

Preface

In the past few years, managers active in the multimedia value chain have been confronted with new phenomena having a remarkable impact on corporate management. These phenomena are caused by the development of sectors such as: technology dynamics, digital economy, demand development, liberalisation, and deregulation policies, as well as a general increase in competitive pressure.

Therefore, digital convergence does not refer to a single event, but rather to the occurrence of an evolutionary process through which different sectors and technologies—which were originally more or less independent from each other—merge.

The whole television industry is involved in this ongoing convergence process, and new challenges and opportunities are opening up to organisations.

The impact of digital technology is the first determinant in evaluating the technological asset as the origin of the structural and competitive transformation of the television market. The technological change brought about by the advent of the new digital technologies will be surveyed here, showing the significant economic components from a relativistic approach.

Digital television is based on the transmission of a numerical or digitised signal that is transformed through algorithms into a signal that removes all redundancies of space and time. The signal is broadcast through compelling delivery systems (cable, satellite, terrestrial, optical fibers) The user's reception of the digital signal is made possible through a digital adapter (*set top box* or *decoder*) which is connected to the normal television or integrated with the digital television in the latest versions.

At present, in Europe more than 23 million households are equipped with digital television, but by 2005, more than 64 million subscribers in Europe and 46 million subscribers in the U.S. are expected to have access to digital television. The expected growth is very considerable.

The advantages offered by digital television to the viewer include:

- an increase in the number of channels that can be transmitted (because of a reduction in the use of the electromagnetic spectrum due to the compression of the digital signal);
- better transmission of image and sound quality;
- the possibility to use larger format; and
- television screens (from 16:9 to large size flat screens).

The second set of factors relates to the series of additional interactive services that can be added to television, and that allow users' interaction with the offered content. For this reason, it is worthwhile to distinguish between the digital and the interactive concepts, as the latter is made possible by the existence of new digital technologies.

Changing competitive systems (characterized by an increasing number of television channels, due to technological innovation in the transmission of digital signal) and the convergence process among sectors, which in the past were distinct and separated, are causing a considerable impact on competitive dynamics and a constant review of media companies' competition patterns.

To be active within hypercompetitive markets, an organisation must develop a set of skills which are characteristic of a proactive organisation.

Technological innovation causes media companies to face a new paradigm: either self-transformation or the risk to find itself in an "electronic quagmire" by new technologies.

Convergence is not solely a technological matter; it's a brand new life and working style, as it foresees new services and opportunities to implement industry productivity and competitiveness on the market. Media, information technology, and telecommunications are then to take advantage of new products and platforms to become part of a unique global network. Digital communications are the

first and essential step to the convergence of information and telecommunications technology where traditional media, once clearly distinct and independent from each other, meet in the new land of interactivity and multimedia.

In this book, the impacts generated by the shift from digital technology and interactivity development within the TV industry are investigated, with a focus on some corporate management implications. The focus of experience covered in this book is European. A few basic assumptions are made.

The first assumption relates to the business backbone: boundaries of each single sector (telecommunications, IT, TV, electronics) which can be detected within the multimedia metamarket become less and less definite and increasingly overlapping. Therefore, the ongoing convergence process must be investigated.

The concept of digital convergence is broken down into the three following levels: convergence of devices, convergence of networks, and convergence of content. Although there is evidence in digital environments of limited alignment in some of these areas, there are considerable physical, technical, and consumer barriers in each case.

Rather than convergence, the transition from analogue to digital is often being accompanied by a process of fragmentation. For this reason, it is suitable to trace the limits of convergence, understood as a phenomenon that involves the bringing together, merging, or hybridisation of different types of digital device, network, or content.

A second assumption makes reference to the peculiar features of digital TV and different transmission modes of the digital signal. Each broadcasting modality (cable, satellite, terrestrial, ADSL, MMDS) shows specific advantages and constraints which any medium-size organisation must take into account in order to set out a correct strategy.

Based upon the above, openings to digital convergence development and its managerial applications for TV companies into the new competitive arena must be discussed.

Among the corporate intangible assets, undoubtedly brand and trust play a critical role, and for this reason the critical success factors for a TV organisation in

the new digital era appear to be connected with the development of careful branding policies in order to acquire and make their audience loyal.

Another critical role is also played by content asset management, which is the ability to manage a digitalised and stored audio-video content and distribute it on different platforms.

In summary, this book contributes to analysing a complex and changing business in the digital era by listing critical points as well as opportunities for the major organisations.

The rules of the game, the reference competitive scenario, the viewers' habits, and offering modalities are all undergoing big changes, and at present, new business models are available to networks coupled with endless opportunities for development and growth within this increasingly fascinating and complex business.

Book's Structure

To achieve a better understanding of this book, its first part is devoted to investigating the new boundaries of the TV networks for the purpose of identifying the system pivotal points and defining an easy conceptual model, based upon the definition of digital metamarket.

Components of the multimedia value chain and convergence drivers are analysed and major players and their strategies in the different stages of the multimedia value chain are studied (Chapter 1). In approaching the study of the so-called multimedia metamarket backbone, which is where a TV network operates, it is crucial to preliminarily clarify its components and functions.

In Chapter 2 the concept of digital convergence is used to refer to three possible axes of alignment: convergence of devices, convergence of networks, and convergence of content. Although there is evidence in digital environments of limited alignment in some of these areas, there are considerable physical, technical, and consumer barriers in each case. In fact, rather than convergence, the transition from analogue to digital is often being accompanied by a process of fragmentation.

A better way of looking at convergence may lie in the degree to which two-way digital networks facilitate cross-platform management of customer relationships—regardless of the type of networks those customers inhabit or the kind they consume. Chapter 2 argues for a definition of convergence based on penetration of digital platforms and the potential for cross-platform Customer Relationship Management (CRM) strategies, before developing a convergence index according to which different territories can be compared.

Once the conceptual system is defined and a terminology in line with the study of the subject matter is developed, digital and interactive TV are discussed in the second part of this book.

First, the technological area is discussed in detail through the features of digital TV and the economic implications generated by the different signal broadcasting technological modalities (Chapters 3 and 4). The development of interactive television is a further evolution phase of the digital television through new functionalities and interactive applications which make richer offerings through the development of an increasingly more customised interaction with final viewers (Chapter 5).

In the third part of the book, the impact on corporate management from new opportunities based upon the development of digital convergence is discussed in greater detail. More specifically, the following three managerial areas influenced by these new opportunities were detected:

- growing importance of brand equity as a loyalty resource available to digital TV channels to aggregate and make a more concrete stand vis-à-vis viewers' loyalty (Chapter 6);
- the critical role of the content asset management or digitalisation of audio and video contents, their management in digital libraries, and their distribution through different digital platforms (Chapter 7);
- the new role of Digital Rights Management processes in the typical digital media management value chain and the security issue in a digital TV world (Chapter 8).

In this phase of the study, technological scenarios within possible models have tentatively been identified, particularly those which have a greater likelihood

of being successful. Interactive television development and its services to viewers, as well as its key management implications, have also been discussed.

The research work is based upon direct contributions from interviews with people in this business. A detailed analysis on the global technological and competitive scenarios was carefully made through desk research and direct contacts with the major corporate entities in this business.

The study on interactive television was first discussed at the symposium on the emerging electronic markets held in Muenster in September 1999; a more advanced phase of this study was also discussed during the Business Information Technology Conference (BIT) in Mexico City in May 2000, as well as at the SISEI Conference held at Bocconi University in December the same year. Chapter 7, “Critical Role of Content Management,” was discussed during the IRMA 2001, International Resource Management Conference in Toronto in May 2001, and Chapter 2 was discussed during the IRMA 2002, International Resource Management Conference in Seattle in May 2002.

The above academic conferences have all been a very good chance to check and compare data and assumptions, thus providing this study with a remarkably richer perspective.

Precious contributions were also made by expert researchers from some of the major European and U.S. universities.