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CASE STUDY: CARDCORP.CO.UK, PRINT YOUR BUSINESS CARD ON DEMAND

Abstract

Cardcorp.co.uk Ltd. is a successful print-on-demand company that was made possible by solutions in online ordering and auto-file to print technologies. By this, Card Corporation Ltd. has enabled to meet customer needs that were not met by the traditional printing industry. Being a small company, it aimed to deliver short-run custom-made business cards, stationery and point-of-sale materials designed by the customer.

Three important aspects contributed to the company's success: developing a system that enabled the delivery of short series of prints on time and at reasonable cost, empowering customers by allowing them to design the products that they want as well as giving them information on production progress, and encouraging both employees and clients to be innovative in cooperative ways.

Case Characteristics	
Full name of the company	Card Corporation Ltd.
Location	Leeds + offices in London, UK
Sector	Printing and publishing
Year of foundation	1996
No. of employees	15
Turnover in last financial year	(no data)
Primary customers	Consumers and other businesses
Most significant market	National
E-Business Focus	
E-business model 'Print-on-demand'	ä ä ä
Online selling	ä ä ä
Digital printing	ä ä
ä = in implementation stage; ä ä = used in day-to-day business; ä ä ä = critical business function	

Background and objectives

Describing itself as 'the only true interactive printer', the Card Corporation lets customers design, edit and order templates of letterhead, business card and cards for every occasion from baby arrivals to moving house.

Card Corporation Ltd. started in 1996 by Ivor Jacobs to exploit new market opportunities made possible by the internet. The founder, together with his small team (Ivor Solutions Limited) then developed an innovative IT solution that allows customers to design their desired product and send it directly to the printing machine. The software had been exclusively licensed to Grasmere Digital Imaging Ltd., a co-founding company that provided initial working capital and production facilities. The company Web site was set up for business customers in 1998, with a site for private customers following in 1999.

Since then, Card Corporation Ltd. has developed into a print-on-demand provider of business (business cards, labels, complement slips, letterheads) and private (announcements, greeting cards, contact cards) stationery. By offering do-it-yourself print designs, it enables the customer to interactively create business cards and stationery online. Using an internet connection, customers, regardless of size or location, can order and customise printed products 24 hours a day, 7 days a week.

A decade ago it was difficult to imagine that one could order, agree on a design and have it delivered in short-run orders of prints in 3 days. The customised, high-quality design was costly for a printer company and for the customer. Over the years, technology (e.g. fax machine, computers, screen-based typesetters) has streamlined the interaction between customer and printer. The arrival of the internet, together with digital print technology, has brought bigger possibilities and has in many ways changed the working of the printing industry. CardCorp Limited has been a pioneer in developing new relationships between customers and the printer, giving customers the benefit of immediacy & convenience and print suppliers much needed accuracy.

The challenge was to obtain small and well-designed print orders on time and at reasonable costs and to provide these to clients demanding more personalised and customised services. With the internet and specific IT solutions, it became possible to transform the way the small order print industry worked. The ability to electronically control administration, workflow, design and production processes created new opportunities. Sophisticated networking technology emerged just as digital printing was being introduced. Combined, they created the possibility of a complete automated digital workflow from start to finish. By taking this holistic approach, Card Corporation developed a new and original business model. It is true to say that the internet made the company's existence and success possible.

E-Business activity

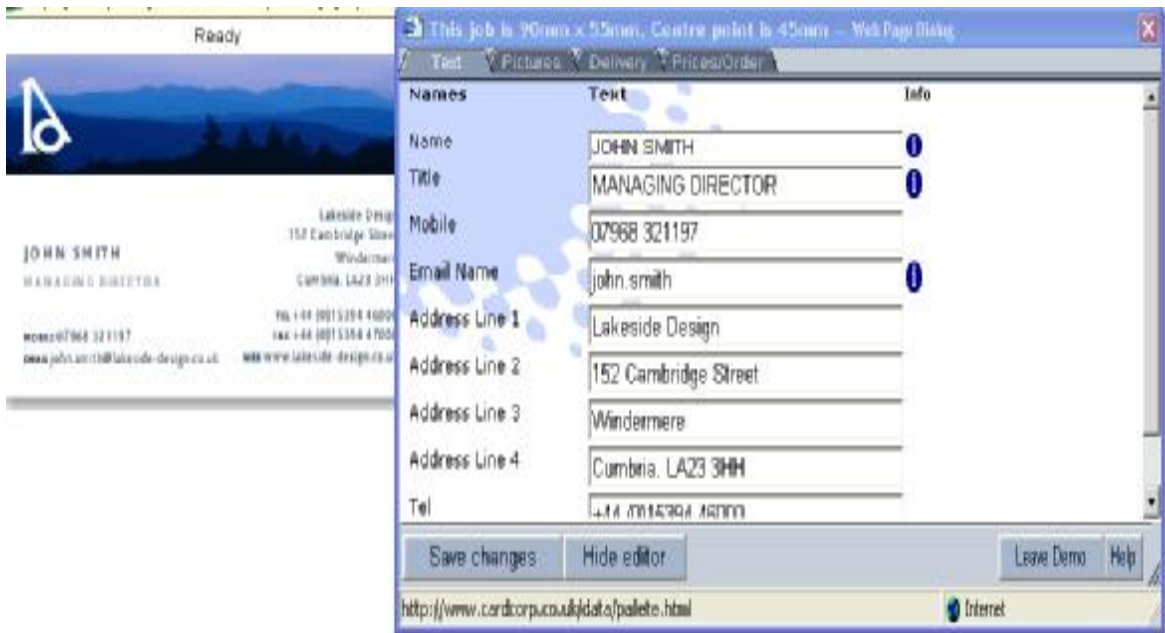
Stakeholders

One of the most important differences to the conventional way of doing business was handing control over from the company to the customers. The customer is empowered to design his individual product, access automated job tracking, use simplified reordering and comprehensive order activity reporting. These are just some of the benefits gained from the e-commerce application.

By offering virtual print ordering systems, the company involves the customer in the production process from the very start. The service is accessed by customers through a standard web browser with no additional software or skills are required. Customers log on to a remotely located server using a password to access templated solutions to place an order.

On screen, there is a floating palette together with a WYSIWG (What-you-see-is-what-you-get) interactive display, which changes as the details are changed. The palette allows customers to change text, colour, layout, typeface, bold, etc. By changing the x and y figures, the text lines can be moved to any position on the page. Online instantaneous proofing is available instantaneously. The software does not use PDF files but individually field automated matrix to generate dynamically interactive, flexible and positional text and graphics that can be automatically linked to their high resolution equivalents. Fonts are rendered on screen exactly as they will print, thus providing a true WYSIWYG interface.

Exhibit: Cardcorp's interactive web page for designing the business card



The challenge was to give visitors an interactive learning experience before they start to compose their own work. The step-by-step tutorial included on the website, together with helpful staff on the phone line, have proven a successful support to the learning process and empowered the customers, who admit having learnt quickly and effortlessly. Customers need to spend five minutes learning the basics of the full application that they are given access to, prior to designing their own work.

Furthermore, what seems to have had a great impact on the company's success is that almost all customer/supplier misunderstandings have been eliminated. The customers virtually control the entire workflow, up to the press stage, fully interactively. There is little room for things to go wrong because communication errors have been minimised.

Many people who understand the technologies and directly see the benefits of a more virtual approach to printing are customers and those in customer services. Customer's feedback has been very important for the organisation and is immensely helpful in improving the way the company operates as well as providing credibility to an internet based company. The firm also maintains a small call centre that functions as the hub of its activities.

The Systems Solution – Print Evolved

In the times when Card Corporation was founded it was virtually impossible to buy an off-the-shelf solution that would meet the needs of the newly created e-business company. Thus, the operational system has been developed by Ivor Jacob's team of graphic arts specialists in conjunction with GDI to manage short-run and personalised print over the internet. This cost in excess of 60,000 man-hours over 6 years. Print Evolved is based on a remotely hosted ASP software engine that uses the internet as a technology platform. It is accessed via a link on the website that activates the Print

Evolved software, ready to begin the print ordering process securely online. It also enables repeat print jobs such as business cards, stationery, point of sale materials and greeting cards to be stored and accessed time and time again. Firstly, the company designed its internet site. Subsequently, Card Corporation moved to production of customised sites for individual clients, where the look resembles their corporate sites and returns visitors to the main customer site, not the one of Card Corporation, when the ordering process has been successfully completed.

The design and ordering process

The design programme, that uses QuarkXpress extensions, enables customers to create personalised templates and to add variable data and graphic images. The programme has been written using a mixture of HTML, Javascript and Java language. Therefore to use this application all that is needed is a connection to the internet using the Explorer 5 (or above) browser that is Java enabled & has Javascript turned on. As most of these features are enabled within internet explorer 5+ by default, most users do not encounter any problems. The process allows print data to be created online and orders are processed through the Print Evolved engine instantaneously.

When the design is completed, an order is placed and payment is made usually by credit card through a third party banking service. The orders are automatically sorted into print queues and delivered to the printers as consistent and standardised formulated data. Unlike many print management technologies, Print Evolved doesn't use non-interactive PDF documents to display template-based information, instead, it uses interactive small XML format, which means the resulting downloaded batch files are just 2KB when compressed.

At any stage all (or individual) orders can be checked in full or partial detail. The employees know exactly when orders were placed and what the delivery expectations are. The files that are transferred from the web server contain both graphic and administrative information. Subsequently, they are uniquely referenced so always match up. All administrative data is run into and stored in the offline database and provides all the back up information.

Printing and despatch

All jobs are checked and then made up into files ready for the printing process. This process has turned out to be the most difficult aspect of the software. The goal was to fully automate the process and this was eventually achieved through hugely complex calculations.

Professional printing requires that only the highest possible definition graphics and type be used. Thus this stage of production takes the low quality web files and swaps them out for their high quality matches. A special case are the corporate customers who have logos in the first place and thus have no need to use one of the template designs. First their files are taken in and then necessary quality adjustments are made before the orders are published to the web.

For printing the company uses a number of processes. Indeed the system is not dependent on any single printing device. Though using exactly the same software and front-end interface, customers are able to design and order many different items including rubber stamps and T-shirts.

The printing method used by the Card Corporation Ltd is referred to as digital offset. This means that a traditional lithographic printing chassis is utilised, incorporating cylinders, blankets and plates together with a feed mechanism that allows printing on a variety of materials, including the best business card boards available. The difference between digital offset and traditional lithographic printing is that the plates are electronic and are dynamically produced with each revolution of the printing machine. Electronic inks are used which combined with the dynamic plates allow the consecutive printing of up to four colours and full colour. The digital offset system is

part of company's one million pound investment program towards better services o customers.

All company's products are packed in Visiboxes, which are also its own packaging product and have become firm's hallmark. The end-product is of top quality received by the customers within the days.

Impacts and lessons learned

In the case of Card Corporation, e-business became the integrator, the co-ordinator of all the firm's departments and provides the tactical link between all activities and an overall marketing strategy. But even more so, it seems that there can no longer be rigid departmental structures or hierarchies. There is specialisation, such as in a printing department. But every action taken by someone can be electronically recorded and provides an immediate knock-on parcel of information to another part of the company or even directly to a customer or supplier. Everyone, staff, customers and suppliers are then better informed and errors are scarce. Also, decisions can be made almost immediately which greatly speeds up the work and delivery times.

The technology has also had a huge influence on the company's employees and their role in the company. Probably the hardest part in the integration of the system was on the human level. The company's team had a challenging time developing, testing, implementing and re-testing the technology whilst at the same time running a busy enterprise that had to satisfy its day-to-day commitments to demanding customers. As a result, employees are well informed of the detail of day-to-day activities as well as the customer perceptions of the firm. They are then in a better position to absorb new developments that, together with the clients' suggestions, enable them to act flexibly and innovatively. The technology is partly responsible for creating the environment that provides motivation and development of novel ideas from employees.

Overall impacts are listed as follows:

- The printers can extend their business offering by providing unique online print ordering services to their customers.
- The print buyers and print management companies access a controlled ordering solution to support the purchase and management of print on a daily basis.
- By using the internet as an effective print creation and ordering tool, organisations save costs and significantly reduce turnaround times and eliminate heavy administrative tasks.
- By defining and providing an online print ordering process the company channel and control its workflow cutting down administration tasks and saving costs.
- The costs of revision control, ordering and storage is greatly reduced.
- New opportunities and market have arisen such as promotions to capitalise on news items, better security, production of unique, and therefore traceable, documents or packages.
- Through Card Corporation and Print Potential technology, Grasmere Digital Imaging has profited from an average of almost 1,000 orders a day.

References and acknowledgements

This case study was conducted by Aneta Herrenschmidt-Moller on behalf of the *e-Business W@tch*.

References

- Interviews with Ivor Jacobs, Managing Director of Ivor Solution Ltd and CardCorp Ltd and Sarah Wadsworth PR Account Director, January and March 2005.

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