

## Information and Knowledge Society

One of the most robust frameworks that we have for understanding the changes currently underway within developed economies is that of the information society. This paradigm contextualizes the current environment as a transition from being an industrial society to becoming an information and knowledge society.

But we need to first think a bit about what we mean when we talk about a society in this way. We can think of a society as a set of cultural, social, political and economic institutions that are interconnected in a particular structure. Societies are supported by a set of technologies and production processes that enable their access to the resources required for their physical subsistence.

So when we talk about a Stone Age or agrarian society, we mean that it was the technological engine of stone tools or farms that enabled that particular set of socio-cultural institutions. When we transitioned from being Stone Age hunter-gatherers to being sedentary farmers, it created a whole new social context. It essentially enabled a whole new world or way of being for people and represented a very fundamental restructuring of beliefs, values and distribution of socio-economic power as we went from living in small tribes to the emergence of large complex empires.

The industrial age was the next systemic transition within the make-up of society, as the harnessing of the new technologies of the combustion engine and fossil fuels allowed for the development of the modern nation state as the social infrastructure behind the emergence of a new form of mass society and mass culture. During the latter half of the 20<sup>th</sup> century, the industrial economies became increasingly linked up into a single global economy. Outsourcing and advance automation drove rapid commoditization of manufacturing and the industrial sector. Alongside the growth of economic globalization was the so-called information revolution, built upon the core technologies of the micro-processor and the global telecommunications network of the Internet. It once again enabled a fundamental restructuring of society.

It is within this paradigm that we can understand the environment organizations operate within today as primarily defined by this transition from an industrial to post-industrial information society. Similar to the technologies of the stone tool, agriculture, and the combustion engine, information technology is enabling a radical and rapid reshaping of all areas of society from how we work to how we socialize, trade, learn and once again restructuring the socio-economic power relations that shape our world. We will now focus upon a few of the major processes behind this transition.

**Firstly the so-called long tail:** Information and communications technologies are changing the structure and dynamics of organizations, whereas previously, the high cost to communications and the tools of collaboration promoted centralized well-structured professional organizations due to the overhead required to maintain them. I.T. has reduced the barriers to collaboration so low that anyone can set up their own networks of collaboration that are unstructured, dynamic and loosely coupled. This has opened up whole new markets and new forms of value generation on what is called the long tail.

The long tail represents the vast majority of people who were not productive enough or consumptive enough to be serviceable at the high collaboration costs of professional organizations. Reduction in collaboration cost is unleashing a whole new framework through which we create value and orchestrate capability within society through the harnessing of the so-called crowd – the mass of people, each of which only has a small amount to contribute, but when summed up it comes to a powerful force. These forms of open organization require a different, more subtle and complex form of management that we will be discussing later on in the course.

**Networks:** I.T. enabled networks have become a key characteristic and structure of the information age. Traditional hierarchical organizations that once had virtual monopolies due to economics of scale are rapidly becoming re-contextualized as simply large nodes in networks where they are one among many and have to compete with the masses on the long tail. This is the world where the previously elite New York Times has to compete for attention with millions of individual bloggers. Increasingly I.T. is enabling the creation of dynamic, real-time, self-organizing networks of collaboration that can be on a global scale and exert a powerful force wherever they emerge.

**Thirdly the commoditization of information:** The information revolution has given us a vastly more efficient and systematic set of technologies for the processing and exchanging of information than previously existed. And although a massive amount of value is still to be derived from this as it ripples through the business world and the social fabric, but the technological revolution continues in advanced analytics and machine learning, where in the not too distant future standardized, routine information processes will become commoditized, this once again drives value up the value chain. Within the advanced economies where the primary and secondary sectors have been commoditized, where information also is fast becoming commoditized, the capacity to learn is the only sustainable competitive advantage. It is no longer what you know; This is just information. It is truly the dynamic process of learning and applying that to solving problems, that is thinking, that comes to be the only sustainable value added activity.

**Lastly the knowledge revolution:** The information revolution has enabled knowledge to break out of its traditional confines. In an advanced information society, knowledge is no longer a static thing that is confined to the elite of academia. Knowledge and intellectual capabilities have always been valuable and scarce resources, but when enabled by advanced information technology that is in turn connected up to a high-tech global economy, it has the capacity to be actuated and reshape the world at an unprecedented speed and scale.

Unleashing the cognitive capabilities of millions that was previously dampened down within industrial systems of organization is one of the greatest sources of potential in our world today, but it is an inherently complex task as knowledge defies all our traditional economic logic. It is nonlinear and nonrival. When people communicate and share their knowledge, it can become more than the sum of its parts. Knowledge services and learning are processes. They are unique and take time. If data is the capital of the information economy, attention and time are the capital of the knowledge economy.

In this section we have explored the emergence of the information and knowledge society – one of the most powerful forces that is shaping our world in the 21<sup>st</sup> century. We have looked at it within its historical context as a new wave of technological development that is enabling a whole new structure to our systems of social and technological organization. We then saw how this new organizational structure is giving us access to a whole new previously untapped source of capability on the so-called long tail. Finally, we talked about the as yet fledgling knowledge economy that I.T. is fostering and its huge potential to shape the future.