

Practical usability of CAT Model – a case study

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Abstract. The average life span of an organization, irrespective of its size, is 12½ years. The majority of companies which get into a crisis find themselves in this situation because of internal factors. To survive in the evolving and more and more demanding environment, organisations have to focus on their internal processes, leadership and management. However, there is no reliable and easily usable tool or model evaluating such criteria of an organisation in place. Following the need to have a lean, yet reliable tool to evaluate a level of Leadership, Management Maturity and Culture a new Performance Model has been created. The CAT Model (acronym stands for Complex Assessment Tool) can be used to evaluate and assess its strong and weak sides using structured interviews. The usage of the tool proved useful, giving owners/management valuable feedback and areas with potential for improvement. This article describes its practical usability in an assessment carried out on a Czech company.

1 An introduction into CAT model

Despite the fact that enormous effort has been deployed in the field of strategy management, the “Search of excellence” does not seem to be any closer to its objective than in 1982, when the book from Peters & Waterman has been published. Thought significant development has taken place, the evolving environment, competition, society and technology still force organisations to constantly adapt or die. Ever since the eighties business writers have been claiming that the world was getting more dynamic, turbulent, unpredictable and competitive. As it turned out, in retrospect the 1990s were ‘a piece of cake’ compared to what is happening now in the world [1].

There are many reasons attributable for company success of failure and both business community and academic sphere are in constant search of them and their impacts. Some of the facts presented by de Waal (based on Booz Allen Hamilton survey among 1,200 large companies) indicate that majority of them are internal:

- from the 360 worst performers 87 percent of the value destroyed was caused by strategic missteps and operational ineffectiveness
- More than 50 percent of managers take decisions based on their gut feeling not on hard facts, and 36 percent has black boxes in the organisation of which they know hardly anything
- four out of every ten organizations do not actively work on increasing employee loyalty

- Return rates and warranty costs are dramatically rising while at the same time customer satisfaction levels are steadily decreasing, a strong indication of the deteriorating quality of products
- The majority of companies which get into a crisis find themselves in this situation because of internal factors, of which dysfunctional management (48 percent of the cases) and inadequate management information systems (42 percent) are the most common causes [1]

As a matter of fact, despite strategies, tools and processes, individual biases persist in every organizations [2]. To increase the chance that an organisation is successful (or at least survives) in a long run - the focus has to be on internal processes and management of a company. Yet, are we able to measure the quality and maturity of an organisation's managerial ability?

Many researchers and business community members focus on the field of company performance's measurement. There are also important criticisms of PMS. Hamel [3] criticises the suitability of performance measurement theories and practices for modern organisations. Suggesting that the measurement and management of performance in organisations increases fear, reduces trust, promotes "command and control" systems, diminishing employee engagement. Thought it may seem a bit too strict, a recognition of a democratic, open, participative and fear-free management is being essential for the twenty-first century organisation. However, the interplay among performance measurement, performance management, employee engagement and performance remains poorly understood. Understanding this interplay is now considered critical for further development of the performance measurement theory [4, p. 1207].

Collins [5] proposes to identify a sole key performance indicator (e.g. sales per customer visit) as one of key drivers to outperform competition. On the opposite, Kaplan & Norton [6] compare managing an organisation to the piloting an airplane, arguing that it is impossible to focus on one sole indicator (e. g. ground speed) ignoring the others (altitude, fuel level, engine temperature...). Neely et al. [7] pinpoints the enormous efforts spent on controlling (according to the Hackett Group an average corporation with turnover over 1 bln. USD spends 25 000 man-days by planning and budgeting, Ford alone spends for the same 1.2 bln. USD yearly). Still there is very rare to find a person responsible for a quality and improvement of planning, budgeting and performance measurement. We can observe that no consensus can be given to answer the questions like: Are we measuring the right things? Do we measure enough/not too excessive? Is the cause-effect description in place?

An effort to overcome the gap and improve organisation's PMS offers Van Aken et al., by developing a tool assessing PMS [8]. However, no widespread usage can be recorded. In non-financial indicators seems the situation even worse – thought their importance is generally acknowledged by [9-11] and many others, a set of criteria or a tool, which provides lean and easy evaluation is missing. Hálek [9, p. 9-10] states that "*In a global environment, where a major part of a business operates in an international environment, financial indicators seem insufficient, because for the most part they are historical indicators and do not reflect future developments*". Therefore, the focus on performance models and management techniques grows. An attempt to find a tool evaluating non-financial criteria in a measurable and comparable way was conducted by the author. The only performance models fulfilling the need for comparable results are EFQM and Baldrige award criteria. Yet there is a serious obstacle for broader usage of them – the usage of these tools is complicated and especially small and medium organizations do not have enough resources for it [11]. Its deployment requires to undertake a multiday training and hiring an external assessor. The assessment itself takes several days, which represents an effort that SMEs are usually not willing to invest. Model is also primarily intended for improving operational management [1], not as a benchmarking tool. Moreover, as identified by Rusev & Salonitis, [12, p. 277] "*...the existing*

assessment tools are generally either biased towards process improvement or towards results. Assessment tools developed by Institutes that award prizes such as the MBQA and EFQM are results driven with little focus on culture and process efficiency”. This might change with an introduction of new EFQM Model 2020 version.

As no suitable tool exists, a new model serving mentioned purposes was developed. It serves the management/owners of a company to better understand their company and to identify its strong/weak sides. It enables them to compare the results over a certain time period or compare with other organizations. This paper deals with practical usability and results of the model.

The CAT model was created by author of this paper to give both researchers and practitioners an easy-to-use tool, which enables them to assess organisational maturity using “soft” factors of an organisation like leadership and culture. It was tested on 12 independent organisations, the extent should be considered adequate [13]. It consists of 17 criteria grouped in three categories - Maturity, Stakeholders & Others. They are: for **Management** – Leadership, Corporate culture, Quality, Performance, Controlling, Processes, for **Stakeholders** - Communication, People, Employee selection process, Customers, Suppliers, Owners, Public authorities and for **Resources** - Financials, Exclusivity, Technology, External factors. The scaling of criteria is in a range from 1 to 5 with 0.5 step. Each functional category has its subtotal to better identify strong/weak sides of an organization Total achievable score is 17 – 85, where upper quartile score - above 68 points indicates well managed, mature organization, lower quartile (under 34) on the other hand, poorly managed entity likely to fail in a near future. The results are visualized for every respondent (and an average result) on a web chart indicating strengths and weaknesses. The results are scalable, comparable over time and enable benchmarking.

The usage of the model is based on a set of structured interviews with three respondents from an organisation. It shall include a top manager or owner; in case he is managing actively. Second respondent shall be another high-level manager, who has best overview of processes and daily business. Preferably executive director, financial director or similar. Third respondent shall be an opinion maker, a person, who is close to the front-line employees, but has a good overview over the organisation. This can be HR manager, head of trade unions, compliance officer, ombudsman or alike. Each participant is interviewed separately. Both graphical output and text results and recommendation is provided by the tool.

2 A practical usage of a model

2.1 A target company description

As the results are rather sensitive, it was decided not to disclose the name of a target company. It was founded in 1991 in Czech Republic, is fully privately owned and is a manufacturing company. It employs approximately 180 people and yearly turnover is around 16 mil. EUR. Let's refer to it as a COMPANY.

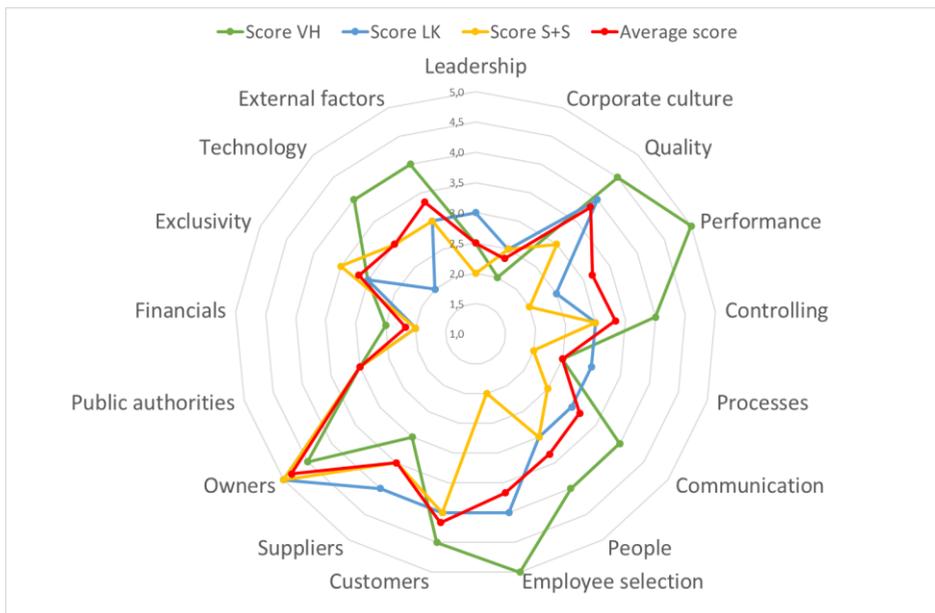
2.2 COMPANY analysis using CAT model

According to the CAT model methodology was the assessment conducted with three company representatives. Firstly, the representative of employees was questioned, it was a head of Human resources department, acronym VH will be used for him. As a second interviewed was an executive director (LK), lastly both company owners (S+S) The strong/weak sides of a COMPANY were identified and areas requiring immediate attention were discovered.

2.3 Graphical results of an evaluation

On Figure 1 there are the results of evaluation clearly visible on a web chart. All participants and their average are shown on the figure. It was expected, based on previous experience that high-level management (owners) ranking is higher than those of middle management. In this case the opposite was true, in most of the criteria the favourable answers were given by HR manager (VH), reflecting also opinions of the employees. The biggest difference can be seen at criterion Employee selection, where the HR manager was satisfied (with own work) at maximum level, whereas the owners received it as absolutely unsatisfactory. Together with criterion Performance were these two results most divergent, what suggests low amount of communication among owners and employees (when the owner is unsatisfied with respective departments performance, say for not fulfilling KPI's, it is necessary to implement some corrective actions and search for improvement). However, if the employees do not recognize the unsatisfaction, it is not reasonable to expect any improvement. Author's note: this resulted in parting of the COMPANY and both HR manager and executive manager.

Fig. 1: CAT model result for a COMPANY Source: own elaboration



The main weaknesses can be seen in three criteria. First of them is Leadership, second is Corporate culture and third is Finance. For the last, it may be considered as a result than the root cause and you cannot trigger finance in a long run solely without improving in the criteria Leadership and Corporate Culture. This is also confirmed by Evaluation comments which the Model provides, see Chapter 2.4.

Results of Categories Maturity and Others were below average, an average result was achieved in Category Stakeholders, better result was not permitted by low score in criteria Communication, People and Public Authorities.

Table 1. Assessment results in respective categories

Category evaluation	Management	Limits	Stakeholders	Limits	Resources	Limits
Maximum		30		35		20
Upper quartile		24		28		16
Average		18		21		12
Lower quartile		7,5		9		5
Minimum		6		7		4
Score:	17,7		25,7		11,7	

If we compare overall results of each interviewed, the lowest evaluation was achieved surprisingly by owners (S+S). All other results were above-average, in some criteria we can expect deeper knowledge of owners than HR manager, resulting in informed pessimistic view in comparison to the view of HR or executive manager.

Table 2. Assessment results of each participant

COMPANY evaluation	Average score	Score VH	Score LK	Score S+S	Limits
Maximum:					85
Upper quartile					68
Average					51
Lower quartile					34
Minimum:					17
Score:	55,0	62,0	54,0	49,0	

2.4 Overall evaluation comments

- Total achievable score is 55, what is slightly above average (55 points). The average result indicates an organisation with fair level of management maturity.
- The highest ranking was provided by VH, LK was on average, S+S were below the average.
- The best results achieved category Stakeholders, from criteria both Customer and Owners. Categories Management and Others scored below-average.
- Significantly below average are the criteria Leadership, Corporate Culture, Processes and consequently Finance.

- A remarkable difference was identified in criteria Performance and Employee Selection.
- The company excels in focus on its customers and quality
- The downside is in setting and living its vision, values and objectives into operations, relation of its strategy to targets and performance evaluation
- Exceptional relations with stakeholders, beside owners also customers
- Overall result is average, the recommendation is except running improvement projects to focus more on soft factors of an organisation, on sharing common values, to motivate on joint success (ownership culture). To focus more on internal communication among departments.
- It is recommended to formalize management processes (minutes of meetings, tasks setting and evaluation, managing of managers instead of front-line employees.

2.5 Evaluation results and next steps

The analysis discovered a weakness in internal communication and managing style as itself. Consequently (this is author deduction only) non-fulfilling of financial targets in last two years with worsening trend. The strategical meeting on mid-level management was organised by the executive manager to identify quick wins and to implement mid- and long-term measures.

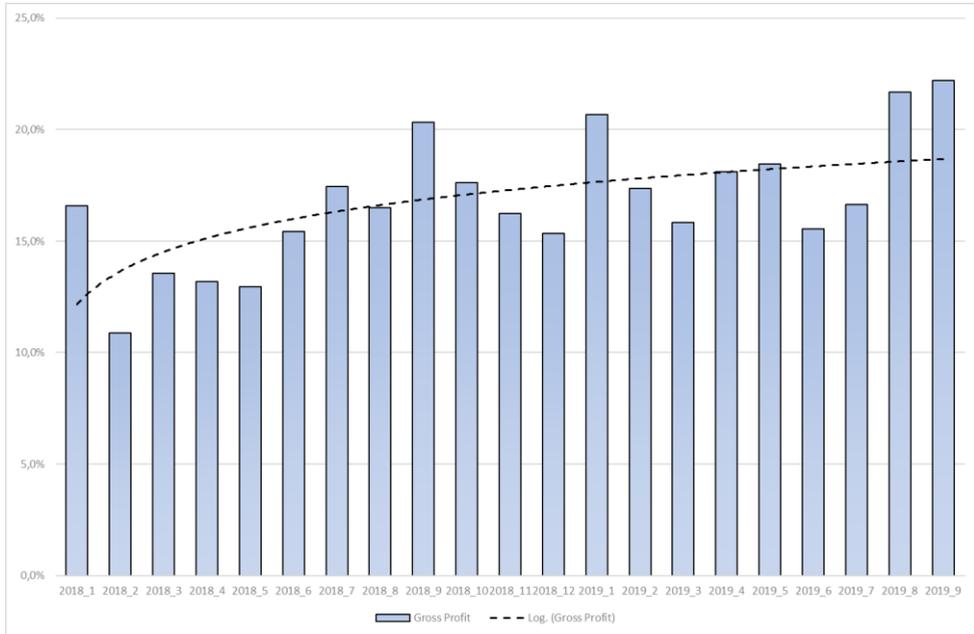
Just half of the measures were not of financial or technological nature but dealt with issues like communication, motivation or organisation. This confirms the findings from CAT model that main problem within the organisation is communication, management style and company culture.

The organisation did not fully utilize the innovation potential of its employees (no improvement process was established, the employees did not come with own proposals), no coherent system of internal projects and changes management existed. It caused ineffective resources utilisation, duplicability, moderate progress and projects delays resulting in overall low motivation. The process did not meet expectations and did even not earn sufficient management.

Measures implemented by the company owners were among others much closer attention on company performance and processes, personal changes, profitability analysis on customer level and cost optimisation. This lead quickly to improvement in economic results see monthly Gross profit development as most important of them in figure 3. Even though seasonal effect in summer months the improvement can be identified, confirmed also by trend line.

However, little was done in regards of communication, company culture. Managers tried to focus on their leadership style, the future development and future assessment will confirm, if the changes were sufficient and the improvement did not exposit a small adjustment only.

Fig. 2 Development of Gross Profit with improvement since summer 2019. Source – own calculation on COMPANY data.



3 Conclusion, further application

The CAT model was used in order to help COMPANY when it faced deterioration of their market position and consequently worsening their financial results. It identified as most important findings:

- for several areas, there is a significant distortion in perception of company owners and their management, resulting in personal changes on positions of executive manager and HR manager
- the COMPANY is poor in maintaining its company culture, internal communication and leadership style. Presumably the financial problems can be attributed to these flaws
- excellent results were achieved in criteria Customers and Owners and also Quality

After the assessment the performance of COMPANY improved. There has been, beside personal changes, increased attention paid by the owners and many corrective actions were taken. As no significant change occurred in order to improve leadership style and internal communication, the long-lasting effect of these measures can be questioned. The new executive manager and his leadership style will be decisive in forming the COMPANY success in next years.

The usage of CAT model proved to be helpful in identifying weaknesses of an assessed organisation and proposing further actions. However, it still delivers identified weaknesses and recommendations to rectify only, the actions and measures have to be taken and implemented by executive management.

It would be reasonable to conduct the same assessment in 1-2 years period to track possible changes and evaluate effect of measures taken. Also, it would be helpful to conduct more assessments in similar organisations to allow benchmark for a COMPANY.

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Enclosures

Enclosure 1: The results of the assessment and full CAT model:

Category	No. criterion	Description	1	3	5	Average score	Score VH	Score LK	Score SS
Management	1 Leadership	Has the organization defined a vision, values, purpose and the key strategy communicated? Is the strategy aligned with values and successfully implemented in operational activities?	Vision, values, purpose are not existed or not communicated, strategy is not defined in agreement with promoting values/strategy/objectives, objectives are not matching with employees' interests and/or among departments/employees exists, there are signs of competition, fear of disposition. Nobody is interested in an opinion of from-line staff.	Values and vision exist and the team can find them. Unit strategy exists, there is no direct connection between values/strategy/objectives, objectives are not cooperation/unfair behaviour. No indicators or substantiation of individual interest on the costs of organization is accepted.	Values and vision/purpose are regularly communicated and most employees know the mission well. Vision and mission contain more than profit only. Strategy is aligned with them, its implementation and objectives fulfillment are regularly evaluated. In strategy is clearly culture is strong. It is usual to listen to and accept different opinions. High grade of employee's engagement. The culture of freedom and accountability leads to personal responsibility for results.	2.5	2.5	3.0	2.0
	2 Corporate culture	Is the culture of organization open, friendly and inspiring?	No, quality is either considered unimportant or ineffective in the way it is given.	There are indicators and measures regarding quality. Goals are set, but no direct connection to an organization's strategy.	The quality of work/life/employee is the main concern, each individual is committed to a appropriate personal responsibility for goals set based on the strategy/objectives of the company and its values. Organization strives to improve. There exists a direct link between performance and pay.	2.3	2.0	2.5	2.5
	3 Quality	Is the quality the cornerstone of a company?	No, the individual performance of units/individuals is not measured, no goals set, no effect on remuneration.	Goals are set, but no direct connection to an organization's strategy.	Comprehensive controlling concept evaluates most important KPIs, besides the value flow and cause-effect relations and provides the necessary information for the management to take decisions on evidence. Bad news and unsatisfactory results are received and solved.	3.8	4.5	4.0	3.0
	4 Performance	Is individual performance measure/managed? Is the compensation based on performance?	Yes, the individual performance of units/individuals is not measured, no goals set, no effect on remuneration.	Company has KPIs defined, there is either unclear cause-effect between KPIs and objectives or a way how to achieve them. Organization does not pay for results, but only for the high status of employees in large amount of other data.	Comprehensive controlling concept evaluates most important KPIs, besides the value flow and cause-effect relations and provides the necessary information for the management to take decisions on evidence. Bad news and unsatisfactory results are received and solved.	3.2	5.0	2.5	2.0
	5 Controlling	Company is managed based on hard data, key performance indicators are evaluated.	There is no structured controlling concept in place, specific interpretation of accounting data might exist.	Key processes described, key processes have its own, no effective evaluation/improvement in place.	Very good internal communication both formal and informal, cooperation improve and initiatives supported. Communication relations to key stakeholders. Objectives and desired relations to key stakeholders.	3.3	4.0	3.0	3.0
	6 Processes	Key processes are described, the effectivity of processes is being monitored	Key processes are not described, no process effectivity monitored.	Key processes described, key processes have its own, no effective evaluation/improvement in place.	Process is fully described, regularly tested, evaluated and improved based on KPIs.	2.5	2.5	3.0	2.0
	7 Communication	The communication and cooperation with key stakeholders are an important topic.	Internal communication is poor, the cooperation among departments is poor. (Inadequately management communication with stakeholders with outside world is not of importance).	Regular formal means of internal communication exist, the cooperation status are being solved systematically (formal: meetings, working groups, working panels).	Very good internal communication both formal and informal, cooperation improve and initiatives supported. Communication relations to key stakeholders. Objectives and desired relations to key stakeholders.	3.2	4.0	3.0	2.5
	8 Role	Organization is partner for its employees.	Employees are not human resources, easily replaced. The main goal is personal interests. Key employees are not united with company, main reason for stay is the salary.	Employees are remunerated in such a way that they do not leave for salary purposes. They are motivated by non-financial factors like company culture, openness, a possibility of personal development, safety.	Employees are able and have opportunity to work with experts in their field with great results. Thanks to their motivations and/or remuneration they do not leave. Flexibility and responsibility on their actions.	3.3	4.0	3.0	3.0
	9 Employee selection	Employee selection process is transparent and respects values and objectives of an organization.	For a selection or stay of certain employees exist no reasonable reasons. Despite of low personal contribution they stay, e.g. because of personal relations.	There are clear selection criteria, the employee is hired through a selection process works well. Employees are engaged in innovations and improvements.	Organization develops necessary competencies and ensures successors at key points. It stresses the employee retention.	3.7	5.0	4.0	2.0
	10 Customers	Is customer the key element in company's life?	No customer, flexibility, internal issues more important.	Regular contacts contact form sales people.	All positions have a frequent contact with customer, B2B sales, manual services are fully aligned with customer requirements, which a company often knows better than they realize.	4.2	4.5	4.0	4.0
	11 Suppliers	The cost of cooperating is preferred over short-term benefits (low price), long-term relationships are favoured.	Main selection criterion is price/discount. A reasonable share of purchasing decisions is not transparent.	AI purchasing criteria are evaluated including lifecycle costs, OPEX, warranty. Some purchasing decisions are not transparent.	FCG is key decisive factor, long term relations (frame contract) established, cooperation with supplier (e.g. in B2B) in place. The owner and company interests are clearly aligned and documented.	3.5	3.0	4.0	3.5
	12 Owners	The interest of the owners is the same as of the company.	Owner follow short term financial/other interests only.	Owner is ready to sacrifice to gain of remuneration in order to further develop the company.	The owner and company interests are clearly aligned and documented. The company is good corporate citizen, working for mutual benefit with a clear strategy to give owners and society.	4.8	4.5	5.0	5.0
	13 Stakeholders	The relationship is mutually beneficial.	There are disputes between company and stakeholders.	Regular cooperation with public authority is without any negative consequences.	Key financial targets of the company are exceeded on average by more than 20%, set goals are fulfilled/exceeded.	3.0	3.0	3.0	3.0
	14 Financials	Financial targets of an organization (tasks, costs, productivity, EBIT, ...) in three consecutive years are fulfilled or exceeded.	Disputes between targets of financial nature, do not follow them or targets were not met by more than 10% in last three years (on average).	Regular financial targets are set at the beginning of fiscal year, organization fulfills on average +/- 5%.	Key financial targets of the company are exceeded on average by more than 20%, set goals are fulfilled/exceeded.	2.2	2.5	2.0	2.0
	15 Sustainability	Has the organization any resource at disposal, which is exclusive and not easily copyable (e.g. patents, brand, customer's passion, costs, rights to other advantages)?	Company is average, surpasses the competitors in no way. (No) is not relevant to gain/financial results/sustainability.	Organization has and important advantage over the competition and aware of it. R&D effects this, but is not systematically directed to being/ improve.	The technology is actively utilized for a long-term development, also R&D systematically used for its marketing development.	3.2	3.0	3.0	3.5
	16 Technology	Organization disposes with all technologies and infrastructure available for running long-term production development.	There exists significant underinvestment, the results of organization could be in danger. The lack of technologies threatens the future existence of an organization.	Organization has and important advantage over the competition and aware of it. R&D effects this, but is not systematically directed to being/ improve.	Technologies enable an organization to gain or maintain a lead over others, future needs are addressed well in advance, and there is a regular assessment of the effectiveness of the technologies used.	3.0	4.0	2.0	3.0
	17 External factors	Was there a significant external factor influencing the company performance within last three years (Changes in regulations, significant market change, political/economical shifts)?	Yes, the performance was positively influenced significantly.	Not relevant.	Yes, the performance was regularly influenced significantly.	3.3	4.0	3.0	3.0
Total	Subtotal Category Chines				55.0	62.0	54.0	49.0	