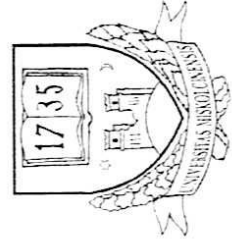


microCAD 2006
International Scientific Conference
16-17 March 2006



P szekció: Kihívások a gazdaságban
Section P: Economic Challenges

implicit, probability that NPV will be zero or less. These probabilities then are plotted with discount rate along the horizontal axis is ascending order and with corresponding probabilities on vertical axis. A probability distribution of possible internal rates of return emerges from which the mean and standard deviation can be completed. Using the standard deviation together with the mean of possible internal rates of return, we are able to perform the same type of analysis as before.

We have assumed normal probability distributions. Although this property is desirable for purposes of calculation, it is not a necessary condition for the use of the foregoing approach. Even when the distribution is not normal, we usually are able to make reasonably strong probability statements by using Chebyscheff's inequality: "probability that $|x - m|$ will be greater than or equal than a certain number $\varepsilon > 0$ is less than or equal with ratio between variance (σ^2) and ε^2 ". So:

$$P(|x - m| \geq \varepsilon) \leq \frac{\sigma^2}{\varepsilon^2} \quad (11)$$

With this inequality we are able to calculate probabilities for various deviation from mean.

Unfortunately, for complex situations the mathematical calculation of standard deviation is unfeasible. For these situations we can use the computer to make a simulation. With this method, we use random sampling to select cash flows series for evaluation and calculate the net present value or internal rate of return for each selected series. When a random sample of sufficient size has been built up in this way, the mean and standard deviation of the probability distribution are estimated from the sample; this information is then analysed in much the same manner as before.

If cash flows are highly correlated over time, the risk of a project will be considerably greater than if they are mutually independent, all other things being the same. Although independence often is assumed for easy of calculation, this assumption greatly underestimates project risk if in fact the cash flows are highly correlated over time. Thus, it is important to give careful consideration to the likely degree of dependence of cash flows over time. Otherwise, the assessment of risk may well be distorted. Of the approaches for dealing with problem, the use of conditional probabilities is the most accurate, although the most difficult to implement.

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ENVIRONMENTAL PERFORMANCE EVALUATION AND SELF-EVALUATION

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COMPLEX ENVIRONMENTAL PERFORMANCE EVALUATION

In other publications I did draw up the importance of taking environmental questions into consideration. [5] [6] We live in a failing natural environment and we have more and more social problems as well. Withal the responsibility of individuals organisations (mainly the profit-oriented sector) have a determinant role.

Based on a well known excellence-model (EFQM) [1] and standards on environmental performance I did work out a complex model which makes organisations able to evaluate their own performance.

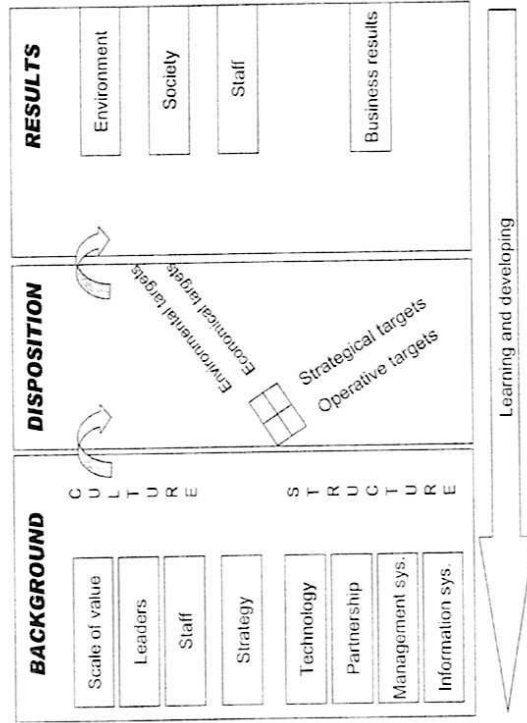


Figure 1.
Environmental Excellence Model

The model is divided into three main parts: background-elements (alike to enablers of the EFQM-Model), objectives and results.

Background-elements are the enablers which make the organisation able to reach results. Culture is not easy to measure but necessary. Connection between the members, beliefs etc. have effect on success. Quality of partnership, management-

system and others determine the business, social and environmental success. In strategy thinking they must be continuously developed.

Objectives give the fastener factor between the background and the results. "Wrong" objectives will not generate the wanted results.

Result must be taken into consideration in details. Environmental and social results measure the "outsider" effects. The "insider" is the satisfaction of the staff. Business result are important because without them it is no more possible to sustain the excellence.

USAGE OF THE MODEL

The model can be used as the part of management-philosophy. From this point of view the model means the base of self-evaluation. The other way is the external evaluation. This means that external and independent auditors examine and certify the organisation. In addition giving awards has many advantages. The most important macro-reason is that they raise competition and meanwhile let the organisations change environmentally better.

The ideal solution is the combination of self- and external evaluation. Previous one supports the effectiveness of the management and the other one gives an objective (certified) picture about the performance.

A large - even multinational - organisation with many depots and products/services can optimise the two types of evaluation. Prescribing the self-evaluation by the top-management the depots get to a uniformed measurement-system. Corollary the formalisation the performance of the depots (units) will become compared and it will be possible to find the failures and good practices as well.

SELF-EVALUATION AND SYSTEM-DEVELOPMENT

The main characteristics of the self-evaluation are the following:

- autonomic decision to do;
- internal auditor;
- flexible and adjustable model;
- "right to left" evaluation;

The organisation must work out the own aspects and methodology of the evaluation. This does not mean to create a brand new model but the possibility of a full-fashioned solution. Beyond the content of the model I rather present the method of evaluation. This method means 7 main steps:

1. Reach commitment of the top-management;
2. Do education and training;
3. Establish teamwork;
4. Finalize the methods;
5. Measure the performance of the organisation;
6. Evaluate the result;
7. Start actions.

Commitment of the managers is the most critical point. Without it there is no chance for consideration of the results or even for taking the necessary expenditures. Of course the commitment of workers has the same importance to reach. The possible advantages will and must be enjoyed by each level in the organisation.

Top management has the decision on starting the project of evaluation. The initial step is doing educations and trainings. Workers and managers must be educated to let known the advantages, the processes etc. In addition the member of the evaluator-team(s) have to be trained. The reason for this is the necessity of factual knowledge of the model, the evaluation methods and processes and the organisational relations.

The team will be able to work conductive only if independence is certified. External members are useful since they are out of the local cultural "blindness". These members may give a more objective opinion and they may have very useful ideas for the future. The team has to discuss the methods and timing they will use. The content of the timing plan depends on size and activity of the organisation.

Finalising methods guarantees the objective and comparable measurement. When the team works out the "toolset" there must be taken into consideration the elasticity in time. Comparison year by year or in place have the same importance. The reasons for this are the following:

- strategic changes and development need much time;
- feedback and management actions will be based by monitoring.

As the last activity of the preparation the team has to fix the working documents. Standard documentation background makes the working-up easier and more unequivocal.

Measuring the performance is the operative part of the evaluation. The activities are data-collection, database building and creating figures in time and place. After that the team and the management evaluate the results. Starting actions is the management's due to do.

EXTERNAL EVALUATION

The process of external evaluation is similar to the self-evaluation, but there are some elemental differences in:

- standardisation of the model;
- basis of the comparison;
- members of the team;
- standardisation of the methods.

An adjusted model is no more allowed if we want to compare organisations in an industry. The elastic model aids the management to seek problems and develop the organisation. But there is the chance that the management wants to draw a better picture than the reality. This means that they give higher weight for factors where they are excellent and lower where are under the average. At this point another

problem is that specialised models - because of their various content - are not comparable.

The next difference is the basis of the comparison. In case of self-evaluation the basis can be the organisational objectives and the results of previous analysis. Getting to information about the level of excellence it is necessary to have a fixed measurement basis. There are two possibilities: the industrial average and the best available solutions. I believe that the second one is more useful because it directs the organisations to work always better.

The auditor team must be generally formed from outsider specialists. But insiders must be presented as well. Insiders can give relevant commentary information about how the organisation does things. Settling the diagnosis is the due of the outsiders. These people have to grant requirements auditor usually do:

- accomplishment in audit;
- industrial knowledge;
- independence from the organisation.

It is evident that there has to be established one or more independent auditing organisations which do the revisions. In my opinion an accredited and admitted professional organisation may bear the responsibility.

The last mentioned difference between internal and external audits is the methodology of the analysis. External audit needs a standard model and of course standard audit processes. Because of the variously of organisations is not easy to standardise the analysis but necessary. Without that it is not possible to compare the results.

We must note that the standardisations does not mean the leaving the characteristic and special activities, result of the audited out of consideration. Even the speciality may give their excellence.

ENVIRONMENTAL AWARDS

Awards are well known in connection with quality and excellence. Even in Hungary there are environmental awards as well. For example the KOVET-INEM has application for the greenest office. I believe that there is need for a complex award. It would have many advantageous benefits for the economy, the organisations and the customers:

- raised and sharpened competition;
- known best solutions (as benchmarks);
- acknowledged excellence;
- higher level of customers' satisfaction.

Publicity is an important question of an award. [1] Others most come to know what an award gives and how to get to it. Management, quality and environmental journal are the best forums. These forums let the winner organisations to get to business advantages as well.

Nearby external communication internal one is essential. An award brings the members together. Everybody may know his and her own role in the process of winning the award. I.e. they will be motivated to continue their excellent performance.

There is another determinative question which will not be discussed in this article: the financial establishment of the award.

THE COMPLEX EVALUATION PROCESS

External evaluation can not be success without continuous internal evaluation and improvement. Internal ones give a picture of the weaknesses. These problems must be solved. External audits will objectively measure the level of excellence.

The working of the complex evaluation is shown by Figure 2.

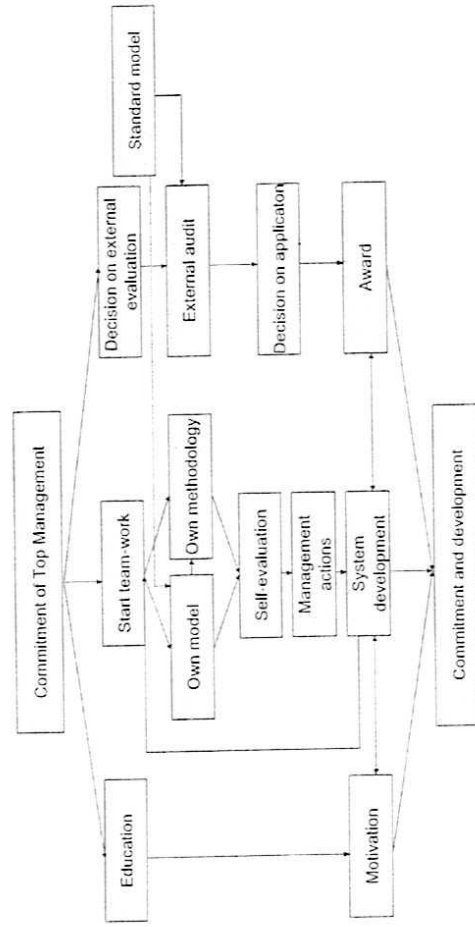


Figure 2.
Evaluation process

The main objectives are the higher level of commitment and the development of organisation. This development combines what ISO-standards and EFQM say. Actual ISO 9001, ISO 14001 and other standards has an important requirement on development: the organisation has to develop the management system, which will support the development the organisational performance. The logic of EFQM is invert. Excellence audits pay attentions to the real heighten performance.

In my opinion both are important. Without a modern system it is no more possible to manage people, information, external connections etc. On the other side we must mention that these systems just allow working better, but they do not guarantee them.

In case of an environmental model the most accentuated factor is the environmental performance. A producer or service-oriented organisations, small, medium and large ones have different performance and different possibilities to measure it. Industrial average and best solutions as measurement basis let the auditors and organisations to get to a balanced and objective picture. Awards in categories may allow various types of organisations to present their excellence.

SUMMARY

Recognising and solving environmental problems have higher and higher importance. In an OTKA research of the Institute of Management Science at the University of Miskolc we asked Hungarian organisations about their environmental and management performance (OTKA No. T 048849 Research).

Greener production, greener office solutions, due diligence etc are not brand new techniques of making the environmental performance better. [3] [4] But there is the problem that many organisations do not know anything about them. Some of them have even heard about them but they do not know how and why to use the techniques. Especially small ones do not have time and money to apply the new solutions.

I believe that we can reach success if we can "translate" environmental advantages into business benefits for a wide range of our organisations.

Solving this problem is a complex challenge. There must be developed the knowledge transfer mechanism and financial background at first. This article shows a methodology which supports the evaluation and prizing the efforts on optimize the environmental performance in a sustainable way.

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WHO WINS IN THE BATTLE OUTSOURCING AGAINST SELF PRODUCTION?

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For becoming competitors on international market companies from emergent markets should chose carefully their strategy. They have to try to benefit from their competitive advantages given by the economic environment from which they come and to consider the flexibility given by their small dimensions.

Companies from emergent markets are trying to find ways for being competitive at a global stage by using their advantages to gain growth power. Combining low costs with high performance of labor in some branches, the result is a great competitive advantage that if it's used efficiently can bring a lot of advantages. Companies should not forget that the strategy should be simple and concrete; also they have to clearly identify priorities [3].

One of the branches with the bigger increase in the last decade from Romanian industry is textile branch. And we can say that start was given by outsourcing. Many companies from European Union had come to Romania to outsource their tailoring activities and they had worked with Romanian small firms. Advantages obtained by Romanian firms were that they got financial support and what is most important is the fact that they gained the know-how as well. But outsourcing system does not give the chance to firms for adding value, because western companies actually buy only Romanian work force, not products. One of the main characteristic of outsourcing is the fact that it migrates to the east, from country to country; because of changes that take place in China (the opening of the country to foreign companies) outsourcing system has gone directly in this country because the cost of work force is the lowest.

Cluj-Napoca is probably the Romanian city that represents a center of textile production because here are located the biggest companies from this field: Somesul, Flacara, Jolidon, Argos, to name only a few. These companies were aware of the fact that if they do not bring on the market their own brands and continue to work in outsourcing, probability to fail in the future will be very big. Somesul is the oldest company and is a producer of knitwear since 1930. Because of competition which had become stronger, a major investment of 5 millions DM was made in 1994 in production capacity and 3,5 millions DM in 1998. Also in 1997 an Italian company (Morgan Treviso) bought 25% of shares, in this way a major amount of funds entered in Somesul Company. The first impact of investments made by company was a decrease of employees from 5.000 in 1990 to 1.200 in 2002. Company launches in every year two collections, one for spring-summer and one for autumn-winter. We also can see