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Development of the benefit realization checkpoints.

Case: Company X Product Development projects.

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ABSTRACT

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Taking its roots from Information systems/Information Technology (IS/IT), the Benefit Realization Management has been advocated to close the gap between traditional project management and the company's strategy as well as to overcome the technocratic way the projects are undertaken. This research addresses the relative novelty of the benefit realization management (BRM for later) when it comes to the practical projects outside IS/IT area, specifically the potential challenges and improvements for implementation in chosen case company X.

The paper started with the need for the BRM implementation for the company X. The project level is investigated to understand the relationship of the values/benefits management throughout the organization as well as projects' lifecycle.

The theoretical framework is presented next, including the conceptually central to BRM areas: project management, programme management as well as benefit management itself.

To understand the current condition of BRM inside the case company, the series of interviews were conducted involving representatives from different functions. The 2-day workshop was organized within the case company in order to test how rigorously the case company's representatives identify and quantify the potential project's values (benefits).

Finally, the potential method to check value realization throughout the project's lifetime is proposed, derived from interview results, workshop findings as well as thorough theory check. Potential areas for further research as well as research validity and reliability assessments concluded the research.

Keywords: project management, programme management, benefit realisation management (BRM), gate checklists, development projects.

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LIST OF ABBREVIATIONS

BRM	Benefit Realization Management
PM	Product Management
R&D	Research & Development

1 INTRODUCTION

1.1 Overall background

Despite aiming at improving organizational performance as well as generating financial values, projects have been quite a challenge for companies, involving substantial investment risks, low rates of success and high probability of unnecessary costs. $55 billion or 21,6% of expenditures on IT-related projects in the US was wasted in 2002 (Wattrus 2009). Furthermore, considering the unstable and rapidly changing economic climate, contradictive interests of stakeholders and complexities of current programs and projects, one synonymizes projects with difficulties and challenges, rather than ways to capture strategic targets and improve business performance. Here is when the benefit realization management is useful.

Without further ado, one has to primarily clarify what is benefit. Hence, benefit can be defined as "an outcome of actions, behaviours, products, or services that provide utility to the sponsoring organization as well as to the program's intended beneficiaries" (Levin 2015). It is worth noting that the definition can also be applicable to a single project. The main logic behind the term is that firstly, benefits are basically contributions of a project to the organization's strategic objectives. Secondly, benefits can be measured both in financial and non-financial terms. And the last but not the least, benefits are usually the flows of value in program dimension, as benefits identified and realized in one earlier project in the program can provide the basis and funding for subsequent projects' benefits. As already noticed, the need for benefits articulation is identified and strongly outlined, however, when it comes to the practice, i.e., setting and practicing benefits metrics (or KPIs), time and budget constraints, intangibility of benefits – failures to implement benefits management are justified. According to the Economist Intelligent Unit (EIU) survey among more than 500 executives, only 61% of high-influence projects returned their intended strategic benefits (The Economist Intelligence Unit 2016).

Thus, the benefit (or value) realization management is here defined as "the collective set of processes and practices for identifying those benefits and aligning them with formal strategy, ensuring that those benefits are realized as project implementation progresses and finishes and that the benefits are sustainable – and sustained – after project implementation is complete" (The Economist Intelligence Unit 2016). This implies firstly the

organizational set-up to align values with strategic goals. Secondly, benefits (values) are tracked throughout a project lifetime. And thirdly, after the project finishes, it does not automatically disappear from all organizational radars, but serves as a platform for lessons learnt, stakeholders' discussion as well as for accumulating business value for the organizational portfolio.

1.2 Company & industry background

In order to understand the practical side of the benefit realisation management, the company X was chosen as a study case company.

Company X is a global manufacturing company that specializes in complete lifecycle solutions and smart technologies for two markets: energy and maritime. The company operates in more than seventy countries around the world with 200 locations and approximately 18 000 employees behind the scenes (case company internal materials).

It consists of the four businesses while the Portfolio Business is reported as other business activities.

Business A comprises 38 per cent of the case company total net sales, focusing on the decarbonised and sustainable future for its customers. The core of the business lies in portfolio of engines, propulsion systems, integrated powertrain systems, and hybrid technologies (case company internal materials).

Business B comprises eighteen percent of the case company total net sales and concentrates on delivering of exhaust treatment applications, seals & bearings, underwater services, shaft line repair services, and marine electrical solutions (case company internal materials).

Business C constitutes five per cent of company's total net sales and provides customers' vessels with digital services across the whole value chain to make voyaging more sustainable and safer.

Business D constitutes 35 per cent of total net sales and focuses on the future-fuel enabled balancing power plants, energy storage and optimisation technologies, hybrid solutions. The current track record accounts for 74 gigawatts of power plant capacity and more than 80 energy storage systems (case company internal materials).

While considering the core activities of the case company, one shall consider the maritime market in more detail with the aim of understanding the external challenges that the case company has to face.

The Maritime industry is one of the most indispensable industries and accounts for 19 per cent of the global trade (OECD). However, despite being the most cost-efficient and energy-efficient way of transferring goods from point A to point B, the maritime transport is characterized by high uncertainty levels, dependency on the global politics and regulations (especially worth mentioning unresolved trade conflict between the US and China as well as Brexit), volatility of the offshore oil and gas markets. Yet the biggest challenge is the formidable technological shift that forces all maritime actors to constantly seek for better, greener, and more efficient solutions. The search for innovative fuels and technologies is enhanced by the ambitious International Maritime Organization (IMO) strategy on reduction of the total annual GHG emissions from shipping by at least 50 per cent by 2050 (IMO).

Bearing in mind the complicated environment as well as nature of the case company, one might recognize the need to concentrate our attention only on the specific type of projects within company X – Product Development projects, which will be discussed in more detail later.

1.3 Research background

Based on the aforementioned insights, investigation into how benefits realisation management (BRM) might work in the development projects in a manufacturing company shall provide an intriguing angle. There is a growing interest (especially from companies' perspective) in how to reach high maturity levels in BRM, it is reported that "organizations that report high benefits realization maturity also report better project outcomes" (Project Management Institute 2017). However, when it comes to the practical implementation of the BRM as well as ways to value benefits and track them throughout project and program lifecycle – the need for research is obvious. The necessity is even more emphasized by the unpredictable and high-risk environment that surrounds development projects, where project schedule exceeds a five-year horizon, stakes are high, and fast evidence-based decision-making is critical.

1.3.1 Research problem

Taking into consideration motivations and challenges surrounding benefit realisation management, one strives to recognize the research problem, i.e., an issue, problem or question that becomes a ground for the research enquiry (Kumar 2011, 344). Thus, the research problem can be formulated as the absence of benefit realisation practices inside the case company. By the absence of practices, one implies not just an absence of lifecycle, procedures and assigned roles, but non-existing benefits mindset as well as the presence of conditions that obstruct the implementation of benefits realisation management.

1.3.2 Research questions

As the research problem serves as a basis for the enquiry, the research questions form the foundation for the clarity of the research as well as the key criteria for research success (Saunders, Lewis & Thornhill 2007, 30). It is advisable to start the research with clarifying one general focus research question that leads to several more detailed research questions as well as the definition of research objectives. Such approach is often called the Russian doll principle due to stripping away the layers and obscurities to find out the core – research aim (Saunders et al. 2007, 31). Hence, the general focus research question is – what should one pressure-test to track the benefits realisation inside the case company's development projects so that to secure the realisation of the project's value by the end of its lifecycle?

The general focus research question results in the following research questions: what is the benefit according to the case company? What are the drivers for implementing benefits realisation management? What are the pitfalls for benefits realisation? How could the BRM practices be implemented?

As one could notice, the research questions can roughly be divided into "what", "how" and "why" categories. And there is no better way to answer these questions than to construct and apply BRM practices to the case company.

1.3.3 Research objectives

In relation to the general focus research question, one shall clarify the research objectives, which "are more generally acceptable to the research community as evidence of the researcher's clear sense of purpose and direction" (Saunders et al. 2007, 32).

The first objective is to identify in the case company blind spots as well as the motivations to implement BRM. This objective will be reached by conducting series of interviews as well as organising a workshop with company's representatives. The second objective is to explore the theoretical side of the benefits realisation, which theoretical frameworks are available and what are theoretical learnings around BRM. The third objective is to merge practical findings with theoretical investigation in order to find the appropriate solution to track the realisation of benefits. The last but not the least, to acquire the feedback on proposed method. Hence, the validity and reliability of proposed solution will be checked.

1.3.4 Research aim

Finally, one strives to set the research aim – the overall, long-term purpose of the research, which "ultimately enables the reader to judge whether the researcher has achieved that purpose" (Doody, Bailey 2016). Based on the research problem, questions as well as objectives, one strives:

To develop benefit (value) realization checkpoints for the Product Development Projects inside company X.

Ultimately, the quality and success of the current research will be judged and evaluated against this aim, whether the researcher has been able to find a solution to track the value realisation for the case company's development projects.

1.4 Limitations & assumptions

As the research aim serves as the main criteria of the enquiry's success, the research limitations help to clarify the scope of the research, while recognizing the aspects that cannot be influenced or researched due to external factors: "limitations of any particular study concern potential weaknesses that are usually out of the researcher's control, and are closely associated with the chosen research design, statistical model constraints, funding

constraints, or other factors" (Theofanidis & Fountouki 2018). One shall set the following limitations concerning the research: firstly, the BRM practices, models, and tools will be investigated from project and programme management perspective, not from the portfolio level. The BRM practices on portfolio level focus on the prioritization of projects and programs as well as sustainment of benefits in the long-term, which is out of scope of this research. Secondly, as it will be discussed later, the common BRM model consists of the benefits identification, benefits analysis and planning, benefits delivery, benefits transition, and benefits sustainment phases. The last two phases (benefits transition and benefits sustainment) lay beyond the scope of the thesis as they are considered to be applied on the portfolio level rather than on the project or programme management layer. Thirdly, by developing, one means researching, constructing, and validating potential method. Fourthly, the current project management model for development projects in the case company (gate model) remains the main model for projects' control and monitoring. The potential BRM model is to serve as an additional tool in decision-making, not the substitute of current project management practices.

The following research assumptions will also be outlined: it was communicated by the company representatives that currently there are no established official or unofficial benefits realisation practices, which means that there is no need to research the ways of enhancement or improvement. Secondly, as with any project or programme aspects, one assumes the establishment of the cycle of benefits realisation, meaning that there will be identification, planning and executing stages. The last but not the least, one supposes the relative unawareness of the benefits realisation existence and goals from the case company's perspectives. The reasoning behind this assumption is the novelty of this domain as well as scarcity of action and practical research in this academic sphere.

1.5 Structure of the thesis

The thesis is divided into five chapters. The first chapter of the current research introduces the overall, company, industry as well as research backgrounds, why this research is undertaken and what one pursues to achieve with it.

The second one – Needs analysis and description of the present state – describes the current project management model established in the case company. The main aim for this chapter is to understand how the project set-up is working, how development projects are

different from other kinds. The need for this research will also be investigated – what are the grounds of undertaking this research from the case company's perspective.

The third chapter – theoretical background – aims to inform a reader in the following areas: project management, programme management as well as benefits realisation management. The logic behind such order is that projects and programmes are the environments for benefits genesis and realisation, the benefits cannot exist without projects or programmes per se.

The fourth chapter "Research environment" depicts the research design and chosen research methodology for two development stages – interviews and the workshop. The reasons why the specific research methodology was chosen are also presented.

The fifth chapter – description of the development process – describes the steps how practical investigation was arranged. The practical insight consists of the interview part and the workshop observations. The results from both steps are presented and elaborated.

The next chapter "Description of the result of development" merges theoretical and practical findings. The benefits realisation method is proposed based on the merger. The managerial perspective on the method implementation and reliability is presented.

The last chapter, the Conclusion, assesses the reliability and validity of the undertaken research. Further research suggestions are discussed.

2 NEED ANALYSIS AND DESCRIPTION OF THE PRESENT STATE

In order to be a market leader in the smart technologies both for energy and marine markets, secure environmental compliance and long-term sustainability demands and hold one of the broadest product portfolios in two markets, the case company has to constantly adapt to changing market requirements and provide the innovative yet cost-efficient solutions for its customers while constantly implementing new technologies that create maximum value and facilitate transition towards green future (the case company internal materials). And though there are numerous functions, businesses and tools enabling the company X to solve this challenge, the project management serves as a starting point.

Projects constitute some of 50 per cent of company X business, more than 3,000 being under execution (the case company internal materials). Bearing these numbers in mind as well as numerous years of experience with successfully leveraging projects, one recognizes a need to take a closer look at how things are working behind the scenes.

Though the focus of this thesis is on the development of benefit checkpoints within project environment, one has to understand the full picture, meaning how projects originate, are prioritized, and what role they play within organizational context (Figure 1).

As one can see from the Figure 1, being different in nature, operations and projects contribute to the one goal – organizational strategy and objectives – and share the same organizational resources. The thesis is concentrated on the right bottom part of the Organizational context triangle, namely program, and project management.

Portfolio management connects strategic planning to the execution level and channels organizational limited resources towards profitable and strategically aligned projects. One may compare portfolio management as a filter stage where all ideas, regulatory requirements, customer orders are selected based on the certain criteria so that to create viable, coordinated, and executable portfolio of projects. The selected projects are then (not obligatory though) grouped into programs, forming project and program management – key to successful planning, execution, controlling and completing. In a nutshell, “project management – do projects right, program management – do projects together, portfolio management – do the right projects” (Oltmann 2008).

Figure 1 An organizational context of portfolio project management (Garfein 2008)

2.1 Types of projects in the company X

Depending on the need and the end-user, one may isolate three types of projects that exist in the case company: the customer delivery projects, the operational development projects, and the product & solution development projects.

The customer delivery projects' scope consists of the new equipment delivery, automation tasks, fuel conversion, performance upgrade, relocation as well as the upgrade of existing equipment. Overall, this kind of projects resonates the engineering, procurement, and construction (EPC) contracts, where private party undertakes construction work on the multifaceted and large-scale infrastructure projects (case company internal materials).

Operational development projects relate to the enhancement of current ways of working, the improvement of quality, processes, and tools; capacity adjustments as well as new business development (case company internal materials).

Product & solution development projects, which are also the focus of the current research, are the third type. The goal behind this kind of projects is to develop and introduce new products, which is critical for companies' survival and success as well as "one of the riskiest, yet most important endeavours of the modern corporation" (Cooper 1993, 4). There are three subtypes: the research projects, which focus on the new methods as well as the research innovation. Technology development is the second subtype, and as the name implies, it concentrates on the creation of technological ideas and assessment of the relevancy of created technology (case company internal materials).

Finally, the product development scope contains the new product development projects, existing products enhancement projects, product improvement as well as customer order engineering (case company internal materials). This subtype is naturally closer to an end-user and has certain distinctive features, such as: the long development life span. The average timeframe to develop and deliver a new product to a customer accounts for minimum five years, sometimes reaching to 10 years. The second feature is the high-risk environment – due to the constant and unpredictable changes on the global market, predicting the financial values and returns from specific projects is far from being an effortless task. Lastly, due to the unclarity surrounding potential customer in the beginning of a project's lifecycle, one recognizes a need to prioritize the main values of an initiative due to surplus of the project's requirements. One also identifies the need to balance portfolio between development projects (which represent long-term gains) and customer delivery projects (which embody the short-term gains). Hence, the necessity for benefits realization for development projects is obvious, which is why they would be the focus of current research.

2.2 The Company X Project Management

According to the PMBOK® Guide, project is a "temporary endeavour undertaken to create a unique product, service or result" (PMI 2008, 434). A project has always defined start and finish dates, strives to fulfil specific targets, and has to deliver a unique outcome (e.g., product, solution, service, etc.). From the company X perspective, the concrete project result may be related to delivery of products/solutions to the case company's customers, improvement of working practices, development of the business concepts, development of new technologies, construction of premises, development of IT systems, etc.

A project governance is based on three parties: a project owner, a steering committee, and a project manager, while implementation belongs to the project team members. Project owner and steering committee are responsible for project's guiding and following up, whereas project manager handles project planning, cost follow-up, leading project team on a daily basis, etc. The more detailed comparison between project manager and project owner would be carried out later in this chapter.

One may conclude that the project management itself is the application of "knowledge, skills, tools, and techniques to project activities to meet the project requirements" (PMI

2008, 6). The case company's Project Model framework is based on the PMBOK and incorporates the following five process groups (Figure 2): initiating, planning, executing, and closing. The process – the project's lifecycle plus gate checklists – defines activities needed for comprehending market segment needs, developing solution concepts and products as well as launching them to the market. The expected output is a fully established product or solution concept, including all essential documentations.

In addition to these project model phases, there are two subsequent project-related processes outside the project, which are – exploring and benefits evaluating.

The beginning and the ending of each phase is marked by the project gate. Gates are mandatory project management decision-making points, where achieved resulted are assessed from business and strategic points of view by the SteCo (steering committee) and the project owner. There are three types of decisions: whether a project is continued (GO), terminated (NO GO) or put on hold/must be redefined and brought for approval again. The case company's project model includes five mandatory gate points that are common to all projects (Figure 2 as a reference): G0 – start project, G1 – start planning, G2 – start execution, G3 – start closing, and G4 – close the project. Decision-making is maintained by the gates deliverables (or project documents), e.g., project charter or project plan.

It is worth noticing that gates are not a simple checklist for a project team not to fall behind. Gates establish a link to a project portfolio management, as during the decision points, projects and projects ideas are compared to each other. Later, this information will be feed to decision makers (project portfolio management board), who based on this information, will make decision to continue, discontinue or re-prioritize the project from portfolio point of view.

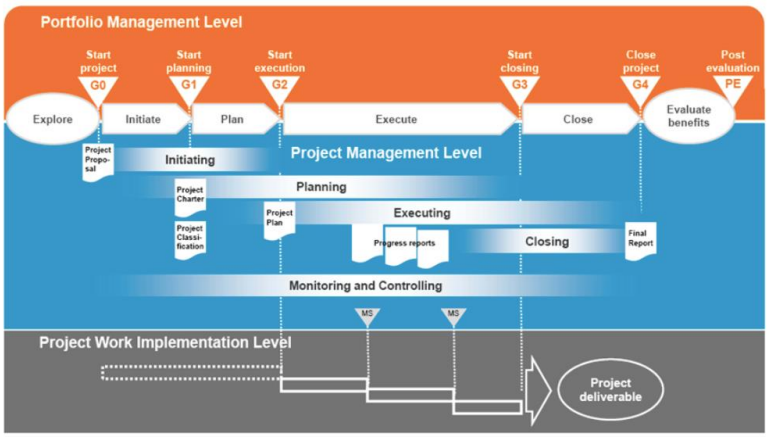

Figure 2 The company X Project Model framework

One could advocate project management gates' implementation because of the following reasons (Stratton 2003). Firstly, gates are first and foremost communication points in project lifecycle since all projects risks and factors are considered together with all involved stakeholders and resource providers – those who have power to continue, hold or terminate the project. They also assist in supporting stakeholders' interests. Secondly, gates provide a formal procedure to review and control risks. Project progress implies higher commitment and investment, which in turn leads to an increase in risks, expenses, and rewards. Gates provide the needed visibility and thorough risk assessment in order to keep the known and unknown threats under control. Furthermore, gates allow to monitor scope changes – one of the potential causes of project failure (Stratton 2003). As a result of the gate reviews, the project progress (status) is updated, risks and scope are controlled, the plans are verified, and there is a confirmation that the organization is still committed to the project ultimate success.

Gates are prepared with the help of the gate checklist, which is a list of recommended activities or deliverables to be accomplished by the end of each gate (case company internal materials). Gate checklists also mention responsible party for each deliverable or activity.

Thus, at G0, one should agree on high level scope of the project and invest in feasibility study. He/she collects market input and ensures that product/technology is aligned with strategy and product/technology roadmap. The main deliverables are project proposal (high-level propositions concerning schedule, requirements, and budget), pre-study as

well as initial business case. Later, the business case will become a baseline for project's success (case company's internal materials). The project owner is nominated.

At G1, one agrees on feasibility and decides to start detailed project planning. The main focus is the requirements management – collecting, documenting, analysing, reviewing, negotiating, agreeing, and approving the requirements. Requirements are then analysed against initial product concepts (that were developed during G0) and evaluated concerning their commercial and technical feasibility. One must accomplish the following deliverables by the end of G1: project charter, updated business case (note that the business case is to be updated at every gate checklist), initial product definition package, initial product concept, requirements feasibility study, initial testing and validation plan, approved requirements document, scope for other function involvement (manufacturing, supplier management, life-cycle services). Upon receiving a "GO"decision, one can proceed to the next gate – planning (case company internal materials).

One shall also mention the project owner's responsibilities during the initiating stage: he/she nominates the project manager; makes sure that required business case descriptions or investment appraisals are started and defines the measurable objectives for the post-project evaluation. He/she also starts to gather the project steering committee (case company internal materials).

Between G1 and G2, one prepares project plan, including all subsidiary plans (e.g., product release, validation). One selects technology; generates and screens product concepts, based on agreed requirements, serviceability and manufacturability. The expected deliverables are project plan, identified product concepts, initial design assurance, testing & validation, sales & marketing plans, plan for manufacturing development, life-cycle services plan. At G2 one freezes project baselines and agrees to start execution upon receiving a "GO" decision (case company internal materials).

The most important goal of the planning phase is to deliver a project plan – all essential information about what deliverables should be ready when the project is closed, how the project will be implemented and what are the acceptance criteria and processes. The project manager is responsible for ensuring that the project plan is done. The steering committee joins the project planning in ensuring that both project business case and project

plan are realistic. It also confirms that the project plan is aligned with the business case (case company internal materials).

Depending on the project's size and complexity, one distinguishes the following sub-gates: G2a, G2b, G2c, G2d. At G2a one approves the final concept, decides to start detailed design, selects product concept on basis of feasibility study, and performs product concept benchmark with customer(s). The deliverables to be checked: updated project plan & business case, updated requirements matrix and requirements traceability, design review/assurance (case company internal materials).

At G2b one starts prototype manufacturing, provides detailed design of the selected concept as well as executes market or pilot sales release, if needed. The deliverables are the same as at G2a, however, one also must provide detailed design for prototyping as well as assembly and installation instructions and training for the proto version (case company internal materials).

At G2c, one manufactures prototype and prepares it for testing. As with G2a and G2b, one updates design if needed and executes market or pilot sales if needed. As for deliverables, the prototype is supposed to be manufactured, design review and design assurance have been performed, validation plan is updated (case company internal materials).

At G2d, one is to confirm that prototype performance requirements have been fulfilled. One performs prototype tests in accordance with validation plan. Test results are analysed and compared against references or expectations. One delivers prototype test reports, released design for pilot installations, reviewed design, market, and pilot product releases (case company internal materials).

Throughout execution phase, the project manager and project team are accounted for guaranteeing that all tasks and activities described in the project plan are performed. Risk management and communication plans are re-evaluated at every steering committee meeting. Actions are performed to solve the deviations. The steering committee, in turn, is accounted for ensuring that the business case of the project is feasible throughout the life cycle. It implies that the SteCo should monitor the business environment, analyze its effects of the project, control business risks and evaluate regularly whether the defined business goals will be achieved. If the project manager communicates deviations to the implementation objectives, the steering committee is required to analyze how deviations

will disturb the business benefits of the project and what actions are to be taken (case company internal materials).

At G3, the handover takes place – the product owner takes an ownership over the product. Product release activities are completed, e.g., internal/external marketing, completed product documentations. Final check on the requirements is performed. Sales, marketing, and training materials are finalised, the product is integrated in tools and applications, all agreements and documents are handed over (case company internal materials).

Finally, the G4 – official closing of the projects and finalisation of all the tasks. Evaluation of the KPIs takes place along with the project closing activities. Lessons learnt document and project final report are compiled. The steering committee must also analyze the project's success and agree how and when final business benefits (business case) will be appraised. The project is officially closed (case company internal materials).

2.3 Project organisation

There are a couple of principles that concerns all projects organisation in the company X. First of all, all projects need an owner with the business interest, who decides the business goals for the project and together with the steering committee ensures the environment for the project's success. Secondly, all projects require a project manager – the role responsible for operational side of the project. Thirdly, the project team is indispensable who is responsible for the concrete project work.

In product & solution development projects, project owner (or business owner) is the one who initiates the project and is the most interested in utilizing the business benefits of it. The project owner is usually a chairman of the steering committee. The responsibilities list includes business responsibility for the entire project; sanctioning goals, budget, and schedule; joining in the steering committee, accepting deviations, maintaining the project and guaranteeing resources and funds (case company internal materials).

A project steering committee plays two main roles in the project's environment: firstly, it ensures the business benefits of the project; secondly, it guarantees resource allocation. It has to also ensure that organisational governance model is followed inside the project. The committee makes the major decisions concerning the objectives, resources and

schedule of the project and normally consists of the most important stakeholders of the project from different functions and businesses.

The project manager is responsible for the operational management according to the sanctioned project plan. He/she also reports to the project owner and steering committee.

Projects cannot survive without a project controller who supports the project organisation in facilitating. He/she also prepares project reports based on the project requirements, contract, or other available information; develops and maintains the project schedule. Last but not the least, he/she tracks and allocates all costs and invoices.

2.4 Need analysis

”In a business environment characterized by rapid change and increasing complexity, companies struggle to implement the strategies they need to generate and sustain a competitive advantage” (The Boston Consulting Group 2016). Indeed, the product & solution development projects in the company X are not simply a way to introduce a new solution to the market. It is a means to acquire and secure the competitive advantage by strategically catching long-term market benefits and values.

However, as one can notice from the described project management model, there are no current official or unofficial practices to track the realisation of the market benefits, to align what is cooking inside the project with the actual customers’ requirements. There are no established routines to check the emergence of unforeseen gains or the disappearance of the planned ones: “you have a planned strategy, but then you have an emerging strategy [as events take place]. You have to have the same understanding of benefits” (The Economist Intelligence Unit 2016).

The situation is worsening, when one acknowledges the fact that the official review points of business case – the official register of business benefits – happen during gate review sessions. However, taking into consideration the extensive lifetime of development projects as well as long-lasting periods between gate checkpoints, one cannot rely solely on the gate reviews as business case is no longer relevant to the market requirements.

Delays in the business case reviews lead to the following complications: firstly, projects are getting out of the “project’s triangle” – scope, schedule, and budget. The increase in

these variables does not simply holds up the introduction-to-the-market time (which leads to the loss of strategic moment and competitive edge) but makes the performed in the beginning investment appraisals irrelevant. Ultimately, the projects do not pay off.

Thus, the following questions appear: how to steer projects under highly unpredictable environment? How to be proactive when it comes to changes that happen outside our control? How to secure the benefits realisation and customers' satisfaction by the end of the project?

The urgent need in the benefits realization management for the case company is quite straightforward. How to do that and what particularly to check – the aim of this research.

3 THEORETICAL BACKGROUND

Being an increasingly important aspect of project and programme management, Benefit Realisation Management (BRM) has been considered as "the glue that binds together all the other management techniques" (Breese 2012). Thus, the present research would firstly investigate project management fundamentals, secondly inspect the programme management side and how BRM is integrated into this area. The third step would be to grasp requirements and strategy management. The logic behind this step is the BRM being a potential solution to the gap between project management and strategy (PMI Thought Leadership report). Last but not the least, one will get a holistic picture of what is the benefit realisation management, what BRM frameworks are available and which pillars of BRM exist. The chapter will end by outlining key steps and moments that are specific to the case company and will serve as the basis for the future potential benefit realisation method.

3.1 Project Management

Project management is a specific form of management, similar to other areas of management, which aims at delivering a series of business change, strategies, goals and work tasks within predefined budget, time frame and scope (Milosevic & Srivannaboon 2006). The difference between project management and any other organizational management is that the first one is essentially the management of change, while running a company is about "business-as usual". Project management is fundamentally about three aspects: proactive change; cost, time and scope-bound and motivation. Thus, the definition of the project management can be formulated in the following way: "the planning, monitoring, and control of all aspects of a project and the motivation of all those involved in it, in order to achieve the project objectives within agreed criteria of time, cost, and performance" (Lester 2017, 7). One might note a term in this definition that needs to shed more light on – project itself.

The project can be defined as a unique process, containing a group of synchronised and controlled activities with start and finish dates, commenced to attain objectives matching specific requirements, including constraints of time, cost, and resources (Lester 2017, 1).

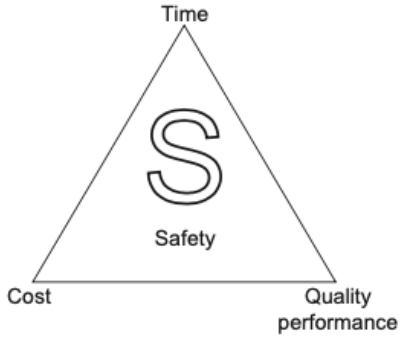

Figure 3 Project triangle

There are various grounds for undertaking the project, e.g., improving cash flow, changing current organizational IT tools, generating revenue. However, there are certain features applicable to all projects (HM Treasury 2018), for instance, an expressed and predetermined life cycle; clear and quantifiable inputs and outputs; corresponding processes of activities and plans; a distinct number of resources; organisational structure for governance and delivery.

These criteria can be graphically represented as a well-known project triangle (see Figure 3).

Projects' nature also implies the harmonizing competing restraints, which include but not limited to (PMI 2017b, 542): schedule, scope, quality, costs, resources, risk, etc.

Projects are launched to implement business opportunities that are allied with the organization's strategies. Before undertaking the project, the business case comes into play, outlining the project's objectives, required cash outflow, financial and qualitative criteria for project's success. The business case serves as a baseline to measure success and progress throughout project's life cycle by comparing the outcomes with previously set objectives and identified success criteria (PMI 2017b, 546).

Projects are usually launched because of one or more following strategic objectives: strategic opportunity/business necessity, market demand, social necessity, customer request, environmental consideration, technological innovation, legal or regulatory obligation, current or anticipated problem. By enhancing organizational strategy, projects do not simply create competitive advantages, but also provide companies with benefits – the leverage to attract new customers as well as withstand competitive forces (Milosevic &

Srivannaboon 2006). And thus, the importance of the benefit realisation management comes into play.

As with all changes, projects consist of the certain framework – project lifecycle, which can be defined as the series of phases the project goes through from start to finish. A project phase in turn is the logical combination of related activities that culminates in the completion of one or more deliverables, milestones, or objectives. The phases vary in structure, e.g., overlapping, sequential or iterative. The important point that each organization is to develop its own cycle and phases based on management and control needs of the organization involved in the project, the nature of project itself, and area of its implementation. Phases are limited in a timely manner, with start and end control point (which might be referred to as phase gate, control gate, phase review). During such control points the project's progress is compared with the project management plan to identify needed changes, whether the project should be terminated or continued as planned. Despite being different in time and/or money-wise, the following structure applies without exceptions (PMI 2017b, 548):

1. Starting the project
2. Preparing, planning, and organizing
3. Implementing the work
4. Closing the work

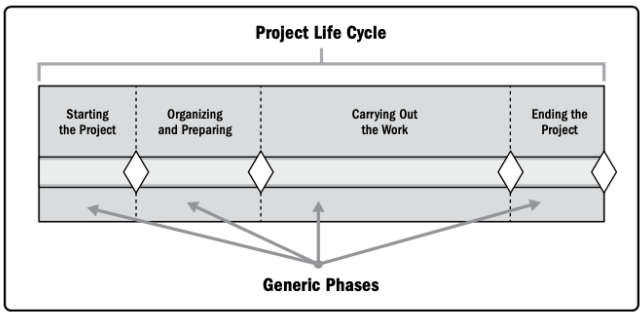

Figure 4 Generic project lifecycle

One should notice that engineering, construction, and manufacturing projects might have slightly different project lifecycle, more extensive one:

1	Concept	Basic ideas, business case, statement of requirements, scope
2	Feasibility	Tests for technical, commercial and financial viability, technical studies, investment appraisal, discounted cash flow, etc.
3	Evaluation	Application for funds, stating risks, options, time, cost, performance criteria
4	Authorization	Approvals, permits, conditions, project strategy
5	Implementation	Development design, procurement, fabrication, installation, commissioning
6	Completion	Performance tests, handover to client, post-project appraisal
7	Operation	Revenue earning period, production, maintenance
8	Termination	Close-down, decommissioning, disposal

Figure 5 Lifecycle of engineering, manufacturing, and construction projects

It can be observed from the figure above the comprehensive approach with the main deliverables at the end of each phase – gates. It is also worth noting that as the word cycle implies, the phases may always be changed in terms of content, duration and costs as new conditions is fed to project manager and sponsor. Projects are essentially dynamic organizations that are not simply created to implement the change but are also subject to the change.

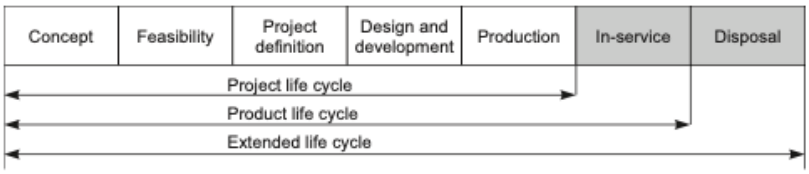

Figure 6 Extended lifecycle

One could notice from the figure above that project lifecycle serves as a basis for product lifecycle (phases of interests to the sponsor) as well as extended lifecycle (which contains disposal). This relationship between different lifecycles plays a crucial role in the benefit realization mentality as the latter one advocates harvesting the benefits during the in-service phase as customers are the ones determining whether the project has realized its business values.

Last but not the least thing to emphasize around project theory is the evolution of project's variables over the life cycle (see the figure below). While risk is being the maximum at the start of the project, it decreases over the lifecycle due to more information available as well as more decisions are made, and more deliverables are accepted. Costs are quite low in the beginning and increase as the work is conducted. The ability to change the direction of the project, affect final characteristics, without significant sacrifice in costs

or schedule, is the highest in the beginning and declines as the project proceeds. The further one is in the project, the more costly it is to correct errors or make changes. Later in the present research, this phenomenon will be one of the key pain points outlined by interviewees.

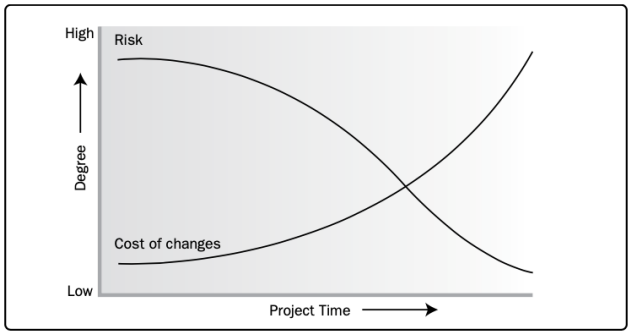

Figure 7 Impact over time

The core behind any change initiative, would it be project, programme, or portfolio, is the business case. “Money is the language of business and translating all projects into financial case allows senior business managers to believe that they understand the ‘value’ of the project” (Ward and Daniel 2012, 10). The document that reflects this money value as well as main advantages and characteristics of a project is called business case, which should at the same time be an initiative from the project sponsor (business owner).

A business case summarizes the “whats” and “whys” of the project as well as includes the investment appraisal techniques, thus, turning the business case into financial case. The well-defined business is the guarantee to profound decision-making, desirability and vitality of a project as well as delivery of intended benefits and outputs.

According to the HM Treasury “Guide to developing the project business case”, business case is about the following five dimensions:

The Strategic dimension reflects the need for change, which is enabled by a project, and how this change provides strategic fit. This dimension is closely related to the portfolio management as strategic portfolio, which consists for synergized projects with holistic fits, can only be achieved by an up-to-date organizational business strategy. Strategic dimension implies the comprehension of the logic, drivers as well as aims for spending proposals. It also requires a certain understanding of existing arrangements: the business as usual, potential scope and benefits, business needs, risks, constraints and dependencies

connected with the proposal. In a nutshell, strategic context is about organizational overview, analysis of business strategy and objectives as well as other relevant strategies. It considers business case from the "Case for Change" perspective: what are current arrangements, business needs, prospective scope and service requirements, key benefits and risks analysis, limitations, and dependencies, spending objectives.

The second dimension is the economic one. This dimension examines business case from the best-value-to-society perspective, including broader environmental and social effects, how realistic options are being appraised from the public view, how well they meet spending objectives and critical success factors for the proposal. Economic dimension requires proposal to be subjected to cost benefit analysis or costs effectiveness analysis, risk assessment and sensitivity analysis, preferred option calculation.

The commercial lens is the third business case dimension. The logic behind this dimension is to prove that the proposal will result in a viable procurement and profitable deal. Viable procurement implies a comprehension of the market requirements, knowledge what is sensibly achievable by the supply side and what procurement routes are the most valuable ones. This dimension also necessitates the analysis of services, project's outputs and milestones as well as how potential risks can be allocated in contractual arrangements.

The aim of the financial dimension is to validate the affordability and funding of the chosen proposal. This approach prioritizes understanding of the capital, revenue, and costs lifecycle; how the proposal will impact company's balance sheet, income and expenditure picture. Another crucial point behind this dimension – to get a positive sanction from stakeholders and customers.

Last but not the least, the management dimension. The objective of this lens is to ensure that solid arrangements are in place for the initiating, planning, delivering, monitoring as well as evaluating, including the lessons learnt phase and feedback to the company's strategic planning cycle. This approach guarantees that best managerial practices are implemented, special arrangements concerning change and contract management take place as well as the organizational resources are assigned for benefit realisation and risk mitigation.

As has been mentioned above, the business case is “whats” and “whys” of the project. Requirements management is the approach that deals with “whats” side (Lester 2017, 26).

Customers, clients, business owners have certain set of expectations for any project, which are officially called requirements. Thus, the requirements management is related to the “eliciting, capturing, collecting, assessing, analysing, testing, prioritizing, organizing and documenting” of these requirements (Lester 2017, 26). In order to prioritize and balance sometimes contradicting requirements, project manager evaluates the profitability and feasibility of a particular requirement and agrees with a stakeholder on the presence of the requirement, bearing in mind costs, schedule and performance metrics associated with this requirement. Upon agreement, the requirement becomes a benchmark against which the progress and success of the project are evaluated.

When it comes to the product development projects (which are under closer investigation for this research), requirements management follows a well-structured, sequential format, which begins with requirement specification and ends with the product solution (Almefelt, Berglund, Nilsson & Malmqvist 2006). Moreover, it is advised to establish requirements early and keep them under focus throughout project development. The Figure 8 indicates the theoretical flow of the activities associated with requirements setting and development. As one could notice, the user requirements come beforehand, highlighting the importance of business case and benefits realization. As with all the theoretical approaches, empirical perspective on requirements management is far from the theoretical one.

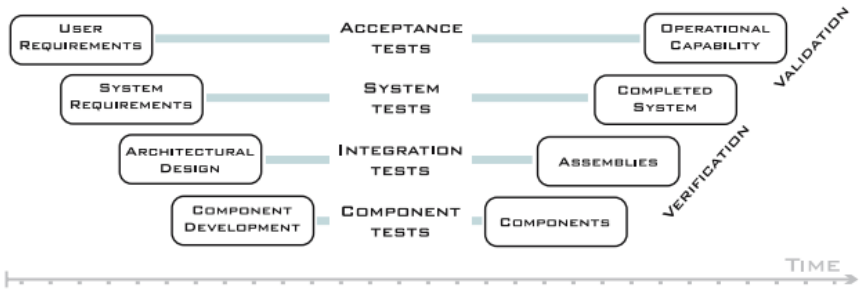

Figure 8 V-model of requirements activities (Stevens, Brook, Jackson & Arnold 1998)

Thus, there is a possibility of a change in requirements from stakeholders’ side after the project scope has been finalized and agreed. Such change rarely happens unnoticed, forcing a project manager to revaluate costs, programme schedule, procedures, and processes

in order to implement a new requirement (Lester 2017, 27). Moreover, there are quite many risks associated with requirements handling. Hence, parties might fail to prioritize key project's requirements, leading to different interpretation by different stakeholders. In case of insufficient knowledge about requirements, parties might fail to have a holistic view on the development and miss attractive values for customers, end-users. Requirements management might also force project team and involved stakeholders to test and periodically review requirements so that to ensure the validity of the project outcomes. The tricky part about these periodic reviews is that it generates additional pressure for intra- and extra-company communication as well as clear assignment of roles and functions, otherwise there is a risk to lose driving factors during the development (Almefelt et al. 2006)

The core behind any aforementioned term, would it be project, project management, business case, requirement, is the benefit. How one can identify, communicate, track and above all realize the intended benefits – the core of this research. The more holistic picture will be achieved only upon investigation of one more level – programme management, as programmes are primarily launched and driven by the need to realize benefits. Projects create outputs, which in turn generates capabilities, which transform into outcomes that serve the purpose of benefit realisation for the organizations.

3.2 Program management

Program can be defined as "a temporary, flexible organization created to coordinate, direct and oversee the implementation of a set of related projects and activities in order to deliver outcomes and benefits related to the organization's strategic objectives" (The Stationary Office 2011, 6).

While project might be also characterized as a temporary organization, the crucial differences are: firstly, the timeframe since the project tend to last for a much shorter duration. Secondly, projects deliver one or more outputs according to the agreed business case. A particular project may or may not be part of the programme. Programmes, on other hand, deal with the outcomes of the project. Programme management and project management are complimentary, meaning programme fulfils a role of an umbrella, under which projects are initiated, controlled, and closed (The Stationary Office 2011, 6).

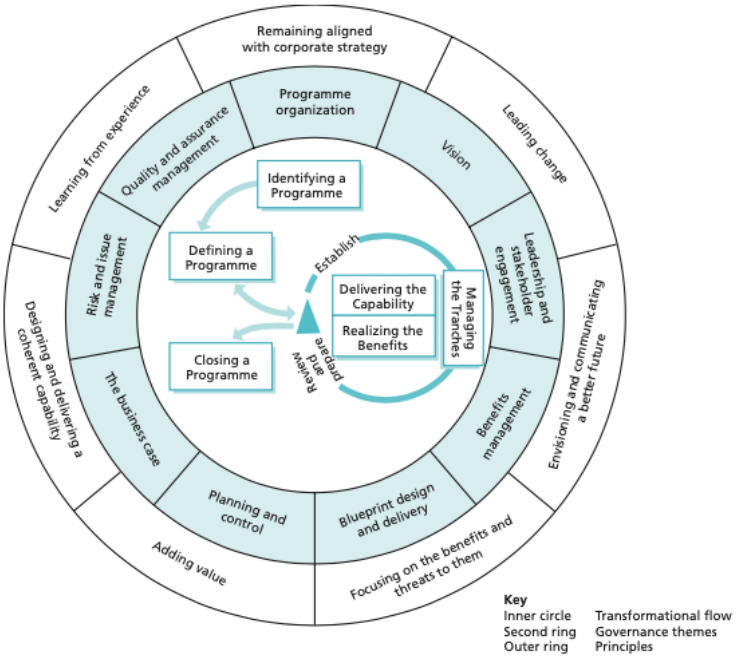

Figure 9 Programme framework

It is worth noting that programs play vital role in shaping, directing, and implementing corporate strategy by authorizing, modifying, and finishing projects as well as their interdependencies, including resolution of resource constrains and conflicts that might affect components within a programme or managing program benefits realisation by sequencing component interdependencies (PMI 2017a, 543).

There are three scenarios for project's existence: stand-alone (outside programme or portfolio frames), within a program, or within a portfolio. The figure below illustrates the relationship between different levels and components. The division and grouping under certain portfolios and programmes reflect the intention to facilitate the governance as well as achieve organizational strategies and priorities. Portfolio and program grouping allows to prioritize components based on the risk, funding, market trends, etc. Moreover, it leads to the holistic tracking by the organization the fulfilment of strategic needs. The appropriate institutes are, thus, launched, governance is established, resources (be it financial, human, or physical) are authorized.

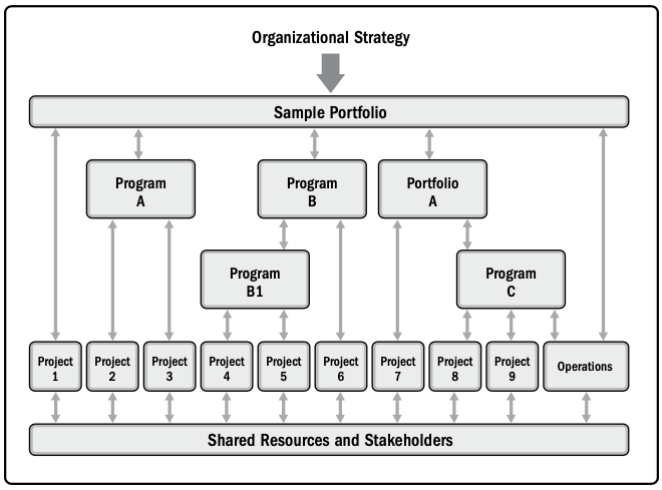

Figure 10 Portfolio, Programme and Project interfaces (PMI 2017a, 544)

Programme management aligns three core organizational elements: delivery mechanisms, corporate strategy, and business-as-usual environment. As contradictive as they seem, these elements might naturally oppose each other, hence, it is one of the programme objectives to manage the natural tension. Programme management scope also includes managing the transition of developed product or solution into company's operations, whilst sustaining their performance and effectiveness. Finally, programme management is about integrating and reconciling competing demands for resources, creating a context and control framework for projects within programme (The Stationary Office 2011, 7).

Depending on the trigger, one could recognize three kinds of programmes (The Stationary Office 2011, 9):

The vision-led programmes are initiated to deliver a clearly defined by top management vision. This kind reflects the top-down approach within a company, while operations playing cross-functional roles. Another scenario for vision-led programmes is development of a new product or service, offered by a business environment and embodied in strategic opportunity.

The second type is the emergent programmes. The reason for initiating this kind of programmes is the recognition that coordination of the projects is indispensable in order to deliver intended benefits and changes.

The final type is the compliance programmes, which can also be referred to as "must-do" programmes. Usually, the benefits that result from these programmes might be expressed

in terms of compliance and escaping from negative implications rather than quantifiable improvements in performance.

It is worth to remember that in reality, most programmes consist of features from all kinds, however, it is advisable to identify dominant features of one kind so that to develop and optimize approach and priorities.

Upon discussing the core values and drivers of programme management, one recognizes the need to elaborate on the functionality side of programmes – programme lifecycle.

Despite having similarities with projects in terms of "definition, realisation of benefits, and closure" framework, programmes imply the sequencing and coordination of multiple components above projects' level of necessities. The activities within program lifecycle depend on the type of a programme as well as business environment, and regularly are initiated before the funding for a programme is approved. One can see the programme lifecycle processes under Figure 11. Thus, substantial number of efforts is needed before the program officially starts.

Programs tend to last significant amount of time, in some cases even decades. Irrespective of a duration, programs follow the same structure in order to successfully realise intended benefits:

The definition phase is the first stage, which contains activities to authorize the program and develop program roadmap needed to achieve expected benefits. Program business case as well as program charter are produced. Upon approval, the program plan is prepared. The programs are usually initiated as the outcome of an organisational plan to reach strategic objectives or a looked-for place within an organisational portfolio. The principal objective of this phase is to evaluate program's goals and objectives, expected outcomes and benefits so that to acquire an approval for the program. Program definition consists of two subphases: program formulation and program planning. Program formulation incorporates the development of business case which states how intended benefits support organisational strategic objectives. Initial studies on resources, risks, and scope as well as risk assessments are conducted. The second subphase – program planning – starts upon approval of program charter by program steering committee. The objective behind this substage is to establish a program governance, program team as well as program organisation. The program management plan is created, which is "the document that

integrates the program's subsidiary plans and establishes the management controls and overall plan for integrating and managing the program's individual components" (PMI 2017a, 94).

The second phase is the program delivery. This stage consists of the activities performed to realise intended outputs of each component according to the program management plan. During this phase, individual projects are launched, planned, implemented, transitioned, and closed, while benefits are realised, transitioned, and sustained. Programs tend to have a high degree of unpredictability and unclarity, which leads to the program roadmap and program management plan documenting only the intended direction and benefits, whilst the full picture of program components might not be known during the program definition phase. To mitigate this uncertainty, program manager needs to consistently supervise the components throughout this phase and, upon need, to relocate and reassess for proper integration and program's right direction via adaptive change. The program delivery phases contain the following substages: component approval and planning, component oversight and incorporation as well as component transition and termination.

Last but not the least, the program closure phase, which aim to transfer realised benefits to the sustaining organisation and officially close the program in an organised manner.

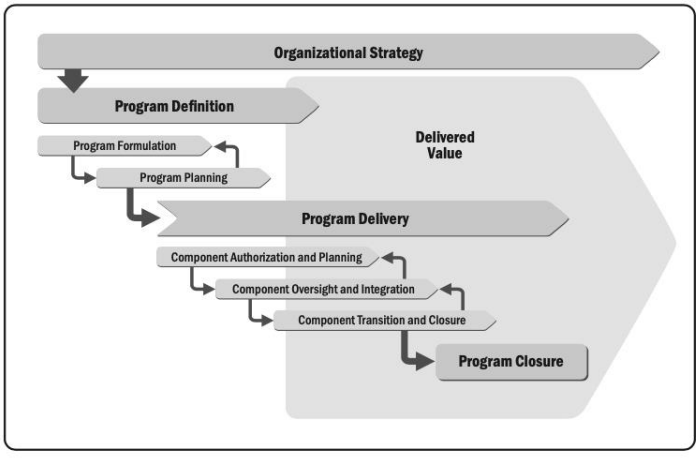

Figure 11 Programme lifecycle phases

Upon investigating the "what" and "how" sides of the program management, one feels the need to elaborate on the "why" side – the core of the present research.

Whether the main aim of the program is to implement organizational changes, enhance strategic objectives or create a new infrastructure complex, it will always come down to the question whether the program has realised the benefits.

Despite the clear need, the post-mortems of programmes are usually focused on the time, budget, and quality aspects. Much more seldom the central question is asked: whether the benefits that have been outlined and foreseen when the investment had been sanctioned were actually delivered by the program. Eventually, it is the matter of an old medical black humour: “the operation was a complete success: unfortunately, the patient died” (Williams & Parr 2006, 155).

As illustrated below, the benefits management, together with programme and project management, directs organisation towards desired, valuable outcomes by translating strategic objectives (from the top strategic management) into recognisable, measurable benefits and methodically communicating the outcomes. At the same time, programme management domain acknowledges that change initiatives do not happen in isolation, and the long-term incorporation of existing projects, programmes and operations is vital (Williams et al., 2006, 156).

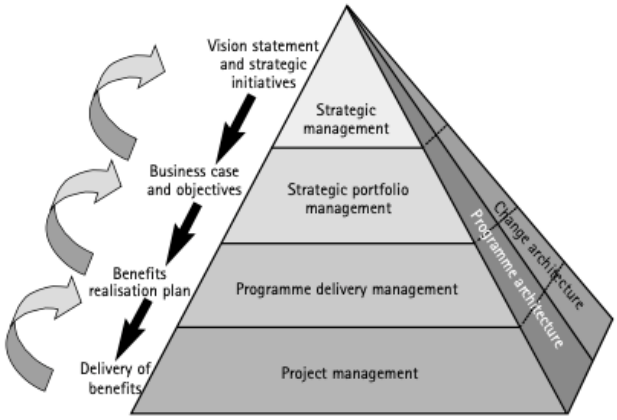

Figure 12 How benefits management fits into programme management

3.3 Benefit Realization Management (BRM)

According to the Office of Government Commerce, approximately 30-40 per cent of projects initiated to sustain business change realize no benefits whatsoever (Williams et al.,

2006, 155). The following question is to be asked – why, despite being at the core of any management domain, be it project, programme, requirements, or strategy management, does the benefits management remain a black box, which makes any project, programme, or portfolio manager tremble?

For the sake of holistic understanding of the benefits realisation, the following aspects will be researched: definition of benefits and dis-benefits, what is the benefit realisation management (BRM) and the aim behind, benefits realisation cycle and associated key roles and outputs, pillars of the BRM, available BRM frameworks as well as issues associated with the practical implementation of the research phenomenon. Based on the overview, one will outline BRM practices and principles for implementation into the case company.

Projects are initiated in the first place to implement changes, generate values and benefits for the organisation (Svejvig & Schlichter, 2020). However, the starting point in any project, programme or portfolio milieu is to agree on what can be considered the benefit: "a benefit is an outcome from actions, behaviours, products, or services that is important or advantageous to specific individuals, such as business owners, or to specific groups of individuals, such as stakeholders" (Kerzner 2018, 715). It is worth noting that there is no consensus when it comes to the distinction between "benefit" and "value", with the latter being defined as "the benefits delivered in proportion to the resources put into acquiring them" (Office of Government Commerce 2010, 143).

Consecutively, the same phenomenon applies to the "benefits management" term, which is used interchangeably with the "benefits realisation management" or "value management", albeit the latter one focuses more on the balance between benefits and costs (Breese 2012). Thus, the benefit realisation management can be defined as "the collective set of processes and practices for identifying those benefits and aligning them with formal strategy, ensuring that those benefits are realized as project implementation progresses and finishes and that the benefits are sustainable – and sustained – after project implementation is complete" (The Economist Intelligence Unit 2016).

Though being quite novel and intangible, the need for the benefits management has been emphasized for quite some time now. Thus, the costs of failed projects (those that failed to realise intended values) have amounted to approximately $200 billion in the United

States alone (Murphy 2002, 2). Other findings are presented by the global survey among more than 500 executives, organized by the Economist Intelligence unit and sponsored by the Project management Institute (PMI), which surfaced that only 61 per cent of the key high-impact projects, those contributing to the organizational strategy, produced their intended strategic benefits (The Economist Intelligence Unit 2016). The survey also found that 70 per cent of the respondents admitted that increased use of benefit realisation management inside their organisation is a high priority. However, it is worth mentioning that "the application of the benefits realisation to general project implementation - let alone strategy – is only about a decade old and standardized best practice is lacking" (The Economist Intelligence Unit 2016). Bearing this in mind, the present research strives to provide practice perspectives to the benefits management, to move away from the normative prescriptions to the actuality and concrete challenges of benefits realisation.

With benefit realisation arising out of a need to counter "the technocratic way the Information Technology/Information Services investments" are initiated as well as current worries around success rates of the projects and restrictions of existing investment appraisal methods (Breese 2012), this domain emerged in the late 1980s with a clear rationale to achieve planned benefits which are to be actively managed (Aubry, Boukri & Sergi, 2021). Particular interest in benefits management from IT sector can be explained by the "silver bullet thinking" – term introduced by Thorp (1998), which reflected the naïve belief that "business solutions come neatly packaged and stamped benefits inside, reinforcing the idea that all you have to do is plug in the technology or handover the infrastructure and magically benefits will flow". The academic interest on the IT sector remained prevalent until 2010 with the focus on improving investing decisions as well as developing IT/IS evaluation methodologies. From 2010 onward, the focus has expanded to various fields, e.g., healthcare, construction industries. There is also a considerable shift from the normative frameworks to the best practices and maturity models. The overall evolution of benefits management from academic perspectives is represented in the table below (Table 1).

Given the benefit realisation importance, there are multiple aspects and areas driven by it, including alignment and validation of the integrity of a blueprint against the activities, projects, and associated company's changes needed to deliver new outcomes and benefits. Definition of the achieved benefits, planned benefits, costs to date as well as expected

costs against the business case is the second aim behind the BRM, which is supposed to deliver a pressure-test of ongoing viability of a project, programme. The third goal might be defined as the prioritization of benefits to let the programme realise maximum value under given restraints and make the correct trade-off decisions. Benefit realisation management also serves as a basis for programme and project planning, simultaneously engaging the correct stakeholders to understand the mutual effect. The fifth ambition behind benefit realisation is the description of a fit-for-purpose capability, establishing the crucial quality-checking mechanisms throughout the project and programme and checking that they are allied with requirements in a blueprint. Besides, the benefits management serves as a driver for gate reviews to enable decisions on changes to project or programme going forward. Last but not the least, BRM serves as a communication tool to balance costs required to deliver the capability with the value of benefits in a business case as well as to monitor challenges and risks associated with benefits realisation (The Stationary Office 2011, 77).

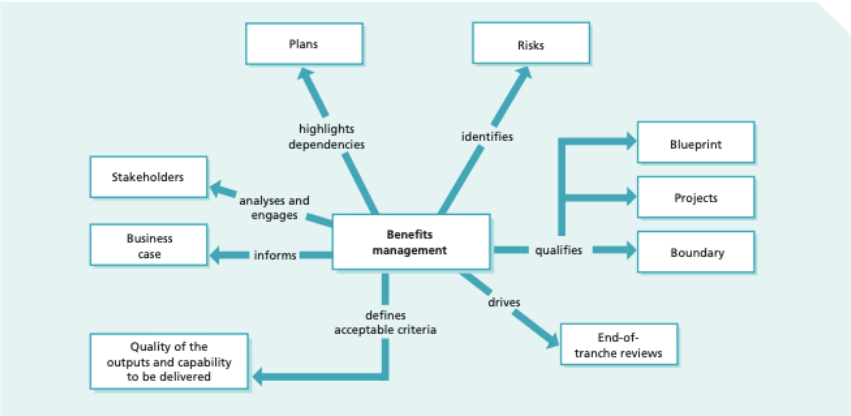

Figure 13 Benefits Management objectives

Following the BRM logic “not to make good forecasts but to make one come true” (Tillman, Tzortzopolous & Formozo 2010), one shall take a closer look at the potential pitfalls on the way to mature benefit realisation processes within organisations. Primary reasons spring from the business case being developed in a la-la land or being shelved after the project received a positive sanction for funding (Keen 2011, 220). Other issues arise from the communication gaps between implementation, evaluation, and business teams. There might be reluctance from the implementation team as well as benefit shortfalls being discovered too late through the project progress. Lastly, the unpredictability of external and internal environments (Keen 2011, 220). Nevertheless, the absence of management process (or even if it exists, it is disregarded or blemished) to ensure ingoing project success is happening. To implement the management process, one shall primarily grasp the basis of the benefit realisation management lifecycle as well as crucial roles throughout the lifespan.

Table 1 Literature on Benefits management over time (Aubry, Boukri & Sergi, 2021)

	1990–2000	2000–2010	2010–2014	Emerging (2015–…)
Professional and Normative Literature (Referred to as *Gray Literature*)				
Main focus	Emergence of concepts and principles of benefits management Thorp (1998), Willcocks (1992)	Case studies—mostly focused on IT projects and publicly funded initiatives, methodology, and "how to achieve benefits management" Bradley (2006); Jenner (2009); Light et al. (2005); Ward and Daniel (2006)	Lessons learned and recipes for success Bradley (2010); Jenner (2012)	Agile approach Bradley (2016); Meredith and Zwikael (2020); PMI (2018a); Zwikael and Smyrk (2019)
Academic Literature				
Main focus	Very few papers describing a process in the IT field. Peters (1990); Remenyi and Sherwood-Smith (1998); Ward et al. (1996)	Mainly in IT but gradual opening to a variety of empirical settings such as healthcare and government Ashurst et al. (2008); Bennington and Baccarini (2004); Clarke and Doherty (2004); Doherty et al. (2008)	Searching for practices and methods, which improve benefits realization and the evaluation process Ashurst and Hodges (2010); Breese (2012); Doherty et al. (2012)	Integration of benefits management into larger organizational systems (i.e., governance, knowledge) Badewi (2016); Breese et al. (2020); Chih and Zwikael (2015); Dupont and Eskerod (2016); Keeys and Huemann (2017); Mikkelsen and Marnewick (2020); Zwikael et al. (2018)

3.3.1 Benefit Realisation Lifecycle

The key steps of effective benefits realisation management lifecycle begin before a project or programme is launched and continue throughout the lifecycle of the project/programme and even beyond it. The evolution of the benefit realisation management approaches is summarized in the Table 2. As one can see from the Table, Active Benefit Management method framework by Leyton (1995), the Cranfield process model of Benefits Management (Ward, Taylor & Bond 1996), The Benefits Realisation Approach by Thorp (1998) as well as The Active Benefit Realization, developed by Remenyi and Sherwood-Smith (1998), Towards best practice to Benefits Management by Ashurst and Doherty (2003) - all these methods and frameworks to one degree or another provide a basis for using information technology projects to deliver, plan and monitor business benefits more consistently and predictably. The key pillars behind these methods are the continuous evaluation process of reviewing and monitoring the business benefits, the engagement of key internal stakeholders as well as explicit relationship between change and benefits. Springing from Information Technology sector, these frameworks are intended to be used for any kind of project, though with fair amount of cautiousness (Sapountzis, Harris & Kagioglou 2008).

In 2006 and 2007, one might witness the development of the Benefits Realisation Management framework (OGC 2003, Bradley 2006) – the lifecycle framework that prioritizes identification and quantification of benefits as well as assignment of owners and tracking. The overview of the process is depicted in the Figure 14. The core principle behind this

method is to guarantee that business change will be attained by transforming the organisational objectives into identifiable measurable benefits that can be methodically followed throughout the project, program (OGC 2003). This approach also implements benefits management steps into standard gate review process that was introduced in the chapter "Need analysis and Description of the present state" chapter of the present research.

Table 2 Benefit Realisation models (Sapountzis et al. 2008)

Approach/Model	Details
Active Benefits Management (Leyton, 1995)	Sets the benefits management activity in the context of business change. Identifies continuous flow between change and benefits
The Cranfield process model of Benefits Management (Ward *et al.*, 1996)	Key feature of this model is benefits monitoring this compares project results with the benefits realisation plan during the project and assesses if any internal or external changes have occurred that will affect the delivery of planned benefits. Potential benefits are identified, a plan is devised for their realisation, the plan is executed, the results reviewed and evaluated and feedback occurs.
The Benefits Realisation Approach (BRA) (Thorp, 1998)	Is based on two cornerstones: 1. The shift from stand alone project management to: Business Programme Management, Disciplined Portfolio Management, Full cycle governance. 2 The three necessary conditions for the successful implementation of the BRA are Accountability of activists, Relevant measure as in measuring the things that really count and Proactive management of change to give people ownership stakes in programs.
Active Benefit Realisation (ABR) (Remenyi and Sherwood-Smith, 1998)	A process for managing information systems' development through a continuous evaluation approach. ABR requires a direct and continuous focus on business benefits realisation and is based on a contingency philosophy, this is that information system outcomes development activities, tasks and participating roles of the stakeholders are dynamic throughout the duration of the project principle stakeholders of the information system are identified at the onset and that they accept and agree their continuous involvement.
Towards best practice to Benefits Management (Ashurst and Doherty, 2003)	In this approach benefits realisation is a continuous process through an evolving organisational context. But it does not into account influences that external factors may have onto a project
Managing Successful programmes (MSP) (OGC 2007)	MSP represents the UK Government's view on the programme management principles and techniques MSP identifies benefits management as "a core activity and a continuous 'thread' throughout the programme" (OGC, 2007a), and fundamental to the realisation of benefits from new capabilities delivered by projects within the programme. Emphasis is placed on identification, quantification, assignment of owners and tracking, it has been heavily influenced by Cranfield's Benefits Management model and Bradley's Benefits Realisation Management 2006.
The Gateway™ Process	The Gateway Review Process indicates, at a high level, dependencies between a typical Benefits Management process and the steps for managing a major delivery programme. It also maps the main benefits management steps onto the standard delivery stages described in both MSP and OGC Gateway Reviews, but the approach can be used for any type of more specialised change initiative. This process contains identification of potential benefits their planning, modelling and tracking, the assignment of responsibilities and authorities and their actual realisation.
Benefits Management in the Handbook of Programme Management (Reiss *et al.*, 2006)	This approach focuses the benefits management model in the delivery of benefits by projects (Nogeste and Walker, 2005). Reiss (2006) define the scope of benefits management as "the management and monitoring of benefits during and after execution phase' and depicts the "value path" relationship between benefits and projects as a Hierarchical Benefits structure (Nogeste and Walker, 2005)

Despite multiplicity in approaches and models within various sectors (which are summarized in the Table 2), one shall highlight the similarity that all models have in common – a Plan-Do-Act-Check lifecycle (Nogeste & Walker 2005). Bearing that in mind, one shall next investigate the common benefits realisation management lifecycle step by step.

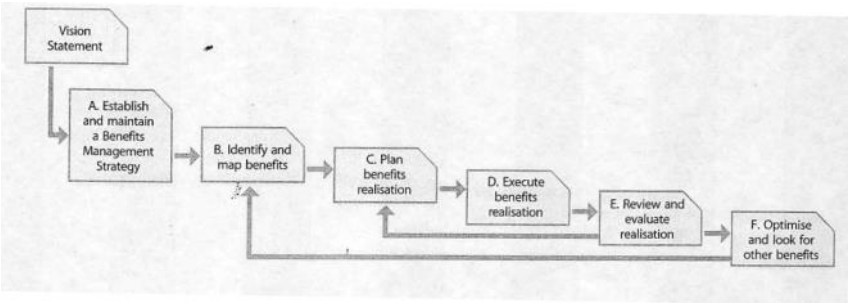

Figure 14 Benefits Management Process (OGC 2003, Bradley 2006)

The benefits management lifecycle starts with the identification of possible benefits and mapping them by linking corporate objectives with project outputs (OGC 2011, 82). The key behind the profound identification is the engagement of key stakeholders as well as robust modelling of the flow between programme outputs, outcomes, capabilities, and benefits. The output can be defined as "the deliverable or output developed by a project from a planned activity" (OGC 2011, 79). A capability, on the other hand, is a finalised set of projects outputs needed to provide an outcome. Consecutively, an outcome can be described as a novel operational state achieved by the transition of a capability into operational mode (OGC 2011, 79). Last but not the least, the benefits definition was elaborated in the section above.

Figure 15 Benefits Management Lifecycle

Upon identifying the benefits, one may proceed to the planning of the benefits realisation, i.e., assigning responsibilities, clarifying interdependencies between benefits, validating the credibility of the plan (OGC 2011, 85). By validating the benefits, one pressure-tests the identified benefits by the following four dimensions: description, observable outcomes, attribution, and measurement (OGC 2011, 85). The description reflects the need to clearly describe what is meant by a benefit; the observable outcomes dimension implies the need to proof that there will be a demonstrable difference between pre- and post-

program launch. The attribution suggests the surfacing of accountability and responsibility for realising the change. Finally, the measurement strives to ensure that the question "how and when will the achievement of the benefit be measured" will be elaborated and answered (OGC 2011, 85).

Delivery of the benefits realisation is the third step. One of the vital areas of focus during this phase is to track the progress of the realisation against the plan, to measure the benefits – "the benefits should always be quantifiable and measurable" (OGC 2011, 86). Setting the baseline, performance metrics as well as Key Performance Indicators (KPIs) – the focus of this stage.

Last but not the least, the benefits review. This phase measures the achieved benefits against previously set targets, that are outlined in the business case. Specific attention is to be paid to the unplanned benefits which should be also measured throughout the project, program at gate reviews as well as at the end of the project lifecycle (Williams & Parr 2006, 162).

While investigating the process, it is worth mentioning the people aspect of it – the roles and responsibilities. To mitigate potential ambiguity in the benefit realisation tasks, it is advisable to assign the following key roles: business benefits manager, business change manager, sponsor, and programme manager (Williams et al. 2006, 169).

The business benefit manager is a key communication point between project (implementing) team and business unit who will be impacted. It is the person who owns the benefits management process from the planning until the handover of the benefits to a business unit. The business benefit manager will work narrowly with the programme manager; however, the two roles should not be performed by the same person. Besides, the reporting from the business benefit manager should not be directed to the programme manager, rather to the sponsor (Williams et al. 2006, 169).

Business change manager is a role who is handling the people side of the change, their behaviours. Business change managers should be involved in the process as soon as possible to formulate the implementation and communication plans. This role is required to identify and implement change within the complicated matrix of individuals' issues and concerns (Williams et al. 2006, 170).

The sponsor is the ultimate owner of the benefits a project/programme is planned to realise. The primary task of this role is to clarify the scope and resolve any associated issues. Furthermore, the sponsor must leverage leadership skills to communicate the intended benefits and the required benefits focus (Williams et al. 2006, 170).

Last but not the least is the programme manager role. Being at the core of the benefits realisation management, he/she is responsible for fine tuning the programme plan and progress in response to the projects' outputs. This role is also responsible for safeguarding the stakeholder engagement and that the communication tools and practices are in place to facilitate the continual buy-in to the programme via an emphasis on business benefits (Williams et al. 2006, 170).

3.3.2 Benefit realization pillars

Taking into consideration the interdependent and complicated nature of the benefit realization management, one strives to identify the critical set of perspectives with which to comprehend, analyze, measure, manage as well as retire organizational investments – projects. Thus, the aim of this section is to set a framework that would allow to align ever changing business context with an initiative so that to realize planned benefits.

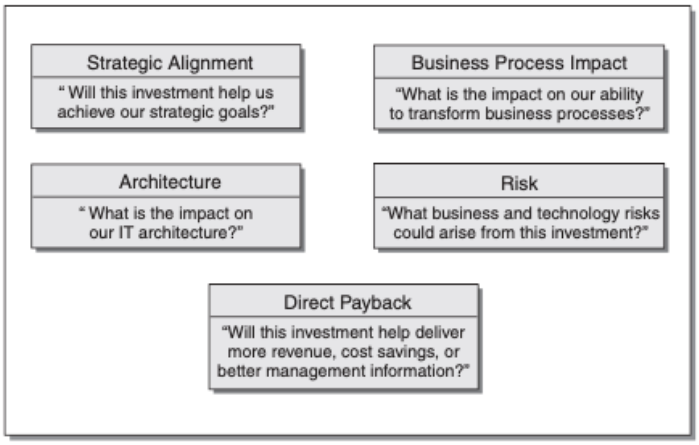

Figure 16 Benefit Realisation Pillars (Murphy 2002, 41).

Murphy (2002) has highlighted the Five pillars of the Benefit Realization Management – the "umbilical cord between business context" and a project (Murphy 2002, 39). Despite targeting the IT/IS sector, this Five Pillars framework provides a new perception for the project and program management domains.

The first pillar – Strategic Alignment – reflects the interdependency of the business and technology decisions. It considers an initiative (project or program) as a strategic resource to address future business needs, expand current capabilities as well as direct and allocate

limited organizational resources. “Technologies that support these strategic goals and initiatives are more likely to make an impact on the enterprise if they complement process and business model enhancements and are more likely to be supported by a business unit and senior management” (Murphy 2002, 45).

The business process impact is the second pillar. This pillar implies the interdependency between business processes and technology (be it tangible products or services). While changing the one side, the other side will be altered at the same time. Hence, while planning and developing the benefits realization, one might consider how this change will affect the present business processes (Murphy 2002, 52).

With architecture being a third pillar, one shall clarify from the beginning that despite architecture implying a technological infrastructure of an organization, this pillar serves as a guiding principle in “selecting, implementing, integrating, and managing shared resources” as well as a criterion to select projects for the ultimate business portfolio (Murphy 2002, 61).

The fourth pillar reflects the need of any initiative to create financial value – financial return. This pillar is the centre for the executive level decision-making procedure. Direct payback is the real reason for launching any initiative as well as a justification for selecting a project within a business portfolio (Murphy 2002, 66).

It is little wonder that due to turbulent business environment, unpredictable and rapid changes, increased importance of human and organizational resource considerations have created a new facet to the complexity of a risk assessment. This pillar reflects the need in the holistic risk assessment and questioning the projects’ financial, legislative, environmental, or safety issues in order to secure project’s approval as well as benefits. Despite having risk assessment and monitoring practices, organizations fail to approach the issue in a structured way, often focusing on what is obvious or can be easily measured (Murphy 2002, 74).

3.4 Developing benefit realisation management for the case company

“The triggers which led to the emergence of benefits management – appraisal of IT investments and closing the gap between projects and organisational strategy – have not lost their salience” (Breese, Jenner, Serra & Thorp 2015). Indeed, the current research

aims to develop a benefit realisation framework for a case company exercising the same rationale behind –to secure development projects' value as well as ensure that the numbers, elaborated in the project's business case, will not diminish in their values with the progress of project.

With the current theoretical overview of the benefit realisation management, its origins, methods, practices as well as roles and aim, one has outlined the findings that might be applicable for the case company in order to establish and implement the benefit realisation management process.

First of all, the business case – official register of project's benefits – must be thoroughly elaborated and followed-up throughout the project. "It must be realistic and committed to by key stakeholders who stand to gain or lose by its success or failure" (Williams et al. 2006, 171). The key aspect here is not merely usage of sophisticated investment appraisal techniques, but the engagement throughout the project or program of those who will be responsible for delivering the benefits in operational environment.

The second implication is the creating buy-in inside the company by proving the vitality of a project. This might be achieved by establishing clear roles and responsibilities related to benefits practices and by ensuring that there is a continuity of an accountability through the business case and realisation.

Thirdly, the establishment of a benefit lifecycle is crucial. Clearly set practices to identify, plan, track, monitor as well as sustain benefits will not only guarantee the continual communication, efficient change management as well as effective balancing of expectations versus reality, but also will allow to pressure-test the initially set targets, check them against external environment and implement right-on-time amendments.

Last but not the least, the quantification of benefits and risks is crucial. "Intangibles are nowadays the main drivers of growth and competitiveness in our societies and their measurement is essential for the design and implementation of public policies" (Nogeste & Walker 2005). Robust quantification in the beginning of the benefits lifecycle guarantees careful monitoring of the performance, identification of efficient Key Performance Indicators as well as measurable progress towards project's targets.

4 RESEARCH ENVIRONMENT

While mentioning the word “research” one has to narrow down the term in order for the reader to understand the logic behind this chapter. Thus, the research can be defined as “something that people undertake in order to find out things in a systematic way, thereby increasing their knowledge” (Saunders et al. 2007, 5). Hence, one might notice the systematic approach to the research mentioning, which implies the need to go through multi-stage process towards successful research, including reviewing the literature, designing the research, collecting the data, analysing data, etc. (Saunders et al. 2007, 8). The “Research onion” by Mark Saunders and Paul Tosey (2007) will serve as a basis to construct a complete research environment (see Figure 17).

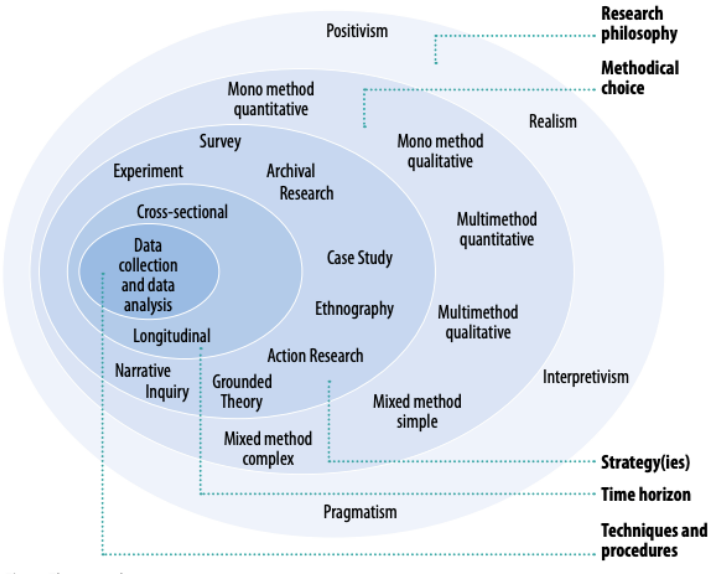

Figure 17 Research Onion

It is advisable to start with the outer layers and peel back to the core in order to ensure that core of data collection techniques as well as analysis procedures undertaken in the research are both coherent and appropriate.

The pragmatism was chosen as the main philosophy for this research due to its focus on “finding practical consequences” (Saunders & Tosey 2012). The mentality behind this philosophy is the absence of single viewpoint that can give the entire picture and the acknowledgement of multiple realities. That’s why two resources of practical findings – interviews and the workshop - were established to check multiple realities.

The second step is to establish the methodological choice – the aspect that concerns data collection techniques and corresponding analysis procedures (Saunders et al. 2012). The multimethod qualitative study – "use of more than one qualitative data collection techniques and corresponding qualitative analysis procedures" – was chosen for the current research (Saunders et al. 2007, 603). The reasoning behind the choice is the in-depth interviews and workshop organisations being the main sources of data findings and analysis.

Thirdly, one identifies the strategy for the research. Due to continual communication and working with company representatives as well as the aim to apply research findings to the organisation and bring organisational change, one chooses action research as the main strategy (Saunders et al. 2012). It is worth noticing that particular strategy was also chosen due to the scarcity of applied, action research in the benefit realisation management domain, highlighting the academic importance.

Fourthly, one sets the time frame for the research. Due to the extended period of time interviews have been conducted as well as the goal of the research to apply potential solution in the future, the longitudinal time horizon is the selected option for the present research.

Last but not the least, one shall clarify the data collection techniques and procedures in order to complete the research environment setup. Both primary and secondary data will be used as the data collection points. The secondary data include journal articles, reports, guidelines as well as books. The primary data consist of semi-structured in-depth interviews and observation (during workshop organisation and facilitation). When it comes to the qualitative data analysis, the inductively based analytic procedures were followed, meaning summarizing the data, analysing and condensing it, so that to explain a specific phenomenon based on the multiple case studies (Saunders et al. 2007, 498). To be more precise, the analytic induction as "an inductive version of the explanation-building procedure" was chosen as the main inductive method to analyse data and can be defined as "the intensive examination of a strategically selected number of cases so as to empirically establish the causes of specific phenomenon" (Saunders et al. 2007, 498).

Thus, by peeling layers of the "Research onion", one was able to construct the environment for the current research.

5 DESCRIPTION OF THE DEVELOPMENT PROCESS

The development process for the present research is divided into four stages. The reasoning behind the division is to combine theoretical overview of benefits management with the practical findings around as-is picture inside the case company, so that to tailor potential solution-method.

The stages are the following:

1. Setting unstructured in-depth interviews. More information on interview environment, tools as well as interviewees' background is presented under 5.1 section.
2. Organizing workshop with focus group. The aim of the workshop was to test how well focus group is able to identify and quantify benefits for the two case projects. Section 5.2 will provide thorough description of this stage.
3. Investigating theoretical background of research phenomenon. Theoretical overview was undertaken in the third chapter of the research. Theoretical check was organized simultaneously with the stages one and two so that not only to compare potential benefits practices inside case company with available benefits framework, but also to fuel discussions with interviewees.
4. Analysing and merging results of the aforementioned stages to proposed method. This stage will be elaborated on in the sixth chapter "Description of the result of the development".

5.1 First data collection point - qualitative unstructured in-depth interviews

Based on the methodological choice of the research as well as aim of the stage – to portrait the as-is picture inside the case company around value (benefits) management – the unstructured in-depth interviews were chosen as the method of the data collection for this stage.

While being a common method for collecting information from people, interviewing is any "person-to-person interaction, either face-to-face or otherwise, between two or more individuals with a specific purpose in mind" (Kumar 2011).

In order to nurture the discussions, the unstructured type of interview was chosen, which provide complete freedom in terms of structure and content (Kumar 2011). However, it

does not imply the complete absence of the skeleton structure or reasoning behind questions.

Last but not the least, in-depth interviews were selected as a method of data collection in the research at this stage. This primary source of data can be characterized as "repeated face-to-face encounters between the researcher and informants directed towards understanding informants' perspectives on their lives, experiences, or situations as expressed in their own words". It is worth mentioning that in-depth interviewing is both research design and method of data collection, hence, structuring the flow and limitations of the research.

5.1.1 Interview environments, structures, and tools

Bearing in mind the intersectional nature of the research problem, it was decided to start with painting as-is picture within the company so that to portrait the process, identify the main pain points as well as to open new discussion topics so that to understand the grounds of the problem.

The following functions are at the core of the Product development projects inside case company and present at every gate review: Product Management (PM); Research &Development (R&D); Project Management; Supply management; Finance & Control; Lifecycle services (case company internal materials).

Being interfunctional, development projects still entail two functions above all – Product management (PM) and R&D. Reasoning behind such dependency is the research nature of the development projects – long development time, high risks, absence (though not always) of the external customer(s), having Product management as an internal customer and project owner.

It is worth mentioning that though Sales are not directly involved in the product development projects (the Product management is official representative of Sales in development environment as well as serves as an internal customer in case of the absence of external customer(s) or until the New Product Introduction (NPI) takes place), they still play crucial role in the development ecosystem as well as in the company as a whole. The reason for that – the prioritization of customers' needs and wants, the positioning of customer success as the key value that drives company's performance.

Hence, the following functions will be under scrutiny in this research: PM, R&D, Sales and Lifecycle services.

Two interview environments were set up: the first one for the R&D, PM and Lifecycle services functions, while the second environment was arranged solely for the Sales. The rationale behind – different levels of detailing. The first environment was mainly for picturing the whole product development process, procedures around business case and requirements management. The environment for the Sales was organized for specifying details around customer involvement and point of no-return.

The first environment consisted of open questions and was held in the discussion format. As questions for these functions are presented in the first appendix of the research, here only the clusters and the logic behind ones will be presented.

The interview commonly started with overview of the whole product development process, which is also known as "Develop-to-Market" process inside Business A and "Take-to-Market" inside Business B. As both processes followed the same gate structure, the aim was to find the gaps or constraints when it comes to gate thinking, whether gate checklists allow to track relevancy of the product/solution to the market, potential customers. Due to broad nature of the question, the interviewees mentioned a list of pain points which served as basis for further examination of research problem, i.e., to investigate practical applications of the benefit (value) realization inside case company for specific kind of projects – product development.

In most cases, the discussion continued in the area of business case – whether there are standard processes to review it, how often, who participates in creating and approving it, what they would like to change in current practices. The grounds for jumping into this topic is that a business case is the actual and formal reflection of the value of product development projects, since it includes the listing of business values, sales volumes estimations, and "contains objective, compelling and effective information which allows senior managers to choose the projects with the best financial returns…" (Melendez 2008).

Following business case cluster, the respondents were asked about Key Performance Indicators (KPIs) of the development projects. Apart from asking about the current metrics being followed, the respondents were challenged with their possible propositions on how

one could improve current KPIs, whether current metrics allow to track the value realization of a project.

As the value for the company side implies the money return on the investment, this value is indispensably leading to the dependency on the market, customers, as the latter one is the actual source of the money return. Thus, respondents were asked whether they see enough communication, collaboration with the end-customer, market and whether they see a room for enhancement. It must be acknowledged that despite being an internal customer for case company, Product management cannot be regarded as the true end-user due to the fact that the money circulates within the company, not coming outside. Moreover, it would be recognized later that though product management is supposed to serve as a reflector of the customer's requirements, this function is more internally oriented, lacking the external focus.

The value realization is the next cluster to focus an attention on. Bearing in mind that there are no official standard practices or procedures on benefit monitoring and realization, the interviewees were questioned what kind of barriers they see to establish these practices.

Last but not the least, the respondents were asked about how would they picture current project's process in the future, bearing in mind all their comments. The ground for asking this inquiry is to question future-proofness of respondents' answers.

The main tools that were used are Teams (to set up virtual meetings), Word (to record findings) as well as Outlook (to schedule meetings).

The second environment was set up specifically for the Sales function. Unlike cluster structuring in the first environment, it contained only three "True or False" questions:

1. Is it true that Sales team (person) are part of the Business case review (which takes at least once a year) – business case focus
2. Is it true that project team knows the segment they are developing product for – communication focus
3. Is it true that the point of no-return can be seen in advance from the Sales perspective under condition that Sales know what the product/project is about – no-return focus

Based on the true or false results, participants were asked the reasoning behind their answers, why they thought so, and what could be potential solutions for identified problems.

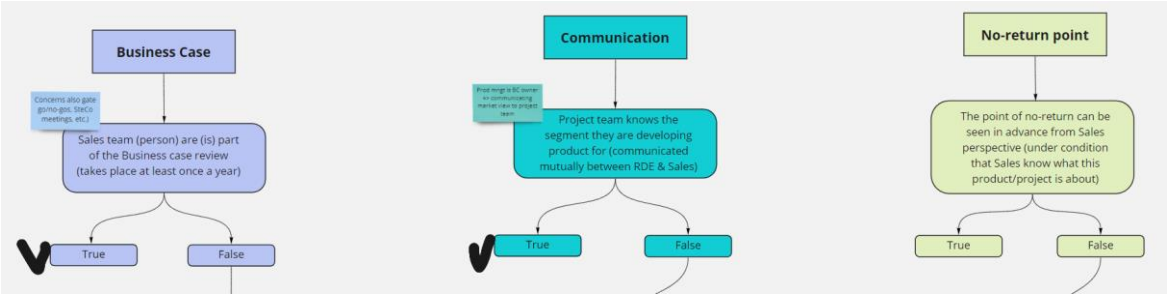

Figure 18 Questions to Sales

The main tools for this environment were Teams (setting virtual meetings), Outlook (scheduling) and Miro (to present and interact with the respondent)

5.1.2 Background of interviewees

Based on the aforementioned functions, the following interviewees were involved. It is worth noting that names are concealed for the sake of confidentiality as well as securing the ethics of the interview process.

Table 3 List of interviewees

ID	BUSINESS	FUNCTION	COMMENTS
PERSON A	Business A		Vice president, Business A
PERSON B	Business A	Product Management	Product Portfolio side
PERSON C	Business A	Product Management	Group A
PERSON E	Business A	Product Management	Group B
PERSON F	Business A	Product Management	Portfolio Management
PERSON G	Business A	Product Management	Group B
PERSON H	Business A	R&D	-

PERSON I	Business A	R&D	-
PERSON J	Business A	R&D	-
PERSON K	Business A	R&D	-
PERSON L	Business A	R&D	-
PERSON M	Business A	R&D	Sustainable Solutions & Decarbonization
PERSON N	Business A	R&D	
PERSON O	Business A	R&D	Project Planning & Development
PERSON P	Business A	R&D	Business & Project Control
PERSON Q	Business A	Delivery Management	
PERSON R	Business A	Lifecycle Services	Group C
PERSON S	Business B		Vice President, Project Management
PERSON T	Business B	Technology & Product Management	
PERSON U	Business B	Technology & Product Management	
PERSON V	Business B	Technology & Product Management	
PERSON W	-	Sales	Development projects, market development

PERSON X	-	Sales	Sales Evolution Project
PERSON Y	-	Sales	Head of Strategic Account Management
PERSON Z	-	Sales	Director of Sales region

As one could see from the table, the major percentage of respondents come from R&D, Business A. The reason for this is: Product Development projects are mainly conducted under R&D umbrella, as both project manager and project team are coming from this function as well as the most activities are performed by this function. Note that the activities as well as the assigned roles have been investigated under the chapter "Need analysis and description of the present state".

In case of reference, the ID of the interviewee will be used.

5.1.3 Interview findings

Without going any further, one shall set the following limitations applicable to this section: firstly, no names are revealed, which means that in case of the reference, the ID from the table above will be used. Secondly, summarized and aggregated version of the interview findings will be presented, meaning the mentioned challenges, interesting moments as well as potential solutions regarding potential benefit realization practices in the case company are displayed in the format of "**problem (phenomenon) -> reference -> grounds -> potential solution (if any)**". The logic behind such structure is to link experiences and insights of interviewees with theoretical reflection of the problem. It is also worth noting that phenomena below are given from the most mentioned to the least mentioned ones.

Unpredictability of the global and local market environments

Too unpredictable and risky development environment and market conditions – phenomenon that was mentioned in every interview meeting. Bearing in mind that the development product or solution will enter the market in minimum five-seven years and will start pay back the invested sums of money and time in 10 years or longer, one is left with no other choice than building assumptions, calculating approximations, playing with sales volumes numbers, and hoping for the most positive scenario.

"*Sales volumes – difficult number to come up with, it is always somebody's estimation. But it is still a crystal ball – we are making assumptions of the future. We are looking into 15-20 life spans. And even if something changes, we say – ok, let's keep it as it is*" (Person A).

"*Nobody expects anybody to know 10 in the future*" (Person N).

"*If you are going with only one direction within three years anything can change*" (Person X).

Indeed, as it was noticed by T.J.Andersen, the adherence of events to irreversible path, which can be explained by the increasing complex interdependencies in the global business environment, the global non-limit communication and exchange of information as well as social linkages between individuals and nationalities, justifies why the decisions are made along the way, and not in advance, to at least somewhat decide choices that will be available for future actions. "It is usually impossible to forecast developments as things are intertwined in intricate networks of interacting elements where things in one place can have unexpected consequences elsewhere" (S.Torp, T.J.Andersen 2020, 2).

The market volatility has been enhanced by two circumstances: the long lifespan of the project (which has already been mentioned above) and the spill-over of the pandemic – COVID-19. From education sector to travel industry, the pandemic has left nothing untouched. The loss of US$6 trillion in wealth at global stock markets in one week from 24th to 28th of February, disruptions of global supply chains, continual decline of the global oil price – only some of the vast number of COVID-19 negative consequences (Ozili & Arun 2020).

Developing an innovative product or solution under such circumstances and high stakes leads to the need of continual check-up of set values and requirements of the project,

which emphasizes the need for benefit monitoring and realisation practices so that to keep market requirements under constant follow-up and control.

Business case

Being the Holy grail of the project development and success, a business case serves three roles: firstly, it acts as a justification for the investment from company side, enclosing vital investment appraisal methods like Return on Investment (ROI), net present value (NPV), payback time, internal rate of return, cost/benefit analysis and expected sales volumes (Lester 2017). Secondly, it serves as a benchmark to compare current project with others as well as a communication tool to other functions and businesses so that to allocate the project into portfolio. The reasoning behind is the limited number of organizational resources (time and people wise), which forces company management to prioritize certain projects based on company strategy, market outlook as well as appealing business case. Last but not the least, business case is to be a guarding tool for the project team as well as project owner (sponsor) to adjust a project as efficiently and early as possible.

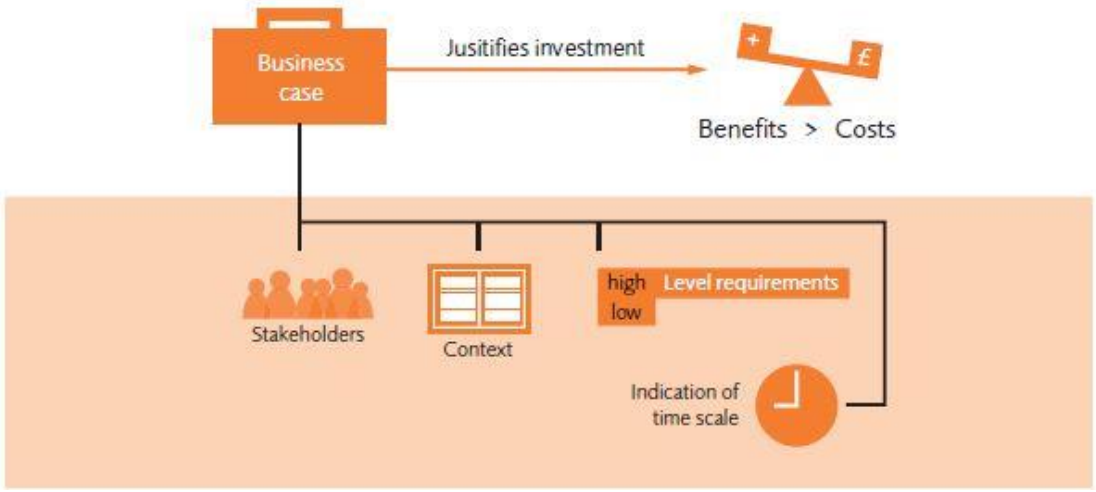

Figure 19 Business case logic (APM Body of Knowledge)

Indeed, the well-prepared business case, according to HM Treasury "Guide to developing the project business case", means:

- Provision of the solid grounds for management, monitoring and evaluation during and after development.
- Validation to key stakeholders, senior management of the continuing feasibility of the project.

- Helping decision-makers to comprehend key bottlenecks, the available evidence bases as well as to circumvent committing resources to the dead-end projects
- Allowing the company and its key stakeholders to understand, affect and form the project's direction and scope during planning stage

However, the reality is far from the theory, and that's what interview findings indicated.

There is a statement that can be found in every interviewee's speech: "*Business case is just playing with numbers; it is pretty easy to make it look successful*". Bearing in mind volatile market conditions as well as developing for at least 10 years lifespan, it is no wonder that sales volumes estimations – the core of any business case – transform into the tool to get company's resources rather than ensuring competitive advantage and future customers' satisfaction.

"*There are few numbers on a very high level. You can play around with the numbers, adjust them. Even if you are saving a million euro, keeping costs down, it matters much less than your sales volumes and how much margin of profit you make on this project. This has the biggest impact*" (Person J).

"*Sales volumes are the biggest flag in the business case*" (Person E).

Due to the "gaining funding not the value" approach, business cases rarely fulfil their most important role – guidance and helping decision-makers. Rather than being a tool to indicate directions and red flags to rethink the project that has already been launched, the business case process is perceived as "a form of medieval torture administered by accountants…once they are approved, they are put away…few track the business benefits the projects actually achieve" (Thorp 2017).

It is worth emphasizing that there are practices to review business case once in a half year as well as during gate reviews. However, whether those practices are official, agreed by the whole company, challenge the logic behind numbers as well as reflect constantly changing market values – this part is missing according to the interview outcomes:

"*We do updates like business case, but I would say it is more a formality*" (Person D).

"*My experience is that we were told that the original business case was made so good that it is worthwhile continue doing the project, though it was clear that the business case won't hold*" (Person S).

"*Yes, we review them at least once in a half year, but it is more forcing, than a tool. We have to pressure-test ourselves, ask whether it still makes sense. Is it still so that, for example, efficiency is number one? Will customers buy it? Is there a still market for it? What is the logic behind the numbers?*" (Person U).

Rather than being a guiding force, business case process is rather a frigid one-time-only point in project lifetime to gain company's resources. Here the benefit realization management logic and procedures come in especially useful since it would allow to test team's as well as the whole company's assumptions on the stated business benefits in a frequent manner involving vital stakeholders as well as rise an early concern to make crucial changes.

Gate review model

As it was already introduced in the second chapter of the present research, the gate checklist model is the main project management model implemented in the case company. The gate model allows companies to track project's lifecycle and check whether there are bottlenecks or challenges on the project' way to success. While each gate has different outputs and logic behind, they have a common goal – to communicate to management teams as well as other organizational functions the main values of the project as well as project's place within organizational portfolio, how the project corresponds to the strategic values.

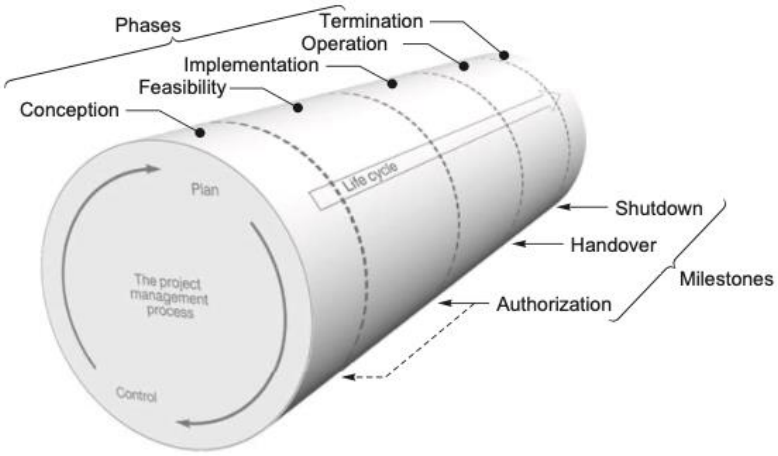

Figure 20 Project Management lifecycle

However, the Research & Development world is much different from the original gate-stage set-up: budgets were more loosened, resources less limited, markets not as hectic and fluid, thus, there was not such pressure for efficiency, productivity, and speed. However, time has changed drastically, and the initial "sharp, early, and fact-based product definition" from the gate model is simply not possible in today's fast-changing world: customers are unsure about what they want while market requirements are changing with the product being under development, or there is a new disruptive technology on the horizon which makes original product idea worthless (Cooper 2017).

There are three vices in the stage-gate thinking spotted during interview processes:

The first vice is the rigidity and formality of the model. Rather than being a discussion point where unchecked tasks or deliverables are handled and communicated, gate review meetings are formal gatherings just to mark check and proceed to execution. Moreover, due to stiffness, it is almost impossible to implement changes after G2 (Start execution) as the approving of this stage implies freezing of the project baselines and plans.

"*Even if there are meetings, they are not solving anything. It is a formality, rather than a communication tool*" (Person R).

"*At G2 we are signing blood what we are doing*" (Person T).

"*Gates are here to have certain standard, but there are no guarantees*" (Person L).

"*Gates are just help; they do not bring us to completion. It is more like a guidance*" (Person G).

It was also noticed that due to organizational culture, the original aim of the gates – communication of the issue and discussion of potential solutions – has been blurred, leading to gate checklists being bureaucratic meetings with lots of papers to sign and check while assigning the failures of not passing the gates to individuals.

"*Not passing a gate should be more like a highlight, red flag to put more efforts and focus, not to blame for failures*" (Person B).

Thus, the nature of innovation and development projects – which can be marked by the absence of needed information at certain stages and "boldly going where no one has gone before" – contradicts with the stage-gate nature, which is linear and does not allow any loopbacks, reworks, or non-availability of information (Planisware).

The second crime is the internal orientation and complete absence of external monitoring. While tracking technical deliverables, gates completely omit the changes on the market, both customers and competitors wise. As such, the core of a project – to realise benefits and outputs to enhance company's strategic objectives – vanishes as the main source of realisation is producing the product or solution that satisfies market needs. "The ability to adapt to changes in the external environment is the main condition for prosperity and the competitiveness of business and other spheres of life, and the main purpose of business organisations is not only to derive profit from their activities, but also to increase growth and survival in a changing external environment" (Eruemegbe 2015). Hence, the success and survival of a company depends on the competent interaction of an organisation with the external milieu and well-timed responses to changes in this environment, examining and accounting for its impact on the organisation and business in general (Kuznetsova, Rahimova, Gafurova, Simakov, Zinovyeva, Ivanova 2017).

"*Market changes are not addressed at all. Market is the disturbance to a gate model*" (Person U).

"*Gate model is stiff, because changes are coming all the time*" (Person Q).

Last but not the least disadvantage is the time periods between gate reviews. Indeed, the original gate idea-to-launch model was based on the linear process with stable product definition – typical environment of the 1980s (Cooper 2017). However, what was not admitted is that gate-stage model does not recognize the "one size does not fit all" principle: "…the problem is that one company's implementation should be different from another's because of the asset base and the decision culture are different" (Walkup & Ligon 2006). Indeed, bearing in mind the typical lifespan of a product development project, which exceeds five or even ten years, one must adopt another, more frequent approach to govern a project. In the worst-case scenario, the project monitoring and tracking will become uncontrollable, with the project's benefits sinking into oblivion.

"*The review of the business case does not come in parallel with gates. Gates are too far from each other*" (Person D).

"*We do not have a full autonomy over gates – they exist on their own"* (Person P).

If one retrieves the aim of the benefit realisation management from the theory chapter – to maximise the likelihood of maximising business benefits – one will acknowledge the need to alter current gate mentality by implementing more frequent, puzzling yet closer-to-reality check points to track and monitor the progress of a project, to be more precise – its value realisation part.

Sunk cost fallacy

For more than three decades the behavioural economists highlighted one of the most common behavioural biases, violating the principles of a rational decision-making – the sunk costs fallacy (bias).

The sunk costs can be defined as "the irrational behaviour of 'throwing good money after bad,' i.e., once found on a course of action to which they committed an investment (e.g., time, money, effort), people continue to stay on that course of action and invest even more resources despite it being unprofitable" (Haita-Falah 2017). Despite taking its roots from psychological and behavioural disciplines, the sunk costs bias is a phenomenon that can be found in any academic or practical domain, especially when it comes to the decision-making processes in industrial surroundings, e.g., firms balancing short-term versus long-term decisions. The case company is no exception to the rule.

It was mentioned by the respondents that despite recognising that even if a project does not financially and technologically make sense anymore, the company tends to continue the initiative. It is also interesting to notice that interviewees from all functions within all company's businesses mentioned this irrational decision-making bias:

"*Development projects are like train; you cannot stop it*" (Person T).

"*…because if we decide to do that, we take it all the way*" (Person K).

"*The no-return-point can be seen from Sales perspective in advance, but we still do it*" (Person I).

One of the potential solutions to assist in rational decision-making and mitigate the risk of falling into this fallacy is the rationally implemented and tailored for the case company benefit realisation management process, which will assist key stakeholders in identifying as early as possible the red flags and implementing changes to the scope to make an initiative valuable again.

Requirements management

Requirements management as a separate discipline was introduced and investigated in the theoretical chapter of present research. However, one shall take a step back to link theoretical background of the discipline with interview findings.

To start with, requirements are the reflection of customers' statement of scope or interest. Thus, the requirements management is a process that governs changes to the specific requirements, relationships, and dependencies between them (Khan, Khalid and Haq 2013). If requirements management aspect of a project goes wrong, the entire project will fail. It is worth mentioning that, for instance in the software development sphere, 70 per cent of the systems errors are primarily from the inappropriate requirements management, and the remaining 30 – from design faults (Khan, Khalid and Haq 2013).

When it comes to the practical perspectives, the respondents indicated clear need to improve current processes concerning requirement management in the case company. The first concern to amend is the redundancy of requirements per project. It was mentioned that it is quite common to have more than 100 requirements, which lead to the logical

question – how it is possible to fulfil all the requirements, taking into consideration the project's iron triangle – costs, schedule, and scope?

"There are more than 100 requirements that we need to fulfil in the projects. I think that when go over 10, they start to conflict with each other: it needs to be the world's best and the world's cheapest - it is already conflicting. The need to prioritize leads to the need of communication" (Person W).

The second finding relates to the inability to prioritize requirements on three levels: project, programme, and portfolio. While producing outputs, projects contribute to the outcomes – the goals of the programmes, which in return serve as a basis for achieving high-level strategic objectives set by portfolio level. Upon elaboration on what could be the reasons for this issue, respondents highlighted two motives: organisational culture and unpredictable environment. The latter one has already been discussed above, while the organisational culture – topic to investigate.

The organisational culture can be defined as "a set of norms, beliefs, principles and ways of behaving that together give each organisation a distinctive character" (Willcoxson & Millett 2000). As it was noticed by Willcoxson et al., organisational culture governs what employees pay attention to and track an external environment and how they reply to this milieu (Willcoxson et al. 2000). One of the distinctive attributes of the case company's culture, according to the interview results, is an "engineer approach": failure to descope a project while focusing on details.

"*We have an engineer symptom – thinking about the decimals, numbers after comma, too many details. While thinking that resources are unlimited, we are always adding to the scope. Instead, we should think vice versa – we have limited resources, how we can make it more efficient?"* (Person U).

Recognizing the key role requirements management plays in preparing the business case as well as reflecting customers' wishes, one realizes a clear necessity to link requirements management with benefit realisation, while the latter one being a communication tool to prioritise requirements as well as a measure to track the fulfilment of those requirements. Thus, the customers are guaranteed to be satisfied, while the company – to be benefitted.

Customer dilemma

The concept of customer being in the centre of the benefits realisation is not novel. Drucker (1954) wrote in his book more than 50 years ago: “is it the customer who determines what a business is, what it produces, and whether it will prosper”. Certainly, the customer focus can be perceived as the source of competitive advantage, profitable future growth as well as simple indispensability of a company on the market: “through constant innovation, customer feedback and the use of knowledge, the enterprise become indispensable. And as the relationship intensifies, truly sustainable gains ensue. No product or service on its own can accomplish that” (Vandermerwe 2004). However, creating and sustaining the customer focus is not an easy endeavour.

Accordingly, it was indicated during the interviews that despite creating a product or solution for a market (otherwise, there is no point in the initiative whatsoever), the project team is too far from the customer(s), often not even knowing what the latter one truly needs:

“*It is hard because in R&D (Research & Development) we are tracking the deliverables, which are beneficial from the company side, but we do not actually see the value behind these deliverables. How are they connected to Sales, to the real profits? How much profit did we just create by fulfilling this deliverable?”* (Person M).

Moreover, it was noticed that there are no feedback loops between project teams and customers. The complete absence of both formal and informal practices on receiving and implementing comments and insights from the field does not just undermine the goodwill and strategic path of an organisation, but also makes the last but the most important part of the benefit realisation management – sustaining benefits – simply unmanageable.

“I wish there were more customer interactions” (Person M).

“*Currently there are no practices to implement all the findings from site to projects, especially the following ones*” (Person T).

There was one proposition how one might solve the customer focus versus benefits realisation challenge, mainly focusing on analysis and articulation of the clients’ values – the co-creation. “The creation of benefits to a broad group of stakeholders, encompassing multiple and varied actors or stakeholders… who influence and determine benefits, suggest a process of co-creation of benefits” (Keeys & Huemann 2017). Indeed, one should

constantly consider that benefits identification is not a neutral progression and is subject to stakeholder's opinions regarding how the benefit is expressed and how value is perceived. (Keeys et al., 2017). As one of the respondents highlighted:

"*Let's meet with these guys, see if we can do something together, maybe even sometimes without knowing what we want to achieve, uncovering what customers really want, going back home and coming up with some proposal, getting back to them and asking feedback – this kind of loop we do not do, though that's how we should do it*" (Person R).

As was outlined in the theoretical chapter of the present research, benefits realisation management is not simply a marginal process for a limited group of people, it is a cross-functional communication tool for the entire organisation, and even beyond organisational scope. It is an instrument to balance external stakeholders' expectations with strategic organisational aims, while taking into considerations available resources and competitors' forces.

Key Performance Indicators

Behind success of any companies lies a long road to key performance indicators (KPIs). The KPIs make difference: it is the frequent and measurable aspects of organisational performance that are the most critical for current and future profitability (Parmenter 2010, 4). In other words, performance measure is the "quantification that provides objective evidence of the degree to which a performance result is occurring over time" (Stacey Barr 2012).

The quantification aspect of key performance indicators implies the presence of numbers, e.g., average of working hours, count of accidents, percentage of closed deals. But what truly makes the performance measure a key one is the encouragement of appropriate action in a frequent manner (Parmenter 2010, 4).

One may define two types of KPIs: leading and lagging. The main difference between these two is the time perspective: "a lead indicator is a measure that suggests how another measure, the lag measure, might behave in the future" (Stacey Barr 2014). Thus, leading indicator has a cause-effect relationship with a lagging indicator, giving an opportunity to influence the latter one now so that to change the future. Being a holy grail of performance metrics, leading KPIs are challenging to set up, compelling a project team as well

as entire function to devote a fair amount of time to this. The findings from the case company proves this statement.

"*If we have a goal, we should reflect to that goal with KPIs. We should match KPIs with a business case. Though we are not doing it*" (Person F).

"*The KPIs should be outcome-driven, meaning they have to assist decision-making*" (Person X).

"*We only have lagging indicators. It would be good to have leading, but how to find them?"* (Person V).

Furthermore, there is a considerable risk for the organisations to transform efficient performance metrics to bureaucratic tools, as was noticed by the interviewees.

"*We tick the deliverable, submit the report, and never come back to it*" (Person S).

"*It is more for the reporting purposes, rather than really tracking what is happening*" (Person L).

Last but not the least, the respondents highlighted the complete absence of metrics that would track and monitor value realisation throughout the project lifecycle. This dilemma proves the validity of this research regarding the implementation of BRM into the case company; and as value KPIs are one of the aspects of benefit realisation, the outcome of the implementation would be an alignment of changes with predictions as well as monitoring for early warnings of significant challenges (OGC 2011, 86).

Benefit realisation

The concluding part in every interview was the section about benefit realisation procedures inside the case company, to be more precise – what kind of barriers currently exists to apply BRM, what a respondent like to follow-up as well as what format.

The first fault regarding benefits realisation can be noticed in every interview, which is – the absence of a single definition or consensus on what can be considered the benefit:

"*Benefit is a customer value*" (Person R).

"*We are realising benefits when fulfilling the requirements of the projects*" (Person M).

"*Benefit is a value propositions of that product or solution*" (Person A).

"*We are getting benefits when we are ahead of competition*" (Person E).

The absence of a consensus springs from the fact that benefits realisation management is still in its infancy phase: "we still do not have a detailed understanding of the actual and concrete challenges of doing benefits, which somewhat remains as a black box" (Aubry et al., 2021).

The second finding relates to the intangible nature of the benefits, the complexity surrounding endeavours to put numbers on them: "*benefits are fluffy*" (Person K). Indeed, as it was noticed by Aubry et al., benefits that could not be measured, are to be ignored: "numbers hence appeared as having more rhetorical power, especially during the project approval period. When translated into numbers, benefits became visible, concrete, and representative of a future action and commitment to achieve the desired result ((Aubry et al., 2021). That is why, it was a strong wish from the interviewees' side to have a tool, process, or method exactly for the quantification stage of benefits realisation.

The third aspect to be discussed concerning BRM is the over-positivism around benefits numbers, better known as "optimism bias" and "benefits fraud" (Jenner 2009, 13,16) or "sales rhetoric" (Aubry et al., 2021). In every case, the potential benefits are intentionally or unintentionally inflated to acquire the approval from management team, hence, a priori are not realisable. The reason for such high-level deception is the absence of accountability among the ones who are responsible for realising the project's benefit. One might encounter the following comments from interviewees:

"*The biggest make or break in the business cases is often the volumes. It's easy to make them look successful if I put it that way, or to make them look profitable. It's a because they are on quite high level*" (Person R).

The projects are meant to fulfil organisational strategy, to achieve clients' values, to realise benefits, to implement profitable change. Whatever is the goal, the path towards

holistic process of benefit realisation management with properly assigned roles and adequately set communication routines with key stakeholders (especially the external ones) – endeavour that is only within the grasp of the strongest.

5.2 Second data collection point - Value KPIs workshop

"Relevant stakeholders are seldom sufficiently engaged in the early briefing phase and the outcome is often an inadequate project definition leading to misinterpretation of client values among the design and delivery team" (Thyssen, Emmitt, Bonke & Kirk-Christoffersen 2010). Indeed, as it has been indicated throughout interviews series, coordinated in the beginning at the early stage of a project requirements are in most cases the technical must-haves, rather than the features that place money labels on the project. Bearing this in mind, it was decided to organize a workshop with the following goals behind: firstly, demonstrate a potential process of setting up performance metrics (KPIs) tailored to specific project. Secondly, to look at the project from customers' point of view – what features would make them pay for it. Thirdly, to connect performance metrics with values. After identifying potential values of a project, one was asked to elaborate on values from perspective of time and progress, how one can track the fulfilment of those values. Last but not the least, the workshop was a learning exercise as no similar methods or exercise had been applied or attempted.

5.2.1 Workshop framework & structure

The workshop was held virtually in a Teams environment for three and a half hours, Miro application was used as a collaboration platform. It involved six participants from two different functions and was applied to two real development projects. The reasoning behind having two projects is to equally separate participants into two teams, so that to compare results and identify potential blind spots. It consisted of the two exercises, the first one called "Strategy Map" that was adopted from "A Measurable Strategy on a Single Page" by Stacey Barr (Stacey Barr 2013) and the latter one designed by the author of current research.

Figure 21 Results Map workshop exercise

"The power of strategy maps lies in their succinct and visual representation of strategic objectives, in a way that highlights the cause-effect relationships among those objectives" (Stace Barr 2013).

The exercise consists of the four zones, rounds. The central pink level is a place for the mission and vision of the project with the timeframe ranging 10-20 years. The results on this level tend to change very slowly. The green round is dedicated to the strategic plan of the project, the time-period is between two – five years. These goals reflect steps that project has to fulfil to achieve the vision above. The blue zone is devoted to the cross-functional or processes goals, e.g., marketing process, procurement process. The timeframe is one- to two-year. Last but not the least, the yellow zone – goals set within a team. The reasoning behind having a cascade approach is to align high-level vision of the project with team-level objectives, specific units. The time constrains are a few months to a maximum year.

Each square on the map represents the result of the goal, meaning the participants had to imagine that the goal already took place, and they are witnessing a post-factum of it, they can see, hear, feel, or taste the results. Moreover, participants had to beware of the intangible words, like innovation, collaboration, sustainability. The logic behind such condition is the multiplicity of meanings, which leads to the absence of consensus as well as simple waste of time trying to agree on the only definition of a word. And as was noticed by D.W.Hubbard, if something can be observed, it can be measured (Hubbard 2014, 3).

There are three types of relationship between squares (unique performance results): the first one is cause-effect relationship, which implies that achievement of one goal will lead to achievement of another. The second type is the companion, meaning that results are interconnected and have to be achieved simultaneously. The third type is conflict – achievement of one result might put at risk the achievement of another.

Upon finishing the "Strategy Map" exercise, participants started with the second exercise called "Quantify Me". The logic of this exercise is to use identified above unique performance results (from the yellow level) and transform results into performance metrics by asking five questions (as indicated in the Figure 21): how one will transform raw data into values of the measure? What exactly is one calculating? What will be out of scope? How often should one calculate the values? What is the name of the performance metric? Thus, the resulting performance metric is supposed to track and monitor the realisation of project's benefits.

For instance, if the unique performance result from the previous exercise is – no compromises on quality are accepted, one has to elaborate what could be the formula to transform raw data into meaningful measure, for instance, the average, percentage, median, maximum, etc. The next step – to agree on what exactly being leveraged on – the percentage of what items, the average of what occasions. The third step is to decide what will stay out of the scope of this measure. If measure deals with customers, the specification like segments or certain criteria are needed. Last but not the least, how often one would like to review this measure. The tricky part here is to set the frequency regularly enough so that to detect signals well in advance. After thoroughly elaborated steps, one should acquire an efficient performance metric.

Figure 22 Quantify Me Exercise

5.2.2 Workshop results

The Workshop findings will be assessed against the previously outlined goal – to identify KPIs that would track benefits, values. Taking this into consideration, one omits the following parts for the sake of confidentiality: projects information, participants background and the content of the stickers. Hence, only generalized observations will be presented.

Firstly, the participants were enthusiastic about the exercises and highlighted the need to establish similar ones for all current development projects in the case company. Their way of thinking was explained by their dissatisfaction around current KPIs, their rigidness and irrelevancy.

However, the initially set focus – customers and their values – was not fulfilled. Already from the second level (green strategic stage), participants switched to having only technical goals and unique performance results, thus, the main condition – to look at the results from customers' perspective – was not fulfilled. Moreover, despite admitting the need to track competitors, the external environment was not taken into consideration. All resulted KPIs were internally oriented.

One potential solution for the future could be an engagement to the similar workshops of the Sales function and Life-cycle services. This engagement would allow securement of customer orientation throughout the session.

5.3 Analysis of practical findings

Current section strives to analyse outcomes from the field via theoretical lens, meaning the discussions will be based on the provided above Figure 12 – "How benefits management fits into programme and project management". The reason behind this approach is to connect discovered in the theoretical chapter phenomena and practices on the three levels (project, programme, and benefits realisation management) with interviewees' insights and wishes. Thus, organisation, alignment as well as thorough examination of the practical findings are guaranteed.

5.3.1 Project Management level

With gate-stage framework being the principal project management model in the case company, its rigidness, stiffness as well as tendency to overlook external market' changes were mentioned throughout interview series as well as marked as one of the pitfalls in the theoretical chapter. The true aim behind establishing gate model – communication of project's progress while securing the risks mitigation and efficient allocation of resources – is, thus, lost. It was proposed by the interviewees to implement a hybrid model – a gate-stage framework with agile mentality where activities are completed via looping and constant feedback from end-users. However, without a dedicated tool to identify, track and realise project's values, the case company risks missing long-term profitable strategic opportunities, lavishing its moneys, time, and people resources.

Bearing in mind gaps in current requirements management and customer engagement processes in the company X, one sees a clear need in additional tool/method to involve a customer throughout the project's lifecycle, ensure that this requirement is truly advantageous to the customer, that it would bring money value without overspending organisational investments. As it was outlined in the theoretical chapter, there are various risks associated with the requirements management, including the lack of competences or expertise from stakeholders' side that leads to requirements being abundant and not actually reflecting customers' needs. The benefit realisation tool proposed in the next chapter of the current research ensures continuous co-creation with the end-user so that, firstly, descope those requirements that are not desirable by the end party. Secondly, it allows to quantify those requirements so that to present both internally and externally the tangible

evidence of benefits realisation. Thirdly, the method would set an environment for continuous customer feedback loops, thus, securing project's values while keeping an eye on its costs side.

Following the BRM main principle of benefits being quantifiable and measurable, one observes a well-defined necessity in identification and implementation of the leading KPIs that would allow to track values of the projects both internally and externally, thus, grabbing new opportunities on the market upon their appearance. However, both interview results, the workshop learnings and findings from the theoretical chapter on the quantification aspect of the benefits surfaced the challenging and laborious nature of this task, which can be achieved only with the engagement of teams from various functions (primarily sales one) as well as continuous pressure-testing of organisational assumptions around project's benefits – how much they value and whether they are still relevant for the end-customer.

5.3.2 Programme management level

With the program management being the most important level from the benefits perspective, one might conclude that due to the essence of product and solution development projects in the case company, the vision-led programmes are the ones under closer investigation in the current research. The vision-led programmes allow organisation to pursue long-term strategic objectives and implement organisational changes to secure durable competitive edge. However, the interview as well as workshop findings revealed the formidable room for improvement when it comes to the strategic benefits and presence of the latter ones in the business case. Due to intangible nature of the strategic values, they are simply left unnoticed, making the sales volume forecast the only guiding flag for the projects' teams. It also leads to the business case completely lacking strategic and management fits described in the theoretical chapter. Taking into consideration the ambiguity of global markers as well as not-so-frequent and thorough reviews of the business case, one emphasizes the urgency of the benefits realisation practices and culture. The introduction of the latter one would serve as a warranty against business case being shelved after the investment flows had been approved by the management team.

5.3.3 Benefit realisation Management level

Ultimately, all identified gaps and issues signal the following – the benefits realisation management is strongly entailed in the case company due to the value-oriented core of the development projects. However, as it was highlighted in the theoretical chapter as well as indicated throughout the interviews, there is considerable number of issues associated with benefits realisation management. Multiplicity of key terms, scarcity of practical research, quantification challenges, as well as the need to assign additional roles to mitigate potential ambiguity in the benefits realisation tasks – the drawbacks that prevent practitioners worldwide as well as representatives from the case company to apply value realisation practices to their organisations. Furthermore, it was discovered from the interviews that despite the fact the project (business) owner and programme manager are present throughout project's and programme's lifecycles, the business benefit manager as well as business change manager – key roles outlined in the theory – are absent in the company X. Hence, there is no dedicated person to quantity and monitor the benefits as well as to communicate and verify these values with internal and external stakeholders.

5.3.4 Summary

As with all the endeavors, the need and aim to apply BRM to the case company's development projects are obvious but quite hard to reach, which has been proved by theoretical as well as empirical parts of the current research. However, there is one aspect that needs to be enhanced above all – the quantification of project's benefits.

The quantification aspect would not merely allow efficient tracking and monitoring (which is not possible nowadays) of the value realization, but also create a buy-in among key stakeholders, engage end-customers as well as recognize red flags so that to escape sunk costs fallacy. The principles as well as the logic behind potential quantification solution for the case company are presented in the next chapter.

6 DESCRIPTION OF THE RESULT OF DEVELOPMENT

The purpose of this section is to combine theoretical and practical findings, and based on the integration, propose a call-to-action for the case company.

The reason for reluctancy among practitioners towards benefits realisation – that was highlighted in the section above - might be explained by the intangible nature of benefits, their immeasurability. Both interview series as well as workshop observation prove this statement. Despite admitting the importance and relevancy of the BRM to development projects, interviewees were suspicious about its implementation not only because of the intangibility, but the obscurity and uncertainty surrounding this domain: how long would it take to implement the lifecycle? How many people would they have to assign? How could they quantify benefits if the customer is always changing? And if they already have practices to review business case, could they somehow enhance or improve them, instead of creating something completely new to the whole organisation?

Bearing this in mind, the author of the current research proposes the following method as a potential solution during the early period for the case company, that could be amended and extended to the whole lifecycle later – the Earned Benefit method (Piney 2011). Note that the instructions how to conduct this method will be omitted in the current research due to potential risk of extending the research's scope. Thus, reasons why this method should be implemented, how long would it take to implement it as well as managerial implications will be presented.

During the discussions with company's representatives, one understood a strong need in the method that would visualize the benefits realisation. The Earned benefit method allows to picture accumulated costs versus planned benefits versus actually earned benefits so that to have a realistic view on the true progress of the projects from the perspective of benefits.

Secondly, it was admitted by the interviewees that it would be beneficial to have a tool that would assist in decision-making. The earned benefit method fulfils this criterion as it allows to quantify and track the benefits by continuously asking the following questions: "what are the benefits?", "how much would the customer want to pay for it?", "what requirements correspond to this benefit realisation?". Thus, the holistic overview of costs

and benefits by this method allows to pressure-test project teams' assumptions while helping them to prioritize essential requirements or descope the current ones.

Last but not the least, this method allows periodic and frequent tracking. Despite having a business case review every half a year, interview participants acknowledged the need to have a tool to track benefits not just for ticking the box (as it is currently done), but for the recognizing red flags in advance. Indeed, this method could be seen as a leading KPI, that would tell project team how much they are behind, what requirements they might sacrifice as well as how much benefits they have realised by fulfilling certain deliverables or requirements.

Last but not the least, this method does not require the commitment of the whole project team. It was tested within the case company with three company representatives that a maximum two-day workshop together with different functions is needed in order to identify the benefits, put monetary values on them, schedule their realisation as well as to perform benefits-requirements matrix. Under the condition that the initial stages are performed robustly and appropriately, the Earned benefit method would show the realistic progress of the project without sacrificing project team's time and resources.

While proposing the Earned Benefit method as a potential value realisation checkpoints framework, the author recognizes that this method would work only for the short period of time to implement the benefits mentality to the organisation. Hence, the motivation to track and monitor benefits should come from the management levels by assigning resources and promoting a cultural change towards value realisation: "effective BRM is about culture. If everyone asks, 'What is the benefit this activity is supposed to contribute to?' you achieve an incredibly powerful alignment" (The Economist Intelligence Unit 2016).

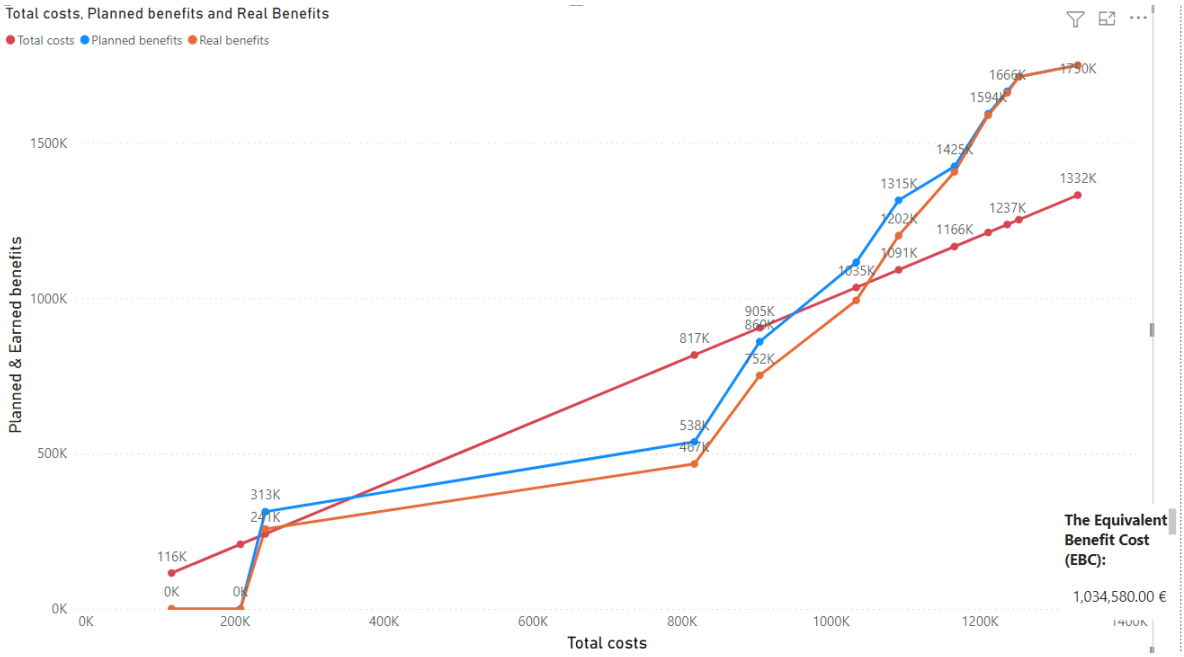

Figure 23 The Earned Benefit Method: final outlook.

7 CONCLUSIONS AND ASSESSMENT

"Strategies have to evolve quickly. Implementation must reflect that" – concisely put morale by Omar Abbosh, Chief Strategy Officer at Accenture (The Economist Intelligence Unit 2016). And there is no better way to reflect the strategical direction than the project and programme initiatives.

Behind any project or programme investment decision, a strong strategical need exists, be it development of innovative solutions, delivery of existing products or simply the improvement of internal process tools. The strategic need is always expressed in the benefits terms – measurable improvement over time which nature and values are considered profitable by an organisation and its external stakeholders (Sapountzis 2008). And that is why the benefits realisation management has emerged. However, despite enhancing a likelihood of the project's success, the uptake of the benefits realisation remains low, with very few organisations embarking on the full BRM lifecycle journey (Breese et al. 2015).

The current research addressed the scarcity of practical research insights into the benefits realisation management by investigating the barriers to the implementation from the case company perspective. Thus, the theoretical review was performed in order to understand the relationships between three domains: project management, programme management and benefit realisation management. It was found that "projects and programmes are generally driven by a need to realise specific benefits through structured change" (Sapountzis et al. 2008). Available benefits realisation frameworks were also examined.

By conducting a series of semi-structured in-depth interviews, one acquired insights on where benefits realisation practices would be useful in the case company's development projects, what kind of concerns company representatives have around BRM as well as what do they expect from the potential BRM method, where it should be used and how it should look like.

To pressure-test the benefits mindset within the company X, the Value KPIs workshop was conducted. Despite a strong start as well as enthusiastic mindset, the participants lost the focus of the overall workshop – to recognize the performance metrics that would track the realisation of benefits from customers' perspective.

Finally, based on the synergy of theoretical and empirical parts, the solution was proposed – the Earned benefit method. This method allows to track the realisation of project's benefits in a visual way by comparing two data points – costs (both planned and accumulated) and benefits (planned and earned). This method also allows to pressure-test project team's assumption concerning value of the benefits and prioritized requirements. Lastly, this method could serve as a leading KPI indicator – something that company representatives wish to implement to the current performance management.

Before concluding, the reliability and validity of the current research will be assessed.

The reliability can be defined as "the extent to which results are consistent over time and an accurate representation of the total population under study … and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable" (Golafshani 2003). The reliability is about repeatability of research results. One may advocate the current research being a reliable one due to the following features: firstly, the current research contains multiple data collection points: theoretical part, semi-structure in-depth interviews and observations from the workshop. Secondly, the interview participants represented various functions and titles, which implies that the issue was considered from multiple perspectives.

The next step to assess the trustworthiness of the research is to evaluate its validity. Validity can be described as "whether the research truly measures that what it was intended to measure or how truthful the research results are" (Golafshani 2003). In other words, did the current research fulfil the initially agreed research objectives and aim? One may support the validity of the research since the aim was achieved – the solution was proposed incorporating theoretical and practical insights. The method was also presented to the company representatives and tested on the real project. It was communicated that the method establishes the connection to the benefits realisation as well as allows to adequately track and monitor the project's values. Thus, it leads to the following conclusion – the present research can be considered valid.

Due to the novelty of the topic in question, a couple of further research recommendations are recognized. Thus, as this research was more focused on the quantification side of the benefits, it is suggested to explore the sustaining part of the benefits, how to ensure that

the values will be transferred to an end-user after the project is officially closed. Moreover, it would be interesting to research the application of the BRM to other industries, for instance, e-commerce or clothing. It would be beneficial to also investigate the people side of the BRM, how difference stakeholders interact with each other in order to realise benefits, how political environment and social values might influence the decision-making process throughout benefits realisation lifecycle.

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Case company internal materials

Interview questions

1. Overall review of the process:
    a. How could you comment current project management phasing-gate model used by the company? Have you encountered any constraints/gaps?
    b. Do you think that gates allow to adequately track project progress and check the relevancy of the project against market changes, market requirements?
2. KPIs and project metrics:
    a. What kind of metrics does one use to stay on track?
    b. Do these metrics track competitiveness, relevancy to the market?
    c. Do you see a need to review/enhance current project KPIs?
    d. How to measure values that a project is creating? How to understand that project deliverables contribute to business values (benefits)?
3. Market & customers:
    a. Is the end-user involved in development project?
    b. How does the company track the drastic changes in customers' requirements?
    c. Do you see a need to involve more end-user? Are there any feedback loops?
4. Business case:
    a. How often does the review of the business case take place? Who triggers it? What do you review? Are there any practices to pressure-test business case?
    b. How often would you like to review business case against environment? What would you like to check?
5. Future-proofness:
    a. How do you picture an ideal plan?
6. Value realization:
    a. How to make sure that the project is creating/will create value?
    b. What kind of barriers are there for value realization/checking?
7. Communication:
    a. How one can ensure solid understanding and communication about values from specific projects within organization, especially between different levels of seniority?