

HOW TO COMMUNICATE AND IMPLEMENT STRATEGIES IN A STRONG ORGANIZATION CULTURE?

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Preliminary notes

Implementing multi-focused strategies has been found a challenging task. Multiple goals are quite difficult to structure and therefore, to assimilate. These challenges may be even greater in a strong organization culture, where the process of change and structure of organization can be rather challenging. This study suggests a new method that can be used to structure, evaluate and analyse multi-focused strategies. In this constructive case study, an illustrative Sand Cone Model of different levels was developed and their relative importance ratings defined using the AHP method. In the three-stage model development process, experts in strategies and tactics from a military organization were involved. With the help of this visualization model, the implementation of multi-focused strategy was found to have a better fit for strategic decision-making in the case organization.

Key words: *organization culture, communications, strategy, operations and resource management, decision making, Sand Cone Model, Analytic Hierarchy Process (AHP)*

Kako komunicirati i provesti strategije u jakoj organizacijskoj kulturi?

Prethodno priopćenje

Provođenje višestruko usredotočenih strategija je iznimno izazovan zadatak. Višestruki ciljevi su prilično teški za strukturiranje, a stoga i prilagodbu. Ovi izazovi bi mogli biti čak i veći u jakoj organizacijskoj kulturi, gdje proces promjene i strukturiranja organizacije može biti prilično izazovan. Ova studija sugerira novu metodu koja se može koristiti za strukturiranje, ocjenu i analiziranje višestruko usredotočenih strategija. U ovoj konstruktivnoj analizi detaljno proučenog slučaja, razvijen je jedan ilustrativan pješčani stožasti model (Sand Cone Model) različitih razina, a njihove relativne ocjene važnosti su definirane pomoću AHP metode (analitičkog hijerarhijskog procesa). U trostadijskom procesu razvoja modela, sudjelovali su stručnjaci za strategije i taktike iz vojne organizacije. Pomoću ovog modela vizualizacije, primjena višestruko usredotočene strategije je u slučaju proučene organizacije pokazala da bolje odgovara za strateško donošenje odluka.

Glavne riječi: *organizacijska kultura, komunikacije, strategija, upravljanje operacijama i sredstvima, donošenje odluka, pješčani stožasti model (Sand Cone Model), analitički hijerarhijski proces (AHP - Analytic Hierarchy Process)*

1

Introduction

Uvod

From the 1970's to the 1990's, the competitive strategies in manufacturing have changed dramatically from focused to multi-focused priorities. These strategies have not yet been tested empirically widely enough. Strong organization culture must also be developed and the strengths can be still strengthened. The development process AirforceQ was launched in 1997 in Finnish Air Force with purpose to bring the modern quality thinking to the help of the management of the organization. The new quality thinking brought new concepts to the discussion of the organization, among others, the customership concept, the processes, the commitment of the management and self-assessments. The self-assessments were first made with Malcolm Baldrige-criteria, later the EFQM model was chosen as criteria. Similar programs, only much larger, are Quality Air Force in U.S. Air Force and TQL (Total Quality Leadership) program in U.S. Navy.

Generally speaking, case study research works well as methodological basis for these kinds of studies [1, 2]. This constructive case study tries to increase knowledge on field of competitive strategy implementation by exploring the strategy of a special type of organization with a very strong organizational culture.

2

The purpose of the study

Svrha studije

The purpose of this study is to indicate the common understanding of the total strategy with its sub-strategies, and to find out their significance in the total picture and logic (hierarchical) microstructure. Also the needed resources to implement the total strategy were aimed to be clarified

Implementation of the whole holistic strategy in a credible way means high effectiveness, efficiency and quality of working life in the organization. These requirements provide us with important research question: *What are the priorities of the sub-strategies (of the whole strategy) and the relationships (microstructure or logic) between them?*

3

Case study objectives and theoretical frame of reference

Ciljevi predmetne studije i teorijski okvir preporuka

The analyzed organization is Finnish Air Force. The Air Force participated in Finland's national quality competition also in 2003 in the public sector category. In connection with the definition of strategies the mission and vision of the Air Force also were shaped again. These concepts in addition to the strategy are general terms in the business world but still rather new

matters in the military organizations. However, in our benchmarked organization, the U.S. Air Force quality program, these terms have already been in use for a long time.

3.1

Organizational culture

Organizacijska kultura

The Air Force has a strong organizational culture and flight officers and the engineers are in the key positions in the operation. The flight officers are in the management of the air commands and the schools of FAF, the engineers, however, lead material commands. The cognitive style of these staff groups is typically analytic and they have organization skills. The persons of this kind use willingly (it is natural for them) quality tools and developing tools. The culture includes a jointly shared goal of organization that is common to everybody and the social network. Strong organization culture must also be developed and the strengths can be still strengthened.

The heroes of the organization transmit concrete role models to be imitated, the rituals connect people more deeply than the arranged meetings, and the regular ceremonies implant the solidarity reminding staff of common values that have been divided and of a common goal. The telling of stories is like glue that connects the people together. In strong cultures the workers know the direction of their organization and work for it [3].

The Finnish Air Force has always been a very quality oriented organization; in performance the quality compensates the quantity. The independent concept "quality" has never been very strongly up for discussion but it has always been clear in the minds of the personnel.

3.2

Development process AirforceQ

Razvojni proces AirforceQ

Figure 1 shows the connection between the development process and the operation of the Air Force. The objective is to get AirforceQ and everyday operations meet as often as possible. AirforceQ makes interventions to the normal operation as an objective to improve the performance of Air Force. In the interventions there are also features from action research [4] [5]. The units of the Air Force make self-assessment every year with EFQM criteria and get the strengths and the weak points as inputs to their development work.

Air Force participated in Finland's national quality competition also in 2003 in the public sector category. The participation in the quality competition is one spiral that has been described in fig. 1. The reading of the feedback report (the Act/Study stage) brought out a better definition of organization's strategies.

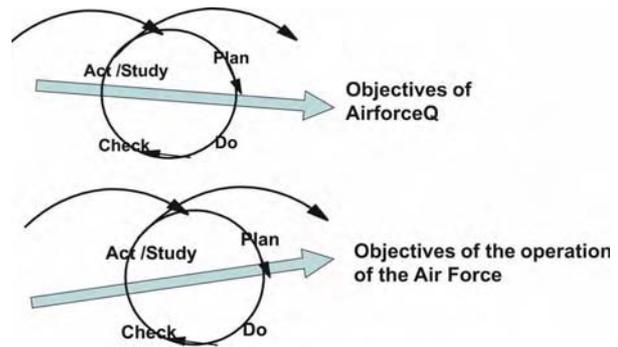


Figure 1. The operation of the Air Force and AirforceQ follow the Shewhart's PDCA logic [5]

Slika 1. Operacija zrakoplovstva i AirforceQ slijede Shewhartovu PDCA logiku [5]

3.3

Strategies

Strategije

The Finnish Air Force strategies (means and options to achieve the vision) consist of sub-strategies which are as follows:

- Strategy of high-quality personnel
- Strategy of social responsibility and good reputation
- Strategy of flight safety
- Strategy of Internationality
- Strategy of development of know-how and working environment
- Strategy of quality
- Strategy of state-of-the-art technology
- Strategy of partnership
- Strategy of intensive training.

4

Research methods

Metode istraživanja

4.1

The approach

Pristup

The epistemology of this quite explorative study is based firmly on empiria and the ontology on participative action research because in general, the meaning of scientific research is to cumulate organized knowledge-reserve in a verifiable way. The categories of research approaches are concept analytical, nomotetical, decision methodological, action analytical and constructive, of which the last one has been followed in this work [6].

Because of the nature of research (multifocused competitive priorities with only few earlier studies in the field) this study uses constructive research approach. It utilizes the philosophy of inductively building a new theory from case study research. That is more detailed and profiled construction compared to the basic solution for the research problem. [1]. Figure 2 illustrates the concept of constructive research approach.

ach in business science where more evidence (multiple cases for benchlearning) is needed for the verification of the construction than in deterministic natural science, the area from which this research approach has been transferred to business science.

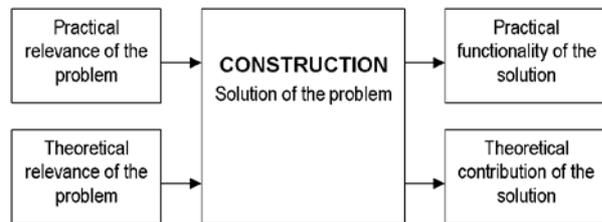


Figure 2. Constructive research approach in business science [7]
Slika 2. Pristup konstruktivnog istraživanja u poslovnoj znanosti [7]

4.2

The AHP method

AHP metoda

AHP method was used in this research. AHP is a multi-attribute decision tool that allows quantitative and qualitative measures to be considered and trade-offs among them to be made. AHP is aimed at integrating different measures into single overall score for ranking decision alternatives with pair wise comparison of chosen attributes [8]. This utilizes pair wise comparison by interviewing the experts of strategies and tactics within the whole organization.

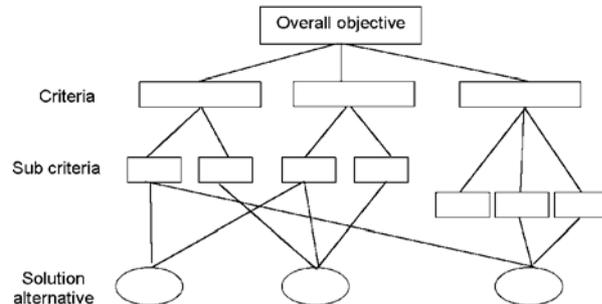


Figure 3. The hierarchical structure of a decision problem [8]
Slika 3. Hijerarhijska struktura problema odlučivanja [8]

The interviews have been carried out by structured questionnaires with few open questions. The research methods include a literature survey, analyzing mainly qualitative (including texts and talks as well) but to some extent also quantitative data, classification by simple statistics, and finally, constructive synthesis (including market tests WMT) and pilots for implementing the strategies.

The interviews were carried out either by one researcher from the university or one researcher from FAF mainly by utilizing simple questionnaires. Firstly the research task was to find out the pivotal persons in the complex and knowledge intensive network organization; secondly what are the priorities of the sub-strategies (of the whole strategy) and the relationships (micro structure or logic) between them, and thirdly

what are the priorities of different type of resources needed to realize the strategy or the sub-strategies?

4.3

Validity and reliability

Vrijednost i pouzdanost

Consistency Index (C.I) and Consistency Ratio (C.R) are calculated to assure the reliability of pair wise comparison results. C.I defines the deviation of comparison matrix from rational matrix, and C.R is the value where C.I is put in proportion with the amount of criteria. How to calculate AHP with inconsistency ratio in practice? You can follow the steps and guidelines from literature and/or utilize ready made software for it, e.g. Expert Choice [9]

Only matrixes with C.R value of 0,10 or under can be used to reliable decision-making (and 0,30 or under in smaller groups with not more than 10÷20 highly competent informants). Implementation Indexes (IMPLs, variability coefficients) in the other hand were used for evaluating the usability of the results from the AHP assessments. IMPL value is calculated by dividing standard deviation of an attribute assessment results by the value of corresponding average value. The results can be considered useful when IMPL value is below 1 [7].

All the case studies have been carried out by using both the basic constructions for the analysis and synthesis depicted in Fig. 2 starting from the analysis, and going on with synthesis, weak market tests/pilots and implementation microstructures and results of the competitive priorities in the strategies (**PE**ople for organizations, **IN**formation systems, **B**usiness **P**rocesses and **TE**chnology for competences, [7]). The number of the interviewed high competence experts has been between 10 to 30 but quite representative to understand the high organizational and functional dynamics. The data gathered - typically from quite a well limited and described application problem improving the required careful documentation of the case study [10] - has typically been mainly qualitative in nature.

This case study follows the philosophy developed by K. Eisenhardt [1]. The details and profiles as the contributions to the basic construction (Fig. 2) have been searched from the longitudinal case studies - lasting typically from half a year to two years each. This has been done by analyzing the deviations of the expert opinions on competitive priorities and by finding out the reasons for the deviations and especially the effects the deviations have in the implementation process of manufacturing strategies. The success of weak market test, enabling and hindering microstructures, pilots and achieved financial and non-financial results within one year from the beginning of the case development task. To increase the sensitivity of the deviation in competitive priorities when considering the implementation processes of strategies the standard deviation has been developed into implementation index (IMPL) by divid-

ing the standard deviation by the value of corresponding competitive priority in order to improve the possibility to compare different cases with each other. In addition to these measured and calculated competitive priorities, standard deviation and implementation index values, quite a deep textual description on the different stages of the implementation procedure of strategies has been introduced.

The weak market test with the consideration of enabling/hindering micro mechanisms verifies the possibility for successful implementation process. The case study also shows that if the implementation index is below 1 for just one focused competitive priority, the forecast will be very good for nice results within the introduction period of just one year. Generally, it might be said that the implementation index provides us with a new measurement between strategic view and operational focus thanks to its capability to measure sensitively common opinions and commitments during the implementation processes of manufacturing strategies.

5

Results

Rezultati

5.1

Strategies

Strategije

The strategic structure of Finnish Air Force was examined by AHP method. The affecting factors were pair wise compared with each other in order to find out the relative importance of them. The results of the comparisons are presented in Table 1, where COMP is the interviewees' evaluation of importance for each sub-strategy, STDEV is the standard deviation for the evaluations, and IMPL is the Implementation Index. The number of informants (from all the pivotal groups of the organization [11]) was about 25, and all the ICR-values were on an acceptable level (below 0,2). This is a nice result! Not any sand cone hierarchy was given beforehand to the informants. Using a time perspective of five years ahead carried out the AHP process.

Table 1. The evaluated importances of sub-strategies in FAF
Tablica 1. Procijenjene važnosti podstrategija u FAF

SUB-STRATEGY	COMP	STDEV	IMPL
Strategy of high-quality personnel	0,15	0,07	0,47
Strategy of social responsibility and good reputation	0,1	0,1	1,00
Strategy of flight safety	0,23	0,1	0,43
Strategy of internationality	0,04	0,04	1,00
Strategy of development of know-how and work environment	0,14	0,06	0,43
Strategy of quality	0,07	0,06	0,86
Strategy of state-of-the-art technology	0,11	0,07	0,64
Strategy of partnership	0,05	0,03	0,60
Strategy of intensive training	0,11	0,07	0,64

The sub-strategies of the FAF total strategy can be divided in two (Fig. 4.):

1) *Basic pillars* with high level of importance (2/3 of the whole strategy with medium life cycle in required resource building), and

2) "Practical" *ways of action* (concept) with lower level of relative importance (1/3 of the whole strategy with very long life cycle in required resource building).

For example the sub-strategy of flight safety is clearly a very important one and can be seen as basic pillar of organization, whereas sub-strategy of internationality is clearly of lower importance, and not so "deep-oriented" in the organizational culture of FAF. The structure of the strategy can be clarified with the "Sand cone triangle" [12]. The idea of it is to arrange the elements of the studied object in such a way that the figurative "sand cone" will have a stable structure. In order to do that, the biggest grains have to be set on the bottom to create a good basis for the cone. The factors on the bottom are always internally crucial for the

cone, but externally only slightly visible. The glossiest grains of the cone are set to the top of the cone to finalize the posture of the cone and make it look nice. These factors are not so crucial internally, but externally visible.

5.1.1

Basic pillars

Osnovni stupovi

The basic pillars of operation are such key elements of operation that lie in the core inside the organization. These factors are deeply set into the organizational culture and are regarded as "a matter of course". These factors are always the firsts in priority and the existence of them is always guaranteed.

The relative importance of 'Basic pillars' was evaluated to be 63 % of total strategy (about 2/3 of it!). Basic pillars of the total strategy consist of: flight safety (23 %), high-quality personnel (15 %), know-how and working environment (14 %) and technology (11 %).

5.1.2

Ways of action (Concept)

Načini djelovanja (koncept)

When the basis of the cone is stable with the help of the biggest grains of the sand, more layers can be added to the cone. The second layer of the cone consists of practical ways of action that are not so internally crucial, but externally visible and more directly, in practice, leading to success. The relative importance of these 'Ways of action' was evaluated to be 37 % of the total strategy (about 1/3 of it!). The ways of action are: partnership (5 %), intensive training (11 %), social responsibility and reputation (10 %) and quality (7 %).

5.1.3

The Total Strategy (Fig. 4)

Ukupna strategija (slika 4)

The total strategy of FAF is based on combination of 'Basic pillars' and 'Ways of action'. With proper combination of these elements, optimum results from the success point of view can be achieved. The FAF Total Strategy with its Sub-Strategies has been well communicated in the organization. Thanks to the very nice ICR-values it can be concluded that the total strategy is a complete entity with no extra or lacking pieces that would cause contradictions. This fact results from the nice progress in the development in FAF in Finnish Quality Award competition from 2003 to 2004. Of cause there are some differences in the priority rankings and even in the given positions of the sub-strategies in the sand cone between the pivotal groups of the organization E.g. officers consider Intensive Training and engineers Social Responsibility and Reputation very important basic pillars. The concept level is criticized in few open comments because there are not any articulated sub-strategies related to productivity management (management accounting) and leadership which have every year higher and higher significance in FAF.



Figure 4. The Total Strategy
Slika 4. Ukupna strategija

5.3

Implementation of the results

Implementacija rezultata

5.3.1

Strategies

Strategije

Fig. 5 presents the operative reliability of the strategy evaluation in FAF by IMPL index (= variability coefficient = $STDEV/COMP$) versus COMP value. The decision making process has been reliable which means that IMPL has a negative linear correlation and value small enough (below 1) with remarkable COMP values (COMP is more than 0.1). This result really means nice commitment in the organization to FAF strategies! [7].

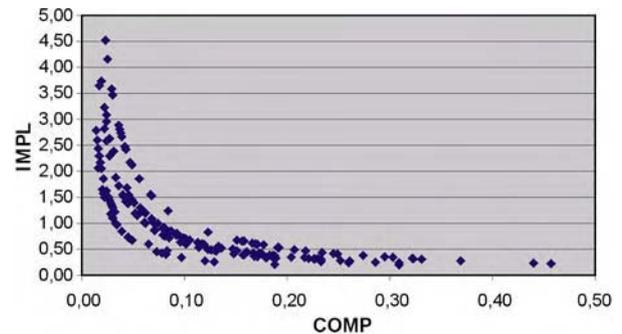


Figure 5. The operative reliability of the evaluation of the strategies in FAF

Slika 5. Operativna pouzdanost vrednovanja strategija u FAF

5.3.2

Resources

Pomoćna sredstva

Figure 6 presents the operative reliability in the decision making for the resources needed for the implementation of the strategy in FAF by IMPL index (= variability coefficient = $STDEV/COMP$) versus COMP value. The decision making process has been reliable which means that IMPL has a negative linear correlation and value small enough (below 1) with remarkable COMP values (COMP is more than 0,1). This result really means nice commitment in the organization to the implementation processes of FAF strategies! [7]. In case of a change process, such as in the development of Partnership sub-strategy, the decision making process is much more challenging which can be seen from the bigger IMPL values.

The resources for the implementation of FAF Total Strategy with its Sub-Strategies have been well communicated in the organization. Thanks to the very nice ICR-values it can be concluded that the implementation resources for the total strategy are a complete entity with no extra or lacking pieces that would cause contradictions.

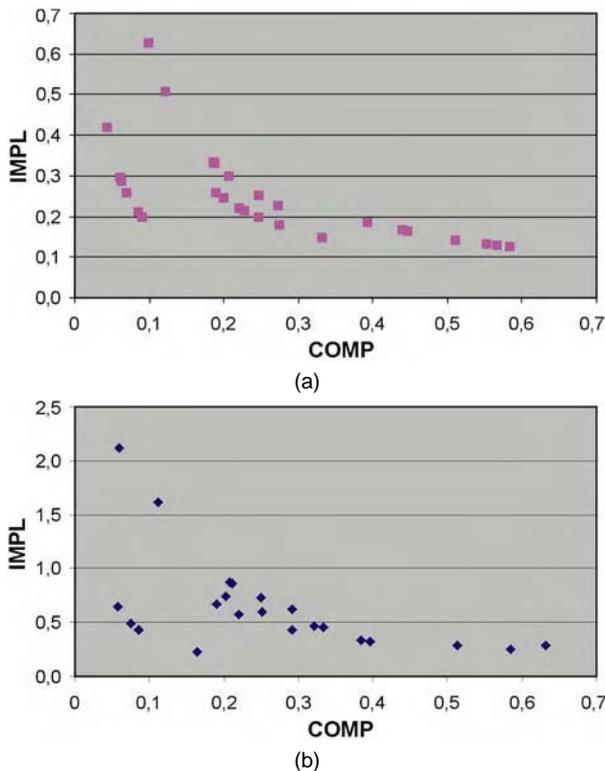


Figure 6. Operative reliability in the resource evaluation for the implementation of the Total Strategy (a) and Partnership Sub-strategy (b) in FAF

Slika 6. Operativna pouzdanost u vrednovanju pomoćnih sredstava za implementaciju ukupne strategije (a) i partnerske podstrategije (b) u FAF

6

Evaluation of the results

Vrednovanje rezultata

It was possible to set the weight values on the sub-strategies with AHP-tool, and all the objectives set (in Chapters 1 and 2) have been met. Operative reliability (IMPL) and internal (construct) validity (ICR) work in practice very well. Therefore, in further research we could concentrate on external validity, i.e. transferability of the decision-making processes utilized. How to ensure external validity? The theoretical frame of reference could be validated by new scientific literature, internal and external brainstorms and benchmarking processes to high tech industries and more specific projects e.g. how to implement specific sub-strategies such as Partnership development in practice (with specified resources and actions) could also be useful approaches to improve the transferability of the piloted decision making processes This can be very well realized when participating in Finnish Quality Award competition.

It is to be noted that all the sub-strategies of Total Strategy of FAF are important. The weight value of the strategy of flight safety rose surprisingly high and a constant discussion on its significance happens all the time. However, the weight values were obtained as the result of the own evaluation of the staff. Actually the surprise indeed was the fact that the different staff

groups agreed on the weight values of sub-strategies. This shows the fact that in FAF the goals are common and everyone knows the essential matters of operations.

The Sand cone model is an excellent tool of the visualization. We were able to describe several sub-strategies with the help of the model in the understandable way of the wholeness. Weak Market Test (WMT) belonging to a constructive research approach was also positively conducted in FAF. Some results for strategy work have already been brought: the Finnish Air Force got a 'Recognize for Excellence in Europe'-recognition in Finnish national quality competition in 2004.

7

Conclusions and further research

Zaključci i buduće istraživanje

The Finnish Air Force uses the AHP tool in decision-making. In the communication and understanding of strategies the good results were obtained with the so-called Sand cone model and with the AHP tool. The Finnish Air Force has a strong organizational culture and flight officers and the engineers are in the key positions in the operation. The flight officers are in the management of the air commands and the schools of FAF, the engineers, however, lead material commands. The cognitive style of these staff groups is typically analytic and they have good organization skills. The persons of this kind use willingly (it is natural for them) quality tools and developing tools as AHP tool.

How to focus further research? Although the results have already been partly implemented in FAF, the generalization of the results is rather weak by now. It is quite obvious that follow-up work will last at least some years in case companies will provide us with better evidence on the effects (benefits, disadvantages, experiences and results) caused by the new and in more detail profiled constructions.

What could be worth of further research? The sub-strategies go on with their step-by-step changes, let's say the priorities will change a lot in 5 years and perhaps some of the sub-strategies will vanish and some of them will be integrated to each other. E.g. we might expect that the generic strategies of Partnership and Internationality will vanish as separate strategies and will be integrated to other ones. Promising areas of further research would also be to combine in Quality Award Competition follow-up studies of the achieved results (with benchmarking comparisons) to the piloted decision making process in the strategies and their realization alternatives. E.g. this might be very interesting in productivity measurements and in new leadership approaches. By utilizing the created decision making processes in resource allocation for strategy implementation we might use the sand cone model to evaluate and develop strategic positioning for the future in a similar way as the global and competitive

industrial companies. What about the form of the sand cone model with the basic pillars (2/3) and concept (1/3)? Would it remain the same even more than 10 years? We don't yet have any scientific evidence for it!

Annual planning of the Air Force includes also the implementation of the strategy further. For example the strategy of flight safety is carried out with annual flight safety program, strategy of internationality is carried out with its own plan which includes the flight operation exercises with other national Air Forces, the quality strategy is carried out by participating in the quality competitions and making self-assessments. The following step is the SWOT-analysis of sub-strategies with which targets for development are searched for and the future is estimated.

8

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