Valu.e-networking

Taking the e-economy from vision to value!

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Abstract The modern corporate management is still in a state of permanent change, whose dynamics of development is rather increasing than decreasing. This change takes place especially in a linking up of value added activities (that occurs more and more in a cross-company way) and the computerisation of business processes. It occurs under various approaches and keywords (e-business, supply chain management, virtual business, e-procurement,..). This change on the one hand includes a successive adjustment to known trends, and on the other hand it includes new challenges for corporate management. In this paper, the change in corporate management is discussed using the concept of the ‘fractal business’ as an example. Solutions for the future are sketched, too.

Changes in Management – Management of Change

For ten years, we have been living in a time that has been called a ‘time of change’ everywhere. Markets, products, and technologies are changing at an unprecedented speed. Since the beginning of the 90ies, when Europe was in the worst economic crisis of the post-war era, businesses have tried to keep up with that change. Market shares are being regained with various approaches, concepts, and strategies, as well as a reduction of costs and processing time and– last but not least – the ability to react to changes quickly is being increased. It is

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interesting to watch how management concepts have developed during the past years.

Among all of the consultants', research institutes', and practical persons' trends, three fundamental developments can be extracted:

1. The development of 'adaptable' businesses
2. The development of business networks
3. The computerisation of added value (e-business)

When looking at these developments on an abstract level, the conclusion can be drawn that it is the development in the same state, seen from different perspectives. The first case is about transforming a rigid, centralistically organised structure into a dynamic shape with decentralised organisation units. In the second case, an attempt is made to co-ordinate and optimise several legally autonomous businesses together. In the third case, a technology revolutionises the possibilities of interaction between business and customer ("business to customer", B2C) and between business and business ("business to business", B2B). All of the three developments have a common objective: an added value, produced together and co-operatively with making full use of high degrees of freedom and the single added value partner's ability to react. Obviously, modern top-level organisations are a composite of extensively autonomous organisation units with common objectives and defined rules of co-operation. It is a form of co-operation we have propagated in the form of the 'fractal business' concept for nearly ten years and which has by now been practised in many businesses.

The Fractal Company – Origin of a Trend Reversal!?

In 1992, we published the book "The Fractal Company: A revolution in corporate culture". Connected to this book is a turn in the thinking of modern business management. The concept of the 'fractal business', as it has been called since the transmission to non-industrial branches, stands for a break with the paradigms that could then be found in theory and practice. New approaches, methods, and concepts have been developed and introduced in companies. For many, the 'fractal business' has become the 'European answer to lean production'. The management trends that were set then are today more relevant than ever. The direction in which we have been heading proved to be successful and is a signpost for modern corporate management. The features of fractal units of organisation are established in many businesses as a model.

Features of Fractal Units of Organisation

"A fractal is an autonomous unit whose objectives and performance can be described unambiguously" [1]. This is how the fractal was defined originally. With that, nothing is said about a fractal's size or organisational structure. A fractal is generally a unit of a business

which has objectives, achieves results and acts autonomously. In this context, the description of objectives and achievements for business units is important. This was new at that time. What was new was that these objectives and achievements were not only fixed on financial scales. In contrast to the so-called Center-concepts, which generally include financial objectives, the objectives of a fractal are orientated on its contribution in the entire added value of an enterprise. This does not necessarily have to be a financial contribution.

Self-similarity

A fractal has objectives, achieves results, can be described through connections (both within the fractal and with other fractals), elements, and qualities. Therefore, from the single employee to the entire business, everything can be described in fractals. Using systems theory, a fractal can be thought of as an open system which itself includes (subordinate) fractals and is also part of a superordinate fractal. All units of organisation are businesses within businesses; employees are entrepreneurs in their company.

Self-organisation

Fractals run by self-organisation. They are allowed a defined amount of autonomy to reach their objectives and accomplish their results. Efficiency requires the ability to act. Fractals are able to act because they can command their resources which are necessary for the supply of performance on their own authority and own adequate freedom for acting and making decisions. Self-organisation also means market economy principles within a company. The fractals organise themselves and are not controlled from outside. The fractal's limits (see above) describe how far this self-organisation stretches, which scope of development it has. The rules of the game between fractals are set by their relationships.

Self-optimisation

Fractals do not persist on their status quo, but are part of the change. They revise their objectives, performance, and qualities permanently and adjust them accordingly to the market's requirements. In this, there are evolutionary changes, e.g. through adaptation of qualities, relationships, etc. However, revolutionary changes, e.g. in the form of a partition, separation, or even dissolution of fractals are possible.

Dynamics, Vitality, Adaptability

The features described above allow fractals not only to adapt to changes, but to act anticipatively and on their own initiative. Fractals are, to a certain extent, "autonomously viable". For an extensive definition of the term "adaptability" we refer to the works of the Sonderforschungsbereich „Wandlungsfähige Produktionssysteme“

(special research field “adaptive production systems”)¹. For a better understanding of what is described by adaptability, the following sentences may suffice: Adaptability is the ability to reach lasting changes out of one’s own strength. These changes lead to conditions that were unknown before the changes occurred. Entirety – The Six Level Concept

The fractal business sees itself as a holistic concept. It is based on the insight that a company is only fully efficient as a whole, as a unit. Local or one-sided optimisations are not very helpful; the unit is as weak as its weakest part. The approaches of cost accounting, of compensation and of PPC must fit, the entire philosophy must be harmonious, and the concept must be consistent. A fractal (and with it, the entire company) is described using the levels ‘culture’, ‘strategy’, ‘finances’, ‘socio-informational level’, ‘information’, and ‘material flow and process level’.

New Developments, New Business Environments, New Challenges

Since the original development of the ‘fractal company’ concept, several influential factors and business environments which are relevant for business management have evolved or changed. These changes are manifold; they concern among other things:

- A new generation of businesses and entrepreneurs. Along with the buzzword “new economy” an unprecedented founding wave can be noticed which questions many “laws of success” that were valid until now.
- New business models, new markets. The term “new business models” stands for innovative ways to achieving economic success. The added value itself changes. Many businesses make money by producing “traffic” and creating a “community”.
- A change in the understanding of what a product is. Whereas in the past the term “product” usually meant a physical product, today the virtual share of a product has increased. Instead of buying a car, you merely purchase mobility or the sensation that is combined with the brand’s image.
- New technologies. Especially in the information and communication technology sector massive changes take place with a noteworthy influence on industrial products and production.

¹ Westkämper, E.; Zahn, E.; Balve, P.; Zilebein, M.: Ansätze zur Wandlungsfähigkeit von Produktionsunternehmen – ein Bezugsrahmen für die Unternehmensentwicklung im turbulenten Umfeld. In *wt Werkstatttechnik* 89 (1999) 9

- New methods and procedures. The industrial added value is more and more supported by efficient methods and is realised both better and faster.

New forms and models of organisation. The developments and new models of organisation focus on cross-company organisation. Be that in the form of virtual enterprises, business networks, or supply chains – the added value that is linked up across companies is established step by step.

Despite these multifaceted changes of the past years, no fundamental break concerning the basic orientation for successful business management can be noticed. Rather, the significant paradigms of a “fractal company” (the “turbulent environment”, adaptive business structures and processes, holistic management,...) have been confirmed and applied in various concepts. Especially the megatrend of “linked-up added value” with its many specific characteristics follows the basic philosophy of fractal organisation – the common added value of extensively autonomous performance units with the objective to react very flexibly and quickly to the market’s requirements.

These modified but still valid business environments offer the modern business management freedom to act. They are a reason for testing the validity and potentials of the fractal company concept. Also, new adaptations and further developments should be identified. An extension of the fractal model accordingly to the latest market developments – namely the trend towards linked-up added value and “e-business” – is at issue. Those two developments are currently the most prominent drivers for concepts and methods of business management.

“Fraktal+” – Adaptation and Further Development of a Successful Concept

The fractal company concept is generally practical for taking up the developments sketched and for offering suitable solutions. As mentioned in the beginning, the basic principles within a fractal company can be compared to those of a business network or a virtual enterprise. The linked-up added value is in this case achieved through legally autonomous fractals, i.e. the companies involved. The self-similarity principle thus makes the mapping of this linked-up added value possible and thereby offers an approach to view this form of added value in the framework of the known theory. The definition “A fractal is a business unit that acts autonomously” must simply be modified to that effect that the company itself and systems comprising several companies are to be regarded as fractals, too. It could be something like “A Fraktal+ is an autonomous performance or business unit consisting of parts of companies, the company itself, or several companies,...”.

However, the adaptation of the fractal company concept is slightly more difficult regarding the e-business phenomenon, which is marked by changes in the business model area. Yet, at second view, it becomes clear that the generic fractal model offers adequate application possibilities. A fractal is, among other things, described through its objectives and accomplishments. These objectives can, as mentioned above, be manifold; they are not restricted to the financial dimension. Neither are the achievements restricted to producing material goods, but they comprise any form of producing performance. Thus, the models for describing the performance of so-called “not directly productive fractals” (as, e.g. in a personnel or quality department) are, at least in principle, conferrable to the “new economy” business models. Here, too, we find performance units (the start-ups) which do not (yet) generate any financial yield, but are appreciated (in the capital market) because of other performance features (“community” size, degree of being known,...).

The general applicability of the “fractal company” concept, however, must not lead us to ignore that the concrete solutions and concepts to be developed are new. Yet, this fact does not pose a real problem, as each fractal company is unique. It is just the individual specifications of fractals – depending on the context of the entire economic unit and their contribution to the entire added value – that make this concept so multifaceted and thereby efficient. Seven rules for successful corporate management in valu.e networking

There are seven rules that companies must obey if they want to achieve lasting valu.e networking success:

1. Businesses must balance the interactive process of value creation. A product is not defined as the result of interaction between “supplier” and “customer”, the product is interaction itself! The manufacturer becomes a service provider and catalyses the networked, interactive process of value creation. The linear process of value creation gives way to the linking-up of the value-adding community.
2. Businesses must be able to constantly innovate on their own initiative. Adaptability is crucial to being competitive in a turbulent environment. It allows companies to react quickly, efficiently and comprehensively to changes. Adaptability itself is not sufficient. Only the one who impacts these changes constantly and on its own accord will be the one to gain a competitive edge. Lasting success requires the ability to innovate products, processes, structures and methods constantly.
3. Businesses must understand value creation as added value creation. Added value occurs if a transaction among at least two value-adding units is successfully creating an added value for both units (e.g. money for product). This is why each value-adding unit

(from the single employee to the entire economy) must actively and permanently have an interest in offering, selling, communicating and realising added value. Added value is defined from the recipient's point of view and not from the added value creator's point of view!

4. Businesses must emphasise the communicative and emotive aspects of their products.

Added value is not only a product, it is the random combination of physics/hardware, software, service rendering, knowledge, time, law and emotion. Added value is not restricted to an immediate or potential benefit, it might also include emotion. Added value is a subjective "additional value" from the recipient's point of view. A vital aspect is whether both recipients recognise the transaction as a personal added value.

5. Businesses must place greater emphasis on "partner" and "competitor" markets.

The potential of vertical networking, i.e. along the value stream is currently being tapped into by all agents. It is not that these potentials hold any competitive advantages worth mentioning, they are merely necessary preconditions for being competitive. New potentials can be extracted from the axis "partner $\leftrightarrow$ competitor". Along this axis, new dimensions of added value are waiting to be discovered, ultimately leading to a significant improvement of competitiveness.

6. Businesses must command "processes overlaying processes"

The automation of manufacturing processes comes along with the consistent automation and standardisation of business processes. Human work shifts from executing single processes to managing structural and meta-data, and continuous process optimisation. It is not the direct added value activities that mark competitiveness but the meta-processes i.e. "processes overlaying processes" (CIP processes, change management, development of organisational structures).

7. Businesses must act in time

Beware of falling a prey to the acceleration trap: Failed product launches, quality defects, misjudged market inertia and burn-out syndromes are the first signs of wear in the high-speed community. Success requires proper timing. That's why enterprises discover the "new slowness". Mature, "decelerated" processes ensure lasting success.

As a conclusion, you should bear in mind that the general approaches of the fractal business will be valid in the future and will offer the business management sufficient potentials. Furthermore, there are enough challenges and questions to be answered in this modified environment. We are looking forward to meeting these challenges.

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