



# ICT and Strategic Product Management: A Case Study of Newspaper Industry

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## ABSTRACT

*Information and Communication Technology (ICT) has changed the entire system of production and marketing. Every industry is affected in one way or the other by the information revolution. The present paper deals with a hereto untouched area of research, i.e. impact of ICT on newspaper industry and possibilities of adopting the benefits of e-governance in the realm of newspaper industry. The paper is conceptual and looks at the impact of application of ICT on the product design, quality, production process, cost, marketing and research and development and analyses the perceived improvements in the processes. Towards the end a conceptual model is developed where four dimensions of people empowerment are identified and explained through the symbiotic relation between newspaper industry and e-government.*

**Keywords:** Information and Communication Technology, people centric, quality, low cost

## 1. Introduction

Information is the primary input as well as the final output of Newspaper industry. It collects raw information and converts it into categorised, defined and useful pieces of information. Therefore it will not be an exaggeration to say that the radical changes brought in the realm of information through Information and Communication Technology (ICT) revolution are bound to affect Newspaper more than any other industry. The adoption and absorption of Information and Communication Technology are being carried out in newspaper industry by bringing efficiencies in all the functional wings including production, editorial and marketing so as to gain competitive advantage (Indo American Print summit 2008). Information and Communication technology is now used not just by press but increasingly by reporters and editors also. Its benefits are being recognised at every point of the entire supply chain of newspaper.

Here is an attempt in this paper to review the impact of Information and Communication technology on every aspect of Newspaper, on the product, the production process, marketing and distribution of the product and research & development. It also attempts to find how technology has strengthened (weakened) Newspaper Industry and what opportunities (threats) it creates for the industry. The researchers assume the role of government as that of facilitator in the process and try to explore the possibilities of application of e-government in the context of newspaper industry.

By 1990s, computer and its ancillary tools had become part and parcel of every business operations. Newspaper industry too took stride towards the computerisation of various activities and became one of the

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first industries to recognise the mettle of charismatic calculating machines like Apple Macintosh (or Mac) (APSNP Proceeding Report, 1995). Technology development and absorption in Newspaper industry improved the printing process and reduced the operating time of editorial desks. The profuse use of online content and facilities has led to dominance of many-to-many model (Chris Lapham, 1995) over one-to-many model of information collection. The individual or the department entrusted for the collection of information and news (Journalist) could gather information as per own and others convenience. The wide range of editing, page making, database, photo imaging, and mixing software provided cutting-edge facilities to newspaper business which could now streamline and integrate intra-wings functions within a newspaper. The use of telefax, websites, online database, web based information sites, and online readers and newsmakers, made the cumbersome job of information collection and reporting easier than ever before. The facilities of emails, personal blogs, and online discussion forums further have widened the canvas of information as the news of remotest areas could be retained within the deadlines.

It would not be wrong to postulate that whole nature of editorial job has changed under the influence of IT. There is a complete transformation from the days when reporters used to file report, which had to be cleared and screened by band of sub-editors, followed by final checking of *story* by editor himself/herself and even an army of trained proof readers. Whereas now the reports are being filed online or on Local Area Network, read, crosschecked and edited electronically, saving time and money both.

## **2. ICT and Newspaper Industry**

Following sections deal with an analysis of impact of ICT on various aspects such as the product (newspaper), the production process (collection of news, editing and printing), marketing and distribution. Role of technology in research and development is well established, therefore a brief note is presented on ICT and research and development in newspaper. The bird eye's view of technology absorption and ICT implementation in newspaper industry gives us an insight in the quantum of quest and inquiries of the industry for upgrading its functional operations through continuous updating of man and machinery both.

### ***2.1 ICT and product innovation***

Information Technology made its presence felt in all quarters of news quarters. It not only impacted the functioning of newspapers and various departments but even gave birth to new avatar, the e-paper. Limitation of print versions, reach and accessibility, cost of newsprint abetted by unfathomable vista of Internet encouraged Newspapers companies to launch electronic version of editions. Thus, ICT made the newspaper available literally with a click of mouse anywhere anytime. However the e-paper is not a substitute to the print version rather a complement to the same. The number of newspaper on-line sites grew 13.77 percent in 2007 and 50.77 percent over the five years from 2003 to 2008 (<http://www.wanpress.org/article17377.html>). According to a custom analysis provided by Nielsen Online for the Newspaper Association of America (NAA), Newspaper Web sites attracted more than 68.3 million unique visitors on an average (41.4 percent of all Internet users) in the third quarter of 2008, a record number that reflects a 15.8 percent increase over the same period a year ago. In addition, newspaper Web site visitors generated an average of just over 3.5 billion page views per month throughout the quarter, an increase of 25.2 percent over the same period a year ago (2.8 billion page views). These figures are the highest for any quarter since NAA began tracking the data in 2004 (<http://www.naa.org/> 2008).

The scope of internet version is expanding with the rise in internet connectivity in India. In 2007, 60,000,000 users were registered in India ([www.internetworldstats.com/asia/in.htm](http://www.internetworldstats.com/asia/in.htm)) which could be attributed to increase in Ad revenue of the newspaper. Indian Express newspaper group recorded Rs 100 million through internet version in its very first year of launching (Prabhu, Gupta, 2000). Recently Allahabad (UP) based Northern India Patrika, which happens to be one of oldest English daily of Uttar Pradesh, launched its e-paper using web space provided free by Internet Service Provider (ISP).

With immense potential, internet versions are now integral parts of as many as 110 newspapers in India (<http://www.onlinenewspapers.com/>). The Hindu was the first newspaper to go on the net in 1995 (<http://www.hinduonnet.com/th125/stories/2003091301020800.htm>). Newspaper online revenues are forecast to more than double in the next five years and will account for 12 percent of total newspaper advertising by 2011 (WAN, 2008).

### **2.2 ICT and Newspaper Production**

The major dimensions of production process include efficiency, effectiveness, cost and quality.

*Ease of production:* The introduction of online filing of reports and online supply of pages to either head editorial desk or to production units, have considerably reduced the production time leading to timely publication of final printed copies. The news which was composed on lino machines are now received through web based mechanism of agencies, thus reducing the dependence on typing personnel of production. Digital printing minimises the usage of films and chemicals used in the normal printing process. It further reduces the role of monitoring staff and personnel as machines guided by computers could now register and streamline printing jobs set by the production unit personnel.

*Low Cost:* Internet versions have paved way for cost-cutting measures in newspaper industry. The variable cost (the cost of newsprint) which constitutes 50 to 60 percent of total cost could now considerably be lowered by launching e-paper which fundamentally requires only a computer and internet connection for its launch, as many portals are available on prolific internet network offering enormous web spaces for hosting sites and e-papers. In light of the fact that News Print comprises 50-60% of total costs for a newspaper (Gupta, 2008), the internet page has emerged as an alternative against rising cost of publication.

*Quality:* The use of advanced commercial printing machinery has also enabled newspaper industry to print copies with well-defined properties. Capable of producing high precision graphic prints along with other direct mail printing services, the modern digital printing machines are printing 30 thousand and above copies per hour as against 3000 to 4000 copies per hour published by old printing press.

The incorporation of digital inkjet proofing and colour management has enabled newspapers to use distributed printing sites to produce product while minimising the possibility of colour loss and poor print quality. Decentralized printing distribution has been given a further boost by the introduction of inserting and distribution technologies that help in newspaper customize and produce targeted products (Tony Stewart, 2004).

### **2.3 ICT and Newspaper Marketing**

The internet version of newspaper has undoubtedly expanded the reach of newspaper, the newspaper edition of Allahabad city could now be read through internet by a person sitting in London. This indicates a gradual inclination of newspapers towards adoption of B2C model as now newspaper could interact directly with readers. With the growth of information and communication technology, audio and visual media are in the field with instant and wide coverage. Contradictory to what earlier was presumed that the advent of information technology would harm the print media, statistics shows that no technology can beat the print media, which always finds its own level. The print media has responded to the new changes and challenges with its modernization. They have accepted the information technology, which resulted in better coverage with great speed and affordable price (<https://rni.nic.in/pii.asp>). As per the latest report for year 2008 released by World Association of Newspapers, a study in the US shows that newspaper web site users also read the print edition: 81 percent of online newspaper readers also read a printed newspaper at least once a week. Half of them spent the same time as they did previously with newspaper content, while 35 percent spend more time overall with newspaper content.

### **2.4 ICT and Research in Newspaper**

Internal reorganisation, research and new technologies are the most important factors that need to be tackled to meet future demands of the newspaper industry, according to a report released by Ifra; (www.newwatch.in, 2006)

Two-thirds of the newspaper industry respondents interviewed by Ifra felt so. Ninety-five per cent of publishers indicated that technical innovation was very important or important for the newspaper industry but only 82 per cent believed it was important for their company. Technical innovation was considered to be important by the vast majority of respondents. Fifty-two per cent of the respondents reported that their companies were addressing innovation by cooperating with other companies in research and development, while 35 per cent addressed it with strategic alliances. Newspaper publishers ranked broadband home and mobile services, CRM systems, editorial management systems, and flexible mobile displays as the technologies they believed would play the most important role in the development of their businesses in the next five years.

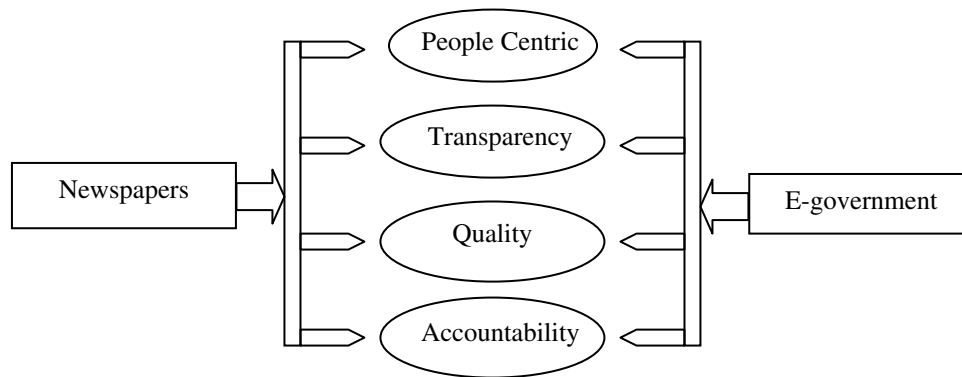
### **3. E-government and Newspaper Industry**

E-government is an opportunity to take advantage of the increased productivity at low costs by using information technology (Kannabiran, 2005). E-government is a facilitating tool for strengthening the critical success factors which ultimately will result in increased efficiency and productivity resulting in satisfied customer which is necessary ingredient for achieving competitive edge. (Geetika, Pandey, 2006). According to Garcia and Pardo, (2005) E-government ensures maximum transparency, right to information, people empowerment, stake holder's participation and better and timely services besides reducing ambiguity, corruption and delays in the day-to-day working of the government.

Newspaper strengthens the democratic set up by providing a voice to masses and by creating a need for transparency at all levels of functioning. E-government can truly help in living the ideology of democracy where people are sovereign, where the government agencies are meant to serve the people. Therefore newspaper and e-government may be seen as reinforcing the ideals of democracy by creating a synergy. Figure 1 is drawn to depict this relationship. Impact of newspaper and e-government is shown on four major dimensions of people empowerment and good governance. These four dimensions are drawn from various literature sources in the context of usefulness of e-government.

**People-centric:** Studies on e-government interfaces in developing countries suggest that unless the e-government intervention is people oriented its adoption and diffusion may not be sustainable in the long run (Paul, 2003, Alam et al, 2004, Shrestha et al,2004). Any intervention on E-government front would help newspapers to be more people centric. Such as interactive web portals where readers can directly post their view points on various issues would remove the hitches of sending messages/reviews/complains in paper form. Reach of news in local language in remotest place of the country would help in binding the nation and in bringing the neglected lot into the mainstream.

**Transparency:** Transparency through e-government is all about providing accessibility and availability of information on decisions, services and action implemented by the government of the country. (Lanvine, 2004). The foremost task of news agency is to foster, nurture and promote transparency in all public functioning. But in the absence of advanced networking infrastructure such transparency would remain an elusive dream. The Global Information Technology Report 2008 has put India at 50<sup>th</sup> rank among 147 countries, which is not very discouraging but the fact that in 2004 we were at 47<sup>th</sup> rank does create a cause for introspection. The fact that only around 5% of Indians have access to internet also is not very happy news. Hence E-government can be looked upon with great hopes for providing required infrastructure.



**Figure 1:** Newspaper and E-government

**Quality:** The people expect quality service from the service provider (Parasuraman, Zeithaml and Berry, 1985). It is already seen in the previous sections that ICT has significantly contributed to improvement of quality of newspaper in terms of information content, layout and accessibility to user. There cannot be an argument to oppose that e-government interventions will improve the quality by enhancing all the features of the product and distribution network.

**Accountability:** Accountability to citizens combines ultimate political accountability, since public institutions are supposed to get their ultimate legitimacy from the citizens, and client accountability, since citizens are normally the intended recipients of the services the public sector provides (Heeks, 2003; Wong and Welch, 2004). News agencies are at times criticised for neglecting accountability in terms of authenticity of reports and impact of these reports on general public or a section of society. E-government will strengthen the check on less responsible media persons/agencies by empowering the hands of users and service providers both.

#### 4. Efforts by Government in ICT

Internet and Broadband access are widely recognized as catalyst for economic and social development of a country (<http://mit.gov.in/default.aspx?id=34>). The Government of India has launched the National e-Governance Plan (NeGP) in 2006 with the intent to support the growth of e-governance within the country. The Plan envisages creation of right environments to implement G2G, G2B, G2E and G2C services. The government in the current fiscal year of 2008 has announced substantial slashing in import duties charged in IT products. Further specified parts of set top boxes and specified raw materials for use in the IT/electronic hardware industry to be exempted from customs duty. Besides reduction in Excise duty is to be reduced from 16 per cent to nil on a few mass consumption items including composting machines, wireless data cards (<http://indiabudget.nic.in/ub2008-09/bh/bh1.pdf>). In the financial year 2008-09 government has plans to spend about Rs. 122 crore on expansion of bandwidth and creating infrastructure for internet expansion and penetration.

Government is taking measures for the expansion of internet and other broadband facilities in rural and urban areas. 100,000 villages will be connected through broadband where educational institutes, police stations, and public health centres will be provided broadband internet services. Ministry of Communication and Information Technology feel that availability of a broadband service at affordable price levels will contribute to higher GDP growth rates. The government is focusing on the requirement of North-Eastern States and has drawn a plan of covering 800 km in 9 routes with ring architecture. Government is also laying emphasis on enhancing microwave link coverage for the North Eastern states

([http://www.ciionline.org/menu\\_content.php?menu\\_id=680](http://www.ciionline.org/menu_content.php?menu_id=680)).

## 5. Concluding Remarks

The government directly or vicariously impacts the functional and business operations of firms. As far as Newspapers, which is often dubbed as fourth pillar of democratic political system, is concerned, government assumes importance with its continuous intervention. Government has to allow freedom of press and at the same time ensure accountability and quality. The famous three doctrines of 'by people', 'for people', 'of people' can only be fulfilled by integration of e-government into newspapers industry as the duo work simultaneously to restrengthen the four dimensions of people empowerment. It is said that charity begins from home. Therefore it is suggested that local bodies, city administration and state agencies may be equipped to interact with newspapers electronically to save time, money and effort. Advertisements, news items, public information, all can be transmitted electronically so that newspapers may incorporate them even at a very short notice without any fear of distortion of information during processing. In many cases it is being done for national level ads but the same must percolate to local levels to make e-government really effective. To conclude, it can be said that the task is gigantic but a focused approach with commitment to systematic timely implementation will give desired results. E-government is a boon but delay in implementation eats up its fruits.

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