

The Proposal of Key Performance Indicators Management to Achieve the Defined Financial Objectives of the Selected Company

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Zásady pro vypracování

Úvod

Definujte cíle práce a použité metody zpracování práce.

I. Teoretická část

- Zpracujte literární rešerši v oblasti řízení výkonnosti firmy.

II. Praktická část

- Charakterizujte vybranou společnost a analyzujte stav současného řízení klíčových výkonnostních ukazatelů ve firmě.
- Na základě analýzy navrhnete systém řízení klíčových výkonnostních ukazatelů pro dosažení definovaných cílů.
- Zhodnotte přínosy a rizika spojená s implementací návrhu.

Závěr

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- RŮČKOVÁ, Petra. *Finanční analýza: 7. aktualizované vydání: metody, ukazatele a využití v praxi*. Praha: Grada Publishing, 2021, 168 s. ISBN 978-80-271-4425-9.

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ABSTRAKT

Tato diplomová práce se zabývá klíčovými výkonnostními ukazateli a jejich návazností na strategické cíle firmy. Obsahem práce jsou teoretické poznatky doplněné o aktuální výzkumné články. Praktická část obsahuje analýzu aktuální situace klíčových výkonnostních ukazatelů ve vybrané firmě. Výstupem této práce je SIPOC mapa popisující procesy strategického managementu. Práce obsahuje nově vzniklou databázi klíčových výkonnostních ukazatelů, která je propojena se strategickými cíli a Balanced Scorecard. Funkčnost databáze je uvedena na příkladech. Poslední kapitola se zabývá pyramidovým rozpadem volných peněžních toků, který slouží k vyčíslení vlivů klíčových výkonnostních ukazatelů na finanční hodnoty.

Klíčová slova: Klíčové výkonnostní ukazatele, finanční cíle, pyramidová soustava ukazatelů, strategický management, RACI matice, SIPOC mapa, databáze klíčových výkonnostních ukazatelů, Balanced Scorecard

ABSTRACT

This master thesis deals with key performance indicators and their relation to the strategic objectives of the company. The content of the thesis is theoretical knowledge supported by current research articles. The practical part contains an analysis of the current situation of key performance indicators in the selected company. The output of this thesis is a SIPOC map describing strategic management processes. The thesis contains a newly created database of key performance indicators that is linked to strategic objectives and the Balanced Scorecard. The functionality of the database is illustrated with examples. The last chapter deals with the pyramid decomposition of free cash flow, which is used to quantify the effects of key performance indicators on financial values.

Keywords: Key performance indicators, financial objectives, pyramid system of indicators, strategic management, SIPOC map, RACI Matrix, database of key performance indicators, Balanced Scorecard

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INTRODUCTION

Performance is efficiency, functionality, speed, productivity, low failure rate, persistence and, in its consequences, money and success. In order to maintain and measure performance effectively it is important to set a clear long-term strategy and to use only the really key performance indicators. Fundamentally, even the performance measurement itself should be effective. Having as many metrics as possible and measuring them as accurately as possible is not the key to successful management. Rather, timeliness is desirable for operational decision making, so that the company has the opportunity to react immediately.

The performance of a business can be thought of by comparing it to a cruise ship. The firm's strategy, its tools, goals, activities and their measurement is something that should hold the helm of the firm in the direction of its imaginary destination - the vision, the mission. The entire journey should be guided by the needs of customers who not only wish to be transported to their destination but also expect a certain standard of service and they are happy to pay for it- the customer perspective. Crew satisfaction and maintaining their skills is also important to maintain high service standards- learning and people development perspective. Keeping the ship afloat also requires time investment in the maintenance of all internal systems - internal process perspective. All of these aspects ultimately have a single objective - to maintain or improve the standard of service provided. How does one sustain oneself in the business world in the long term? With performance that brings money and financial stability.

The aim of this master's thesis is to support the performance of the selected company. The company has already set company-wide objectives, which will be described in this thesis but will not be contradicted in any way. The thesis will also include a newly created database of all the key performance indicators, which will be linked to the individual goals and perspectives of the company within the database. Each objective has its/their KPIs, but what this thesis will seek to establish is how much each KPI contributes to the financial objectives. Individual indicators have their own explanatory value, but it is also interesting to look at their interconnectedness and impact on the state of the company's finances.

OBJECTIVES AND METHODS OF MASTER THESIS PROCESSING

The topic of this master's thesis is important because it can contribute to faster and easier decision making. It will also help to create a better understanding of the interconnection between financial and non-financial KPIs and financial objectives.

The main objective is to implement project focused on KPIs management system. Objective of the project is to develop a tool which will show connections between KPIs and financial targets. A side objective is to create a description of strategic management processes using SIPOC map. The second side goal is to create a database of KPIs linked to the strategy so that it can be further used for the main objective.

The subject of the study is the selected company that is actively consulted during the whole project. All outputs are targeted at this company, which can benefit from the outputs of this work.

The process of the thesis is as follows: first, literature research in the field of company performance management. Then a description of the company and a description of the current situation of the company, including specific KPIs and their strategic targets. Evaluation and suggestions follow. Last part of this master thesis includes the creation of a description of the strategic process. Next, the collection of information and the creation of a KPI database, which is linked to company's SharePoint, where the individual perspectives of the Balanced Scorecard and individual objectives were prepared before. The functionality of the database is illustrated with examples. In the final section, the linking of the KPIs and their influence on the defined financial targets will be proposed.

Methods and tools which are used are literature research for theory, then SIPOC map and RACI matrix for description of strategic processes. Microsoft Visio is used to create SIPOC and RACI.

An overview of the company's strategy is developed and maintained in Microsoft SharePoint, which serves as a single source for monitoring the implementation of the strategy for internal users. The system needs to be revised so it can be understandable for the users. It is necessary to describe the individual strategic objectives in a new and clear way and finally it will be created a list of key performance indicators. It will contain terms and their components, as well as the links between KPIs and their calculations. Data are sourced from internal sources such as Microsoft Power BI software, Microsoft PowerPoint files and other internal sources. The database will be developed in Microsoft Excel, Microsoft OneNote and at the end it will be converted to Microsoft SharePoint.

Microsoft Excel and its functions will serve to create pyramid decomposition.

I. THEORY

1. PERFORMANCE MEASUREMENT AND MANAGEMENT CONCEPTS

1.1 Enterprise performance management

Durkáčová and Kalafusová (2012, p. 1) says: “The performance of an enterprise is determined by the ability or potential to achieve the set objectives, to value the resources invested in its activities, to produce profit, to increase the value of the enterprise and at the same time it is the ability to ensure its future development. Only an undertaking which complies with the predetermined the objectives defined in the strategy can be efficient in the long term.”

Performance depends on the ability to keep a competitive advantage. To know the company's performance, the enterprise needs to repeatedly measure the activities it performs and to determine how much they contribute to the successful management of the company's performance.

The reason why financial performance is determined by value creation for the owners is that the owner bears most of the risk, the business was created with the owner's money, and the main idea of the business revolves around a product which is devised by the owner. It is called shareholder value. The long-term existence of the company depends not only on the satisfaction of the owner, but also on the satisfaction of the stakeholders. Creating value for customers, employees, owners, suppliers, creditors, and public sector is called stakeholder value. These two concepts do not have to be opposed to each other; In fact, they can be in harmony, but shareholder value should be priority. This was not always the case, as can be seen in . (Pavelková and Knápková, 2012, p. 13-14).

Wagner (2007, p. 17) adds that among the stakeholders, the focus should be on the customer and employees.

Tab. 1 - Development of financial performance indicators (according to Pavelková and Knápková, 2012, p. 14)

1. GENERATION	2. GENERATION	3. GENERATION	4. GENERATION
Profit margin	Growth of profit	Return on capital (ROA, ROE, ROI)	Shareholder value
$\frac{\text{Profit}}{\text{Sales}}$	Profit maximization	$\frac{\text{Profit}}{\text{Invested capital}}$	EVA, CFROI, FCF...

Globalisation makes the business environment faster; it also increases competition and puts pressure on business performance. Performance needs to be measured more and more

effectively, as well as and evaluated and managed more flexibly so that the business can maintain or even improve its market position. Globalisation also pushes for a clearly defined strategy. (Durkáčová and Kalafusová, 2012, p. 9).

1.2 Mission and Vision Statements

Part of a company's strategy is to establish a mission and vision for the company. Mission is the most basic purpose of a company. In simple terms, one could say that the mission of any company is to produce, repurchase certain products or provide services. (ManagementMania, 2017).

The vision determines where the company is going and what its main goal is. The whole strategy of the company is further based on this main goal. (ManagementMania, 2019).

As we can see in the figure *Fig. 1*, the entire strategy, including the long-term goals and individual activities of the company, is linked to the mission and vision.

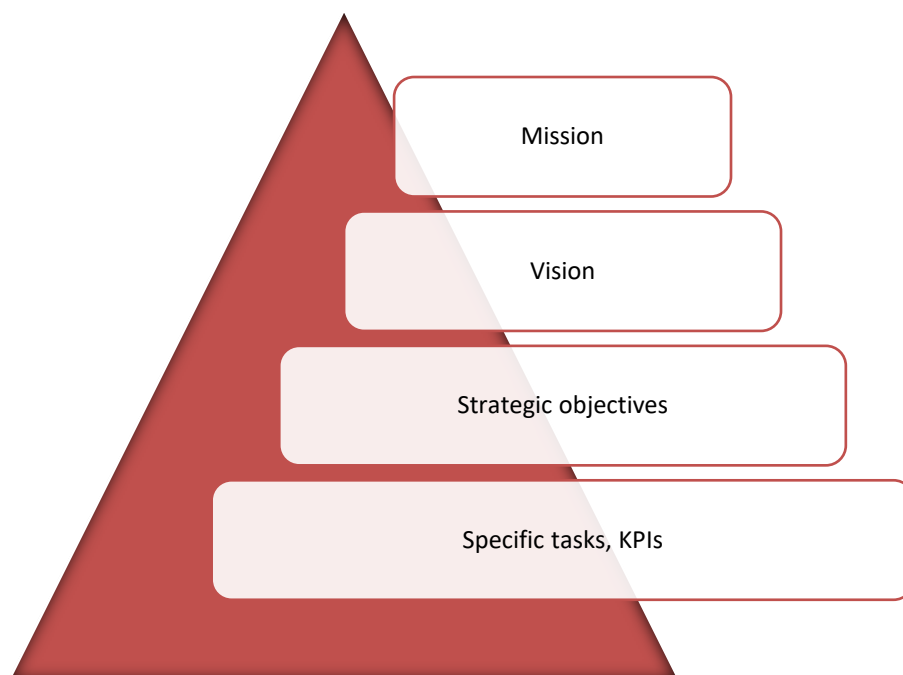


Fig. 1 – Company strategy (according to ManagementMania, 2019)

1.3 Objectives

The starting point for the company's financial objectives is the financial analysis and overall assessment of the company. Eva Růčková (2021, p. 104-105) divides the objectives as follows:

- the company's market position - market share, etc.

- the company's efficiency and financial stability
- innovation of products, machinery and equipment, technology
- personnel and social objectives
- environmental protection

Operational planning is short-term. It is aimed at days, weeks, and months. Tactical planning is also short-term in nature and may concern, for example, production. Strategic objectives are those of a long-term nature over a period of years. As indicated in *Fig. 2* the objectives are interrelated and from the strategic ones should follow the tactical ones and from the tactical ones the operational ones.

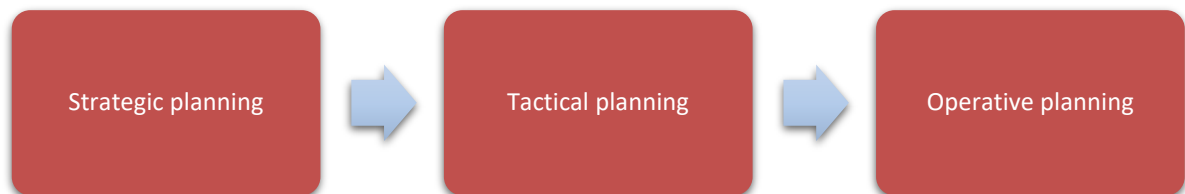


Fig. 2 - types of company planning (Růčková, 2021, p. 104)

KPI without targets are useless. When setting a target, it is important that it is clearly specified, and everyone knows what to mark as success. It is therefore important to set a target value and a time by which it must be achieved. (Marr, 2015, p. 25).

1.4 Balanced scorecard

The building blocks of the BSC are a clearly defined vision and strategy for the business. Further, the strategy is deeply linked to the strategic objectives, which are evenly divided between 4 perspectives — the financial, customer, internal business process, and learning and growth perspectives. These objectives have their own way of measurement, target values, and activities. (Kaplan and Norton, 1996, p. 54).

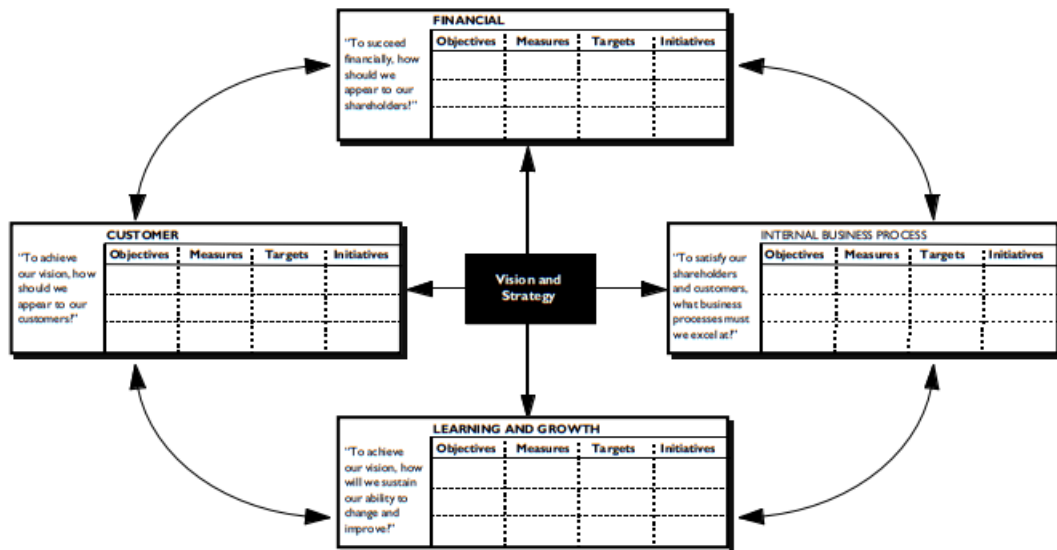


Fig. 3 – Four perspectives (Kaplan and Norton, 1996, p. 54)

Prospects typically include the following metrics:

- Financial performance — revenue, earnings, return on equity, cash flow
- Customer-focused performance — market share, customer satisfaction rates, customer loyalty
- Innovation and development performance — productivity, quality, frequency
- Internal performance — morale, knowledge, turnover, use of best practices

BSC is used in the following situations:

- To clarify and update corporate strategy
- To link strategic objectives to long-term goals and annual budgets
- To track key elements of corporate strategy
- To facilitate organizational change
- To compare the performance of geographically diverse business units
- To improve understanding of enterprise-wide vision and strategy (Rigby, 2017, p. 16-17).

BSC is ranked among the top 25 most popular and trending management tools in Management Tools & Trends (2018) by Darell Rigby and Barbara Bilodeau. It is the only

one ranked out of existing the performance management systems (PMS). BSC is average in comparison of the most popular tools measured based on usability and satisfaction - see Fig. 4. The adoption rate of BSC by businesses fell to 29% in 2018, which was rather low compared to previous years. Conversely, BSC experienced its peak in 2008, when 53% of the world's enterprises adopted it. BSC has been considered as one of the main cost reduction tools for manufacturing companies along with Supply Chain Management, Total Quality Management and Lean Six Sigma. (Rigby, & Bilodeau, 2009, p. 7-10; Rigby, & Bilodeau, 2018, p. 2-5).

The popularity of BSC is confirmed by the fact that according to Google Scholar, BSC was included in the title of papers 4660 times. (Tawse a Tabesh, 2022, p. 2).

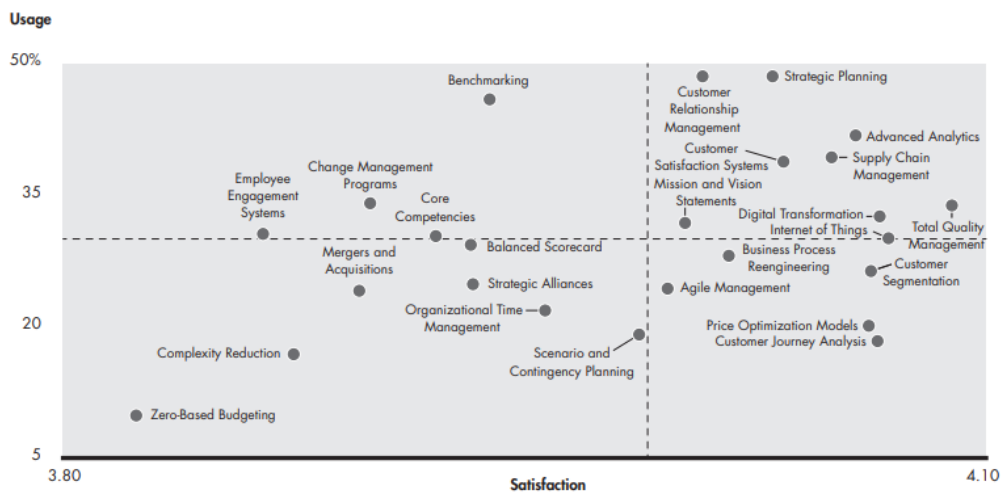


Fig. 4 - The result of research on tools and trends (Rigby a Bilodeau, 2018, p. 5)

1.5 Strategic planning and strategic management processes

“Process is an organised group of interrelated activities and/or sub-processes that flow through one or more organisational units or one (enterprise process) or more collaborating organisations (inter-organisational process), which consume material, human, financial and information processes and whose output is a product of value to an external or internal customer.” (Šmída, 2007, p. 29).

In practice, a common problem is poor identification of the organisation's needs. With proper analysis, new systems are then implemented more efficiently, or old ones are improved. The identification of processes in the enterprise is also important. (Michalski, 2019, p. 103).

A process is a specific form of arrangement of work activities in time and space with a definite beginning and end and clear periodic inputs and outputs. (Davenport, 1993, p. 5).

1.6 SIPOC

SIPOC is a tool used to define business processes. It helps to identify opportunities more easily. It is a quick simple and easy to understand overview. This tool also saves time and costs. As can be seen in *Fig. 5*. SIPOC describes the process from the supplier that creates the process, through the inputs of the process, and the name of the process itself. Then the outputs that have been achieved by the process are described and finally the customer that requires the process is named. In general, the process described by SIPOC should not involve more than 6 steps. There are also different variants of SIPOC, such as COPIS or PISOC. The difference is merely in the order of columns. (Brown, 2018, p. 200-203).

The SIPOC consists of several elements:

- Suppliers
- Inputs — input elements
- Process
- Outputs — output elements
- Customers — recipients

The sequence in which elements are passed is important in the development of the SIPOC model:

- Step 1: name the process (P)
- Step 2: clarify the beginning and end of the process, determine the length of the process period
- Step 3: define and name the sub-processes, narrow the number of processes to 5-8 main steps (P)
- Step 4: compile a list of key inputs and outputs (I) + (O)
- Step 5: identify the supplier and customer in the process (S) + (C) (Michalski, 2019, p. 108-109)

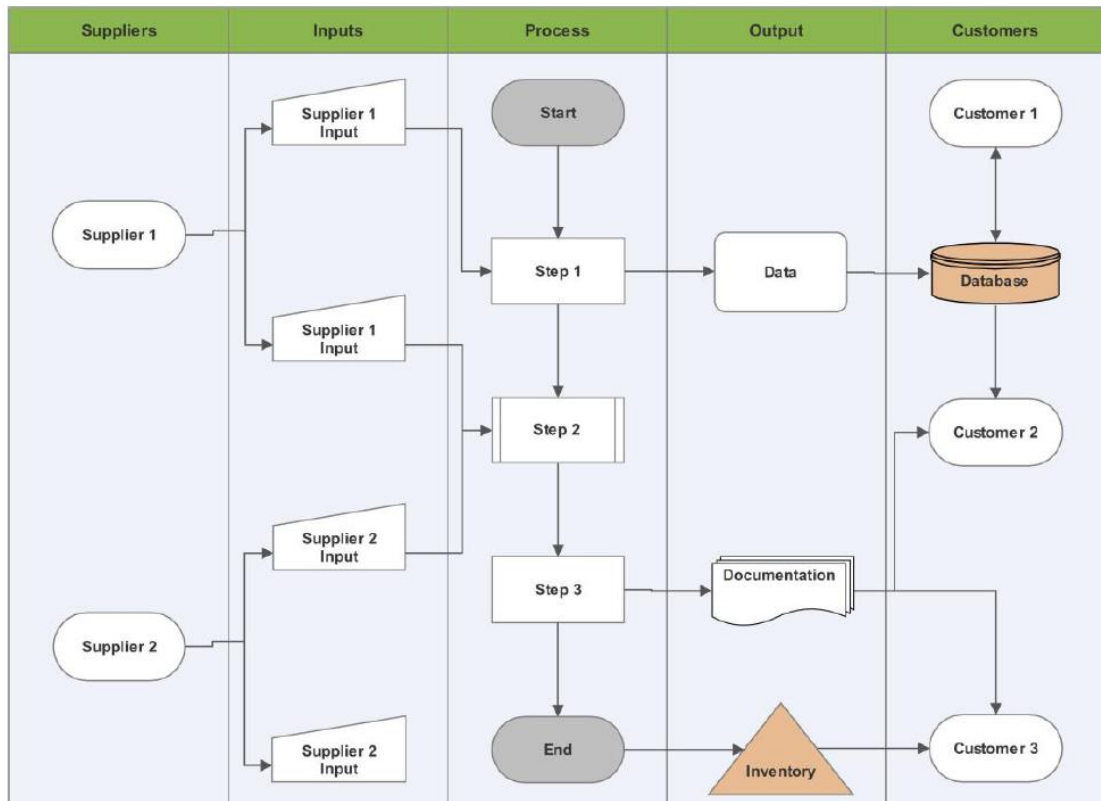


Fig. 5 – Using the SIPOC to understand the relationships between processes, suppliers and costumers (Brown, 2018, p. 203)

1.7 RACI Matrix

RACI is used to identify persons associated with the process. It analyses the links between participants in information flows.

Responsible — the person carrying out the activity

Accountable (= Approver) — the person responsible for activity

Consulted — an experienced person involved, only through consultations

Informed — a person only receiving information about the activity (Michalski, 2019, p. 110)

1.8 Pyramid Systems of Indicators

Durkáčová and Kalafusová (2012, p. 9) classified pyramid decomposition of performance as a business performance measurement and management system. The purpose of the performance pyramid is to link a company's strategy to its operations and activities by linking top-down goals and bottom-up metrics upwards.

There are two indicator breakdown procedures: additive and multiplicative. The additive procedure is based on the decomposition of indicators into smaller indicators that are added

or subtracted from each other. In the case of multiplication, the procedure involves multiplication and division. The multiplicative method involves the chain addition, logarithmic method, functional method. (Růčková, 2021, p. 50-51).

Pyramid decompositions are used to identify the interdependence of indicators and also to determine the strengths and weaknesses of a company. This identified bottleneck should be item number one on the list for improving the performance of the company (improving the result of the decomposition indicator). (Růčková, 2021, p. 88).

1.8.1 DuPont System

The most famous pyramid decomposition is the DuPont System. The history of this system was written at the chemical company DuPont Nomeurs, where it was first devised. (Růčková, 2021, p. 50-51).

Du Pont's system is a pyramid system of indicators, serving as a tool for capturing the links between processes in a company. The result is a set of indicators how one indicator decomposes from 1 indicator to the sum of several. The pyramid has several tiers. (Pavelková and Knápková, 2012, p. 113).

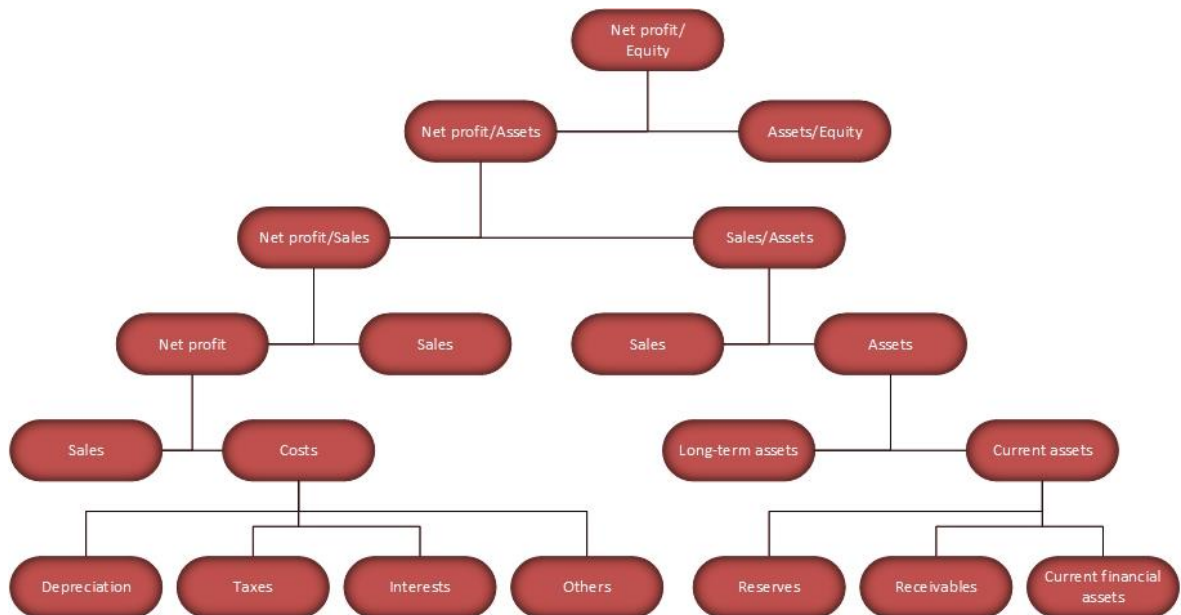


Fig. 6 – DuPont System (according to ManagementMania,2015)

1.8.2 Du Pont System based on Free Cash Flow

Chu Liqin (2012, p. 196-197) believes that after the introduction of cash flow indicators, the firm will be able to report more accurate financial diagnostics. His study concludes that

free cash flow can better reflect the quality of profits, the ability to sustainably grow profits, the value of the enterprise, and the ability of the enterprise to repay its debts.

Tab. 2 – Financial diagnosis indicator system based on free cash flow (according to Liquin, 2012, p. 197) lists indicators used in the establishment of financial diagnosis indicator system based on free cash flow.

Tab. 2 – Financial diagnosis indicator system based on free cash flow (according to Liquin, 2012, p. 197)

Indicator	Calculation Formula
Free cash liquidity ratio (Debt-paying ability)	Free cash flow/Average of current liabilities
Total liabilities ratio of free cash	Free cash flow/Average of total liabilities
Free cash cover ratio (Ability to obtain cash)	Free cash flow/Interest expenditure
Operating free cash flow ratio	Free cash flow/Operating income
Free cash flow per share	Free cash flow/Total amount of ordinary shares
Free cash recovery rate of assets	Free cash flow/Average of total assets
Free cash recovery rate of equity (Quality of earnings)	Free cash flow/Average of shareholder's equity
Free cash rate of net profit	Free cash flow/Net profit
Free cash creation rate (Development ability)	Free cash flow/Net operating cash flow
Free cash flow growth rate	(Free cash flow of current year-Free cash flow of last year)/Free cash flow of last year
Assets acquisition ratio	Free cash flow/Capital expenditure

Further, a breakdown based on the traditional DuPont System was created. The DuPont System lists return on equity (ROE) as the main indicator. This ratio indicator is decomposed using the indicators linked to free cash flow shown in the previous table. In this breakdown is interesting that we can see the exact same indicator at the beginning and totally others result at the end. Pyramid breakdowns are established on mathematic division, so creativity has no limits when its correct in mathematical way. This opportunity opens door to make individual breakdown focused on specific company.

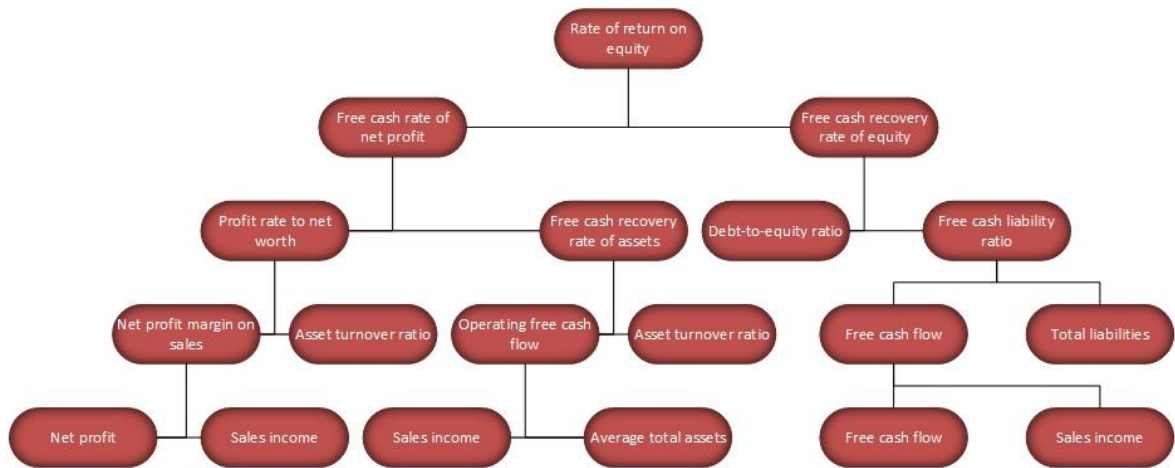


Fig. 7 – The Du Pont System of Financial Analysis with Introduction of Free Cash Flow (Liquin, 2012, p. 197)

2. KEY PERFORMANCE INDICATORS

KPIs are used to evaluate the company's performance in comparison with previous periods. These indicators serve as a tool to achieve targets or to establish general standards in specific industries or in internal processes of the company. (AlRababah, 2017, p. 80).

KPIs should be considered as important tools for identifying and sharing priorities of organizations across the supply chain. Inconsistency of KPIs is considered as a major source of inefficiency and disruption of supply chain interactions.

Effective performance indicators allow us to understand:

- How well we are doing
- If we are meeting our goals
- If our customers are satisfied
- If our processes are under control
- If and where process improvements are necessary (Franceschini et al., 2018, p. 133-134).

There are many ways how KPIs can be divided. They can be divided according to whether they belong to operational or strategic objectives. Operational KPIs are measured on hourly, daily, weekly and monthly bases. They are trying to be as close as possible to real time. Their essence is quickly delivered results for a potential quick response in management change. Strategic KPIs reflect trends and map progress. Both of them are equally important. (Marr, 2015, p. 19).

Peter Parmenter (2019, p. 1-2) described the types of KPIs using onion as an example. According to Parmenter, key result indicators (KRIs) form the outer skin, makes an overall impression of status. KRIs indicate how we performed in a particular area in terms of critical success factors. This could be EBIT, for example. Below the top layer, there are Result Indicators-RI and Performance Indicators-PIs. RIs show what we have been doing, whereas PIs show what to do. At the very core are KPIs in the narrower sense, telling us what has to be done to improve performance as can be seen in *Fig. 8*- see for example TEEP.

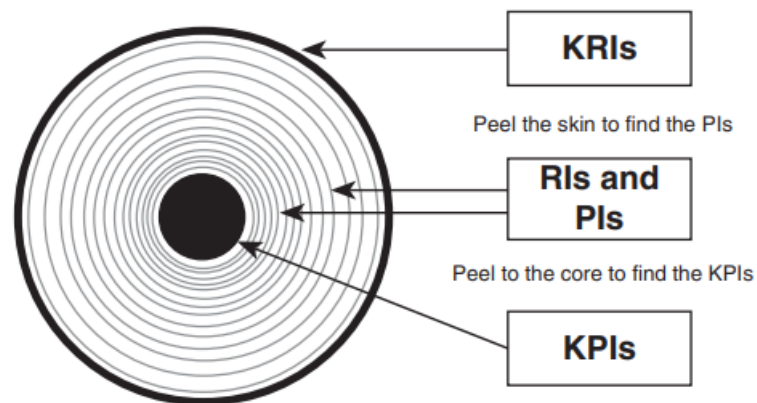


Fig. 8 - Four Types of Performance Measures (Parmenter, 2019, p. 2)

KPIs can also be used for strategic management, where metrics are divided into financial and non-financial. They are linked to organisational objectives and to the Balanced Scorecard. This is a broad concept.

As a narrow concept, KPIs can also be considered as process indicators. Petříček further divides KPIs into:

- sub-financial KPIs – e.g. sales in relation to a specific customer segment
- overall financial KPIs, i.e. KPIS - in relation to the company as a whole, indicating total sales for the whole company
- non-financial KPIs, also referred to as non-financial performance measures (NFPM) or non-financial measures of corporate performance (Petříček, 2009, p. 686-697).

In principle, it can be said that authors most often stick to the division between financial and non-financial indicators, also in connection with KPIs. Financial indicators are divided into traditional and modern. The classical financial ratios also include absolute value of profit, cash flow, and ratio indicators based on standard financial statements of enterprises. (Durkáčová and Kalafusová, 2012, p. 4).

KPIs are used in decision support systems for managers, with the effect of significantly speeding up the whole process. According to Ahmad A. Al Rababah, flexible decision-making is largely based on an automated link between the ERP system and a system evaluating the results of selected KPIs linked to the company's objectives. (AlRababah, 2017, p. 81-83).

However, automation also has its limits, as quantified KPIs are not able to tell us the causes and consequences, which is why the human factor is still important. Another imperfection of KPIs evaluation automation is that indicators offer only a representation model of a process. It is not correct to confuse such as model with an actual one – it is only “proxy”. The difference can lie in detail, and compliance with laws and regulations is not thus guaranteed. (Franceschini et al., 2018, p. 135).

There is no right number of KPIs, its actual number correlating with the needs of the business and the number of targets. It can be 20 but also 30 and more. (Marr, 2015, p. 22).

2.1 Financial and non-financial indicators

Kaplan and Norton (1996, p. 56-58) identifies profit as the main financial metric; other measures may vary according to the business life cycle. Since the growth life stage is not profitable most of the time, the business focuses on other financial metrics. A business in a growth stage measures a wide variety of investments-investments to improve products and services, to expand production facilities, to expand distribution network infrastructure to support global relationships, and to develop new customer relationships. Also of interest are total sales, sales by different markets, and sales of specific services and products. The company uses these metrics to map its potential.

The sustain stage is also focused on investments, as investments are also observed in terms of returns on invested capital. Investment projects will already be more focused on improving the system already in use - removing bottlenecks and expanding capacity. The company is focusing on traditional metrics such as return on capital, and operating profit, and gross margin. More advanced companies also use discounted cash flow, and economic value added.

The last period identified is harvest, which is the time when the enterprise wants to harvest its fruits. This is a stage when the business no longer invests much, preferring instead to invest in the short term and focusing on maximizing the cash flows going back into the business.

NFPMs help in assessing service quality or customer satisfaction. In addition, NFPMs help employees visualize long-term objectives. If the employer uses the NFPM to assess employees, then NFPM encourages employees to be more creative. Research has confirmed

that NFPM improves manager performance directly and indirectly through innovation. (Yuliansyah a Razimi, 2015, p. 135-141).

The use of non-financial indicators is voluntary, but more and more major customers, suppliers, investors or employees are pushing for the publication of environmental metrics, for example. Well-designed sustainability reporting helps companies create a positive business reputation, increases transparency and builds stakeholder trust. The number of non-financial reports published under the GRI from different countries is growing every year. (Strelnik et al., 2015, p. 369-372).

2.2 Financial KPIs

2.2.1 EAT, EBT, EBIT, EBITDA

EAT (net profit) is divided by Eva Růčková (2021, p. 64) into profit available for distribution and retained earnings. Profit available for distribution is used for shareholder dividends, while retained earnings are used for investment in the enterprise in the following periods. In the P&L account, it can be found as the result for the current period. Pavelková and Knápková (2012, p. 20) indicate EAT as the most important profit indicator for owners.

Bernard Marr (2015, p. 127) sees EAT as an indicator which can give distorted picture of the company. He also points out that the results are easy to manipulate. An example of such manipulation is when a building is being sold with such a large profit that the business looks much more successful than it actually is.

EBT (earnings before taxes) is advantageous to use as an indicator if we use it in comparison with other subjects with a different level of taxation. (Růčková, 2021, p. 64).

EBIT (in other words operating profit) is used for inter-firm comparison. It considers not only taxes but also interest, which could affect the financial analysis and thus fail to accurately portray their potential to generate profits. (Růčková, 2021, p. 64).

Bernard Marr (2015, p. 127) sees EBIT as a more accurate measure than EBITDA because EBIT describes the business in its normal circumstances.

EBITDA (gross profit) is mainly used by US companies when they split depreciation for tangible assets and appreciation for intangible assets. It can also be beneficial for remuneration because it makes managers less inclined to reduce investments for greater personal gains. (Pavelková and Knápková, 2012, p. 20).

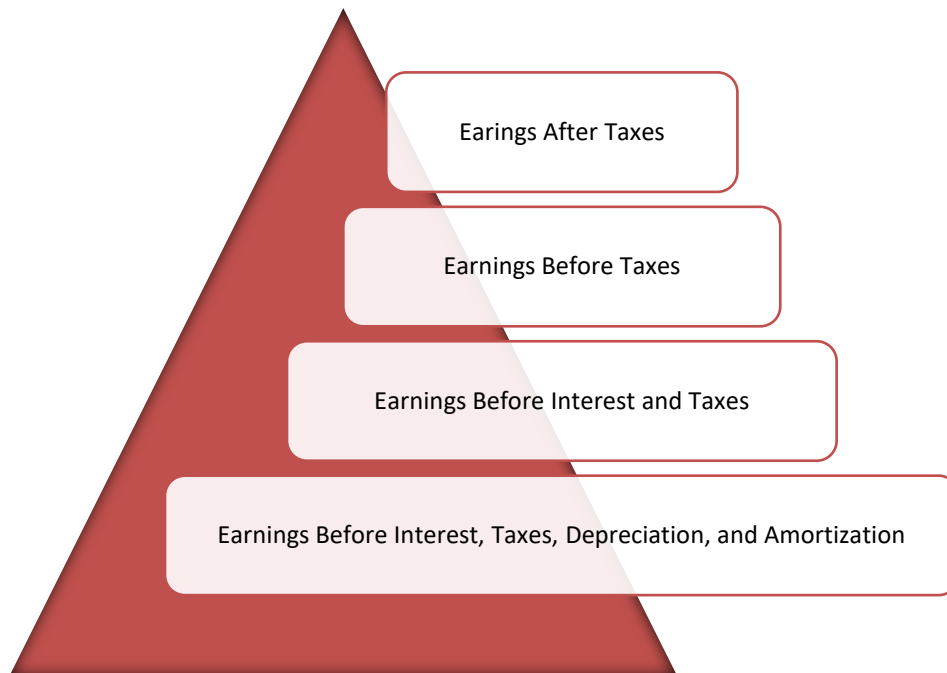


Fig. 9 – Profit indicators (Own processing)

2.2.2 Profit margin

It is important to understand profit indicators in the context of comparisons between periods as well as in the context of the events we have already outlined, see 2.2.1

EAT, EBT, EBIT, EBITDA. Profit margin indicates how much money was squeezed out of sales. It is the operating profit margin that gives us the truest picture. Another advantage is that it can be used in benchmark as well. Profit margin, or Return on Sales (ROS) should increase over time. (Marr, 2015, p. 131; Pavelková and Knápková, 2012, p. 23).

$$\text{Profit margin} = \frac{EBIT}{S} * 100 \quad (1)$$

2.2.3 Working capital

Working capital is an indicator of liquidity. Operating working capital (OWC) excludes cash and short-term debt. Cash is considered a non-operating asset. Both high and low OWC indicate how efficiently the company uses and manages its financial resources. High OWC usually means that the enterprise has less cash. Operating working capital is a narrower measure than net working capital. While operating working capital focuses more on day-to-day operations, net working capital looks at all assets and liabilities. The OWC is useful for determining the solvency of the company, where a low OWC indicates an upcoming deficit

in funds to pay maturing liabilities. NWC takes into account overall profitability and is useful for evaluating investments and determining whether it is worth increasing debt. (Indeed Editorial Team, 2022).

OWC = operating current assets – operating current liabilities

NWC = total current assets – total current liabilities

Companies also use OWC/S ratio. High OWC/S indicates that more cash is tied up in operations, which means that companies have less liquidity.

Conversely, low OWC/S indicates that less cash is tied-up in operations, which means that companies have more liquidity. (Wall Street Prep, 2023).

$$OWC - to - Sales = \frac{Operating\ Working\ Capital}{Sales} \quad (2)$$

2.2.4 EVA

As already stated, profit can be easily manipulated. Often the cost of capital is not taken into account, which is why the EVA was created. This indicator quantifies the profit when the cost of financing capital is removed. It follows the idea that the return on capital must always be greater than the cost of capital. Thanks to EVA investors can make a true picture of the state of the company and can thus more accurately estimate the return on their investment in it. EVA measures how the company's activities contributed over a given period to the increase or decrease in value for its owners. (Marr, 2015, p. 147; Pavelková and Knápková, 2012, p. 52).

$$Economic\ Value\ Added\ (EVA) = Net\ Operating\ Profit\ After\ Tax\ (NOPAT) - (Weighted\ Average\ Costs\ of\ Capital\ (WACC) \times Economic\ Capital\ Employed\ (C)) \quad (3)$$

2.2.5 Investment

Investment is the accumulation and expenditure of funds on capital assets in a firm. To maintain a company's competitive ability, it is important not only to earn funds but also to invest them back. Not every investment is necessarily profitable, so it is important to know how to evaluate it properly. (Marr, 2015, p. 153-154).

NPV- Net present value - answers the question: Is the investment profitable? The interest rate varies according to the riskiness of the investment. It is desirable that the NPV is greater than 0, then the investment is beneficial.

$$NPV = -I + \sum_{t=1}^{t=n} \frac{CF_t}{(1+i)^t} \quad (4)$$

CF_t = cash flows from the investment

I = investment

i = discount rate (interest rate)

t = given period

n = total number of periods

IRR – Internal rate of return – is the way in which the return on investment is calculated. The calculation is based on positive and negative NPV. The positive and negative NPVs are found by estimation.

$$IRR = i_N + \frac{NPV_N}{NPV_N + NPV_V} * (i_V - i_N) \quad (5)$$

i_N = discount rate at which NPV_N is positive

i_V = discount rate at which NPV_V is negative

The models can be used not only to calculate investments but also for valuing the business. (Slavík, 2013, p. 76; Pavelková and Knápková, 2012, p. 44-45).

2.2.6 Free Cash flow

The free cash flow theory dates from the 1984 to 1986 by Easterbrook and Jensen.

Slavík (2013, pp. 119-120) describes the FCF as a free cash flow for firms that is available to the owners and creditors after satisfying the state and the company itself. FCF is one of the methods of valuing a business on the income principle, for example, also EVA belongs to this group.

$$FCF = EBIT (1-t) + D/A - \Delta WC - I \quad (6)$$

D/A = non-cash expenses (amortization, depreciation)

ΔWC = change in working capital

I = investment

t = tax rate

The following information can be inferred from Cash Flow:

- *Operating activity*: is the business able to generate cash from day-to-day operations? The main source of income for the business should be revenue from product sales.

- *Investing activity*: Is the business reinvesting in equipment or just coasting? Investments should be directed towards modernisation and maintenance of machinery.
- *Financing activity*: How much has been paid to shareholders? Has there been a release of capital? (Marr, 2015, p. 136-137).

In contrast to cash flow, for the calculation of free cash flow only investment fixed assets and operating cash flow are needed. For a more detailed calculation see *Tab. 3*.

=	Cash Flow From Operations
+	Earnings
+	Depreciations
+	Creation of Long-term Reserves
-	Decrease in Non-current Reserves
+	Increase in Short-term Liabilities, Short-term Bank Loans, Accrued Liabilities
-	Decrease in Liabilities (current), Short-term Bank Loans, Accrued Liabilities
-	Increase in Accounts Receivable, Accrued Assets
+	Decrease in Accounts Receivable, Accrued Assets
-	Increase in Inventories
+	Decrease in Inventories
=	Cash Flow From Investing
-	Expenditure Related to the Acquisition of Fixed Assets
+	Proceeds From the Sale of Fixed Assets
=	Cash Flow From Operations – Cash Flow From Investing = Free Cash Flow

Tab. 3 - Calculation of free cash flow (according to Pavelková and Knápková, 2012, p. 22)

2.3 Customer, Sales and Marketing KPIs

2.3.1 Net Promoter Score (NPS)

This indicator was demonstrated by Fred Reichheld. The aim of this measure is the level of customer loyalty to the product, services and to the company. The advantage of NPS is that it is directly related to revenue growth and encourages action. When NPS is calculated and compared to competitors, there is a noticeable direct correlation between NPS and the firm's market share. Due to this context, some companies use NPS in their executive bonuses.

The division into those groups is based on the question asked to a specific customer: "If they would recommend the company from 0-10". The further measurement of the indicator shift can be further measured by the actual length of the relationship with the customer.

Customers are divided into 3 groups:

- Promoters - They are happy to recommend the supplier company. Price changes do not compromise their loyalty to the company because price is not their primary motivation for choosing a supplier. Promoters are customers with a long-term relationship with the supplier; they are the most valuable customers. This customer moves between 10-9 points.
- Passives - It's a relatively satisfied customer who would probably recommend his supplier. This customer is fairly loyal to the company, but does not rule out the possibility of switching to a competitor. This customer is between 8-6 points.
- Detractors - Detractors are more likely to leave the company, so the relationship between the company and the detractor is shorter and less profitable. Detractors are price sensitive, do not care about the development of the supplier company and are often the source of gossip by the supplier company. It is important to remember that a negative comment is worth several times the weight of a positive one. 6 or less points.

NPS = Percentage of Promoters – Percentage of Detractors (Reichheld a Markey, 2011, p. 61-84; Kuhn, 2023).

2.3.1 Complaints and their evaluation

Customer complaint management is an important element of CRM (Customer relationship management). Handling complaints takes a lot of time, so it's important to measure them and eliminate mistakes. The company should not make it difficult for the customer to handle complaints, but rather help them in handling them. Mistakes can happen but should not have a negative impact on the company's relationship with the customer. (Stauss a Seidel, 2019, p. 2).

2.4 Internal Process KPIs

2.4.1 Production efficiency

“The concept of Overall Equipment Effectiveness (OEE) was first written about in 1989 from a book called TPM Development Program: Implementing Total Productive Maintenance

edited by Seiichi Nakajima from the Japan Institute of Plant Maintenance.“(Kennedy, 2017, p. 1).

In practice, companies often resort to assessing the overall efficiency of equipment on the basis of availability alone. But there are several factors: availability, quality and performance. Overall equipment effectiveness takes these three factors into account. When a loss occurs, it is important to consider OEE in the context of the specific subjects that caused the loss. Losses can be influenced by the layout of the lines, the proportion of human labour, flexible automation conditions and other factors. (Jurová, 2016, p. 154).

$$OEE = \text{availability rate} * \text{performance rate} * \text{quality rate} \tag{7}$$

$$\text{Availability: } \frac{\text{operating time of the production machine} - \text{downtime}}{\text{operating time of the production machine}} \tag{8}$$

$$\text{Performance: } \frac{\text{number of produced pieces} * \text{ideal cycle (takt)}}{\text{operating time of the production machine} - \text{downtime}} \tag{9}$$

$$\text{Quality: } \frac{\text{number of produced pieces} - (\text{reject} + \text{extra work})}{\text{number of produced pieces}} \tag{10}$$

Kennedy (2017, s. 3) enriches the calculation with 7 losses. Jurečková discusses examples of their causes in her book and Kennedy specifically names them as: planned downtime, setup or changeover downtime, unplanned recorded stoppages, minor unrecorded stoppages, reduced speed, rejects and rework, start-up and yield. All these losses need to be monitored and minimised by preventive action. Examples of prevention include reducing unplanned downtime through good production planning and periodic maintenance.

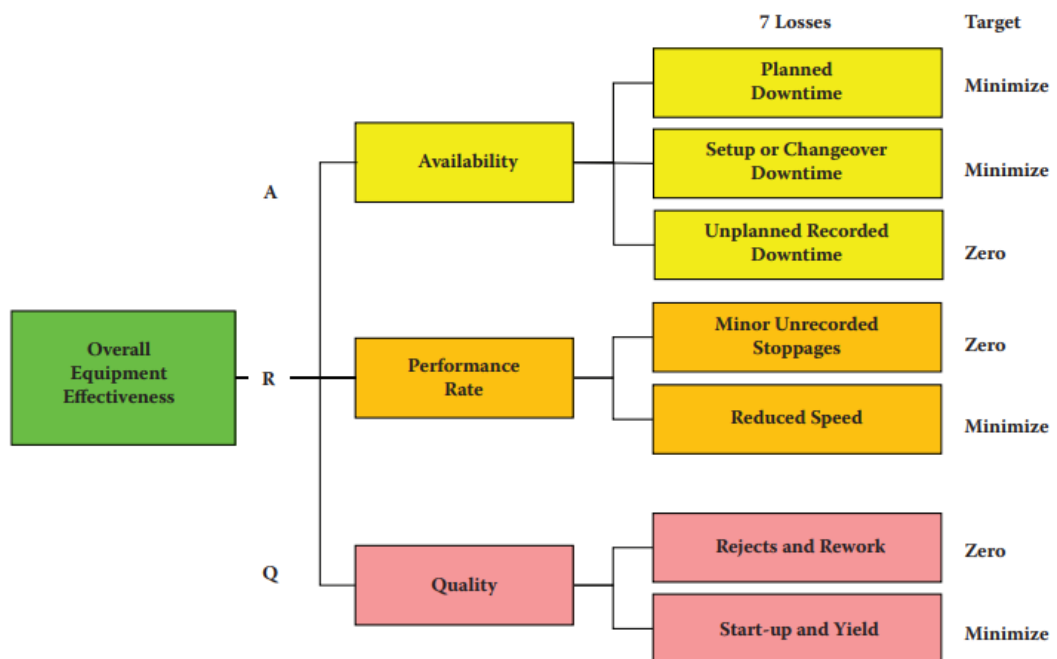


Fig. 10 - OEE calculation (Kennedy, 2017, p. 3)

OEE as well as TEEP -Total effective equipment performance- measures the gap between the ideal and the real state of equipment performance. TEEP measures how well an organization is creating value from its facilities through efficient utilization based on availability 24 hours a day, 365 days a year. (Gulati a Smith, 2009, p. 183)

$$TEEP = utilization\ rate * OEE \quad (11)$$

$$Utilization = \frac{expected\ production\ time}{asset/system\ time} \quad (12)$$

2.4.2 Sustainability indicators

It is important for the company that the indicators are comprehensive. In addition to incremental resources, there is also a demand for sustainable indicators that serve the greater good. Such an indicator can be the measurement of CO₂, pollution or product recyclability. (Linhart, 2021, p. 45).

The European Union has set the objectives and strategy for the Energy Union (2015), which, together with the Energy Union Governance Regulation (EU) 2018/1999, defines the dimensions of EU energy policy. One of the paths that these regulations set is the diversification of energy sources into groups such as fossil, nuclear and renewable. Furthermore, the European Union has committed itself to the transition to a low-carbon economy in line with the commitments set out in the Paris Agreement. (EUR-Lex, 2023).

Strategic sustainability plans and indicators are being developed at the European Union level, but also elsewhere in the world. As with the development of technology, it is essential in these areas to keep up with competition, but also with demand-customers who are also becoming wary of sustainability.

One of the benchmarks should certainly be an indicator that takes into account the share of renewables in the company's total energy consumption.

$$Percentage\ of\ green\ energy = \frac{renewable\ energy}{total\ consumption\ of\ energy} \quad (13)$$

In order to reach at least the Czech average, a company should use at least 15% of renewable resources. The average in the European Union is 17%. (Krause, 2019, p. 59;96).

An article by the Czech Statistical Office "The Czech Republic is among the European leaders in recycling plastic packaging" states that 59% of plastic packaging was recycled in 2017. Why is it important to take recycling into account in company indicators? In its sustainability plans, the European Union commits to achieving a 90% collection rate of

plastic materials for recycling and banning the use of microplastics by 2030. All plastics manufacturers should consider their long-term production strategy.

Krause (2019, p. 94-95) adds that the strategy of increasing the recyclability of packaging in food production is also outlined. An indicator that takes this into account can not only be beneficial for the company, but also for its presentation as a sustainable producer.

2.5 HR and people KPIs

2.5.1 Recruitment success and employer brand

Recruitment can also be seen as a kind of investment into the success of a company. According to Bernard Marr (2018, p. 119), there are three key aspects of intelligent, data-driven recruitment:

- boosting your employer brand
- identifying the best recruitment channels
- identifying and assessing the most suitable people for your organization

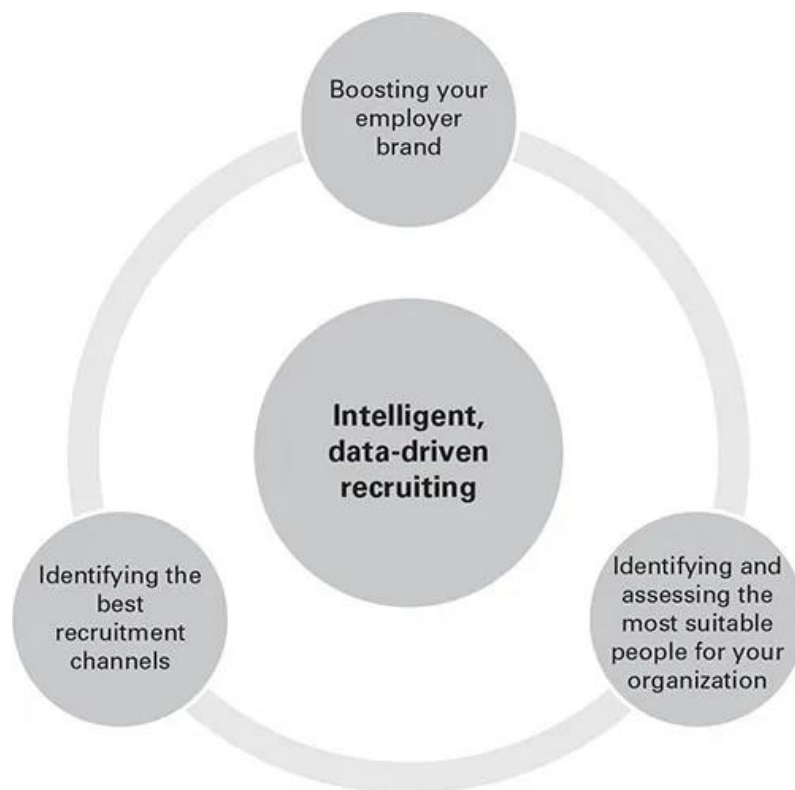


Fig. 11 – Intelligent, data-driven recruitment (Marr, 2018, p. 119)

Employer brand is the view of employees - whether current, former or potential employees - on how they perceive the company as an employer. Employer brand is part of the company's

branding and increases its value as well. The ethos of the whole company should be consistent. Nowadays, new employees choose their employers more carefully than before. Therefore, the main aspect may not only be the amount of salary and bonuses, but also the reputation of the company. The employer brand should also take into account what their target group of employees is in general.

To measure employer brand, a modified NPS can also be used as well as to measure employee satisfaction, see 2.3.1 *Net Promoter Score (NPS)*. The NPS can be based on a single question: would you recommend the company as a good employer? The simplest option offered is to do this survey among current employees. It can be weekly, monthly or quarterly, but to have honest results it needs to be anonymous. Social sites such as Glassdoor, based on employee reviews, can also serve this purpose, especially for leaving employees who can provide valuable information. (Marr, 2018, p. 119-122).

As already mentioned, setting the target group is important. Where are these people located? ROI-Return on Investment- is used to find the right best recruitment channel.

$$ROI = \frac{\text{Net return}}{\text{Cost of investment}} \quad (14)$$

As already mentioned, recruitment can be seen as a kind of investment and there are also costs associated with it, such as wages, which are affected by time, or the costs associated with placing advertisements. The moment a given recruitment channel does not bring quality candidates, its use will be reduced. (Marr, 2018, p. 123-126; Pavelková and Knápková, 2012, p. 24).

Data and any analysis also help to select the right candidate. (Marr, 2018, p. 134).

2.5.2 Safety and Health

Workplace safety and injury minimisation is something that everyone, employees and employers wish for, so it is important to create rules and monitor their compliance. Security is based on data that needs to be measured. We need to measure not only their frequency, but also the reasons why they occurred. As we know from experience, machines are replacing human activity not only because of lower costs but also because of lower error rates. Due to the high probability of specific error events committed by employees, but also by ordinary people, new mechanisms have been and are continuously being developed. To increase not only the safety of work, various motion sensors have been developed, which immediately stop the machines in case of an emergency, smoke and gas detectors. With the

advent of big data and especially the Internet of Things (IoT), the world has taken this area to a whole new level. The future of workplace safety can be seen in the measurement of human values from devices similar to smartwatches. Most accidents are caused by employee negligence or inattention, shouldn't machines take responsibility for safety? However, until this situation arises there is a need for activities that are not supervised by machines to be supervised by human reason. This knowledge needs to be raised by training sessions. (Marr, 2018, p. 137-139).

2.5.3 Training hours

There are many options for employee training. One training alternative is online training, where employees can learn the information, they need and choose their own pace of learning. Others can be traditional courses. Employees and their skills are the heart of the company and need to be continuously improved, employee training also has an impact on employee satisfaction in the company. Consequently, employee training can have a direct impact on the mentioned employer brand. (Marr, 2018, p. 177-193).

2.6 Evaluation of the theoretical part

The theoretical part described enterprise performance management from the perspectives of different authors. The theoretical part is divided into two parts: performance measurement and management concepts and key performance indicators. In the first part, the basic concepts related to strategic management such as mission, vision, Balanced Scorecard or objectives were described.

The second part was designed in an unconventional way. Mostly the authors resort to a division according to traditional and non-traditional indicators. This thesis is divided according to Balanced Scorecard perspectives because it includes not only financial but also non-financial indicators. Another reason is also the good continuity with the analytical part.

The second part starts with a description of KPIs, which can be divided according to different types. In this point, there are many options how to divide KPIs. Next, the KPIs are described in greater detail and some specific KPIs are described in isolation.

In this part the theoretical knowledge has been collected and in the following part it will be used practically.

II. ANALYSIS

3. INTRODUCTION OF THE COMPANY

3.1 Basic information

The legal form of the company is a limited liability company, and its main activity is the manufacture of plastics. According to the market view, the company focuses Strategy Business A, B, C. (Internal Resources, 2022).

Tab. 4 – Basic information about company (Internal Sources, 2022)

Company	Selected Company s.r.o.
Date of foundation	1992
Legal form	Limited liability company
Subject of activity	Manufacture of plastics

3.2 Organizational structure

Stock corporation is a family business. It is one of the world's major producers of plastic and foam products. The company is composed of three operating divisions that focus on different industries in the plastics industry. Stock corporation has over 11 000 employees and are spread across 139 locations and 34 countries worldwide. Selected company is part of a limited liability company. Selected company has 4 subsidiary companies. Limited liability company, which is the parent company of selected company is located in 32 locations with 5 000 employees and out of which Selected company has its 450 employees and an average of 70 agency employees. (Internal Resources, 2022).

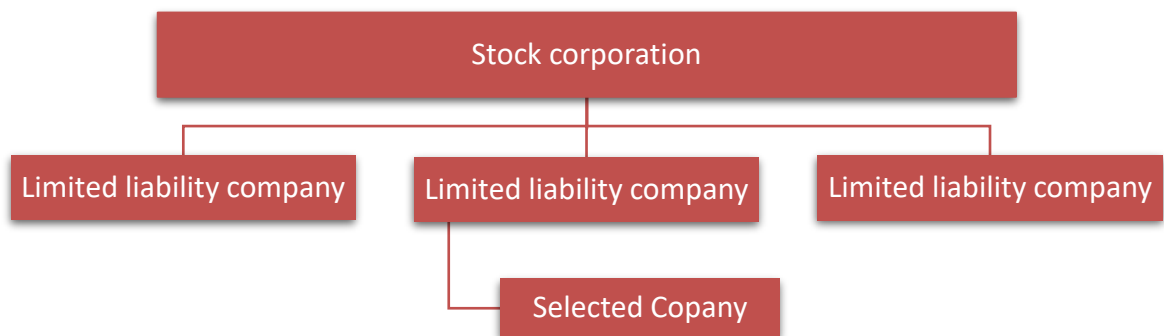


Fig. 12 - Organizational structure (Internal Resources, 2022)

3.3 Mission and vision of the company

The company's mission is a satisfied customer. They want to create added value for customers every day and enrich the everyday lives of consumers around the world, especially with their aesthetic, practical and sustainable plastic solutions. With the help of an innovative and diverse range of technologies, excellent know-how and employee commitment, they shape the industry and constantly move forward. (Internal sources, 2022).

The vision is to remain a profitable company that contributes to the value of the entire group. To build long-term relationships with our business partners and to act in accordance with the principles of social, environmental and economic sustainability. To continuously improve working practices and processes, therefore minimising waste and creating added value for their customers. Form a team of highly skilled, loyal and motivated employees. (Internal sources, 2022).

4. ANALYSIS OF THE CURRENT STATE OF USE OF STRATEGY AND KPIS

This particular analysis is based on the decomposition of the whole into elementary parts, in our case the current situation of the KPIs. The aim of the analysis is to identify the essential and necessary properties of the elementary parts of the whole, and to understand their nature and regularities. To describe the current state of KPIs, it is essential to include related information that influences their existence or even causes their emergence.

This chapter includes KPIs, descriptions of objectives and strategic processes in order to obtain a comprehensive picture of the current management of KPIs and the way in which they are linked to financial strategic objectives.

4.1 The principle of strategy development

Strategic objectives are defined for a strategic period (usually 3 years) during a strategic workshop (SWS). At the SWS, the goal is also assigned a goal guarantor who is responsible for the subsequent decomposition of the goal. By decomposition is meant the organisation of a Workshop on Goals (WSC), where key areas of implementation are defined for the strategic goal, which then consist of independent or interdependent activities, the implementation of which will lead to the fulfilment of the key area and thus contribute to the fulfilment of the strategic goal and the strategy itself. The activities are again assigned an activity guarantor, for whom the activity becomes a task, whose responsibility is to complete the task within a given timeframe, either by himself or by delegation. Clarification of the activity guarantors, the priorities of each activity must be done in the last month of the year. It is necessary to have the priorities and responsibilities allocated before the start of the annual discussions.

The deadlines for the implementation of individual activities can be set within the horizon of the relevance of the strategic objective (maximum 3 years), but always in agreement with the guarantor of the objective and with an effort to implement everything in the next twelve months if the nature of the task allows it.

The tasks assigned to individual employees within the strategic process are also communicated to their direct supervisors via the goal management tool (currently SharePoint). In the case of a major task of a larger scale, it is advisable to include this as part of their annual objectives and thus the level of completion as one of the parameters of the

annual staff appraisal. The strategic objectives, key areas and individual activities, including sponsors, are currently available here: *Error! Reference source not found. Error! Reference source not found.*

The objective guarantor coordinates and controls the implementation of individual activities falling under the strategic objective and in the event of a threat to the achievement of the objective due to the non-implementation of an activity according to the plan, reports on these threats at the designated regular strategic management meeting, which is usually held once a month. At this meeting, it may be decided to change the activity, both in terms of content and timing. Here the guarantor of the objective may also request the assistance of the lead guarantor of the activity to ensure that the activity is implemented as planned. The objective guarantor is also responsible for the design of the KPIs associated with the objective and for the successful implementation of the strategic objective.

The logic of reporting and coordination of activities under each strategic objective is outlined below.

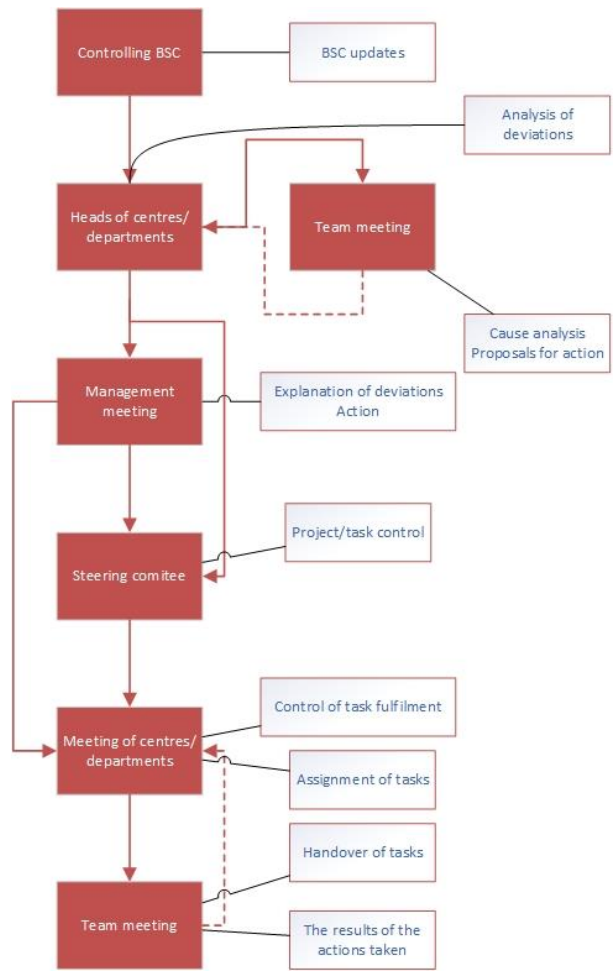


Fig. 13 - The course of the month from the perspectives of different levels of management (Internal resources, 2023)

The successful completion of the activity/task is the responsibility of the activity guarantor. The activity guarantor also keeps track of the level of completion of the activity in a dedicated tool, currently 5.2Error! Reference source not found.. By completion level overview we mean in particular status updates, % status, start and end dates and notes (comments on completion).

Tab. 5 - Types of activity statuses (Internal resources, 2023)

Status	Not started	In progress	Completed	Deferred	Pending

4.2 Definition of objectives and KPIs related to Balanced Scorecard

The company has 26 active strategic objectives which are divided according to the four Balanced Scorecard perspectives. All these targets are set for 2025. They are made for three years in advance during Strategy Workshop (SWS), which is every year. The objectives themselves are accompanied by a guarantor and activities are related to the objective. The

SWS needs to take place at the end of the year so that each guarantor knows what they are responsible for.

In Fig. 14 we can see the Strategy Map, which is a one page strategy. It is therefore a comprehensive view of the company-wide strategic objectives as well as a view of the company from four perspectives. The targets are divided by color. The blue strategic objectives belong to the financial perspective, orange to the customer perspective, yellow to the internal process perspective and green to the learning and people development perspective. The strategic map is linked by arrows to indicate the interconnectedness and coherence between the strategic objectives. The Strategic Map is revised annually to reflect the current situation. The last strategic objectives meeting was held in late 2022/2023.

Each of the strategic objectives is assigned at least one KPI and a desired target value in the future. The strategic objectives have designated guarantors. The guarantors are usually members of the company's management who regularly report on the progress and status of tasks to support the achievement of the company's objectives.

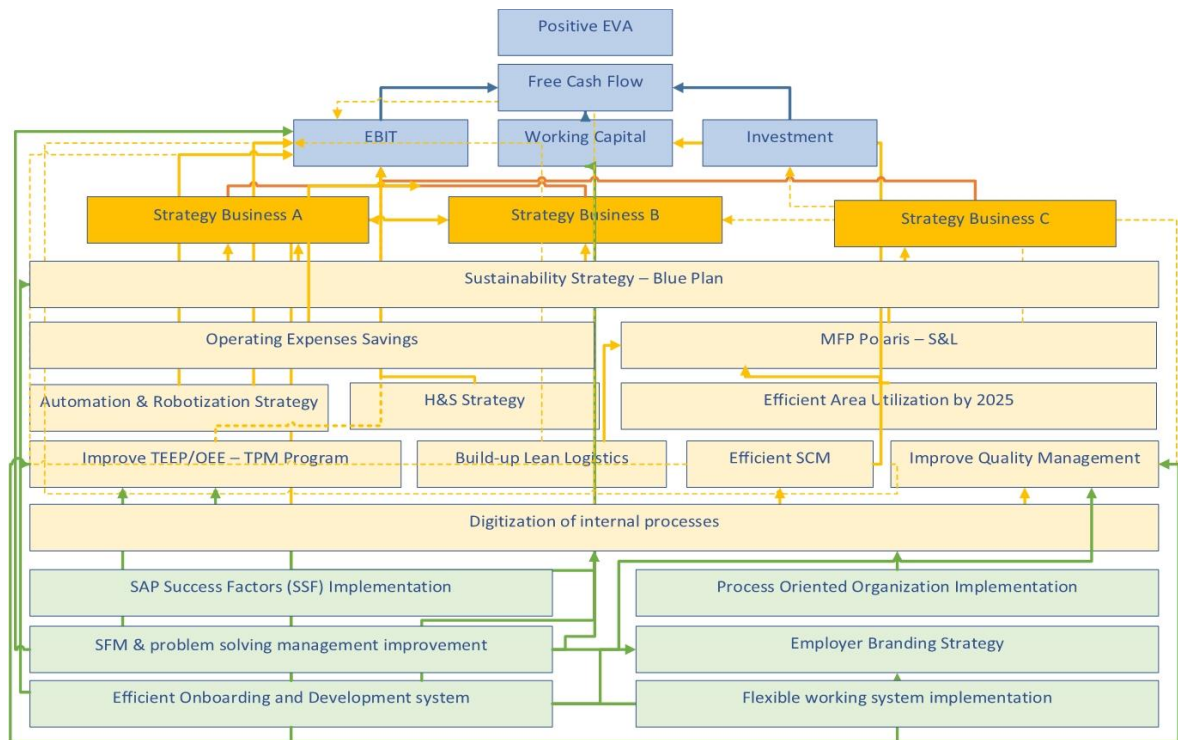


Fig. 14 – Strategy map (internal resources)

4.2.1 Strategic objectives for the financial perspective

Based on SMYP and budget, the financial outlook includes key financial targets to meet the group's business expectations. The SMYP is a three-year financial performance plan and budget for the coming year.

The main financial objective is to have *positive EVA*. In numbers it means to have more than 22.5 million EUR in cumulative value for 2022 to 2025. This indicator focuses not only on accounting profit but primarily on economic profit. A positive result of economic added value is taken as the result of a prosperous and efficiently managed enterprise. Therefore, it can be confidently described as an overall financial key performance indicator, some authors as Parmenter can also use name KRIs. The disadvantage of EVA is that it is calculated only once a year and its calculation is difficult.

Tab. 6 – Financial objective - positive EVA (Own processing)

<i>EVA</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
EVA	Economic Added Value	EAT - (I * WACC) (EUR)	22.5 mio	Annually

Free cash flow is the amount by which the enterprise's operating cash flow is greater than its WC requirements and expenditure on FA. The target value is an absolute amount expressed in millions of euros. The advantage is that it is quantified on a monthly basis because its calculation is not difficult. The FCF result can be responded to in operational steps. FCF can be qualified as overall financial KPI or KRI.

Tab. 7 – Financial objective – Free Cash Flow (Own processing)

<i>Free cash flow</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
FCF	Free Cash Flow	Revenue - Operationally necessary expenditure (EUR)	> 90 mio	Monthly

EBIT/S, also known as ROS, should be more than 18%. EBIT is one of traditional financial indicators. The advantage is that it is not affected by the method of financing and the different international conditions in taxation. For inter-company comparisons in a multinational company, it is an ideal indicator compared to, for example EAT. The

calculation is simple. Company use this ratio indicator because it helps to understand profits in context. Moreover, this indicator can be qualified as overall financial KPI or KRI.

Tab. 8 - Financial objective – EBIT/S (Own processing)

<i>EBIT/T</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
EBIT/S	Earnings Before Interest and Taxes	(Costs – revenues)/Sales (%)	18	Monthly

Operating Working Capital's target is to have less than 18,75 %. The enterprise uses OWC/S as indicator. Low OWC to sales ratio means less cash linked in operations and more liquidity. Company identifies this liquidity ratio as overall financial KPIs.

Tab. 9 – Financial objective – Working Capital (Own processing)

<i>Working Capital</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
OWC/S	Operating Working Capital	(Operating current assets - operating current liabilities)/Sales (%)	<18,75	Monthly

Financial Objective - *Investment* has 3 KPIs. The first one is *Investment* which should be less than 51 million EUR in cumulative value for 2022 to 2025. Larger investments are approved by the PC. Controlling submits IRR and NPV to support the merits of the investment. Investment is overall financial KPI and IRR and NPV can be defined as PIs, sub-financial KPI or KPIs.

Tab. 10 - Financial objective – Investment (Own processing)

<i>Investment</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Investment	Acquisition of new assets (machinery, infrastructure, buildings)	Sum of all investments - the value of assets sold – subsidies (EUR)	51 mio	Monthly
IRR	Internal Rate of Return	$0 = CF / (IRR + 1)^t$ (%)	the higher the better	Irregularly
NPV	Net Present Value	(CF of a given year / (1 + interest rate) for the intended term of	the higher the better	Irregularly

		the investment)- I (CZK/EUR)		
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Overall financial indicators and targets are the most important KPIs. Their results are linked to company’s financial health. IRR and NPV are sub-financial KPIs. They support decision-making, which means that if they are not profitable, investments will not be made. However, their outcome does not directly affect the health of the company.

4.2.2 Strategic objectives focused on the customer perspective

Customer perspective contains strategic objectives relating to the market, customers, products and added value for the customer.

Strategy Business A is trying to increase sales. *A Business* has large customers. *Strategy Business B* is focused on smaller customers and the sale of, for example, packaging for ready meals. *Strategy Business C* is separated because it is a different production technology than the previous two.

Strategy Business A, B, C is the market view used for the strategy map and there are also defined activities for them. However, KPIs are according to the product view. There is no prepared system for everything to be in market view.

Tab. 11 – Sales strategy by product group (Own processing)

<i>Sales strategy for customer perspective</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Gross Sales PG 1.1	Selling price multiplied by the number of units sold	p*q (EUR)	47.85 mio	Monthly
Gross Sales PG 1.2	Selling price multiplied by the number of units sold	p*q (EUR)	15.3 mio	Monthly
Gross Sales PG 1.3	Selling price multiplied by the number of units sold	p*q (EUR)	32.25 mio	Monthly
Gross Sales PG 1.4	Selling price multiplied by the number of units sold	p*q (EUR)	16.05 mio	Monthly
Gross Sales PG 1.5	Selling price multiplied by the number of units sold	p*q (EUR)	38.85 mio	Monthly
Other Gross Sales	Selling price multiplied by the number of units sold	p*q (EUR)	6.75 mio	Monthly

4.2.3 Strategic objectives focused on the internal process perspective

The internal process perspective identifies strategic objectives within the organisation that relate to company processes, work organisation, technology, production facilities, production quality and production efficiency.

Sustainability Strategy – Blue plan is the name of our sustainability strategy applied throughout company. Their non-financial KPI is use of renewable energy sources which stands on contracts with energy suppliers. Hence, this KPI is the easiest to manage.

The second KPI is CO₂ emissions. Results may be inaccurate here because this KPI is the hardest to measure.

Recyclability of products - recyclability profile shows how much of our product portfolio is recyclable. The target is given to the highest possible position – 100%.

The company also use PCR material for creating new products. The aim is 30%.

Tab. 12 – Sustainability Strategy and its KPIs (Own processing)

<i>Sustainability Strategy</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Use of renewable energy sources	This is the share of electricity consumption from renewable sources in total electricity consumption	Renewables/total sources (%)	80	Annually
CO₂ emissions	Reduction of CO ₂ emissions	Current CO ₂ emissions/ benchmark year 2021 (%)	<40	Annually
Recyclability of products	Recyclability profile shows how much of our product portfolio is recyclable	Recyclable products/total number of products (%)	100	Annually
PCR material	Use of post-consumer recycle	Recycled material /Total Material (%)	30	Annually

Operational Expenses Savings are related to the new market conditions for energy and materials. The aim is to build up a reserve in case the prices of these commodities rise sharply again. The company wants to make internal cost savings of EUR 1.5 million. This is not meant to be an inflation saving; inflation is dealt with by changing prices in agreements with suppliers and customers. The savings in operating expenses are aimed at reorganizing processes and teams.

Tab. 13 - Operational Expenses Savings and its KPIs (Own processing)

<i>Operational Expenses Savings</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Operational savings	Internal costs savings	Sums of savings (EUR)	1.5 mio	Yearly

Polaris – P.G. 1.2. The aim of the project is to optimize the manufacturing footprint and to answer questions such as why do we have this number of factories and machines? Is the machine utilization high enough? Polaris is a sub-project dealing with the transfer of unspecified technology from all over Europe to our company.

Polaris – P.G. 1.2 has two non-financial KPIs: Number of P.G. 1.2 units sold and CMII P.G. 1.2. Optimisation of P.G. 1.2 sales and production is linked to these two KPIs. To be labelled "optimal" the company needs to have 1.5 billion pieces yearly and more than 35% CMII P.G. 1.2/S ration. The number of P.G. 1.2 is in accordance with the Polaris project plan.

Tab. 14 -Polaris- P.G. 1.2 and its KPIS (Own processing)

<i>Polaris – P.G. 1.2</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Number of P.G. 1.2 units sold	Number of P.G. 1.2 sold for the period	the sum of all P.G. 1.2 sold (pcs)	1.5 billion	Yearly
CMII P.G. 1.2 /S	Contribution margin of the second level in relation to sales. Costs include all material costs and production costs.	(Selling price - Total production costs (Material costs + production costs))/Sales (%)	>35	Monthly

Automation & Robotization Strategy helps to reduce salary costs and modernization which is important for the company's future market position. Non-financial KPI includes S/FTE, represented in EUR/FTE. Target value is more than 230 TEUR.

Tab. 15 - Automation & Robotization Strategy and its KPIs (Own processing)

<i>Automation & Robotization Strategy</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
S/FTE	Sales/FTE (Full Time Equivalent = sum of individual working hours) FTE - considers the working time of individual employees incl. Long-term sickness	S/FTE (EUR/FTE)	> 230	Yearly

Efficient Area Utilization by 2025 - this objective relates to the specific area from which production has moved and a use is being sought. Target is more than 350 TEUR.

Tab. 16 - Efficient Area Utilization by 2025 and its KPIs (Own processing)

<i>Efficient Area Utilization by 2025</i>				
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Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Annual revenue/savings from space usage	Income from the use of premises	Sum of revenues (EUR)	> 350 TEUR	Yearly

Improve TEEP/OEE - TPM Program - TPM stands for Totally Efficient Maintenance - Production with reliable and affordable machines. The aim is to ensure production where there are no unplanned events related to, for example, maintenance or machine downtime.

TM Program has two KPIs – TEEP and OEE. OEE is further subdivided into individual subspecies according to their components, specifically into 5. These subcategories are also evaluated daily. OEE is directly influenced mainly by machine operation and planning. OEE is part of the TEEP calculation. TEEP is directly influenced mainly by the shift model and management decisions. TEEP is one of the most important KPI because it affects the company's market potential. If the company's TEEP is too high, it is no longer able to take on new large orders with the current number of machines. If it is too low, it may indicate that the enterprise is unable to compete and therefore has few orders. They can be qualified as non-financial KPIs.

Tab. 17 - Improve TEEP/OEE-TPM Program and its KPIs (Own processing)

<i>Improve TEEP/OEE - TPM Program</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
TEEP	Total Effective Equipment Performance	OEE* availability (%)	>70	Daily
OEE	Overall Equipment Effectiveness	Availability*performance*quality (%)	>80	Daily

Build-up Lean Logistics is an objective that is meant to create logistics processes with fewer people. It is measured by indirect FTE/sold pallets. The disadvantage of this KPI is that indirect FTE is evaluated unregularly and pallets shipped are recorded weekly, so the frequency of obtaining information to evaluate the indicator is inconsistent. Measurement of frequency is yearly. This KPI is also inaccurate because each pallet may contain a different quantity of sold goods. It depends on whether it is the whole product or just the intermediate product sold. The result is that prices of individual pallets also vary. Two variables are measured - the number of indirect FTEs, which will not change much during the year, as well as their valuation, and the number of pallets, which no longer have such a clear definition. This is a non-financial KPI.

Tab. 18 - Build-up Lean Logistics and its KPIs (Own processing)

<i>Build-up Lean Logistics</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Indirect FTE/sold pallets	All employees excluding machine operators and adjusters/pallets sold	Indirect FTE/sold pallets (%)	0,13	Yearly

Another target is *efficient SCM* – Supply chain management. The goal is functional chain from order to customer.

OTIF means measuring the reliability of deliveries to our customers in the required time and quantity / number of deliveries in a given quantity and time, or On Time in Full. OTIF is measured monthly and the goal is to have 100% reliability. However, this is not realistic, which is why the company has set a target of 93% success or more. When the result differs significantly, the cause and its corrective measures are identified.

DIO also called inventory turnover is activity indicator. This indicator shows how many days on average company is able to consume or sell the inventory that is kept in the enterprise. This number needs to be as small as possible. At the same time, there is a risk that with a very low turnover, there may be a deficit of stock and the customer will have to wait for it, and this is something to watch out for. Otherwise, a situation may arise when extra costs for external storage are incurred, which is not welcomed either. They are non-financial KPIs.

Tab. 19 - Efficient SCM and its KPIs (Own processing)

<i>Efficient SCM</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
OTIF	On Time in Full	OK delivered/Total number of deliveries (%)	>93	Weekly
DIO	Days Inventory Outstanding	Inventories/Sales *365 (days)	<32	Monthly

The aim of *Improve Quality Management* is to maintain the highest possible quality of products and related services. This internal process perspective is focused on complaints. The company is dividing them into 3 categories: Q1 - Number of accepted customer complaints, Q2 - Claims for products purchased from the suppliers, Q3 - Number of internal complaints about poor quality products. In an ideal world, all indicators would be 0, but there is no such business. Therefore, the company decided to split the complaints and set up a system that would reduce Q1 and Q2 as much as possible, and all the differences between the contract award and the actual quantity and quality would be captured at Q3. Q2 can be

avoided by choosing the reliable suppliers and it can also affect Q1 in cases when no one notices the mistake internally. All the three KPIs are measured in pieces of complaints not in pieces of goods, so results can be misleading. Since measurement in pieces can be misleading, there is one more KPI, namely - Q1 costs/S and it is targeted at $\leq 0,16\%$. Supplier reliability is in turn measured by the number of Q2 per 1 million supplier turnover. The smaller the number, the higher the reliability of the supplier. The reasons for the complaint could also be broken down into Microbiological contamination of products and incorrect manufacturing specifications, e.g. a different colour of packaging than the customer wanted.

Tab. 20 - Improve Quality Management and its KPIs (Own processing)

<i>Improve Quality Management</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Complaints Q1 - Cost /S	Cost of customer complaints to sales	(Cost of complaints Q1 / Sales) (%)	$\leq 0,16$	Monthly
Complaints Q1 - number of open and closed	Number of accepted customer complaints	Sum of open and closed complaints (pcs)	Reduction	Weekly/monthly
Complaints Q2 - number of open and closed	Claims for products purchased from our suppliers	Sum of open and closed complaints (pcs)	Reduction	Weekly/monthly
Complaints Q3 - number of open and closed	Number of internal complaints about poor quality products	Sum of open and closed complaints (pcs)	Increase	Weekly/monthly
Complaints - number of Q2 per 1 million supplier turnover	Evaluation of the number of complaints for comparable purchase turnover	Sum of complaints and number of notifications/turnarounds of the supplier in million CZK * million CZK (Number of complaints per 1 million CZK of supplier invoices received)	0,12	Yearly

The purpose of *Digitalization of internal processes* is to keep administrative processes efficient. The only KPI related to digitalization is Overheads excluding transport and sales commission/COGM evaluated yearly. The target of this KPI is reduction of overheads costs in relation to Cost of Goods Manufactured under 12%. Digitalization is reported yearly.

Tab. 21 - Digitalization of internal processes and its KPIs (Own processing)

<i>Digitalization of internal processes</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency

Overheads excluding transport and sales commission/COGM	The ratio of overhead costs to total production costs. The purpose is to keep administrative processes efficient.	Overheads excluding transport costs and sales commission/production costs (%)	<12	Yearly
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H&S Strategy (Health & Security) - The OSH strategy is based on the "Zero Accidents" strategy. Part of the activities to achieve this goal is the systematic improvement of workplace ergonomics. OSH – express the number of serious injuries evaluate situations that have already happened. The target value is on 6 and less people in year. Measurement of frequency is set on a monthly base because the company knows well that corrective action must be set immediately.

There is also a KPI which also evaluates preventive steps such as practical training in emergency situations. The target number is 5x a year.

Tab. 22 - *H&S Strategy (Health & Security) and its KPIs (Own processing)*

<i>H&S Strategy (Health & Security)</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
OSH - number of serious injuries	Injuries associated with incapacity for work	Sum of current serious injuries (number of people yearly)	<6	Monthly
Practical training in emergency situations	Increasing emergency response to unexpected situations through practical training	Sums of practical training in emergency situations	5	Yearly

4.2.4 Strategic objectives focusing on a learning and people development perspective

Learning and people development perspective summarizes the strategic objectives in terms of the development of the organization, the development of teams and the provision of the necessary human resources with the required qualifications and approach to work.

One of the six strategic objectives is *SAP Success Factors (SSF) Implementation*. HR software SAP Success Factors (SSF) is a holding project that is being actively implemented in the plans in 2023. This software can change workflows and processes in the company, affecting all employees, which is why it is included in the strategic objectives for the following period. The disadvantage of this objective is that it is enterprise-wide: it applies to this company as well as to other SCs and PCs. The company has postponed this goal because

not everyone is ready to use the new system. Since synchronization is currently in progress, this target has no KPI.

Tab. 23 - SAP Success Factors (SSF) Implementation and its KPIs (Own processing)

<i>SAP Success Factors (SSF) Implementation</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Based on the capacity of the equipment		(%)	100	

Process Oriented Organization Implementation - the strategic goal of implementing a process-driven organization is based on descriptions of key processes in the company using the SIPOC method as described in the chapter 5.1

. The basic division of these processes is as follows: Management processes (financial, strategic, operational management), Core processes (Customer Relationship Management, Supply Chain Management, Product Lifecycle Management), Supporting processes (other). SIPOC management processes is created and described in this master’s thesis and it will be internally accessible.

This objective has KPI - number of created and used SIPOCs – described processes. This goal is set so that the organisation has all the processes described and given so everyone is able to follow them and apply them correctly and consistently.

Tab. 24 - Process Oriented Organization Implementation and its KPIs (Own processing)

<i>Process Oriented Organization Implementation</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Number of defined processes	Number of defined processes	Defined processes/All processes (%)	100	Yearly

SFM & problem-solving management improvement - the strategic objective Improve operational management responds to the need for a consistent and timely response to deviations from the plan, including the necessary traceability and traceability of tasks. This target is outlined in the proposal Fig. 16. The aim is to set up this process and possible standardized steps.

Tab. 25 - SFM & problem-solving management improvement and its KPIs (Own processing)

<i>SFM & problem-solving management improvement</i>				
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Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Active deviation management	Active deviation management implemented in all levels	Active deviation management/Total deviation management (%)	100 %	Yearly

Employer Branding Strategy has KPI High quality applicants per position, Way how to measure that is not easy but way how to influence it is that complicated. The company is currently looking for ways - various activities to achieve it and increase the company's value on the labour market. The aim is to increase or at least maintain the current position.

Tab. 26 - Greiner Employer Branding Strategy and its KPIs (Own processing)

<i>Greiner Employer Branding Strategy</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
High quality applicants per position	High quality applicants per position	High quality applicants per position/ Total applicants per position (%)	Increase	Yearly

Efficient Onboarding and Development system is focus on Talent Management. Talent Management is used to attract and retain employees in the most productive way possible while keeping fluctuation low. The company strives to achieve the goal of low fluctuation and high employee satisfaction through targeted development. The set number of hours is 16 in one year. Objective is to have more of internal trainings than training courses.

Tab. 27 - Efficient Onboarding and Development system and its KPIs (Own processing)

<i>Efficient Onboarding and Development system</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Time of internal training/training hours	Evaluation of the amount of training hours	Sum of internal training/training courses hours (h)	16	Yearly

Flexible working system implementation should ensure both quality of recruitment and machine utilization. Quality of recruitment should be growing. Quality recruitment methods are essential to ensure a wide selection of employees. Quality recruitment includes quality employees who will stay in the company for a long time. It is also important to be able to work flexibly with the number of employees so that there are enough, but not too many. TEEP is more focused on machines. Total Effective Equipment Performance is based on the capacity of the equipment, see 4.2.3 *Strategic objectives focused on the internal process perspective.*

Tab. 28 - Flexible working system implementation and its KPIs (Own processing)

<i>Flexible working system implementation</i>				
Name of KPI	Meaning of the KPI	Calculation	Target value	Measurement frequency
Quality of recruitment	Quality of recruitment	Sum of recruitment quality values/total number of recruitments (numerical value)	Growing	Yearly
TEEP	Total Effective Equipment Performance	OEE* availability (%)	>70	Daily

4.3 Evaluation of the current situation

The analytical part of this thesis was focused on the description of the current situation in society. What should be highlighted about the current situation?

- The company has a clearly developed strategy of KPIs not only informatively but also visually. A well and clearly developed strategy map is one of the keys to successful long-term management of the company.
- The KPIs themselves. It is obvious that the company is actively trying to measure what it can to avoid falling behind the competition.
- Witness the countless projects that are trying to reduce the impact of business on the planet, among other things.

The company itself was characterized, the principle of strategic development was described and the definition of objectives linked to the Balanced Scorecard along with the definition of KPIs.

The description of the organizational process is part of one of the objectives of the company's strategy, which was developed in the framework of this thesis. The description is mainly aimed at clarity of the process. Within the description of the organizational process, the function of the database has been outlined, which is part of the objectives of this thesis and will be developed as part of the management design. What is the focus of the project?

- One of the shortcomings of the management of KPIs in the selected company is the absence of a comprehensive overview that would be available to all employees in one place. It is difficult for a new employee, as well as the permanent ones, to navigate the

objectives and KPIs. The information is in different places and working independently and navigating the data is difficult. Therefore, it would be a good idea to link the individual KPIs to the goals and the necessary information and group everything in one place, as outlined in the previous section of the paper.

- Another shortcoming of the management is that despite the resulting database, the company could also use a link between the individual KPIs. So that the management could be more comprehensive and more telling.
- The description of the organizational process is part of one of the objectives of the company's strategy. Transparent strategic management processes can be way how to effectively manage company, its objectives and KPIs. The description is mainly aimed at clarity of the process. Within the description of the organizational process, the function of the database can be outlined, which is also part of the objectives of this proposal and will be developed as part of the management design.

The following part will focus on the weaknesses of the current situation. Areas for improvement are indicated in the following figure by arrows.

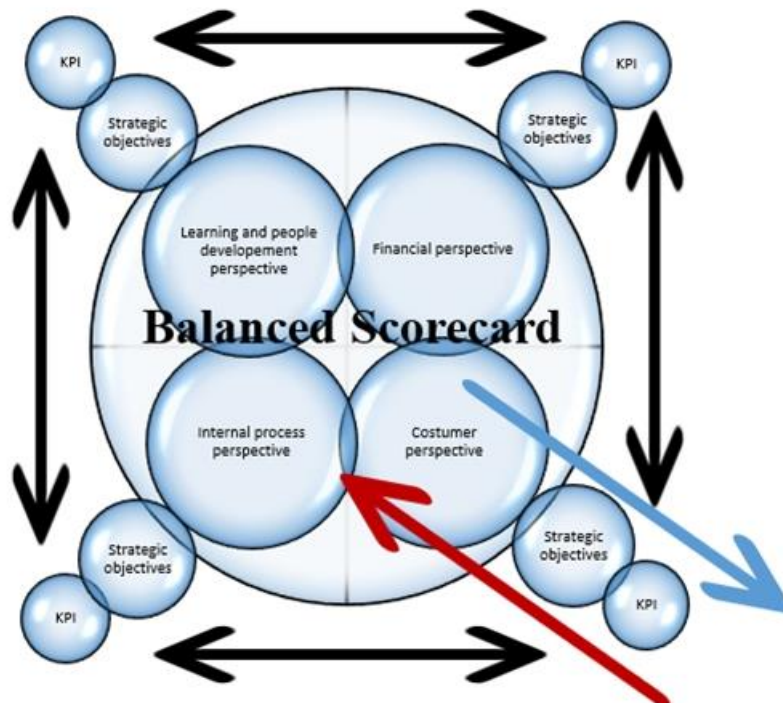


Fig. 15 - Objectives of the proposal (Own processing)

5. THE PROPOSAL OF KEY PERFORMANCE INDICATORS MANAGEMENT TO ACHIEVE THE DEFINED FINANCIAL OBJECTIVES

5.1 Organizational process

In this chapter, the potential of SIPOC diagram and RACI matrix is used to describe the strategic processes in the company. The visual form is processed using Microsoft Visio. When creating a visualized description of the company's processes, the following question was asked at the outset: If there is no such thing as strategic management in the company - where do we need to start first? What would be the first step?

Seven processes were selected in turn. In the literature, it can be found that processes should be selected according to their importance, the recommended value is number six. Other sources consider 5-8, see 1.6 SIPOC. This instruction was considered, and all seven processes were found to be essential and irreplaceable.

In Fig. 16 the following processes can be seen: definition of mission, vision and corporate values, strategic analysis, creating a strategy map according to Balanced scorecard, reporting on the achievement of strategic objectives, response to deviations from plans, and update of the medium-term objectives and revision of the strategy.

Definition of mission, as well as vision and corporate values were selected as the first step that the company should make. In this case, the company cannot make its own new ideas, as its values should be in accordance with the values of the parent company. Its outputs include set missions and visions for the subsidiary company. They can be presented in company on SharePoint, see 5.2 **Error! Reference source not found.** RACI matrix is extended supplier and customer substitution. The process also has a label: the company's mission statement answers the question of what is the purpose of the company's existence. The company's vision represents the future state, direction and long-term goal of the company. Values represent the basic principles on which the company operates, and which are embedded in the company culture.

Strategic analysis is a necessary part of strategy formation. The precision of its execution increases our probability of success and long-term prosperity. Inputs of strategic analysis comprise competition, market and technology analysis. Output can be various. The basic outputs include competition analysis, market and environment analysis (PEST), strengths

and weaknesses analysis, and opportunities and threats analysis (SWOT). Outputs can be found in presentations and analyses in the "internal use" mode stored in PC.

The strategic map is a visual summary of the strategic objectives, which are grouped into four perspectives according to BSC:

- financial perspective objectives
- the objectives of the customer and market perspective
- internal process objectives
- learning and people growth objectives

Inputs for this process include PC strategy and strategic analysis outputs. Outputs comprise defined strategic objectives, strategic objective guarantors, and KPIs including target values. CEO and executive board level can find them in presentations.

Reporting on the achievement of strategic objectives has two basic levels:

- reporting on the achievement of indicators (KPIs)
- reporting on the performance of tasks, activities and projects supporting the achievement of strategic objectives

Sources of reporting are planned target values from previous process compared with the actual KPIs values. Thanks to this reporting the company knows whether it is fulfilling KPIs as well as strategic objectives, activities and BSC projects (Power BI + SharePoint) linked to KPIs. Finance and benchmark are visualised in XlCubed, Power BI. BSC, including KPIs, objectives and activities will be in SharePoint BSC, see 5.2 *Error! Reference source not found.*

How to respond to deviations in plans needs to be defined, in order to be incorporated as standard following changes in operating management. This process is the only one which does not have any standardised procedure. The reason for this is that it is difficult to adjust, because each deviation requires a certain degree of individual approach. To describe how the strategic management process is set up, it should be noted that the inputs are the outputs of the reports and the outputs are corrective actions, revisions of tasks and activities. The result is further reflected in BSC visualised and described in Power BI and in new created SharePoint.

The sixth process involves updating of the medium-term objectives. The short-term performance forecast FCI, FCII needs to be updated during the year and the annual performance plans BUDGET and medium-term plan SMYP need to be updated annually. Inputs comprise results of corrective actions and reporting outputs from the previous fifth process and outputs are FC 1, FC 2, SMYP in Tagetik which are visualized by XLCubed. Along with the previous data, the sixth process can be found in new company database.

The whole strategic process concludes revision of the strategy. The strategic objectives of the particular BSC perspectives must be reviewed annually to see if they are still relevant in terms of the development of the environment and the long-term vision of the company. Inputs are consist of BUDGET which contains an outlook for the year and SMYP for three years into the future. The outcome is an assessment of whether the company's vision and strategy map have been achieved. Results can be found in Tagetik visualized by XLCubed. The created visualization of the process is already published for internal users of the company. For greater clarity, it also includes explanations of abbreviations that have been used.

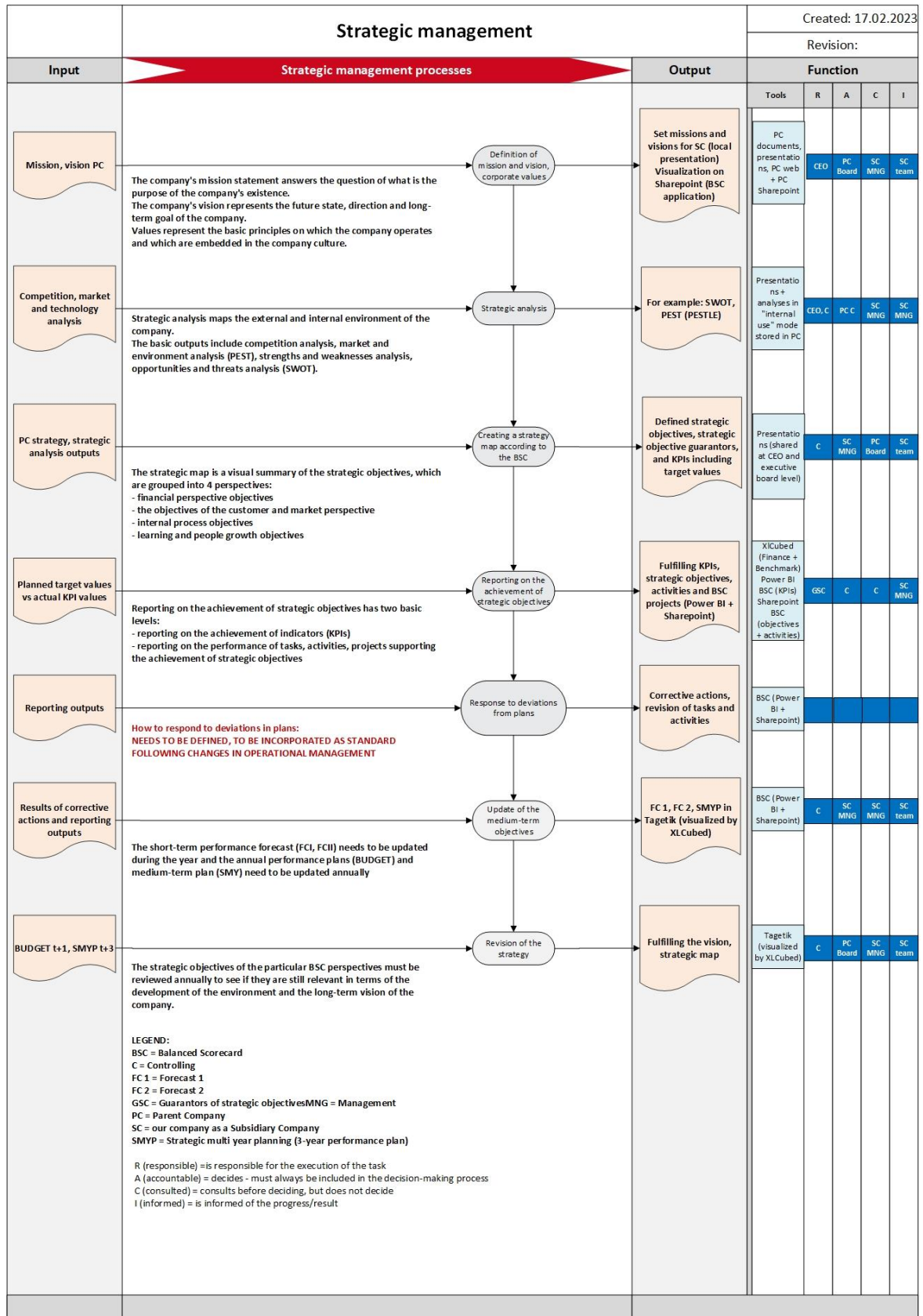


Fig. 16 – SIPOC and RACI Matrix of Strategic Management Processes (Own Processing)
 Three sub-processes - strategy map processes, the process of reporting on the achievement of objectives and plan update processes, were further selected for a comprehensive

description of the processes. All the three are considered important for a comprehensive understanding of the interdependence and development of KPIs and strategic objectives.

Strategy map processes are divided in six processes, see

Fig. 17 - SIPOC – Strategy Map Processes (Own Processing). The first one involves creating a finance perspective which should always be the first process. Finance should be a priority and well planned, because if it is not, the company will not stand in the long run even if other perspectives are better. The finance perspective is created based on PC strategy, outputs of strategic analysis, execution of strategy (reporting) and PC board expectations (finance). SMYP and budget capture the planned finances.

Creating a customer/market perspective is the second step of creating a strategic map. Inputs comprise financial strategic objectives, including planned values of KPIs, business strategy PC and outputs of market analysis. Outputs include the plan of sales and margins (CMII) by product groups for the next three years. The business strategy of the defined market segments is defined by and aligned with the PC strategy. Tools used for this process are SMYP, budget and the new customer perspective relates to the status of current strategic objectives from previous period.

The third step involves creating a perspective on the internal processes, and it is based on previous processes and outputs from WCOM audit which analyses maturity and performance scan and other internal analysis. Outputs include defined strategic objectives in the areas of process, technology and sustainability, including defined KPIs. Used tools comprise WCOM analysis SMYP, budget, status of current strategic objectives from previous period.

The last perspective deals with people perspectives – i.e. development and growth. Inputs comprise all previous prepared perspectives as well as WCOM audit outputs and internal analysis. The result consists of defined strategic people development objectives including defined KPIs. Tools include WCOM analysis and status of current strategic objectives from previous period.

It is when all the perspectives are ready that the process of linking and validating the defined strategic objectives starts. It starts with an overview of active strategic objectives and ends with visual and formal checking of whether the defined objectives of the different perspectives are interrelated. It is also important to verify that some of the objectives are not contradictory.

The breakdown of strategic objectives is created using HOSHIN. Based on data from the previous steps, this process ends with a completed strategy map. For a strategy map see 5.2 ***Error! Reference source not found.*** and individual KPIs in Power BI. Visualisation of the current strategic map is in chapter 4.2. *Definition of objectives and KPIs related to Balanced Scorecard.*

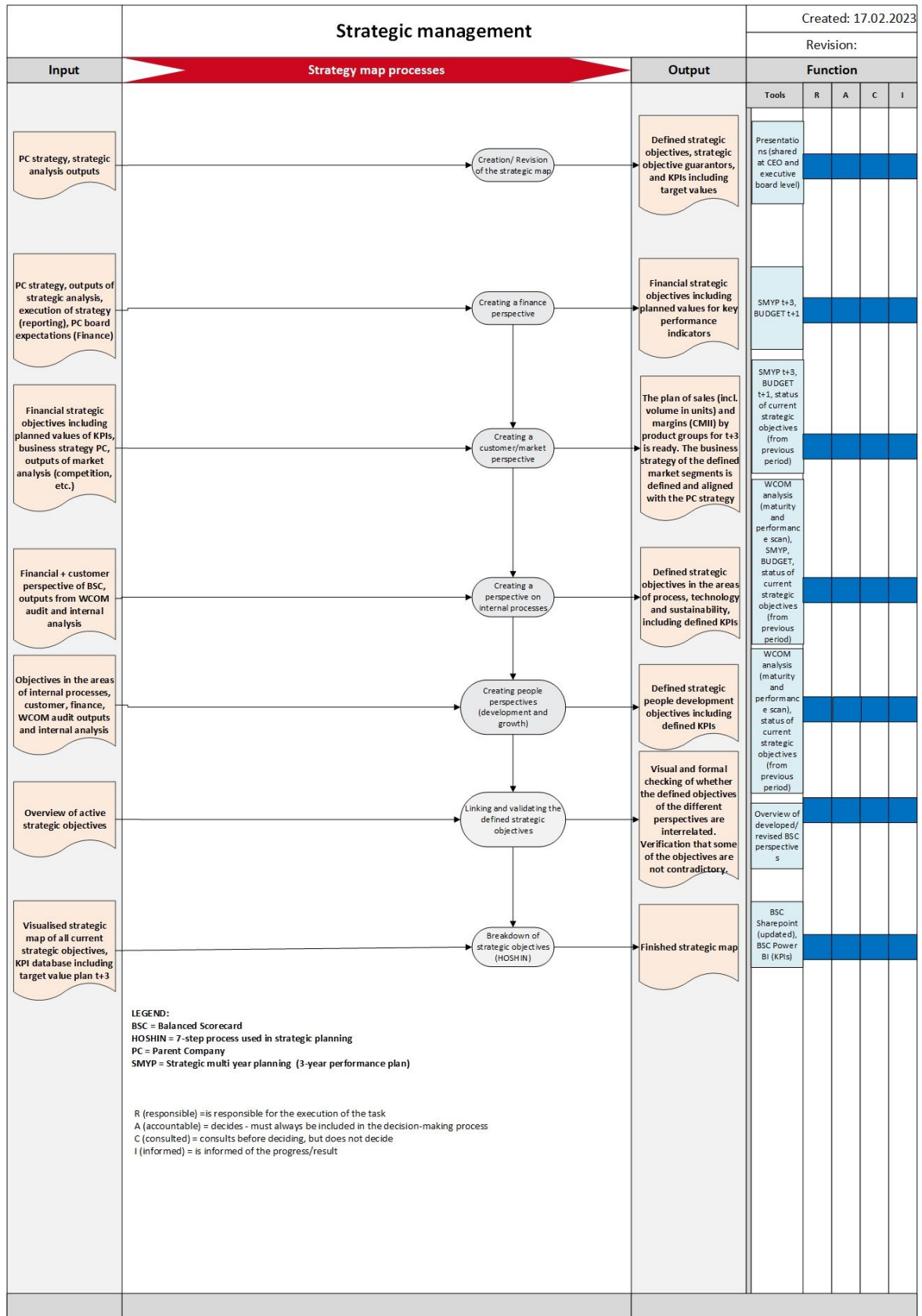


Fig. 17 - SIPOC – Strategy Map Processes (Own Processing)

Reporting on strategic objectives shows us how well we have been able to meet our planned targets. This process is divided into three sub-processes: reporting performance KPIs, reporting on the implementation of strategic tasks/projects/activities and incorporation of changes to the task/project/activity plan.

The first process starts with a monthly update of KPI values in BSC Power BI reporting. This information is used to evaluate and compare with the plan. Results are reported and commented on at the monthly management meeting. Presentations and analyses are in the internal system for PC.

Reporting on the implementation of strategic tasks/projects/activities is sourced from monthly/quarterly updates on the status of individual tasks. Outputs comprise current overview of the implementation of tasks within the strategic objectives, actualised in SharePoint BSC. As tools we have here are presentations shared at CEO and executive board level.

Incorporation of changes to the task/project/activity plan is based on the current overview of the implementation of the tasks within the strategic objectives. Last of the reporting on strategic objectives is presented in 5.2 **Error! Reference source not found.**. Data warehouse used for this process are XICubed for finance and benchmark, Power BI BSC for KPIs, SharePoint BSC for goals and activities.

Process is visualised and already used in internal system, see *Fig. 18 - SIPOC – The process of reporting on the achievement of objectives (Own Processing)Fig. 18.*

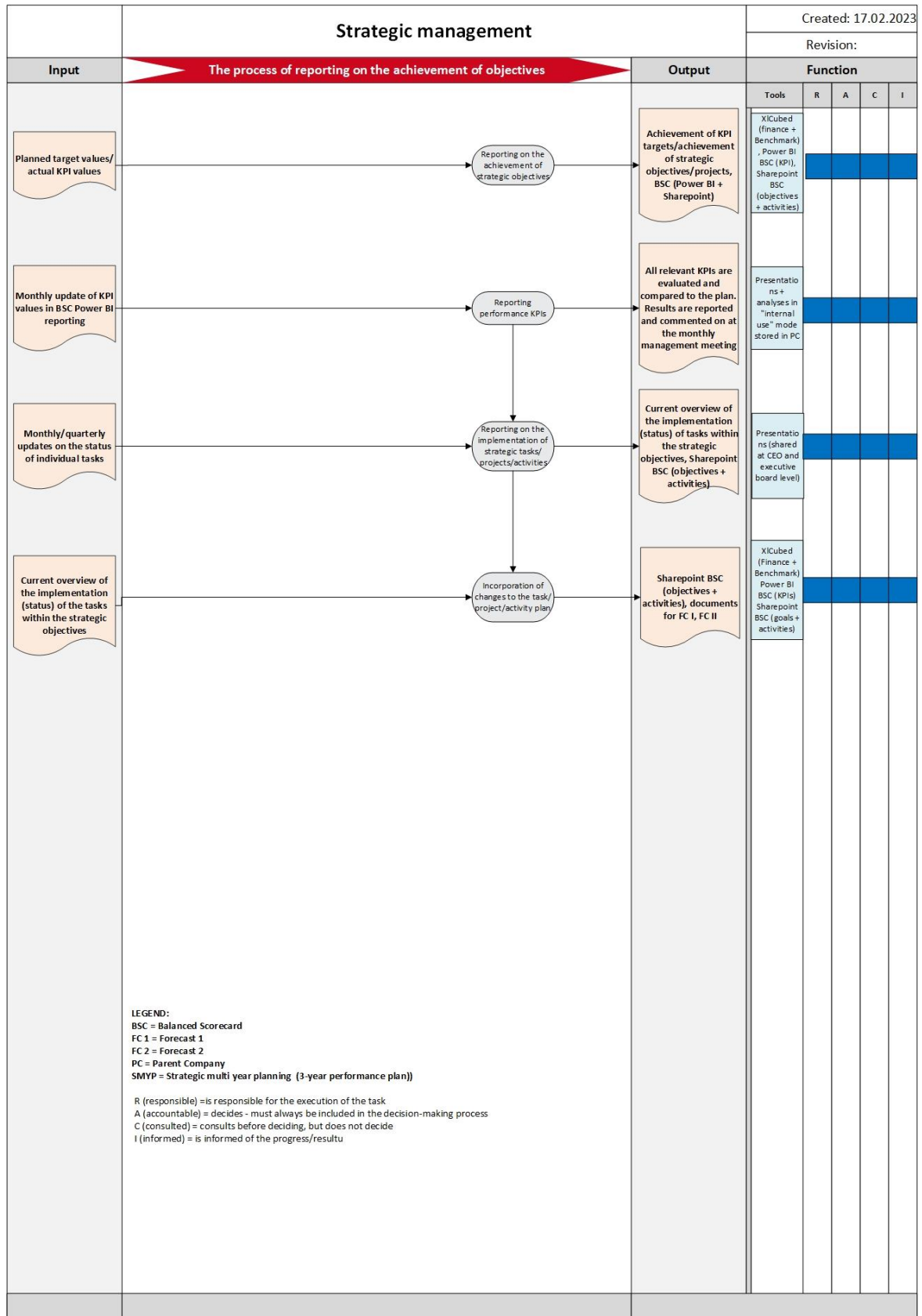


Fig. 18 - SIPOC – The process of reporting on the achievement of objectives (Own Processing)

Good planning is the cornerstone for optimal company management. It contains 9 processes.

The first process involves creating of FC I from resultants from January to April. This plan reacts to these four months and adapts to them. The outputs comprise FC I approved from PC and approved revised financial targets. It is necessary to use budget to create FC I.

Creating sales SMYP involves using FC I from previous process and it contains also new projects. SMYP is a 3-year sales plan by product group.

Once FC I and sales SMYP are created, the obtained information is used to create budget for following year.

This step is followed by a SMYP of investments which is also created in accordance with previous processes.

The SMYP of investments is followed by SMYP P&L, WC, FCF and FTE. The output consists of a finished 3-year financial performance plan.

Once the company obtains the results for August, the sixth process can begin - Creating FC II. FCII should be approved from PC and financial targets should be revised.

Last changes of sales BUDGET t+1 and submission have the following inputs: FCI Sales, new projects. At this stage, the sales plan is done and customer level is submitted.

SMYP, FC II enter the budgeting process and the result is the approved budget.

The last process is update of SMYP non-financial indicators where all previous steps are entered. KPI database is updated on BSC SharePoint, see *Fig. 19*.

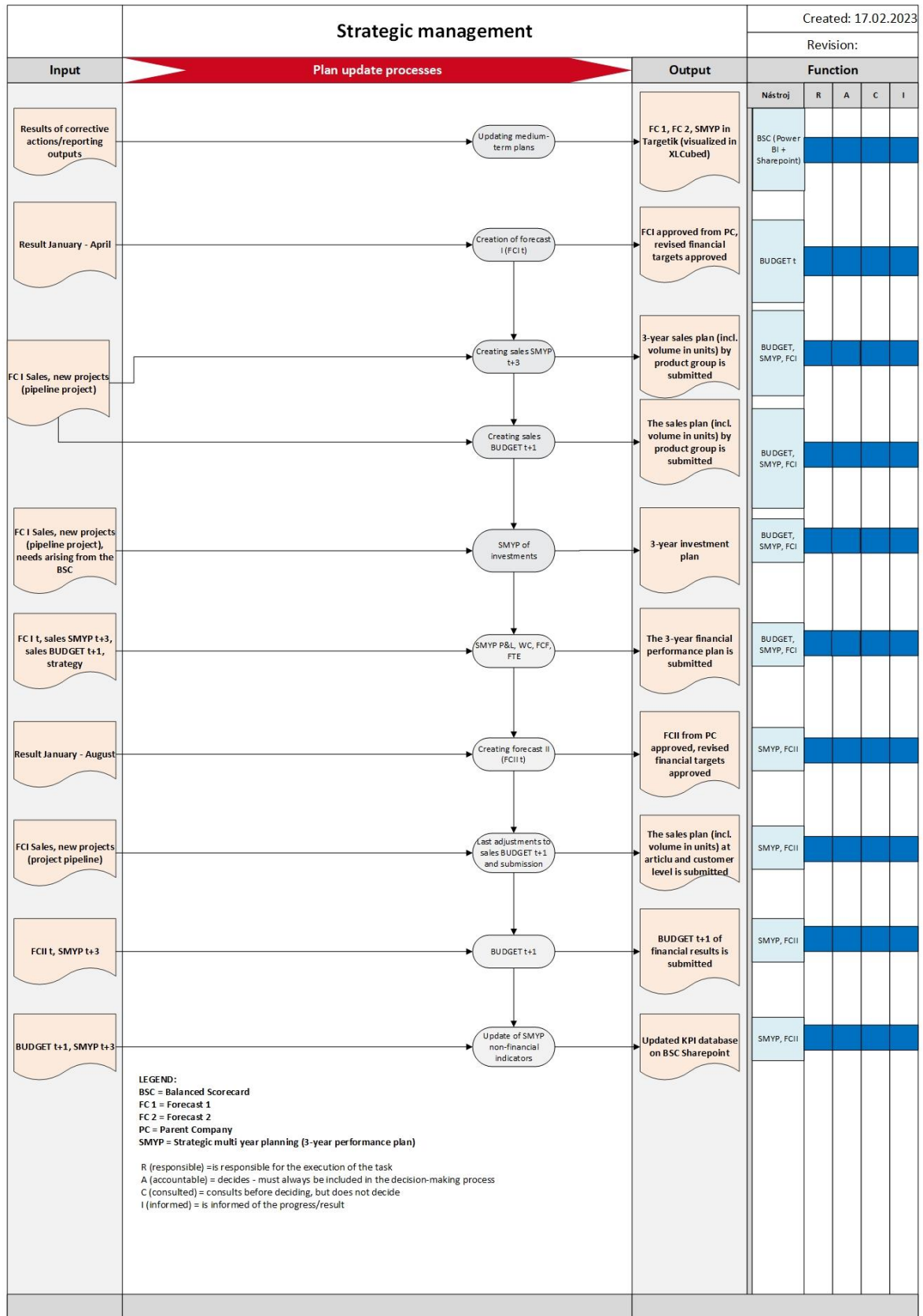


Fig. 19 – SIPOC – Plan update process (Own processing)

5.2 Company strategy database

One of the aspects of good corporate governance is their presentation of their mission, vision, goals, objectives and the KPIs themselves. Management of KPIs is dependent on good knowledge of KPIs by employees. It is necessary to present the interdependencies, meaning, responsibilities, plans and current situation, but also why the company is dealing with each metric in the first place.

It is necessary to create a database of key performance indicators that will be linked to the overall concept of the Balanced Scorecard. Within the company, the guarantors and other employees can use the database, where can be described everything from the mission, vision, BSC perspective, strategic goals to KPIs. In the past, a description from the BSC to the objectives has already been created, so the task of the KPIs database is to build on the already created parts and link everything.

Within the database, all KPIs need to be identified and described in detail. The following describes the possibilities to enter the database are described according to the simulated situations. The structure of the entire Balanced Scorecard system is visualized in *Fig. 20* - input via the navigation bar is followed by the red arrow, input via the tiles is followed by the blue arrow.

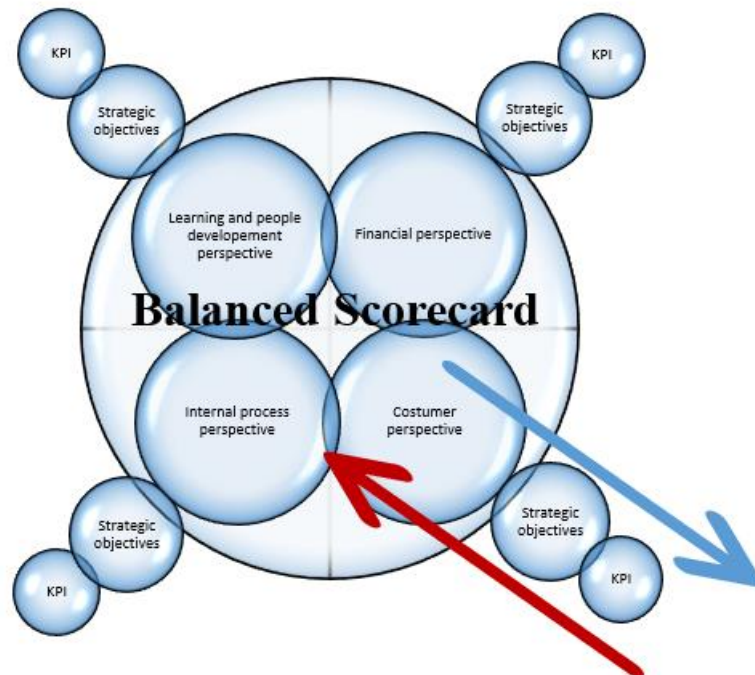


Fig. 20 – Balanced Scorecard (Own processing)

5.2.1 Entry via navigation window

Tab. 29 – Model situation 1 (Own processing)

Model situation 1

An employee Eliška offered to take the place of her colleague at the weekly meeting. She had never been at this meeting before, so she needs to check which indicators are evaluated at the meeting. She was interested in the term TEEP, for which she could not recognise the exact meaning and calculation.

When you enter the KPI list via the blue navigation bar, the entire KPI database is displayed.

The KPIs database contains:

- Name of KPI
- KPI guarantor
- Strategic objective
- Meaning of the KPI
- Calculation
- Unit
- Target value for 2025
- FC 2022
- ACT 2022
- Budget 2023
- SMYP 2024
- SMYP 2025
- Measurement frequency
- Level of reporting
- Explanatory notes

Information does not stand alone; it is also partly interconnected. The first three columns contain link fields – Name of KPI, KPI guarantor and strategic objective. Due to GDPR, the column with the guarantors is hidden and the names on the other slides are hidden. (See *Fig. 21*)

Název KPI	Strategický cíl	Význam KPI	Výpočet	Jednotka výsle...	Cilová hodnota 2025	Frekvence měře...	Úroveň reporti...	FC 2022
Tržby/FTE	Automatizace & Robotizace	Tržby/FTE (Full Time Equivalent = součet jednotlivých pracovních úrazů) / FTE - zahrnuje pracovní úrazek jednotlivých zaměstnanců vč. Dlouhodobě nemocnosti	T/FTE	CZK/€	> 230 TEUR	roční	Strategický Workshop	183,9 TEUR
Počet vážných úrazů	Zlepšení ergonomie práce a BOZP	Úrazy, které jsou spojeny s pracovní nezhodností	Aktuální počet vážných úrazů/porovnávaci rok 2021	počet úrazů	< 6 lidí	měsíčně	SPM3	4
Roční výnos/úspora z využití prostor	Koncept areálu 2025	-	Výnos z využití prostor	CZK/€	> 350 tisíc €	roční	Strategický Workshop	0
TEEP	Zvýšit spolehlivost a dostupnost strojů (TPM)	Totální využití zařízení	OEE * dostupnost	%	> 70 %	denně	Výsledková porada vedení	54,5 %
OEE	Zvýšit spolehlivost a dostupnost strojů (TPM)	Celková efektivnost zařízení	výkon/kvalita*dostupno st	%	> 80 %	denně	Výsledková porada vedení	77,08 %
Neplánované FTE/prodané palety	Vytvořit funkční úvar Lean / Pi	všichni zaměstnanci bez obdržení stroje a	Neplánované FTE/prodané palety	%	- 25 %	roční	Strategický Workshop	

Fig. 21 – KPIs database (Own processing)

We will illustrate the functionality of the database using the example of Eliška who is looking for a non-financial KPI "TEEP". For this KPI the strategic objective "Increase reliability and availability of machines (TPM)" is given. Both fields contain a link. Under the reference to "Increase machine reliability and availability (TPM)" (A more detailed description 4.2.3 Strategic objectives focused on the internal process perspective) there is a description of the specific strategic objective: the BSC perspective, the sponsor of the objective, the activity/inactivity of the objective and a description of why the company has set this objective.

Strategie G... > Seznam str... > **Zvýšit spolehlivost a dostupnost strojů (TPM)**

Perspektiva BSC *

3 Interní procesy

Strategický cíl *

Zvýšit spolehlivost a dostupnost strojů (TPM)

Garant cíle *

Aktivní? *

Ano

Popis

Zkratka TPM znamená zcela efektivní výroba - výroba se spolehlivými a dostupnými stroji. Zcela efektivní výroba je výroba, kdy nedochází k neplánovaným událostem spojených například s údržbou nebo odstávkou strojů.

Fig. 22 – Description of strategic objective “Increase reliability and availability of machines (TPM)” (Own processing)

By clicking through a specific KPI you can get into its details. Here Eliška can read about additional information that is not included in the basic list to make it clearer and contain only basic information. The detail includes all the information we have for the KPI, including

information that is hidden in the list itself - for example, the aforementioned KPI guarantor or explanatory notes that would make the database table itself unorganized.

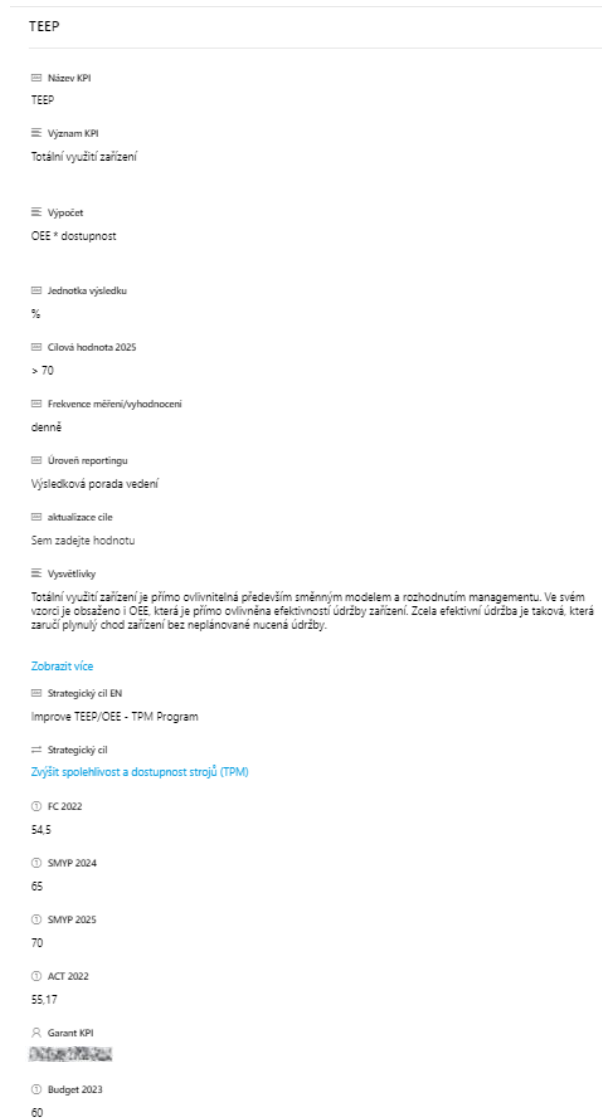


Fig. 23 – TEEP in detail (Own processing)

5.2.2 Entry via tiles

Tab. 30 – Model situation 2 (Own processing)

Model situation 2
Employee Markéta wants to know how the company is performing against the strategic objective "Increase machine reliability and availability (TPM)", which has a target value to be met by 2025. She knows that the KPI she is looking for is from an internal process perspective.

In SharePoint GPS Strategy, Markéta gets to the homepage. If she knows the name of the strategic objective, she can use an access via the blue navigation bar again. Another option is access through tiles, which Markéta will use.

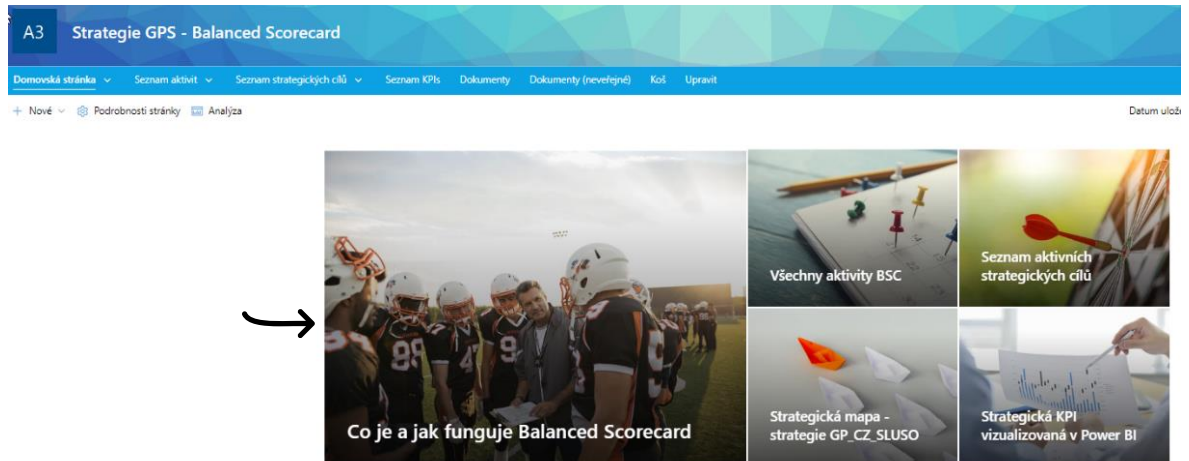


Fig. 24 - Corporate strategy (Own processing)

Clicking on the BSC tile, the user Markéta gets to a description of what BSC is and can further choose from four perspectives that BSC offers - Financial Perspective, Customer Perspective, Internal Process Perspective, Learning and Development Perspective (People). The strategic objective "Increase machine reliability and availability (TPM)" that internal user Margaret is looking for is under internal processes.

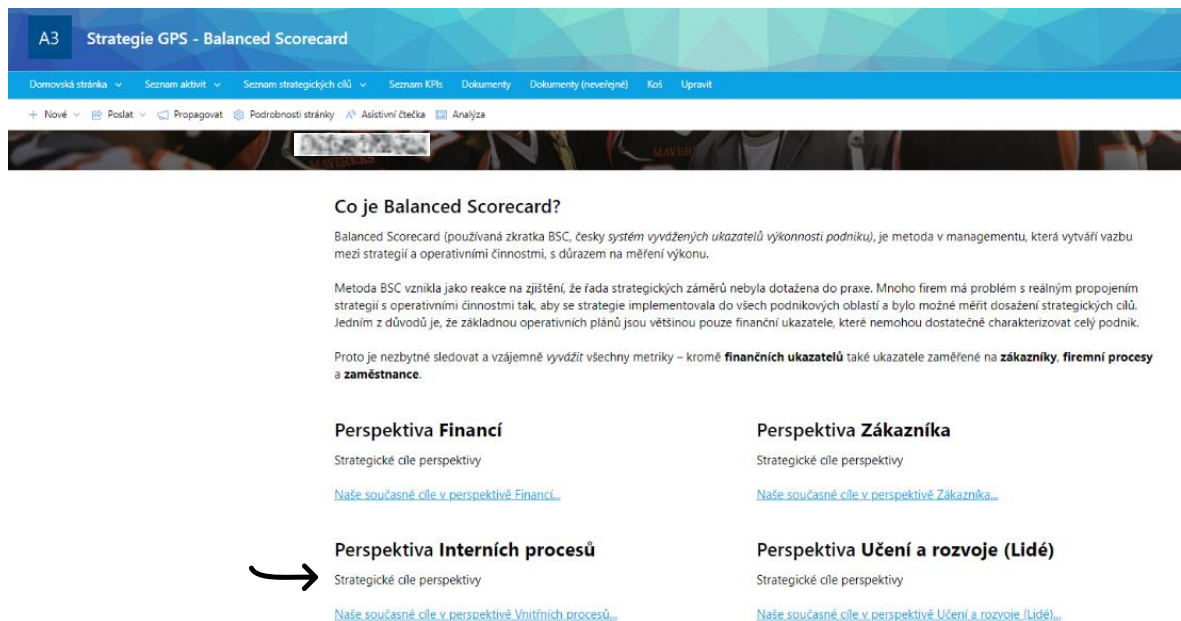


Fig. 25 - Perspectives of the BSC (Own processing)

The link "Internal Processes Perspective" will take you to the list of active internal processes. There is a table containing a column: perspective, strategic goals, goal sponsor, goal activity/non-activity and a link. Looking at the list of strategic goals, the user finds that the goal they are looking for is in the table and clicks on the link.

Perspektiva BSC	Strategický cíl	Garant cíle	Aktivní?	Odkaz
3 Interní procesy	Koncept areálu 2025	[Avatar]	Ano	[Menu]
3 Interní procesy	MFP Polaris - S&L	[Avatar]	Ano	[Menu]
3 Interní procesy	Provozní dokonalost - WCOM	[Avatar]	Ano	[Menu]
3 Interní procesy	rPET Business	[Avatar]	Ano	[Menu]
3 Interní procesy	Zajistit efektivní logistiku	[Avatar]	Ano	[Menu]
3 Interní procesy	Zajistit efektivní SCM	[Avatar]	Ano	[Menu]
3 Interní procesy	Zavedení energetického managementu	[Avatar]	Ano	[Menu]
3 Interní procesy	Zlepšit systém řízení kvality	[Avatar]	Ano	[Menu]
3 Interní procesy	Zlepšování ergonomie práce a BOZP	[Avatar]	Ano	[Menu]
3 Interní procesy	Zvýšit spolehlivost a dostupnost strojů (TPM)	[Avatar]	Ano	[Menu]

Fig. 26 - List of strategic objectives (Own processing)

By clicking through the strategic objective, one can get to the list of KPIs that belong to the given objective and the employee Markéta finds out that the objective "Increase reliability and availability of machines (TPM)" is measured by the company using KPIs - TEEP and OEE and all available information for each metric is in the detail of the KPI name itself.

Strategický cíl EN	Strategický cíl	Název KPI	Význam KPI	Výpočet	Jednotka výsle...	Cilová hodnota ...	Frekvence měře...	Úroveň reporti...
Improve TEEP/OEE - TPM Program	Zvýšit spolehlivost a dostupnost strojů (TPM)	TEEP	Totální využití zařízení	OEE * dostupnost	%	> 70 %	denně	Výsledková porada vedení
Improve TEEP/OEE - TPM Program	Zvýšit spolehlivost a dostupnost strojů (TPM)	OEE	Celková efektivnost zařízení	výkon/kvalita*dostupnost	%		denně	Výsledková porada vedení

Fig. 27 – KPIs database (Own processing)

Eliška and Markéta, as well as any other user, can use this quick way to learn about current and no longer used targets and related KPIs for this and other years, about sponsors, calculations and more. The database could be seen as a means of speeding up the reporting of information.

For the database to fulfil its purpose, it can never be considered complete. The next update is scheduled for the end of the year. A management meeting will be held in December when the strategic objectives will be reviewed and thus the strategy map will be updated. All KPIs will be updated in the coming period and target values adjusted as necessary. This Strategy Workshop is always held at least once a year. The aim is to review whether the chosen

strategy corresponds to the environment (external and internal) in which the company finds itself.

5.3 Linking key performance indicators to pyramid breakdown of Free Cash Flow

This chapter focuses on the pyramid decomposition of free cash flow, which is part of the design of the interdependence of financial objectives and KPIs. The following breakdown shows the actual figures for 2022 and the budget for 2023. The source of information is the company's reports and also the KPIs database. Due to the very sensitive nature of the data, it was decided that every number is multiplied by a coefficient.

Why use free cash flow breakdown?

- The breakdown of FCF includes 4/5 of the financial indicators as well as the strategic objectives
- Accelerate and support decision making
- Evaluation on a monthly basis

The pyramid decomposition is designed to answer the following questions:

- How does this indicator affect FCF?
- How does this indicator affect EBT?
- How does this indicator affect WC?
- How does this indicator affect CF from investments?

It is also important to mention that *ceteris paribus* is applied for this instrument. This tool is created in Microsoft Excel. It is designed to work on the following principle: the base of this pyramid (the KPIs that are located at the bottom) are given by a reference from the table. Their value is fixed. All other indicators are linked by equations: additions, subtractions, multiplications, divisions of lower-level indicators.

The decomposition contains colour-coded indicators. These metrics are KPIs that are ready for use. It is allowed to fill in only one indicator at the same time. Exceptions are indicators that have another indicator of the same colour. Indicators of the same color belong together and vice versa they should be filled together.

Due to the size of the breakdown, it will be divided into 3 figures. Figures includes separate indicators at the bottom below the breakdown. These indicators cannot be linked to the breakdown, but there is no need to do that. Simply note what they affect and how.

For example: It needs to be determined what effect has 5% increase of TEEP on FCF. TEEP can be described as equipment utilization. At the moment when TEEP increases, in proportion to TEEP, material consumption will increase 5% as well. If the assumption is that there is a high demand for the newly produced products, 5% is written straight into operating income. Raw material in stock, on the other hand, will decrease by 5%. As a result, TEEP makes a significant contribution to the increase in FCF.

Tab. 31 – TEEP and its influence on FCF (Own processing)

	TEEP (%)	Operating income (EUR)	Material consumption (EUR)	Raw material (EUR)	FCF (EUR)	
2022	54,50	136 569	68 300	3770	11 710	
2023	55,17	130 691	61 239	4251	16 983	
$\Delta\%$	+5%	+5%	+5%	-5%	?	
2022	59,50	143 398	71 715	3 581	15 312	+31%
2023	60,17	137 226	64 301	4 038	20 480	+21%

Other indicators offered are DIO, DSO, DPO. All indicators include turnover and then inventory, receivables or payables. For these indicators, one of the two numbers changes. These indicators answer the question: What happens to FTE and WC if DIO, DSO or DPO increase by 2 days?

This instrument is not limited in any way. These KPIs are just examples of its use. Its results are simplified to support decision-making or to show the connections between indicators.

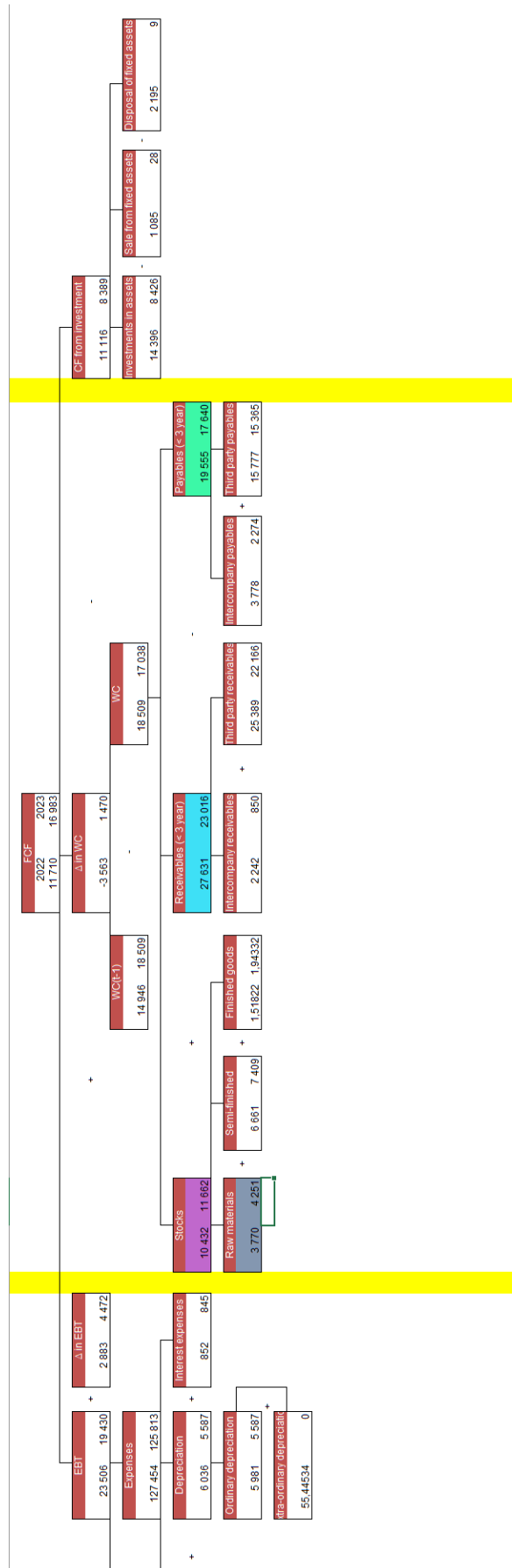


Fig. 28 - Pyramidal breakdown 1/3 (Own processing)

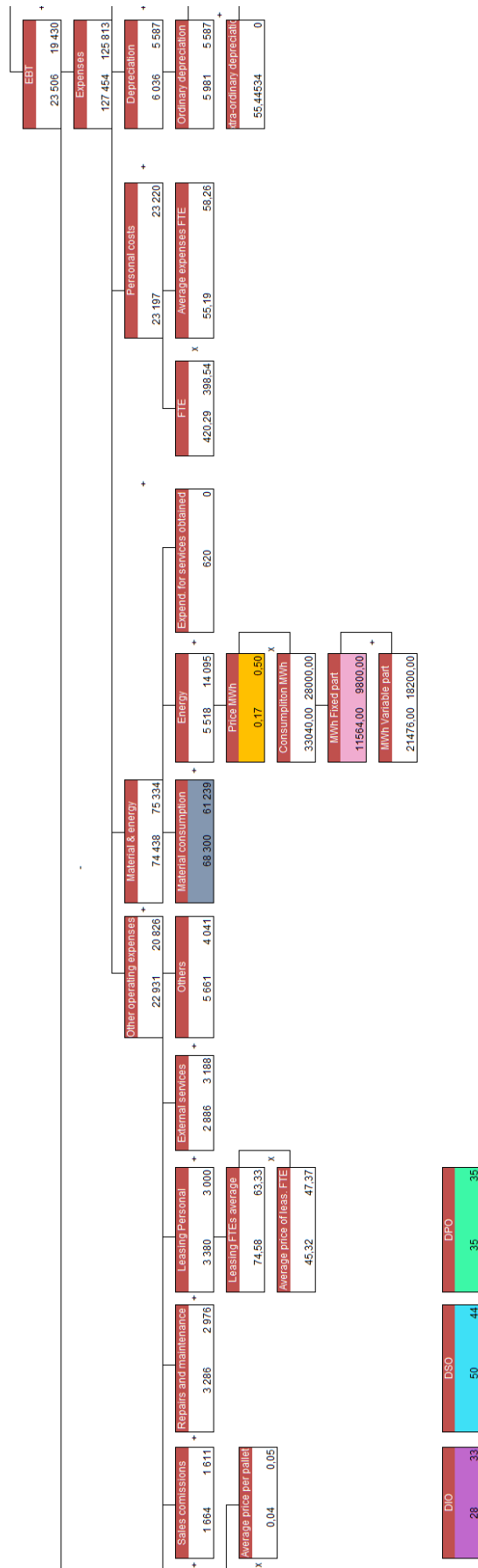


Fig. 29 - Pyramidal breakdown 2/3 (Own processing)

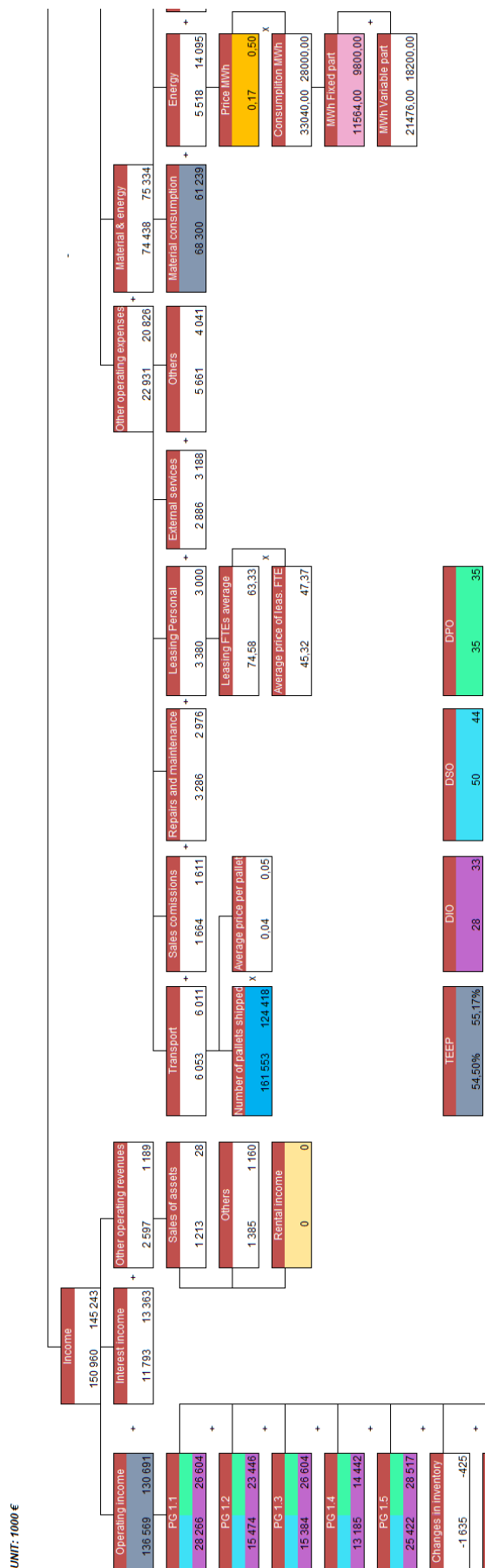


Fig. 30 - Pyramidal breakdown 3/3 (Own processing)

6. THE BENEFITS AND RISKS ASSOCIATED WITH THE IMPLEMENTATION OF THE PROPOSAL

In the previous chapters, 3 tools were outlined - SIPOC analysis, the interconnected KPI database and finally the interconnected FCF decomposition.

The benefits of the proposed instruments are as follows:

Creating a SIPOC for strategic management processes is beneficial because it establishes standardized procedures that will be followed in the long term. SIPOC is not only informative, but its creation is also required by the company. SIPOC is one of the internal strategic objectives of the company. Its creation has contributed to its achievement.

The company has a new database where every employee can find KPIs, but also the goals and perspectives with which they are related. The importance of the database is mainly informative and has a wide target group. The information can be used not only for management posts to look up specific metrics, but also for employees who are not familiar with the data and employees who want/need to complete it.

The last management improvement tool which is proposed and constructed is the FCF decomposition. The decomposition serves to make a quick visualisation of the impact of KPIs on financial metrics. The decomposition supports the idea that finance is the most important perspective because it signifies long-term prosperity or failure.

The advantage is that all the proposed tools contribute to improving the description and perception of KPIs. The proposed tools describe, link, quantify and relate KPIs. All tools contain objectives. They help to describe, link, quantify objectives and put them into context. The database is also available for analysis and the advantage is that it is convertible to Microsoft Excel.

All the tools are practical and some of them are already in use. All tools are user-friendly: well visualised, simple, clear.

The next section focuses on the risks associated with the use of designs:

The main disadvantage of all tools is their maintenance. The work does not end with their creation. They need to be maintained to be useful. This is especially valid for the database and the decomposition. The database should be enriched with new numbers from newly evaluated years. The values should be edited also in accordance with the forecasts. In the

case of pyramid breakdowns, updates also are applied after new forecast or budget is published.

The fact that the decomposition takes into account *ceteris paribus* may not always fully reflect reality and may be inaccurate.

The disadvantage of SIPOC is that, in contrast to other tools, it has only an informative function.

CONCLUSION

In the theoretical part, sufficient knowledge was obtained to achieve the objectives of the analytical part. The main idea of this master thesis was to create something practical and usable for the selected company and this was fulfilled.

The objectives of the work were also fulfilled. The project includes three tools: a SIPOC map, a database of KPIs and a pyramid decomposition. The first tool - SIPOC map - is a tool describing strategic management processes. This tool describes a process that includes specific responsible persons, input data, sub-processes or the process of the emergence of the BSC and its perspectives, the formation of objectives and KPIs.

The database of KPIs is linked to the database of all objectives, activities, mission vision and overall Balanced Scorecard. In the database you can find a lot of detailed information about each KPI: responsible persons, related goals, target values 2022-2025, KPI meaning and calculation. The database is useful for a wide target group. It can be used by new employees - these employees can view the database as part of their induction into the company. The database can be used for employees who are unsure about calculations, meaning or for employees who are looking for specific values. The advantage is that the database is also suitable for management users, as the database can be used as a data warehouse and used, for example, for analysis. The database is also convertible to Microsoft Excel.

The pyramid decomposition has contributed to show the effects of each indicator on finance. The indicator can be used, for example, for argumentation why are the objectives targeted in that concrete way. The pyramid decomposition is proposed as a tool for managing financial targets and KPIs. It would also be possible to build on the decomposition and statistically demonstrate the significance of the impact of each indicator on free cash flow in another master thesis. This could not be part of this thesis as it would go significantly beyond the scope of this master thesis.

Finally, I would like to mention that two of the three proposed tools are already in use by internal users of the company. I hope that they will serve well and that they will be periodically maintained and long-term integrated into the company's internal management systems.

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LIST OF ABBREVIATIONS

ACT	Actual numbers
BSC	Balanced Scorecard
C	Economic Capital Employed
CFROI	Cash-flow Return on Investment
CMII	Contribution Margin of the Second Level
COGM	Costs of Goods Manufactured
DIO	Days Inventory Outstanding
DPO	Days Payable Outstanding
DSO	Days Sales Outstanding
EAT	Earnings after tax
EBIT	Earnings Before Interest and Taxes
ERP	Enterprise Resource Planning
EVA	Economic Value Added
FA	Fixed Assets
FC I	Forecast I
FC II	Forecast II
FCF	Free Cash Flow
FTE	Full Time Equivalent
GDPR	General Data Protection Regulation
GPI	Global Reporting Initiative
H&S Strategy	Health & Security Strategy
I	Investment
IRR	Internal Rate of Return
KPI	Key Performance Indicator
KRI	Key Result Indicator

NFPM	Non-financial Performance Measures
NOPAT	Net Operating Profit After Tax
NPS	Net Promoter Score
NPV	Net Present Value
NWC	Net Working Capital
OSH	Occupational Safety and Health
OTIF	On Time in Full
OWC	Operating Working Capital
P&L	Profits & Losses
P.G.	Product Group
PC	Parent Company
PCR material	Post-consumer Recyclate
PI	Performance Indicator
RACI	Responsible Accountable Consulted Informed
RI	Result Indicator
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
ROS	Return on Sales
S	Sales
SC	Subsidiary Company
SCM	Supply Chain Management
SIPOC	Supplier Input Process Output Customer
SMYP	Strategic Multi Year Plan
SMYP	Strategic Multiyear Planning
SWS	Strategy Workshop

TEEP	Total Effective Equipment Performance
TPM	Totally Efficient Maintenance
WACC	Weighted Average Cost of Capital
WC	Working Capital

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