FORMATION OF SPECIALISTS FOR INTEGRATED MANAGEMENT (QUALITY, ENVIRONMENT, OCUPATIONAL SECURITY)

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Se prezintă abordarea în cadrul unei rețele universitare integrate a formării manageriale în problematica: managementului calității, mediului, securității personalului, muncii şi informațiilor, conform standardelor internaționale şi evoluțiilor pieței.

In locul abordării discrete se insistă pe cerința folosirii unor bănci/baze de date şi formării sistemice a unor manageri capabili să opereze în întreprinderi. Elementul esențial este punerea în valoare a contribuției pe care o are Managementul integrat pentru profitul şi dezvoltarea firmei. In locul predării clasice, se urmăreşte implicarea în cercetarea-proiectarea managerială, în consultanță, în cazuri reale pentru firme (mai ales pentru cele aflate într-un impas economic şi social). Contribuția managementului la nivelul firmelor o considerăm – păstrând proporțiile – a fi vârful de atac, cea care va pune în valoare toate structurile organizatorice, în general, întreaga societate pentru ceea ce se aşteaptă în sec.XXI: restructurarea dezvoltării pe principii ecologice şi de calitate.

It is presented the approach of the managerial formation within an integrated university network in problems like: quality management, environment management, personnel security, work and information, according to international standards and evolutions of the market.

Instead of a discrete approach we insist on the request of using a bank/data base and the systemic formation of managers able to operate in companies. The essential element is capitalizing the contribution of Integrated Management in the development and profitability of the company. Instead of the classical teaching, we follow the involvement in the managerial research-projecting, in consultancy, in real cases for companies (especially for those being in economic and social deadlock). We think that the contribution of management at company level – keeping proportions- is the spear head, the one that's going to capitalize all organizational structures, generally, the whole society for what one expects in the XXIst century: the reorganization of the development upon ecological and quality principles.

Key words:quality management, personel security,environment management

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1. Concerns and perspectives

From the technological training in the years '70-'85, consisting of gathering some descriptive aspects, acquiring of projecting knowledge to answer to the constructive and technologic demands of beneficiaries, even initiation in research, we became confronted with the requests of the new completely technological HTs, on new incorporated physical principles, with laboratories, products and virtual processes. Unfortunately, the technological handicap takes its toll, and it's very hard to say that we are close to the real exigencies and the ones that face the trained engineers.

An interesting presentation of the technology-management ratio in this century is made by Th. Friedman / 1 /.

The company Dell – SUA, Texas, near Austin, is a producer of computers and has six factories: 2 in the USA, Ireland, China, Brazil, and Malaysia. Each factory is in direct cooperation with tens of suppliers in almost the entire world for electrical components, including projecting. The supplying of components is made in "just-in-time" system in an imposed rhythm of two hours. The normal production is of 140-150 thousands of computers per day, provided that the firm answers to the explicit order of each beneficiary (they are in daily contact with them) and each year the design is modified, taking into account the evolution of hard and soft components.

Friedman underlines an important conclusion: economic cooperation, this global "symphony" of productive activities, is and will become the source of preventing conflicts: either political, military, economic ones! There are thousands of examples for many products and services when discrete components are designed, executed, transported from hundreds of thousands of kilometers away, on efficiency, quality and competitiveness criteria.

If we take into account the *principle* according to which technological optimization must proceed managerial progress, today its application assumes this specifying: - the optimization criteria are managerially defined and take into consideration the strategic-managerial component. Here steps in, decisively, the role of the Integrated Management (IM).

2. Managerial Training with help of the Network

In the former planned economy the managerial training was at its beginnings; the lack of contact with the market determined important lacks in defining efficiency, in managerial and financial approaches of productive systems. Now, we can say that we are "aligned" to the demands of managerial training.

But – the situation is also valid on an international plan- a sequential way of distinct approach is no longer possible to be promoted, the Deming cycle,

PDCA (Plan-Do-Check-Act), which was a product of the same period of the years ’86.

Conceptually, the quality, environment, occupational security standards have been elaborated in a common philosophy, even a collective one, going to, in some cases, to certain identifications. The present informatics systems, the systemic managerial conception itself, the economic life of the companies and markets, impose, in relationships between companies, a unitary, integrated approach. In this spirit, we plea for a integrated network, presented as a project for training in integrated management (IM). We have expressly underlined the repeating of the integration: - in space, of the network, in a first stage, in three academic centers: Bucureşti, Sibiu, Târgu-Mureş; and – regarding the managerial process itself.

The idiosyncrasies of the IMs are made distinctly and systematically, through its polyvalent components.

Quality- through the Quality Insurance fund, the TQM approach in company’s integrality and according to its relationship with its customers, researchers and designers, traders, focusing on dynamics and anticipative actions.

Environmental management – concerning the requirements of the ecological integration of own activities, products and services; general *gain*, for the company and the society for structuring the production on ecologic criteria, for promoting the business plans and environment protection activities.

Occupational security – regarding the formal aspects, of recording the personnel health status, promoting general hygienic and sanitary actions of work protection; for solving fundamental and social problems of the personnel (audit, balance sheet and social budget, those regarding the children, employees’ meals, insurances, facilities for solving locative problems)

Information security – including everything that concerns the information protection and information systems security.

These mean the involvement of the company through its management in society’s problems: quality, competitiveness, ecological criteria restructuring, and even its capacity to transpose political and social programs.

Even for the academic specific we have to fundament the training and research program in an unitary manner, as a business. The network working as a *non profit organization,* the gains are used for development, but, just as in any other business, there must exist a revenue and generate an interest for it; the gain is addressed to everyone, the beneficiaries of the program, including the society.

In a few words, *revenue from the program* is obtained:

- through training courses, respectively through specialists trained in 2 years as managers;

- through the offering services, consultancy and design for the IM (quality, environment, health, personnel labor protection, security of information) and access to the data base;
- through the junction of IM with the use of the company program-products (ERP, CRM, PLM, SAP, EAS);
- through offering program-products (software) of IM;
- through consultancy for IT and information. This comprises, according to EU norms: Security Strategy and Planning; Security Analysis, with 3 services: penetration tests, conformity analysis, vulnerability detecting; Security Training.

The main activities are represented by offering information as a professional integrated network for training and managerial consultancy, technological and business transfer, and know how for solving important problems like integrated management (IM), information, technology according to European and international standards transfer as well.

The activities are carried out on a project basis, according to the businesses problematic, so their performances, products and services are compatible with the European integration, market evolution and durable development.

3. Business environment analysis

As a potential market – IM, through its problematic related with the quality of the product, services and environment concerns the whole economic domain. We can affirm without error that the Romanian GIP is conditioned by them. As real market, we intend an approach on some contactable companies and representative ones from those three cities.

Referring to the information security market, in 2005 the big corporations, banks and financial institutions all over the world have spent approximately 70 billion dollars on damages caused by informatics attacks. Out of this amount, the biggest part, 48 billion $ is due to phising (identity theft) and about 20 billion $ have been linked to traditional attacks (see Consumer Reports State of Net, 2005). Economic and social life is almost 100% dependent on IS. Banks, resources distribution, transports, all are marked by the necessity of proper functioning of IS. Regarding informatics security, after 2005, electronic menaces and the gravity of electronic attacks have grown considerably, due to the focus on personal data theft.

Electronic threats target, as tendencies: more viruses, faster ones but less dangerous; major vulnerability in main applications; slower response time to

vulnerabilities; accent on bots, spyware, phising, and obtaining a profit. (Source: GECAD NET).

A brief structuring of the IM regulations would comprise the international standards:

ISO 9000 : 2001 – Quality Management Systems – concept, vocabulary, requests ISO 9004 : 2001 – Quality Management – guiding lines

ISO 14001 : 1996 –Environment Management Systems

ISO 14004 : 1996 – Environmental Management

HACPP – Quality Insurance in the Food Industry

ISO 17025 : 2001 – Quality Management – Tests and Calibration Laboratories

ISO 19011 : 2003 – Quality Management – Auditing Organizations for MC MM

OHSAS 18001 : 1999 – Labor Security and Health Management Systems

ISO/IEC 17799 – Information Technology. Practice Code in information security management

If to these we add the operative normative documents, which are thousands, procedural references, general company management references, we have an extensive view of the system.

In the Network data base we can not limit ourselves to standards and regulations reproduction - that would violate copyright. We take into consideration the procedural applications, the comprehension of standards and legislation in the correlations, comments referring to operating mode of specialists in the companies. Simpler formulated, the contribution is found through the combining of these databases what provides a unitary management, subordinated to the company's concerns: the requirements of the standards and legislation, the procedural elements and the junction with applied aspects of managerial-technology as well.

Implementation is made by:

- direct contact with beneficiary companies of the study results', projects, research made during the managerial training of students
- through trained managers. This especially for managerial restructuring of companies in economic deadlocks;
-through consultancy offered to the companies
-through program-products achieved in the Network
-through presentations made in annual conferences, including scientific presentations of results and works.

The endowing of each academic center aims, at this stage, its formation, 12 to 15 work stations, with electronic equipment, in existing spaces and an informational database of books, lectures printed in the past few years by European prestigious publishing houses, magazines, and some program-products.

The most important problems are those of overcoming the difficulties of "moment zero". This because students are confronted with the lack of traditional "reference" support, with the persistency of inductive practice and thought, of gradual transposition practice and models etc. The exigencies of companies, those of the beneficiaries are very real, concrete ones, even with a higher level of exigency which is normal to first contacts. Not even for the teachers the first moments, the ones where they face "full start" tasks close to maximal levels are not easy.

They are solvable problems, and we count for that on the cooperation of students, companies, occidental universities which will be involved in the network. The determining contribution resides in the fact that the approach in an integrated network allows "parallel" working, simultaneously on the ground of a high participation, with reciprocal taking of procedural elements and applications.

The value of the activities accomplished in the first year after the constitution of the UPB network is of thousands of 79,7 euros, with a 12 % annual dynamic, realizing in the first 5 years of activity an amount of 861 thousands of euros. For the component units we count on cashing 2.750 thousands of euros. We will form approximately 180 managers. These things will allow the development eventually the autonomy of network as a structure and the extension of technological and managerial transfer.

The performances must be- according to demands- for the beneficiary companies and for the formed managers as well. One very important thing: what will be acquired in the two years of managerial development is equivalent to some traditional practices of 5 to 7 years (numbers very high from the companies' point of view)

Competitive advantages. It is out of question the competitiveness through quality, through observing the environmental protection requirements. Unfortunately, the big non-competitiveness problems faced by our companies are known. As for the operational security, personnel, health and work protection we cannot speak of any competitive advantages. There are conditions imposed by life

standards, by fundamental requests of the period we live in, if we want to be a part of the countries with world known economies in the XXIst century.

The approached perspectives and, therefore, the development potential are really big ones because we are in a period of development of the IS, IT needs and their involvement in companies' management. The perspectives and potential must be regarded from the contradiction of quality and competitiveness of our products and services, opposed to the good level of the specialists in informatics and preoccupations in this field. The problem practically comprises all economic and social activity areas. The managerial training process is decisive one in providing growing outcomes and innovations. The knowledge based society as a new source and process means essentially education.

The information volume: managerial "basis" of general management, at company level, those concerning the technological, process, conception aspects – project management and, aiming the specialty problematic, regarding: quality, the environment, personnel and labor security is huge. This volume, necessary in its whole, cannot be digested, applied with performance in a creative, competitive manner, unless post academically theoretically approached for about 2 or 3 years, and practically for about the same time.

The structuring within an integrated network and the training of managers that can operate is an essential condition to keep up with the exhaustive encompassment and for being able to work in a highly dynamic environment, even turbulent.

The approach can be made only by the collaboration of various universities – the network in its territorial structure – each with distinct concerns, but converging with the contribution of specialists in informatics. As for the partnerships with the western universities through IDD, parallel series can be organized, in international known languages, working with their own educational plans and support materials which are applied to the necessities of our companies.

The contribution of the informatics means offering answers to what interests the users, for updating and developing the structures of databases and for necessities of safety of the informatics systems as well. Their protection has become a requisite in a time when we are faced with true professionalism of the informational terrorism. The program cannot be built in a traditional way: classes, practical applications, seminars. The suggested formula targets the people's

involvement in the companies cases, in the solutions related to acquiring practical knowledge.

What we propose, even if it has a high innovative degree, was initiated, is being developed and practiced in some Universities of Western Europe and the USA. We intend to synchronize ourselves with these preoccupations, in the specific and with the professionalism on hand. We want to train specialists that have access as equals to teams and colleagues in other companies and in other economically developed countries. This is the meaning and the spirit of economic integration.

University's mission consists of training specialists, in this case integrated systems managers, building the support structures and systems. By this we understand, in equal way, the access to information and the offer, the availability of applications and incorporated managerial practice.

As specific objectives we mention*:*

a) Setting up a modern database, easily accessible and highly available, that should work through long term partnerships and develop after finishing the project.

b) Know-how for professional training.

c) Strategic approach of the IM problematic, assimilation of new quality technologies, environment protection, labor security and firm restructuring. It implies adequate solutions of adhesion documents, binding immediate actions and orientation/effects on the long term.

d) Strengthening the relation between the university and the productive companies by involvement projects and programs of large perspective, with an adequate material basis and documentation, the development of the joint ventures, testing and experimenting laboratories and other forms accepted by external markets.

e) Consultancy activities, facilitating IM in state-of-art areas of the market; European consultancy, the correlation between quality and environmental management; services projection, especially developing business spirit, entrepreneurial capacities, cooperation in the area.

f) Consultancy services, project developments, program products for information and informational systems security.

g) Economic and financial self support, extending the acquired experience, materialization in some highly qualified work places: for specialists, managers, consultancy companies and for programs of international cooperation.

The training of specialists: managers for integrated systems, as well as carrying out the support structures and systems addressed to multiple segments.

- *For young people in general:* we notice the attention and need for an orientation we find in European and international practice, on the consideration of the Lisbon Agenda, respectively the attention given to the *generation that will work in a unique European space.* From a nonce inquiry on young graduates, we found a high interest quota.
- *For companies* – we are taking into account the condition and desire to meet the solution of their real problems: technological, managerial and economical ones. It is not about some classes, readings, etc. but about acquiring point information regarding European practice demands and, especially, those of explicit training for what the companies need, for the specific of each of them. Essential is the information and *implementation of the technological transfer* with an academic contribution –that cannot be substituted- of consultancy and, if it is the case, tutoring. It is a permanent form for acquiring managerial techniques in strategic development projects.
- *For developing managers,* the project offers the informational basis and documentation; it serves for solving problems of the dimension, complexity of the ones of assimilation of modern technologies and integrated management, technical and managerial instruments corresponding to the communitarian acquis being initiated and developed. There are novelty aspects which can be "generalized" from the point of view of the transfer in a broad area of cases.

A decisive condition is that 70-75% of the students find their own business or get involved in middle management positions and about 95% in their second year.

Finalizing an informational system on the Internet, printing synthetic courses, very efficiently accelerate the information and leadership possibilities, even in real time, of certain far-reaching processes and programs.

- *Regarding The Administration organisms,* we underline the aspect of natural co-operation of the most important forces in decisive points and activities for the *integration demands* in the European space. A high volume of documentation must be "overtaken" in the good way: being understood, learned, applied, and coordinated, respectively emending old situations. The available forces, from a technical and scientific point of view, are limited. The efficient co-ordination between representative programs and projects, prior ones at a national

level, and the collaboration between the decisional levels are very important. It is required an emphasis for the *management solutions* problematic.

It is conclusive the relevance of the project in far-reaching areas, through the fundament of *strategic approaches,* inter-correlations, which are imposed for reaching the anticipated performances. It is not overlookable that through open education from a distance, it is created a school for young managers, for restructuring some industrial productive companies.

Target segments. The most important element being aimed we think that is represented by the new engineers, graduates of the last two years, who want to have top management knowledge or want to open their own business.

For studies, managerial projects and consultancy, the target market is represented by the SMEs, especially those with technical potential, but being in economic difficulty due to their incapacity of complying to the demands of the integration in the European market. Statistical data show that in our country they are 85% of the companies. An important target segment is newly founded companies, which activate in areas like management or environment technologies.

We are faced with an interesting phenomenon, meaning that the potential of the market is high above what we want by this project, in a highly dynamic evolution and we do not want client fidelity. It is desirable that on the basis of contracting the services offered by managers, these clients obtain a good autonomy, and not become dependent on a future collaboration (managerial, it is the situation close to "ideal"). As managerial formative process, a part of the projects responsibilities will be given –and the delegation of authority will be encouraged in this case – to some students or teams of students.

Without claiming to define a certain leading style, we plea for a responsible, dynamic approach, that highlights the anticipative, provisionary side. Cultivating a special attention to personnel, to each future manager, developing their initiative and responsibility for adequate formation, the problematic of "surveillance" is reduced almost completely. What count are the results, the leadership through and for results, this making them to appear as natural things.

Personnel motivation can not be avoided and has to be approached distinctively

- *for participating students*, including companies, through IDD form, and that are involved in accomplishing projects, applications, studies on their formation. They will be rewarded proportional to the value of the accomplished activity. It is the

most important, and, maybe, the first managerial motivation, for the success. From a material point of view, one of the conditions is that the student be able to pay its study fees and have a gain for it support at the level of the medium economic gain. The problem, without any exaggeration, but without considering it too difficult either, is the economic support of the motivation of the students and companies – and most important –managerial formation;
- *for the participating teaching staff,* to follow the stimulating side, of promoting competitive, performing and economically efficient solutions;
-for the exploitation and network maintenance personnel.

The formative IM program comprises:

a) –*courses*

Management	TQM, Environment management
Project management	Marketing
Informatics; inform. Security	Finances
Health and labor insurance.	Organizational behavior
Quantitative analysis	Audit.

The time allocated to attentind the 10 post academic courses, master, each 80 hours/year. To these, one or two individual disciplines might be added, the ones the student find necessary, such as: a foreign language or a technological discipline, for which they would enlist in the training forms existing in the university.
b) – *managerial research and projection activities; marketing;*
c) – consultancy for companies. It is about consultancy on the projects, services offered even for the formation. The term that has to be highlighted is "tutoring" related to the incorporated professionalism and the responsibility associated to the project and the profit of the company.
d) – *studies, papers, group analysis*

The work volume is higher that 8 hours/ day, it implies individual work. The implication of the students in such activities is made naturally, these activities being absolutely necessary, practiced in other renowned universities.

A strong argument with an unbeatable success against such conceptions is given by Bill Gates/ 3, p.287/. "Even since the founding I have first applied the technology, then the work to try to solve business problems. It's started by business, marketing and sales plans, an initial information technology plan is

created, which contains all the technological initiatives and financial costs, it is analyzed, updated at the middle of the year and then it's decided.
We call this approach "you try to eat the biscuits you make for dogs". It is not a very elegant motto but it became a close expression to us and it represents the type of work to which you dedicate yourself fully. If we cannot run our own businesses with the technology we offer, how can we convince the client to do so?"
Instead of a conclusion: we do not intend an experiment, but a project where the secret of the success in the digital era is the approach of informational technology through Integrate Management. The project and the program are necessary steps.

B I B L I O G R A P H Y

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