UCLouvain

LOUVAIN
School of Management

Louvain School of Management

Elements leading to succesful implementations of Objectives and Key Results (OKR) goal-setting systems

Author: Beaussart Adrien
Supervisor: Vanderborght Vincent
Academic year 2020-2021
Dissertation for the master of
Business Engineer majoring in Supply Chain Management
Daytime schedule

The Objectives and Key Results (OKR) goal-setting system is one of the most popular goal-setting systems utilized by some of the most successful organizations around the globe such as Google, Amazon or even Netflix. Surprisingly, there is a lack of framework to guide organizations develop and implement OKR goal-setting systems. The purpose of this master thesis is to develop such a framework based on the existing literature regarding OKR goal-setting systems.

UNIVERSITÉ CATHOLIQUE DE LOUVAIN
Louvain School of Management

Place des Doyens, 1 bte L2.01.01, 1348 Louvain-la-Neuve
Boulevard Emile Devreux 6, 6000 Charleroi, Belgique
Chaussée de Binche 151, 7000 Mons, Belgique

www.uclouvain.be/lsm

Foreword

First and foremost, I would like to thank my promoter, Mr. Vincent Vanderborght for proposing this subject to me and for his guidance as well as my family for supporting me throughout my work on this thesis. Without their support, this master thesis would have been for me an insurmountable task. This master thesis and this academic school year as a whole have been for me an intense experience full of vicissitudes along the way such as having my initial promoter replaced, finding a new thesis subject or having my exchange program postponed and ultimately cancelled. However, all in all, I am proud of the work I have accomplished and that I am presenting here today.

Table of Contents

1. Introduction

Objectives and Key Results (OKR) is a goal-setting framework used by some of the most successful companies in the world such as Google, Amazon or even Netflix. Centered around their namesake Objectives and Key Results, OKR represents more than a mere goal-setting framework. Indeed, OKR represents first and foremost a philosophy to approach an organization's business encouraging transparency, communication and employee involvement. Surprisingly, the framework is not widely explored within the currently existing literature. The purpose of this master thesis is to synthesize how to successfully develop and implement OKRs effectively within an organization as well as to develop a framework that organizations could use to develop their OKRs successfully.

2. Literature review

The purpose of this review of the literature is to synthesize the OKR framework and its origins and the main differences, specificities and advantages OKRs have compared to their main alternatives (Balanced Scorecard & KPIs. The main literature of this review consists of scientific articles from peer reviewed journals retrieved using keywords such as OKR, performance management systems, MBO, KPI, press articles and books regarding performance management systems, in particular "High Output Management "by Andy Grove (1983), "Objectives and Key Results: Driving Focus, Alignment, and Engagement with OKRs" by Ben Lamorte & Paul R. Niven (2016) and "Measure What Matters" by John Doerr (2017).

2.1 OKR

OKR is a goal-setting framework that stands for Objectives and Key Results. Andy Grove, the co-founder and CEO of Intel is widely seen as the father of OKRs. He developed the OKR framework during his time as the CEO of Intel using the MBO (Management by objectives) framework as a basis (Anatolyevna et al., 2020).
For the purpose of this review of the literature, I have chosen to refer to one particular definition of the OKR framework, namely the one presented by Lamorte & Niven (2016, p.28). The authors define the OKR framework as follows: "OKRs is a critical thinking framework and ongoing discipline that seeks to ensure employees work together, focusing their efforts to make measurable contributions that drive the company forward."

The OKR performance system is centered around two main questions that are, according to Andy Grove (1983), essential for effective goal-setting; namely "Where do I want to go" (What is my objective?) and "How will I pace myself to see if I am getting there? (How will I track my progress?)[1] (Lamorte & Niven, 2016, p.26).
Grove's view on effective goal-setting is characterized in the OKR framework by the fact it is centered around its namesake Objectives and Key results.
Objectives are defined by Lamorte & Niven (2016, p.30) as "concise statements outlining a broad qualitative goal designed to propel the organization forward in a desired direction." whereas the authors define Key Results as "quantitative statements that measure the achievement of a given objective." Doerr (2017) describes the importance of both Objectives and Key results. Doerr describes Objectives and Key Results as being the Yin and Yang of goal setting. He notes that on the one hand Key Results are required to make Objectives actionable and on the other hand Objectives are able to provide meaning and purpose to Key Results.

2.2 An Intel success story

As Andy Grove was the co-founder and CEO of Intel, it is not surprising that the very first successful implementation of the OKR framework took place at Intel. More precisely, OKRs rise to popularity began with the tale of Intel's fight for survival in the early 1980's.
John Doerr, a venture capitalist, worked at Intel at the time and wrote about his experience in his book "*Measure what Matters*" (2017). He later popularized the OKR framework by integrating it into Google.
The operation Doerr recalls in his book is Intel's "Crush" operation to compete with a company that then posed a serious threat towards the company, namely Motorola. Motorola was at the time producing chips that were both faster & easier to program (Motorola's 68000 chip compared to Intel's 8086 chip.) The success of the operation shows the importance of proper goal-settings and how goal setting can influence thousands of individuals across different departments of a company. The particularity of Intel's operation was that it did not alter any of Intel's products. Rather, the aim was to modify the company's marketing strategy. The bottom line of the operation was to rebuild a competitive advantage over their most direct competitor (Motorola) via differentiation. Indeed, while Motorola was at the time able to produce cheaper, they were not able to provide the same technical support or system-level performances as Intel (Motorola was a big and diverse company whereas Intel was a company solely focused on memory chips, microprocessors and the systems that support them).

[1] Grove refers to the MBO system when referring to these two questions.They later became key elements of the OKR framework when Grove developed and popularized the framework.

2.3 Goal Setting and the OKR-method

Proper goal setting is the very core of successful implementations of performance management systems. According to Homem de Mello (2016), the purpose of goal setting in the corporate world has historically been twofold. Goal setting has indeed primarily been used both to motivate employees as well as to assess their performances. However, with OKRs this changes drastically.
The objectives of goal setting when using the OKR goal-setting framework are fourfold (Doerr, 2017). OKRs powers lie, according to the author, in its ability to promote commitment (focus), alignment, accountability and aspiration within a company.
In this section, I synthesize these four key powers presented by Doerr (2017) as well as key elements that lead to both successful implementations of OKRs and effective goal setting.

2.3.1 OKRs promoting focus

The first step in the implementation of an OKR performance system is goal setting by the top of an enterprise. Their mission is to decide what priorities and initiatives are vital for the company's success across their planning horizon. As such, their mission is to develop organization-level OKRs that represent the company's commitment to the priorities they determine.
Doerr notes that in order for the organization-level goals to be effective, they need to be traceable and time-bound. In other words, they need to be paired with key results and to have deadlines. Key results are needed in order for the company to be able to track the company's progress on its objectives and deadlines both guarantee that the company's objectives are timely met but also have, according to different studies such as Mathe et al. (2011) a positive impact on employee performances and motivation.
Furthermore, when it comes to organization-level OKRs, "Less is more" is a key concept. Less is more is a concept that originated from Andy Grove's view on the importance of limiting the amount of organizational-level goals within a company in order to be able to commit the company's resources to each of them. The following quote from Grove's book *"High output management"* (1983) reflects this view.
"The one thing an MBO (OKR) system should provide par excellence is focus. This can only happen if we keep the number of objectives small. In practice, this is rare, and here, as elsewhere, we fall victim to our inability to say "no"—in this case, to too many objectives. We must realize—and act on the realization—that if we try to focus on everything, we focus on nothing. A few extremely well-chosen objectives impart a clear message about what we say "yes" to and what we say "no" to—which is what we must have if an MBO system is to work."

The underlying idea behind Grove's quote is that a company's resources are inherently finite and that a company cannot focus on an unlimited amount of objectives.

Knowing this, it becomes apparent that determining a company's Objectives, Key Results, deadlines and best course of action is a challenging task. Doerr (2017) underlines that developing and implementing OKRs are in practice often an iterative process and that OKRs can be modified or scrapped at any stage of its cycle. This line of thought is in line with the fact that modern business environments change ever so quickly.
Being willing to reestablish company goals and revisit the company's priorities regularly is an important OKR practice according to Lamorte & Niven (2016) as it allows for companies to be ready for what the authors refer to as "inevitable forces of change and disruption.". This is a reflection of the importance of being able to react to ever-changing business environments and the following quote from Loudon (1827) about plans represents that idea: "Any plan at all, even a bad plan, is better than none; because those who set out on any plan will, in all probability, sooner discover its errors, if a bad one, and correct them, than those, who set out on no plan, will discover the want of one, and form a good plan."

2.3.2 OKRs promoting alignment

Alignment within companies can be interpreted as a measurement of the extent at which employees understand how their individual actions connect with their companies' overall goal or strategies. Regarding the importance of alignment within companies, Doerr (2017) refers to the works of Kaplan & Norton. (2001) and the Harvard Business Review (2016). Kaplan & Norton 's work suggested that only 7 percent of employees fully understood their company's strategies and how their work was related to the company's goals, which highlighted how rare alignment within companies is in practice. On the other hand, studies made by the Harvard Business Review suggested that companies with highly aligned employees are more than twice as likely to be part of the top performing enterprises.
Two main goal setting philosophies are of interest in this discussion: namely top-down & bottom-up goal setting. On the one hand, top-down goal setting is a goal setting strategy where the top of an enterprise or department discusses and establishes the goals of the unit and its different divisions. The different divisions then typically establish the goals of their divisions/employees. It is a process where each individual has little to no power over their goals. The main advantage of bottom-up goal setting is that it is relatively simple and fast to implement; however top-down goal setting does not promote alignment within a company and can even be sources of misunderstandings or unintended behaviors such as excessive goal pursuit within organizations, a topic further discussed in section **3.4.2** of this review of the literature (Chin, Hao & Yu-Ling, 2018).

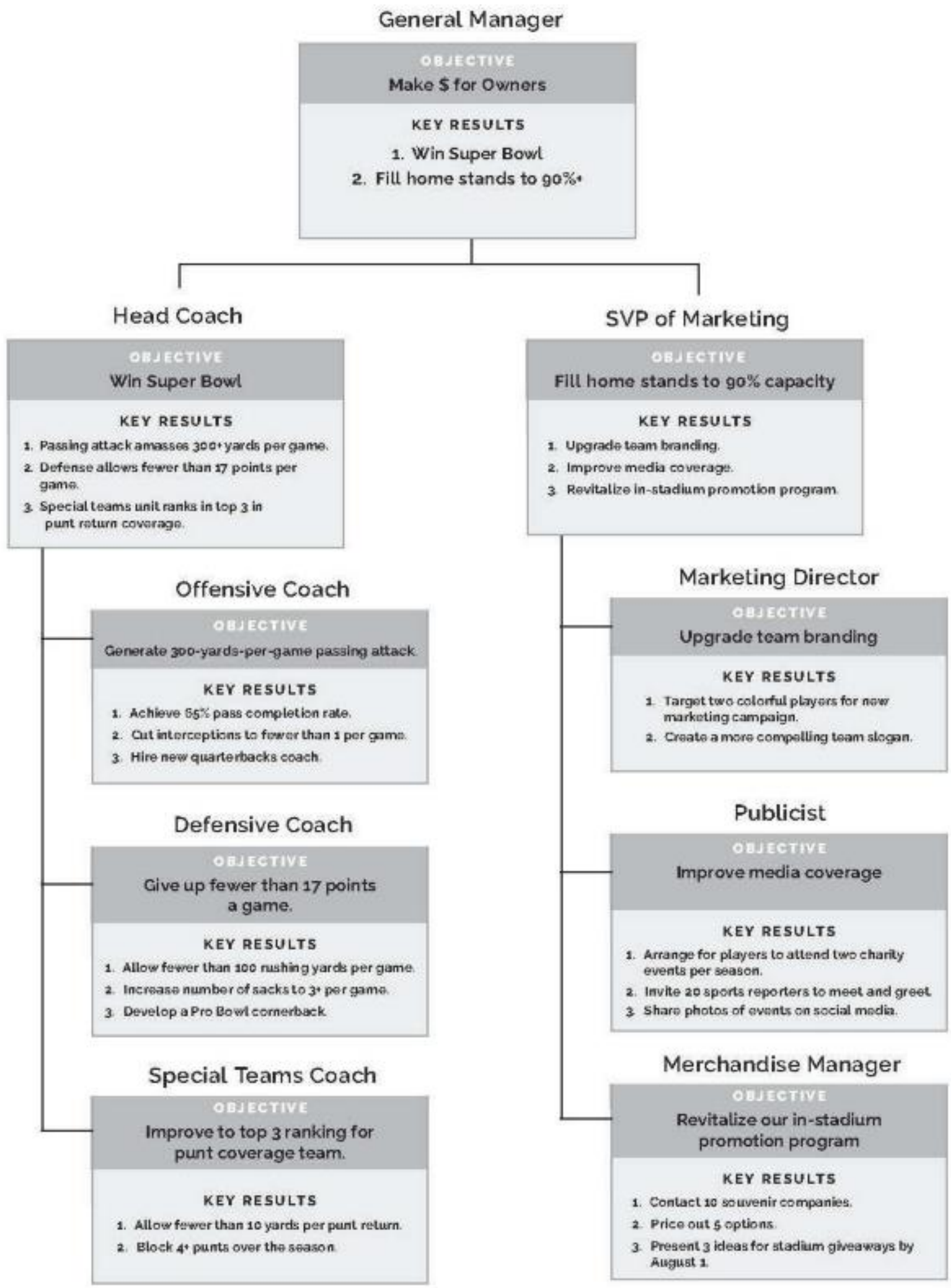
On the other hand, bottom-up goal setting is a goal setting strategy where goals are (partially) established by the bottom of an enterprise; i.e a process where employees are involved in establishing their own goals. Establishing their individual goals; most often with the supervision of their superiors, is for employees an opportunity to understand how their work and goals relate to the goals of their team, their department or to the mission of the whole company. Some form of bottom-up goal setting within OKR goal-setting frameworks is highly advised by Doerr (2017) and represents an important source of alignment within companies according to the author. The main disadvantage of bottom-up goal setting is that it is time consuming.

Bottom-up and top-down goal setting philosophies are not mutually exclusive. This is best showcased by Lamorte & Niven (2016) characterization of the two different types of alignment within companies: namely vertical & horizontal alignment.

Vertical alignment one the one hand is the most intuitive type of alignment and consists of connecting the goals vertically throughout an enterprise. This can be achieved by flowing company goals downwards within a company by creating connected OKRs from enterprise- to individual-level. The authors note that, in practice, companies' attempts at achieving vertical alignment are textbook top-down goal settings where the goals of a department or unit of an enterprise are dictated by who they report to.

However, the authors argue that this is far from optimal as, more often than not, doing so leads to misunderstandings and the purpose of vertical alignment; creating a connection between each individual team or worker's daily job and the company’s overall objectives is lost in the process. Instead, the authors recommend that each different team or individual within a company determines his objectives based on the objectives and key results of who they report to. This line of thought is also presented by Doerr (2017) where he develops an OKR-system for a fictitious American football team presented in **Figure 1** below.

Figure 1: Fictive OKR-system



Source: Doerr (2017), p.37

It can be seen that the objectives of the different units of the organization are determined in a top-down fashion; the different units' objectives are in fact the key results of the unit they report to. However, the key results of each different unit are determined by the unit themselves and are thus determined in a bottom-up fashion. It is for instance assumed that the owners of the team have mainly financial objectives and are not too interested in *how* the general manager achieves the returns, which at first might seem like a stretch as it is fair to assume that owners of football teams care both about the results of their team as well as their financial returns. However, as the general managers intend to create money for the owners by winning the Super Bowl (the yearly final of the American Football League), this becomes a non-issue.

Horizontal alignment refers on the other hand to different units that do not; in principle; report to one another to be aligned and work together to meet one (or both) units' objectives. For instance, in the figure 1 above, it could consist in the Head Coach and the Senior Vice President of Marketing working together in a campaign aiming to promote the team in order to fill home stands. It is fair to assume that having home stands filled would help the team win the Super Bowl and that, as such, working together would benefit both units (Doerr, 2017).

However, horizontal alignment is in practice, according to Lamorte & Niven (2016), less common and more challenging than vertical alignment. The authors showcase this by referring to an article from Sull & Homkes published in the Harvard Business Review in 2015. Sull & Homkes surveyed managers across the US and when asked whether they could rely on their boss most of the time, 84 percent of them replied in the affirmative; showcasing some form of vertical alignment being widespread across companies. However, when asked whether they could rely on colleagues from different functions and units, only a shocking 9 percent replied positively. Furthermore, the lack of horizontal coordination between different units of a company represents, according to 30 percent of the surveyed managers the greatest obstacles to successful executions of a company's strategies. Indeed, lack of coordination can not only represent missed opportunities like in the example above but can also result in duplication of efforts or even escalating conflicts. A well-known example of escalating conflicts due to the lack of coordination between different units of an enterprise would be the retail department of an enterprise wanting to have more stocks available; in order to never be out of stock and have unsatisfied customers as a result; whereas the finance or logistics department want to reduce stocks in order to reduce costs.

Lamorte & Niven (2016) introduce how OKRs can help companies to create horizontal alignment. The authors illustrate that, through detailed discussion between different units of a company, mutual dependencies or objectives can be found. The next step is to ensure that both units either create individual OKRs that reflect those dependencies or create shared or dependent OKRs. These OKRs help to avoid situations in which one unit reaches their objective and might even be celebrating; whereas another unit, whose work heavily relies on the first unit's work, fails to meet their own objective due to a lack of cooperation between the units. These scenarios are, according to authors, common and often result in companies failing to reach their overarching goal. An illustration provided by the authors of both a scenario where a unit of a company establishes a dependent and a scenario where two units of a company establish a shared OKR is presented in **Figure B** of the appendix.

A last driver for alignment within companies is transparency. Transparency lies at the heart of effective OKR systems according to Lamorte & Niven (2016). Indeed, according to the authors, effective OKR programs are transparent across the different levels they are implemented in (from corporate-level objectives down to the objectives of a particular team of a corporation). The authors note that for any given business problem a team from a corporation is trying to tackle, cooperation with a different group from within the firm can likely lead to a potential solution to the given problem. Because of this, the authors underline that a transparent OKR framework (where different divisions or teams of a corporation have access to objectives and performance goals from different teams of a corporation) encourages collaboration and alignment within a company.

Doerr (2017) presented a similar line of thought. According to the author, transparent goal-setting frameworks increase collaboration within a company as employees are able to track the progress of their peers and offer their support spontaneously to colleagues in need. The author furthermore states that transparent OKRs seed alignment within companies as they link the work of individuals to the mission of their team, their department or to the mission of the whole company. In the words of the author, they allow different members of the same organization to be on the same page.

2.3.3 OKRs promoting accountability

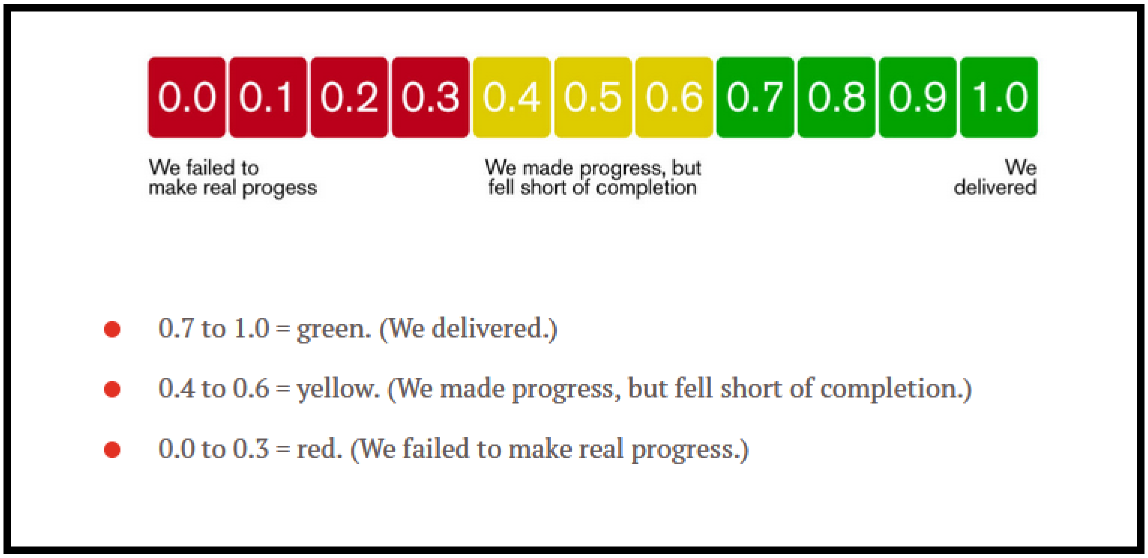
Doerr (2017) underlines the adaptive nature of OKRs. The author notes that OKRs, unlike traditional set-in-stone business goals, are meant to be refined throughout their life cycle and compares them to living organisms. Doerr preconizes quarterly OKR life cycles and weekly check-ins on the different OKRs. This view is shared by recent literature as studies made by Deloitte (2014) have shown that organizations reviewing their goals quarterly or more frequently are three-and-a-half times more likely to score in the top 25 percent of business performers.

The author differentiates four different courses of action when tracking the progress of OKRs.
Firstly, the author states that OKRs that are on track should not be modified during their life cycle. Secondly, objectives or key results that are not on track should be modified to get them back on track. Such initiatives could be revising timelines or even freeing up resources from the company.
Thirdly, new OKRs should be developed and launched throughout OKR life cycles should the need for a new one arises.
Last but not least the author underlines that goals or key results that have become obsolete throughout their life cycle should be dropped. According to Doerr, in a typically OKR-mindset, these events can be important learning experiences for future projections.
Furthermore, Doerr (2017) underlines that analysis during OKRs life cycles as well as *post hoc* analysis are important sources of insight. As such, the author develops that each OKR should; throughout their life cycles; be scored, self-assessed and reflected upon.

1. OKR-scoring

The purpose of OKR-scoring is, according to Doerr, to mark what has been achieved and pinpoint what went right or wrong. OKR-scoring firstly assesses whether the set objectives have been attained, but also, if the objectives have not been met, to which extent progress was made. This is useful for discussing whether objectives that were set were feasible and should be modified/dropped.
According to the author, the simplest and cleanest way to score objectives is to average the completion rates of their associated key results expressed in percentage. The author refers to the 0 to 1.0 scale Google uses presented in the **Figure 2** below. A detailed example with different key results can furthermore be found in **Figure A** of the appendix.

Figure 2: Google OKR scoring scale



Source: Prince (2021) adapted from Doerr (2017)

Very similarly to the four courses of actions discussed above; OKRs that score in the green zone are on track and should most likely be left untouched; whereas OKRs that score in the yellow or red zone should most likely be revisited or even dropped.

2. Self-assessing OKRs

Doerr highlights that self-assessing OKRs's main motive to understand the circumstances of a given objective during a given period. Furthermore, self-assessing OKRs drives, according to the author, more adequate goal-setting processes in the next period.

The underlying reality is that one the one hand, weak results could be explained by lack of effort from employees but also by inadequate goal setting or even unexpected market changes.

Opposedly, strong results could be explained by employees exercising a lot of effort but also by the objectives setting the bar too low.

Doerr notes that these externalities can be reflected in the score given to a particular OKR but more importantly notes that the contextual feedback in the form of self-assessments and discussions within teams or divisions are most likely more important than the actual score given to OKRs.

An example of different OKR scoring and assessment is presented in **Table 1** below.

Table 1: OKR Scoring & Assessment examples

OKR	Progress	Score	Self-assessment
Bring in ten new customers.	70%	0.9	Due to a slump in the market, the OKR was significantly tougher to achieve than I'd thought. Our seven new customers represented an exceptionally good effort and outcome.
Bring in ten new customers.	100%	0.7	When I reached the objective only eight weeks into the quarter, I realized I'd set the OKR too low.
Bring in ten new customers.	80%	0.6	While I signed eight new customers, it was more luck than hard work. One customer brought in five others behind her.
Bring in ten new customers.	90%	0.5	Though I managed to land nine new customers, I discovered that seven would bring in little revenue.

Source: Doerr (2017), p.50

3. Reflection

Referring to a study from the Harvard Business School of 2014, Doerr notes that learning from experiences is more effective when coupled with reflecting about one's experiences. Doerr (2017, p.124) proposes different examples of reflections at the end of OKR cycles such as:

- "Did I accomplish all of my objectives? If so, what contributed to my success?"
- "If not, what obstacles did I encounter"
- "What have I learned that might alter my approach to the next cycle's OKRs?"

2.3.4 OKRs promoting aspiration

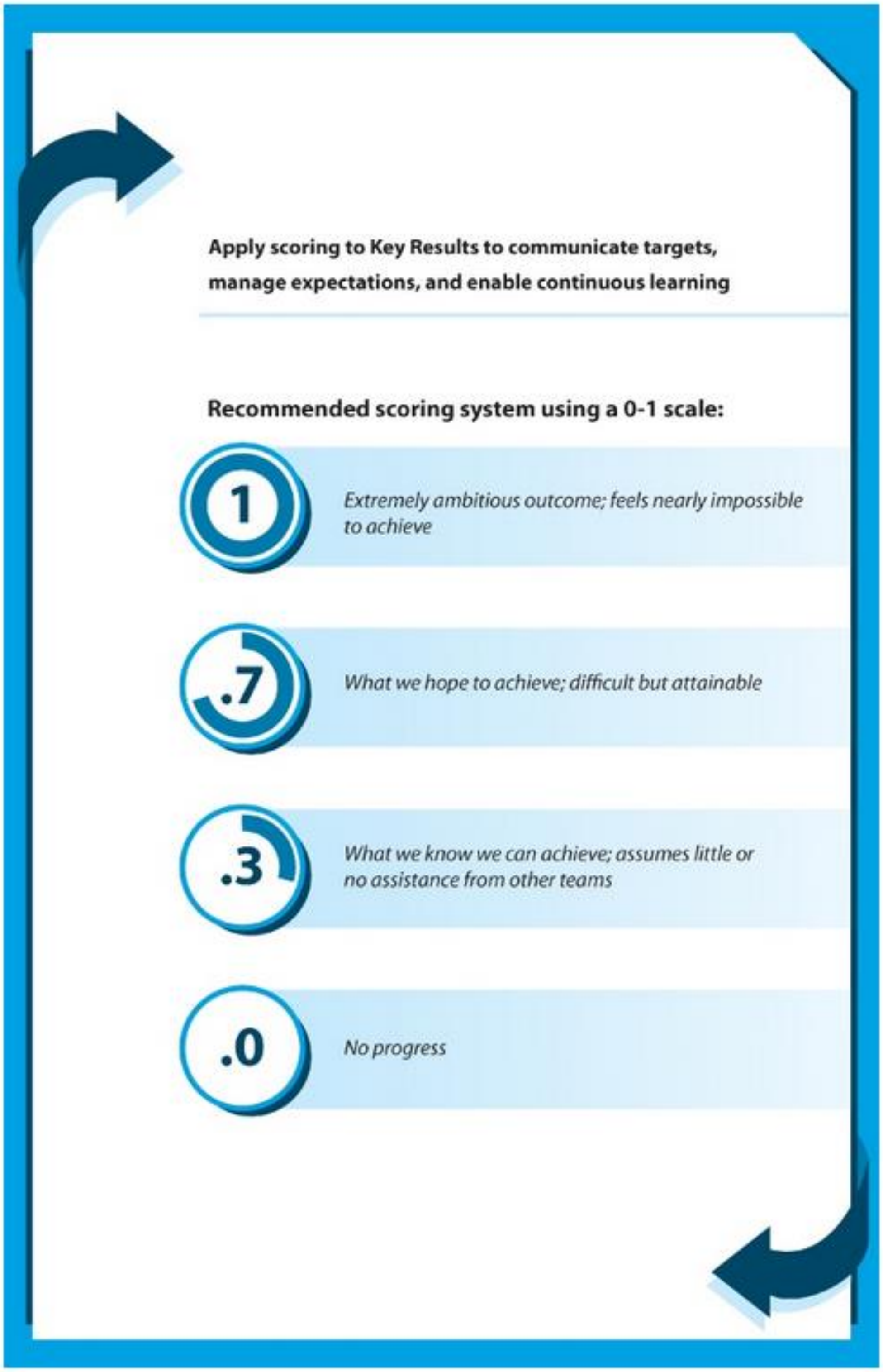
Being willing to innovate and to stretch for new heights is a key factor for prosperity in the business world. In the words of Bob Igor, the former CEO of the Walt Disney Company, (n.d.) "The riskiest thing we can do is just maintain the status quo. "
This view is shared by Lamorte & Niven (2016) as they state that OKRs that simply mimic the status quo are not only ineffective but also alienate talented employees. According to the authors, OKRs are meant to challenge an organization's team to "fundamentally rethink" the way work gets done.

Doerr (2017) refers to studies made by Locke et al (2002) that showed that employees with challenging goals were more motivated and engaged and achieved an overall higher level of productivity.

This view is characterized by Doerr into OKR-frameworks by the existence of aspirational goals as well as committed goals. Aspirational goals are more challenging and have typically much higher acceptable failure rates than a company's committed goals (that are not allowed to fail). Doerr notes that it is up to the leadership of an organization to decide the distribution of the goals they set depending on the conservativeness of their business strategies.

Lamorte & Niven (2016) propose a different approach. The authors stress that research has shown that setting the bar high when it comes to employee objectives lead to both improved performances and enhanced satisfaction at work, referring to the works of Locke et al (2007). As such, the authors suggest that all OKRs should have aspirational components and suggest the usage of the following scoring scale for each individual key result.

Figure 3: OKR scoring scale presented by Lamorte & Niven (2016)



Source: Lamorte & Niven (2016), p.132

The main difference with the scoring system introduced by Doerr is that delivering the result the organization hoped for does not grant a perfect score, reflecting the aspirational character of OKRs.

3.4 Alternatives to OKRs

The purpose of this last section of the review of the literature is to discuss two main alternatives to OKR performance management systems namely the Balanced Scorecard & KPIs and comparing them to OKRs.

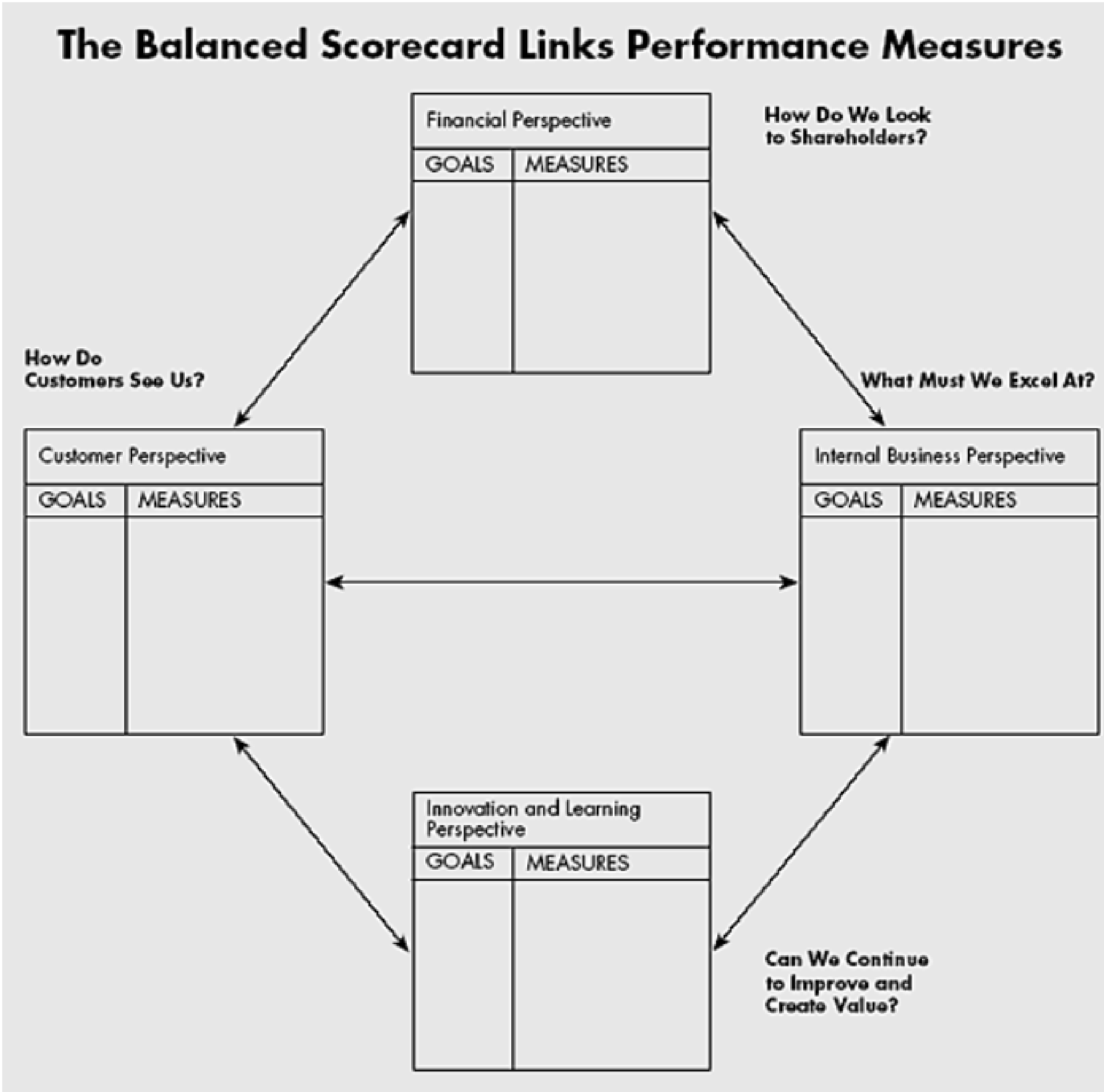
3.4.1 Balanced Scorecard

The Balanced Scorecard is a performance management system developed by Robert S. Kaplan and David P. Norton, who introduced the framework in a Harvard Business Review of 1992.

The authors developed the Balanced Scorecard framework because, according to them, managers across the worlds were exercising too much focus on financial measurements, foregoing non-financial measurements in the process. As such, the Balanced Scorecard is centered around that idea and aims to combine three perspectives that, next to the financial perspective, are important for companies to be able to thrive.

The framework is used by organizations to effectively communicate an organization's vision, mission & strategy, to create alignment & focus within the organization and to improve performances across the four different perspectives illustrated in **Figure 4** and detailed below. An example of a company's Balanced Scorecard is furthermore illustrated in **Figure C of the appendix.**

Figure 4: The four perspectives of a Balanced Scorecard



Source: Kaplan & Norton (1992)

On the one hand, the financial perspective represents a company's situation and objectives on the financial side. Elements that are typically included in the financial perspective are: profit earned by the release of a new product, savings relating to the reduction of operational expenses, ... In other words, the financial perspective of a Balanced Scorecard typically represents the performance on the bottom line of listed companies, creating value for their shareholders.

On the other hand, the customer perspective details a company's situation and objectives regarding their customers. The purpose of the customer perspective is to provide insights regarding an organization's customers such as who they are, what they value, how to earn profit from them via measurements such as customer satisfaction, customer retention or customer profitability.

Thirdly, the internal process perspective focuses on the internal processes that occur within an organization in order to deliver its services or products. As such, this category typically focuses on elements such as, schedule efficiency, average wage level, worker absenteeism levels. Furthermore, the internal process perspective also includes measures and objectives related to the quality of the services or products an organization provides via metrics such as accessibility, availability, reliability or safety and comfort.

Lastly, the learning and growth perspective represents the need for an organization to be able to innovate and the importance of employee satisfaction within organizations. As such, it typically details an organization's objectives regarding the continuous training and development of employees via measurements such as employee satisfaction, productivity levels or employee training and skill levels.

According to the authors, achieving a balanced performance on the four different perspectives is the key to a company's long-term success.

From the organizational-level Balanced Scorecard of an organization, different objectives are typically determined in a top-down fashion for different units of an organization.

However, it is noteworthy that Balanced Scorecards and OKRs are not mutually exclusive systems. Indeed, Wilsey (2019) for instance notes that OKRs and the benefits related to bottom-up objective setting (that were previously discussed in **section 2.3.2** of this review of the literature) that the framework encourages could be developed within the different departments or teams of an organization based upon an organization-level Balanced Scorecard. According to the author, Balanced Scorecards typically give a clearer view of organization-level objectives and strategies than organization-level OKRs do.

3.4.2 KPI

Key Performance Indicators (KPIs) are key indicators of progress towards an intended objective within an organization, much like the Key Results of OKR frameworks. They are therefore rather than being frameworks of their own, a measurement used inside an organization's performance management systems such as the Balance Scorecard discussed above.

The main differences between the KPI & OKR goal setting systems In research supported by the National Natural Science Foundation of Chin, Hao & Yu-Ling (2018) discuss the main differences between the KPI and OKR goal setting systems.
While both are tools created and used by enterprises to ensure an organization's strategic objectives are reached, they are fundamentally different as is detailed in the following paragraph.

According to the authors, the principal differences between OKRs and KPIs is related to the way objectives are determined within an organization. main disadvantage of KPIs in practice; namely excessive goal pursuit. Excessive goal pursuit in KPI performance systems is a phenomenon where self-interest driven employees forgo the strategic guiding role of KPIs and solely pursue the achievements of the indicators their performances are measured with. KPIs indeed often directly link employee performance, based on indicators that are determined from the top of the enterprise to employee benefits. This can lead to employees focusing solely on what their performances is based upon, a topic further discussed in section
On the other hand, creating and implementing OKRs is typically a flexible bottom-up process. This means that, next to the four strengths of the OKR framework presented by Doerr (2017) (and discussed in **section 2.3** of this review**),** negotiation between employees and their superiors lies at the heart of successful OKR performance management systems.
Negotiating their individual goals is for employees an opportunity to understand how their work and goals relate to the goals of their team, their department or to the mission of the whole company. The OKR framework is furthermore flexible by design and OKRs are aimed to be refined throughout their life cycles (Doerr, 2017). This allows for companies and their objectives on an enterprise and individual level to be able to adapt to changes in the environment such as customers' needs in a timely fashion while still retaining the company's standards in terms of quantity and quality.
This is in sharp contrast with KPIs that typically are developed by a few managers at the top of an enterprise. This firstly means that there is no guarantee that employees understand their own goals, but it also makes it unlikely that they understand the bigger picture; how their individual goals relate to the goals and mission of their enterprise. While this is not an issue for relatively simple operations such as production lines; the rigidity of KPIs is a big issue in today's ever-changing business environments. OKRs flexible character is undoubtedly a key element to the rise in popularity of the framework.

4. Research Question & Methodology

The research question of this master thesis is *“Elements leading to successful implementations of Objective and Key Results (OKR) goal-setting systems”*. In order to review the elements leading to successful implementation of OKRs, this master thesis research question is further divided into two, namely firstly in the design of effective Objectives and Key Results and secondly in their successful implementation. Lastly, this master thesis aims to develop a framework aiming to help organizations develop and implement OKR goal-setting systems. The lack of such a framework in the existing literature furthermore represents the research gap of this master thesis.

In order to develop an answer to the research question, this thesis uses as main literature two widely considered references for OKR goal setting systems; namely “*Objectives and Key Results:Driving Focus, Alignment, and Engagement with OKRs”* by Ben Lamorte & Paul R. Niven (2016) and “*Measure What Matters*” by John Doerr (2017). Articles from peer-review journals as well as two success-stories of successful implementations of OKR goal setting systems form the secondary references used in the context of this thesis.

5. Analysis and discussion

5.1. Creating Effective OKRs

The first step towards successful implementations of OKR goal-setting systems is the creation of the OKRs themselves. As such, this first section synthesizes elements leading to the creation of effective OKR and creates a framework aiming to provide assistance for creating effective OKRs. In order to do so, this section first describes the characteristics of Effective Objectives before synthesizing how to design them. In a similar fashion, this section secondly describes the characteristics of Effective Key Results before synthesizing how to design them effectively.

5.1.1 Effective objective-setting

The first step in order to create effective OKRs is creating an effective objective. In this discussion, the works of Ordóñez et al. (2009), Lamorte & Niven (2016) and Van Oijen (2020) are of particular interest. A company's objective is defined broadly by Lamorte & Niven as" a *concise statement outlining a broad qualitative goal designed to propel the organization forward in a desired direction* "(Lamorte & Niven, 2016, pp. 96-97).

A starting point for the creation of effective objectives is the work of Van Oijen (2020). Van Oijen emphasizes the importance of employees' psychological needs in the context of successfully driving organizations forwards. According to the author, employee motivation and employee trust and psychological safety within the organization are the most crucial cornerstones of successful organizations. Ensuring employee motivation and employee psychological safety are both accomplishable via goal-setting systems according to Van Oijen.

The author underlines that these two different elements are directly related to the psychological well-being of the employees.

On the one hand, as previously introduced in **section 2.3.2** of the review of the literature, employee motivation is a key driver for employee and organizational performances. Employee motivation can (and traditionally is) augmented by extrinsic incentives such as monetary incentives; however, according to the work of Pink (2009), higher levels of employee motivation are attained through the creation of intrinsic motivation. The author determines three elements creating intrinsic motivation for employees within organizations: namely autonomy, mastery and purpose. Autonomy firstly refers to employees having the ability to exercise some degree of influence regarding their job. In the context of objective setting, a similar line of thought was presented and discussed in **section 2.3.2** of the review of the literature; Doerr (2017) notably recommend employee involvement within OKR goal-setting systems. Pink (2009) refers secondly to mastery as the employees need to be challenged by their jobs. Promoting aspiration and challenging employees is a key aspect of OKR-goal setting frameworks discussed in section **2.3.4** of the review of the literature. Lastly, the author refers to purpose as the human necessity to contribute to something greater than oneself; a concept very much related to vertical and horizontal alignment previously discussed throughout **section 2.3.2** of the review of the literature.

On the other hand, Van Oijen (2020) describes trust and psychological safety as the degree in which employees are willing to render themselves vulnerable to their coworkers by sharing their ideas, thoughts and doubts. The author refers to the work of Zak (2017) that showcased the significance of employee trust levels in the context of organization performances based on employee levels of Oxytocin; a neurotoxin indicative of a person's trust levels and overall comfort. Zak notably found that employees working in organizations scoring high on trust, self-reported 50 to100 percent higher levels of energy, engagement

and alignment with company purpose. Furthermore, regarding productivity, Zak reported a 50 per cent higher productivity for these employees compared to employees working in an organization with relatively low trust levels.
The author furthermore determined five elements improving trust levels within organizations namely:

1. Challenges:

According to Zak, challenging, but attainable, goals and jobs; a topic further discussed below in **section 1** of this characterization of effective objectives, is a first element leading to higher trust levels within organizations. Challenging goals were previously discussed above as a driver for employee motivation. Intuitively, challenging goals, seed cooperation within organizations, especially challenging team goals.

2. Discretion

Zak refers to discretion similarly as Pink (2009) referred to autonomy (see above). According to Zak, giving employees the opportunity to determine how they do their job is a second driver for trust within organizations. The intuition behind this relationship is that feeling trusted generated trust in return

3. Information sharing

Information sharing through transparency within an organization, regarding objectives but also regarding the current progress made on a particular objective, is a third driver for higher trust levels according to Zak. Transparency is a key component of OKR goal-setting frameworks that was previously discussed in **section 2.3.2** of the review of the literature. Zak and Doerr (2017) present the similar line of thought that transparency within organizations seeds collaboration within organizations. Both authors further imply that collaboration raises trust levels and improves relationships amongst coworkers the more they interact with each other.

4. Relationships

According to Zak, improving the relationships between employees is a fourth driver of trust within organizations and notes that relationships between employees are best improved through frequent interactions (see point 3. above).

5. Vulnerability

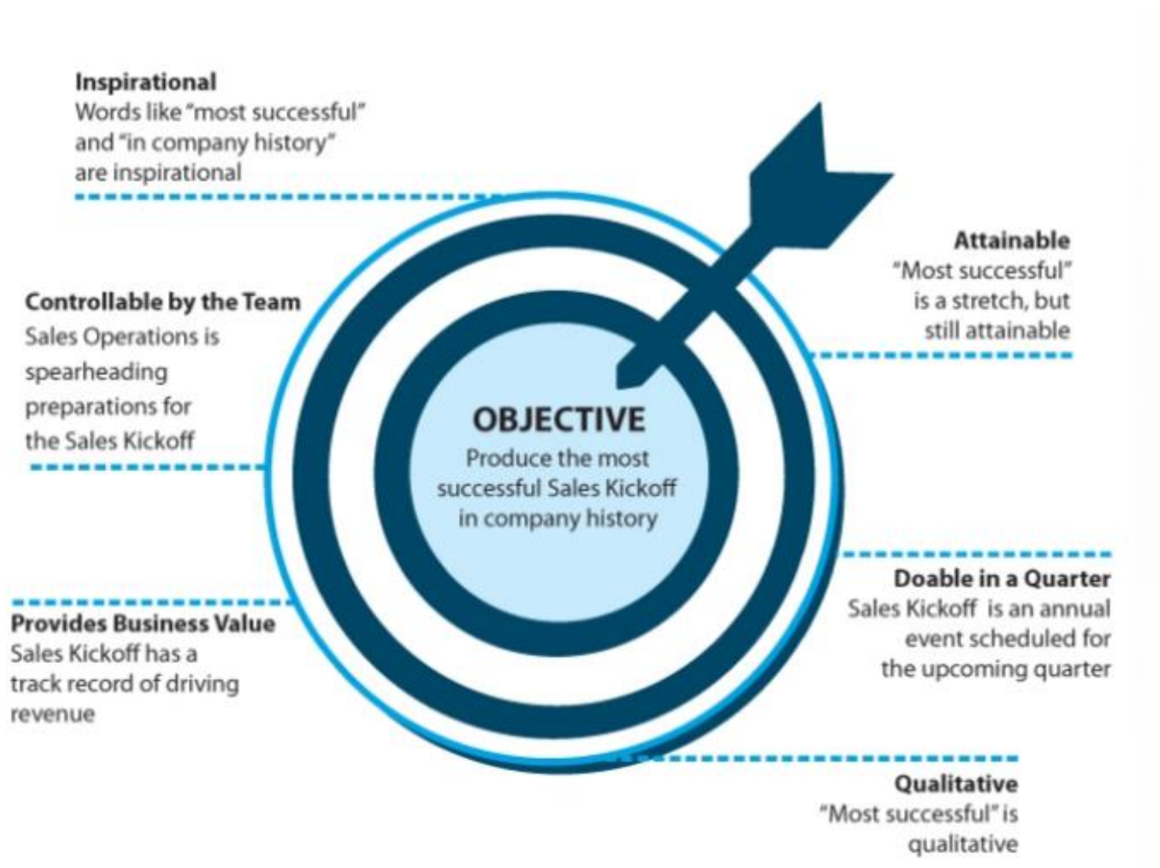
Lastly, Zak showcased that shows of vulnerability coming from the management of an organization by, instead of telling employees what to do, asking them for their help; improves employee motivation and commitment. The underlying idea is that doing so enhances the employee’s feeling that they are valuable towards their organizations and that this not only generates involvement and engagement from employees but also creates an environment within organizations were asking for help and collaboration are the norm. This line of thought is closely related to the importance of involving employees in the goal-setting process of their own objectives presented by Doerr (2017) and discussed in **section 2.3.2** of the review of the literature.

1. Characteristics of effective objectives

The purpose of this first section related to effective objectives is to discuss the characteristics of effective objectives, both in terms of content but also in terms of syntax or framing. In this context, the work of Lamorte & Niven (2016) represents a good starting point.

The characteristics of effective objectives according to Lamorte & Niven (2016) are illustrated and discussed below through an example of a fictive effective objective of a Sales Operations unit.

Figure 5: Fictive example of effective objective setting



Source: Lamorte & Niven (2016)

The illustrated objective, producing the most successful Sales Kickoff in the (fictive) company's history, is:

1. Inspirational

According to the authors, an objective entail more than a business goal. Indeed, a well-written objective should convey the aspirations of a company to its employees; inspiring and challenging them to reach higher levels of performance. As such, word choice is key in an objective setting. This is best illustrated in the example above by the usage of the terms such as "most successful" or "in company's history".

2. Attainable

As discussed throughout **section 2.3.4** of the review of the literature, the right balance between inspiration and reality is an important decision when creating objectives. The authors present unsurprisingly the same line of thought, noting that one the one hand objectives should push the limits of employee's imaginations but that, on the other, unrealistic objectives can damage a company. Ordóñez et al. (2009) present the same line of thought. The authors note that while there exists a positive linear relationship between the difficulty of an employee's goal and the employee's performance, the opposite relationship exists for goals that are perceived as too challenging (or impossible). Furthermore, the authors describe three side effects of too challenging goals; namely risk taking, unethical behavior and the psychological costs related to failure.

2.1 Risk taking

The authors note that the literature suggests that goals alter risk taking profiles of employees, referring, amongst others, to the works of Knight, Durham, & Locke (2001); Neale & Bazerman (1985) and of Larrick, Heath, & Wu (2009). Larrick et al. for instance demonstrated that negotiators motivated by challenging goals adopt riskier strategies than negotiators motivated by less challenging goals. In the context of their study, this had drastics results as negotiators with challenging goals made larger demands which ultimately resulted in missed opportunities for their companies. Ordóñez et al. (2009) further suggest that excessive risk taking related to overly stretched goals could be the root of large-scale economic disasters. The authors illustrate their thoughts by referring to the collapse of the Continental Illinois Bank that, in 1976, was the ninth-largest bank in the US. Indeed, the then chairman had set an objective for the bank's lending to match that of any concurrent bank. However, this far-too-stretched goal had as direct result that the bank had to shift its strategy to a more aggressive risk-taking one, investing notably in the buying of risky loans from smaller banks. As a large number of the borrowers of these loans were not able to repay them; this strategy ultimately led the US government needing to bail out the Continental bank, showcasing the drastic results that excessive risk taking and poor objective setting can have.

2.2 Unethical Behavior

Excessive goal pursuit and overly challenging goals can, according to the authors, damage an organization's ethical behavior and damage its reputation. The authors differentiate two different types of unethical behavior originating from overly challenging goals. One the one hand, in situations where employees have specific hard to reach goals, they may use unethical methods to reach them if they have the possibility to do so. For instance, an employee in the automotive repair industry could, in order to meet his quotas, take advantage of asymmetric information (the employee typically knows if and what repairs are required; while the customer typically does not) to sell unnecessary repairs. On the other hand, excessive goal setting can lead to employees misrepresenting their performances on purpose and reporting they met their goal while in reality; they did not. For instance, employees could report sales that never took place. The authors detail a number of factors that enable cheating in the context of reporting performances such as the existence of financial incentives for meeting one’s quota or the laxity of the oversight on employees. Furthermore, the culture and commitment of an organization regarding ethics is particularly important in order to mitigate unwanted unethical behaviors from employees.

2.3 Psychological costs related to failure

The last side-effect related to overly stretched goals is that, in the very possible outcome that the goal is not reached, the employee satisfaction about their own work and their self-esteem can be damaged by their inability to meet their goals. As these employees question their own abilities and overall intelligence as a result, their self-efficacy, their own perceptions regarding their ability to achieve a particular task, decreases. The authors note that such reductions in self-efficacy have highly detrimental results as employee’s self-efficacy is an important driver of engagement, commitment and effort, referring to the work of Bandura (1977).

3. Controllable by the Team.

The third characteristic of effective objectives, according to Lamorte & Niven (2016), is that the unit by and/or for whom an objective is designed has the actual means to control whether or not the objective has been met. If the realization of a particular objective is not solely in the hands of the given team or unit, the organization would have to instead create a shared objective between the different teams that together can realize the given objective (as introduced and discussed in **section 2.3.2** of the review of the literature). OKRs shared between different units of an organization represent, for an organization, an opportunity to promote horizontal alignment within their organization. In the context of shared OKRs, it is necessary for the different units sharing the OKR to be able to jointly meet the common objective. The author illustrates their point by mentioning that if; for instance; a team's first response to failing to meet their objective is to blame another unit, the first unit's objective was likely not well designed. Furthermore, this could become a source of tension between the different units of an organization.

4. Doable in a Quarter

As discussed in **section 3.3.2** of the review of the literature, the literature suggests that organizations reviewing their goals quarterly reach higher levels of performance. As such; when creating objectives for an enterprise, they should be accomplishable within the subsequent three months. Would this not be the case if, for instance, the developed objective is expected to be realizable in a matter of years, it is likely that the objective represents more a strategy or vision than an objective for the unit in question.
However, quarterly goal setting has its pitfalls. Ordóñez et al. (2009) discuss the potential negative effects related to inappropriate time horizon management and myopic management in the context of short-term goal setting. Indeed, quarterly goal reviews emphasize the importance of immediate performance, which, in the long run, might damage an organization in the long run. The authors notably refer to the works of Cheng, Subramanyam, and Zhang (2005) that showed that firms issuing quarterly earnings reports tended to have better performances but also invested less in research and development. Managers in these organizations were thus prioritizing their short-term goals over the long-term goals and development of their organization. As such, it is important to keep the long-term goals; often referred to as strategy or vision; of the company and given unit when developing new short-term objectives for a given unit.

5. Providing Business Value

The fifth characteristic of effective objectives, according to Lamorte & Niven (2016), is that objectives should provide value for an organization. It is very implicit that there is little reason for a company to invest resources into an objective that does not create any value for the company.

6. Qualitative

The sixth and last characteristic of effective objectives presented by the authors is related to the syntax of objectives. Objectives should represent what one wishes to accomplish and therefore should typically be expressed qualitatively and in words rather than in numbers. They should thus provide the "What" a company or unit wants to achieve rather than the "How" which is the focus of the key results discussed **later in section 5.1.2.**

2. Effective objective focus

Objective focus represents, next to the six characteristics presented by Lamorte & Niven (2016), a seventh characteristic of effective objectives. Ordóñez et al. (2009) describe the negative effects of having too narrow or too many objectives.

The authors describe that, with goals, people narrow their focus towards their said goals, which leads to them, consciously or not, to paying less attention to - or even overlooking - elements that seem unimportant or unrelated towards their goals.
The authors illustrate this with a fictive example of a university basing its tenure decisions primarily based upon the number of articles the professors publish. This would lead to the professors to chase a very narrow goal of publishing articles resulting potentially in a decrease of other important elements such as the impact of their research or the quality of their teaching. An important concept in this discussion is that "you get what you reward" (Kerr, 1975). Goal setting indeed can, as illustrated above, cause people to ignore important elements if they are not part of their goal-setting systems. This concept is, according to Ordóñez et al, widespread and is, for instance, illustrated in the works of Wade-Benzoni, Messick, and Bazerman (2000). The authors indeed argue that, in the context of environmental standards, focus is often exercised on compliance with specific goals and that the overall mission of these standards; protecting the environment; is often overlooked.
On the opposite side of the spectrum, we have employees pursuing too many goals. Ordóñez et al. refer to the works of Shah, Friedman, and Kruglanski (2002) that demonstrated that employees with multiple goals often concentrate on only one. Furthermore, when faced with goals of different difficulties, goals deemed more difficult are more likely to be given less attention. According to Doerr (2017), the right number of goals for employees or units using the OKR-framework ranges typically between three or five objectives per period. The author notes however that finding the right balance between too few or too narrow objectives and too many objectives is a difficult task and represents a main challenge in the context of effective goal setting.

3. Designing effective objectives

After determining the different characteristics of effective objectives, this next section analyses four different important aspects related to the creation of effective objectives.

1. Avoiding the status quo

The first aspect related to the design of effective objectives is described by Lamorte & Niven's (2016). Lamorte & Niven advice, when designing objectives for an organization using the OKR-framework, is to ensure that the objectives inspire employees. The aspirational character of OKRs and the necessity for OKRs to avoid the status quo were previously discussed in **section 2.3.4** of the review of the literature. Therefore, objectives should entail change within a company; objectives such as maintaining market shares for instance are for instance not likely to not move a company forward.

2. Objective framing

A second more psychological advice from Lamorte & Niven (2016) is related to the framing used when setting objectives. Firstly, the authors underline that human behavior research show that people tend to be more prone to chase what they want to achieve rather than avoid what they wish to avoid. As such, using positive language represents a first objective framing strategy. The authors illustrate this with an example objective of improving eating habits. In this context, having as objective to eat more healthy food would have a better impact than having as objective to eat less junk food. Positive language framing increases the likelihood of success of an objective as it focuses on the solution rather than on the problem. Secondly, the authors note that, in order to avoid blank canvas paralysis, objectives should include some form of guidance or starting point in order for the unit to be able to start working. The authors note that finding the right balance between setting up guidelines and letting employees be creative are not mutually exclusive. Thirdly, the authors highlight that setting objectives imply action; this is also implicit from the definition of an objective" An *objective is a concise statement outlining a broad qualitative goal designed to propel the organization forward in a desired direction."* presented earlier in **section 5.1.1**. (Lamorte & Niven, 2016, pp. 96-97). As such, an objective should begin with a verb in order to stress that action is required to propel the organization forwards. Lastly and especially in the context of company-level objectives, the authors recommend the usage of plain language whenever plain language conveys objectives accurately and discommend the usage of acronyms when creating objectives. The authors highlight that the purpose of setting objectives is to generate widespread comprehension and ensure that everyone is on the same page within an organization or unit. As such, they should be immediately understandable by every member of the organization.

3. Objective descriptions

A third piece of advice from Lamorte & Niven's (2016) comes in the form of objective descriptions. The authors refer to objective descriptions as a statement consisting of a few sentences detailing the relevance and the context of a particular objective. The purpose of such a description is to, on the one hand, clearly describe and explain the importance of a particular objective but also to detail how the objective is linked to other different objectives of an organization. In short, objective descriptions can be seen as a justification for the existence of a particular objective.

4. Who sets the goals?

A fourth important decision when designing objectives is the question of who is in charge of setting the objectives of a given unit. In this discussion, two non-mutually exclusive perspectives exist; namely bottom-up and top-down objective setting. These two viewpoints were previously discussed in **section 2.3.2** of the review of the literature. Doerr (2017) recommends some form of bottom-up goal setting, i.e., at least some involvement of employees in the establishment of their own goals in order to not only promote vertical alignment within the company but also increase employee motivation and performances.

4. Transparency and Alignment

Transparency and alignment are two last key elements of effective objective-setting systems and were previously discussed in **section 2.3.2** of the review of the literature: alignment being notably a key driver of performance within organizations.
According to Lamorte & Niven (2016) and Doerr (2017), transparency should be at the heart of OKR-frameworks. According to the authors, this means involving employees in the setting of their individual or team objectives but also allowing employees or teams to have access to the objectives of their colleagues. Doing so encourages collaboration between the different units and promotes alignment within companies according to the authors. As transparency and alignment are more characteristics of OKR-frameworks than of individual objectives, their importance will further be discussed in **section 5.2** of this thesis.

5. Framework for effective objective setting

The purpose of this last section related to effective goal setting is to develop a methodology leading to effective objective-setting in the context of OKR goal-setting systems. The developed methodology consists of a table detailing 9 questions managers should ask themselves as well as their relevance and their potential remediations aiming to ensure the effectiveness of the objectives developed within an organization based upon the findings discussed above. The 9 questions are illustrated in **Table 2** below. **Table 2** also forms the first element of this master thesis's larger framework aiming to ensure successful implementations of OKR goal-setting frameworks.

Table 2: Framework for effective objective setting

Question to ask before setting goals	**Why is this an important task**	**Possible remediation**
Does the goal provide value to the company?	Investing resources into an objective that generates no value to the company makes little sense.	Do not chase objectives that are of no value.
Are the goals inspirational?	Inspiring employees drive a company towards higher levels of performance.	Rethink the used word choice
Is the framing appropriate?	The usage of positive & plain language as well as implying action are positive drivers for success.	Rethink the used framing.
Are the goals challenging but attainable?	Challenging goals seed cooperation within organizations and raise employee motivation and trust levels. Overly challenging goals can lead to unethical behavior from employees, excessive risk taking and can even harm self-efficacy from employees.	Provide skills and training to enable employees to reach goals. Avoid harsh punishment for failure to reach a goal. Safeguards such as strong employee oversight and the development of a strong culture of ethical behavior inside organizations help ensure ethical behavior.

		Recalibrate the determined objective.
Are the goals too specific?	Narrow goals can blind people to important aspects of a problem.	Be sure that the developed goals include all of the elements that are relevant for success.
Is the outcome of the objectives solely in the hands of the unit?	A unit from an organization blaming another unit for not being able to realize their objective can be a source of tension within an organization.	Create shared objectives between the different units. Shared objectives furthermore seed horizontal alignment within organizations.
Is the time horizon appropriate?	Too much focus on short-term goals may harm long-term performance. Short-term goals should be doable within a quarter.	Be sure that short-term efforts to reach a goal do not harm investment in long-term outcomes.
Who sets the goals?	Some form of bottom-up goal setting drives (vertical) alignment within companies and improves performance.	Allow involvement from employees within the goal-setting process.
Does my objective have a description?	Objective descriptions detail the relevance of an objective to ensure they are understood throughout an organization.	Write an objective description

Source: Author's own table inspired and adapted from Ordóñez et al. (2009)

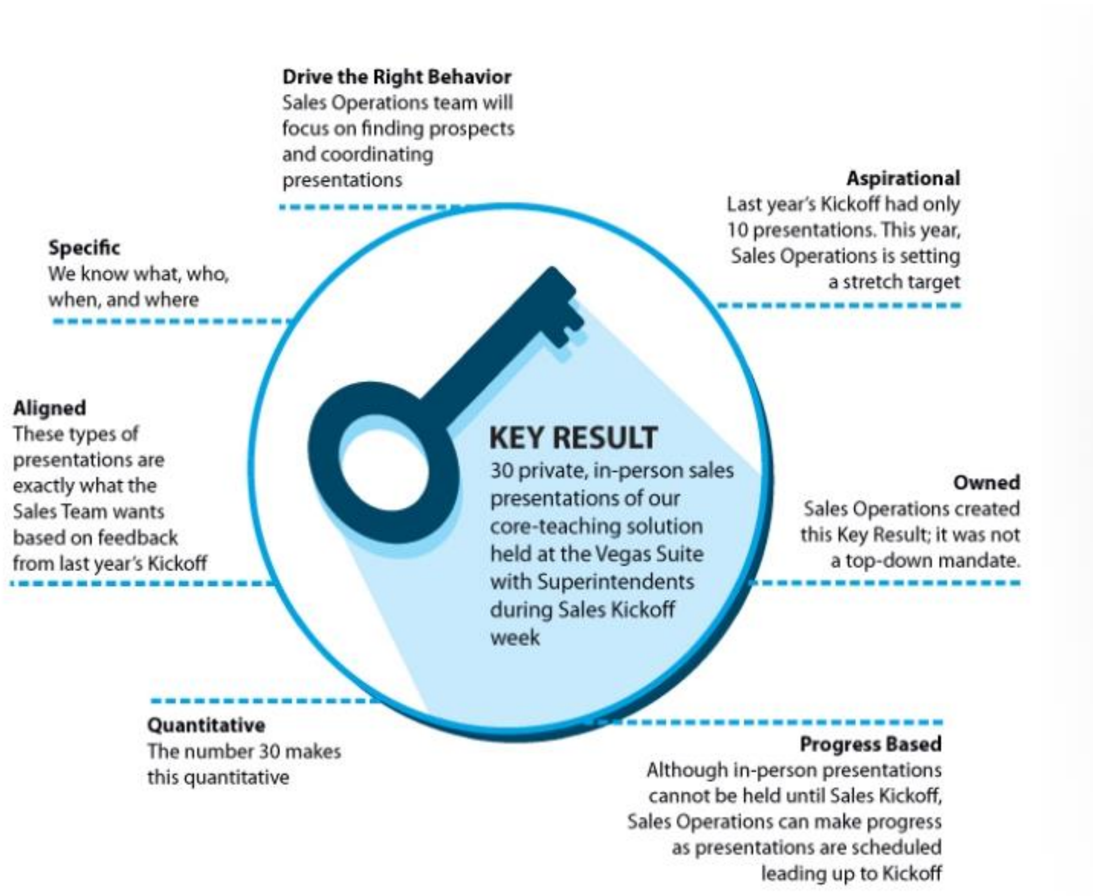
5.1.2 Effective Key Results

The second step in order to create effective OKRs is creating effective key results for the determined effective objectives. In this discussion, the work of Lamorte & Niven (2016) and Doerr (2017) are of particular interest. Key results are defined broadly by Lamorte & Niven as" Quantitative statements that measure the achievement of a given objective "(Lamorte & Niven, 2016, p. 32). As such, while a company's objective focuses on what a company aims to achieve, key results focus on how a company intends to achieve their objectives.

1. Characteristics of effective key results

The purpose of this first section related to effective key results is to discuss the characteristics of effective Key Results. In this context, the work of Lamorte & Niven (2016) represents a good starting point.
The characteristics of effective objectives according to Lamorte & Niven (2016) are illustrated and discussed below throughout a fictive example of a potential effective key result related to the previously discussed effective objective consisting in producing the most successful Sales kickoff within a company.

Figure 6: Fictive example of an effective key result



Source: Lamorte & Niven (2016), p.106

The illustrated key result, holding 30 private, in-person sales presentations of the (fictive) company's core-teaching solution at the Vegas Suite with Superintendents during the company's Sales Kickoff week is:

1. Quantitative

Whereas objectives are qualitative by nature as their aim to represent the desired direction and actions an organization undergoes, key results are quantitative as they quantitative data is necessary in order to assess whether or not a given objective has been met. The authors note that any form of quantitative data such as raw numbers in the context of new visitors or dollar amount in the context of revenues related to new products can be at the basis of a key result. The main advantage of relying on quantitative data is, according to the authors, that quantitative data is always objective. Therefore, progress made and the state of a current key result should never be up to an individual's interpretations.

2. Aspirational

Key results should, according to the authors, have an aspirational character as setting challenging but attainable goals enhance employee motivation & performances. Unattainable key results can, in a similar fashion as unattainable objectives, lead to unwanted behaviors such as excessive risk taking or unethical behaviors from employees. Both the importance of setting the bar high and the issues related to overly challenging goals were previously discussed throughout **section 2.3.4** of the review of the literature as well as **section 5.1.1** above.

3. Specific

Avoiding ambiguities when developing key results improves the quality of communication both amongst and between different units of an organization. Furthermore, as key results outline how the objective, they are paired with aims to be achieved, misunderstanding key results more than likely would lead to not meeting a unit's objective. As such, key results should aim to be as specific as possible according to the authors. They should lastly contain a specific target to compare progress against.

4. Owned

The authors note that, in their example, it is the Sales operation unit itself that developed the key result detailing how their unit's objective will be met. Doing so, according to the authors, not only ensures that the key result is properly understood by the unit but also ensures the execution of the laid-out plan, noting that people tend to be more willing to execute a plan they helped create. A similar line of thought presented by Doerr (2017) was previously discussed in the context of top-down and bottom-up objective setting in **section 2.3.2** of the review of the literature. According to Doerr, while some form of bottom-up goal setting should exist in the context of setting objectives, key results should be developed by the unit in charge of delivering a particular objective. Doerr (2017) notably also notes that a particular unit has typically more knowledge regarding what is truly important in their field of work.

5. Progress Based

Referring to the work of Amabile (2011), the authors highlight the importance of perceiving progress in one's work. Indeed, Amabile's work suggests that making meaningful progress is a key driver of employee motivation and morale, which are both recurrent drivers for employee performance. As such, the authors recommend drafting key results able to demonstrate progress frequently. In the above example, progress can be made and demonstrated by keeping track of the presentations that have already been scheduled.

6. Aligned

Horizontal and vertical alignment were previously introduced in **section 2.3.2** of the review of the literature and **section 5.1.1** above. Once again, alignment refers in this context to ensuring the developed key results are in line with the unit, the unit's divisions and the overall's company strategies and objectives. Alignment being more a characteristic of OKR-frameworks as a whole than of specific objectives or key results, it will be a separate topic of discussion later in **section 5.2** of this master thesis.

7. Drive the Right Behavior

The last key element of effective key results is, according to the authors, driving the right behavior. By driving the right behavior, the authors refer to ensuring that the developed key result leads to adequate behaviors from employees. This topic was previously discussed in the context of objectives in **section 5.1.1** above. In the context of key results, similar issues can occur if the developed key results prove to be overly challenging. As such, preemptive measures such as guidelines regarding what is expected from employees should be included when detailing key results.

2. Different types of key results

Although key results should be quantitative by nature, it is, in practice, not always possible for an organization to design quantitative measurements for a given objective. This reality is discussed by Doerr (2017). The author differentiates three types of key results: namely Metric, Milestone and Baseline key results.

1. Metric key results

Metric key results are, according to the author, both the most intuitive and the overall best type of key result. Metric key results are the traditional quantitative measurements designed to track the progress on a given objective described in the characterization of effective key results above. A few examples would be increasing revenues from sales by 15 percent or maintaining utilization rates from machinery between 70 and 80 per cent. The author notes that metric key results should be designed whenever a quantitative key result is determinable for a given objective.

2. Milestone key results

On the other hand, milestone key results are measurements aimed to track progress made on objectives that are easily expressed in metric measurements. For instance, the author notes that some key results have seemingly binary outcomes and illustrate this with the example of potential key results regarding the shipping of new products that are seemingly either shipped or not shipped, rendering tracking progress a difficult task. Such key results with binary outcomes should be transformed and scored, a topic discussed further in **section 5.4.2** of this master thesis.

3. Baseline key results

The last type of key result discussed by the author are baseline key results. Baseline key results are key results used when organizations lack a comparison point to compare to and have difficulties setting targets. The author illustrates by giving the example of an organization having as objective to increase customer loyalty by starting to send out online coupons. As this represents a brand-new strategy for the organization, setting a specific target for the number of redeemed coupons is a difficult task. Instead of setting specific targets, baseline key results aim to, as their name implies, set such a baseline for further target settings. Baseline key results are thus less specific by nature compared to metric and milestone key results and, even though they are in practice often a necessity, they should only be temporary key results according to the author.

3. Designing effective key results

This next section presents advice from Doerr (2017) and Lamorte & Niven (2016) regarding the creation of effective key results.

1. Keeping Key results Key

Lamorte and Niven note firstly that key results should first and foremost remain key. Their purpose is not to list every single possible action during a given period in order to accomplish a set objective but rather to determine and put emphasis on the necessary key drivers for progress on the set-out objective. As a rule of thumb, Doerr (2017) states that each objective should be assigned two to five key results.

2. Key result framing

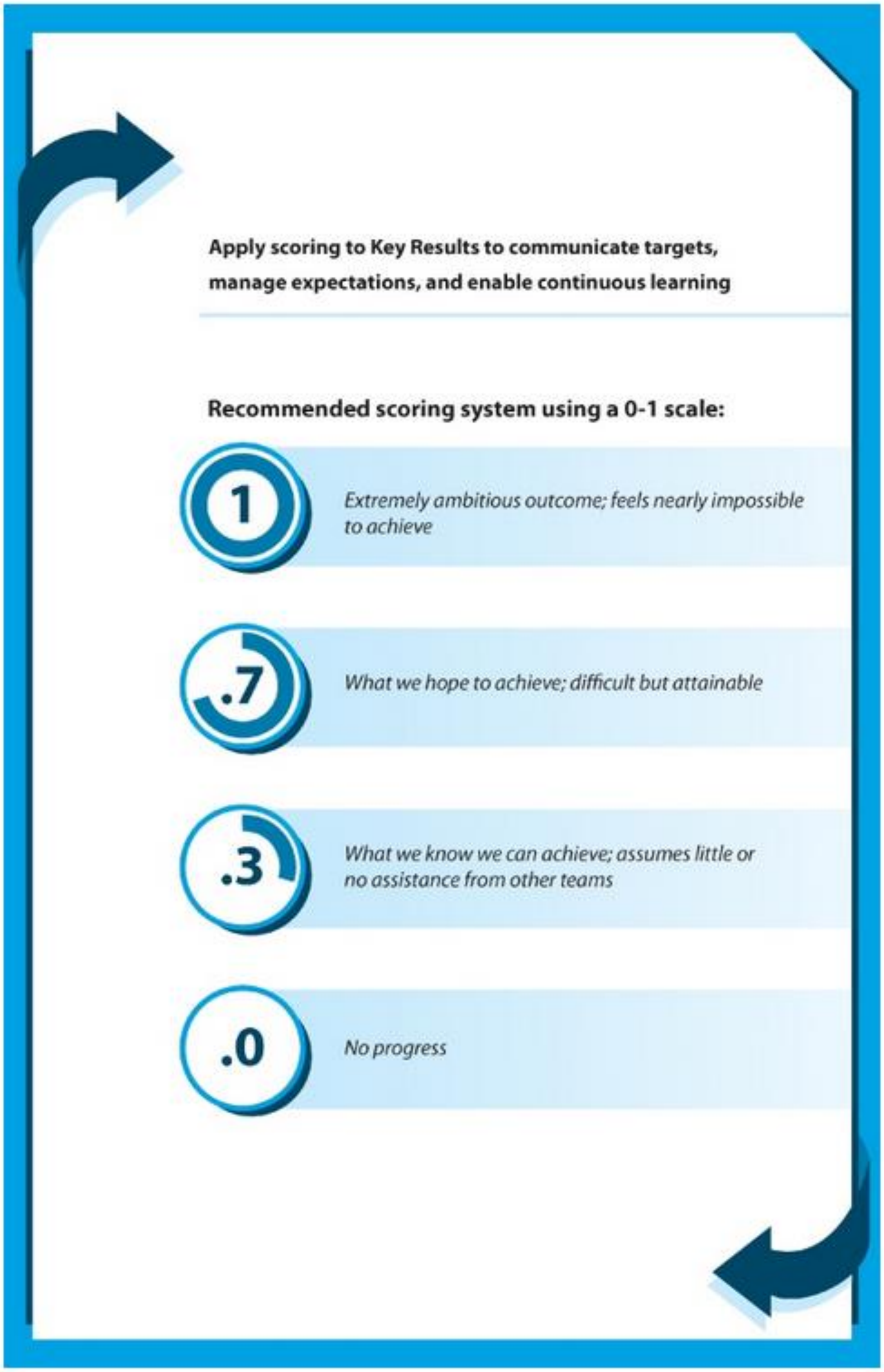
Similarly, as with the framing of objectives discussed in **section 5.1.1**, key results should be framed positively as framing results positively and using positive language to determine key results enhances motivation and commitment from employees. Indeed, a multitude of

human behavior studies such as Tuk et al. (2021) show that people are more willing and more motivated to achieve what they want to achieve rather than not achieving what they wish to avoid.
Furthermore, keeping key results simple and clear ensures that they are, on the one hand properly understood by the employees in charge of delivering them, but also ensure that people with a different background or from a different unit also understand the developed key results. This is particularly important in the context of transparent OKR-frameworks as having access to the objectives and key results from a different unit or division is of little interest if they are not understandable from an outsider's point of view. This topic will later be discussed in **section 5.3** of this master thesis.

3. Key Results Scoring Scale

As introduced in section **2.3.4** of the review of the literature, OKRs should be scored throughout their life cycle in order to showcase the progress that has been made and ultimately the results that were obtained. For this purpose, Lamorte & Niven (2016) recommend the scoring scale presented and discussed in the said **section 2.3.4.** Figure 3 illustrates the authors' scale here below once more for the readers' ease.

Figure 3: OKR scoring scale presented by Lamorte & Niven (2016)



Source: Lamorte & Niven (2016), p.132

4. Framework for developing effective key results

The purpose of this last section related to effective key results is to develop a methodology leading to the development of effective key results for a given objective in the context of OKR goal-setting systems. The developed methodology consists of a table detailing 7 questions managers should ask themselves as well as their relevance and their potential remediations aiming to ensure the effectiveness of the developed key results within an organization based upon the findings discussed above. The 7 questions are illustrated in **Table 3** below. **Table 3** also forms the second element of this master thesis's larger framework aiming to ensure successful implementations of OKR goal-setting frameworks.

Table 3: Framework for determining effective key results

Question to ask before setting key results	Why is this important	Possible remediation
Is the key result a specific quantitative measurement for tracking the objective's progress?	Quantitative data is objective and is the best way to track progress on a given objective.	Use milestones when unable to determine specific quantitative measurements. When lacking a point of comparison, use as a temporary key the development of a point of comparison from which targets will be developed in the future.
Are the key results inspirational?	Inspiring employees drives a company towards higher levels of performance.	Rethink the used word choice.
Are the key results challenging yet attainable?	Challenging employees lead to higher employee motivation and performance. Setting the bar too high can lead to unwanted behaviors.	Recalibrate the chosen key result.

Is the framing appropriate?	The usage of positive language and keeping the key results simple are drivers for success.	Rethink the used framing.
Is progress demonstrable frequently?	Making meaningful progress is a key driver of employee motivation and morale.	Draft a more progress-based key result.
Do the key results drive the right behavior?	Key results should include what is expected from employees in order to avoid unwanted behaviors.	Provide guidelines for each key result.
Who sets the key results?	Being able to develop the results related to their objectives motivates employees. Employees have likely more insight on the subject.	Allow involvement from employees within the development of the key results.

Source: Author's own table inspired and adapted from Ordóñez et al. (2009)

5.2 Setting aligned OKRs

Throughout this master thesis, the benefits of ensuring alignment within companies have been discussed multiple times. However, this master thesis has until now focused on stand-alone objectives and their results. The purpose of this section aims to determine how to drive alignment within OKR-goal setting frameworks by connecting OKRs throughout an organization.

The previously introduced works of Kaplan & Norton. (2001) and the Harvard Business Review (2016) are of particular interest in this discussion. Kaplan & Norton 's work notably suggested that only 7 percent of employees fully understand their company's strategies & objectives and how their work was related to the company's goals, highlighting how rare alignment within companies is in practice. On the other hand, studies made by the Harvard

Business Review suggested that companies with highly aligned employees are more than twice as likely to be part of the top performing enterprises.

Different works such as Taub (2002) present similar lines of thought, Taub for example noting that employees being able to see strong connections between their company's goals and their daily jobs has a tremendous positive impact on the company's bottom line.

According to Lamorte & Niven (2016), driving alignment within organizations is best accomplished in a top-down fashion by creating sets of what the authors refer to as "connected OKRs". The authors refer to connected OKRs as OKRs that are in line with the organization's highest-level OKRs and signal the unique contribution of a given team or individual regarding the organizational-level objectives.

A first step in that regard is determining the amount of OKRs to develop at each level of the organization. Doerr (2017) & Lamorte & Niven (2016) both underline that, in the context of OKR-frameworks, "less is more"; referring towards the inability of employees to focus on a large number of objectives at a given time, a topic previous discussed throughout **sections 2.3.1 & 5.1** of this master thesis. According to the authors, the general consensus is to determine two to five objectives for each unit of an organization and pair them with two to five key results.

The second step in the process of connecting OKRs within an organization is to ensure the organizational-level objectives are understood throughout the organization. As previously discussed in **section 5.1,** OKR-frameworks are characterized by employee involvement within the development of their individual or team objectives.

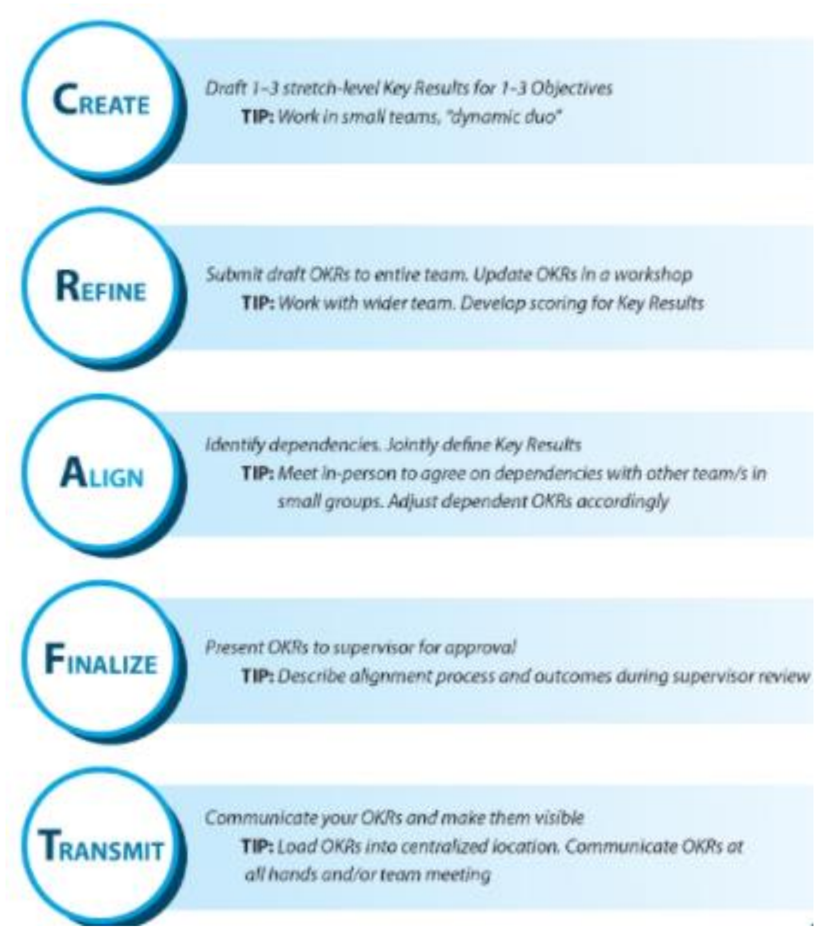
However, in order for the developed objectives to be aligned with organizational-level objectives, the corporate-level OKRs first and foremost need to be understood throughout the organization. In order to achieve this, clear communication regarding what these OKRs mean, why they were chosen and why these OKRs are important drivers of company's success is the most important factor leading towards successful OKR implementation according to Lamorte & Niven (2016). The importance of clear communication in the context of organizational restructuration's within companies is further discussed in **section 5.5** of this master thesis. Furthermore, a critical link needs to exist between the objectives of the different levels and units of an organization. Lamorte & Niven note that such a critical link can be achieved by developing mission statements. Indeed, according to the authors, developing mission statements that convey the purpose of a given unit and how the given unit creates value for an organization creates the necessary context to create aligned objectives within an organization. These mission statements can furthermore be used by units to discuss their potential OKRs by ensuring their proposal fits not only the organization's overall goals but also their individual unit's purpose.

The actual process of setting connected OKRs presented by Lamorte & Niven (2016) consist of on the one hand the CRAFT-process for setting OKRs and the Mass Connect Approach to ensure the developed OKRs are connected.

5.2.1 The CRAFT-process

Lamorte & Niven's (2016) CRAFT-process is illustrated in the following **figure 7** and detailed below. As previously discussed in **section 5.1**, OKRs should typically be set quarterly within organizations.

Figure 7: The CRAFT-process



Source: Lamorte & Niven (2016), p.132

1. Create

The first step of the CRAFT-process consists of creating sets of draft OKRs. As cooperation and employee involvement are central elements of the OKR-framework, brainstorming these draft OKRs with the different members of a given business unit might seem like the obvious choice.

However, the authors note that the literature suggests that brainstorming as large groups is widely inefficient. The authors refer to the work of Cain (2012). Cain firstly showcased that people require deep and time-consuming concentration on a given task in order to come up with new creative solutions; something that in practice cannot be expected from large groups. On the other hand, Cain noted that forty years of psychological studies show lower performances with larger brainstorming groups. A similar line of thought was notably presented by Chamorro-Premuzic in the Harvard Business Review issue of March 2015.

As such, Lamorte & Niven (2016) advise the creation of a small team within a given business unit that invests their time and energy to analyse the necessary elements to create the unit's OKRs such as the unit's core capabilities, the unit's purpose and place within the organization, the unit's strategy, ...

Furthermore, the authors note that involving more employees at this stage can be done by allowing them to submit their ideas via e-mail or via surveys to/from the small team.

As a rule of thumb, Lamorte & Niven suggest the development of two to three draft OKRs with two to three key results each for the given business unit.

2. Refine

The second step of Lamorte & Niven's CRAFT-process consists of refining the drafted OKRs. Refining the drafted OKRs is accomplished by holding a workshop within the business unit to review the draft OKRs. As such, prior to this workshop, the drafted OKRs have to be submitted to the different members of the business unit.

Ideally, is it expected from the small team that developed the unit's draft OKRs to explain their choices and generate debate within the unit before ultimately coming to an agreement regarding the OKRs the unit is going to use. The authors note that achieving full consensus on a set of OKRs, or on anything at all, is in practice an impossible task. However, the authors underline that, while it is important to have the voices of the different members of a business unit heard, it is also important to commit towards a set of OKRs as a team. A

3. Algin

Ensuring the developed OKRs are aligned within the organization is one of the tasks of the small team introduced earlier. Indeed, after refining the OKRs with their business unit, the small team is expected to determine the dependencies between their unit's objectives and other units of the organizations. In order to do so, the small team should communicate

with (the similar) small teams of other business units. In this process, the small team should score the different OKRs together with the business units they are dependent from based on the scale introduced in **section 2.3.4** of the review of the literature; scores of 0.3 and 0.7 out of 1 respectively representing what the business unit can achieve on a given key result without (0.3) and with (0.7) the help of the units they are dependent from.
Once the OKRs are updated, the small team should distribute them once more within their business unit. The authors note that, if there are no significant changes, no meeting is required at this stage of the process.

4. Finalize

The fourth step of the CRAFT-process consists of finalizing the developed OKRs. This step consists of receiving final approval from the unit or team's superior to use the developed OKRs in the upcoming quarter. The authors encourage providing an overview of how the OKRs were developed and the rationale behind the targets that were put in place. For fairly obvious reasons, in the context of organization-level OKRs, the finalizing step doesn't exist.

5. Transmit

Transmitting is the last step of the CRAFT-process. The authors divide this last step in two; namely in loading the developed OKRs into a software such as Microsoft Excel, Google Sheets or a specific OKR software and secondly in communicating them widely throughout the organization. The authors note that the former is a necessity in order for OKRs to be monitored and cataloged but also note that purchasing a specific OKR software shouldn't be an organization's priority when starting to work with the OKR-framework for the first time. On the other hand, communicating the OKRs means to enable employees across the organization to have access to the developed OKRs. This idea is also presented by Doerr (2017). Indeed, according to both Lamorte & Niven (2016) & Doerr, communicating openly about the objectives of the different units within an organization encourages the development of new ideas; new ideas being the key to securing a successful future for one's organization.

5.2.2 The Mass Connect Approach

The Mass Connect Approach is a process presented by Lamorte & Niven (2016) that aims to ensure the developed OKRs at the different levels of an organization are connected.
The approach can be seen as an extension of the create phase of CRAFT-process discussed above and consists of holding a workshop with every employee for small organizations or representatives of each business unit for larger organizations (ideally the small team from the CRAFT-process) aiming to create draft sets of OKRs. The authors recommend holding the workshop in an informal convivial manner and such a workshop should, according to the authors, consist firstly of creating or refreshing the context of the organization's OKR-journey covering topics such as the organizational-level OKRs but also more generic information about OKRs and how to effectively create them. The purpose of the introduction is to give employees the opportunity to ask questions regarding the already developed OKRs as well their relevance but also regarding what is expected from the employees. Next, the authors recommend letting each unit or the representatives of each unit 90 minutes to create their own unit's draft OKRs. During that time, the authors recommend organizations to have facilitators, from the organization or from outside the organization, roaming the facility in order to help the different units and answer any potential questions. Finally, each unit should be allowed a small amount of time to present their set of draft OKRs to the rest of the organization and receive feedback from the different units of the organization. The purpose of that exercise is twofold. Firstly, doing so facilitates horizontal alignment within the organization by seeding cooperation between the different units within the organization. Secondly, it enhances the overall knowledge that the employees have of the activities occurring within the organization as well the objectives the different business units have.

The CRAFT-process and the Mass Connect Approach are the third element of this master thesis's larger framework aiming to help organizations implement OKR goal-setting systems effectively.

5.3 Revisiting OKRs

Until now, this master thesis covered the characteristics of effective OKRs as well as the process to develop and implement them throughout an organization. However, the OKR-journey does not end here. Indeed, as was introduced in **section 2.3.3** of the review of the literature, OKRs aren't static benchmarks and should be scored and potentially modified or even scrapped throughout their life cycles. The following three paragraphs act as a reminder of the three activities presented by Doerr (2017) related to revisiting OKRs during their life cycles; namely OKR-scoring, OKR Self-assessments & OKR-reflection.

5.3.1 Scoring

The purpose of OKR-scoring is, as discussed in, **section 2.3.3** of the review of the literature to mark what has been achieved in order to assess whether the set objectives have been attained, but also, if the objectives have not been met, to which extent progress was made. As mentioned in **section 5.1,** this master thesis recommends the scoring scale presented by Lamorte & Niven (2016) illustrated in figure 3 in **section 2.3.4** of the review of the literature as well as **section 5.1** of this master thesis. OKR-scoring should happen at the end of an OKR-cycle but also throughout its life cycle. If a given unit realizes during a quarter that they do not have made any meaningful progress on a particular objective, they should consider recalibrating the said objective or even dropping it.

5.3.2 Self-assessment

Self-assessing OKRs's purpose on the other hand is to understand the circumstances of a given objective during a given period and drive more adequate goal-setting processes in the next period.

The underlying reality is that one the one hand, weak results could be explained by lack of effort from employees but also by inadequate goal setting or even unexpected market changes.

On the other hand, strong results could be explained by employees exercising a lot of effort but also by the objectives setting the bar too low.

OKRs should typically be self-assessed whenever they are scored as their purpose is to provide the context of a given score.

5.3.3 Reflection

Lastly, reflection consists unsurprisingly of reflecting about one's experiences, Doerr notably noted that learning from experiences is more effective when coupled with reflecting about the said experiences. Doerr (2017, p.124) proposed different examples of reflections at the end of OKR cycles such as:

- "Did I accomplish all of my objectives? If so, what contributed to my success?"
- "If not, what obstacles did I encounter"
- "What have I learned that might alter my approach to the next cycle's OKRs?"

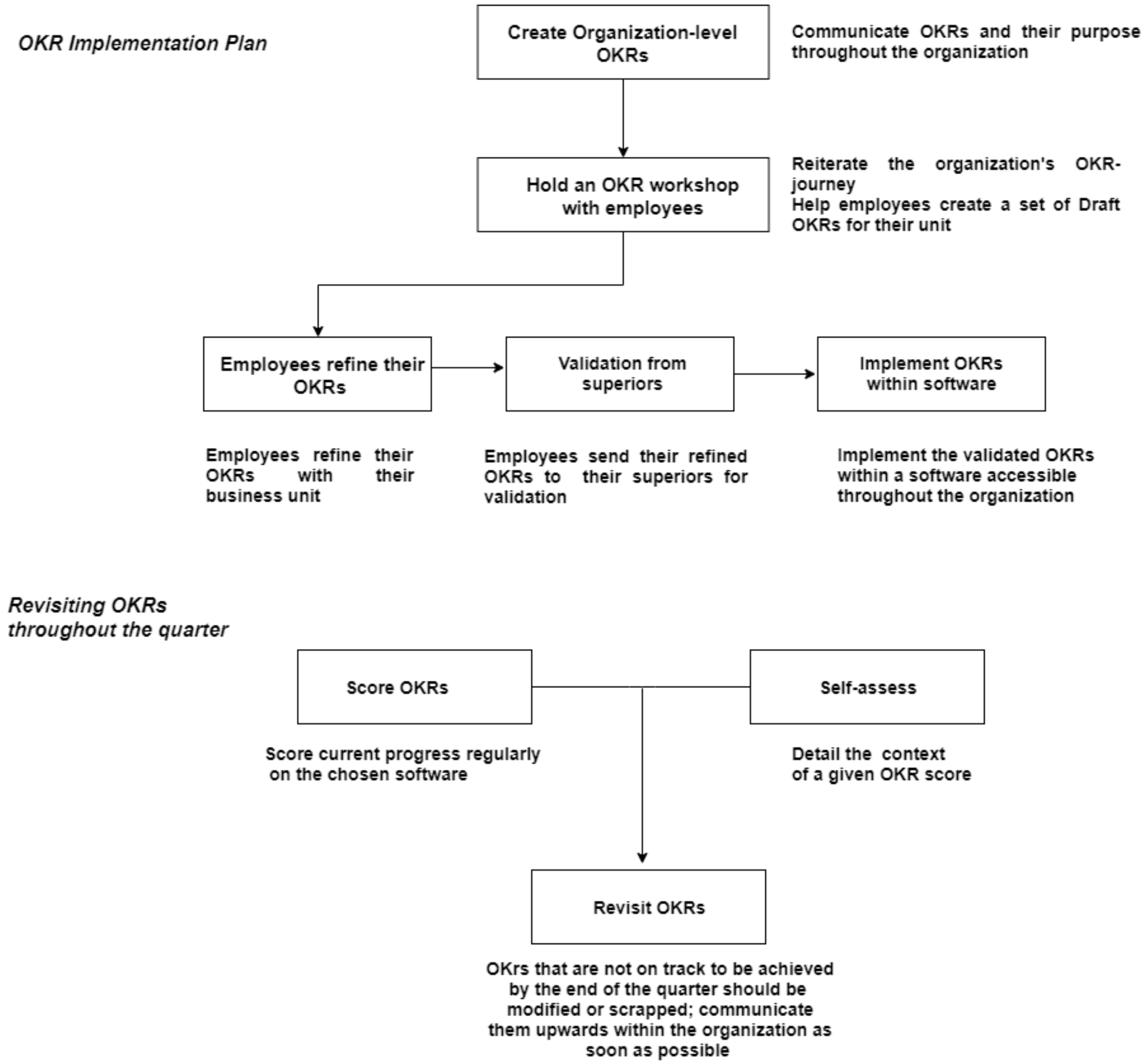
5.4 The importance of clear communication

A last important point of discussion is the importance of clear communication in the context of organizational changes.
According to a study made by McKinsey (2015), clear communication is the most important factor regarding successful organization-level transformations. Companies where senior managers communicate openly and continuously regarding the company's transformation are shown to be 12.4 times more likely to implement organization-level transformations successfully.
However, communication within a company regarding the implementation of OKR systems as well the OKRs themselves is a challenge that many companies overlook. Doerr (2017) states that it is very common for enterprises to fail to communicate OKRs throughout their company. The authors refer to a study by Garr (2014) where a survey of eleven thousand senior executives and managers where revealed only half were able to identify even a single top priority of their company and notes that unclear communication regarding organizational-level goals can have drastic effects on cohesion and alignment within a company and on employee's motivation as they become unable to comprehend the link between their goals and the company's mission.
As such, organizations should focus a lot of energy on clearly communicating not only their organizational-level OKRs, but also on the purpose of starting their OKR-journey. The holding of an OKR-workshop within the organization, discussed in the context of Lamorte & Niven's (2016) Mass Connect Approach in **section 5.2** above represents one major opportunity to ensure everyone within the organization is on the same page.

5.5 Framework for developing and implementing OKR goal-setting systems.

In this last section of this master thesis, the overall framework comprehending the CRAFT-process, the Mass Connect Approach and the two tables related to effective OKRs is presented. The framework aims to be used each quarter when setting the quarterly OKRs within organizations. One the one hand, the two tables first introduced in **section 5.1** of this master thesis act as guidelines for the development of effective OKRs but also as a reminder of the most important characteristics of the OKR goal-setting framework such as involvement employees within the goal-setting process or driving aspiration within the organization. One the other hand, the below **Figure 8** inspired from the CRAFT-process and the Mass Connect Approach detailed in **section 5.2** above act as a plan for the implementation of OKR-frameworks within organizations.

Figure 8: Guide for implementing OKR-frameworks



Source: Author's own figure inspired and adapted from Lamorte & Niven (2016) & Doerr (2017)

Table 2: Framework for effective objective setting

Question to ask before setting goals	Why is this an important task	Possible remediation
Does the goal provide value to the company?	Investing resources into an objective that generates no value to the company makes little sense.	Do not chase objectives that are of no value.
Are the goals inspirational?	Inspiring employees drive a company towards higher levels of performance.	Rethink the used word choice
Is the framing appropriate?	The usage of positive & plain language as well as implying action are positive drivers for success.	Rethink the used framing.
Are the goals challenging but attainable?	Challenging goals seed cooperation within organizations and raise employee motivation and trust levels. Overly challenging goals can lead to unethical behavior from employees, excessive risk taking and can even harm self-efficacy from employees.	Provide skills and training to enable employees to reach goals. Avoid harsh punishment for failure to reach a goal. Safeguards such as strong employee oversight and the development of a strong culture of ethical behavior inside organizations help ensure ethical behavior. Recalibrate the determined objective.
Are the goals too specific?	Narrow goals can blind people to important aspects of a problem.	Be sure that the developed goals include all of the elements that are relevant for success.

Is the outcome of the objectives solely in the hands of the unit?	A unit from an organization blaming another unit for not being able to realize their objective can be a source of tension within an organization.	Create shared objectives between the different units. Shared objectives furthermore seed horizontal alignment within organizations.
Is the time horizon appropriate?	Too much focus on short-term goals may harm long-term performance. Short-term goals should be doable within a quarter.	Be sure that short-term efforts to reach a goal do not harm investment in long-term outcomes.
Who sets the goals?	Some form of bottom-up goal setting drives (vertical) alignment within companies and improves performance.	Allow involvement from employees within the goal-setting process.
Does my objective have a description?	Objective descriptions detail the relevance of an objective to ensure they are understood throughout an organization.	Write an objective description

Source: Author's own table inspired and adapted from Ordóñez et al. (2009)

Table 3: Framework for determining effective key results

Question to ask before setting key results	**Why is this important**	**Possible remediation**
Is the key result a specific quantitative measurement for tracking the objective's progress?	Quantitative data is objective and is the best way to track progress on a given objective.	Use milestones when unable to determine specific quantitative measurements. When lacking a point of comparison, use as a temporary key the development of a point of comparison from which targets will be developed in the future.
Are the key results inspirational?	Inspiring employees drives a company towards higher levels of performance.	Rethink the used word choice.
Are the key results challenging yet attainable?	Challenging employees lead to higher employee motivation and performance. Setting the bar too high can lead to unwanted behaviors.	Recalibrate the chosen key result.
Is the framing appropriate?	The usage of positive language and keeping the key results simple are drivers for success.	Rethink the used framing.
Is progress demonstrable frequently?	Making meaningful progress is a key driver of employee motivation and morale.	Draft a more progress-based key result.
Do the key results drive the right behavior?	Key results should include what is expected from employees in	Provide guidelines for each key result.

	order to avoid unwanted behaviors.	
Who sets the key results?	Being able to develop the results related to their objectives motivates employees. Employees have likely more insight on the subject.	Allow involvement from employees within the development of the key results.

Source: Author’s own table inspired and adapted from Ordóñez et al. (2009)

6. Conclusion, closing thoughts and further research

Throughout this master thesis, a lot of focus was exercised on how to develop and implement OKRs effectively. The strengths of the OKR goal-setting framework were widely explored from ensuring that every voice within the organization is being heard to ensuring that everyone within the organization is on the same page. Furthermore, the pitfalls related to goal-setting such as the unwanted behaviors employees might undertake when faced with overly challenging goals were explored and remediations to avoid these pitfalls were proposed. Furthermore, this thesis developed a framework for organizations to use in order to implement OKR goal-setting systems within their organization. The developed framework is divided into guidance related to the design of effective OKRs and guidance related to the implementation of OKR frameworks. It is noteworthy that little to no attention was given throughout this master thesis to the actual objective's organizations set themselves. While this would be an interesting topic, I decided to focus on the structural aspect of OKRs and their implementation. The underlying reasoning for that decision was that organizations should be able to determine the kind of objectives they want to develop for their organization and that these objectives can widely differ between the different types of organizations around the world. The OKR goal-setting framework is indeed applicable from the largest companies listed on the trade market to the local football team. Lastly and sadly, while this master thesis initially aimed to develop a framework for implementing OKR goal-setting systems within organizations and use the said framework to implement OKRs within a small organization, this ended up not being feasible due to not being able to find a said small organization to work with. The current business environment related to the Covid-19 pandemic has undoubtedly played a role in that regard. Further research could include research regarding the actual objectives organizations set themselves or the implementation of an OKR goal-setting system within an organization using the developed framework.

7. Bibliography

Amabile, T. & Kramer, S. J. (2011). The Power of Small Wins. Harvard Business Review. https://hbr.org/2011/05/the-power-of-small-wins. Consulted on July 7 2021.

Awadallah, E., & Allam, A. (2015). A Critique of the Balanced Scorecard as a Performance Measurement Tool. International Journal of Business and Social Science, Volume 6, Number 91.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, Volume 84, Number 2, Pages 191–215. https://doi.org/10.1037/0033-295X.84.2.191

Cain, S. (2012). Quiet: The power of introverts in a world that can't stop talking. Washington: Crown Publishers/Random House.

Chamorro-Premuzic, T. (2015) Why group brainstorming is a waste of time. Hbr.org. https://hbr.org/2015/03/why-group-brainstorming-is-a-waste-of-time. Consulted on June 7 2021

Cheng, M., Subramanyam, K. R. & Zhang, Y. (2005). Earnings Guidance and Managerial Myopia. Ssrn.com https://ssrn.com/abstract=851545. Consulted on July 8 2021.

Covey, S. R. (2004). The 8th Habit. New York: The Free Press.

Doerr, J. (2017) Measure What Matters. London: Portfolio Penguin

Grove, A. S. (1985). High output management. New York: Vintage Books.

Intrafocus. (2021). Balanced Scorecard Example. Intrafocus.com. https://www.intrafocus.com/2016/06/balanced-scorecard-example/. Consulted on March 19 2021.

Jacquemont, D., Maor, D. & Reich, A. (2015). How to beat the transformation odds. Mckinsey & Company. https://www.mckinsey.com/business-functions/organization/our-insights/how-to-beat-the-transformation-odds.Consulted on May 7 2021.

Kaplan, R. S. & Norton, D. P. (1992). The Balanced Scorecard—Measures that Drive Performance. Harvard Business Review.

Kaplan, R. S., & Norton, D. P. (2001). The strategy-focused organization: how balanced scorecard companies thrive in the new business environment. Boston, Mass.: Harvard Business School Press.

Kerr, S. (1975). On the Foly of Rewarding A, While Hopig for B. Academy of Management Journal, Volume 18, Number 4, Pages 769-783.

Knight, D., Durham, C. C., & Locke, E. A. (2001). The Relationship of Team Goals, Incentives, and Efficacy to Strategic Risk, Tactical Implementation, and Performance. Academy of Management Journal, Volume 44, Number 2, Pages 326–338. https://doi.org/10.2307/3069459

KPI. (2021) What is a Key Performance Indicator. KPI.org. https://kpi.org/KPI-Basics. Consulted on July 15 2021.

Lamorte, B., & Niven, P.R. (2016). Objectives and Key Results: Driving Focus, Alignment, and Engagement with OKRs. New Jersey: Wiley

Larrick, R. P., Heath, C., & Wu, G. (2009). Goal-induced risk taking in negotiation and decision making. Social Cognition, Volume 27, Number 3, Pages 342–364. https://doi.org/10.1521/soco.2009.27.3.342

Latham, G. P., & Locke, E. A. (2007). New developments in and directions for goal-setting research. European Psychologist, Number 12, Volume 4, pages 290–300. https://doi.org/10.1027/1016-9040.12.4.290

Locke, A., Ginsborg, J., & Peers, I. (2002). Development and disadvantage: implications for the early years and beyond. International journal of language & communication disorders, Number 37, Volume 1, Pages 3–15. https://doi.org/10.1080/13682820110089911

Locke, E., & Latham, G. (2002). Building a Practically Useful Theory of Goal Setting and Task Motivation: A 35Year Odyssey. American Psychologist, Volume 57, Pages 705-717. doi:10.1037/0003-066X.57.9.705

Loudon, J. C. (1827). An encyclopædia of gardening; comprising the theory and practice of horticulture, floriculture, arboriculture, and landscape-gardening, including all the latest improvements; a general history of gardening in all countries; and a statistical view of its present state, with suggestions for its future progress, in the British Isles (Fifth ed.). London, England: Longman, Rees, Orme, Brown, and Green.

Mathe, H., Pavie, X., & O'Keeffe, M. (2011). Valuing people to create value: An innovative approach to leveraging motivation at work.

Merchant, K. & Van der Stede, W. (2017). Management control systems. Edinburgh: Pearson.

Neale, M. A., & Bazerman, M. H. (1985). The effects of framing and negotiator overconfidence on bargaining behaviors and outcomes. Academy of Management Journal, Volume 28, Number 1, Pages 34–49. https://doi.org/10.2307/256060

Neale, M. A., & Bazerman, M. H. (1985). The effects of framing and negotiator overconfidence on bargaining behaviors and outcomes. Academy of Management Journal, Volume 28, Number 1, Pages 34–49. https://doi.org/10.2307/256060

Ordónez, L. D., Schweitzer, M. E., Galinsky, A. D. & Bazerman, M. H. (2009) Goals Gone Wild: The Systematic Side Effects of Over-Prescribing Goal Setting. Harvard Business School, working paper no 09-083.

Panchadsaram, R. & Prince, S. (s.d.) What is an OKR? Definition and examples. Whatmatters.com. https://www.whatmatters.com/faqs/okr-meaning-definition-example. Consulted on June 10 2021.

Park, J. (2020). Why all Product Managers should apply Objectives and Key Results (OKRs) to drive product success. Medium.com. https://awesomeproductsquad.medium.com/why-all-product-managers-should-apply-objectives-and-key-results-okrs-to-drive-product-success-4af597b68cd Consulted on May 4 2021.

Pink, D. (2009). The Puzzle of Motivation Dan Pink. TED. https://globalioc.com/wp-content/uploads/2018/11/Pink-Motivation.pdf. Consulted on April 17 2021.

Prince, S. (2021). How to grade your OKRs. Whatmatters.com. https://www.whatmatters.com/faqs/how-to-grade-okrs/. Consulted on July 9 2021.

Sull, D. & Homkes, R. (2015). Why Strategy Execution Unravels—and What to Do About It. Harvard Business Review. https://hbr.org/2015/03/why-strategy-execution-unravelsand-what-to-do-about-it. Consulted on 3 July 2021.

Taub, S. (2002). The Peasants are Revolting. CFO.com. https://www.cfo.com/2002/09/the-peasants-are-revolting/. Consulted on 20 July 2021

Tenbrunsel, A. E., Wade-Benzoni, K. A., Messick, D. M. & Bazerman, M. H. (2000).Understanding the Influence of Environmental Standards on Judgments and Choices. The Academy of Management Journal, Volume 43, Number 5, Pages 854-866.

Tuk, M. A., Prokopec, S. & Van den Bergh, B. (2020). Do versus Don't: The Impact of Framing on Goal-Level Setting.Journal of Consumer Research, Volume 47, Pages 1003-1024.https://doi.org/10.1093/jcr/ucaa050

Van Oijen P. (2020). Driving Value Creation Through Proper Design of Goal Realization Frameworks. Journal of Creating Value. Volume 6, Number 2, Pages 271-285. doi:10.1177/2394964320938220

Zak, P. J. (2017). The Neuroscience of Trust. Harvard Business Review, Volume January-February 2017, Pages 84-90.

Wilsey, D. (2021). Using OKRs with Balanced Scorecard. Balancedscorecard.org. https://balancedscorecard.org/wp-content/uploads/2019/08/BSI-Using-OKRs-with-Balanced-Scorecard.pdf. Consulted on July 13 2021.

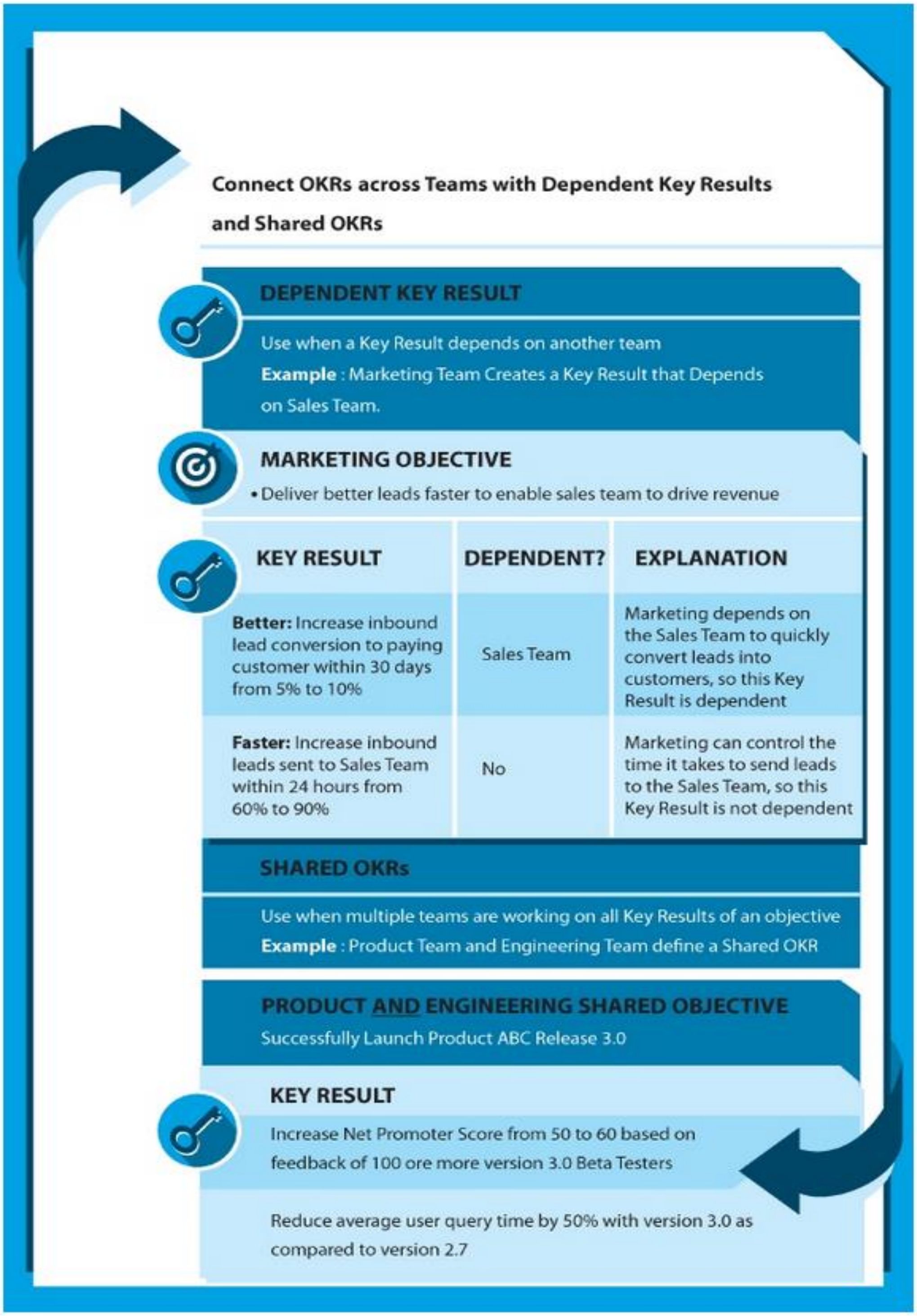
Zhou, H., & He, Y. (2018). Comparative Study of OKR and KPI. DEStech Transactions on Economics, Business and Management.

8. Appendix

Figure A: Example of a scored OKR

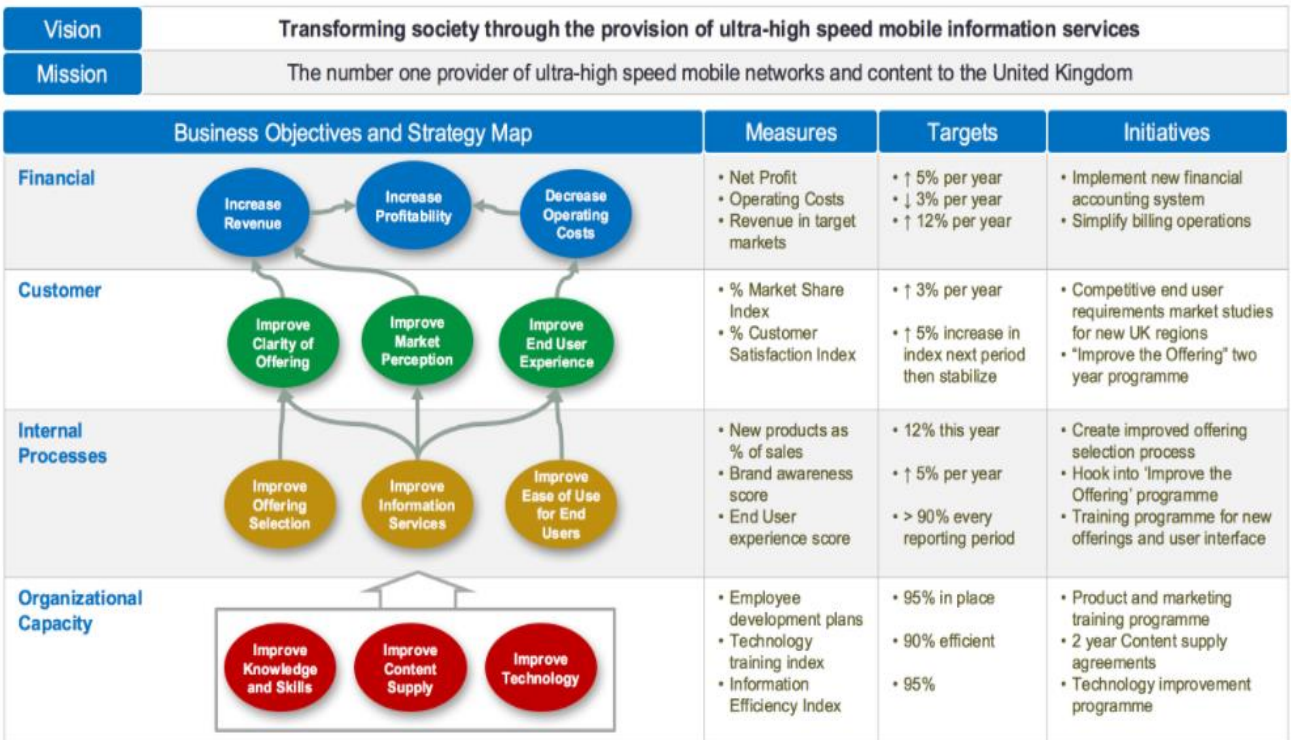
Source: Prince (2021)

Figure B: Example of shared OKRs



Source: Lamorte & Niven (2016); p.157

Figure C: Sample Balanced Scorecard



Vision	Transforming society through the provision of ultra-high speed mobile information services
Mission	The number one provider of ultra-high speed mobile networks and content to the United Kingdom

Business Objectives and Strategy Map		Measures	Targets	Initiatives
Financial	Increase Revenue; Increase Profitability; Decrease Operating Costs	• Net Profit • Operating Costs • Revenue in target markets	• ↑ 5% per year • ↓ 3% per year • ↑ 12% per year	• Implement new financial accounting system • Simplify billing operations
Customer	Improve Clarity of Offering; Improve Market Perception; Improve End User Experience	• % Market Share Index • % Customer Satisfaction Index	• ↑ 3% per year • ↑ 5% increase in index next period then stabilize	• Competitive end user requirements market studies for new UK regions • "Improve the Offering" two year programme
Internal Processes	Improve Offering Selection; Improve Information Services; Improve Ease of Use for End Users	• New products as % of sales • Brand awareness score • End User experience score	• 12% this year • ↑ 5% per year • > 90% every reporting period	• Create improved offering selection process • Hook into 'Improve the Offering' programme • Training programme for new offerings and user interface
Organizational Capacity	Improve Knowledge and Skills; Improve Content Supply; Improve Technology	• Employee development plans • Technology training index • Information Efficiency Index	• 95% in place • 90% efficient • 95%	• Product and marketing training programme • 2 year Content supply agreements • Technology improvement programme

Source: Intrafocus (2016)