of Self Service at any point to speak with an agent. There is nothing to be gained – and a lot to be lost – if organisations simply do away with the Contact Centre and offer Self Service as an all-or-nothing. Those customers who wish to speak to an agent will simply migrate immediately to rivals and those that remain will be more likely to defect at the least provocation. Agents must be trained to give multi-channel service and supported with systems that give a consistent multi-channel view.

Enticing and rewarding customers

- **Incentives** – Self Service reduces costs. Web transactions are often already discounted. Consider giving something back to customers for using other Self Service channels too.

- **Innovation** – think about using Self Service to add value. For example one retailer allowed customers to change delivery schedules online; while an airline enabled passengers to request SMS or email reminders of their flights.

Implementing Speech Recognition - Getting it right

Given that the majority of Contact Centre activity is still dominated by the phone call, Jam IP believes that a special mention is in order for speech Self Service, or speech recognition, as this is the area that is widely expected to experience the highest growth over the next few years.

Many in the industry will advocate speech enabling everything in the contact centre in one go - a big bang approach. In Jam IP's view, the adoption of speech should be a slower process to give the organisation and the customer base time to adapt. In the Dial-a-Phone case study presented earlier, the three phases of implementation occurred over a space of years. Many companies will be able to move far more quickly than this, but the concept of a phased approach is still valid. Here is some practical advice on how speech implementations may be phased.

- **Automate Identification and Verification**
A logical first step is to automate the identification and verification of callers. As outlined earlier in this paper, in the interests of security there are very compelling reasons to conduct this activity using an automated system rather than a human agent. During this first phase, it is important to ensure there is a fallback to a human agent while the speech engine is learning the language patterns of callers.
- **Automate low value transactions**
Look for transactions that are repetitive and fairly easy for the caller to complete on their own using a speech recognition system. These types of transactions have been completed using the touch tone keypad for many years,

but bear in mind that speech recognition now provides the opportunity to automate transactions that may have previously been out of reach. Using a touch tone keypad, there are only so many menu options that you can provide to a caller. But using speech, the potential menu is much larger.

- **Natural language**
Once experience has been gained in speech-enabling transactions and implementing identification and verification, a more bold move can be made into the area of natural language. This means that callers are posed an open-ended question by the speech enabled application, such as "how can I help you?" Careful consideration must be given to the range of possible answers – planning and a very good understanding of callers and the business is essential. Again, there will be a fair amount of tuning in the beginning stages of this phase to capture all the different ranges of answers that can be provided by the customer base. Indeed, as with the previous stage, tuning should be an ongoing process.

In Conclusion

This paper considers whether Self Service is an alternative to offshoring. Jam IP's view is that the answer is undoubtedly yes – and for a number of reasons:

- Advances in speech recognition and delivery technology continue.
- People are increasingly accepting of human-to-machine interfaces.
- The increasing need for more secure transactions.

But the real potential for Self Service is how it can improve the customer experience and the company brand. A Self Service experience can be very satisfying if it is fast, efficient and well designed. Interactions with live agents can be more satisfying if they are freed up from performing repetitive tasks.

The biggest opportunity in Jam IP's opinion – the next frontier to be explored – is turning Self Service on its head and pushing it out to the customer in the form of an outbound contact. If relevant personalised information can be proactively pushed to customers in a cost-effective, secure and automated way, this will reduce unnecessary enquiries into the contact centre, This then has the potential to further reduce costs, further increase revenues and further build customer satisfaction and loyalty.

About Jam IP

JAM IP is a leading contact centre services organisation, a group of experts who specialise in consulting, professional services, software development, systems integration and managed services. We trade independently as a centre of excellence within the KCOM group. Our main office is based in Maidenhead, Berkshire, with branch offices in Manchester and Hull.

We have delivered innovative customer contact solutions for many organisations across the UK, including Carphone Warehouse, Teleperformance, Travelsphere, Ocado, and Dial-a-Phone.