

1:1 Marketing. Myth or Reality?

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Abstract

The market for digital color printing machines right from the beginning promised very high growth rates due to new applications like one-to-one marketing. However the promised growth has not yet occurred. To load machines with appropriate jobs needs a high marketing effort that printers and service providers do not usually provide. Cross departmental communication and cooperation, the structure and split of duties in the markets, and technical issues so far impede the growth of this promising and exciting application. On the other hand the internet provides great opportunities and first studies indicate that it will generate significant printing volume.

This presentation will give an insight and create hypotheses why the market for individualized products is yet to come but has great opportunities in the future.

Introduction

1:1 Marketing Definition

Today's market place often mixes the 1:1 Marketing approach with traditional direct mail communication which is sent in 100 thousands of mailings with only a change in address and salutation. 1:1 Marketing herein is understood as a communication strategy which results in the approach to speak to each receiver individually. The content varies from receiver to receiver taking into consideration the individual's interests and communicating only on those issues and topics in which the receiver is interested. Content variations are on text, image, graphics and color level.

The Markets Change

In the past decades communication strategies were driven by mass media: radio, TV and newspapers/magazines. With the help of those media, companies have managed to create brands out of products and established a corporate image in the heads of consumers.

Advertising has become an economical force through the growth of mass communication. The branded goods manufacturers and agency networks were and remain protagonists of this movement. Since the beginning of the 80's a new trend could be perceived: the trend to individualization. This trend has various reasons:

- 1) Loss of the modern human being into the mass: Mass media cannot satisfy the urge for being individual. The messages sent with this way of communication are "big messages" which do not differentiate market segments and ignores

everybody's wish to be individual. In the 90's a kind of overkill of advertising spending happened and with it the phenomenon of brand equality, what means, that consumers could not differentiate brands anymore. Advertising to mass has lost effectiveness through overuse of stereotypes and messages.

- 2) The role of PCs: Beneath phone and TV the PC is the third largest invention of medium of the past century. It was the technology that enabled individualization. The ability to save individual's data, to use it and communicate with other persons built the backbone of the evolution to individualization.
- 3) Internet and the consequences for marketing and communication: The internet has a major benefit over other media like radio, TV. There is no fixed purpose but it is an open media for transportation of whatever content, that can be delivered digitally. Nobody owns it, not even big industries and so far governmental regulation is limited. Entry barriers into the internet are low and it offers a view into future where cost of information transmission is low. Distances don't play a role anymore and information is available at a mouse click. Internet and PC will change the world, political, social and economical. For the industry it offers new ways of business and a new sales channel but also a new way of communication with the customer.

Differentiated Marketing for Differentiated Target Groups Down to the Target "Group" of One.

The power of the consumer in an already existing buyer's market is strengthened by the internet. Customers can decide on a worldwide basis where, when, and at what price they buy. All relevant information is just a mouse click away. That means that prices will become similar for services and products which are similar. It will not be enough to only build a brand with advertising.

The power of the brand increases through customer relation management, which utilizes the knowledge of all transactional processes of the customer with the brand. These transactions are more than just buying activities. They include all relations between customers and a company on all levels: be it in service, distribution or in communication.

Studies prove that money which needs to be spent for acquisition of new customers or a lost customer is almost triple than to keep a customer. In 1:1 Marketing acquisition of customers is not the focus. Rather the focus changes to customer relationship management. Instead of following the typical development of the last decades on the axis

- product > mass advertising > brand > product management

the paradigm changes to a new axis

- customer > customer transactions > database > customer relation > customer management

Still organizational structures are driven by products and product management. What is quite logical: it has taken more than 30 years to fine tune and establish that kind of product oriented organization. And, it will take another couple of years to establish real customer management in an organization and find the right interfaces into existing structures.

Does Technology Make the Change?

When the first digital color presses were introduced to the market place and made available consultants preached high growth rates for the volume of those devices. But reality was different. Lots of vendors shipped to market pre-maturely with products then developed at the customer sites.

Print services like "Quick turnaround printing" (which is ideally suited for digital printing presses having dry output so no drying time is involved to start binding) as one of the new businesses was risky, given the fact that the presses were and still are unreliable. The time advantage over conventional offset printing processes is at risk.

In July 2000 NexPress has evaluated Average Monthly Print Volumes (AMPV in A4 4/0) on 157 devices in Europe like Xeikon (sample size 47), Indigo (sample size 43), Xerox DocuColor 40 (sample size 33) and Canon CLC 1000 (sample size 34) in four countries (UK, Germany, Austria, France). The median AMPV of Indigo and Xeikon systems was about 60.000 A4 4/0. Median AMPV of Xerox and Canon devices was about 34.000 A4 4/0. Having in mind that Indigo and Xeikon devices print from 70 A4 4/0 (Indigo E-Print+ in simplex mode and Xeikon DCP 32/D in duplex mode) up to 100 A4 4/0 (Xeikon DCP 50/D in duplex mode) those units on average were only used monthly for approx. 28 hours per Indigo system or 16 hours per Xeikon system. That equals in a 8 hours shift for the Indigo devices 3,5 days and for the Xeikon systems 2 days of utilization per month!

The volume available from the overall printing market to the digital color presses is low due to the fact that the breakeven for cost per page compared to offset technology is around 500 to 1000 depending on how the manufacturer calculated the cost and which job mix they have used. The "short run color" market for those devices is under pressure from copiers at the lower end and direct-to press presses like Quickmaster 54 DI at the upper end.

The main technical differentiation to other presses is the capability of the digital presses to generate a different image with each rotation of the electrophotographic

drum. Therefore the primary application set which cannot be surpassed by any other device is applications where every print is different from the other (like direct mailings). So, applications were developed which met the needs of the digital color presses and actually met the needs of marketing communication to slice target groups down to the number of one, the individual.

Rogers & Peppers established fundamentals in their books like "The One to One Future" ² or the "The One to One Fieldbook" ³ with a simple message: "The big winners will be those companies that best make use of the customer data they constantly collect, and create a relationship that involves interacting with the customer by tailoring products and services to their needs". This way, the customer will become loyal and even better. As customers tell more about themselves, sellers can create new products that have built-in buyers. It's not only collecting and using data but analyzing it and know about customer needs. Here the internet can become and already is a valuable provider of customer information.

In 1998 NexPress evaluated in Europe job mixes of applications being printed on digital color presses and found that only around 10% of all jobs being printed on such devices were personalized. Of this 10%, only 2 to 3 % were in color the rest was black and white personalization only.

If personalized applications are the main volume building factor for digital color presses one might ask the question where they are, and if they are not there, what holds them back from making the volume which was forecasted by consultants? To generate more volume, owners of digital presses need to understand that they did not purchase just another printing device but were opening the door to new business models and high value printing services that increase the value of printed information and processes.

Hurdles in the Market Place

Analyzing the markets and it's participants shows that a couple of hurdles need to be overcome:

- Organizational problems in companies
- Organizing and managing customer data
- Legal barriers and protecting privacy
- Advertising Agencies and their value add
- Capturing communication process cost
- Proprietary dataformats
- Real life application samples

Organizational Problems

Companies need to be organized in a way so they meet the needs of customers and address bottlenecks in the market place. In early times, manufacturing was the bottleneck in the market, so organizations needed to address it. Then distribution channels of products were the bottleneck to satisfy the demands in the market, and again companies needed to address this bottleneck by focusing the overall organization to sales.

As markets become more saturated, needs of customers and target groups need to be evaluated to create new products which focus on particular needs of target groups. Product Management was introduced internally to manage a variety of products within the organization. In today's market place where variations of products are available from various vendors and are quite equal from a quality and price/ performance view point, markets become highly competitive.

To increase a company's market share in saturated markets only stealing market share from competition helps growth. Companies need to take activities and be proactive to avoid losing customers to competition.

Therefore a clever customer relationship marketing must be established centrally in the organization with links into all departments that have contact to customers.

Organizing and Managing Customer Data

Customer data often is not available centrally. Many different departments are in contact with the customer and have their own set of data. Data which is needed to fulfill a department's organizational tasks is collected and stored for only this purpose. Accounting focuses on financial data, sales on customer and investment data, service on machine data, marketing on customer's business data. And, each department has a customer's history if they have managed to keep their database up to date and alive. Did you ever wonder why the very same company sometimes spells your name correctly and sometimes doesn't? Often decentralized data drive these processes and for whatever need your data are pulled, it is pulled out of a database created for this purpose only.

To overcome that hurdle, companies need to re-organize the way they are managing customer data. The financial department needs to speak to the service department, marketing needs to speak to the IT department, and everybody needs to agree to the plan. There will be implications on organizational structures and maybe the complete IT infrastructure needs to be streamlined. Responsibilities need to be assigned to owners driving that process. Tools to analyze data need to be reviewed and tested.

According to a survey in May 1999 by Forester Research¹ of 54 online retail companies, 39% said that combining data from different systems has proven to be difficult, as data management and not data collection is key driving factor in the e-business world.

How long does it take to change a companies infrastructure and mind set? Based on organizational changes in the past, such a process can take for years. Five years might not be long enough for such dramatic changes.

Legal Barriers and Protecting Privacy

Georg Orwell's vision of Big Brother was that government controls everybody, knowing everything about the individual and thus controlling him. But it is not government that threatens privacy today. It is the value of individual data for commercial use.

Lots of efforts are undertaken to capture individual data although the tracked person is not aware of the tracking. Data-mining companies constantly collect individual's data and buying behavior through business intelligence software, that help to fish out data from offline databases. Such are of concern because they can be misused. Currently cookies that advertisers place on Web user's computers track that person's behavior. But today these cookies don't reveal a person's name or address. The possibility to link offline databases with data about online habits is what makes privacy activists howl.

Even in US where past concerns about private data were not taken serious those new concerns have prompted calls for tighter government regulation. Right now people in US have no clear legal recourse. And while nobody wants the government policing the internet, somebody must enforce standards for handling of personal data. If regulation goes too far, companies may be hamstrung in what data they can acquire and how they can use it.

In Europe there are already laws and regulations on how data can be used and a strict guideline on data protection has been published by the EU lawyers causing much pushback in those companies that deal with data for a long time: the Direct Mailers. Part of the new regulation gives the receiver of such information that is sent unasked, the right to get feedback about the purpose of advertising or market research activity and where the sender got the personal data from. Additionally the addressees need to be informed about their right of objection.

Most companies insist that they can regulate themselves. But as online direct marketing becomes more successful and more automation tools are available, the value of personal information will soar – as will the temptation to misuse it.

Advertising Agencies and Their Value Add

Traditionally, advertising companies were consultants to their industrial clients. They help to define and realize communication strategies. The expertise of full service agencies is in creation and design, adding value by knowing communication media and managing communication campaigns. They earn money on creativity and design, the management of the overall creation process, and get kick-backs from the media for placing ads and spots. As headcount is the critical cost factor for agencies, they try to limit this cost factor in areas which are not mission critical e.g. administration and accounting.

Looking into the needs of 1:1 marketing, the role of the advertising agencies has changed. Advertising agencies do not know the customer data captured in a database of their industrial clients and do not know the potential of what can be done with it. The data belong to the client who manages the content. Advertising agencies do not know how to mine and interface databases to derive data out of it. The owner of this process clearly is the client's IT department. Advertising agencies cannot

provide the technical know how of managing a datastream from a database and a personalization tool, and how it is to be sent onto a color digital press. The creation of content is a problem because the client owns the content of the customers individual needs and history. The value add of advertising agencies to the process of individualization is limited to design only.

Capturing Communication Process Cost

All marketing activities are about getting a customer to buy the companies' services and products. Lots of processes can be measured for cost but when it comes to communication processes, measuring cost is difficult. If ten more ads are placed in magazines and newspapers how does this influence overall sales? Everybody who is involved in marketing communication knows the question: How many more machines do I sell if I spent this money in a TV spot or in ads?

In the area of Direct Mail cost and return can be calculated, using special and dedicated coding to track orders generated through the direct mail campaign. Efficiency can then be calculated as "Cost per order" or "Cost per interest" metrics.

But calculating efficiency of ads or product brochures and literature is almost impossible. There are methodologies in place to track efficiency (like contacts per page or viewers per spot) but there are many uncertainties that these metrics are actually valid and can be tracked to a level to be able to answer the question of how these activities have generated sales.

Interestingly, the total process cost of communication is often not analyzed in detail. Instead in the past focus has been to capture only a few parts of the communication process like cost of creation, cost of media, or cost per page, which can be tracked more easily. Focusing only on parts does not help to optimize the complete communication process. New services in digital color printing focus on process cost rather than on cost per page.

Services like "Print on demand" or "Just in time printing", which are focusing on eliminating warehouse stock of printed material which often becomes obsolete, consider the overall cost involved in the entire process from the creation to the production and delivery of information. Although the cost per brochure or whatever information material is on stock might be more expensive, the overall cost and additional value capturing customers data when he requests information might lead to a more cost efficient process than the traditional process. Print on demand also influences communication process factors like accuracy of information, relevance of information and the overall communication strategy.

Another service for digital printing is the "1:1 Marketing" application. This communication process in particular focuses very much on the relevance of information to the receiver. Again cost per page might be higher but due to the fact that the selection of information and preparation of the overall design was

targeted to an individual person or organization the chance to close deals is higher.

Proprietary Dataformats

If all the hurdles we have discussed so far are overcome and data were available to generate individual pieces of information then another hurdle is in sight. All software packages available so far that can manage variable data and color then have one big disadvantage. Once the datastream is generated and sent to the RIP (Raster Image Processor) the data are dedicated to a particular digital color press. In highly complex jobs these data need to be RIPPed for hours – remember the color information in color images needs time for interpretation – so late minute changes are hard to handle. Late minute changes could be of the document's content or possibly a machine is down and there is need to redirect the job to another press. All-in-all, the workflow issues are big enough to create another hurdle.

At the Drupa 2000 trade show in Duesseldorf a new standard output format for variable data printing named Personalized Print Mark-up Language (PPML) was presented by PODi, the Print On Demand Initiative (founded in 1998 as a non-profit institution for strategic marketing and education).

This standard is based on the Extensible Mark-up Language XML. Consequently, this means that XML is the programming language in which a PPML application - the master file - is generated via the PPML output driver, in addition to the files that describe the page elements. A basic understanding of the extensible mark-up language is required in order to understand the personalized print mark-up language.

XML makes it possible to fulfil the high demands imposed on printed products and exploit the advantages of content-driven document management. Since its definition, the Extensible Mark-up Language has steadily become the standard for cross-media publishing as a result of these diverse possibilities. The merging of the World Wide Web, cross-media publishing and database publishing has acquired new stimuli and drive from XML, because XML data are clearly structured and, due to its media-neutrality, suitable for versatile use. The tags are clearly defined and described by the corresponding document type definition (DTD). By interpreting the XML data, an XML browser makes it possible to view and output the data. Its function is similar to that of an HTML browser.

The concept of the personalized print mark-up language is such that a PPML file is generated by a so called PPML producer. PPML producers can be stand-alone applications, program extensions or the like. The PPML files generated are processed by a so called PPML consumer. A PPML consumer is typically a raster image processor or the digital front end of a digital printing system.

The PPML structure is hierarchical down to the page element. The individual page objects (mark elements) are not part of this hierarchy, as 100% variability of the pages must (theoretically) be assured in variable data

printing. In addition to its strictly hierarchical nature, the data structure of the personalized print mark-up language has one decisive feature: the objects described in the PPML file are distinguished as being "disposable" or "reusable". An object that is needed several times in a printing process is labeled as "reusable". It is RIPed once and kept in buffer storage in RIPed form for further use. The object is called up from memory as needed and printed in the appropriate position on the page. When a PPML file is generated, a recurring object is assigned to a layer in accordance with its frequency. It becomes clear that the individual objects of a variable print job need only be RIPed once when using PPML. The time saved is an unquestionable advantage of the personalized print mark-up language.

PPML is advantageous when creating a dynamic layout because the complete print output need not be tied to a specific digital printing system at this very early stage (layout phase). Depending on the personalization tool, this is virtually unavoidable today, meaning that a rapid change of digital printing system or the unrestricted implementation of remote printing is impossible!

The personalized print mark-up language is currently in the establishment phase. The manufacturers are in the process of making their systems and solutions PPML-compatible. At Drupa 2000, several exhibitors demonstrated the practical use of the personalized print mark-up language at their booths. However, these presentations were not approved solutions.

Numerous personalization tools will support the PPML output format starting in 2001, so that PPML data will increasingly be exported from digital prepress after the creation of a dynamic layout. Various manufacturers have announced the introduction of PPML producers by late 2000/early 2001.

Several manufacturers already presented PPML consumers at Drupa 2000. The manufacturers of digital printing systems and RIPs have already announced that their digital front ends will start extensively supporting the personalized print mark-up language in 2001. Nevertheless, there is still a lack of a broad foundation to bring about the definitive breakthrough of PPML.

Real Life Application Samples

Reports of real life applications in 1:1 Marketing have told and are still saying that response rates of 30+% seemed to be not unrealistic. Interestingly, some deeper investigations showed that although response rates were high some of the companies did not repeat such campaigns. This could have various reasons. First, the company that had great success may want to keep all further information disclosed to protect themselves and have some competitive advantage. Second, one could assume that the extra high efforts within the projects to get alignment between various departments and external service providers kept a company from repeating such campaigns.

NexPress has invested in a project which started in 1998 together with the Institute of Information

Management in Dortmund⁴, Germany to create a pilot project that compared traditional direct mail pieces with those being generated on an individual level using the individual data of the receiver. The study confirms that the response rate of fully personalized direct marketing is higher than that of conventional mailings. In addition, long-term marketing programs save time and cut costs while simultaneously achieving higher response rates.

How the study was conducted: A conventional direct mailing and a fully individualized mailing produced by digital color printing was compared with regards to implementation and outcome. The main conclusion: in 1:1 Marketing, mailings that contain information of specific relevance to the addressee achieve a response rate that is nearly three times higher than that of conventional mailings.

The pilot study was conducted within the framework of a direct marketing campaign by the Duesseldorf Municipal Utility Company, Germany. The objective was to acquire business customers for the company's new combination gas and electricity products with the help of a four-page brochure. The addressees of the traditional mailing received a brochure with content that was not tailored to the individual, and only mentioning name and address in the personal salutation. The others were addressed individually in the brochure and given direct information on their specific savings potential, among other things like linking typical images of branches they came from.

Within 7 weeks, 15.5 percent (104 of 670) of the customers contacted in individualized fashion returned a signed contract, while only 5.4 percent (40 of 748) of those addressed in the traditional manner were motivated to sign. The percentage of customers who received individualized information was also higher among the group of customers who made telephone inquiries: 6.3 percent (compared to 2.4 percent of the conventionally addressed customers) chose to call. Of this total of 60 customers, 38 signed the contract. The percentage who received personalized information was again remarkably high in this case: 71.1 percent of the companies that signed the contract after making a telephone inquiry were among the group that had received the personalized mailing.

Under the direction of Prof. Dr. Carl B. Welker, the job completion times associated with the mailing campaign were also analyzed. According to the results, individualized, digitally printed mailings particularly pay off when the greater effort required to generate the required variable content is utilized in several campaigns and if the data is stored in databases.

Based upon the findings in the study Dr. Welker calculated a scenario with the following metrics:

- 3 different campaigns types (e.g. new product or service, holiday)
- 6 campaigns of each type in the targeted time period
- Templates
 - 4-pager
 - 12 variable fields

- 2 variable images and 1 graphic in 10 variations
- 5000 addressees (equals print run)
- 2 employees in creation and content management
- 50% reutilization of elements in creation
- 50% predictability of elements in creation

The findings were that the overall cost for the creation and production of digitally produced campaigns were 25% higher than in conventional production. However, if the higher cost was put into relation to the higher response rate the "Cost at Equal Effectiveness" which is calculated by "Total Cost" divided by the "Overall Response Factor" was DM 178.200 for digital printing versus DM 426.780 for the traditional production. The time for job completion was just one fifth for digital production from the time required for conventional production.

Other positive effects like the synergistic effects of bundled technology (e.g. order and control process via Internet), further quality effects from automation and standardization, and the advantages of flexibility were not included in the computational model. The results in various scenarios proved to be highly stable, even with broad variations of the variables. (More details of the study can be found in the press center on www.nexpress.com)

Conclusion

Although hurdles in the market for 1:1 marketing still exist, organizational changes are taking place. Managing customer data efficiently and creating a central datawarehouse with customer information is slowly becoming reality. Lots of measurements are taken in organizations to manage customers more efficiently but still face the challenge to organize data the right way. An

enormous potential lies in internet based tools for customer data capture if these data are efficiently organized, and legal restrictions do not prevent using that data. 1:1 Marketing so far is a dream but it slowly becomes reality.

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Biography

The author has 18 years experience in the graphics arts market. He has a degree in business administration and engineering.

Mr. Gross started his career in graphic arts and worked for almost 4 years in the area of layout, typesetting and reproduction. After university he joined Linotype-Hell and held various positions in international product management and marketing. In 1997 Heidelberger Druckmaschinen hired Mr. Gross to help build a product line for digital color printing. This project in which Mr. Gross was engaged in Business Development and Marketing, later became NexPress. Today he manages NexPress Sales Development and Support for Central Europe.