different ways. Thus the role and impact of IT can vary across types. The literature provides some examples. Konsynsky et al. provide a descriptive case study of an electronic market in used cars [14]. Clemons and Weber examined the effects of computerisation on the London Stock Exchange.

Due to the convergence of IT and telecommunication, and the proliferation and availability of bandwidth, the impact of electronic markets is expected to grow rapidly. Their effectiveness is however dependent on their design. Existing research in this new area provides examples of relevant issues supporting an effective design.

Also the literature shows that most researchers view markets (auctions) as single isolated markets (auctions). This viewpoint is however too narrow. E.g. Dutch flower auctions are market places in an international flower market. There are other market channels among sellers and buyers. Competition between other markets and market channels is an important element in explaining the success of an electronic market.

Market organisations are the meeting point for multiple stakeholders: buyers, sellers, and intermediaries with conflicting incentives. Given existing or competing market alternatives, no new IT based initiative is likely to succeed if any stakeholder is worse off after the IT enabled innovation.

The concept of stakeholders has been introduced in the study of organisations. As put forward by Simon and March not organisations but people have objectives. Stakeholders are those whose contribute to the functioning of an organisation and whose contribution depends on what is received in return. The continuation of the contribution is dependent on the degree that goals of stakeholders with the organisation are met.

Electronic commerce systems, like electronic markets are organisations. They depend on the continual contribution of different stakeholders. We can distinguish between buyers, sellers and intermediaries (those who organise and offer the electronic market).

Stakeholders behave in a bounded rational way. They are motivated by their goals and by satisfying behaviour. Their decision to enter an electronic market will be based on the perceived contribution to their individual goals.

The concept of stakeholders is important to understand the success or failure of electronic commerce systems.

6 Lessons from Evolutionary Stage Led Theories

Rajesri Govindaraju and Dirk Swagerman

In this part of the panel paper, we would like to explain the two ways of change in order to achieve the virtualness of the organisation: evolutionary and revolu-
tionary change. The relationship between the evolutionary change process and the organisational virtualness will be stressed.

Rapid and uncertain change is the most unsettling marketplace reality that companies and people must cope with today. The pace of innovation continues to quicken, and the direction of innovation is often unpredictable. Co-operation within companies but especially among companies, is the key to the competitive advantage offered by the challenges posed by a business environment dominated by change and uncertainty (Goldman, 1995).

Although there are many reasons that make it may be easy to encourage the use of virtual organisation concept, it is not yet simple to form and operate a virtual organisation. Some of its advantages give rise to its most significant implementation difficulties. To achieve something virtually, implies the introduction of a new process or a new structure (Saaksjarvi, 1997).

The implementation of virtual organisation requires an analysis of the technical and work systems in a company. The change in behaviour and structure needed for this is enhanced and enabled by a number of systems in a suitable infrastructure.

There could be made the division between evolutionary and revolutionary change process (Venkataraman, 1991). These changes in their relation with the virtualness of the organisation are possible by means of the use of information technology (IT). The formation of virtual enterprises is possible only if communication and information exchange technologies are capable of supporting the plug compatibility required by the organisational structure of virtual companies. Venkataraman (1991) described several levels of change that electronic integration stimulates—from increased functional integration to changes in the business’s scope—and each of these extends the reach of the change project.

The phenomenon that changes happen due to the use of IT leads to an opinion that IT can be used as „enabling factor“. The term „enabling factor“ means that the particular factor, in this case IT, could be used as a strategic objective for reaching the organisation’s goal.

Benjamin said that IT-enabled change process is different from more general change processes. They create unique issues for managers. Managers must know how to integrate the technology, business processes, and organisation in order to achieve the goals they expect with the technology (Benjamin 1993).

Knowing the fact that IT is one of the enabling factors for organisational virtualness, technological changes happen due to the use of IT that is playing an important role in the organisation. Even more important are changes in managerial values, organisational structure, and the prevailing corporate culture paradigms that are required. Work force empowerment, self-organising and self-managing cross-functional teams, performance- and skill-based compensation, flatter managerial
hierarchies, distributed authority, and point-of-problem decision making are all expressions of moving toward the acquisition of business capabilities (Goldman, 1995).

It is common to consider the introduction of IT in companies as a more revolutionary change, but in this paper we would like to mention that this change could also be seen as an evolutionary process. It is not a matter of good or bad which type of change process could be applicable. It depends on a set of contingency factors.

The introduction of IT will lead to all kinds of organisational virtualness applications and phenomenon, such as group-ware. The organisation’s objective is that the organisation will migrate towards a form of organisational virtualness. The objective will be led by some business reasons and strategic direction. In that case the organisation has to choose between evolutionary change or revolutionary change, depending on the contingency-factors. An important element that will be incorporated in this decision process is the cultural factors.

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Figure 1: Different Change Concepts

It is not right to say that one form of change is better than another. The use of induced change depends on situational factors, we could say that these factors are the contingency-factors of relevant change concept.

The application of that contingency-factors is used for the first time by Lawrence and Lorsch, for explaining different organisation forms depending on the organisation in their environment (Lawrence and Lorsch, 1977). Later on, these concepts were further developed by Mintzberg. He explained that there are only a few contingency factors relevant for the main organisation structure (Mintzberg, 1979). We could see that depending on the environmental factors and the organisational goal, organisations will make their decision of using a particular change model.
We will see how the evolutionary change process is relevant for the organisational virtualness.

If an organisation has an high expected degree of resistance against change, it is better to use the evolutionary change concept, by mean of the incremental approach. One important comment must be made in the Business Transformation Model (Venkataraman 1991). Business process redesign (BPR) is a part of the revolutionary change process. The IT as an ‘enabling factor’ will be used for a fundamental and revolutionary change at the current procedures. In our way of thinking a BPR could be also realised by mean of other instruments. In the past, the term ‘organisational development’ was frequently used for a fundamental change process, not led by IT. The fundamental change of process in an organisation using BPR concept and not based on the revolutionary change concept, is that an organisation will migrate step-by-step, as a form of continuous improvement toward the desired end situation. If an organisation would like to migrate towards organisation virtualness, redesign of the processes are necessary. This could be done in an evolutionary way.

Contingency theorists stress the importance of an organisation’s ability to adapt to its environment. Evolutionary models specify a cycle of variability, natural selection, and ongoing modification. Evolution is driven by either changes in the environmental context or the entrance of variant „species“ of organisation that is better able to compete for scarce resources. The change stimulates other organisations to modify their forms, and a number of variations emerge. Organisation that can not adapt, decline and fail. When a new „population“ of organisations becomes established, forces of inertia impose other, and only incremental adjustments occur until the next radical environmental changes (Applegate, 1994).

**Conclusions**

Organisations must recognise that to manage the change enabled by IT in its relation with the organisational virtualness is very important. The change can take the form of revolutionary or evolutionary change. If an organisation would like to migrate towards organisation virtualness, redesign of the processes is necessary.
The evolutionary change process is a suitable change solution for certain organisations. Based on the contingency-factors, the appropriate change concept could be chosen.

References


Lawrence, P.R., J.W.Lorsch, (1977) „Organisation and Their Environment“, Addison Wesley.

