

**Positioning Indian Publishing  
to e-commerce Challenge**

**BY**

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## Introduction

The Internet is rapidly pushing us into a global marketplace. The barriers that once isolated countries and people in the past are being blown away, and in the future so will businesses who bury their heads in the sand and pretend that none of this is really happening. The following are the current EC statistics and some of the forecasts:

- Worldwide EC business expected to touch \$500 billion by 2001
- 377 million users of the internet by 2000
- Indian EC revenues expected to change from 1crore in '97 to 1200 crores in 2001.
- 2 million strong users (500000 registered accounts)

With the entry of private Internet service providers in India what we get is an industry which beckons. Soon every business will need to be on the Internet, indeed it will be the same as needing to have a telephone and fax. Most companies that decide to venture into this relatively unknown area do so believing that Electronic Commerce (EC) is all about hosting a web site. They would buy an EC server product, design and build a virtual store, arrange for suppliers who can fill the orders, get the Web site online, and presume they are in business. But unfortunately, the problem is that most products cannot be sold effectively without a sales presence. Providing a sales presence over the Web and putting virtual salespeople in the virtual store is the real difficulty that Electronic Commerce faces. Very few companies have understood and addressed this issue and most others are either blind to the problem or are unable to solve it because of their traditional mindsets.

One industry that has been radically affected by EC is the news/publication/information services industry. Internet news publication in India is still in its infancy. Though India has a number of bulletin boards, there is no major national online service yet. However, the scenario is changing rapidly. Five factors are currently acting as a catalyst for this projected future:

- A skilled labor force
- A large population of English speaking population
- A huge Diaspora population
- Relatively free press climate
- Emerging economic strength

Online editions of the following are available on the net: Indian Express, Times of India, Deccan Chronicle, Hindustan Times, Financial Express, Economic Times, Business Line, Financial Express, and Deccan Herald. A few Vernacular publications have also been launched (Kesari, TamilWorld, Vishwa Kannada). One of the main advantages of setting up a web presence in India is the increased ability to reach out to the diaspora population - people of Indian origin scattered around the world. This, then could be a new source of advertising revenue. A web edition also allows a newspaper to experiment with newer forms of presentation and delivery, such as digital searchable archives, linkage between current and older articles (threading) to provide background information, multi-media data delivery (speech, video, etc), customization or personalization of news for frequent

visitors, conducting chat forums, etc.

### ***Challenges for Online editions:***

- Internet publishing technology is advancing at such a breakneck speed that newspapers are being forced to hire extremely competent technical and design staff, or outsource Online publication to other companies.
- The ease of duplicating and re-distributing the information raises issues of copyright protection.
- Advertising has not taken off very well on the net, mainly because of questions raised about the effectiveness.
- Non-traditional focus Websites threaten to eat into the revenues of newspapers.

The Indian publishing industry, predominantly analogue processes driven, is facing difficult and sometimes painful choices regarding their future technical process, organization, marketing and business plans? How do these enterprises adopt to online environment? We are inundated with information about new technologies and applications; however, not much has been written about the strategies and business designs that firms need to employ. This article is an attempt in that direction, presenting a comprehensive framework of changes that may be required in several functional areas for embracing an e-commerce strategy.

### ***Status of Systems in Indian publishing industry:***

- Technology applied piecemeal, without information architecture.

The technical infrastructure - powering, printing and publishing is predominantly analogue and mostly based on proprietary standards. Communications are not standardized, and often the content interchange is on proprietary file formats.

- Mainly analogue production processes.

Publishing industry has evolved from the printing press and even today, many of the processes are hybrid-analog digital processes, for example video image transfers.

- Low connectivity.

Most organizations are pursuing point-to-point connectivity, supported on dial-up systems. Throughput is managed in sequential and linear fashion. Tracking workflow across several places as well as updating schedule management becomes difficult. The advent of online information services has expanded the domain of information service industry, increasing the gamut of competencies required to operate successfully in this domain. The print players, who were previously dominating the industry, have suddenly found that their share of the new set of competencies has shrunk. In

addition, the complexity of this environment has increased. Some of the print firms have chosen to start online editions of their own, in spite of their limited competency.

Figure 1 shows the value curve of the current newspaper players in the dark curve. Through various value additions and economic benefits from technology, the value curve of the online editions (dotted curve) has become much more competitive when compared to the print version. This results in higher performance of the online information services. In India, owing to the lack of adequate infrastructure, and associated high costs, the print industry has not faced much threat yet. However, this is only just the current scenario. Given the rapid penetration of these systems into the market, it seems likely that the threat is just round the corner. Therefore, to some extent, the scenario described below is futuristic. A proper understanding of this can help companies act proactively in this changed environment.

The profitability of online information services could prove to be very high because of better performance on both the price and the features front. However, this higher profitability can be forsaken in favor of better service to the customer. The latter course has now been adopted by most of the players on the net. This has become the dominant logic of the industry today and it has altered the positions of both the price and the feature threshold. The feature threshold is the minimum set of features expected by the customer, and the price threshold is the maximum a customer would be willing to pay for all the features provided by the industry. By providing information for free over a sustained period of time, the Online editions have *lowered* the price threshold line, and by providing features such as drill-down, interactivity and instant news around the clock, they have shifted the feature threshold line towards high. This simultaneous movement has caused many of the players in the print industry to appear unviable and unattractive to the customer. So, online editors are attempting to bring in more customers into the fray by offering a copy of the offline editions.

Thus, the radical changes caused by the advent of internet has left the print industry with little choice but to adopt these strategies themselves and play the competition at their own game. This has led to the rapid proliferation of web sites and information vendors on the net. The customer stands to gain from this increased competition. Although, the individual firms would lose out (remain unprofitable), the industry as a whole would boom. The early movers would have a strong advantage that would translate into presence, higher advertisement revenue and a small degree of profitability. The adaptive strategies that can be followed by the Indian publishing industry are shown in Figure 2. The possibilities are reorientation (Quadrant 3), redefinition of their niche (local focus), and an appropriate mix of integration and adaptation. Firms can also start building up competencies required for the new environment (Try to move over to the fourth quadrant). This would in turn create an opportunity to move over to the first quadrant, towards where the industry is really heading. Needless to say, this three-stage road map has to be expedited to match "Internet time".

## **E-com Publishing**

Electronic commerce can be defined as "the buying and selling of information, products, and services via computer networks", and includes the "support for any kind of business transactions over digital infrastructure" (Malone et.al, 1987). There are three main forms of e-commerce: Inter-organizational, intra-organizational and consumer to business. Inter-organization e-

commerce would involve supplier management, inventory management, distribution management, channel management and payment management processes. Examples of intra-organisational e-commerce include work group communications, electronic publishing and sales force productivity. Consumer to business commerce refers to Social interaction; Personal finance management; Purchasing products and information. The figure 3 describes the components for E-publishing decision. It is the integration of the S/W applications, business strategies, business processes and technologies & tools enabling the implementation. The e-com-publishing environment for printing and publishing industry will have

- A network running through the enterprise
- Firm's and client's processes online
- Building blocks that are interactive supporting direct (remote) printing, variable data-printing, digital media replication and interactive content delivery.
- Open standards for communications, content and process management.

Figure 4 shows the components of strategic planning for e-com publishing. A blueprint of an e-com publishing that enables dynamic adjustments is shown Figure 5. The salient features of an e-com-publishing environment are:

- Need to operate digitally in a networked, information flooded world
- Focus not just in terms of technology, but also in terms of digital organization and workflow
- Define Information management as the newsroom's core critical process
- Constant improvement processes
- Focus on Blending technology and organization
- Using technology more effectively instead of just more technology

The significant differences between analog (hybrids) and e-com publishing are,

<b>Analog Publishing</b>	<b>E-com Publishing</b>
Goal is efficiency	Goal is innovation
Organized around production tasks	Organized around core processes
Not easily changed or adapted	Adjusts dynamically as needed

## Aligning the systems and process to e-com environment

How should firms plan for moving from analog (hybrid) platforms to an e-com-publishing environment? We present here a practical strategy, based on 'best practices' building blocks that print and media organizations can adopt to achieve digitization. The roadmap for building an e-com-publishing environment should 1) identify new efficiencies needed for leadership in speed, service, quality and cost and 2) exploit new capabilities and media choices with the right service package. Nissen, (1997), suggests a commerce model, shown in Figure 6 to realign all the phases of a commerce transaction.

Core processes in printing and publishing industry evaluated based on the commerce model would reveal facets of organizational redesign and the processes that are required for supporting e-com publishing. For example, the graphic communication process in the analog process would be content generation, preparation and reproduction (often by tedious screen printing methods). In an e-com environment, the content origination develops the knowledge expressed in prints and other media. It includes authoring, design, imaging and composition. To some extent it also encompasses marketing, audience segmentation, and customization. The Digital mastering integrates and versions these information into a hierarchical structure so that data and meta-data handling becomes easy. Information management, preparation and media productions are completely digitized processes saving enormous time and cost. Having identified the processes, the next step is to integrate the implementation plan. Shown below are essential dimensions and issues that need to be addressed for defining an e-com implementation strategy.

The route to e-com publishing evolves through four stages as shown below:

Stage 1	Publishing model with no real impact on business processes. In this stage, companies attempt to map non-core functions to web (Example: advertising). Attempt digitizing internal data.
Stage 2	Similar to the early introduction of EDI at sites. At this point, companies start thinking about reengineering a part of their business process. Integration with back-end systems begins. "Flow through" is the goal--a full hands-off approach to certain specific processes.
Stage 3	At this point, companies move into original content, which may be highly interactive. One-to-one marketing is the goal: a company seeks to develop profiles of the users accessing its sites so that they can be treated uniquely.
Stage 4	This fully enabled e-commerce model seeks to achieve dynamic segmentation, in addition to developing basic user profiles. Specifically, segmenting of site visitors is done in real time based on user activity.

Firms start with stage 1 and jump to stage 2 and 3 improving, transforming and redefining the organization. Stage 4 requires a total commitment to e-commerce and radical change in mindset of the business models. Stage 2 and 3 mean significant changes in terms of product promotion, service,

pricing and other issues which are detailed below.

### ***Product promotion***

The first use of electronic commerce is to provide product information to customers, through on-line electronic brochures. Through a direct, information-rich and interactive contact with customers, electronic commerce can enhance the promotion of these products. This can be seen as an additional marketing channel allowing the reach of a maximum number of customers. The advantages of electronic commerce as a means to deliver product information is its availability anytime and anywhere, provided the customer has the right infrastructure (e.g. PC, modem, online service) to access this information. However, using an electronic medium also allows for interactivity and customization. Thus, the online edition can be used in any of the four following ways:

- Direct selling (i.e. selling products)
- Content selling (i.e. selling information)
- Advertising (i.e. giving out information such as news or directories for free, to drive traffic and sell it to advertisers)
- Transaction and links (i.e. charging a fee for a transaction, such as selling an airline ticket online, or charging to link with a service provider, as in a yellow pages service).

### ***Customer relationships***

There is a clear need for a shift from supply-side to demand-side thinking, with organizations having to respond to customers' desires rather than simply make and sell newspapers. The focus is therefore on establishing relationships with customers, based on learning their needs and desires, proposing the right services and keeping these relations active throughout the years. Electronic commerce systems will allow for more personalized relationships between suppliers and their customers, due to their ability to collect information on customer needs and behavioral patterns.

The role of technology in learning more about customers depends on its ability to record every event in the relationship through log maintenance. All the data acquired about customers also provides a switching barrier, as customers would have to "teach" a competitor all that information. Moreover, a historical analysis of the data will reveal who are the most profitable customers and services, thereby allowing for reduction of the scope of products and services. It will also help to focus on the most profitable ones as well as extending a new information service to cater to the needs of the most profitable customers. Then, by understanding the segment of customers that are most interesting, specific marketing efforts can be targeted to similar individuals, who may be currently non-customers.

Becoming a trusted partner of a customer is the key to maintaining these relationships. It can be achieved by providing him or her with valuable information. Pro-activity is the ability to use the direct channel with the customer to inform him of specific offers that would match his/her needs and buying patterns. What electronic commerce brings, as a lever to such strategies is the automation of the customer profile, his needs, buying patterns, etc. All that data can then be analyzed through computer applications and the right answer chosen. Therefore, personalized

service strategies that were before achievable only with a small number of customers suddenly becomes possible on a wider scale.

## **Archiving**

Data warehousing and archiving form a very important aspect of e-com publishing environment. The workflow goal of archiving "Capturing the right files at the right state in the production flow with the right information attached". Archive everything that is published (excluding low value material - average 70% of newspaper content), unpublished digital material (scanned local photos, unpublished text), other newspapers, unpublished source material (official documents, text of speeches, other reference information), advanced datatypes ( graphics, pages, video, audio)

## **Web site-planning issues**

*Some of the questions, which need to be addressed when planning for the website, are:*

- What will be the core purpose of the site? (i.e., marketing, online commerce, customer service, community building, etc.)
- What staff and resources are you willing to commit on an ongoing basis? For example, will your site feature time-sensitive information (such as pricing) that will require updating?
- If you plan to offer email answers to customer inquiries, do you have an adequate staff to constantly monitor and respond to questions? You can lose a lot of consumer goodwill by failing to respond promptly to online requests.
- How scalable should the site be? Do you want to create a site you can "grow into" as your needs expand, or one that is functional given your current situation.
- What back-end functionality do you need to support the new features you implement? For example, if you offer your products for sale online, what sort of order processing and security features will you need?
- If your products are now reaching a new international market, do you need to be aware of any international taxation issues?
- How will the site be integrated with existing marketing materials?
- What is the likely network capacity of your target customers?
- Should you create a site that is accessible to everyone or one that has many bells and whistles?

## **Advertising on Web**

Despite its vast potential, advertising on the Web is still a frustrating experience for advertisers and content-site providers. Like just about every Web-related development, online advertising is

currently a victim of its own hype and lofty expectations. Content-site providers dangle carrots such as targeted ads and ad tracking in front of advertisers but still fail to deliver the goods. Take ad tracking, for example. Although ad-server software can accurately measure how many people click on a banner ad, there is no way to effectively track whether such "click-through" results in viable sales leads. Now, advertisers are grappling with these and other basic questions. If an ad has a low click-through rate, is it because the copy is lame? Or is the content site, where the banner appears demographically challenged? Another problem muddying the waters is a lack of auditing standards across sites. Without uniform metrics, to say nothing of uniform definitions, one ad agency may give ad impressions top billing while another may rely on click-through rates to determine an ad's effectiveness.

The central issue regarding the expansion of advertising into the new push environment is that, as push becomes mainstream on the desktop and the desktop continues to resemble more the interface and delivery of TV, advertising via push will take on not only the same passivity of TV reception but also experience a similar level of ineffectiveness as in banner ads.

### *Internet Banner Ads*

One of the most commonly used forms of advertising on the Internet is a banner ad. We can label banner ads as a form of "pre-push" marketing. This means that banner ads incorporate many of the fledgling attributes as ads through services such as Pointcast; however, they lack the same level of sophistication. The most notable attribute which banner ads and traditional push ads have in common, is that in both cases, the potential consumer is in a passive state of reception or attention. The individual is not actively searching for this ad information, therefore attention will be directed elsewhere. Even if the user does see the ad, research shows that only 2-5% will actually initiate a click investigation. The fact that customers do not ask for the information leads to a lack of attention to the ad. Banner ads are not nearly as effective as TV ads because they lack full-screen graphics, audio, and other rich forms of communication. In order to achieve a higher level of presentation on the web, the user must first click on the banner ad and get to the target ad. Because only 2-5% of Internet surfers actually do so, the conclusion that banner ads are not effective at reaching the consumers does not require a great leap of faith.

### *The Interstitial*

Another form of passivity-based "pre-push" advertising emerging on the Internet today is the "interstitial," a 5 to 10 second animated advertisement very similar to actual TV commercials. These are inserted between web pages and are non-clickable, leaving the user with no option but to watch the clip.

### *The Advent of Push Advertising*

Advertisements through push services such as PointCast are based on the concept of banner ads, but they are more accurately tailored to the user's interests through reference to demographics and are often more elaborate in color and movement. Like interstitials, push ads are most akin to television commercials both in the level of attention required and the subsequent effectiveness through mental filtering. Likewise, push services such as Pointcast screen savers are generally operative only while the user is either not at his or her computer or involved in non-computing tasks. Therefore, the ads are often not noticed by the user. In its simplest form, push technology is defined as a program that resides on the individual user's desktop (called a client) that can either

request information or receive information at specified intervals or at the occurrence of certain events. Following receipt, this information is displayed for the user according to user-defined parameters or according to parameters set by the information provider.

Fundamentally, however, push technology breaks up into two distinct functions: information delivery and application delivery. Push Technology transforms the information gathering process from an active process to a passive one. A user decides what information he or she wants delivered and at selected intervals during the day, the program retrieves the information and pushes it onto the user's screen. This shift to passivity by the user imposes the one-to-many mass communication model on a medium that is defined by an interactive, many-to-many communication model.

### *Customising advertising:*

Some of the ways of customizing the advertising content, based on the customer profile or input, are:

- to change the content description (simple or complex)
- display only a range a products which are relevant to the particular customer
- change the price (e.g. discount for club members)
- allow for new functionality's in some cases (e.g. coupon available only in certain conditions)
- change the path used to navigate in the service.

### **Other Issues**

This section discusses other issues related to e-commerce publishing. Basically, it has to do with the realization that technology alone will not solve issues or create advantages. This technology needs to be integrated in an organization, with change management issues linked to people resisting new concepts and ideas. It also needs to support a clearly defined and well-communicated business strategy. There are two ways of seeing the alignment between technology and the organizational processes. The first is the need to redefine some processes after the introduction of electronic commerce systems, so that these systems become fully integrated in the way an organization does business. Three examples of such redefinition are:

- When the online edition is used to provide information other than published in the print edition, there is a need to authorize each specific piece (or class of) information which becomes public. Therefore, the process handling information authorization (article selection) needs to be refined
- The logistics processes (the back-end) need to be integrated with the on-line systems (the front-end) to provide uniform and seamless service. There is little use for an on-line system if processing is manual. This often requires integration with legacy information systems. This further highlights the importance of complete process digitization.
- When customer contact becomes possible through an on-line media, the customer expectations

of the company's reaction change: By using electronic mail, which is usually answered in a few hours, a day at the maximum, when dealing with a company, the customer expects a similar response time. Thus, the processes dealing with various information services would need to be restructured to accommodate this changed expectation if the advantages of on-line communications are not to disappear.

When information technology and processes become fully integrated, one can see the emergence of new business models for companies, "digital companies", i.e. fully integrated organizations fully relying on information technology both for customer interaction and internal management. These issues of alignment should be kept in mind while designing an electronic commerce strategy and its implementation plans.

Functions	Traditional (print)	Current and future (EC)
Business model	Completely control their distribution networks	Deliver content by means that a client chooses, without controls.
Competitive model	Dominating distribution	Responsive distribution
News product	Primarily print	Integrated flexible-media product
News data handling	Analog to digital to analog	Fully digital, media neutral
Advertising approach	Tied to a medium, usually print	Tied to value-added content
Newsroom organization	Centralized task based assembly line	Decentralized process oriented
Newsroom workflow	Linked to production needs	Media independent digital information management
Technology implementation	Standardized distribution systems	Personalized, on demand systems

The final issue is the organizational commitment necessary to successfully run an electronic commerce system. Although the Web today represents a great way to test some commercial ideas with low cost of entry, and is a great equalizer and a real marketplace for innovation, a working system very soon requires additional resources in terms of technology and skills (e.g. professional design, integration of legacy systems, process integration, etc.). Therefore, a sustained presence in cyberspace requires a strong organizational commitment to increase the resources devoted to it, as success proves the validity of the business model. Increased financial revenues, justifying the additional costs should of course compensate this.

## **Recommendations for Indian Publishing Industry**

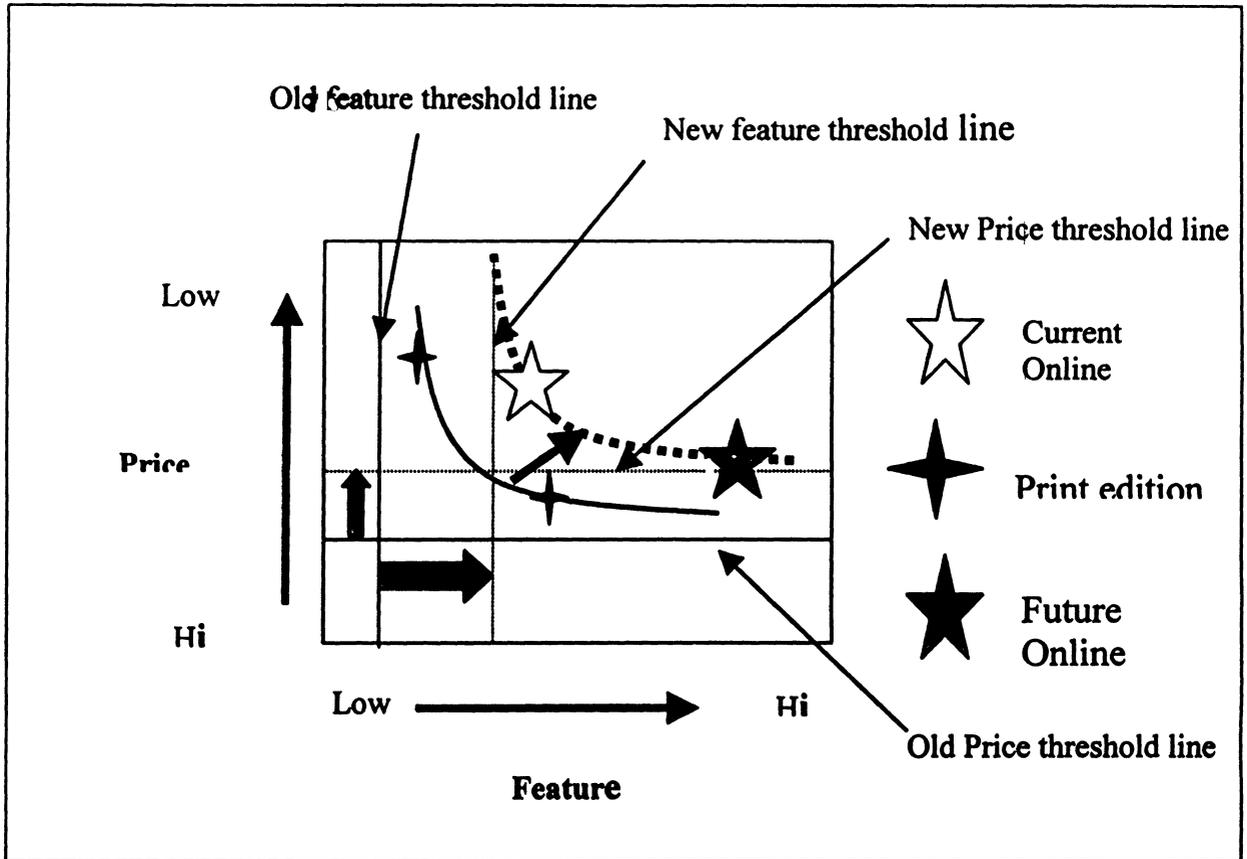
Move from analog to digital in stages 1 to 4 as outlined above

1. Establish a flexible and evolving Online presence as soon as possible (Go beyond the simple host a web site mindset)
2. Develop new news products (start moving some of the offline to online, advertising for example)
3. Research the demographics of local as well as diaspora populations and offer products accordingly
4. Build strategic alliances with other media and non-media partners, local as well as abroad
5. Update often, add new content exclusive to the web edition
6. Provide links between related articles
7. Create Push services
8. Exploit local market: Concentrate on being the best for local news
9. The potential of online searchable directories is yet to be tapped, and is an area of future growth, especially for India Language content. Address this market.

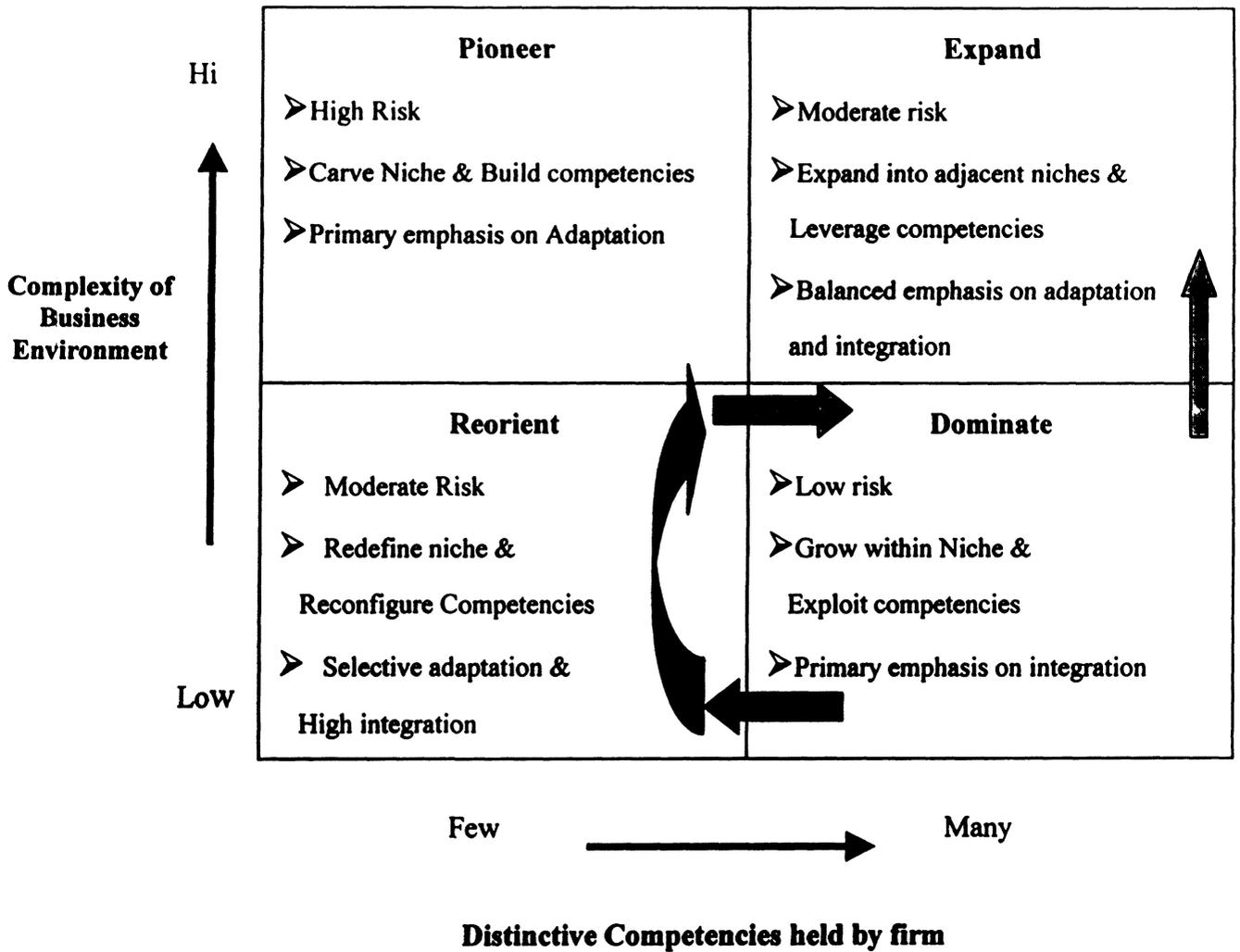
## **References**

1. T. Malone, J. Yates and R. Benjamin, "Electronic Markets and Hierarchies", Communications of the ACM, August 1987, p.485.
2. M.E. Nissen, " The Commerce Model for Electronic Redesign", Journal of Internet Purchasing, Vol. 1, No. 2, June 1997.

**Figure 1: Value creation in Publishing Industry**



**Figure 2: Possible Adaptation strategies**

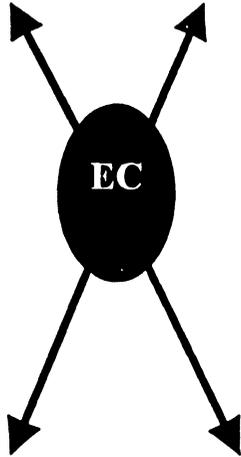


### **Software applications**

Link multiple enterprises or individual customers to enterprises for the purpose of conducting business

### **Business strategies**

Optimizing relationships among enterprises, and between individuals and enterprises



### **Technologies and tools**

Enable these applications, strategies, and processes to be implemented and realized

**Business Processes**  
(e.g procurement or selling order status or payment ) that by definition cross enterprise boundaries

### Strategy

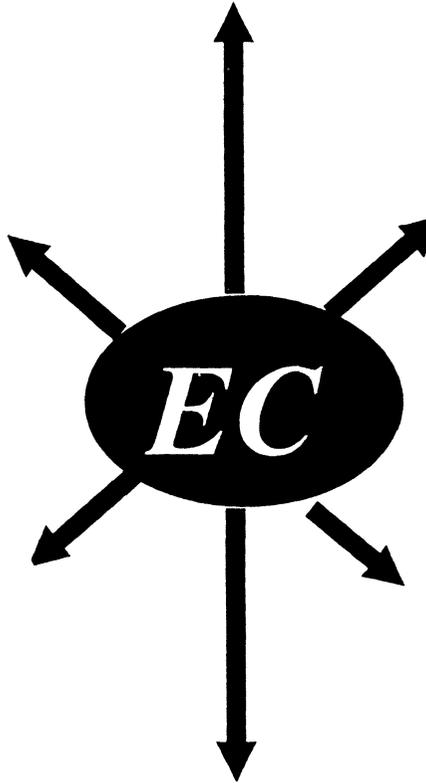
- ⊖ Sustainability of competitive advantage
- ⊖ *Business strategy & Competitive strategy*
- ⊖ *Technological strategy*
- ⊖ *Value model*
- ⊖ *Opportunities?*
- ⊖ Road Map

### Marketing

- ⊖ Customer identification
- ⊖ Product or service?
- ⊖ Product mix
- ⊖ Pricing policies
- ⊖ Promotion (customer, advertisers)
- ⊖ Place

### Finance

- ⊖ Costing
- ⊖ Profitability & Investment : ROI
- ⊖ Opportunity costs
- ⊖ Taxation issues
- ⊖ Control issues
- ⊖ Security of transactions



### Systems

- ⊖ H/W requirements
- ⊖ S/W - web tools
- ⊖ Knowledge systems
- ⊖ Systems Integration

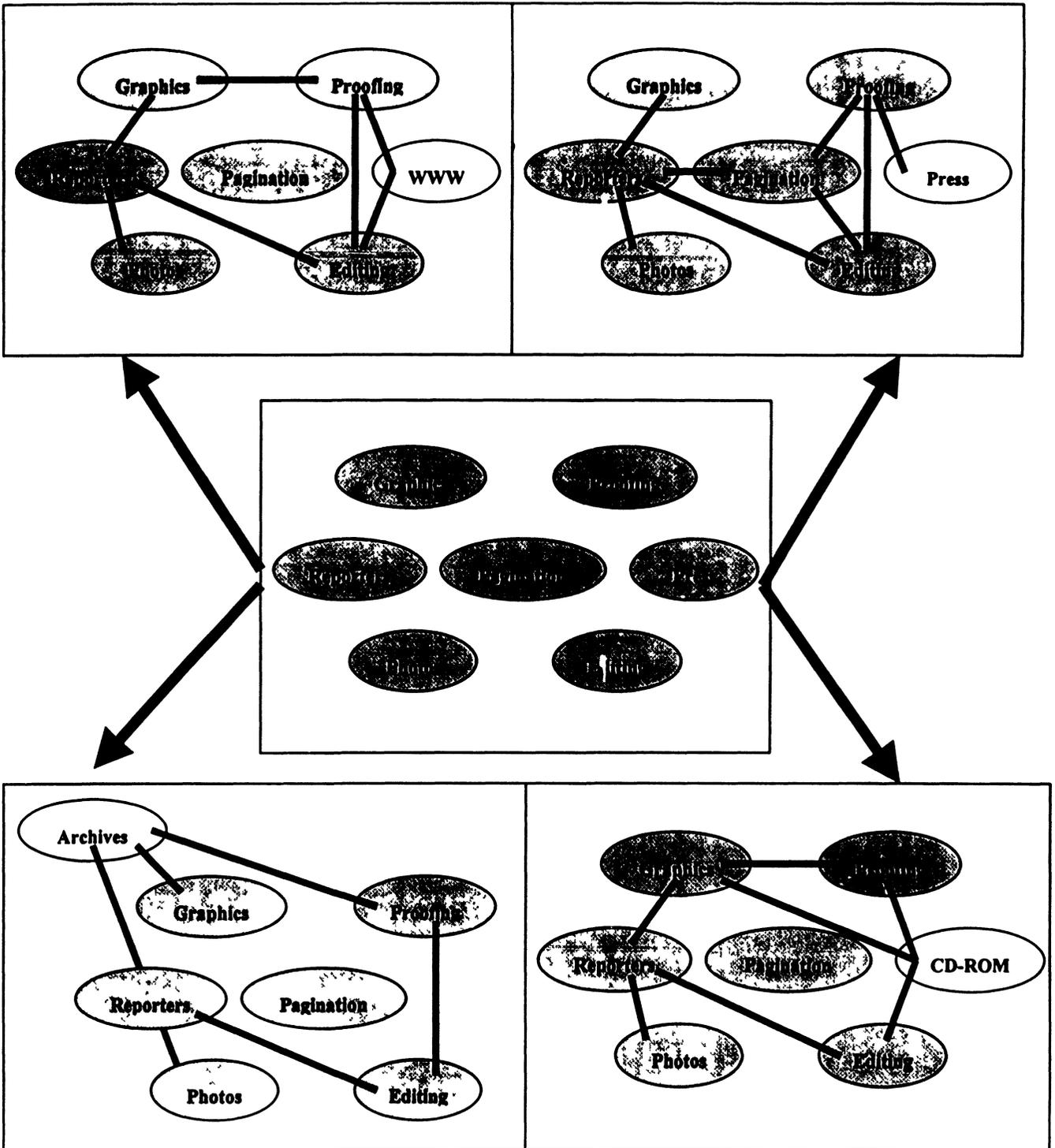
### Operations

- ⊖ Security issues
- ⊖ New product development
- ⊖ Delivery
- ⊖ Monitoring IT innovation!
- ⊖ Cost monitoring
- ⊖ Billing

### HR & Organisation

- ⊖ New Skill set?
- ⊖ Recruitment
- ⊖ Training
- ⊖ Culture difference
- ⊖ Change management

Figure 4: Dimensions of Issues in E-Com publication



*Figure 5: e-publishing framework*

# E-commerce model (integrated perspective)

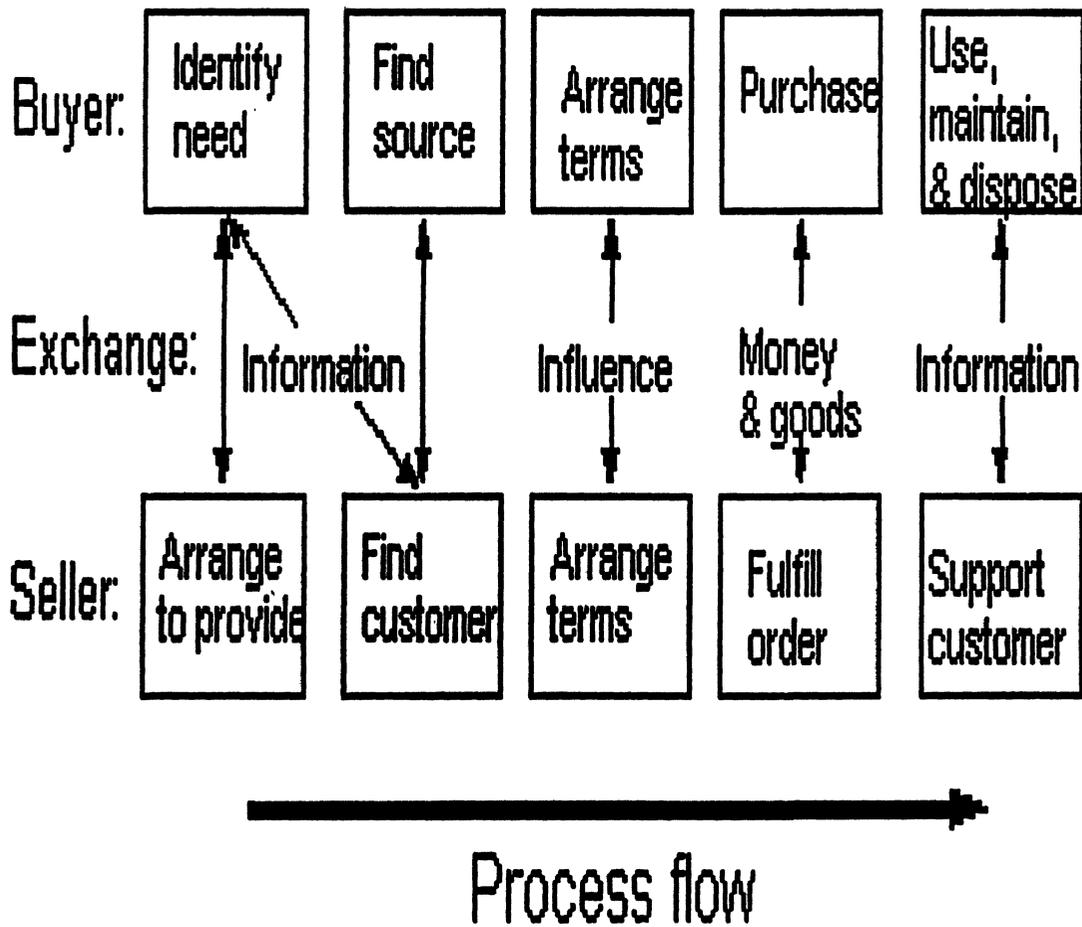


Figure 6: e-business Model