CLUSTER ENTERPRISES AND INFORMATION TECHNOLOGY

CHANCES THROUGH EASY PROCESS DIGITALISATION AND COMMON INFRASTRUCTURE

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Anotace: In the following we want to try to project the advantages of cluster enterprises, in narrow dependence with modern information technology, to music producers or music composers at important media locations in Germany.

Klíčová slova: cluster, ecomomics, team work, telecast

1. INTRODUCTION

Many of single enterprises are not able to overcome alone at business competition. They need an effective teamwork of research institutions and development institutions, financial institutions, suppliers, skills institutions, other service enterprises and manufacturers for a durable development of innovative products and service and therefore a strong business competition.

One of the basics in successful and effective playing together is information exchange with modern digital information technology. The possibilities to exchange data within a corporation and to external places, thus to other corporations, are nowadays realisable in a variable and certainly very quick manner.

We will find out, if the rules of the cluster enterprises partial or entire are available at the music producers and music composers, in order to advance innovative possibilities of musical compositions and therefore be incited through a stronger business competition, in order to increase the productivity.

2. CLUSTER ENTERPRISES

If the team work, mentioned in the introduction, is bounded to the same geographical location, we talk from cluster enterprises. Simply verbalised, we can talk about cluster enterprises when there is a regional trade (branch) accumulation of similar enterprises (Schiele, 2003). The enterprises in a cluster have common as follows (Schiele, 2003):

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- They are more profitable as their competitors, which are not in an trade cluster
- They are in the same trade
- They are resident in the same region

Holger Schiele shows (Der Standort-Faktor) some outstanding cluster in Germany, which I want to reflect here in extracts:

- Luxury automotive industry in Stuttgart, Munich, Regensburg, Ingolstadt, Neckarsulm
- Biology technology in Martinsried
- Medical technique in Erlangen
- Media in Babelsberg, Berlin
- Kitchens in Ostwestfalen-Lippe
- Blade ware in Solingen

It is interesting in this list, that the media in Babelsberg nearby Berlin is registered in the row of cluster and thus cluster enterprises (later some more explanations). At this point I want to note additional the media locations Cologne and Munich as media cluster and the media corporations there. Generally Radio- and TV stations under public law are not called enterprises, because their main task is to accomplish a legal fixed information task and they are not allowed to earn profit. Since the private economic broadcast in Germany have a not humble share from the media market, the situation has changed in the way that it is valid to talk over all about media enterprises and this is not correct for all broadcast stations. Furthermore we find under the term “media” not only broadcast stations, but also film companies, rental studios, production companies and peripheral enterprises like media agencies, pertinent graphic agencies and audio agencies. All facets of print media are in this context not in the foreground.

To describe a cluster better and to understand the functionality better, Schiele considers four groups which have to be in one region, in order to speak from a cluster (Schiele, 2003):

- The direct competitors of an enterprise
- The most important customers
- The supplier
- Organisations which act supporting like education service and consultant companies

At the electronic media the direct competitors are the resident broadcasts in the same transmission range (here it is intentionally not differed between private economic stations and stations under public law), the most important customers are the viewers and the listeners, the suppliers are production companies which deliver complete

broadcast contributions to the stations and the organisations are pertinent colleges and e.g. the VDT (Verband Deutscher Tonmeister) or BVK (Bundesverband Deutscher Kameramänner

3. INFORMATION TECHNOLOGY

Information technology or often applied as information technique, is a generic term for digital information and data processing and for the required hardware and software. Oftentimes the abbreviation “IT” is used, which is in English and German known and only adequate pronounced.

IT is a connector between the classical analogue but also digital electronic technique and the informatics. Just namely this fusion is obvious by “information technique” or “information technology”. Near to the information technique is the technique informatics, which deals with switching unit networks and the build-up and handling of computer. But also hardware aspects of input devices, thus all facets of human-computer-interfaces belong to this term.

Digital signal processing, digital signal transmission and communication technique are the basics for computer networks. The growing together of information technique, telecommunication and entertainment communication is therefore often labelled as information and communication technique.

How we will see later by an example, the development of IT has changed many living areas and occupational image. Many Enterprises are affected by the information technology in different characteristics. The industrial IT treats networking of machines in manufacture processes and production processes with in a company, but increasingly crossing the company boarder.

Many companies cannot avoid the pretty widespread electronic installations and so they are almost forced to integrate themselves in the variable net of the digital information society.

4. PROCESS DIGITALISATION

Already existing enterprises, which have no modern information technology, must first of all create the precondition for IT. This means concrete single processes or

workflows, which were in the past transacted without or only partial with electronic support have to be analysed in detail before going into the digital world.

Manual workflows have sure not efficient processes, possibly delays and quality deficiencies, but they can be corrected at a certain position because of the manual work and thus the human component.

This is valid for standard processes and in particular when it is necessary to react very quickly at unforeseeable or topical events, which change the entire process or a part of a process.

Everybody who had to emulate certain workflows with all logic conjunctions, branching and loops on the basis of a program language knows about the structured procedural method and the distinction of cases which have to be considered, in order to get the accurate copy of the workflow. A correction of possible errors in the copy we can not do after the implementation of the system while running procedure. A changing of the procedure is only possible by the system administrator with significant effort.

At Bayerischer Rundfunk, a broadcast station under public law was installed before three years a digital computer networked system for order, permission and booking of technical devices. Beside SAP R/3 began with E-Procurement the era of process digitalisation and E-Business.

With fixed personnel of 3.500 persons and a few hundred transactions per day the cost effectiveness of the enterprise process digitalisation is given at Bayerischer Rundfunk. The digitalisation barrier is crossed over from the total turnover. The coherence between system cost and entrance barrier for E-Procurement is valid for installing the system (Schiele, 2003).

5. COMMON INFRASTRUCTURE AT ENTERPRISES

The term infrastructure signifies all long termed basic establishments of personnel, material and institutional species, which guarantee the working work partial political economics. This term includes administration, traffic, tradement and production, whereby it id also used to typify technical basics in the private economics, e.g. in enterprises.

In enterprises the term IT infrastructure was carried through since the last years more and more. The public infrastructures are very important for enterprises, because they are competent for traffic network, communication and the social component. So trades have a great advantage, if they choose a location with easy public infrastructures.

Public technical infrastructure

- **Providing**: disposal of waste, waste water, potential recyclable
- **Communication**: phone, internet, E-Mail, broadcast stations
- **Traffic infrastructure**: inland water, maritime shipping, trains, buses, air traffic, Country streets, highways, public traffic net

Public social infrastructure

- **Education establishment**: Kindergarten, libraries, schools, colleges, research establishment, universities
- **Service**: care service, clubs and associations, establishment for children care
- **Health network**: medical doctors, hospitals, rescue service
- **Cultural establishment**: exhibition rooms, museum, cinema, theatre, concert rooms
- **Public security**: fire-brigade, police, technical service
- **Meeting points**: market places, recreation centres, athletic grounds

The enterprise infrastructure, here is meant the internal infrastructure within an enterprise, belongs to the secondary activities. These are the technique information systems, planning systems, management of workflows, information procurement and systems of accounting. They take care for clearance and communication in the enterprise and contribute to effectivity and efficiency at enterprise processes.

But not only must the internal infrastructures of a company be building up within the company. The internal infrastructures, especially the systems of information techniques, need fitting and compatible interfaces to external enterprises. In comparison to former possibilities of communication (e.g. drawings which had to draw on paper or printed and then the paper must be copied, in order to send the papers per conventional post in an envelope or as parcel) now gets the much quicker bidirectional exchange of data with other enterprises a entire new rank in information policy. The high information speed influences the speed of decision of the manager enormous and thus not only in the own enterprise, but also depending on other networked companies. Therefore is developed a new direct interactive communication culture.

Without any doubt there appear important synergy effects when choosing a location which has qualified public infrastructure, if common infrastructure could be used or perhaps just created for cluster enterprises. Common basics have to be defined for each of the branches and if there are infrastructures they have be integrated into the entire system. For building cluster successfully the public social infrastructure is very important, because the coming together out of the enterprise promotes the creative exchange of ideas. The collegues are able to communicate in unforced environment and they are free from barriers of the company (in its rooms and thinking). They get important ideas for improving the own situation or can give some ideas to the others. We can assume that there will be soaring skills of all enterprises within a cluster.

6. TRIAL TO PROJECT CONVENTIONAL ENTERPRISES TO MUSICAL COMPOSERS AND MUSIC PRODUCERS

Similar to enterprises in former times in which there were no modern infrastructure technologies it was for the music composers a total different world, which has nothing common to our present world. To show it simplified and narrowed to the area of music for telecasts in former times arise process of a composition commission was like this:

1. Idea of a new telecast
2. Genre of the telecast, conception for content, audience and viewers
3. Ideas for the optical acoustical creation of the opener, jingles, crossfades, Abspann
4. A music composer was informed about the telecast and the music was ordered
5. The composer plays some ideas on the piano and works out tunes and arrangements
6. The on paper written score is played orchestral musicians and recorded on tape
7. Maybe changes are discussed with the editor between the recordings or there are created two or three versions
8. The completed versions are given to the editor for checking
9. The production was very expensive (recording studio, musicians), thus one version will be taken without other musical demand

The entire productionprocess had duration of many weeks because beside the main composition work there is to handle a big organisational and logistical expense. The composer and the editor met more often face to face, in order to review the authenticity of the music piece. In our times the beginning of arise process of a composing commission is in comparison to former times similar, but from point 4. it is different.

1. Several composers will be briefly informed about the points 2. and 3. They will be requested to make first proposals.

2. The composers create with their Midi-Studio the first proposals. These were put to a server at the editor (customer). The editor gets a first impression not only from the composal aspect but also from sound characteristic
3. The customer chooses between the composers and the winner is invited to a (first) discussion
4. Following proposals and changes are sent per E-Mail or communicated per phone. The new proposals were put on the server again.
5. The piece of music is completed. The musical composer sends his result per post on CD because of the better audio quality.

At this point I want to remark, that the occupational image of the music composer, in the environment of the present process digitalisation, has much common with the classical occupational image of the music producer, because the composer has to manage pretty often digital logistics too.

Through using modern IT the time for logistic and communication elements are rather reduced when producing a musical work. Especially the possibility to transmit music files per internet within seconds without high transport costs, we can save much time and there is no need to be near to the customer. There are no more costs, if the music files must be copied for more people, e.g. for a group of responsibles which want to hear the music. In former times there had to be copied some CDs, now just the E-Mail addresses of the responsibles must be known and they all get the information with one mouse click.

Partial it is used practice to involve other composers into the entire production through division of the production process. Also with using IT some parts of the music files can be played to the composer, who is the “general enterprise”, and he mixes the separate audio files together for creating and completing the whole work.

Now we can think that it is possible to compose successful music apart of all civilisation because of the connection with the customer over world wide web. But independent from the digital possibilities of net is in principle the face-to-face contact to the customer absolutely necessary. Especially in the music branch the personnel communication decides about success or not success. Only virtual via internet and therefore without any direct contact to the customer the relation between customer and supplier cannot work because it could not built up a basis of mutual trust.

What about business competition? Do I have the possibility to compare my skills to other composers or could I get inspiration from other composers when I am apart of civilisation? Sure it is possible to hear musical works of composer colleagues

just to find out how they managed a certain task or to be inspired from their CDs. Contemporary hear habits, sound characteristics or instrumentation can be heard out too. But this kind of getting information is only in one direction. An interactive exchange of backgrounds, explanations, interpretations is not possible. The interactive exchange of information is essential for the upkeep or developing of the own skill and the extension of the experience horizon.

The experience exchange of applied knowledge, manual philosophy of technical devices (e.g. audio mixing consoles, effect devices, editing stations), different production procedures and handling of special productions is important for the music producers and composers to overcome. Without bilateral communication with colleagues at the very hard competitive music market there is no chance to exist long term.

Based on the explanations up to now we can perceive the following rules:

Conventional enterprises	Composers/music producers
• There are announcement procedures at searching for the best/most bargain supplier • Trust relationship customer-supplier • Branch usual necessary communication technology • Division of the production procedure to several suppliers • Nearly similar rules in business competition • Build up, development and usage of similar infrastructure • Process digitalisation to achieve more effectively	• There are announcement procedures at searching for the best/most bargain composer/music producer • Trust relationship customer-composer • Branch usual necessary communication technology • Division of the production procedure to several composers/producers • Nearly similar rules in business competition • Build up, development and usage of similar infrastructure • Process digitalisation to achieve effectively

In principle the enterprise system of conventional companies can be transferred to the situation of the music producers and music composers. The supplier-customer relationship has similar marks. The distribution of the final product is made by post or face-to-face. Nevertheless the customer is included in the creative process. With internet distributed beta versions are corrected by the customer.

7. PERCEPTION FROM THE TRIAL UNDER THE ASPECT OF CLUSTER ENTERPRISES

The systematical analysis of this thesis into single areas made clear the complexity of the entire theme area, at which a deeper entrance into this theme would cut across this work. The explanations did always have the aspects of cluster enterprises in the background. So we see clearly that in the music branch the building of cluster, similar to conventional enterprises, is sure possible and the composers take the advantages of the cluster. Innovative possibilities of musical compositions are developed through the infrastructure and the productivity increases.

The electronic paradoxes (Schiele, 2003) shows its impact. Although; the area wide electronic network is given, composers can be only really successful, if they could exchange additional their ideas face-to-face. The chances for being successful at the international and national business competition increase through establishing cluster and fitting process digitalisation. The creating of cluster does not exclude the process digitalisation and other way around. Both, cluster and process digitalisation, need each other to build up a successful location. An adequate together with the right mixing ratio is the optimal assumption for successful music composers, music producers and of course, enterprises of variable branches.

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