

# E-Business Value Creation, Platforms, and Trends



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## INTRODUCTION

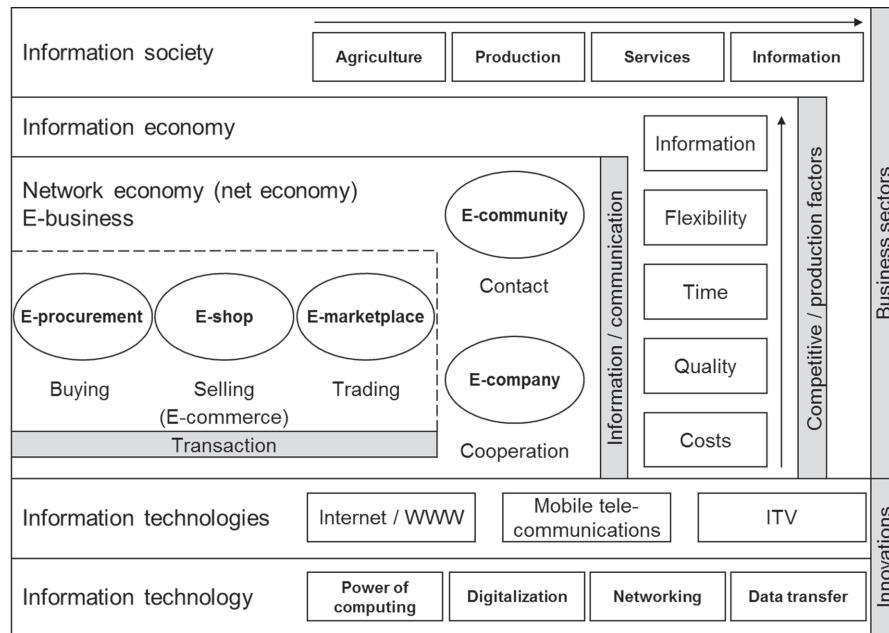
The growing relevance of IT and the expansion of electronic data networks have created a new commercial/business dimension that can be called the Internet economy or the net economy. It is especially influenced by the area of electronic business processes that take place over digital data pathways (Kollmann, 2001; Taylor & Murphy, 2004; Zwass, 2003). Due to the importance of information as a supporting and independent competitive factor, as well as the increase in digital data networks, it has to be noticed that there is a division of the relevant trade levels on which the world does business: In addition to the real level of physical products and/or services (real economy), an electronic level for digital data and communication networks (net economy) evolved. The commercial possibilities resulting from this development can be called e-business. The necessary building blocks, including information, communication and transaction are in this case transferred and respectively concluded between the participating trade partners over digital networks. In this area, numerous possibilities for making use of electronic networks and IT have emerged (e.g. Internet applications, ITV or mobile services) and numerous business models have been developed successfully. Independently from the general economic situation, the business sector “information” is characterized by continuously high growth rates and permanent ongoing technological advancements resulting in a dynamic business area with an almost endless number of products and services. Hence, electronic business offers a lot of chances for a successful business venture. This article provides an overview of the field of electronic business and discusses its conceptual basis as well as its current and future trends.

## BACKGROUND

The basis of the net economy is formed by four technological innovations: Telecommunication, information technology, media technology and entertainment (the so-called TIME markets). These innovations had, and continue to, significantly impact the possible ways in which information, communication and transactions are managed (Kollmann, 2001). The increased support of business processes using electronic systems takes center stage here. There are a number of terms for this that can be identified (e.g. e-business, e-commerce, information economics, network economics), which can, to some degree, be used synonymously (Jelassi & Enders, 2005). It is easiest to structure and clarify the terms, define their boundaries and field of application by using the shell model of the net economy, which will subsequently be described in more detail (see Figure 1).

The initial assumption in the shell model is the general development towards an information society (see Figure 1). Since the beginning in the 1990s, innovative information technology induced a structural change in both social and economic spheres especially through the digitalization of information and the networking of computers (Hagel & Singer, 1997; Tapscott, 1996). Whereas just a few decades ago, computers and networks were reserved for only a few specialists, today they are already an integral part of daily life: Digital technologies and their influence on the transfer of information are ubiquitous. The results of this development are clear – innovative information technologies such as the Internet/WWW, mobile telecommunications and interactive television (ITV). These technologies are changing the world as radically as the steam engine, loom, railways and tractor once did (Pruden, 1978). The digitalization and spread of

Figure 1. The shell model of the net economy (Adapted from Kollmann, 2013)



information via electronic data pathways or networks serve as a pace maker for future economic growth that is comparable with the significance of the printing press in the 15th century or motorization in the 20th century. The information society is respectively characterized by the intensive use of information technologies and the resulting change from an industrial to a knowledge society (Evans & Wurster, 1997). Analogously, from a global economic point of view, there is an obvious shifting from the traditional economic sectors of agriculture, production and (non-virtual or rendered) services towards the information industry sector.

Against this background, one of the central characteristics of the post-industrial computer society is the systematic use of information technology (IT) as well as the acquisition and application of information that complements work-life and capital as an exclusive source of value, production and profit. Information becomes an independent factor of production (Porter & Millar, 1985; Weiber & Kollmann, 1998) and thus establishes the information economy (see Figure 1). From a historical perspective, initially only the product characteristics (quality) and corresponding product conditions (e.g. price, discount) determined whether or not a product was successful (Kirzner, 1973; Porter, 1985). At that point it was important to either offer products or services to the customer that were either

cheaper than (cost leadership) or qualitatively superior (quality leadership) to the competitor's product. Thereafter, the first major successes, two additional factors joined the scene – time (speed) and flexibility (Meyer, 2001; Stalk, 1988). At this point, it was important to offer products/services at a certain point in time at a certain place (availability leadership). Additionally it became crucial to allow for customer-oriented product differentiation of important product characteristics (demand leadership). Information technologies have now created an environment in which information is more easily accessible and can be increasingly used for commercial purposes. The source of a competitive advantage will be determined in the future, as a result of the technological development presented here, by achieving knowledge and information superiority over the competition (information leadership). Those who possess better information about the market and their customers (potential customers) will be more successful than the competition. Whereas information previously held merely a supporting function for physical production processes, it already started to become an independent factor for production and competitiveness (Weiber & Kollmann, 1998).

In practice, three central platforms have been formed which serve as a basis for these electronic business processes in e-business (see Figure 1) that include the

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