

ADAPTIVE INFORMATION MANAGEMENT
in an era of constant change

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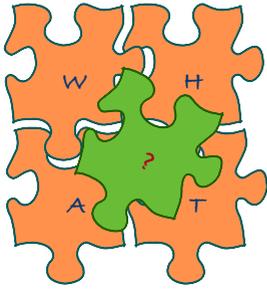
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SECOND EDITION

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ADAPTIVE INFORMATION MANAGEMENT

- Adaptivity
- Information
- Management

A worldwide operating beer company initially positioned itself as a beer-production company. Years later, they called themselves a marketing company, although of course, beer remained their primary focus, marketing became the core of their existence. Nowadays, they call themselves an IT-tech company. All steps of their production and marketing processes are driven by technology.

Using several cloud systems, they operationalise significant parts of their vast production, marketing and sales operations, using their information position and sharing knowledge between the 150 independently operating breweries.

Based on this development path they plan to become a platform company. Broadening from a focus on beer, they opt to become the central platform via which whatever drinks - maybe even drinks and brands from competitors - find their ways to the end-users.

This is WHAT the authors call Adaptive Information Management, and this is the insight this book wishes to give the Reader!

Cheers!



Adapt to change...

We have no other choice in our accelerated world.

Those organisations who do not adapt – will have a hard time to survive.

Information is the key resource of the organisations for obtaining a better grip on changes.

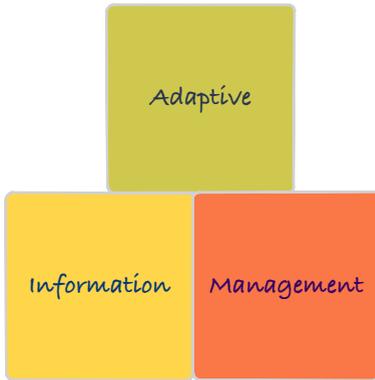


The various levels of Information management - from consistent databases to system administration, etc. - are required for effective change management. Most importantly, the availability of information is crucial for going concern today and for being adaptive not only today but also tomorrow.

The management of information is thus of growing importance for many organisations.



People manage change, so leadership is key, but without dedicated staff, long-term success cannot be guaranteed.



WHAT is Adaptive Information Management?

WHY do we need it?

HOW and WHEN should we start it?

WHO should be involved and responsible for it?

To start with we will check what organisations are, and understanding the complexity, we will get answers step by step to our questions on WHAT – WHY – HOW –

WHEN and WHO should deal with the change management.

Each question will be explained by an explanatory case to illustrate the importance of the topic. Then we do some further suggestions to dive deeper in the issues to put together the puzzles of adaptive organisation management for dealing with challenges and changes more consciously and more efficient.

The different elements of the “puzzle” will be detailed in this book, such as information, management, change, the role of the managers and teams; the short and long-term management tools, such as the Amsterdam Information Model or the Adaptive Cycle of Management, the authors recommend using when dealing with information.

The book starts with WHAT adaptive information management is about, followed by an analysis to gain insights regarding WHY the organisation and its core competencies need attention and the reasons to improve the ability, so to decide on whether dealing with the disturbances, emerging challenges or change is necessary or not. It discusses the topics of strategy and what management can do to ‘get things done’, pointing out the fact that information plays a crucial role within organisations, bridging towards the next chapter on understanding the role of information.



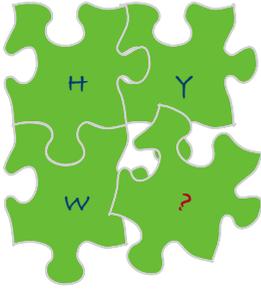
The puzzles of Adaptive Information Management

Realising that organisations, management and the growing importance of information need permanent attention, in the next chapter on HOW, we analyse the different approaches to the role of information, as major organisational resource. Introducing the Amsterdam Information Management model (AIM) ensures a method to analyse the role of information in an organisation. The proposed approach for information management shows how to analyse the actual context of information systems and can be used to understand the interaction and alignment between business and IT, sketching an approach to operationalise the alignment process. By using elements of a systemic constellation, it makes better use of the creative capabilities available within every organisation. For a successful long-term operation, we introduce the Adaptive Cycle of Resilience (ACoR) model in the next chapter. It describes a logical

process that almost every organisation goes through in their lifecycle. It suggests that long-term success cannot be guaranteed without taking attention to careful information management. The process in ACoR illustrates how organisations fall in traps and face different challenges and how solutions evolve. So, the chapter on WHEN deals with the dynamics of change and the role of resilience, while the chapter on WHO focuses on understanding risk and the requirements towards the staff, including managers and teams, in dealing with changes.

All in all, the tension of the authors was to help “students” - so all members of our society, because we should never stop learning - to live and adapt to the dynamic contexts, believing that awareness improves the ability to deal with changes effectively and efficiently.

Emőke, Toon and Otte-Pieter



ORGANISATIONS IN CHANGE

- Organisational Change
- The Role of Managers
- The Role of Information

Fire brigades are organised as quick-responding units. In case an incident of a fire or an accident, they are well-trained and equipped to respond quickly and operate professionally. It is the sole reason for their set-up.

Nowadays they try to make use of all kinds of data: weather forecast, events nearby, rush hours in traffic, etc. They know in full detail what industries are in the region, what risks particular objects may have (ex. hospitals, kindergarten, hotels, students' houses, etc.).

Preparing for any potential risk is critical for being successful in fulfilling the objectives.

Optimal preparedness and having the right information position facilitate to organise the interventions in a quick respond manner: the organisation works as what we call information-driven operation.

Information-driven operation must ensure that all necessary information is available, and the fire brigade can prepare and optimise its capacity and alertness. Basing the operation on data and information is much more efficient; it can optimise the workload and duties. Data, data analysis and information ensure a faster response and a safer environment.

This example clearly shows the importance of information and information management, which this chapter is about. Overall, the role of the fire brigade has not changed over the years, but the way they adapt and react to the changing context using the available information makes them stronger and more efficient.

In today's modern organisation, information and access to it is becoming increasingly important. In our society, organisational changes are related to new opportunities, which are, in most cases related to information technology and its continuous development. Literature calls this process '*digital transformation*', a typical feature of the information society. In the first chapter, we look at organisations through the challenges of digital transformation, which organisations confront every day.

In current society, organisations are increasingly dependent on the quality of information. The ability to deal with modern (and often disruptive) change is crucial for the success of the organisations.

Understanding the change and being able to understand the impact of dynamics in a setting where organisations are no longer functioning on their own but mostly as part of a network or chain of organisations, allows the setting described as a complex adaptive system (CAS). The decisions made by the other partners in the CAS setting will influence the decision space in one's organisation.

Organisations

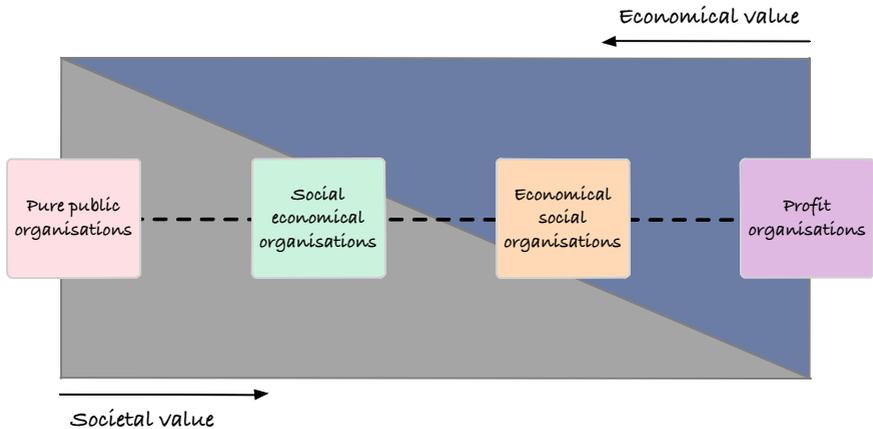
The traditional definition of organisation is as follows:

A structured composition of people and resources
aiming at fulfilling
a - preferably predefined - objective

There are several aspects of this definition that are important:



Organisation theories often state that the first thing to be decided upon is the objectives – specific and measurable goals - that the organisation is striving for. Objectives usually appear in a *strategy* that builds on a number of data and information, - like market analysis, past performance data and industry trends, - sketching a point on the horizon where it is heading to. They are usually a result of a management process and customer demands, and they often have a focus on reaching higher performance, societal interests and values. It does not only mean that the activities of the organisations should be economically sound, but they also should find a *balance* between striving for pure public and societal as well as more economic values.



The social and economic values of organisations
(Desmidt & Heene, 2005)

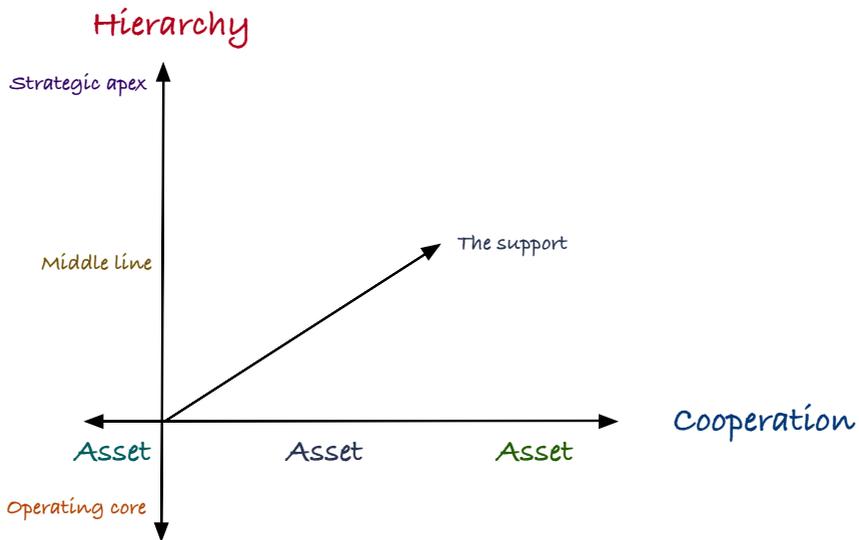
Objectives consist of measurable results and drive strategic planning with *dates* when to reach them, *resources* to be allocated and *costs* (and revenues) projected. The different timeframes of the objectives lead to a long-term mission. Although the routes to reach there assume that continuous updating will be necessary due to change, objectives help to *measure efficiency and progress* by providing benchmarks for leadership and motivation to the employees via transparent information about shared expectations.

People - like the employees of an organisation and all kinds of other resources - work as *assets* together like cogs in a clock. Without synchronisation, organisations are not able to achieve their objectives. Therefore, leadership is key, just as sound and well-defined *structure* and *operation*.

People and Resources

The structural aspect of an organisation determines its operation. In the figure below, we use the terminology as defined by Mintzberg (Henry Mintzberg, 1981). The line for *Hierarchy* defines the structures of *governance* to identify who is responsible for what. It is the *Strategic apex*, the part of the organisation, responsible for defining the strategic objectives, the *Middle line*, responsible for putting the strategic objectives into operation and performed by the *operating core* that *cooperates* using the *assets* available in the organisation.

Organisation structure



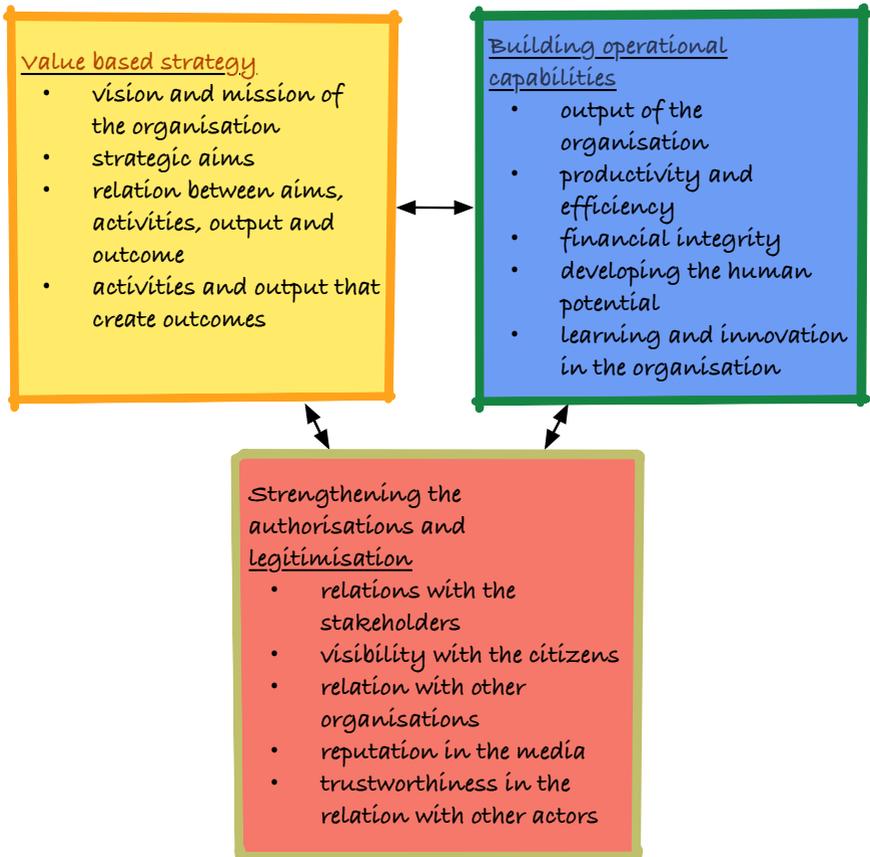
Organisational structure in the relation of hierarchy and cooperation

Operation

Organisations operate by using the available assets to fulfil their objectives. The assets must work together. *Cooperation* is thus a different dimension of the organisation. *Hierarchy* defines who is responsible for what and *cooperation* focuses on the division of work and the definition of tasks, performed by the assets of the organisation.

For smooth operation, two forms of *support* are necessary: *technical* for defining the tasks and jobs; and *daily* support to ensure effective and efficient operations within the organisation. So, the organisational performance in the outside world largely depends on the internal human and other resources operating in the form of business processes, legitimised by the society.

For fulfilling the organisations' objectives, (Desmidt & Heene, 2005) highlight the importance of a value-based strategy, the necessity to build operational capabilities, strengthen authorisation and legitimisation to stress the relations with citizens and other organisations.



Fulfilling organisational objectives

They also added the concept of reputation as an essential aspect, organisations need to deal with. The organisations establish their reputations based on their achievements, trustworthiness. Earning a good reputation requires efficient and effective performance, and for that managers need to enable the right skills and abilities within the organisation. Every organisation builds on the abilities they are good at, which in literature is called *core competencies*.

Core
competences

Core competence is the collective skill and knowledge in an organisation that involves coordinating diverse production skills and integrating different technologies. Organisational design based on core competencies requires excellent communication, engagement, genuine

breakthrough of established organisational frameworks, and the creative and flexible combining of available expertise (Prahalad & Hamel, 1990).

A core competency is a coherent strategic system of the organisational processes - as far as the organisation starts and ends with cases or customers - in which the strength of the organisation lies. Core competence is that in which the organisation is strong and therefore represents the inalienable right of existence and the trust of the organisation. The basic idea is: if an organisation operates from its actual strengths, it is recognised by the market or the public, as being a highly valuable organisation. Positive collegial thinking fits well with this, as opposed to negative competition. Subcontracting parts of that strategic system is out of the question. Ideally, almost every employee in the organisation performs some core skills. Organisational restructuring based on core competencies can lead to a flat organisational structure within which no one can claim to keep it under control. Classical hierarchical thinking works counterproductively here. In this school, a dynamic organisational environment strategy is a matter of 'movement': anticipating trends with society or market and changing customer needs. The combinations of product and market are not strategic determinants; instead, how we act as an organisation in an ever-changing environment are. Information systems must signal these movements early enough and then they must be quickly adapted to move with them. Multiple employability of people and resources is currently necessary for the required flexibility and variety in managing changes. The idea of the 'learning organisation' directly addresses this. It is essential to focus on the behaviour, organisational habits and organisational processes in which the core skills have their roots. Management's attention should focus on corporate infrastructures that support and strengthen this behaviour. Identifying and investing in those supporting infrastructures must be a top priority for management. This also applies to any information systems belonging to that infrastructure.

In bureaucratic organisations the reasoning is as follows. To minimise bureaucratic overheads, we need to look for the smallest organisational core unit in which business processes are accommodated. Once the management structure and information management have been arranged, it will be possible to set up 'clones'. Then these units combine in an unlimited way with each other to keep close to the needs of customers, creating a flat

organisational structure. The management is for the benefit of those who are in direct contact with the customer. The production units are virtually autonomous in the infrastructure. To this end, the hierarchy must be reduced to the minimum. Steering takes place based on budgets and results. The transformation of large, long-standing, highly bureaucratic organisations in the model mentioned above, will of course be expected to meet great resistance. According to the experience this does not mean that winning is not rewarded.

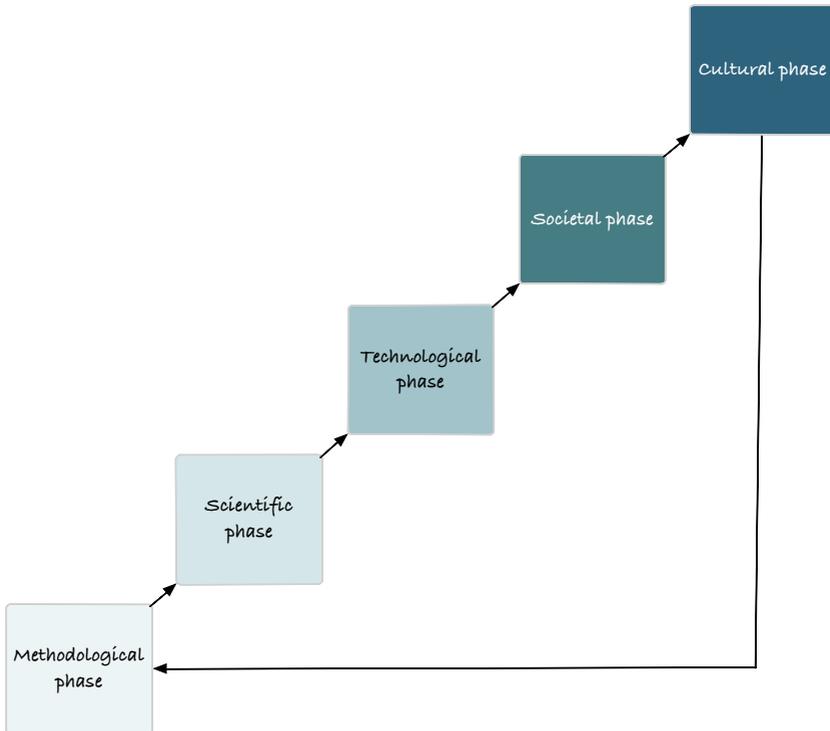
The focus on the different approaches to organisations will help a better understanding and improve the ability to deal with change which is necessary for current society.

Change

Change, as an image of an era is a fact now, characterise contemporary developments as being highly dynamic and changeable. Professional literature provides us with countless references to this, and at the same time, there is not any doubt that organisations find it very difficult to cope with changes. Scharmer (2007) observes justly that we live in an era of intense conflicts and massive institutional failures that may result in unforeseen *disaster* but also *hopeful innovations*. Therefore, M. Beer (2003) notices that 'it is hardly news that in this environment, firms will have to possess the capacity to adapt or suffer the consequences – low performance and ultimately death and destruction'. These are only two examples of authors, who point out that organisations should pay serious attention to developments. Therefore, the complexity of the issues within organisations has received more attention for many years (see a.o. Allen & Varga, 2006; Anderson, 1999; Benbya & McKelvey, 2006; Kauffman, 1995). We will discuss this in more detail.

The environment in which organisation function is characterised by globalisation, competition and non-linear changes (Maula, 2006). The speed at which these changes take place may vary strongly. Perez (2002) for example, distinguishes five major revolutions in the past few centuries, developed in an identical way. Starting at the industrial revolution that commenced in 1771, she distinguishes the steam revolution (1829), electricity (1875), oil (1908) and as last the information technology (1971) revolution. Van Praag (1986) distinguishes five phases that are characterising a revolutionary development. In the first methodological phase, new ideas germinate that are the basis for the development. In time, these ideas are adopted by science, which will examine the development thoroughly and ultimately, after the necessary experiments (and failures)

translate into technological progress. According to van Praag, implementation of this progress will lead to a societal phase in the revolution when the impact of the development becomes apparent. The ultimate incorporation of the change in our economic and cultural system completes the revolution and marks the moment where nobody can withdraw from this development. Both Perez and van Praag observe that after the cultural phase a methodological phase follows that heralds a new revolution. This completes the cycle and starts a new one.



Changes in the organisation's operational environment
(Praag van, 1986)

Land (2003 p.53-54) uses this approach to indicate that organisations being open systems, are going through cyclical learning processes. In this learning process, the organisation successively finds itself in a relatively stable situation alternating with phases of instability.

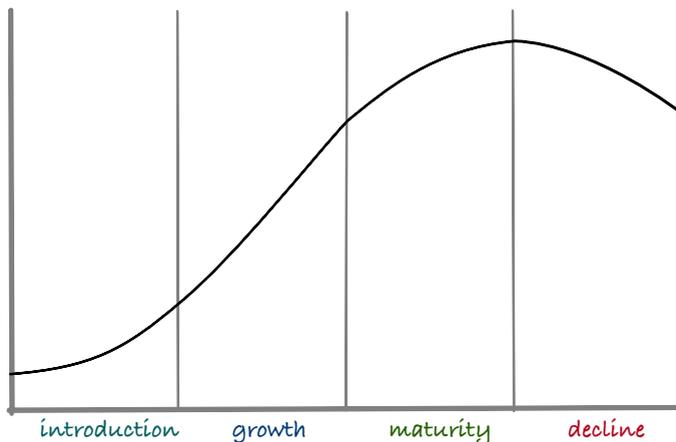
A characteristic of this type of development is that organisations face dilemmas. When organisations deal with highly dynamic contexts,

these dilemmas pop up everywhere. In many cases, they may be characterised as ‘tough problems’ (Kahane, 2004), for which no solutions exist.

Literature calls this type of thinking *Polarity management* (Johnson, 2014). There is no one best way to organise the process of finding a solution for dilemmas like this and dynamics puts the organisations in a permanent mode of change. Thinking in polarities is sometimes called metamorphosis thinking and characterised (A W Abcouwer, Gels, & Truijens, 2006) as:

- Permanent state of balancing between polarities where the domination of a pole changes in time without losing contact with the other pole;
- Stepwise and sudden development to higher levels may lead to alternating states of crisis and equilibrium;
- A continuous change of attention between inside versus outside the organisation, such that periods of accelerated and delayed transformation alternate with each other;
- The presence of interlocking but qualitatively different life rhythms.

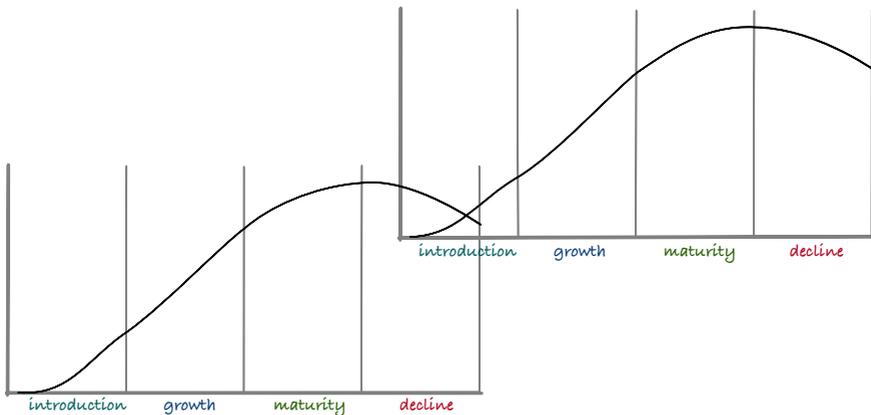
The question organisations are facing in these dynamics is how the management will be able to govern developments in this complex situation in order to be able to make the necessary adjustments. In this situation, one often links to the product lifecycle in which the successive phases of introduction, growth, maturity and decline occur (A W Abcouwer et al., 2006; Porter, 1980).



Growth potential of an organisation

When an organisation wishes to develop further, then this is only possible if a new introduction phase starts as early as the decline phase, during which chaos and crisis are already occurring/threatening. For management, this is not a natural development. The management will reckon with variables that come within the reference framework and time frame that they use. In this regard, decisions from the past influence decisions now and in the future to a high degree. In literature, this phenomenon is denoted as “path dependency” (see a.o. Pierson, 2000).

In literature, *framing* (Fiske & Taylor, 1991) is to view the developments within the present world view. In practice, managers usually embroider on the experience they accumulated in the past. Although an action proved successful in the past, the changing context does not guarantee that the action will also be successful for the present or future situation. Taking the past for granted may even result in a negative impact on the functioning of the organisation.



Growth potential in a changing environment

Even though these models originate in the field of commercial organisations, they are applicable and helpful in any organisational activity. When organisations do not prepare for changes, a dramatic fall in performance may occur, leading to a growing mismatch between expectations, needs and requirements.

Not being prepared for future developments in society, and in the meantime, trusting upon old abilities and skills, will lead to a growing risk of decline. D. Miller (1990) for example, observed that