Software review

The evolution of self service environments and their potential business impact

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Abstract This paper will explore the growth in self service environments. It looks at: key business drivers; how these environments have evolved; the types of functionality present; how they fit with a customer relationship management (CRM) strategy; the business opportunity they present; and the critical success factors.

INTRODUCTION

The last five years have seen a significant growth in the popularity of customer self service environments across a range of business sectors. In the early days these environments allowed customers to record a technical query or service request through some type of web interface. A customer service agent then contacted the customer either over the telephone or by email in response to the query. These self service environments have evolved significantly and now provide rich functional environments for customers to interact with an organisation.

DRIVERS OF THE DEVELOPMENT OF SELF SERVICE ENVIRONMENTS

In an increasingly competitive environment, many organisations see

customer service as a key pillar in the development of sustainable competitive advantage. Often this is part of a broader CRM approach that is concerned with developing a synergistic relationship with the customer. Self service environments provide the opportunity to increase customer choice and extend the opportunities that customers have to interact with an organisation. In these self service environments the customer has a significant control over this interaction. Self service environments can provide a number of positive benefits to a customer. These include:

— Choice of channel — in the past, customer service has typically been provided through human channels (predominantly the telephone). The growth of the new self service environments, particularly those over

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Figure 1: Changes in internet usage between July 2000 and February 2003

Source: Research conducted by the Office for National Statistics (ONS).

Note: Data has been indexed to 100 as at July 2000 to illustrate the trends.

the internet, has increased the customer's choice of channels for this type of interaction.

- Choice of when — internet self service environments give customers the ability to interact with an organisation 24/7, 365 days a year.
- Choice over type of interaction/transaction — better self service environments do not limit the types of interaction/transaction that may take place through a particular channel. The customers can therefore choose which interactions/transactions they want to perform from a comprehensive set of processes.
- Choice over nature of interaction — the new self service environments allow customers to choose the nature of the interaction and to avoid face-to-face or telephone interactions if desired. This desire to use self service environments has also been driven by changes in customer attitude, such as:
 - Increased comfort with the technology — people are generally more comfortable using the technologies — such as interactive voice recording (IVR), internet and kiosks — partly through familiarity and partly through improvements in the user interfaces.
 - Increased confidence in the technology — people are becoming more confident in the effectiveness of these technologies particularly for purchasing and interacting with an organisation.
 - Wider availability of broadband internet access — this, along with lower costs of internet access, are making this channel far more acceptable for complex interactions/transactions. Figure 1 reveals changes in internet usage between July 2000 and Feb 2003. Of particular note is the increased purchasing of goods and services. Purchasing of tickets, goods and services increased by more than 70 per cent over the period, meaning

Table 1: Evolution of self service environments

Channel	Type	Comments
Telephone IVR	Person-to-person (24/7) Person-to-technology (lower cost/limited)	Started at the beginning of the 1980 Started at the beginning of the 1990s. Evolved from the use of call centre routing technology
Internet Mobile device	Person-to-technology (lower cost/real time) Person-to-technology (mobile environment)	Started in the mid-1990s. The move now is to mobile devices. (eg broadband on mobiles, voice activation processes, etc)

that there is little doubt that the internet is becoming an attractive commercial proposition for many organisations. There are other more business orientated drivers that are helping to drive the growth in internet-based self service.

- Opportunity to reduce customer service costs — as the costs of serving a customer through traditional channels continue to rise, organisations are striving to drive down the unit cost per customer. New self service technologies provide the opportunity to decouple the link between costs and volume of service interactions. This factor proved pivotal in the development of the early self service environments.
- Opportunity to drive incremental revenue — self service environments have also provided platforms for organisations to develop or expand e-commerce activities, either as part of or to complement customer service activities. It is this revenue opportunity that is driving the current explosion of internet-based solutions that combine these self service and e-commerce environments.

This e-commerce activity has been further enhanced by the expansion of technologies that support personalised real time cross sell and up-sell offer management on the web. Many of these new self service environments have now

reached maturity and are impacting positively on business performance (in terms of reduced costs to serve and incremental revenue). This, in turn, is increasing business confidence in the various self service models.

EVOLUTION AND USE OF SELF SERVICE ENVIRONMENTS

Table 1 describes the evolution of self service environments.

The range of processes supported on a self service site varies quite widely depending on: the particular industry; the target market; the customer's home country; the customer's level of maturity in self service; and the channel used. It is important to note that although the primary channel for self service is becoming the internet, it is not the only channel being used. As was mentioned above, the telephone, IVR and kiosks are currently the most common channels used, but other channels are also being tried. These include:

- Instant messaging
- SMS
- Voice activated IVR

How do they fit into an overall CRM strategy?

In the last few years, e-commerce sites have evolved into complex portal environments that combine a number of

Table 2: Processes supported by different customer service functionalities

Customer service functionality	Typical processes supported
Manage an account	Maintain account details. Make payments on account. Maintain communication preferences (eg opt in for email). Modify a product or service configuration
Resolve a technical support queries	Query frequently asked questions database. View product or service manuals on line. Down load software upgrades. Record technical queries. Monitor status of technical queries. Receive responses to technical queries. Run automated diagnostics
Resolve customer service queries	Query frequently asked questions database. View account payment history. Make a payment. Record customer service queries. Monitor status of customer service queries. Receive response to customer service queries

capabilities. Taking internet service providers (ISPs) as an example, the core areas and level of evolution can be described in the following broad terms.

product feature comparison capabilities, personalised offer management (such as cross selling and up selling) and other sale supporting capabilities.

Level 1: E-commerce

Early sites focused on e-commerce. This functionality was concerned with the ability to purchase a product or service through a web site. In the ISP sector the core products sold would typically include:

- Internet access
- Internet telephony
- Domain names
- Equipment

Through these sites a customer was able to view products or service details; create an order by selecting one or more products or services; create a new account or select an existing account; enter or retrieve payment details; enter delivery requirements; view order details; confirm the order; modify it as required; and monitor status of the order.

On the more mature e-commerce sites the functionality was extended to include

Level 2: Customer services

At this level, the e-commerce functionality is enhanced to provide customer service capabilities. The key driver here is the exploitation of existing investment in the platform and the reduction of the cost to service a customer.

This customer service functionality is typically concerned with the ability to manage an account and resolve technical support queries and customer service queries. Table 2 lists some of the processes offered at this level.

Level 3: Value added services

At level 3, both the e-commerce and customer service functionalities are enhanced to provide value added services. In many cases this functionality is added to stimulate traffic on the site and expand the revenue generated from the core products and services. In the

ISP sector these value added services have included:

- Security and safety services or software
 - customers are given the ability to download additional security software or to subscribe to security services, which may be free or fee-based depending on the provider strategy.
- Email services –customers have the ability to create and manage email accounts.
- Photo service — space to store, share and print digital photos.
- Web site creation — the site provides the customer with the ability to build and maintain web sites. In many cases templates are provided to simplify the process.

Level 4: Content

Here, the e-commerce, customer service and value added service functionalities are further enhanced to provide content. The primary objectives of this content are to stimulate site traffic, generate revenue from partners and provide a service to customers.

In the ISP sector, content can be quite diverse. The following is a list of some of the more common content on ISP sites in USA and Europe:

- Web search capabilities, often using the key players such as Google
- News information, eg CNN
- Weather information — often with the capability to target locality of the information
- Sport news, including digital video and voice content
- Shopping portal to key online sites
- Games, including downloadable and online capabilities
- Entertainment news and features, digital video and music content or links

- Finance information
- Shares information
- Automotive content, such as product reviews and sale and auction capabilities
- Employment content — including advice and job search capabilities

In most cases these capabilities are restricted to web sites, but improvements in mobile access mean that some ISPs are starting to make these capabilities available through mobile devices such as personal digital assistants (PDAs).

FUTURE EVOLUTION OF PORTAL ENVIRONMENTS

As the commercial and customer benefits of these portal environments become more visible, other channels and technologies are starting to appear that either facilitate or augment existing capabilities. The following is a short list of some of the developments that are taking place and may become mainstream over the next few years.

Intelligent kiosks

Currently, more intelligent remote devices –such as kiosks — are in development. Web-based technology is starting to migrate to devices such as kiosks. This means that many of the capabilities found on web sites can be replicated in kiosk environments.

Instant messaging

The popularity of instant messaging in the USA, and in key customer segments in other markets, has led to some industries — entertainment in particular — to start to pilot the use of instant messaging as a real time interface for self service. A range of capabilities are being made available. To automate this

interaction a new class of technologies, IM Robots, is starting to become available. These technologies allow the interaction with the customer to be fully automated (see www.MLB.com as an example of this capability).

Voice over IP (VOIP)

The ability to make calls over the internet using VOIP technologies has provided some organisations with the ability to bring down the cost of calls. A customer downloads VOIP software and can then call the organisation while on the web site or while using certain products or services.

Video conferencing

Similarly to the use of VOIP, video conferencing is also starting to be used in some sectors to support self service activities. 3G is also allowing this approach to be made over the mobile telephone networks.

Knowledge management systems

There has been a big growth in the sophistication of knowledge management systems. These systems allow databases of customer service or technical service queries/resolutions to be searched effectively by a customer and can be accessed through a number of user interfaces, thus reducing the number of queries that need to be addressed by customer or technical service representatives.

Remote diagnostics

There has been an increase in the number of organisations that are using remote diagnostics. In some cases, diagnostic software is downloaded onto the user's PC and the application runs a

number of diagnostic routines then sends the results to a technical representative. In other cases the technical representative can get direct access to the customer's PC, or other device, and run diagnostics remotely. In other cases the tools can correct the problem as part of the process. In both scenarios the average call duration and associated costs are reduced.

Supported selling

In these cases a range of technologies are used to support the selling process in an automated and pro-active manner. Simple examples include

- Parameter driven feature/functional comparison charts
- Product selection based on key feature questions
- Purchase decision tools which guide the user through the product purchase process

WHAT IS THE BUSINESS OPPORTUNITY AND HOW IS THE BUSINESS CASE MADE?

The business case for self service projects is usually made conservatively and is often based on the following hard (financially quantifiable) benefits such as incremental sales, increased margin based on lower cost of sales, reduction in customer and technical service costs.

Soft (not financially quantifiable) benefits — such as increased customer satisfaction, positive impact on the brand and competitive advantage — may also be taken into account but do not usually drive a project business case. Project targets may be set for these soft items. The key business objectives for a typical self service project at each level of evolution are set out below. Figure 2

1. Acquire 80,000 new customers per year for three years
2. Generate \$9.6m in additional sale per year
3. Generate \$12.6m in additional sale per from current customers
4. Migrate 4.2m customer service and technical queries to the web each year
5. Reduce cost of customer and technical support environment by \$12.0
6. Migrate 3m customers to online bill management
7. Increase average order value by 5%
8. Improve customer satisfaction score by 12% in year 1

Figure 2: Examples of self service targets for a Mobile Telco

Note: numbers are for illustration purposes only.

gives examples of self service targets for a hypothetical Mobile Telco.

— Reduce churn: improve customer service and increase customer choice.

Level 1 — e-commerce

- Acquire new customers: Provide access to existing and new markets.
- Reduce cost of acquisition: Lower costs mean that the internet can provide a lower fixed cost platform for sales.
- Increase product and service sales: Provide another channel to market that works 24hrs a days 7 days a week.

Level 2 — Customer service

- Improve customer service: Provide an effective vehicle for customer and technical query resolution.
- Reduce cost to service customer: Lower costs and fixed price nature of the platform means that the unit costs per query resolution can be lower than other human channels.

Level 3 — Added value services

- Stimulate site traffic: Value added services can be used as a vehicle to stimulate site traffic.
- Increase product and service sales: Stimulate traffic and create additional opportunities to sell products and services.
- Increase customer satisfaction: Provide a single source for all requirements to support a particular task or activity.

Level 4 — Content

- Stimulate site traffic: Use content as a vehicle to stimulate site traffic.
- Increase product and service sales: Provide a vehicle for the sale of partner products and services.
- Increase the value of the site for partner advertising and sponsorship:

Provide a high traffic context for advertising.

KEY ISSUES THAT NEED TO BE ADDRESSED IN DELIVERING THESE TYPES OF SOLUTIONS

Like all major multi departmental projects these projects need to be well managed to deliver on time and to budget and to realise the financial benefits. Typical critical success factors include ensuring that all key stakeholders commit to benefits realisation; setting targets for project delivery and benefits realisation; putting structured project management in place; ensuring that the self service environment has an effective promotional plan; setting up the required measurement systems; and implementing the required business and system process changes.

Structured project management involves:

- Setting up a project steering group
- Establishing a project team (core and supporting team members)
- Including all key departments in the delivery process

- Developing a clear project plan, including resource allocations
- Ensuring commitment to resourcing of the project.

CONCLUSION

Simple self service environments have played an important role in the financial services and other key sectors for many years — the ever present automated telling machine (ATM) being the best example. The last few years have seen the evolution of functionally rich portal environments that support e-commerce, customer service, value added services and content provision. These sites demonstrate that self service environments can drive real business benefit for an organization, while enhancing customer choice and experience. In the future, enhancement of self service supporting and customer interaction technologies will mean that these capabilities will become available in a wider range of channels and sectors. With this in mind, the author recommends that readers look at their organisation's website with new eyes!

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