# PERSONALIZATION OF INTERNET CONTENTS

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**Abstract:** *Mass customization is a popular subject in research (Pine, 1993; Gilmore and Pine, 1997), and is getting more attention in literature in the last decade because the needs and desires of the consumers are changing, which leads to high market turbulence (Pine, 1993). Public relationships staff used micro-demography (which precisely defines target audience in relation to interest, gender, education level etc.) in order to approach different groups of the public and information adjusted to them.*

*Beside traditional media, the publics were more and more divided into groups with specialized interest, which gave rise to the development of Mass Customization and Personalization concept in e-communication area. The fragmentation of the public led to the gradual disappearance of mass media. Internet is the medium which participates in communication in a very specific way. That means that you have two basic actors in MCPC process Thus, we have two specific sides, one is the consumer and the other is the Internet as »producer«. Due to the fact that the Internet is the global medium and that it is not a classical factory, the consumer must customize alone what he or she wants, and after that use his or her own services.*

**Key Words: *Mass Customization and Personalization approach, Marketing, Public Realations, Internet Content, Electronic Applications.***

## 1. INTRODUCTION

A company can rarely satisfy everybody in the market and for that reason segmentation is necessary. This refers to identifying and profiling distinct groups of consumers with different needs and desires and it requires different marketing mixes. The segmentation of mass market into a hundred smaller markets started in the 80s and has continued until now. Needs and desires of consumers are changing, which leads to high market turbulence (Pine, 1993). Public relationships staff used micro-demography (which precisely defines target audience in relation to interest, gender, education level etc.) in order to approach different groups of the public and information adjusted to them.

Beside traditional media, the public were more and more divided into groups with specialized interest, which gave rise to the development of Mass Customization and Personalization concept in e-communication area. The fragmentation of the public led to the gradual disappearance of mass media. Technology provides many ways of transmitting massages to concrete individual. The key words are niche programming and concrete TV programmes. As communication instruments in mass media became faster a need arose to modify massages for small and well-defined public. That means identification and understanding of particular interest groups and their cooperation with media they believe. Common messages are the past. Public Relations experts communicate both with the individual and with mass audience. Experts for communication deal with many people and with the public in general. Technology enables divisions and subdivisions of the public to the point of addressing an individual.

People are still there, but mass public concept had been destroyed by new ways of communicating with people.

At the same time, IT technologies have expanded quickly during the last few years. During the 90s the number of Internet sites rose from 4 million to 20 million. According to Nielsen researchers, 78 million people used the Internet by 1998. One third of these were buying via network which points to the development of MCPC approach to communication. The following picture 1 shows the world between 2000 and 2007. Picture 2. shows the predicted growth of Internet users between 1995. and 2010.



*Picture 1*

**Internet Users in the World**
**Growth 1995 - 2010**
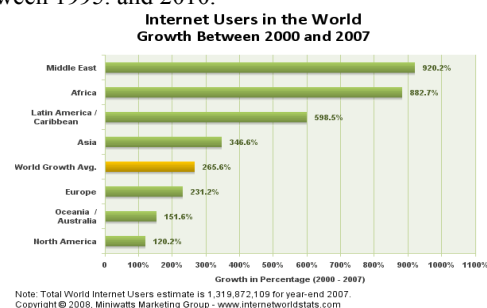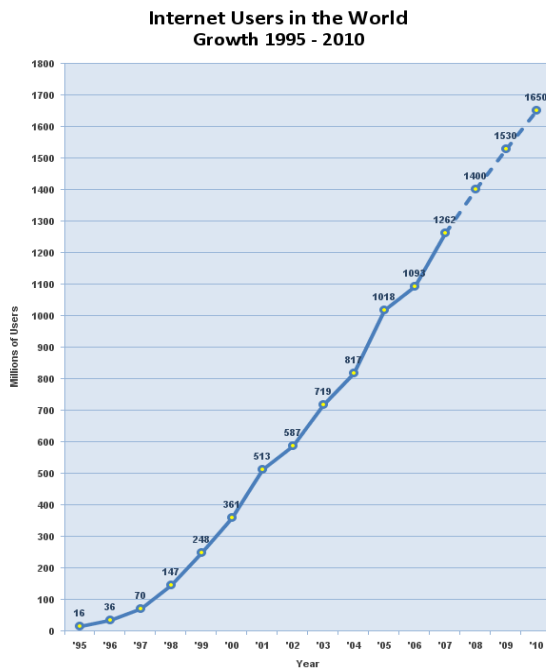
*Picture 2*

The world economy has gone through radical changes during the last two decades due to the influence of informational technology, various innovations and rising world market. Geographic and cultural differences have decreased by acceptance of new trends including Internet and that is why many people say that the world has become 'global village'. Globalization is a social process where geographic boundaries of social and cultural activities lose their importance and in which people become more and more aware of it. (Senic, 2001). The world is strongly entering information and e-communication and informational technology era that were strongly influenced by the Internet which influences knowledge increase and creates a new dimension in all spheres of individual and social life.

The main objective of the Internet and IT technologies is communication improvement between the suppliers, the system, the consumer. Throughout history, people tried to improve communication. First the printing press was invented in order to multiply and forward information in a fast and simple way. Then, F. B. Samuel Morse invented the telegraph in order to send messages through air over long distances. From our stand point we can conclude that every stage of human history brought certain improvement and development.

## 2. INTERNET AS A GLOBAL MEDIUM

Internet is a communication medium without space and time limits. Picture 3 presents the comparison of traditional and online technologies. By using ICT in the technological sense, communication channels gain a completely different meaning and partly eliminate the traditional communication channels between employees, as well as between the system and the environment.
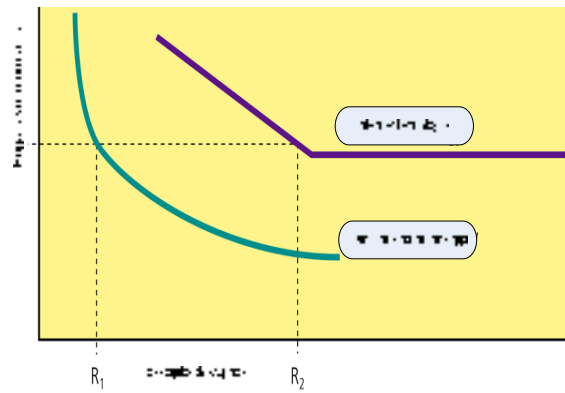


*Picture 3– Comparison traditional and online technologies*

Internet as a technical solution and network concept presents huge business potential." (Äyväri, 1997). The dramatic growth of the Internet can be explained with the virtuous cycle. The core of the virtuous cycle is user fascination. Users, both consumer and business, become fascinated with the new technology and acquire the Internet connection. Providers see this developing opportunity and rush to create new content. This creates a large amount of media coverage and more news stories on the topic.



**World Internet Users**
**November 2007**

**World Internet Users**
**December 2007**
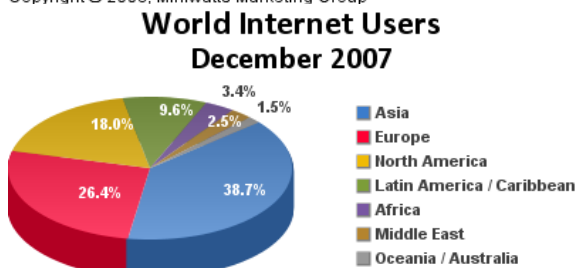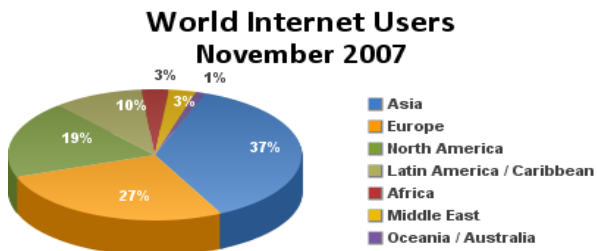
*Picture 4*

The transition from traditional marketing to Internet marketing brings also with itself a great number of Internet users which can be seen from the chart above. Mass customization is a term which is often used in literature, basically referred to as mass production of customized goods. Many researchers addressed mass customization for physical goods (Pine, 1993; Gilmore and Pine, 1997; Lampel and Mintzberg, 1996; Duray et

al, 2000; Tseng and Piller, 2003; MacCarthy et al., 2003). But, digital products are transmutable and they are extremely customizable. The Internet economy enables strategies of customization and personalization for suppliers of digital products, much more than the economy of tangible products. Take for example the Amazon.com website. Jeff Bezos of Amazon: *"If I have 10 million visitors to my Web site, I should have 10 million Web sites for my visitors!"* (Riedl, 2001). Santonen (2003) suggests basically the same, but instead bases it on demand-side economies of scale (Shapiro and Varian, 1999). Demand turbulence is increasing the level of customization in the case of digital information products (Santonen, 2003).

In the folowing division we can see a short view of communications applications which we use today::

- e-mail
- Instant messages (IM)
- Voice system
- Electronic data interchange (EDI)
- Teleconference
- Videoconference
- Intranet
- Extranet, etc.

What Internet provides to consumers:

- A significant rise in purchase power. Consumers, today, can click and compare competition price with product/service characteristics. Only in a few minutes they can receive every answer on the Internet. Goods and services proposal is diverse. Today, consumers can order anything via Internet: furniture, consultants, medical advice, books, foods, they can even study by Internet;
- People can read almost every daily newspaper in many languages from different places in the world;
- Better interaction and easier issue and receiving order. Consumers can book from home, office, by mobile phone at every time of the day or night and every day of the week.;
- Compare notification about products and services. Consumers can enter  Chat room, interactive site, and there they can exchange information and opinions.

What Internet provides to companies:

- New information channel which is more powerful and widespread. Unlimited transmission of information;
- Companies can collect meaningful information about markets, consumers, potential consumers and competitors and can do new market research on the Internet;
- Companies can communicate with employees faster and more easily.;
- Companies may establish two-way communication with their (own) consumers and

clients, so as efficiency transactions for order implement and efficient payments;
- Companies can send messages, coupons, templates and information to consumers who need their materials;
- Companies can establish to way on customize own proposal and services based on information from database their consumers.

## 2.1. Framework for Internet Marketing

Internet and marketing are nowadays strongly connected because this enables direct and interactive relationship by the usage of computer network, while the main goal of marketing concept is offering the choice of products or services according to consumers' needs and desires and relationship creation and maintenance through various marketing activities of a company. (Ljubojevic, 2001)  Internet has created a space for practical and interactive marketing actions aimed at consumers and has shown as a powerful mean for marketing oriented companies for better service of consumers and for efficient achievement of its own economic and marketing goals. The new trend in this new era of marketing are social networking web sites that have created a real boom especially among the young people. Social web site is a place where people with different comments and opinions and community building are one of the fastest growing applications on the web.

- The Web is changing the focus of marketing from segments to the individual and from **one-way to two-way communication**
- Consumer contacts can be easily used to:
  * generate revenue
  * lower the cost of consumer service
  * assist in new product development
  * **personalize** prices and offer special
    promotions
  * enhance brand building
  * advertise and communicate
  * build communities
- A key aspect of Web marketing is the possibility for the "digitization" of product attributes -- meaning– while consumer interactions with the firm becomes cheaper with the Web, consumer acquisition, capturing attention, and sustaining interest over time remains expensive / difficult
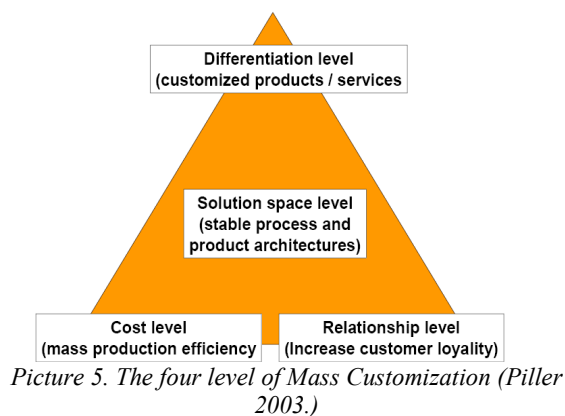
## 3.  MCPC

Variety, or increased choice, is positively related to consumer surplus (Brynjolfsson et al., 2003). Variety is a term that sometimes is mixed up with customization. Customization and variety are strongly related to each other, but variety is not the same as customization. Variety provides choice for consumers, but not the ability to specify the product as is the case with customization. Variety is the tool for mass customization, because it can create the link between the consumer and the product (Svensson and Jensen, 2001).

Customization can lead to many variations of products. In addition, the reproducibility of digital products can lead to an enormous variety. The Internet makes it possible to reproduce digital products for virtually anyone, which can lead to an enormous choice of digital products.

Internet can be supported in order to maximize variety while minimizing complexity and search costs. Mass customization is a popular subject in research (Pine, 1993; Gilmore and Pine, 1997), and is getting more attention in literature the last decade because the needs and desires of the consumers are changing, which leads to high market turbulence (Pine, 1993). However, in literature little attention is paid to the customization of digital products.

Users seek value in exchange for heir valuable time. Customization supports the value exchange. Customization means tailoring the WWW or Web content according to the needs and preferences, either expressed or inferred, of the consumer. The purpose is to ensure that *the right people get the right content at the right time and delivered or presented in the desired way*. For example a consumer using a Web news service can only view the news he is interested in or wants to be informed ("news on demand"). According to a survey[1] almost 75% of Internet users would be interested in "news on demand" services and 67% would like customized news. People like to control the news they see instead of watching or reading news items selected by others. Over two thirds of Internet users believe they would be better at selecting news of interest to them than a professional news editor would be. (Nua Internet Surveys, [B], 2000). Internet is the medium which participates in communication in a very specific way. That means that you have two basic actors in MCPC process. Thus, we have two specific sides, one is the consumer and the other is the Internet as »producer«. Due to the fact that the Internet is the global medium and that it is not a classical factory, the consumer must customize alone what he or she wants, and after that use his or her own services.



*Picture 5. The four level of Mass Customization (Piller 2003.)*

The boundaries of the modern sphere of business activity are determined by rapid technological progress, a highly specialised consumer/client-centred market and by limited financial capacities. The changes brought about by rapidly shifting trends mean that the human being, the individual who creates his or her own tools within the business environment, is in a position of constant communication with his or her own micro and macro environment. The goal of information exchange is personal improvement, exchange of experiences and ideas, identifying user needs, discovering alternative solutions and promoting personal reputation and the reputation of the company. The frequency of communication eliminates any possibility of the creation of improvised information distribution channels. The time factor does not allow for constant consolidation of functional interdependency's between the company and stakeholders. A high degree of standardisation of the processes and bearers of information is required. All this stands in contradiction to the basis of communicative creativity as the fundamental component from which the very outcome of the process depends.

### 3.1. Traditional vs. Digital Contemporary MCP Approach

Traditional mass customization can be defined based on three findings (Kaplan and Haenlein, 2006). First, mass customization should be applied to products only. Second, mass customization should only be used to describe consumer–producer interaction at the operations level of the value chain. Thirdly, mass-customized products should have production costs and monetary prices similar or only slightly higher than those of mass-produced goods. Earlier, Tseng and Piller (2003) used a comparable definition of mass customization by defining a differentiation level for customized products or services, a cost level like mass production efficiency and a relationship level to increase consumer loyalty. Kaplan and Haenlein (2006) argue that customization can only be practiced on products and not on services. Their definition is as follows:

*"Mass customization is a strategy that creates value by some form of consumer–producer interaction at the fabrication/assembly stage of the operations level to create customized products with production costs and monetary price similar to those of mass-produced products."*

Kaplan and Haenlein (2006) use the definition stated above to define electronic mass customization. For that, they use the dimensions product, player and process which can all be physical or digital (Choi et al., 1997). These dimensions determine the degree of electronic commerce, and are adopted to define pure electronic mass customization. If all dimensions are digital, it can be called the core of electronic commerce (Choi et al., 1997).

Loebbecke (1999) argued, however, that the dimensions of Choi et al. (1997) cannot be used for on-line delivered content or purely intangible products. Since this research focuses on intangible products only,

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[1] "A View of the 21st Century News Consumer" designed and conducted by Frank N. Magid Associates for The Radio and Television News Directors Foundation (RTNDF).

this definition is not applicable. Loebbecke (1999) proposes a distinction similar to Choi et al. (1997) that a product can be either physical or digital, but the player or the consumer is always physical. In addition, Loebbecke (1999) adds the characteristic of bundled or unbundled value. Traditionally, intangible products were always embodied in some physical means. Now, the link between content and support has been loosened (Goedvolk et al., 2004). As a result, identical content can appear in different forms and packages. The content is what is valuable, bundled or unbundled. For a digital product to be delivered over the Internet, it should be unbundled from a physical carrier. The importance of bundling content with a physical carrier has decreased significantly with the emergence of the Internet. The process dimension is kept, but is reformulated as off-line and on-line. Furthermore, a high degree of customization can be achieved when consumers are involved at the design stage of the production cycle (Lampel and Mintzberg, 1996; Duray et al., 2000; Da Silveira et al., 2001; MacCarthy et al., 2003). Pure customization can therefore not only occur at the fabrication/assembly stage, but also at the design stage.

The definition of customization for this thesis is based on the definition of Kaplan and Haenlein (2006) and uses the dimensions of Loebbecke (1999). This results in the following definition, which is visualized in Figure 2.1. This definition draws on mass customization addressed in existing literature, which is reviewed in the next section. The definition incorporates the type of product to be customized, the process and the value.

*"Pure customization is a strategy that creates value by some form of consumer– supplier interaction at the design stage of the operations level to create customized products with production costs and monetary price similar to those of mass-produced products, where the product is digital, the process is online and the content is unbundled from its physical carrier."*
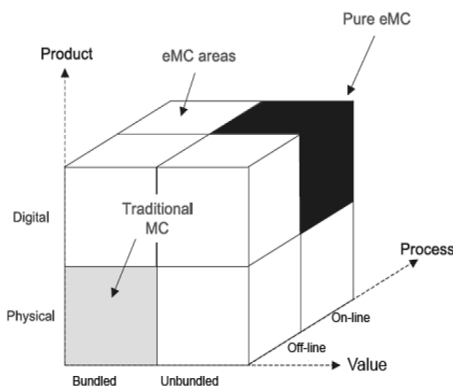


*Picture 6. Dimension of electronic Mass Customization (Kaplan and Haemlein, 2006. )*

Picture 6. shows the difference between pure electronic mass customization and traditional mass customization. A mass customization market can differ in three components when traditional mass customization and pure electronic mass customization are compared:

the product, the process and the value. To illustrate these dimensions, the figure has orthogonal axes.

Consumers do not want more choices, they want exactly what they want – when, where and how they want it (Pine et al., 1995). Important drivers that lead to more variety and more mass customization are globalization and market turbulence (Svensson and Jensen, 2001; Santonen, 2003). Markets are becoming increasingly global, and competition from low costs manufacturing countries is getting larger. Products are no longer targeted at one geographic market only, but moreover towards a global market. Product variations therefore must be made possible in order to adapt to different needs and tastes. Through the use of modularization in mass customization, the risk in product development can be reduced as a large number of variants can be launched (Pine, 1993).

All of these facts explain that the consumer in online environment has become demanding and that he or she wants a product or services designed exclusively for them by saving time and money. This is the main topic of this paper.

During the last thirty years more information has been gathered than in the previous five thousand years. On the Internet we can find anything we want and this is what invites us to use to the Internet and personalize content

**Example: Customization of online media communication example – Netvibes.com**

Netvibes.com is the first online service which allowed the use of advanced Web technologies, with the cooperation of consumer experience management (the term *Web 2.0* describes concept of using new Web technologies and information architecture to enhance a consumer experience). Netvibes.com use XML-based technologies like RSS (Real Simple Syndication) and ATOM, for the simple "pool" of an online content, which is of some interest to the single user of the service, for the user to view some content from several Web locations without the actual site visit. All Netvibes.com users have their own tastes, and they observe the online content from one place, instead to go on many Web locations.

Those kinds of services share the same name – RSS Readers. There are online RSS readers like Bloglines.com, or Google.com/reader, as well as desktop RSS readers like FeedDemon.

Many Web locations (including blogs) have the ability to syndicate content through XML-based RSS or ATOM technologies, which allow the possibility to track the latest updates of the content from hundreds of online location through one RSS reader. RSS Reader users customize their bookmarked RSS feeds through a RSS reader, to achieve better and quicker overview of the subjects which they are interested in. The desktop-like usability of Web 2.0 applications like Netvibes.com ensures ease-of-use of the RSS service, through the simple operations like add, remove, move, new folders, etc.

Online media get the closest connection to their users through the RSS technology and RSS readers, and they

(online media) are in the position to "push" the content which is of the interest of their users.

The result of use of RSS technology and RSS readers is – better reach for online media, and ease-of-use of

customizable online environment (the better overview) like Netvibes.com service.

The following picture serves as an example of this.

## 4. CONCLUSION

Positioned by the service, it is absolutely clear that modern business will require a modern communication model with exceptional flexibility.
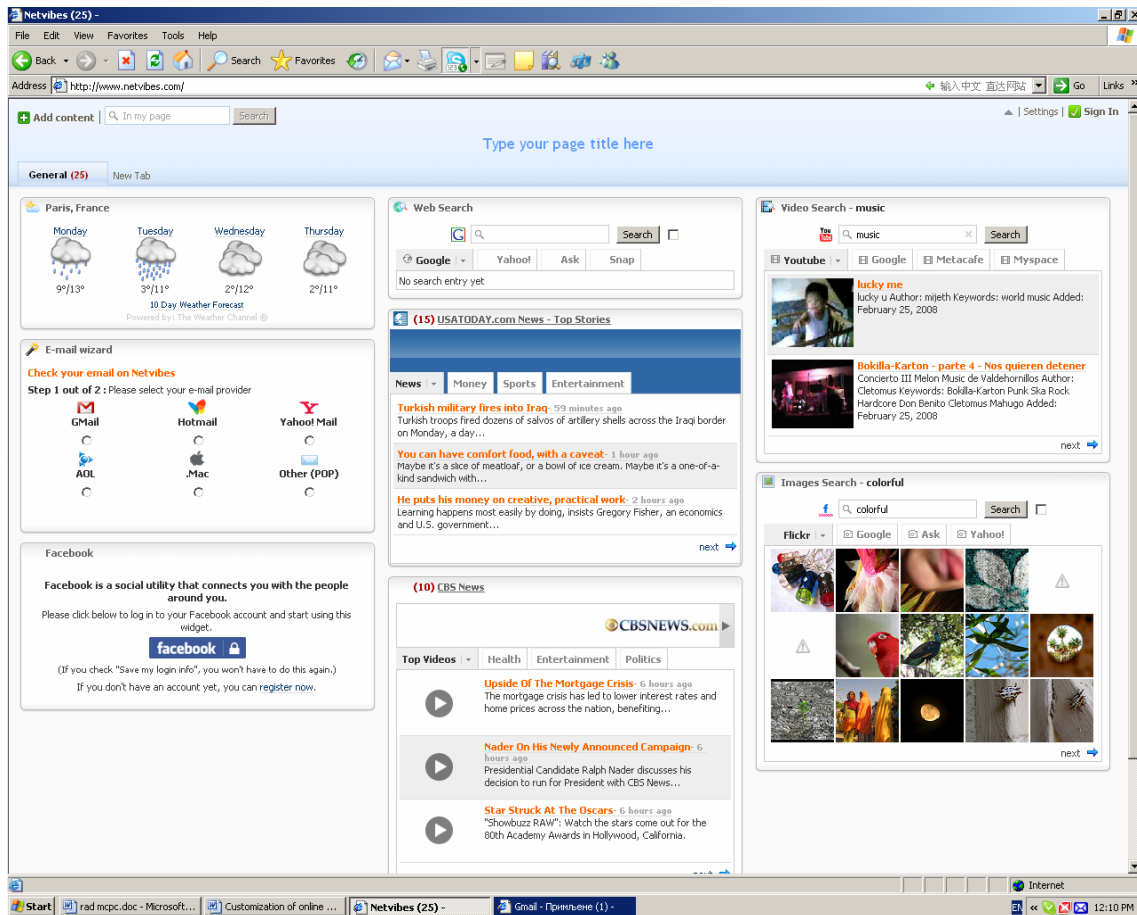


*Picture 7. Example www.netvibes.com*

Observing the tendency for growth in areas which impact IT-supported MCPC approach, the conclusion is clear: the fundamental limitation and condition for the achievement of goals is not the technological component of the system but rather a **properly defined and well-targeted communicative content.** The future of online public relations is closely tied to communication models and skills in the Internet environment. Forums, discussion groups and chat rooms are readily available, but insufficiently explored resources. There is a constant issue of trust levels regarding information received electronically.

Certainly, almost all sectors based on IT solutions require a detailed analysis of usable capacity, global reach and functional suitability for the achievement of the planned goal. Considering the increasingly close links between top management and the public relations service and the value of information gathered and

A balance in the implementation of information technologies, carefully selected content and well-trained human resources, who emphasise high-quality communication both with internal and external audiences, will yield a result which offers a clear response to intense changes in the environment by providing information and navigation on the road to **Business Excellence**.

"The age of constant progression is over. The old mantra, "faster, better, cheaper" is ceasing to hold foreign companies. Today even change has changed. It is no longer constant. It is no longer linear. It is now discontinuous, sudden and exceptionally nonlinear. Perhaps the most far-reaching of all the changes is the Internet, since the Internet has wiped out geographic limitations." - Leading the Revolution, Gary Hamel

The proliferation of electronic information, products and services, an increasing availability of information processing, storage and communication technologies make the jobs of information managers all the more interesting. They have to provide the best quality personalized information services as and when their users want and deliver those services to wherever their users reside. Only then can they survive, flourish, and be "better than the best".

By analysing the traditional MCPC approach in comparison with the modern MCPC approach supported by ICT, we can observe significant differences and the fundamental common component, i. e. goal, which is to satisfy the consumer by offering personalized services.

The advantages of MCPC approach are numerous; mass communication for an individual without limits of time, space and money.

The only disadvantage, which at the same time can be seen as an advantage, is the lack of tete-a-tete effect. Nowadays this is not considered as a drawback but an enhancement of communication.

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