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KEY PERFORMANCE INDICATOR'S KPIs RELIABILITY IN DECISION MAKING

IN PEOPLE MANAGEMENT, PROCESS OPTIMIZATION AND MARKETING

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List of Abbreviations and Expressions

KPI	Key Performance Indicator
KPI System	A set of KPIs related to specific objectives, processes to develop, communicate, iterate, and execute them
KPI Users	The people who are using the KPIs either to evaluate others work or being evaluated by others.
KPI Relevance	Indicates the relevance of the KPI to an objective directly impact the business
KPI Iteration Process	Indicates refers to the process of workflow to validate that the KPI relevance still exist
Corporate Culture	Refers to the adoption of the corporate or organization to the KPIs in the culture, or as they say "let's speak numbers"

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The KPIs have been widely used in many places in our day-to-day life for many reasons, and it was meant to be the business objectives compass. Therefore, it should be designed, communicated, and usually tuned to really indicate the performance toward the objectives. However, in many businesses we can recognize some distance in the application of KPIs; it starts in many companies in a perfect way, then by time it faces some challenges lead to losing its purpose.

In this research, we study the KPIs reliability limits in decision making in People Management, Process Optimization and Marketing in a various company from different industries like Information Technology, Pharmaceutical, Oil and Gas and Banking sectors, to identify the elements causes those leads to less dependent or even useless KPI systems.

This research is testing to what extent KPIs is used in decision making, by reviewing the earlier definitions and theories about KPIs to choose the proper structure for the KPI system, and the KPI characteristics.

The research adopted the (KPIs Iteration Process (KO), KPI Relevance (KR), and Corporate Culture (CC)) as KPI system components, and the (Balanced, Sparse, Distributed, Correlated, Owned, Actionable, Regulated, Simple, Aligned, Referenced, Validated) as KPI system characteristics. Where each component has its characteristics set and represented each characteristic by a question in the server distributed on 65 KPI users.

$$KPI\ System = KPIs\ Iteration\ Process + KPI\ Relevance + Corporate\ Culture$$

$$KPIs\ Iteration\ Process\ (KO) = \{Balanced, Correlated, Owned\}$$

$$KPI\ Relevance\ (KR) = \{Sparse, Distributed, Aligned\}$$

$$Corporate\ Culture\ (CC) = \{Actionable, Regulated, Simple, Referenced, Validated\}$$

Then the research analyzed the results to recognize the KPI Iteration Process as the higher impacting factor followed by KPI Relevance, then the Corporate Culture, on the KPI System reliability in Decision Making.

The research offers a way to assess the internal KPI system in the organization to have a better visibility on the defined variables for a reliable KPI system in decision making.

Keywords: KPI; KPIs; KPI System; Decision Making; Marketing; People Management; Process Optimization

1. Introduction to the Research Topic

In this research, the researcher is focusing on the Key Performance Indicators, as a tool, method, framework, process, or system (referred as **KPI System** in this research), and to what extent the **Decision Making** can rely on the KPI system in an organization or firm.

The research is considering the KPIs from the two perspectives; The assessor and the assessed (referred as **KPI Users** in this research).

Also, the research considered to analyze the use of KPIs from three main and major areas of use, **Marketing, People Management** and **Process Optimization**.

To represent this research and its conclusion, the researcher is following the below research indexing structure for the research contents to introduce the research topics, followed by the reviews of the earlier similar research, articles and theories, to extract and emphasize the research gap, and research questions. With clarifying the research philosophy and methodology used in the research design, implementation, and data analysis, followed by the data gathering and analysis, to reach to the relation conclusion, explained by defined factors to be able to numerate the phenomena of the study which is the **Reliability of Key Performance Indicators in Decision Making**.

1.1 Scenario Analysis

In this research: there are five Chapters aimed to drive the fluency from the problem to the conclusion and structured as below.

- **Introduction to the Research Topic**

This is where we are now, describing the topic and the structure of this research.

- **Chapter One – Purpose of the Research**

This chapter is designed to expose the importance of the research topic by showing the significance of your topic and providing proper background about the area of implementation. It also justifies the importance of such research topic and its practical implications.

- **Chapter Two – Literature Review.**

We will discuss published work and related topics and discussions related to the specific topic.

- **Chapter Three – Research Methodology**

Where we will explain the research methodology and the framework.

- **Chapter Four – Data Analysis & Findings**

Where the data sorting and analysis designed and its results, as well as the relations calculations.

- **Chapter Five – Discussion**

The interpretation of the framework variables data, and its meaning and correlation to each other.

1.2 Introduction to Research Topic

Key Performance Indicators (KPIs) are used to inspect the performance and progress of businesses, it is usually connected with process analysis, productivity, and quality. To set a scale of accepted performance to the business.

1.2.1 Case Study 1 – A Fall of a Running KPI System

We have – as an example – an information technology company working on Hardware equipment and systems integration professional services established in Egypt 1990. The company achieved a moderate income in the exceedingly early years then started to grow noticeably in 2007-2008 when they started to provide services widely to banking sectors which is controlled by the central bank of Egypt from the regulation perspective.

At that time, it was clear that they need to restructure the company hierarchy, process, workflow, documentation system, and quality to provide a sustainable standard. In 2011, they contracted with HR and business consultancy to help in the restructuring and re-organized everything and constructed the HR KPI system with the participation of all the departments and many discussions.

Employees Performance Evaluation was planned to be conducted monthly to be averaged quarterly to impact the variable part of the salaries.

The system was working fine for 3-4 years and in 2005 it started to show a gap between the application of the HR KPI system and the purpose of its existence which is employee motivation and sustainable quality.

No wonder that this case for many systems in the modern business is a big pain leading to split the decision making from the KPIs and leave them useless indicators with many subsequences for the employees and workers, and the business overall.

1.2.2 About this Research

In this research we will find the main KPI system elements and its components to keep the KPI system reliable in decision making by defining these variables and evaluating its reliability for KPI users, to identify the higher variables in weight to provide a model for business to focus within limited budgets as an example.

The research will offer a way to examine an existing KPI system reliability to the business decisions, and recommendation to keep the KPI system alive and functional, as well as some KPI reference examples.

1.3 Research Procedures

The research procedures are illustrated in [Figure 1](#). Where the first procedure to be considered to introduce the research background and identifying the research problem.

The second procedure is to provide previous studies related to the research scope through the literature review, including a presentation of definitions, theories, as well as a discussion of the relationship between them.

The third procedure to be considered in the construction of a conceptual framework for the current research.

The fourth procedure is to design the questionnaire directed to the sample selected for this research.

The fifth procedure is to collect data from the sample assigned for this research, represented in decision making in Marketing, People Management, and Process optimization in the companies in Egypt from different industries like Information Technology, Pharmaceutical, Oil and Gas and Banking sectors.

The sixth procedure is described in the statistical analysis of the collected data using correlation and regression analyses.

The seventh procedure is to identify the main research findings through the research discussion. And to derive the main conclusion of this research and provide recommendations and an action plan.

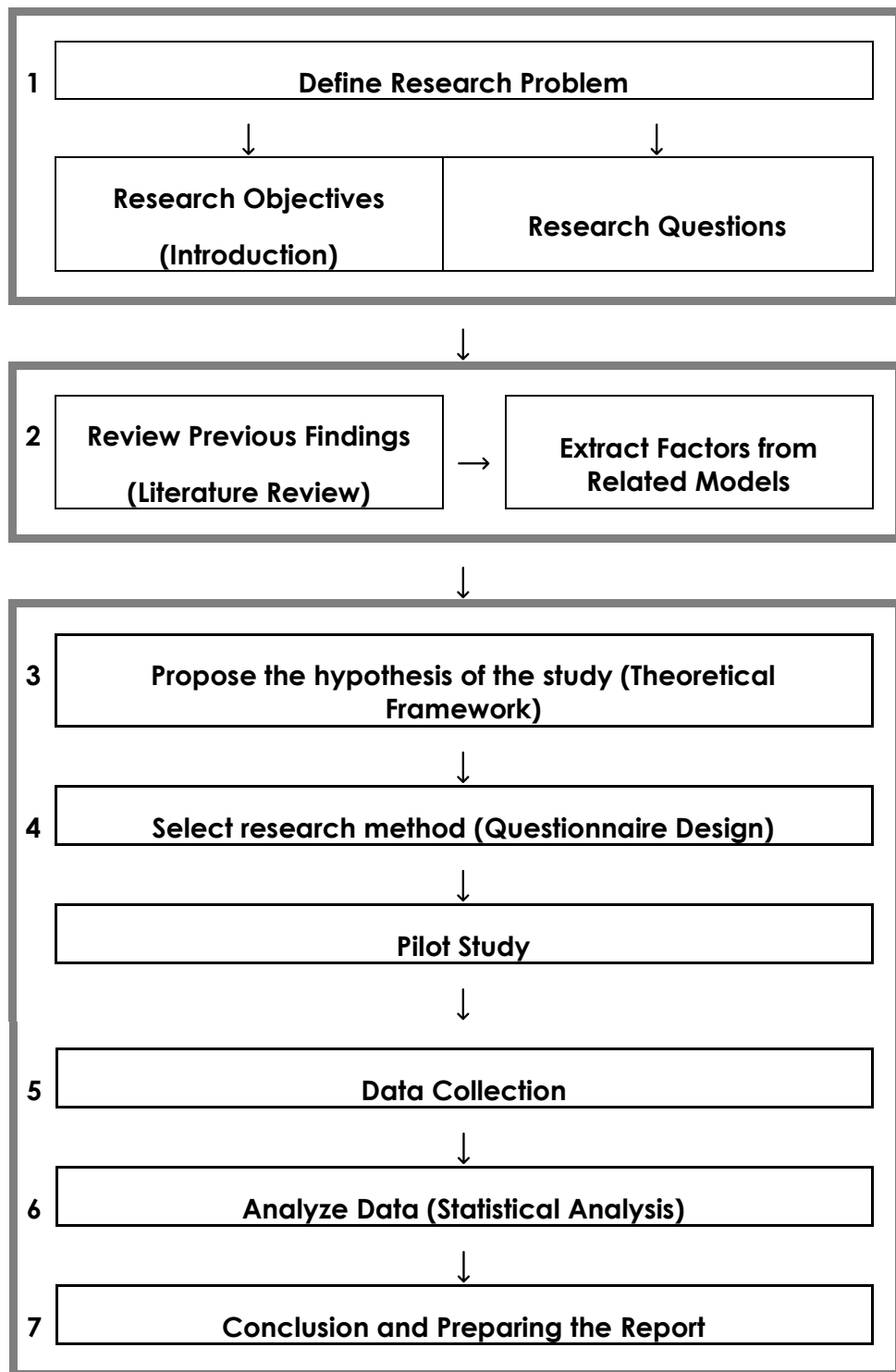


Figure 1 - Research Procedures

2. Chapter One – Purpose of the Research

This chapter explores What is Key Performance Indicator KPI by going through deferent definitions of the most popular business references related to Key Performance Indicator KPI discussions.

Then, the research will show the Key Performance Indicators Common Use in many application areas or areas of use by listing samples of Key Performance Indicators KPIs used in different departments.

Next, we will focus on the Key Performance Indicators KPIs usage within the areas of Marketing, People Management and Process Optimization – as key dimensions for the research study.

Finally, the research will show and discuss the Common Key Performance Indicators KPIs Issues and Conflicts, within deferent cases and studies for many organizations and firms.

And before ending this chapter, the research includes the Conclusion for the whole chapter idea line to raise the idea streams for the next chapter.

In this Chapter:

- What is Key Performance Indicator KPI
- Key Performance Indicators Common Use
- KPIs and Marketing, People Management and Process Optimization
- Common KPIs Issues and Conflicts
- Conclusion

2.1 What is Key Performance Indicator KPI

In today's competitive environment, companies and organization need to keep track of the actual performance updated result to steer the firm or organization in doing the right things. Most successful organizations nowadays implement a performance measurement system within their businesses.

This is done to give them true attention to results, responsibilities, and targets. For the organization to have control and improve processes, the organization needs to measure and identify the performance indicators. One of the manager's responsibilities is to realize what the critical metrics are in their organizations and how those metrics should be identified, measured, reported, and managed so that the organization can be viewed as a successful one by its stakeholders.

Key performance indicators (KPIs) are specific metrics which show early warning signs if there is an unfavorable situation in the system. KPIs give everyone a clear picture of what is important for the organization. KPIs also give us information to make informed decisions and reduce uncertainty by managing risks.

According to [kpi.org](https://www.kpi.org):

Key Performance Indicators (KPIs) are the critical (key) indicators of progress toward an intended result. KPIs provides a focus for strategic and operational improvement, create an analytical basis for decision making and help focus attention on what matters most. As Peter Drucker famously said, "What gets measured gets done." (Drucker, n.d.)

According to Alexandra Twin [investopedia.com](https://www.investopedia.com):

Key performance indicators (KPIs) refer to a set of quantifiable measurements used to gauge a company's overall long-term performance.

KPIs specifically help determine a company's strategic, financial, and operational achievements, especially compared to those of other businesses within the same sector. (Twin, 2021)

According to [Wikipedia.org](https://en.wikipedia.org):

A performance indicator or key performance indicator (KPI) is a type of performance measurement. KPIs evaluate the success of an organization or of a particular activity (such as projects, programs, products, and other initiatives) in which it engages.

According to [Oxford's Dictionary definition of KPI](https://www.oxforddictionaries.com/definition/key-performance-indicator):

A quantifiable measure used to evaluate the success of an organization, employee, etc. in meeting objectives for performance.

According to [Macmillan's Dictionary definition of KPI](#):

A way of measuring the effectiveness of an organization and its progress towards achieving its goals.

From the above definitions, we extract the below characteristics.

KPI.org	<ul style="list-style-type: none">▪ Critical indicators of progress toward an intended result.▪ KPIs provides a focus for strategic and operational improvement.▪ create an analytical basis for decision making.▪ help focus attention on what matters most.
Alexandra Twin	<ul style="list-style-type: none">▪ KPIs refer to a set of quantifiable measurements used to gauge a company's overall long-term performance.▪ KPIs specifically help determine a company's strategic, financial, and operational achievements, especially compared to those of other businesses within the same sector.
Wikipedia	<ul style="list-style-type: none">▪ KPI is a type of performance measurement.▪ KPIs evaluate the success of an organization or of a particular activity in which it engages.
Oxford's Dictionary	<ul style="list-style-type: none">▪ A quantifiable measure used to evaluate the success of an organization, employee, etc. in meeting objectives for performance.
Macmillan's Dictionary	<ul style="list-style-type: none">▪ A way of measuring the effectiveness of an organization and its progress towards achieving its goals.

Table 1 - KPI Definitions

We will keep the KPI Definitions characteristics for a while to explore its common use in the next chapter first and will refer to this later in [Chapter Two – Literature Review](#).

2.2 Key Performance Indicators Common Use

No wonder that the KPIs can be used in everything. We can recognize this in Sales evaluation, Managers Reviews and assessments, Project management progress and performance, Marketing plans and strategies, Operations from all perspectives, Customer Service, Finance, Human Resources, IT, and social media.

This research also identified and prioritized the most impactful key performance indicators use and examples for each department in the modern common businesses.

Below KPI examples are being used most relevant to the organization and the teams.

You can skip the examples to follow the idea to [2.3 KPIs and Marketing, People Management and Process Optimization](#)

2.2.1 Examples of KPIs:

Sales KPI Examples

Sales leaders and their teams need to track the key performance indicators that help them close more orders. Below are the essential sales KPI examples:

- New Inbound Leads
- Lead Response Time
- Lead Conversion %
- New Qualified Opportunities
- Total Pipeline Value
- Lead-to-Opportunity %
- Opportunity-to-Order %
- Average Order Value
- Average Sales Cycle Time
- Upsell %
- Cross-Sell %
- Sales Volume by Location
- Sales Change (YoY, QoQ, MoM)
- Sales Target %

KPIs for Managers Examples

Executives and managers need KPIs that reflect their organization's strategic priorities. Below are the key management KPI examples:

- Customer Acquisition Cost
- Customer Lifetime Value
- Customer Satisfaction Score
- Sales Target % (Actual/Forecast)
- Sales by Product or Service
- Revenue per FTE
- Revenue per Customer
- Operating Margin
- Gross Margin
- ROE (Return on Equity)
- ROA (Return on Assets)
- Current Ratio (Assets/Liabilities)
- Debt to Equity Ratio
- Working Capital
- Employee Satisfaction Rating

Project Management KPIs Examples

Project managers need to keep projects on time and on budget while also ensuring a high-quality outcome. That is why the fifteen key performance indicators examples below focus on timeliness, budget, and quality.

- On-Time Completion %
- Milestones on Time %
- Estimate to Project Completion
- Adjustments To Schedule
- Planned vs. Actual Hours
- Resource Capacity %
- Budget Variance (Planned vs Actual)
- Budget Iterations
- Planned Value
- Net Promoter Score
- Number of Errors
- Customer Complaints
- Change Requests
- Billable Utilization
- Return On Investment (ROI)

Marketing KPIs Examples

Marketing leaders need to track KPIs which enable them to measure their progress against clearly defined goals. The marketing KPI examples below cover all phases of the customer funnel and can be accurately tracked using modern marketing analytics.

- Marketing Qualified Leads (MQLs)
- Sales Qualified Leads (SQLs)
- Cost per Lead
- New Customers
- Cost per Acquisition
- Upsell & Cross-Sell Rates
- Conversion Rates (For Specific Goals)
- Social Program ROI (By Platform)
- Organic Traffic & Leads
- Return on Ad Spend (ROAS)
- Average Order Value
- Total Revenue
- Revenue by Product or Service
- Customer Lifetime Value (CLV)
- Net Promoter Score (NPS)

Operations KPIs Examples

Operations managers need to track KPIs around efficiency, effectiveness, and quality as covered in the key performance indicators examples below.

- Labor Utilization
- Employee Turnover Rate
- Employee Absence Rate
- Employee Training Rate
- ROI of Outsourcing
- Labor Materials
- Operating Margins
- Customer Lifetime Value
- Processes and Procedures Developed
- Cash Flow
- Project Schedule Variance
- Order Fulfilment Cycle Time
- Delivery In Full on Time Rate
- Rework Rate
- Customer Complaints

Customer Service KPIs Examples

Service and support teams should focus on KPIs that measure response times. But, like the key performance indicators examples below, they should also have a clear view of the customer base and longer term, preventative KPIs such as employee engagement and knowledge base articles.

- Number of Issues (By Type)
- First Response Time (FRT)
- First Contact Resolution Rate
- Average Response Time
- Average Resolution Time
- Most Active Support Agents
- Cost Per Conversation
- Customer Satisfaction Score (CSAT)
- Net Promoter Score (NPS)
- Positive Customer Reviews
- Customer Effort Score
- Customer Retention Rate
- Support Costs / Revenue Ratio
- Knowledge Base Articles
- Employee Engagement

Finance KPIs Examples

Financial teams have no shortage of ratios and metrics to track. Finance managers and executives should focus on margin, expense, revenue, and cash management as shown in the key finance KPI examples below.

- Gross Profit Margin (and %)
- Operating Profit Margin (and %)
- Net Profit Margin (and %)
- Operating Expense Ratio
- Working Capital Ratio
- Debt-To-Equity Ratio
- Quick Ratio (Acid Test)
- Current Ratio
- Berry Ratio
- Return on Assets
- Cash Conversion Cycle
- Accounts Payable Turnover Ratio
- Accounts Receivable Turnover Ratio
- Budget Variance
- Payroll Headcount Ratio

Human Resources KPIs Examples

HR managers are primarily concerned with three principal areas: **workforce management**, **compensation**, and **recruitment**. The key performance indicators examples below cover the main KPIs for each area:

- **Workforce Management KPIs:**

- Absenteeism rate
- ROI of outsourcing
- Succession planning rate
- Open/closed grievances
- Promotion rate
- Time to productivity
- Successor gap rate
- Worker composition by gender, experience, and tenure
- Internal mobility
- Manager quality index
- HR effectiveness
- Employee satisfaction rates
- Training ROI

- **Compensation KPIs:**

- HR functional operating expense rate
- Labor cost per FTE
- Labor cost revenue percent
- Labor cost revenue expense percent
- Total benefits as percentage of labor costs
- Revenue per FTE
- Profit vs. compensation per FTE
- Human capital ROI
- HR functional cost per employee

- **Recruitment KPIs:**
 - Quality of hire
 - Vacancy rate
 - Turnover rate
 - Resignation/retirement rate
 - External hire rate
 - Time-to-fill
 - Diversity, experience, and gender hire ratio
 - Recruiting funnel metrics
 - Talent import/export ratio
 - Voluntary turnover rate
 - Retention rate
 - Recruiting expense per new hire
 - Retirement rate forecast

Information Technology KPIs Examples

IT managers should track the on-going stream of support tickets and downtime. They should also track the projects and the team that will proactively reduce the number of these tickets in the future as shown in the top-15 IT KPI examples below.

- Total Support Tickets
- Open Support Tickets
- Ticket Resolution Time
- Reopened Tickets
- Average Time Between Failures
- Average Time to Repair
- Uptime %
- Server Downtime
- Security Related Downtime
- Total Projects
- Projects on Budget
- Critical Bugs
- IT Support Employees Per End Users
- IT Costs vs Revenue
- IT Team Turnover

Social Media KPIs Examples

Social media managers should have KPIs that represent reach, engagement, and conversion to revenue. The social media key performance indicators examples below should be applied both as totals and for each social media platform that the organization is active on.

- Social Share of Voice (SSoV)
- Total Reach
- Total Impressions
- Followers or Fans or Subscribers
- Audience Growth Rate
- Share Rate (Shares or Retweets)
- Interest Rate (Likes, Reactions, Favorites)
- Response Rate (Comments, Replies)
- Key Post or Hashtag Reach
- Link Clicks
- Site Traffic from Social (By Platform)
- Conversions From Social
- Conversion Rate from Social
- Revenue From Social
- Social Program ROI

In this research, we will focus on KPIs in Marketing, People Management and Process Optimization.

2.3 KPIs and Marketing, People Management and Process Optimization

Marketing leaders need to track KPIs which enable them to measure their progress against clearly defined goals. Executives and managers need KPIs that reflect their organization's strategic priorities, Project managers need to keep projects on time and on budget while also ensuring a high-quality outcome, Operations managers need to track KPIs around efficiency, effectiveness, and quality, HR managers are primarily concerned with three principal areas: workforce management, compensation, and recruitment

In this research, the researcher listed [Examples of KPIs By Department](#) in the last section, it was also used to recognize the business relation and points of assessment and evaluate its performance.

2.4 Common KPIs Problems, Issues and Conflicts

Key Performance Indicators (KPIs) is one of those business topics that has been so widely written about and discussed in management and leadership circles that most people think "they have it covered." And yet, like most familiar things, this familiarity can breed contempt – and this results in critical errors when it comes to implementing KPIs. Here are the ten biggest KPI mistakes I have seen businesses make repeatedly. Avoid them at all costs! (Marr, n.d.)

2.4.1 *Not linking KPIs to your strategy*

KPIs are only useful if they are aligned to your strategy and inform strategic decision making. Anything else is just window dressing. When KPIs are not linked to your strategy, you are wasting massive amounts of time and money collecting information that is not going to benefit the business.

KPIs are useful if they deliver mission-critical information that is relevant to your business. It follows, therefore, that once you know what you are trying to achieve in your business, you should use those objectives to help you select the relevant KPIs. (Marr, n.d.)

2.4.2 *Measuring everything that is easy to measure*

Unfortunately, there is often a disconnect between whether something can be measured and whether it should be measured. Therefore, one of the biggest mistakes that people make with KPIs is measuring everything that is easy to measure, regardless of its relevance to the business. (Marr, n.d.)

2.4.3 *Measuring everything that walks and moves*

There is also a temptation to measure everything that walks and moves – the assumption being that lots of information is better than no information. In fact, having too much information can be as useless as too little. And it can be downright damaging to the business, wasting time, money and attention that could be better spent elsewhere. (Marr, n.d.)

2.4.4 Collecting the same measures as everyone else

Another big error people make is developing their KPIs by looking at what everyone else is measuring. So, a business leader may decide that KPIs are something she really needs to take seriously but, rather than work out what information she really needs, she will look at competitor businesses or perhaps discuss KPIs with other senior executives and gather a list of KPIs that everyone else is using. (Marr, n.d.)

This can also happen if a particular KPI or metric gains popularity in leadership journals. Just because everyone is talking about customer satisfaction surveys or employee engagement surveys does not automatically mean you need those KPIs. Whether you invest in these types of measure will depend on your strategy and nothing else. (Marr, n.d.)

2.4.5 Not separating strategic KPIs from other data

There is no shortage of data and information inside most businesses, ranging from financial and sales to customer and compliance data. However, the problem is that, too often, all the KPIs are lumped together in one long KPI report or indecipherable dashboard. Business leaders and decision makers are time-poor; they do not want to have to wade through pages and pages of KPIs to ferret out the critical ones. As a result, the ones that could direct strategy and inform decision making are lost in a sea of irrelevant information. (Marr, n.d.)

2.4.6 Hardwiring KPIs to incentives

Linking KPIs to incentives (such as a bonus or pay rise) is dangerous in business because it so easily creates unintended consequences. The true purpose of a KPI is to help people inside the business know where they are in relation to where they want to be. They act like a compass on a sea voyage. But, once those KPIs are linked to incentives, they stop being a navigation tool and become a target an individual must hit to secure their bonus. And, as soon as that happens, the individuals involved can become highly creative in how they can manipulate the information or their behavior to ensure they receive the incentive. (Marr, n.d.)

2.4.7 Not involving executives in KPI selection

What I see in my work with senior executives is that they get excited about strategy and the big picture. Those that are interested in numbers (the finance director, for example) might be interested in designing specific KPIs, but most executives are not. As a result, senior executives work on the strategy but then delegate the process of identifying or designing the right KPIs to someone else. (Marr, n.d.)

This is a mistake. Senior executives must be involved in the KPI decision-making process, otherwise they will not feel ownership of what is created. And if they do not feel ownership of the KPIs, they will not use them. It is especially important that the senior team think about the KPIs, engage with the questions they are seeking answers to and sign off the chosen KPIs. This ensures a clear, strong, understood connection between the strategy, the KPIs and the questions those KPIs will answer. (Marr, n.d.)

2.4.8 Not analyzing your KPIs to extract insights

Another common mistake with KPIs is that no one inside the business is really analyzing the data to extract business-relevant insights. No one is working out how the data relates to corporate or industry benchmarks, or how the metric has changed over time and what that might mean for the business.

Again, this is often down to a disconnect between the decision makers and those who are doing the reporting. Often the analysis is done at lower levels of the organization and reported to the top. Those lower down might not understand the relevance of the data; they might just be presenting it. And those at the top delegated the KPI design to others, so are not connected to the way the information is presented. It is vital that someone at the right level looks at the data and deciphers what it all means for the business. (Marr, n.d.)

2.4.9 Not challenging and updating your KPIs

Once the right KPIs have been identified or designed, they are often never questioned or challenged in terms of whether they remain relevant, linked to strategy, or continue to help the business answer critical questions. It is important to make sure that you are always collecting the right data, collecting it often enough and are using what you collect.

This means you must not be afraid to challenge your KPIs. If you do not, KPIs can easily become a “tick box” exercise that allow managers to say they have them, rather than being a real-time navigation tool that leads to better outcomes and performance. Whenever there is a change in strategy or corporate priorities, you need to review and update your KPIs to make sure you only measure what really needs to be measured and that the KPIs remain relevant and aligned to the new strategy. (Marr, n.d.)

2.4.10 Not acting on your KPIs

KPIs can shape strategy and inform fact-based decision making inside businesses – but only if those inside the business act on them. In the end, it does not matter how brilliantly you have aligned your KPIs to your strategy, or even how brilliantly you have captured and presented the relevant KPIs, if they are not then used as they were intended. If you are not using your KPIs to inform your decisions and drive performance, then you are wasting your time and effort. (Marr, n.d.)

A well-designed set of KPIs should provide a clear indication of current levels of performance and help your people make better decisions that bring the business closer to achieving its strategic objectives. By avoiding these ten pitfalls, you can ensure your KPIs are designed, implemented, and used exactly as they were intended – to help your company succeed. (Marr, n.d.)

2.4.11 Case Study 2 - The Problem with KPIs:

Service KPIs form the basis of service reporting for most outsourced relationships. A good KPI set will consist of a manageable number of metrics that are simple to measure, easy to interpret and within the control. Crucially, they must also be effective in identifying healthy (or unhealthy) functioning of the service – and this is sometimes trickier than it first appears. (alphafmc.com, n.d.)

KPIs will always have a 'green' threshold for satisfactory performance, set somewhere at or below 100%, giving an agreed tolerance for error. There may also be a second 'amber' threshold. Any KPI that fails the threshold(s) is scored 'red.' (alphafmc.com, n.d.)

In this example, for 'Trade STP Rate,' Manager A and Manager B both score 'green' – a satisfactory performance – whereas Manager C scores 'red' – a poor performance, to be hopefully rectified by the TPA. (alphafmc.com, n.d.)



There is only one problem with that assessment: it is completely wrong – C's performance is the strongest, they just have a much stricter threshold. (alphafmc.com, n.d.)

2.4.12 Setting a Threshold

Many factors may impact the decision on the appropriate level for KPI thresholds, such as current performance, target performance (if an improvement is expected), maximum potential performance (which may be limited for some asset types) and perception of market standard performance.

Problems can arise when the KPI threshold is either too slack, or too strict, for its intended use.

Slack KPIs mean that the threshold is set lower than is appropriate. The KPI will always show as performing well, even when that is objectively not the case – for example, when compared to other deals. (alphafmc.com, n.d.)

Conversely, strict KPIs are set higher than is appropriate. This may result in a measure that lacks sensitivity, constantly flagging up issues for improvement for processes that are, in fact, already being performed well. (alphafmc.com, n.d.)

2.4.13 Benchmarking KPIs

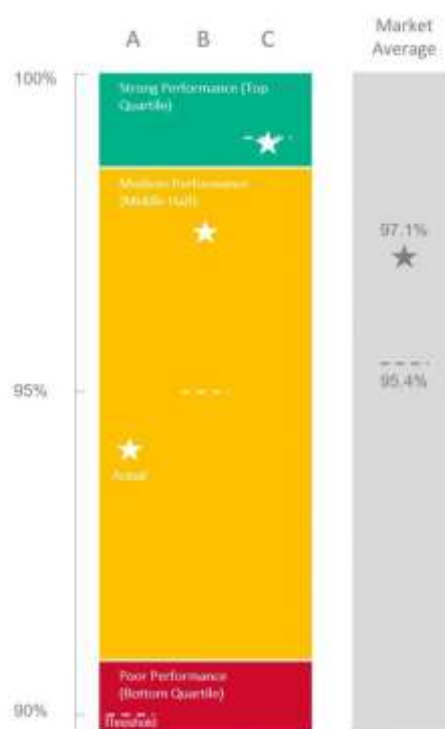
During the last 10 years, Alpha has collated a library of service metrics, for 30+ deals and more than 100 different KPIs, allowing us to determine market averages for KPI thresholds and performance. This library is supplemented by our broader Investment Operations study.

If Managers A, B and C all have a standard trading profile, then we would expect them to have broadly the same KPI thresholds and performance as other deals in the market (see below).

In this example, Manager A would have a 'slack' KPI. The threshold for 'good' performance (90%) is set at a level that is in fact at the poorest end of the sample (in the bottom quartile). What Manager A deems to be 'good enough' performance would be 'poor' in a more typical KPI report.

Manager C, on the other hand, may have an overly 'strict' KPI – the performance must be exceptional to avoid being flagged as an issue in the KPI report.

Manager B is broadly aligned with the market standard, both in terms of threshold and performance. Although Manager C has a better STP rate, Manager B has a better-designed KPI.



Following discussions with their TPAs, Managers A and C may wish to adjust their KPI thresholds closer to the norm. When transitioning from a period of underperformance (such as for Manager A), this may be done incrementally.

KPI benchmarking can take place at any point in an outsourced relationship – either at the outset as part of service negotiations, as part of an overall relationship review, or as a standalone project. (alphafmc.com, n.d.)

2.5 Why KPIs Do not Work; And How to Fix Them

A Key Performance Indicator (KPI) is a widely used tool to measure how effectively a company, a group or a team is achieving key business objectives. KPIs sound good but it is doubtful whether as currently implemented they really enhance performance. Here is why, and what to do about it.

2.5.1 Organizational KPIs

Organizations use KPIs at multiple levels to evaluate their success at reaching targets. High-level KPIs may focus on the overall performance of the business, while lower-level KPIs may focus on processes in departments such as sales, marketing, HR, support, and others. (Denning, 2021)

At the organizational level, analysts start in theory from the firm's objectives, how they are to be achieved, and who can act on this information.

This process sounds logical until you realize that in many corporations, there is a problem at the outset: the firm's goals are usually unclear. There is often a significant gap between what the firm's objectives are said to be, or thought be, and what objectives are driving the firm's behavior. Neophytes often ask: how could this be? These are smart, highly educated people who are spending a lot of highly paid time discussing goals and strategy.

This problem was noted several decades ago by Edgar Schein in his landmark book, *Organizational Culture and Leadership*. "Most organizations," wrote Schein, "have multiple functions reflecting their multiple stakeholders and some of these functions are public justifications, while others are 'latent' and, in a sense, not spoken of." To make a public announcement of these latent functions is often "embarrassing." Thus, the assumptions the members of the organization share about a firm's mission is "not necessarily very conscious" although we "can surface if we probe the strategic decisions that the organization makes." (Denning, 2021)

2.5.2 What Is the Goal of The Firm?

To illustrate the issue, let us take the goal of the firm. For several decades, big business has explicitly, openly, and aggressively pursued the goal of maximizing shareholder value. This even became official when the Business Roundtable (BRT) in 1997 declared creating value for shareholders was the firm's "paramount duty." Most firms' processes and practices were designed to support this goal.

But in August 2019, after much criticism, more than 200 CEOs of major corporations signed a new BRT declaration to the effect that maximizing shareholder value was no longer the paramount goal of firms and instead supported the goal of adding value for all the firm's stakeholders.

Since then, however, careful research by critics such as Professor Lucian Bebchuk and his colleagues at Harvard Law School have been unable to find evidence that these corporations have changed their behavior. There is even some evidence that they have intensified the relative emphasis in their actions on shareholder value.

So, what now is the goal of these firms? If Professor Bebchuk is right, in practice their goal remains in most cases maximizing shareholder value. But that goal is politically unacceptable. If the C-suite were to make that goal explicit in public, it would, as Schein says, be “embarrassing.” Hence these firms will find it difficult to talk about their primary goal in public, and even in private (since embarrassing private documents are bound to leak). Instead, they will tend to make vague PR statements such as “we are for all the stakeholders,” without specifying the balance between stakeholders. In such a setting the goal of the firm will be unclear even to too many insiders and it will be difficult to formulate KPIs that reflect the real goal of the firm. (Denning, 2021)

2.5.3 What Is the Structure of Work?

A similar issue arises with the structure of work. When firms are asked what the structure of work in their organization is, they reply that work is structured to help employees achieve their full potential. In their more expansive moments, they may even claim to be unleashing all the capabilities of their people.

Yet if we look at the actual structure of work in these firms, we find that bureaucracy is still rampant, with individuals reporting to bosses, and a steep hierarchy of authority, in which information flows downward. In effect, the firm's stated aspirations in terms of the structure of work is uncoordinated with the reality.

This is not really a surprise, since the bureaucratic structure of work flows directly from the goal of maximizing shareholder value: this is not a goal that inspires the workforce. Hence close monitoring and control by the hierarchy becomes inevitable. (Denning, 2021)

2.5.4 KPIs At Lower Levels

The lack of clarity of the firm's principles (goal, structure of work, and dynamic) creates even greater confusion at lower levels than at the top of the firm. Analysts, department heads and managers find themselves entangled in a maze of obfuscations relating to the mix of PR-type goals that are talked about for public consumption while the actual goals implied by the firm's actions and processes are quite different. Here too, the discrepancy would be “embarrassing” to reveal, and hence is hard to talk about.

There is thus often a gap between the goals the unit or team is meant to espouse and what is driving behavior in the firm. This in turn leads to the familiar Dilbert-style management in which managers try to see which way the wind is blowing before deciding.

Managers may say for instance that there needs to be an atmosphere of trust in the organization, but that does not by itself lead to actual trust. There may be KPIs that are fine intellectual constructs about trust, while actual trust levels may be completely different. There may be a certain feeling of satisfaction and even relief at having formulated a goal related to the trust, along with an inner doubt as to what they have done. There may follow an extended period of muddling through as staff try to make sense of what they are saying and what they are living. The KPIs tend to add to the confusion: the goal of the exercise often becomes getting through the exercise with the least personal damage possible. (Denning, 2021)

2.5.5 Industrial-era vs Digital-Age Leadership

These findings should not be surprising because most firms are still in the grip of industrial-era management, in which firms follow the familiar set of principles—a goal of maximizing shareholder value, bureaucratic work structures and steep hierarchies of authority.

Relatively few firms have made a full transition to digital-era leadership, where the primary goal is delivering value to customers (not shareholders); where the structure of work is truly designed to unleash the talents of all the workers, with small teams working short cycles focused on customers; and the firm dynamic is a horizontal hierarchy of competence, where information flows in all directions and new ideas can come from anywhere.

When a firm is practicing such digital-era management, the firm can afford to be open about its principles, both inside and outside the firm, and eliminate the obfuscations of industrial-era management. A first step therefore towards solving the problem of KPIs must begin with a shift to digital-age management. (Denning, 2021)

2.5.6 The Shift from Internal to External Indicators

The shift to digital era management can also begin to deal with another important drawback of KPIs in industrial-era management, namely, that key performance indicators tend to be based on internal measures. Internal measures lead to perverse incentives and unintended consequences because of employees working to the specific measurements at the expense of the actual quality or value of their work to the eventual customers.

Improvements on internal measures may indicate that the bureaucracy is going faster, and more work is being done, but the risk is that it is unproductive work. Since the work structure is bureaucratic and internally oriented, any relationship of the work to external customers will be hard to assess or measure or even discuss. Various categories of employee—flunkies, duct tapers, box tickers, supervisors—will be able develop impressive KPIs, which show ironically, not that performance is improving, but that increased work is being done. Like hamsters in a running wheel, the staff are working

harder but not much more is getting done. In such cases, KPIs measure the speed of the bureaucracy, and hence are inversely proportional to actual productivity.

Perversely the lack of contribution of the work to actual performance creates incentives for managers to ask for even more KPIs, while staff are also induced to respond by offering a blizzard of KPIs to prove how productive they are.

In a sense, KPIs are God's gift to bureaucracy. They help perpetuate it and create endless justifications for it. It is work, feeding on work, and creating more work, while serving no external purpose.

By contrast, in digital-era leadership, the firm is oriented towards delivering value to external customers. Each team in principle has a clear line of sight to the external customer who will benefit from the work. If there is no such clear line of sight to an external customer does not exist, then the team should be asking: why are we doing this work at all?

In digital-era leadership, it becomes routine that KPIs are focused on external measures and thus represent a true measure of progress. (Denning, 2021)

2.6 Conclusion

From the reviewed sources discussed above, KPIs has the below characteristics and attributes:

KPI.org	<ul style="list-style-type: none">▪ Critical indicators of progress toward an intended result.▪ KPIs provides a focus for strategic and operational improvement.▪ create an analytical basis for decision making.▪ help focus attention on what matters most.
Alexandra Twin	<ul style="list-style-type: none">▪ KPIs refer to a set of quantifiable measurements used to gauge a company's overall long-term performance.▪ KPIs specifically help determine a company's strategic, financial, and operational achievements, especially compared to those of other businesses within the same sector.
Wikipedia	<ul style="list-style-type: none">▪ KPI is a type of performance measurement.▪ KPIs evaluate the success of an organization or of a particular activity in which it engages.
Oxford's Dictionary	<ul style="list-style-type: none">▪ A quantifiable measure used to evaluate the success of an organization, employee, etc. in meeting objectives for performance.
Macmillan's Dictionary	<ul style="list-style-type: none">▪ A way of measuring the effectiveness of an organization and its progress towards achieving its goals.

No wonder KPIs can be used for anything. We can see this in sales reviews, manager ratings and reviews, project management progress and performance, marketing plans and strategies, full-scale operations, customer service, finance, HR, IT, and social media. The study also identified and prioritized the most impactful KPIs and examples for each department in the modern collaborative enterprise.

Marketing leaders need to track KPIs so they can measure their progress against clearly defined goals. Executives and managers need KPIs that reflect their organization's strategic priorities, project managers need to keep projects on time and on budget while ensuring quality results, operations managers need to track KPIs related to efficiency, effectiveness, and quality, and human resource managers come first Line Address 3 Main Areas: Workforce Management, Compensation and Recruiting.

From the previous review, we can also list the KPIs common problems:

- Not linking KPIs to your strategy
- Measuring everything that is easy to measure
- Measuring everything that walks and moves
- Collecting the same measures as everyone else
- Not separating strategic KPIs from other data
- Hardwiring KPIs to incentives
- Not involving executives in KPI selection
- Not analyzing your KPIs to extract insights
- Not challenging and updating your KPIs
- Not acting on your KPIs
- Setting threshold
- Benchmarking KPIs

And finally, the research reviews the ways and advises to keep the KPIs healthy and functional by setting the right goals to the firm or organization, understanding the structure of the work, workflow, culture, and environment, and relating internal factors with external factors.

3. Chapter Two – Literature Review

In this Chapter:

- KPI Properties and Design
- The Theoretical Framework Discussion
- Research Gap
- Research Objectives
- Major Research Questions
- Conclusion

3.1 KPI Properties and Design

We referred to the KPI in [Table 1 - KPI Definitions](#), But we have not addressed how to create a KPI that drives positive change and desired outcomes. You can have the most elegant KPI, but unless it helps the organization achieve its strategic objectives, it is a failure.

The key to creating effective KPIs is as much art as science, but there are many guidelines to help the uninitiated achieve success. Organizations that create KPIs with the following characteristics are likely to deliver high-impact KPIs:

Mohammed Badawy, Abd El-Aziz Ahmed, Amira M. Idress, Hesham Hefny, and Shrouk Hossam have analyzed the characteristics of KPIs in a paper name “Exploring Key Performance Indicators – a Survey” and identified the below KPI Characteristics from wide analysis and from discussions with workshop sharer covering most organization types in the public and private sections, they were able to define the characteristics of KPIs based on Parameter.

1. **Sparse:** The fewer KPIs the better
2. **Drillable:** Users can drill into detail
3. **Simple:** Users understand the KPI. Clearly indicate what action is required by staff.
4. **Actionable:** Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors and more than one business perspective).
5. **Owned:** KPIs have an owner. Are acted on by the CEO and senior management team.
6. **Referenced:** Users can view origins and context
7. **Correlated:** KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior).
8. **Balanced:** KPIs consist of both financial and non-financial metrics.
9. **Aligned:** KPIs do not undermine each other.

10. **Validated:** Workers cannot circumvent the KPIs.
11. **Regulated:** Are measured frequently (e.g., 24/7, daily, or weekly).
12. **Distributed:** Are measures that tie responsibility down to a team (e.g., CEO can call a team leader who can take the necessary action).

Sparse:

When it comes to the number of KPIs to deploy, most performance management practitioners say less is more. The common argument is that most people can only focus on a maximum of five to seven items at once; therefore, we should limit the number of KPIs to that range.

The better argument is that there are only a handful of metrics—even just one—that can dramatically impact a desired outcome or outcomes. In my book on performance dashboards, I recount the story of how British Airlines ignited a dramatic performance management revolution in the 1980s by focusing on one all-encompassing metric: on-time flights. That metric touched a host of interconnected processes and services, so focusing the entire company on it reshaped the way the company did business from its foundations.

When creating an executive dashboard, most companies permit each department to bubble up one KPI to appear on the executive dashboard. Obviously, it takes a lot of discussion to identify and create a KPI that represents the performance of an entire department. And it is likely that the first KPI proposed will change over time or another KPI will prove more indicative of departmental performance. Focusing on a few KPIs enables users to understand at a deep level exactly what behaviors the KPI is driving and fine-tune the KPI to deliver better results.

However, a practical argument to limit the number of KPIs is that sourcing data to populate and display KPIs requires an enormous amount of work and time, especially if the data is sourced directly from operational systems. IT managers need to clean, integrate, and validate the data, which can take months, and the quality may still not be sufficient. Unfortunately, most executives and managers do not understand or appreciate the work involved in sourcing data. As a result, it is wise to start small with a handful of KPIs and then iterate quickly as the project gains acceptance.

Drillable:

The problem with having only a handful of KPIs is that organizations represent a dynamic balance between strategy and process. Strategy seeks change, while process seeks stability. You can represent strategy with a few KPIs, but you need hundreds or more to monitor processes, which often cut across departmental boundaries. Therefore, the best performance dashboards parse out KPIs and data based on role, level, and task.

Simple:

KPIs must be easy to understand. Employees must know what is being measured and how it is calculated. Complex KPIs consisting of indexes, ratios, or multiple calculations are difficult to understand and, more importantly, difficult to act on.

In short, if users do not understand the meaning of a KPI, they cannot influence its outcome.

It is important to train people on KPI targets.

For instance, is a high score good or bad? If the metric is customer loyalty, a high score is good, but if the metric is customer churn, a high score is bad. Sometimes a metric can have dual polarity; that is, a high score is good only until a certain point. For instance, a telemarketer who makes twenty calls per hour may be doing exceptionally well, but one who makes thirty calls per hour may not be connecting well with potential clients. An effective scoring and encoding system are critical to making KPIs simple and understandable.

Actionable:

All performance management practitioners underscore the importance of creating actionable metrics. "We don't want to build KPIs that are nice to have; we want to build KPIs that impact the company," says Alex Crabtree, senior manager of BI solutions at NetJets. Not only should KPIs be easy to understand, but users should also know how to positively affect the outcome of a KPI.

Unfortunately, while many organizations publish KPIs, their users often do not know how to interpret the results or what to do when a KPI trends downward. This is especially true for new managers, who may overreact the first time they see a red stoplight. Managers need to manage according to overall trends rather than the status of a KPI (e.g., percentage change in variance rates rather than red lights). This avoids the whipsaw effect, in which a manager overreacts to a dip in performance that represents a normal statistical variation rather than a manifestation of a deep-rooted problem that needs to be fixed. In fact, overreacting to a redline performance can sometimes make the problem worse. Performance dashboards are meant to liberate and empower employees, not put them under the microscope of an over-controlling boss who inadvertently uses the scores to sabotage morale and personal initiative.

A related problem occurs when organizations publish KPIs but do not empower users to act. Bureaucracy, territoriality, or habit may prevent managers from delegating authority to workers to act and address problems. Companies with hierarchical cultures often have difficulty here, especially when dealing with front-line workers whose actions they have historically scripted. Managers need to be trained to delegate and coach workers to take the right actions.

A different problem is that new employees may take the wrong action in response to a red flag. The analytical literacy in most organizations is extremely low, and most organizations would do well to put new hires through a course in how to read and respond to dashboard indicators. Use case scenarios are extremely helpful. Some organizations are trying to bake analytical techniques and actions into software using decision trees, breadcrumbs, or suggested next steps. This way, novices can follow the trail of experts who have been down the path before. These so-called guided analytics are still in their infancy.

Owned:

Every KPI needs an owner who is accountable for its outcome. Some think it is imperative that each KPI have only one owner so there is no potential for finger-pointing, and that the individual owner feels highly motivated and responsible for managing the KPI. Others say the opposite: make two people responsible for a KPI and you engender teamwork. This coordination might be especially valuable in an organization that wants to break down departmental silos and cross-pollinate ideas among diverse groups.

Typically, a KPI has a business owner and a data owner. The business owner is responsible for the meaning and value of the KPI. If someone has a question about the origin of the KPI, how it was calculated, or what actions to take should performance drop, they should call the KPI's business owner. The data owner, on the other hand, is responsible

for populating the KPI with data and adhering to standard system-level agreements (SLAs) governing the accuracy and scheduled loading of the data, among other things. Both the business and technical owners should be listed in the KPI's metadata with contact information.

Referenced:

Most BI professionals have learned the hard way that if users do not trust the data, they will not use it. The same is true for KPIs. The data must be clean, accurate, and most importantly, perceived as accurate. Just being accurate is not enough; users must believe it is as accurate as their existing reports or spreadsheets (which may be woefully inaccurate but are trusted nevertheless).

One way to engender trust in your KPIs is to provide reference data about them. Users should be able to right-click on a KPI or button to reveal a dialogue box that identifies the business and technical owners of the KPI as well as the details about the origins of the KPI, how it was calculated, when it was last updated, and other relevant details.

Correlated:

KPIs need to impact performance in the proper direction. Unfortunately, many organizations create KPIs but never evaluate them after the fact to see if they statistically correlate with desired outcomes. This correlation makes explicit the linkage between driver KPIs and outcome KPIs and gives executives greater confidence in making decisions. They know that if they "pull a certain lever" it will create a specific result. A strategy map correlates strategic objectives and KPIs, giving executives a high-level view of how objectives relate to one another.

It is important to correlate KPIs on a continuous basis because their impact changes over time as the internal, economic, and competitive landscape shifts. Most KPIs have a finite lifespan; you get most of the value from them in the first year or so. Afterward, you need to rejigger the targets or KPIs to sustain progress or move to new KPIs that better reflect the current strategy. But if you are not continuously monitoring the impact of KPIs, you will never be able to evaluate any shifts in their effectiveness. Many organizations spend lots of time and energy evaluating the effectiveness of their KPIs, especially if monetary incentives are attached to the results. They use statisticians to perform regressions that map KPIs to intended results and engage in discussions with peers and executives to negotiate the KPIs and targets.

Balanced:

It is also important that you offer a balanced set of KPIs. This is the philosophical underpinning of the balanced scorecard methodology. Its creators, Robert Kaplan, and David Norton, believe organizations should measure performance across multiple dimensions of a business, not just a financial perspective. They advocate a "balanced" approach to measurement, which helps executives focus on and invest in the key drivers of long-term growth and sustainability.

Aligned:

It is important that KPIs are aligned and do not unintentionally undermine each other, a phenomenon that some call "KPI sub-optimization." For instance, a logistics group that wants to streamline inventory costs may decide to reduce inventory levels. But this makes it difficult for a retail store to prevent stock-outs of fast-moving items—which is a KPI for the store staff. "We've seen our staff take unexpected action to boost a metric that

turned out to undermine other measures," says one performance manager. It is often difficult to detect KPI sub-optimization until you put KPIs into play and monitor the results. You quickly discover the imbalances and can then adjust. Therefore, many performances management practitioners caution against striving for KPI perfection. They recommend getting KPIs to a point where you are 80% confident, they will work and then committing to practice to see what happens.

Validated:

KPIs need to be not only aligned and balanced, but also tested to ensure workers can't "game" the system—or circumvent the KPIs out of laziness or greed. Organizations need to test their KPIs to ensure workers can't affect their outcome without taking the required actions to improve the business. One way to avoid this problem is to include employees in defining the KPIs and targets in the first place. They know better than anyone the nuances involved in the processes and potential loopholes that may tempt users to game the system. The tendency to game KPIs increases dramatically once organizations attach monetary incentives to KPIs. So, it is imperative to test and validate KPIs in the reality of the workplace before using them as part of an employee incentive system. KPIs need to be not only aligned and balanced, but also tested to ensure workers can't "game" the system—or circumvent the KPIs out of laziness or greed. Organizations need to test their KPIs to ensure workers can't affect their outcome without taking the required actions to improve the business. One way to avoid this problem is to include employees in defining the KPIs and targets in the first place. They know better than anyone the nuances involved in the processes and potential loopholes that may tempt users to game the system. The tendency to game KPIs increases dramatically once organizations attach monetary incentives to KPIs. So, it is imperative to test and validate KPIs in the reality of the workplace before using them as part of an employee incentive system.

3.2 The Theoretical Framework Discussion

From what is provided in KPIs definitions and properties, and to measure the KPI system, we can represent KPI System with the relation:

$$KPI\ System = KPIs\ Iteration\ Process + KPI\ Relevance + Corporate\ Culture$$

Where:

KPI Iteration Process is represented by the set:

$$KPIs\ Iteration\ Process\ (KO) = \{Balanced, Correlated, Owned\}$$

KPI Relevance is represented by the set:

$$KPI\ Relevance\ (KR) = \{Sparse, Distributed, Aligned\}$$

Corporate Culture is represented by the set:

$$Corporate\ Culture\ (CC) = \{Actionable, Regulated, Simple, Referenced, Validated\}$$

3.3 Major Research Questions

Business monitoring or control is usually supported by an information system that gives information about several Key Performance Indicators (KPIs). Business monitoring is a critical activity that research problems in business performance and alarms of their existence with its source. It is one of the key functions for companies because it enables decision makers to take corrective actions sooner better than later, but it is also a challenging action because of the large quantity and high speed of data that need to be processed.

Publishing across one or more Balanced Scorecards and multiple dashboards. Traditionally, business monitoring is based on the evaluation of the mass values of KPIs by users who regularly check the scorecard to make sure that everything is correct. For example, the KPI "Customer retention increased by 3%" considers the customers kept all our stores in the present year. To give a more complete view for KPI monitoring, dashboards provide detailed informationⁱ.

Usually, a business strategy includes many challenges that make fail to achieve their objectives:

1. If it includes too many KPIs, this can weaken the focus on aims.
2. A large list of KPIs that does not have clear connections to business objectives may be a sign of a bigger problem.
3. A shortage of strategic focus on selecting KPIs is a complicated process.
4. Lack of understanding of the performance measures lead to a failure in monitoring and reporting of measuresⁱⁱ.

The following is a typical succession for developing KPIs inside an organizationⁱⁱⁱ:

1. Identify a problem, situation, or objective you are trying to address, e.g., decrease the number of defective products at the end of the industrializing process.
2. Develop a view on how you would like the results to look, e.g., target number of defective products to reduce it from 20% to 5%.
3. Develop a process for how you want things to be done, e.g., this could include reengineering the entire process or it could be achieved by introducing quality affirmation review at different stages of production.
4. Develop effectiveness KPIs before capacity KPIs. This is because you first need to define your benchmark, e.g., how many units you produce in each period, before you can begin to think about measuring related efficiencies.
5. Develop stakeholder and financial KPIs before other KPIs. Stakeholder KPIs for a government organization. For example, every child receives education. For a company, it is that the financial KPIs, such as growth and profit targets, will lead all other strategic objectives. So, it is logical to set these KPIs before any others.
6. Develop product KPIs before input KPIs for each objective. It is not possible to start thinking about input KPIs before product has been determined. For example, you need to know what your production target is, i.e., how many cars you need to produce, before you begin to think about KPIs relating to the manufacture of those cars.

7. Select best-fit KPIs, share, accept and document them. Companies should always have flexible and creative minds when developing KPIs, as their final goal is to drive the performance changes required by the corporate strategic plan. KPIs cause divisions and departments to act differently, improve certain processes and lead discussion and agenda subjects at the administrative level. Well-designed KPIs makes management able to ask the right questions, instead of giving perfect answers and results.

3.4 Conclusion

From the characteristics above, we can design our questions as below:

Area of use	Area of use of KPIs	1. What is best describes your area of use of KPIs?
Sparse	The fewer KPIs the better	1. How many KPIs do you are being assessed for? 2. Do you think you can focus your aim?
Simple	Users understand the KPI. Clearly indicate what action is required by staff.	1. Users understand the KPI. Clearly indicate what action is required by staff.
Actionable	Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors [CSFs] and more than one BSC perspective).	1. Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors [CSFs] and more than one BSC perspective).
Owned	KPIs have an owner. Are acted on by the CEO and senior management team (e.g., CEO calls relevant staff to enquire what is going on).	1. KPIs have an owner. Are acted on by the CEO and senior management team (e.g., CEO calls relevant staff to enquire what is going on).
Referenced	Users can view origins and context	1. Users can view origins and context
Correlated	KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior).	1. KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior).
Balanced	KPIs consist of both financial KPIs and non-financial metrics.	1. consist of both financial and non-financial metrics.
Aligned	KPIs do not undermine each other.	1. KPIs do not undermine each other.
Validated	Workers cannot circumvent the KPIs.	1. Workers cannot circumvent the KPIs.
Regulated	Are measured frequently (e.g., 24/7, daily, or weekly).	1. Are measured frequently (e.g., 24/7, daily, or weekly).
Distributed	Are measures that tie responsibility down to a team (e.g., CEO can call a team leader who can take the necessary action).	1. Are measures that tie responsibility down to a team (e.g., CEO can call a team leader who can take the necessary action).

4.1 Introduction

Research methodology is a systematic theoretical analysis of the methods applied in the field of study. It provides a description of the research process and includes various theories, concepts, and ideas that the researcher can relate to in a particular field of investigation or investigation. Researchers explain the concepts, principles, and procedures and apply them to research in the Methodology section. The research methodology provides the methods that were used to conduct this research and the rationale for using this method.

In this chapter:

- Introduction
- Research Philosophy
- Research Approach
- Research Design
- Unit of Analysis
- Data Collection
- Time Horizon
- Population and Sample
- Research Framework
- Research Ethics

4.2 Research Philosophy

Research philosophy is defined as the belief in the ways in which data about a phenomenon should be collected, analyzed, and used.

While the researcher must study the nature of the phenomenon of his study well to focus on the strategy implemented in his study, as the incorrect strategy can affect the overall results of the researcher.

The objectives of the research must be clear enough because the choice of philosophy adopted in the research depends on the goal of the research as the researcher believes and what is considered evidence of those goals and objectives and what is not.

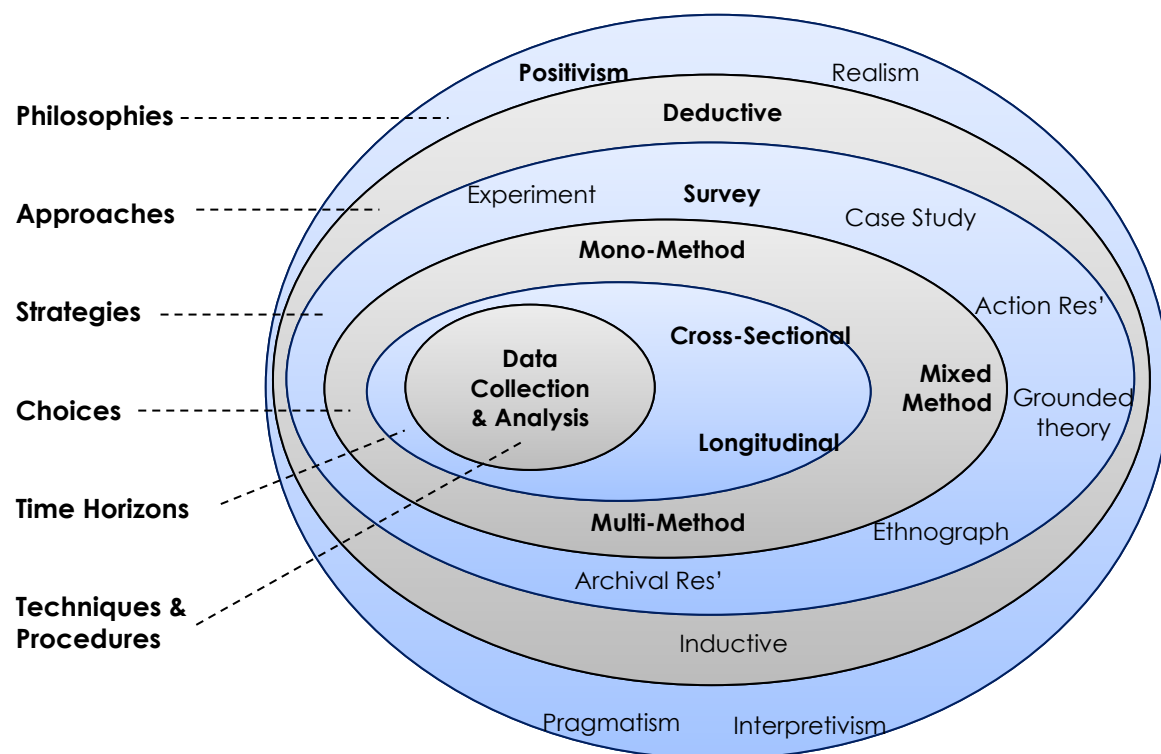


Figure 2 - Research Onion

In this research, a **Positivist Philosophy** was adopted, whose objective is to study the impact of technology on the balance between work and personal life on the performance and satisfaction of employees. Therefore, the researcher tests a general theory by applying it to a specific sector. The philosophy of positivism was based on an analytical and descriptive approach that is commonly used in studies that describe the current reality of a phenomenon with the intention of finding out if this fact is true or if it needs changes.

There are some principles followed by the philosophy of positivism and descriptive analysis that defend the methods of natural sciences that study social reality. These principles are:

The principle of phenomenology, that is, the adoption of real phenomena and then

access to knowledge confirmed by the senses.

The deductive or deductive principle, which means creating testable hypotheses to explain the laws to be evaluated.

The principle of induction, which is access to knowledge through the collection of facts that lay the foundations of the laws.

The research objective for which the research should be conducted in a value-free manner. There is a clear difference between doctrine and standard and approved scientific data. That scientific information is the real domain of the world. As for normative statements, they are implicit because the senses cannot confirm normative statements.

The key to positivism is the experience that allows them to test cause and effect relationships through manipulation and observation.

Some theorists believe that the goal of research is to describe phenomena that can be directly observed and objectively measured. For them, knowing something behind, such as emotions, feelings, and thoughts, is impossible. Because here the descriptive philosophy fits with the nature of the subject of study.

The applied study was also used to collect their data and then depend on the distribution of their progress as the main tool for the questionnaire forms and to work on the analysis of these data and show the impact of the variables that were selected to achieve the results. in the decision-making process.

4.3 Research Approach

The research approach contains three broad approaches adopted by any research study, whether it is a deductive or inductive approach or a mixed approach (deductive and inductive). In our research, the mixed approach was adopted which is a mixture of the deductive approach and the inductive approach.

The inductive approach is the approach in which the researcher works from specific observation to generation and is used to generalize untested results as the collected data is used to explore the phenomenon and define the model. The inductive approach relies on logical induction because it allows adjustments to be made to the theory in action. The induction approach is used when the researcher notices something and asks why it happened, and in answering this question the researcher develops a tentative explanation for the phenomenon or hypothesis.

The deductive approach is the approach by which the researcher works from the general observation to the specific observation when the premises are true, and the results are true also (because this deductive approach depends on the validity of the premises). The natural sciences rely heavily on the deductive method, in which a theory holds true or false depending on the premises and their properties. It explains causation between variables and concepts and should be used in specific steps in a way that allows facts to be quantified, and to generalize from the general to the.

Our research adopted the **Deductive Approach** whereby the researcher wants to study the KPI Systems and its dimensions (KPI Relevance, KPI Iteration Process, and Corporate Culture) and its reliability in decision making.

4.4 Research Design / Strategy

Research design is the research plans or methods that extend from steps from general assumptions to detailed methods of data collection, analysis, and interpretation. This section will explain in detail the research methodology and framework within the design of this research, hypotheses and research questions were formed, where the research method is used by the researcher to establish his research project.

In addition, according to the research, the approach seeks to inform the readers about what the researcher has done to explore the problem in depth and what techniques he used to solve the problem and gain new knowledge through data collected by various means.

There are three types of research design that must be clarified to choose the most appropriate design for this study, as these methods are known: quantitative method, qualitative method, and mixed method (quantitative method and qualitative method).

This study adopted a **Primary Data / Quantitative Method** that depends on data that results in numbers to explain the reliability of KPI System and its dimensions (KPI Relevance, KPI Iteration Process, and Corporate Culture) on decision making, where a questionnaire was distributed and where the quantitative model helps to reach absolute results.

The search will show some literature reviews that examined the relationship between KPI System and its reliability in decision making using quantitative design (**Questionnaire Methods**).

4.5 Unit of Analysis (Method)

The unit of analysis represents the observations of the study, and the numbers of these observations range according to the study population. In our study, the research is based on the collection of primary data through questionnaire methods (**Quantitative Design**) from KPI users in different industries and the unit of analysis in our research represents the study sample.

4.6 Time Horizon

The time horizon is addressing three main types of data: time series data, cross-sectional data, and panel data.

Where time series data is the observation of a specific agent in different time zones, Cross-sectional data is the observation of different agents in a one-time zone. Panel data (The mix of time series and cross-sectional data) is the observations of different agents in different time zones.

In this study, **Cross-Sectional Data** is adopted as most of the sample agents represented one time zone to achieve the aim of our research that KPI reliability in decision making.

4.7 Data collection

In data collection, there are two types of data; Secondary data (data already collected by another person for a specific purpose and then reused by the researcher for his study), and primary data (data collected by the researcher for the purpose of his study – e.g., survey, interview, questionnaire, and experiments).

The primary objective of the research is to find out the effect of technology use on the employee's WLB. Therefore, the researcher used the selection of the sample members from the information technology employees in Egypt. In this part, the researcher categorizes the methods used in collecting data for the study. In addition, data collection is the primary objective of research exploration.

There are different methods of data collection that are selected based on the research and design approach identified in the previous sections. Interviews are used in qualitative research, while questionnaire is often used to obtain a quantitative result. Interviews can be structured or unstructured and can be agreed with one or more people, they can also be conducted over the phone and interviews are suitable for use when you want to know the reasons behind the respondents' point of view. In this sense, interviews are appropriate for qualitative studies. The study is based on the questionnaire compiled by asking questions to the participants in the research, and the questionnaire is one of the most used tools for collecting appropriate information for analysis from individuals that can be used in combination with other methods.

In this research, the researcher used a **Questionnaire Method** to collect data for analysis and access to the extent of KPI reliability in decision making.

4.7.1 Questionnaire for Quantitative Data Collection

The below table illustrates the variables of this research (KPI Relevance, Corporate Culture and KPIs Iteration Process) by using the questionnaire method (quantitative design). In addition, the questions that used in the questionnaire distributed among KPI users in different industries distributed internationally, and how the research variables will be measured according to the corresponding questions of each variable. The used questionnaire consists of (14) statements, close-ended questions, scaled on a 5-point Likert scale, ranging from "**Strongly Disagree**"=1 to "**Strongly Agree**"=5

KPI Relevance (KR): KPI design and how it is related to a business objective

Corporate Culture (CC): KPIs are meaningful and well communicated to the applied segment

KPIs Iteration Process (KO): there is a process or frequency to review and evaluate and update the KPI system

Research Variable	Survey Questions	Question ID
KPI Relevance (KR)	Do you think you can focus your aim?	Q004
	Are measures that tie responsibility down to a team (e.g., CEO can call a team leader who can take the necessary action).	Q014
	KPIs do not undermine each other.	Q011
Corporate Culture (CC)	Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors [CSFs] and more than one BSC perspective).	Q006
	Are measured frequently (e.g., 24/7, daily, or weekly).	Q013
	Users understand the KPI. Clearly indicate what action is required by staff	Q007
	Users can view origins and context	Q008
	Workers cannot circumvent the KPIs.	Q012
KPIs Iteration Process (KO)	KPIs consist of both financial and non-financial metrics.	Q010
	KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior).	Q009
	KPIs have an owner. Are acted on by the CEO and senior management team (e.g., CEO calls relevant staff to enquire what is going on).	Q005
Other indexing Questions	What is best describes your area of use of KPIs?	Q001
	What is best describes your use for KPIs?	Q002
	How many KPIs do you are being assessed for?	Q003

Table 2 – Questionnaire Questions

4.8 Population & Sample

4.8.1 The Study Population

The research dealt with KPI Reliability in decision making. Therefore, the dimension study is restricted to those who are using the KPIs in their business structure, like Corporates, Multinationals, Overseas, ISO holders, etc., in either people management process iteration, or marketing,

4.8.2 The Study Sample

It aimed to verify the hypothesis of the study and answer its questions, depending on the method of complete enumeration. It consisted of (51) middle managers and higher from deferent areas of use to KPIs. The researcher distributed (51) forms.

Some (9) forms were returned with answers for deferent areas from the same person as he is using the KPIs in 2 or 3 areas, and thereby the return of such answers was considered as new answer to make the votes count (65) distributed as below.

Area of Use	Research Scope	Samples
People Management and Team Performance	People Management	42
Process Optimization and Iteration to enhance the business output	Process Optimization	20
Marketing Strategy and Campaigns	Marketing Strategy	3
Total Sample Size		65

Table 3 – Sample Size and Distribution Across Areas of Use

4.9 Research Framework

The Research purpose is to examine the KPIs reliability in decision making. The research fills the gap in the literature by exploring the dimensions of KPI system (KPI Relevance, Corporate Culture and KPIs Iteration Process) on the decision making and the research will explain and show the theories that related to KPI systems recommendation as to define the relationship between KPI system implementation impact on its reliability on decision making as shown in the next section “conceptual framework”.

4.9.1 Conceptual Framework

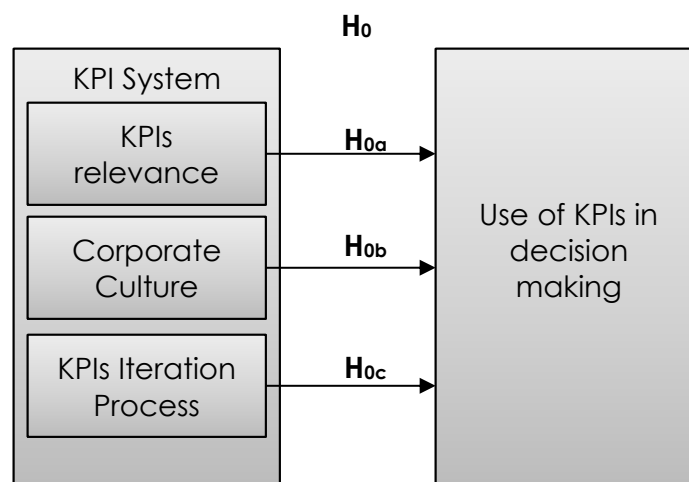


Figure 3 – Conceptual Framework

4.9.2 Research Hypothesis

The three core hypotheses that were derived from this general model are listed as follows:

H_0 : There is a significant relationship between KPI Relevance and the KPI reliability in decision making.

Which is provided by the below sub hypothesis:

H_{0a} : There is a significant relationship between KPI Relevance and the KPI reliability in decision making.

H_{0b} : There is a significant relationship between Corporate Culture and the KPI reliability in decision making.

H_{0c} : There is a significant relationship between KPI Iteration Process and the KPI reliability in decision making.

4.9.3 Research Variables Operationalization

The research variables were defined and adopted according to the study of the relationship between KPI system implementation represented by its three-variable mentioned below as independent variables and the KPI results reliability in decision making. Research variables are classified as follows:

Independent Variable:

KPI Relevance

- KPIs Relevance
- Corporate Culture
- KPIs Iteration Process

Dependent Variable:

The dependency of KPIs in decision making.

4.10 Research Ethics

- Any information obtained related to this study that is identifiable with the participant will remain confidential and will not be disclosed except with the participant's permission or as required by law.
- Confidentiality will be maintained with the consent of the study participants.
- The participants' names will not be used in any of the information obtained from this study or in any of the research reports.
- the participants' names will be destroyed. Information that could identify the participants will not be published individually to anyone outside the study.
- However, the researcher will use the information gathered in his message and other publications. Any information may be used and obtained from this study in any way we believe is best for publication or education.
- Any information that we use to post will not identify the participants individually. Study participants can choose whether they want you to be in this study or not.
- If participants volunteer to participate in this study, they can withdraw at any time without any consequences of any kind.
- The participants can also refuse to answer any questions that they do not want to be answered. There is no penalty if they withdraw from the study.
- In addition, no harm from participating in the sample will be on the health of the participants.

5. Chapter Four – Data Analysis & Findings

5.1 Introduction

This chapter introduces the empirical study with the main findings and results after running the data analysis.

First, a descriptive analysis is performed for the research variables (KPIs Relevance, Corporate Culture, KPIs Iteration Process) and respondent areas of use (People management, Process Iteration and Marketing). Then distributive statistics. At last, the hypothesis testing.

This chapter is designed into five sections, where the first one presents the current introduction of the chapter. The second section introduces the respondents' profile in the form of an analysis of the characteristics of the studied sample. The third section discusses the descriptive statistics of the research variables. The fourth section responds to the hypotheses testing. Finally, the fifth section derives the conclusion of this chapter.

In this Chapter:

- Introduction
- Analysis of the Characteristics of the Studied Sample
- Distributive Statistics
- Hypothesis Testing
- Conclusion

5.2 Analysis of the Characteristics of the Studied Sample

As the study is focusing on the People Management, Process Optimization and Marketing, the sample consisted of 42, 20, 3 of the workers of each area in order.

Area of Use	Research Variables	Samples
People Management and Team Performance	People Management	42
Process Optimization and Iteration to enhance the business output	Process Optimization	20
Marketing Strategy and Campaigns	Marketing Strategy	3
Total Sample Size		65

Table 4 - Sample Size

■ People Management ■ Process Optimization
■ Marketing Strategy

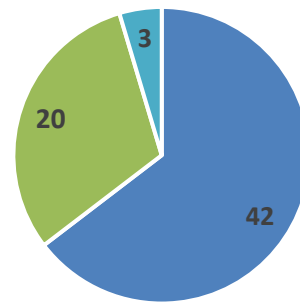


Figure 4 - Sample Size

Q003 was meant to address the number of KPIs used by the firm for each area of the study scope. It shows a mode between 5-10 KPIs.

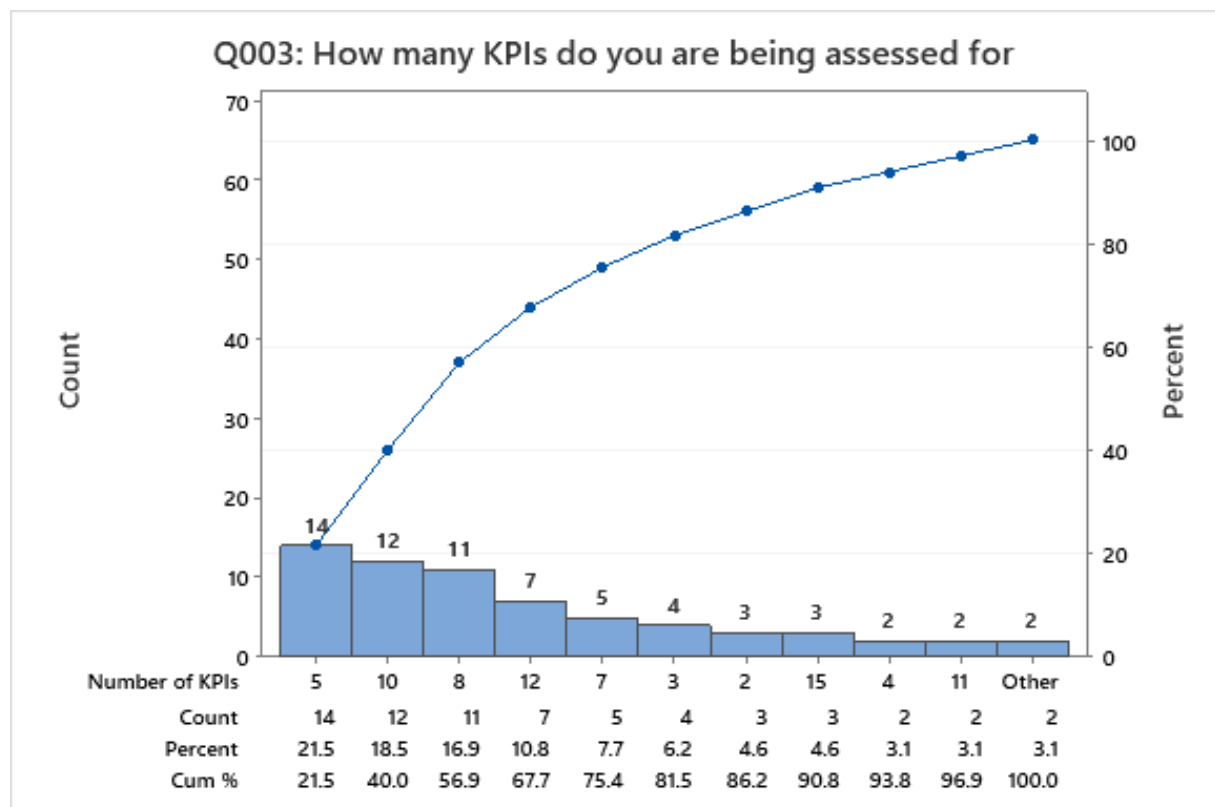


Figure 5 - Pareto Chart for Number of KPIs used by the Sample

The research analyzed the responses from the study sample and the mode of KPIs use was 5 KPI, however, KPIs range was 2-30 KPIs, and the mean was 8.46 KPIs.

5.1 Distributive Statistics

Explaining and analyzing the data of the questionnaire.

5.1.1 KPI Relevance (KR)

Q-ID	Related Variable	KPIs Attribute	Questions	Responses Received
Q004	KPI Relevance (KR)	Sparse	Do you think you can focus your aim?	65
Q014	KPI Relevance (KR)	Distributed	Are measures that tie responsibility down to a team (e.g., CEO can call a team leader who can take the necessary action).	65
Q011	KPI Relevance (KR)	Aligned	KPIs do not undermine each other.	65

Table 5 - KPI Relevance Questions

Q004 was meant to address the Sparse attribute as the fewer KPIs the better. Where there fifty-four agreed they can focus their aim as below.

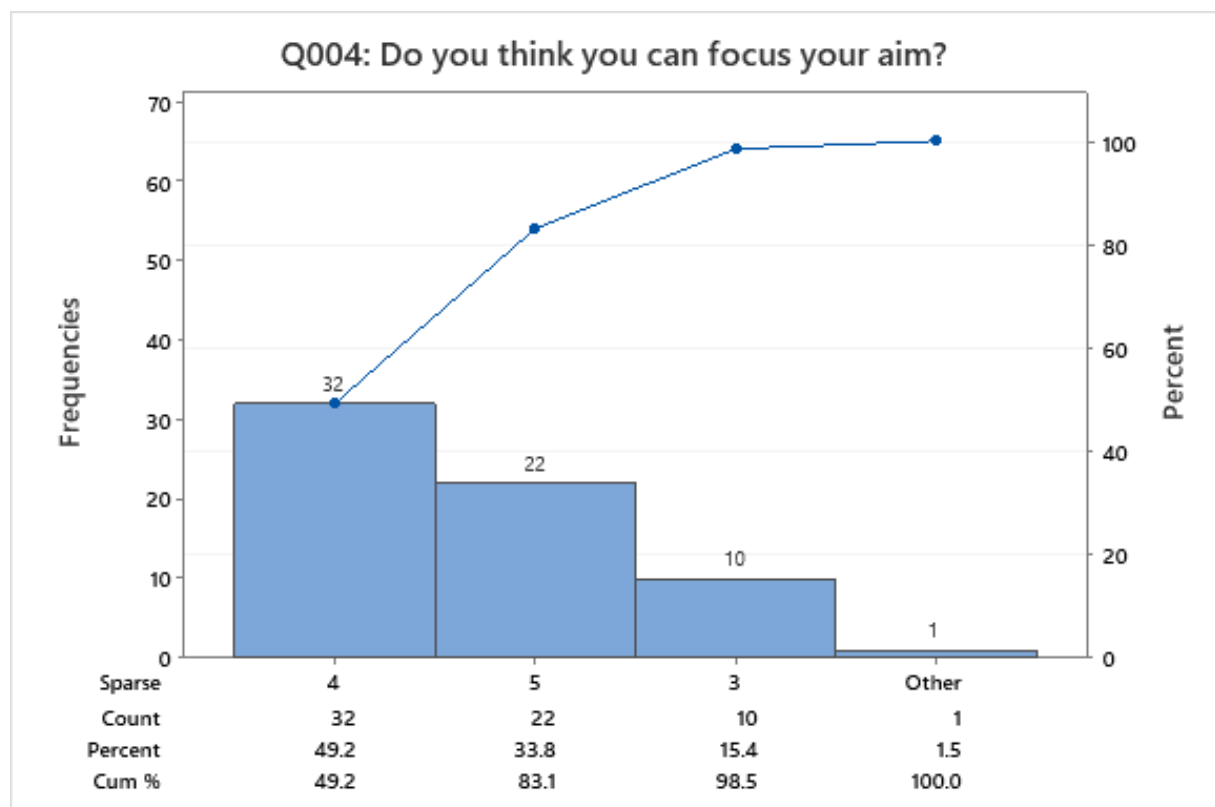


Figure 6 - Q004: Sparse

Q014 was meant to address the Distributed attribute as measures that tie responsibility

down to a team (e.g., CEO can call a team leader who can take the necessary action). Where there fifty-four agreed the distribution of the KPIs, as showed below.

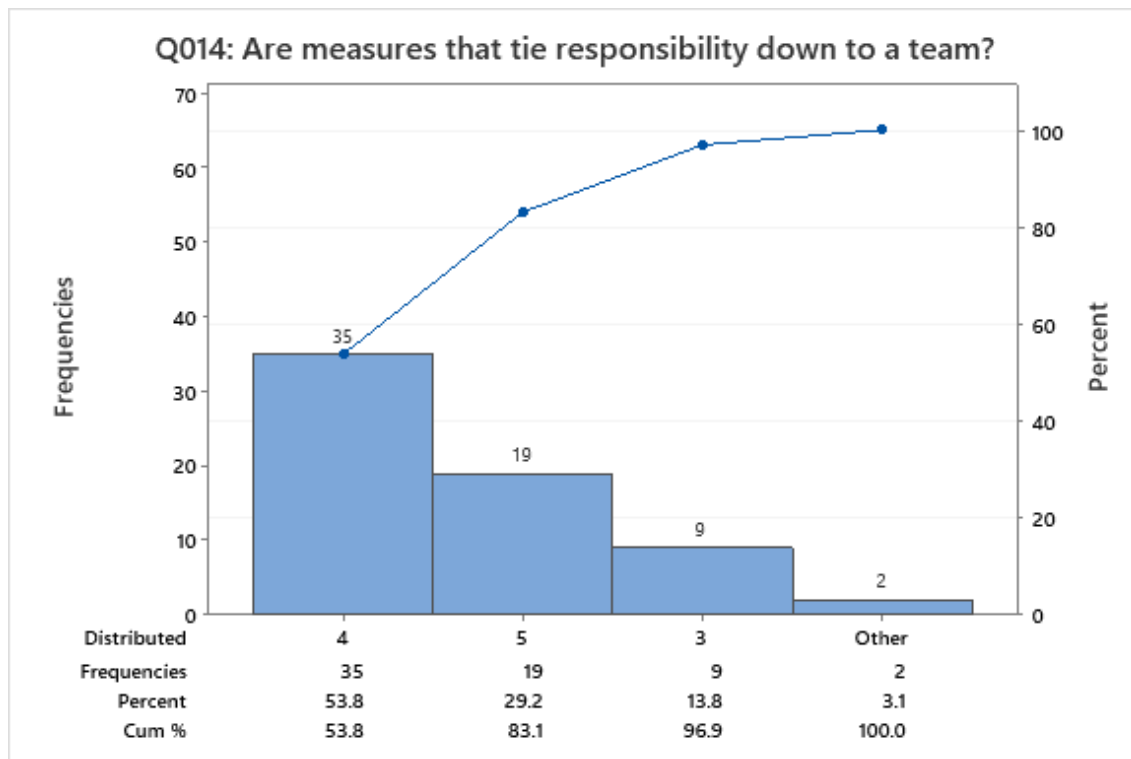


Figure 7 - Q014: Distributed

Q011 was meant to address the Aligned attribute as KPIs do not undermine each other. Where there thirty-six agreed the distribution of the KPIs, as showed below.

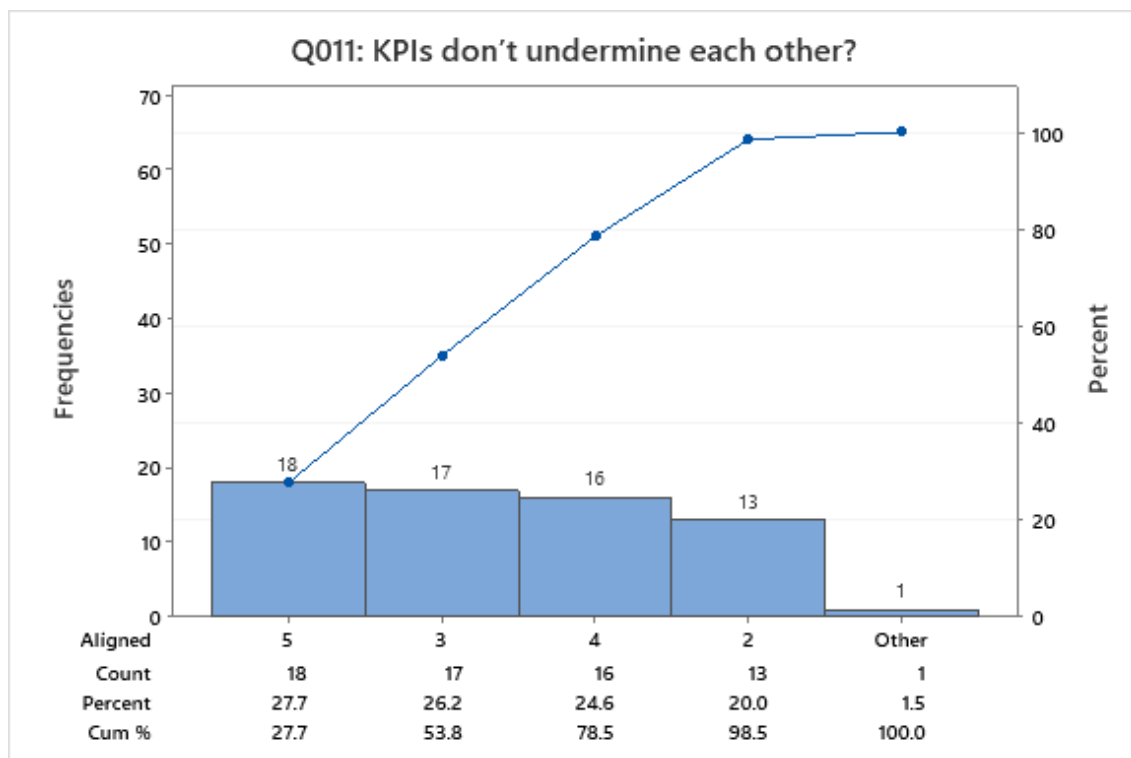


Figure 8 - Q011: Aligned

Now, by getting the mean for adding the answers for the questions (4,11 and 14) divided by three for all answers we can get the average percent for the variable "KPI

Relevance" as below.

Q-ID	Totals	Mean	%	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Q004	270	4.15	83.08%	0.00%	1.54%	15.38%	49.23%	33.85%
Q014	266	4.09	81.85%	0.00%	3.08%	13.85%	53.85%	29.23%
Q011	232	3.57	71.38%	1.54%	20.00%	26.15%	24.62%	27.69%
QKR	256	3.94	78.77%	0.51%	8.21%	18.46%	42.56%	30.26%
				→	8.72%	18.46%	72.82%	←

Table 6 - QKR: KPI Relevance Analysis

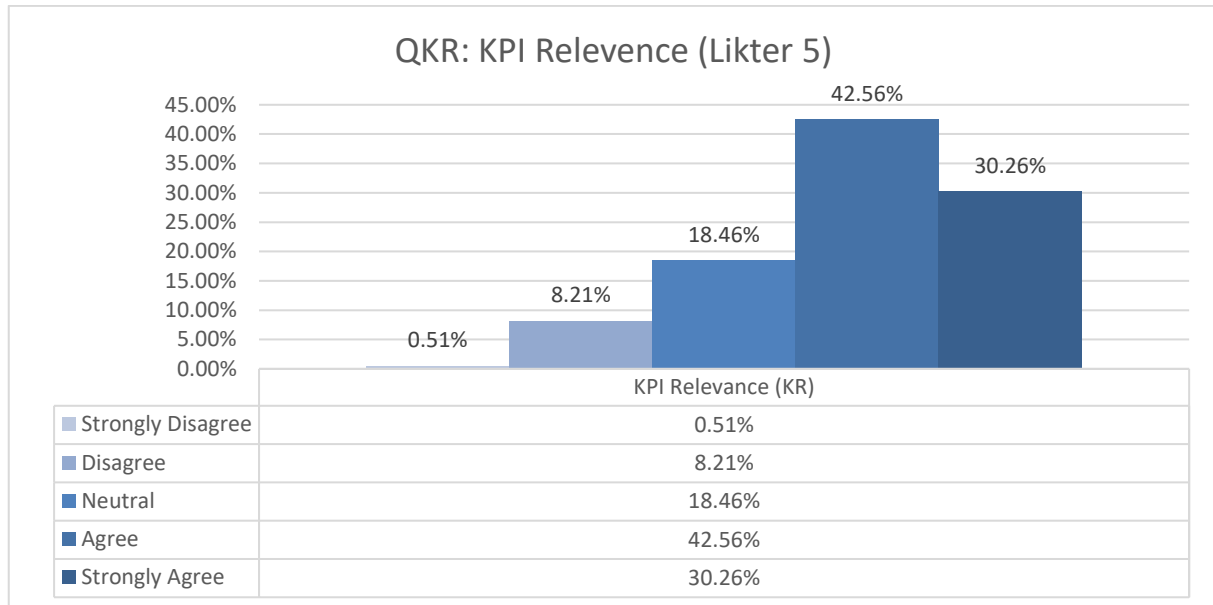


Figure 9 - QKR: KPI Relevance (Likert 5)

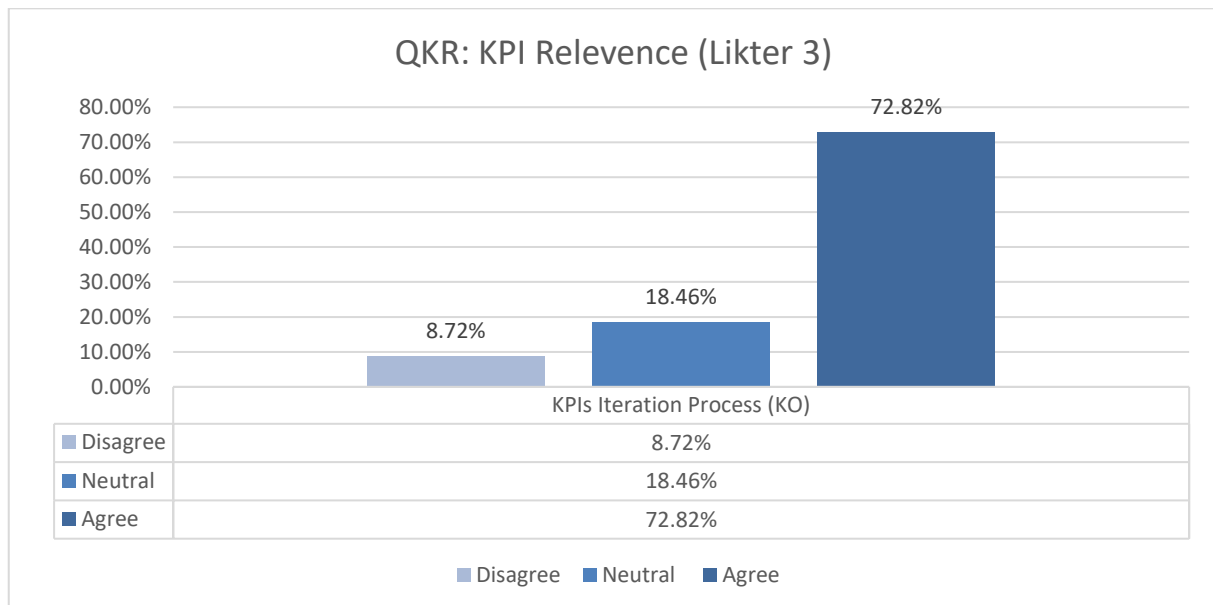


Figure 10 - QKR: KPI Relevance (Likert 3)

5.1.2 KPIs Iteration Process (KO)

Q-ID	Related Variable	KPIs Attribute	Questions	Responses Received
Q010	KPIs Iteration Process (KO)	Balanced	KPIs consist of both financial and non-financial metrics.	65
Q009	KPIs Iteration Process (KO)	Correlated	KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior).	65
Q005	KPIs Iteration Process (KO)	Owned	KPIs have an owner. Are acted on by the CEO and senior management team (e.g., CEO calls relevant staff to enquire what is going on).	65

Table 7 - KPI Iteration Process Questions

Q010 was meant to address the Balanced attribute as KPIs consist of both financial and non-financial metrics. Where there fifty-four agreed.

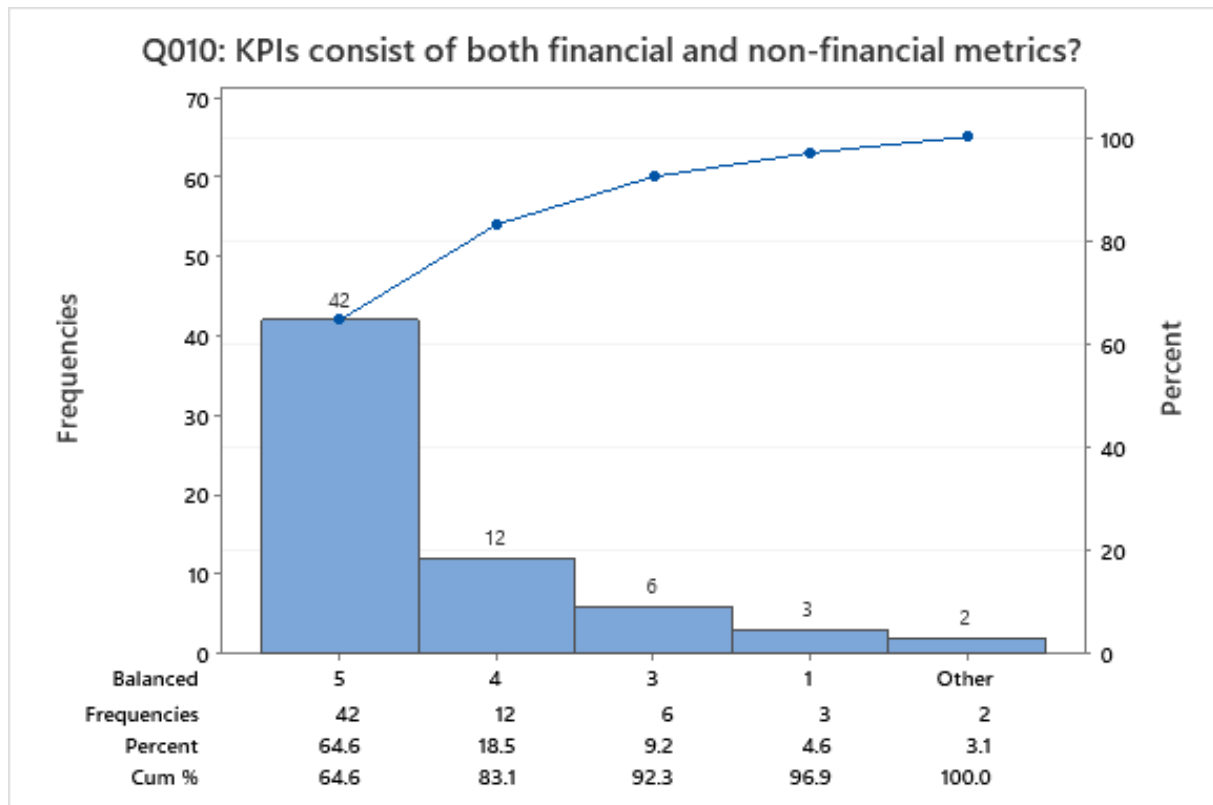


Figure 11 - Q010: Balanced

Q009 was meant to address the Correlated attribute, where KPIs drive desired outcomes. They encourage appropriate action (e.g., have been tested to ensure they have a positive impact on performance, whereas poorly thought-through measures can lead to dysfunctional behavior). Where forty-seven agreed.

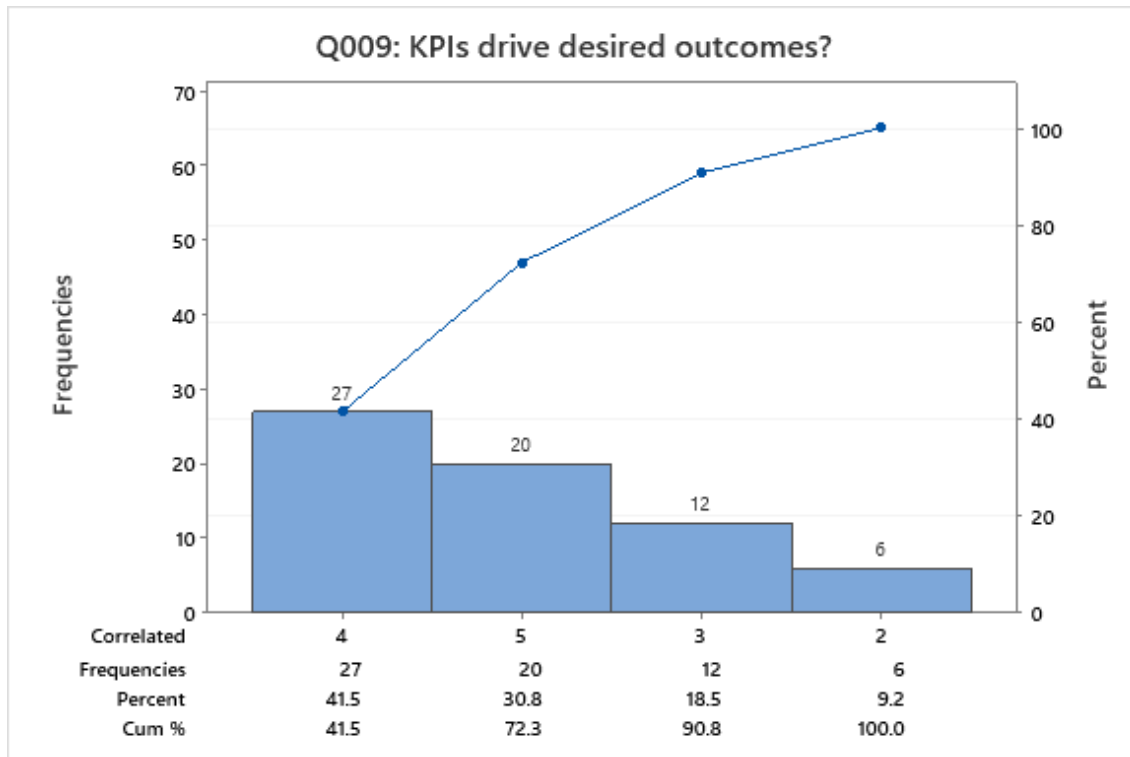


Figure 12 - Q009: Correlated

Q005 was meant to address the Owned attribute, as KPIs have an owner. Are acted on by the CEO and senior management team (e.g., CEO calls relevant staff to enquire what is going on). Where forty agreed.

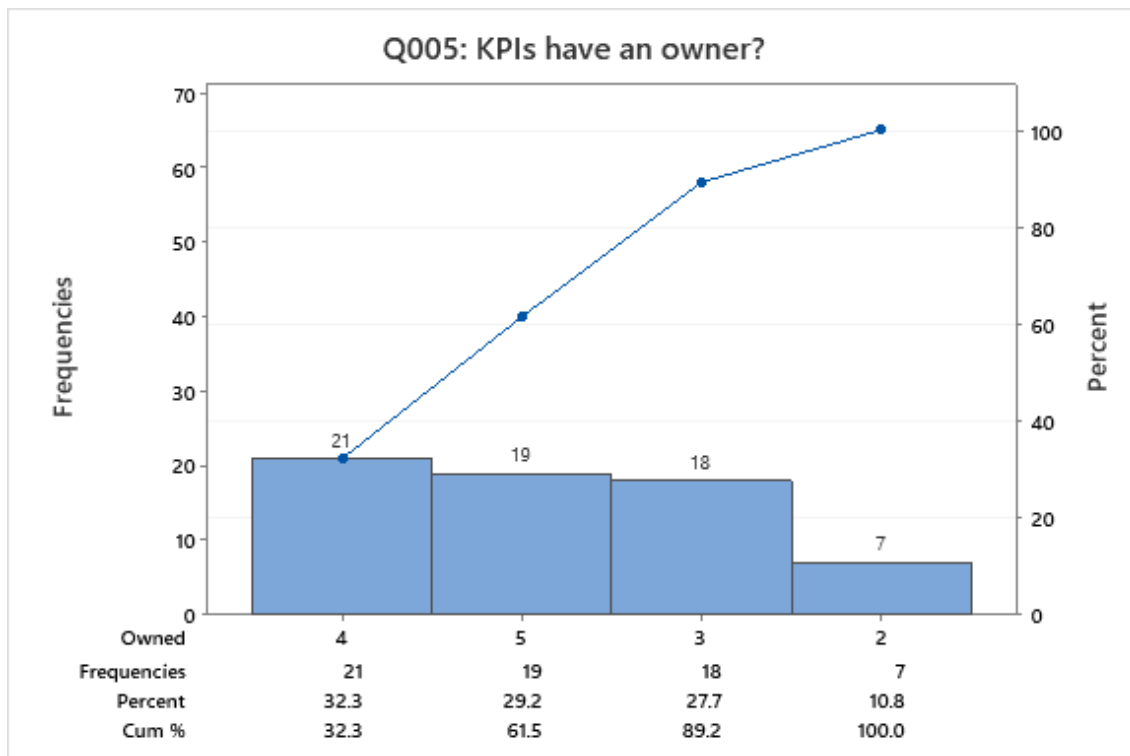


Figure 13 - Q005: Owned

Now, by getting the mean for adding the answers for the questions (5,9 and 10) divided by three for all answers we can get the average percent for the variable "KPI Iteration Process" as below.

Q-ID	Totals	Mean	%	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Q010	283	4.35	87.08%	4.62%	3.08%	9.23%	18.46%	64.62%
Q009	256	3.94	78.77%	0.00%	9.23%	18.46%	41.54%	30.77%
Q005	247	3.80	76.00%	0.00%	10.77%	27.69%	32.31%	29.23%
QKO	262.00	4.03	80.62%	1.54%	7.69%	18.46%	30.77%	41.54%
				→	9.23%	18.46%	72.31%	←

Table 8 - QKO: KPI Iteration Process Analysis

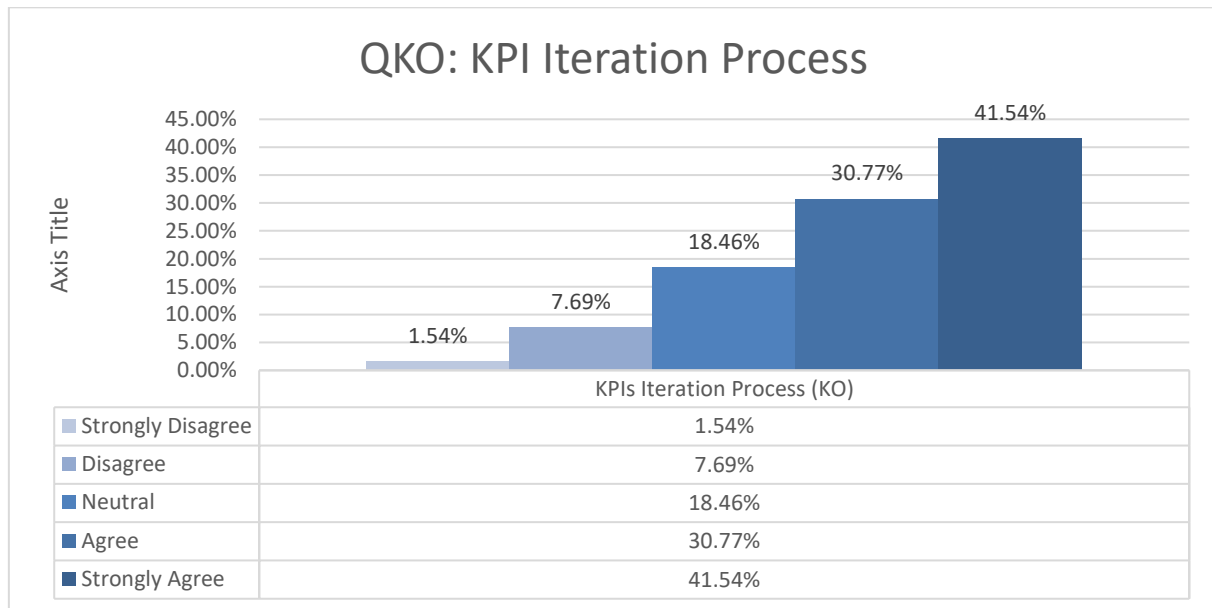


Figure 14 - QKO: KPI Iteration Process (Likert 5)

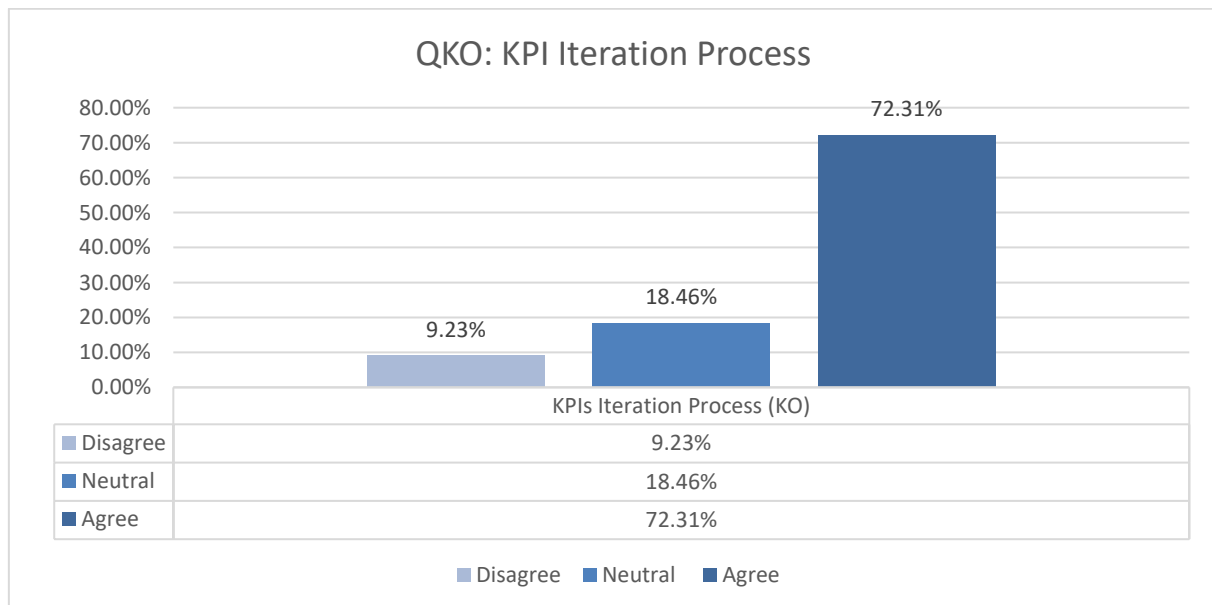


Figure 15 - QKO: KPI Iteration Process (Likert 3)

5.1.3 Corporate Culture (CC)

Q-ID	Related Variable	KPIs Attribute	Questions	Responses Received
Q006	Corporate Culture (CC)	Actionable	Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors [CSFs] and more than one BSC perspective).	65
Q013	Corporate Culture (CC)	Regulated	Are measured frequently (e.g., 24/7, daily, or weekly).	65
Q007	Corporate Culture (CC)	Simple	Users understand the KPI. Clearly indicate what action is required by staff	65
Q008	Corporate Culture (CC)	Referenced	Users can view origins and context	65
Q012	Corporate Culture (CC)	Validated	Workers cannot circumvent the KPIs.	65

Table 9 - Corporate Culture Questions

Q006 was meant to address the Actionable attribute, as Users know how to affect outcomes. Have a significant impact (e.g., affect one or more of the critical success factors [CSFs] and more than one BSC perspective).

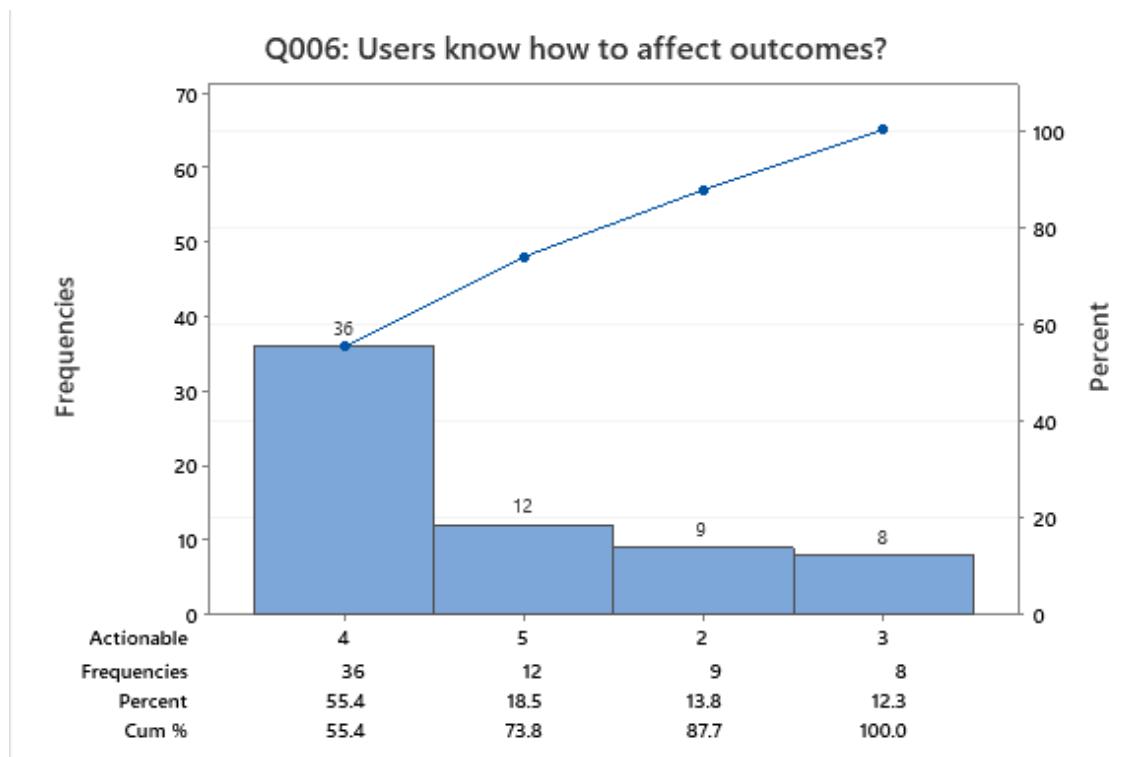


Figure 16 - Q006: Actionable

Q013 was meant to address the Regulated attribute Are measured frequently (e.g., 24/7, daily, or weekly).

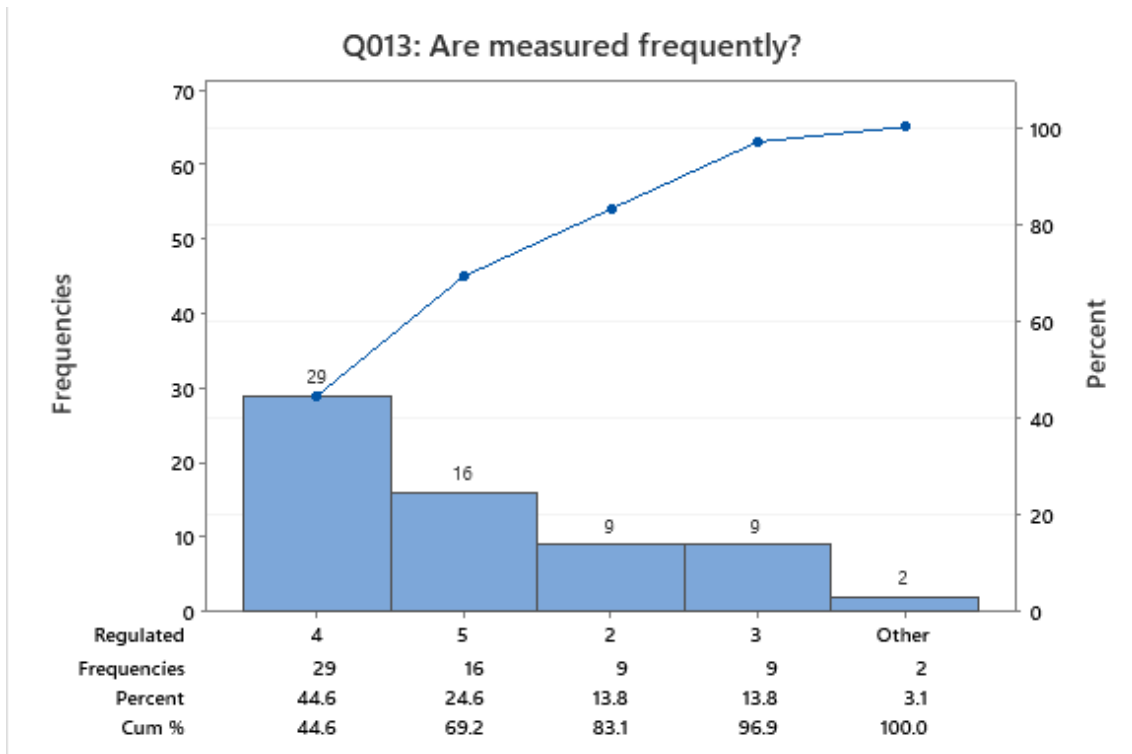


Figure 17 - Q013: Regulated

Q007 was meant to address the Simple attribute as Users understand the KPI. Clearly indicate what action is required by staff.

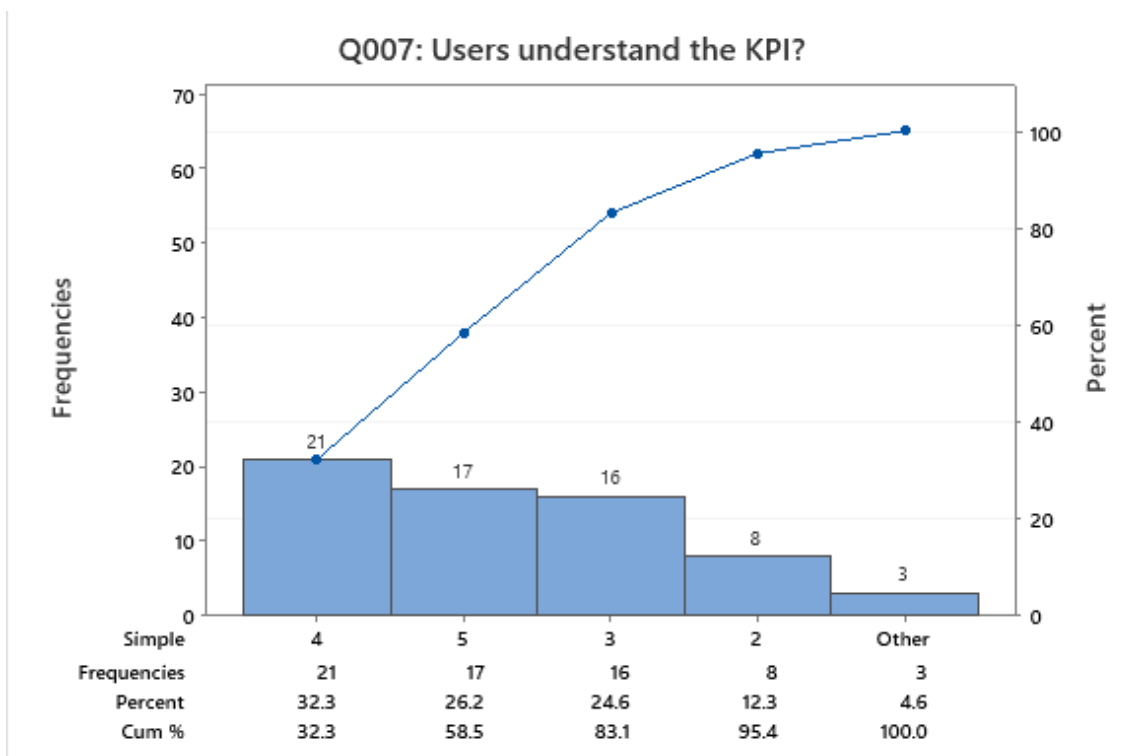


Figure 18 - Q007 - Simple

Q008 was meant to address the Referenced attribute as Users can view origins and context

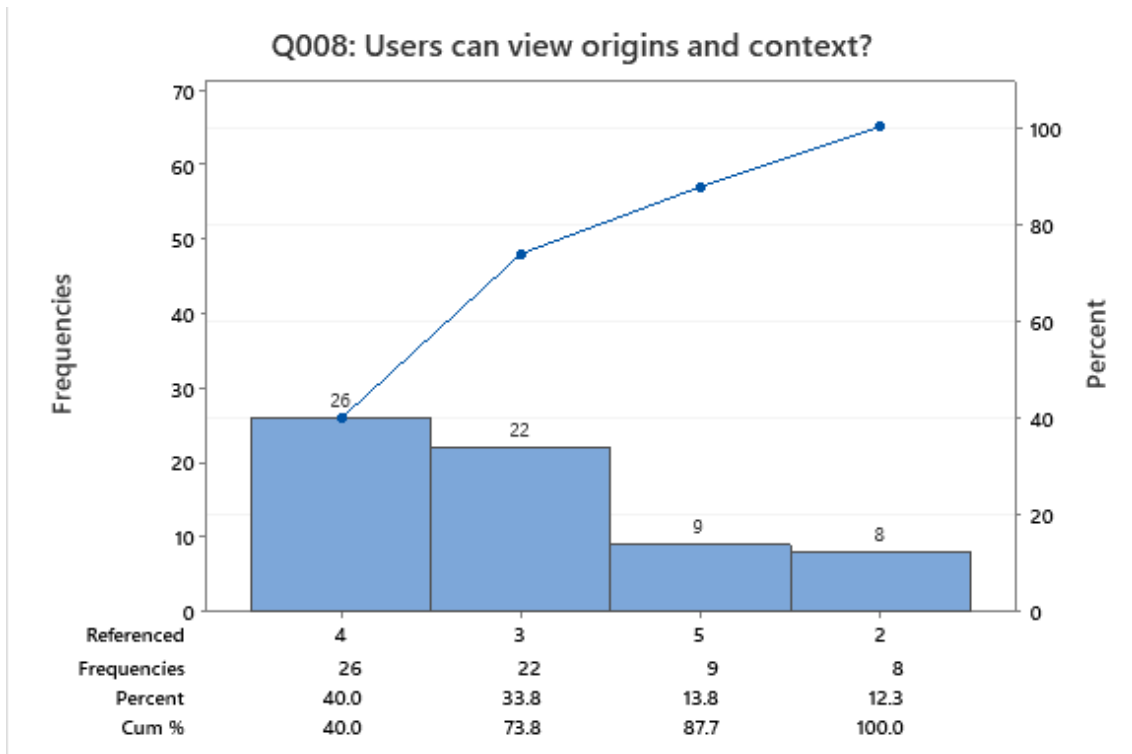


Figure 19 - Q008: Referenced

Q012 was meant to address the Validated attribute as Workers cannot circumvent the KPIs.

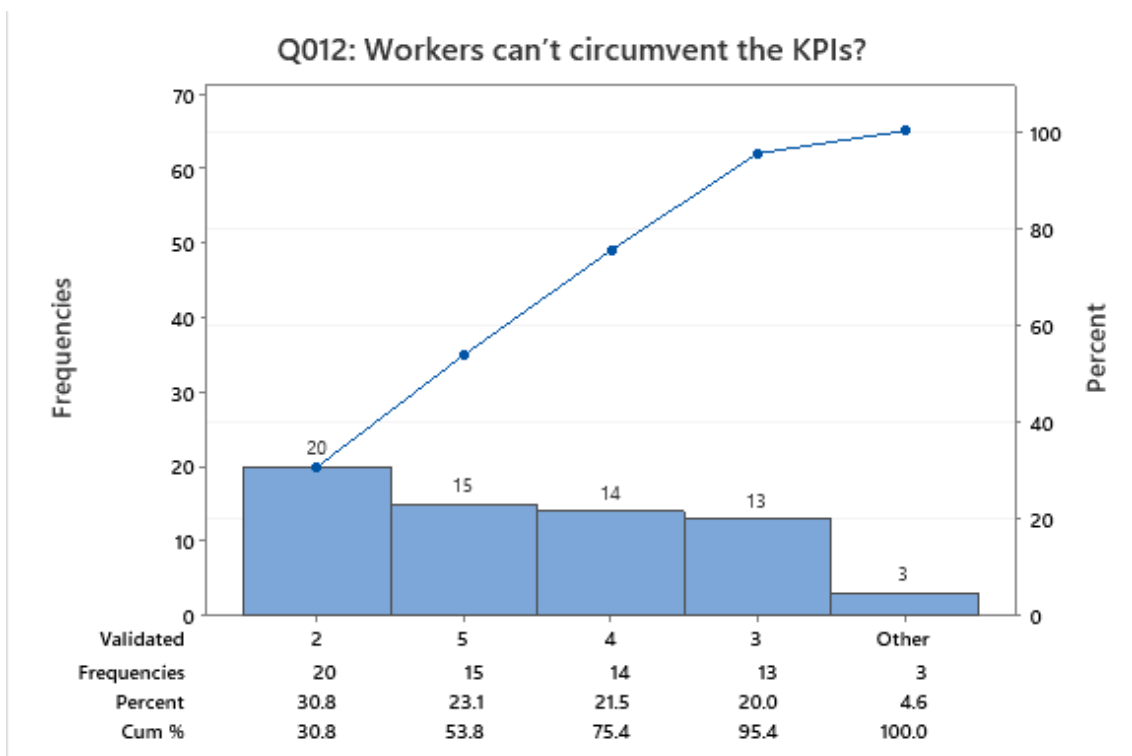


Figure 20 - Q012: Validated

Now, by getting the mean for adding the answers for the questions (6, 7, 8, 12 and 13) divided by five for all answers we can get the average percent for the variable "Corporate Culture" as below.

Q-ID	Totals	Mean	%	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Q006	246	3.78	75.69%	0.00%	13.85%	12.31%	55.38%	18.46%
Q013	243	3.74	74.77%	3.08%	13.85%	13.85%	44.62%	24.62%
Q007	236	3.63	72.62%	4.62%	12.31%	24.62%	32.31%	26.15%
Q008	231	3.55	71.08%	0.00%	12.31%	33.85%	40.00%	13.85%
Q012	213	3.28	65.54%	4.62%	30.77%	20.00%	21.54%	23.08%
QCC	233	3.60	71.94%	2.46%	16.62%	20.92%	38.77%	21.23%
				→	19.08%	20.92%	60.00%	←

Table 10 - QCC: Corporate Culture Analysis

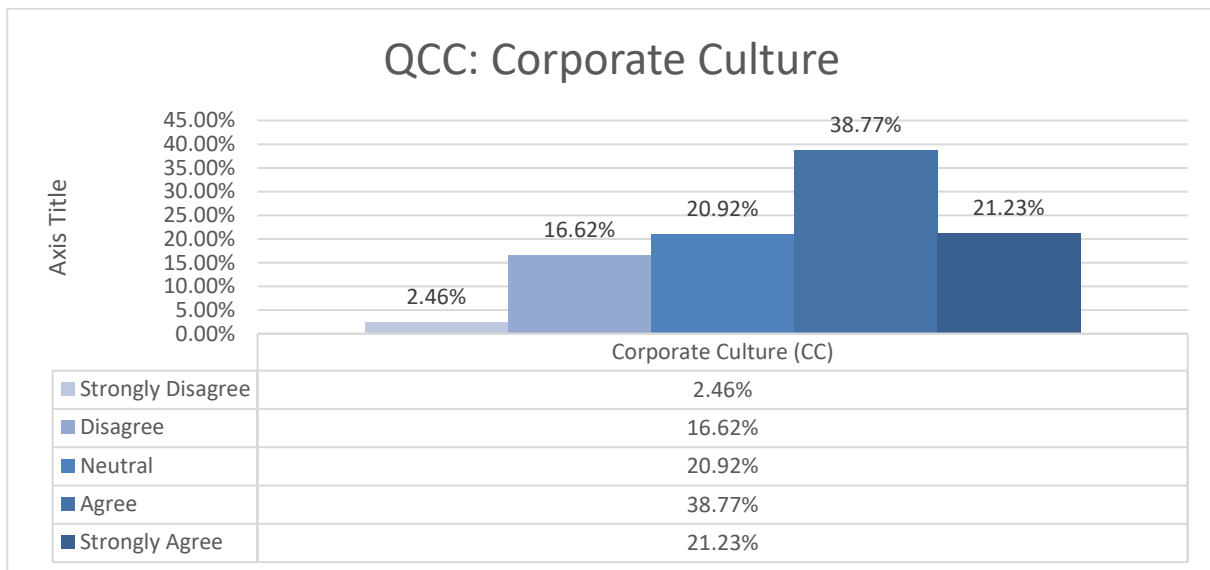


Figure 21 - QCC: Corporate Culture (Likert 5)

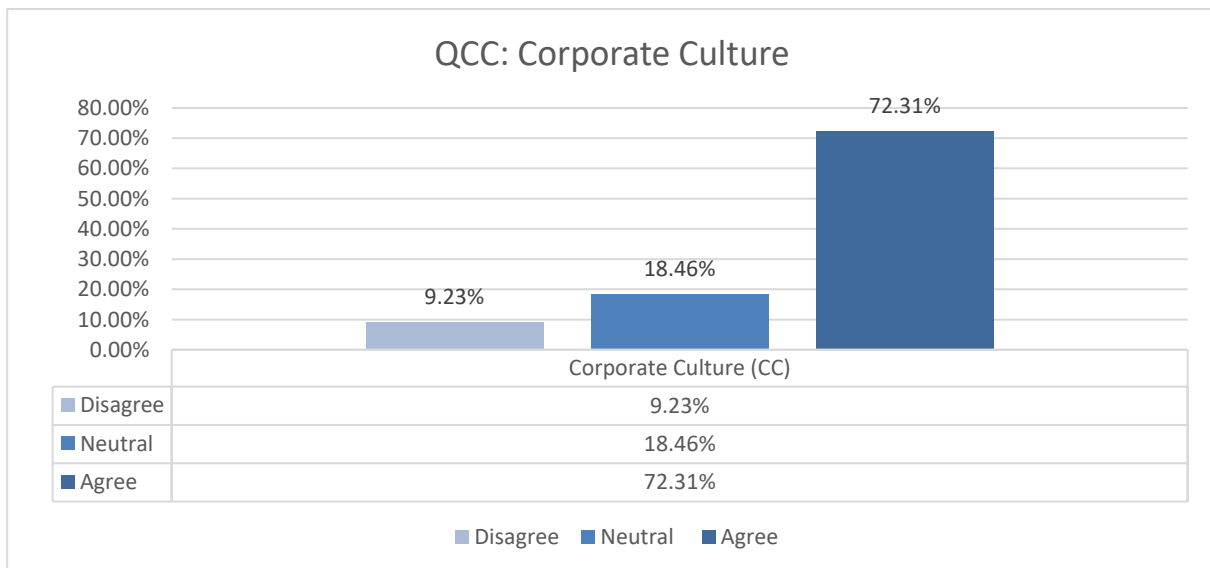


Figure 22 - QCC: Corporate Culture (Likert 3)

5.1 Conclusion

From analysis of data gathered from sixty-five samples, we find **72.82%, 72.31% and 60%** of the study sample **agreed** the relation for the KPI Relevance, KPI Process Iteration and Corporate Culture – in order. While **18.4%, 18.4% and 20.92%** kept **natural**, and **8.72%, 9.23% and 19.08%** disagreed.

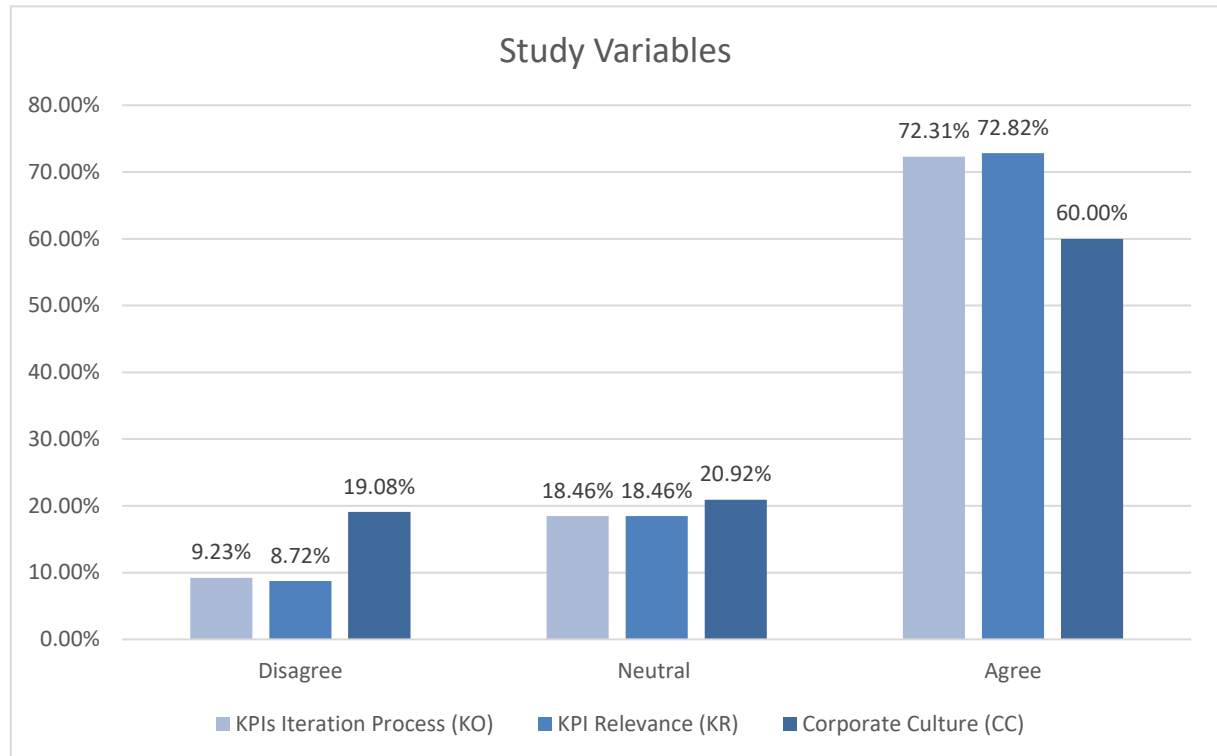


Figure 23 - Study Variables Comparison

We also notice that 72.82% agreed KPI Relevance is the higher agreed follower by KPI Iteration Process with non-noticeable deviation, however, the Corporate Culture if getting less agreement with about 12% deviation.

Related Variable	Number of Questions	Variable Mean	Disagree	Neutral	Agree
KPIs Iteration Process (KO)	3	4.03	9.23%	18.46%	72.31%
KPI Relevance (KR)	3	3.94	8.72%	18.46%	72.82%
Corporate Culture (CC)	5	3.60	19.08%	20.92%	60.00%
KPI System Reliability			12.34%	19.28%	68.38%

Table 11 - KPI System Reliability

6. Chapter Five – Discussion, Conclusion, and Recommendation

6.1 Introduction

This chapter provides a summary, discussion, and conclusion of the findings and makes recommendations based on the study's objective. The recommendations provided are relevant for KPI implementation in any organization and its dependability in decision making for overall organization performance.

As mentioned in previous chapters, KPI system has three dimensions affecting its reliability in decision making; these dimensions of KPI Relevance, KPI Iteration Process and Corporate Culture. The factors that make the KPIs better related and used in business. Thus, the researcher was aware of this problem, so he poses a question, which is the central theme of this research. The research problem can be summarized as How organizations can develop, maintain, and improve KPIs within the strategies. Accordingly, the researcher divided this main question into sub-questions, as the researcher tries to answer throughout this research. These sub-questions are:

- To what extent the KPI Relevance influence the Decision Making?
- To what extent the KPI Iteration Process influence the Decision Making?
- To what extent the Corporate Culture influence the Decision Making?

The principal research aim is to investigate the KPI framework most impacting parts to be adopted in decision making for better decisions, subsequently the better organization's performance. In addition, review the KPIs theories and issues then providing a broader perspective interpretation of literatures that has studied the KPI system elements and processes as discussed earlier.

Thus, literature had been reviewed to find out the research hypotheses and define the research gap in the literature. Accordingly, the methodological philosophy and approach had been selected for answering the research questions. Therefore, the researcher collected data sixty-five quantitatively through the questionnaire to have a comprehensive and reliable conclusion.

Results and findings had been obtained and illustrated in the previous chapter. The current chapter is a discussion of the main research findings, as well as the research contribution and originality. In addition, the research implications, recommendations, and limitations had been illustrated in this chapter, respectively.

This chapter is designed into eight sections, where the first section presents the current introduction of this chapter. The second section presents the research discussion, while the research conclusion is presented in the third section. The fourth section introduces the

research contribution and originality. The fifth section provides the research implications, including academic and practical implications. The sixth section introduces the research recommendations. The seventh section provides the action plan obtained according to the research findings. Finally, the eighth section presents the research limitations as well as the suggestions for future research.

In this Chapter:

- Introduction
- Research Discussion
- Research Conclusion
- Research Suggestions for Future Research

6.2 Research Discussion

This research aims to develop and understand a framework for KPI system and varied factors (KPI Relevance, KPI Iteration Process and Corporate Culture) as dimensions of the KPI system reliability in decision making.

This section discusses how this research was able to achieve the research objectives as stated in chapter one of research that the objective of the research is to test the theory and framework that relates to KPI system that impacts the decision making.

The main research objectives are as following:

- Investigate to what extent the KPI Relevance influence the Decision Making?
- Investigate to what extent the KPI Iteration Process influence the Decision Making?
- Investigate to what extent the Corporate Culture influence the Decision Making?

This section discusses each one of the mentioned objectives, how it was achieved, to what extent it had been achieved, and the result of its achievement from collected data from study sample, through the questionnaire method. The main objectives are represented in some hypothesis, as follows:

H₀: There is a significant relationship between KPI system and Decision Making.

H_{0a}: There is a significant impact of KPI Relevance and Decision Making.

H_{0b}: There is a significant impact of KPI Iteration Process and Decision Making.

H_{0c}: There is a significant impact of Corporate Culture and Decision Making.

6.2.1 The Main Hypothesis

According to the first objective, which is to investigate the extent to the use of KPIs in decision Making. This objective is represented in the main hypothesis of the study.

H₀: There is a significant relationship between KPI system and Decision Making.

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 68.38% **Agreed** this relevancy, 19.28% kept **Natural** and 12.34% **Disagreed**.

Therefore, that means there is a statistically significant positive relationship between the independent variables KPI System Reliability and the dependent variable Decision Making.

Therefore, the main hypothesis (H₀) was accepted stipulating that: There is a significant relationship between KPI system and Decision Making.

The conclusions from the presented are conforming and show that KPI system has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H₀) stipulating that: There is a significant relationship between KPI system and Decision Making.

6.2.2 The First Sub Hypothesis

H_{0a}: There is a significant impact of KPI Relevance and Decision Making.

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 72.82% **Agreed** this relevancy, 18.46% kept **Natural** and 8.72% **Disagreed**.

Therefore, that means there is a statistically significant positive relationship between the independent variables KPI Relevance and the dependent variable Decision Making.

Therefore, the main hypothesis (H_{0a}) was accepted stipulating that: There is a significant impact of KPI Relevance and Decision Making.

The conclusions from the presented are conforming and show that KPI Relevance has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H_{0a}) stipulating that: There is a significant relationship between KPI Relevance and Decision Making.

6.2.3 The Second Sub Hypothesis

H_{0b}: There is a significant impact of KPI Iteration Process and Decision Making.

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 72.31% **Agreed** this relevancy, 18.46% kept **Natural** and 9.23% **Disagreed**.

Therefore, that means there is a statistically significant positive relationship between the independent variables KPI Iteration Process and the dependent variable Decision Making.

Therefore, the main hypothesis (H_{0b}) was accepted stipulating that: There is a significant impact of KPI Iteration Process and Decision Making.

The conclusions from the presented are conforming and show that KPI Relevance has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H_{0b}) stipulating that: There is a significant relationship between KPI Iteration Process and Decision Making.

6.2.4 The Third Sub Hypothesis

H_{0c}: There is a significant impact of Corporate Culture and Decision Making.

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 60.00% **Agreed** this relevancy, 20.92% kept **Natural** and 19.08% **Disagreed**.

Therefore, that means there is a statistically significant positive relationship between the independent variables Corporate Culture and the dependent variable Decision Making.

Therefore, the main hypothesis (H_{0c}) was accepted stipulating that: There is a significant impact of Corporate Culture and Decision Making.

The conclusions from the presented are conforming and show that Corporate Culture has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H_{0c}) stipulating that: There is a significant relationship between Corporate Culture and Decision Making.

6.3 Research Conclusion

This research was aimed to investigate the reliability of KPI system in decision making, and throughout [Chapter Two - Literature Review](#), the research explored the theories and discussions about the KPI system components and the KPI characteristics, like (Balanced, **Sparse, Distributed, Correlated, Owned, Actionable, Regulated, Simple, Aligned, Referenced, Validated**). And then we grouped these characteristics into three related components of the KPI System.

To recognize that KPI must be **Relevant** to a business objective, **iterated** frequently to fit the strategy, and well adopted within the **Corporate Culture**. To define the KPI system as three components to be translated later by business to set of actions and processes. Those components are **KPI Relevance, KPI Iteration Process, and Corporate Culture**.

In this research, a **Positivist Philosophy** was adopted, whose objective is to study the impact of technology on the balance between work and personal life on the performance and satisfaction of employees. Therefore, the researcher tests a general theory by applying it to a specific sector. The philosophy of positivism was based on an analytical and descriptive approach that is commonly used in studies that describe the current reality of a phenomenon with the intention of finding out if this fact is true or if it needs changes.

Our research adopted the **Deductive Approach** whereby the researcher wants to study the KPI Systems and its dimensions (KPI Relevance, KPI Iteration Process, and Corporate Culture) and its reliability in decision making.

The unit of analysis represents the observations of the study, and the numbers of these observations range according to the study population. In our study, the research is based on the collection of primary data through questionnaire methods (**Quantitative Design**) from KPI users in deferent industries and the unit of analysis in our research represents the study sample.

In this study, **Cross-Sectional Data** is adopted as most of the sample agents represented one time zone to achieve the aim of our research that KPI reliability in decision making.

In this research, the researcher used a **Questionnaire Method** to collect data for analysis and access to the extent of KPI reliability in decision making.

The below table summarize the research philosophy and methodologies used in this research:

Research Philosophy:	Positivist Philosophy
Research Approach:	Deductive Approach
Research Design / Strategy:	Primary Data / Quantitative Method
Unit of Analysis (Method):	Quantitative Design (Likert 5)
Time Horizon:	Cross-Sectional Data
Data collection:	Questionnaire Method (Likert 5)

Table 12 - Research Methodology

The research **Questionnaire** included fourteen questions: three indexing Questions, three questions to evaluate the KPI Relevance (KR), five questions to evaluate the Corporate Culture (CC), and three questions to evaluate the KPIs Iteration Process (KO), to come out with the below core hypotheses that were derived from this general model are listed as follows:

H₀: There is a meaningful relationship between KPI Relevance and the KPI reliability in decision making.

H_{0a}: There is a meaningful relationship between KPI Relevance and the KPI reliability in decision making.

H_{0b}: There is a meaningful relationship between Corporate Culture and the KPI reliability in decision making.

H_{0c}: There is a meaningful relationship between KPI Iteration Process and the KPI reliability in decision making.

The research analyzed the responses from the study sample and the mode of KPIs use was 5 KPI, however, KPIs range was 2-30 KPIs, and the mean was 8.46 KPIs.

The research analyzed the response for the Independent Variable **KPI Relevance (KR)** characteristics (**Sparse, Distributed, Aligned**).

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 72.82% **Agreed** this relevancy, 18.46% kept **Natural** and 8.72% **Disagreed**.

The conclusions from the presented are conforming and show that KPI Relevance has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H0a) stipulating that: There is a significant relationship between KPI Relevance and Decision Making.

The research analyzed the response for the Independent Variable **KPI Iteration Process (KO)** characteristics (**Balanced, Correlated, Owned**).

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 72.31% **Agreed** this relevancy, 18.46% kept **Natural** and 9.23% **Disagreed**.

The conclusions from the presented are conforming and show that KPI Relevance has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H0b) stipulating that: There is a significant relationship between KPI Iteration Process and Decision Making.

The research analyzed the response for the Independent Variable **Corporate Culture (CC)** characteristics (**Actionable, Regulated, Simple, Referenced, Validated**).

The analysis carried to test the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 60.00% **Agreed** this relevancy, 20.92% kept **Natural** and 19.08% **Disagreed**.

The conclusions from the presented are conforming and show that Corporate Culture has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H0c) stipulating that: There is a significant relationship between Corporate Culture and Decision Making.

The research analyzed the response for all Variable **KPI Relevance (KR), KPI Iteration Process (KO), Corporate Culture (CC)**.

The analysis carried to evaluate the main hypothesis and to assess to what extent KPI Users are using KPIs in decision making. and as per the collected information, we find 68.38% **Agreed** this relevancy, 19.28% kept **Natural** and 12.34% **Disagreed**.

The conclusions from the presented are conforming and show that KPI system has a significant positive impact on Decision Making, and this is consistent with our research findings, and accordingly, we accept the main hypothesis (H0) stipulating that: There is a significant relationship between KPI system and Decision Making.

From the research discussion, we reach to the result that all hypothesis was agreed by most of the research sample.

	Hypothesis	Disagree	Neutral	Agree
H₀	There is a significant relationship between KPI system and Decision Making.	12.34%	19.28%	68.38%
H_{0a}	There is a significant impact of KPI Relevance and Decision Making.	8.72%	18.46%	72.82%
H_{0b}	There is a significant impact of KPI Iteration Process and Decision Making.	9.23%	18.46%	72.31%
H_{0c}	There is a significant impact of Corporate Culture and Decision Making.	19.08%	20.92%	60.00%

Table 13 - Hypothesis Results

The conclusion is that there is a significant relation between the KPI System and the Decision making, this relation consists of three dimensions; KPI Relevance, KPI Iteration Process, and Corporate Culture. Or in other words; the relevance of KPIs with the business, the KPIs are usually revised and enhanced to reflect the strategy changes, and the adoption of the corporate to the KPIs as a culture.

This agreement comes almost equal for KPI Relevance (KO) and the KPI Iteration Process (KO) at 72% and 73%. However, only 60% supported the Corporate Culture as key components for the KPI system. about 10% of this 12% deference was accumulated to the disagree for the Corporate Culture (CC) as key components for the KPI system. and this is explaining the roots for our dilemma, where this specific component was meant to address the characteristics (Actionable, Regulated, Simple, Referenced, Validated), and leakage of these components makes the system weak against some changes in corporate like turn over, restructuring, changes in management, and so on.

Since we finally reached our conclusion and the end of this study, we encourage the passing researchers to jump to the next section to find the research recommendations for further points to explore and symptoms to explain.

6.4 Research Suggestions for Future Research

This research was aimed to study the KPIs reliability limits in decision making in People Management, Process Optimization and Marketing in a various company from different industries like Information Technology, Pharmaceutical, Oil and Gas and Banking sectors, to identify the elements causes those leads to less dependent or even useless KPI systems.

The researcher recommends for coming research studies to focus on a sample within the same organization from deferent departments will help to explore the KPI System reliability in decision making. And even a Sample from the same industry within the same economics.

This research is testing to what extent KPIs is used in decision making, by reviewing the earlier definitions and theories about KPIs to choose the proper structure for the KPI system, and the KPI characteristics.

The researcher recommends for coming research studies to focus on a bigger Sample size from each area in separate study, Marketing, People Management and Process Optimization teams.

The research adopted the (KPIs Iteration Process (KO), KPI Relevance (KR), and Corporate Culture (CC)) as KPI system components, and the (Balanced, Sparse, Distributed, Correlated, Owned, Actionable, Regulated, Simple, Aligned, Referenced, Validated) as KPI system characteristics. Where each component has its characteristics set and represented each characteristic by a question in the server distributed on 65 KPI users.

$$KPI\ System = KPIs\ Iteration\ Process + KPI\ Relevance + Corporate\ Culture$$

$$KPIs\ Iteration\ Process\ (KO) = \{Balanced, Correlated, Owned\}$$

$$KPI\ Relevance\ (KR) = \{Sparse, Distributed, Aligned\}$$

$$Corporate\ Culture\ (CC) = \{Actionable, Regulated, Simple, Referenced, Validated\}$$

The researcher recommends for coming research studies to update the model to:

$$KPI\ System = KPIs\ Iteration\ Process + KPI\ Relevance + Corporate\ Culture + n$$

: where n is other variables

$$KPIs\ Iteration\ Process\ (KO) = \{Balanced, Correlated, Owned, n\}$$

$$KPI\ Relevance\ (KR) = \{Sparse, Distributed, Aligned, n\}$$

$$Corporate\ Culture\ (CC) = \{Actionable, Regulated, Simple, Referenced, Validated, n\}$$

Then the research analyzed the results to recognize the KPI Iteration Process as the higher impacting factor followed by KPI Relevance, then the Corporate Culture, on the KPI System reliability in Decision Making.

The research offers a way to assess the internal KPI system in the organization to have a better visibility on the defined variables for a reliable KPI system in decision making.

The researcher recommends for coming research studies to focus on measuring the decision-making variables and attributes and find the relation between them and the KPI System variables.

6.4.1 Suggestions Conclusion:

1. The researcher recommends for coming research studies to focus on a sample within the same organization from deferent departments will help to explore the KPI System reliability in decision making. And even a Sample from the same industry within the same economics.
2. The researcher recommends for coming research studies to focus on a bigger Sample size from each area in separate study, Marketing, People Management and Process Optimization teams.

3. The researcher recommends for coming research studies to update the model to:

KPI System = KPIs Iteration Process + KPI Relevance + Corporate Culture + n
: where "n" is other variables

KPIs Iteration Process (KO) = {Balanced, Correlated, Owned, KOn}
: where "KOn" is other characteristics of Iteration process

KPI Relevance (KR) = {Sparse, Distributed, Aligned, KRn}
: where "KRn" is other characteristics of Relevance

Corporate Culture (CC) = {Actionable, Regulated, Simple, Referenced, Validated, CCn}
: where "CCn" is other characteristics of Culture

4. The researcher recommends for coming research studies to focus on measuring the decision-making variables and attributes and find the relation between them and the KPI System variables.

Appendix 1 – Case Study of Employee performance Evaluation

Case Study 2 – IT System Integrator Firm Performance Evaluation User guide (performance competencies)

Quality of Work and Attention to Details:

This competency is concerned with being preoccupied with performance and quality targets, perfection, and efficiency - getting the job done on time, to the required standard. Higher ratings will be associated with having a clear idea of what is and is not relevant to the achievement of results, with a full attention to details pros and cons, and with a precautionary oriented mind, before committing to a solution

Development and Achievements:

This competency is concerned with having a spire of perfectness by working harder and is concerned with a respect for knowledge and information and being disposed to research issues and discovers the available facts. It is also concerned with the employee disposition to keep up to date with areas of expertise, thorough acquisition of knowledge as a necessary basis for planning and actions, where employee takes pleasure in learning and enjoys applying knowledge to current situations, in addition to meet deadlines of assignments and or information acquisition

Development Examples:

Being able to develop and improve your own skill or your team skills in the following dimensions:

1. Technical knowledge,
2. Technical aptitude,
3. Skill Level progress rate.
4. Quality of work
5. Potential for progress
6. Other soft skills clusters
7. Job related technical skill areas,
8. Etc.

Achievements Examples:

Being able to perform your job on time, whatever the job is; plans, training, meetings, projects, communication, certifications, etc...

teach, demonstrate, prove and to persuade, them.

Communication and Presentation Skills:

Communication skills: are the ability an individual displays in consistently demonstrates the ability to effectively communicate with clients, colleagues, subordinates, and supervisors in professional manner and in the personal department Communication skills are understood to be the art or technique of persuasion using oral language and written language. To understand the basic of communication skills, one need to understand that communication is one of those words that is most hyped contemporary culture. It includes a large number of experiences, actions, and events; also, a variety of happening and meanings, as well as technologies

Presentation skills: a structured prepared and speech-based means of communicating information, ideas, or arguments to a group of interested people to inform, inspire, demonstrate and to persuade,

that is an objective of a good presentation

PERSONAL Skills:

Commitment

This competency is concerned with an employee's readiness to identify with an organization and with its objectives and values. Higher ratings distinguish those who look for a deeper involvement from their employment from those viewing it as a simple work for hire' contractual arrangement. Such people like to feel that they belong and are ready to make a commitment. They have a desire to fit in and to conform to the expectations and procedures that define the organization's culture. These are potentially good, loyal employees who want to do an excellent job and as far as their natures allows will work to high standards. Implicit in these attributes will be an expectation that in their turn, they will also be valued and treated with respect by the employing organization

Flexibility

This competency is concerned with having the capacity to cope with the unexpected, to welcome the views of others, to be opened to learning from a wide range of sources. The ability to adapt to the unexpected and to welcome variety in one's work. Individuals who match this competency would be described as even tempered, calm, not easily flustered, spontaneous, not reliant on the opinion of others and open to change.

Resilience

This competency is concerned with a capacity for coping with elevated levels of stress and for remaining calm and steady when under pressure. High scorers will be confident and sure of themselves, without seeming arrogant

They will be neither moody nor inclined to take things personally and will be happy to discuss criticisms of their views or policies without taking offence. Such individuals are calm and consistent and have the self-confidence and personal autonomy to deal with issues (including criticism, conflict, or abuse) without over-reacting or taking things personally, optimistic and confident, they will be appreciated by colleagues for their stability and their consistency,

Self Confidence

This competency is concerned with being sure of oneself and having few doubts about one's abilities, one's viewpoint of one is right to contribute. Such people are likely to cope effectively with social situations and to be ready to take on responsibilities. They are typically optimistic and up-beat in their outlook. They should be relaxed and self-assured, readily express their ideas and opinions and do so in a manner that will inspire confidence in others. They are likely to be calm, and assertive, without being arrogant or overbearing, and ready to take on responsibilities

Punctuality

This competency is concerned with an employee's ability to complete a required task or fulfill an obligation before or on a previously designated time, keep to agreed times and dates, carries out designated tasks accurately and timely, adheres to working hours, is available for appointments as agreed time.

Adhering to the company policies:

Is concerned with being able to work adherently with the following:

- Meet dress code requirements.
- Meet attendance requirements.
- Meet work etiquette guidelines.
- Timely internal communication response

Performance Management Competencies Dictionary

The Competency Dictionary has been designed as a resource for supervisors and non-supervisory employees. Its primary purposes are to bring more detailed definition to the behaviors that are important for Nile.Com to achieve its strategic goals and to create a common objective language for talking about behavioral skills

Each Competency in the dictionary has a Definition and a set of behavioral skills called Behavioral Indicators. The Behavioral Indicators are observable behaviors that individuals employ when they are demonstrating a particular Competency.

During the planning phase of the performance management process, supervisors and their employees use the dictionary to determine how the employee can most effectively achieve their goals or planned outcomes. There are Competencies that are baseline requirements "Basic/Main Competencies" and are expected of all employees at Nile.Com. They are Ethics & Values, Reliability & Attendance/Punctuality, Interpersonal Relationships, Accountability and Flexibility. The dictionary contains "Functional Competencies" and seven "Management/Leadership Competencies" from which employees and supervisors can choose. Employees and supervisors will choose at least five competencies from the "Functional Competencies" list. It is important to choose the at least five competencies that will help the employee achieve his/her planned outcomes or goals. All competencies are important, but there are certain competencies that are more relevant than others to the job or focus for the year.

Note: All employees in managerial/supervisory/leadership positions will choose at least three competencies from the "Management/Leadership Competencies".

During the managing and appraising phases of the performance management process, supervisors and employees use the dictionary to understand and classify the behaviors of themselves and others. The language contained in the dictionary can be useful in helping supervisors and other feedback providers to document and discuss specific examples of the use of the behavioral skills identified as performance expectations.

1. Ethics & Values

Acts in an honest and trustworthy manner based on personal accountability and a moral conviction to do the right thing.

- a) Acts consistently with personal standards of ethical judgment when participating in group decisions and problem-solving.
- b) Acts to protect and does not violate or compromise the confidentiality of information
- c) Recognizes when situations or directives are directly or indirectly in conflict with professional ethics or with the organization's stated values
- d) Promises only what can be delivered.
- e) Appropriately and consistently complies with policies and procedures
- f) Holds self and others accountable for making principled decisions, addresses unethical behaviors head-on

2. Interpersonal Relationships

Demonstrates respect for all differences (e.g., race, gender, ethnic background, disabilities, age, career, etc.) Thinks carefully about the effect on others of his/her words, actions, appearance, and mode of behavior. Maintains stable performance and emotional control when faced with opposition, pressure, hostility from others and/or stressful conditions

- a) Refrains from behavior or language that is exclusionary or offensive in nature.
- b) Always demonstrates appropriate and professional behavior.
- c) Uses a high degree of tact and diplomacy in working with others.
- d) Models and exercises sound judgment regarding personal conduct.
- e) Is aware of his/her own style or preference and its impact on others.
- f) Earns the respect of others.
- g) Stays calm in the face of others' anger or lack of control or when faced with complaints.

3. Accountability

Accepts full responsibility for self and contribution as a team member, displays honesty and truthfulness; confronts problems quickly; displays a strong commitment to organizational success and inspires others to commit to goals, demonstrates a commitment to delivering on his/her public duty and presenting oneself as a credible representative of the company

- a) Follows through and meets personal commitments to others on time
- b) Commits to the company's goals and finds ways to get team members more involved toward accomplishing the company's objectives
- c) Takes his/her responsibilities seriously and consistently meets the customer's expectations for quality, service, and professionalism. Customers can be co-workers, peers, supervisors or managers, vendors, suppliers, external partners, or other stakeholders.
- d) Consistently presents a calm, competent, and professional image & helps/supports fellow employees in their work to contribute to overall organization success.
- e) For Leaders: Demonstrates an understanding of the link between his/her own team's job responsibilities and overall organizational goals, purpose, functions, competition needs, etc. - that helps increase employee commitment and interest to perform their jobs with
- f) the broader goals in mind.
- g) For Leaders: Demonstrates good stewardship of the company's resources (. e. people, time, money) by using an acceptable number of resources to accomplish goals/tasks
- h) For Leaders: Consistently inspires others to commit to the goals of the company
- i) For Leaders: Looks beyond the requirements of his/her own team's jobs to offer suggestions for improvements of overall organization operations.

4. Reliability & Attendance/ Punctuality

Demonstrates an elevated level of dependability in all aspects of the job.

- a) Is punctual and present for work. Begins working on time
- b) Schedules time off in advance
- c) Keeps absences within guidelines Ensures work responsibilities are covered when absent
- d) Arrives at meetings and appointments on time
- e) Completes all assigned tasks on time and with minimal supervision Fulfills all commitments made to peers, co-workers, and supervisor
- f) Informs appropriate individuals when assigned tasks will not be completed in agreed upon time frame.

5. Flexibility

Adapts to change and diverse ways of doing things quickly and positively: does not shy away from addressing setbacks or ambiguity, deals effectively with a variety of people and situations appropriately adapts one's thinking or approach as the situation changes

- a) Adjusts schedules, tasks, and priorities when necessary
- b) Recognizes when changing customer or organizational expectations require innovative approaches and takes the necessary steps to meet new standards
- c) Adapts effectively to change by accepting changes in work processes readily and with an optimistic perspective of the resulting benefits
- d) Adapts effectively to different situations even when under stress or pressure
- e) Works through situations or issues involving ambiguity or setbacks by systematically evaluating options and establishing appropriate action plans
- f) Maintains flexibility in involving others in delivering customer-focused results
- g) Understands the requirements of different situations and effectively adapts his/her behavior even when under stress and pressure
- h) Readily accepts modern technology as part of his/her job and uses it to continually improve efficiency or the quality of his/her work products

6. Attention to Details

Thoroughness in accomplishing a task through concern for all the areas involved, no matter how small. Monitors and checks work or information and plans and organizes time and resources efficiently.

- a) Provides accurate, consistent numbers on all work
- b) Provides information on a timely basis and in a usable form to others who need to act on it.
- c) Maintains a checklist, schedule, calendar, etc., to ensure that trivial details are not overlooked.
- d) Double-checks the accuracy of information and work product.
- e) Carefully monitors the details and quality of own and others work.
- f) Expresses concern that things be done right, thoroughly, or precisely.
- g) Follows policies, procedures, safety, and security measures in using various equipment.
- h) Completes all reports and documents according to procedures and standards.
- i) Maintains properly equipped work area.
- j) Takes necessary actions to produce work that requires little or no checking.

7. Teamwork & Collaboration.

Cooperates with others while participating in a group of people within and across his/her department to accomplish common goals. which benefit all involved parties through treating others with dignity and respect and maintains a friendly demeanor values the contributions of others.

- a) Consistently works with others to accomplish goals and tasks through keeping people who are affected by plans or actions informed and up to date.
- b) Treats all team members with a respectful, courteous and professional manner, supports team through giving credit and recognition to others who have contributed: despite different points of view or setbacks.
- c) Considers the views of other people and departments, if relevant) when analyzing a situation through Identifying and pushing for solutions by which all parties can benefit.
- d) Consistently works well with a variety of different people, rarely encounters someone he/she cannot work effectively with on a task/project
- e) Regularly initiates communication to help solve interpersonal/team conflicts and problems & tries to build consensus & to find areas of agreement when working with conflicting individuals or groups
- f) Consistently attends and actively participates in the company's and department meetings, activities, and events when asked or required

- g) Provides balanced feedback to improve team collaboration and functioning on a continuous basis.

8. Customer Focused

Understands that all the company's employees have external and/or internal customers that they provide services and information to honors all the company's commitments to customers' needs in a manner that provides satisfaction for the customers by providing helpful, courteous, accessible, responsive, and knowledgeable customer service. ["Customers" can be co-workers, peers, supervisors or managers, vendors, suppliers, external partners, or other stakeholders.]

- a) Helpful: Follows through on customer commitments despite time pressures or obstacles Works to remove barriers that get in the way of giving customers top notch service.
- b) Helpful: Recognizes when work processes and/or outcomes are negatively impacting the customer assumes ownership of the issue and takes appropriate steps to eliminate problems
- c) Courteous: Develops relationships with customers that are marked by attention and customer satisfaction
- d) Courteous: Addresses disgruntled customer problems by remaining calm and professional: personally, follows through to resolve issues)
- e) Accessible: Responds promptly to customer requests is easy to reach and work with during work hours willingly works with customers to meet their needs.
- f) Responsive: Listens for and responds to customer requests or problems in a timely manner seeks out customer input to better understand their needs develops ideas for how to meet those needs
- g) Responsive: Refers customer to appropriate department or employee to solve specific problems. When referring customers to different departments, follows up to make sure that the customer has been taken care of.
- h) Knowledgeable: Demonstrates a solid understanding of customer needs by consistently meeting their expectations, seeks ways to continuously improve external and internal customer satisfaction with product or service quality and on-time delivery
- i) Knowledgeable: Meets customer needs by acting professionally and applying a good working knowledge of the services and information provided by the company. Looks for creative approaches to providing or improving services that may increase efficiency and decrease cost.

9. Communication

Creates an atmosphere in which timely and high-quality information flows smoothly both up the organization and down, inside and outside the organization; encourages open expression of ideas and opinions. Respectfully listens to others to gain a full understanding of issues, comprehends written material, presents information in a clear and concise manner orally and in writing to ensure others understand his/her ideas, appropriately adapts his/her message, style, and tone to accommodate a variety of audiences

- a) Actively listens to co-workers and customers to put him/herself in other people's shoes to gain a better understanding of what they are saying.
- b) Keeps people accurately informed and up to date
- c) Comprehends written and oral information and direction and takes appropriate action.
- d) Communicates intentions, ideas, and feelings openly and directly & Refrains from immediate judgment and criticism of others' ideas, delivering criticism in a way that demonstrates sensitivity to the feelings of others.
- e) Appropriately expresses his/her own opinion & consistently delivers accurate, clear, and concise messages orally and/or in writing to effectively inform an audience: & listens attentively to the speaker and actively asks questions to confirm understanding and avoid miscommunications.
- f) Adapts to the needs of most audiences to ensure his/her message is understood & Uses vocabulary which is appropriate to the audience.
- g) For Leaders: Discusses the impact of change efforts honestly and directly with those affected.
- h) For Leaders: Ensures direct reports understand the company's vision and goals by Translating those goals into day-to-day practices, explains the business purpose behind assignments and shifts in priorities so direct reports can understand the "big picture"
- i) For Leaders: Keeps responsible people informed of both positive and potentially negative information & encourages staff to keep one another informed and share information

10. Results – Focused goals: consistently complies with quality

Consistently delivers required business results, sets, and achieves achievable, yet aggressive goals. Consistently complies with quality standards and meets deadlines, maintains focus on the company's goals.

- a) Demonstrates concern for achieving or surpassing results against an internal or external standard of excellence, shows a passion for improving the delivery of services with a commitment to continuous improvement.
- b) Recognizes and capitalizes on opportunities.
- c) Tries diverse ways to reach challenging goals while also taking action to minimize the risks involved.

- d) Works around typical problems and obstacles & try to find more efficient and less expensive ways to get results
- e) Works to meet individual and company goals with positive regard, acknowledgment of and cooperation with the achievement of others' goals.
- f) Manages own time well to complete allocated tasks online and with high quality
- g) For Leaders: Establishes clear, specific performance goals, expectations, and priorities
- h) For Leaders: Aligns the efforts of him/herself and the team to the team's objectives
- i) For Leaders: Uses resources as expected, resulting in quality work that stays within established budgets
- j) For Leaders: Holds self and other team members accountable for achieving results through motivating others to translate ideas into actions and results.
- k) For Leaders: Sets and maintains high performance standards for self and others that support organization's strategic plan
- l) For Leaders: Persists until personal and team goals are achieved and commitments met.

11. Negotiation & Influence

Effectively represents his/her position on issues to gain support and buy-in from others, generates multiple alternatives to a problem to meet the needs of other stakeholders, works to achieve win-win outcomes that others can accept, appropriately utilizes settlement strategies, such as compromise.

- a) Effectively articulates his/her position and helps others understand the underlying issues and concerns
- b) Generates support among team members for ideas of controversy and importance to the company
- c) Thinks "outside of the box" to identify alternative solutions that meet the needs of all stakeholders le... customers, peers, supervisor, involves key stakeholders (e.g., customers, peers, supervisor) in the development of processes and action plans to ensure the final approach reflects their insights and has their commitment
- d) Keeps others informed of issues that affect them: displays a sensitivity to time and confidentiality of information
- e) Considers the needs and perspectives of others and avoids applying pressure so that win-win outcomes can be realized whenever possible
- f) Recognizes when a win-win outcome is not possible and appropriately applies settlement strategies to achieve his/her goals.

12. Problem Solving / Analytical Thinking

Builds a logical approach to address problems or opportunities or to manage the situation at hand by drawing on own knowledge and Problem-Solving experience base and calling on other Analytical references and resources, as necessary. Thinking Analyzes problems by evaluating available information and resources, develops effective, viable solutions to problems which can help drive the effectiveness of the department and/or the company.

- a) Analyzes problems effectively and makes appropriate decisions without missing deadlines or causing delays in service.
- b) Considers the organization's priorities when making decisions or analyzing the costs and benefits of various alternative solutions.
- c) Identifies the information needed to solve a problem effectively. Can cope with uncertainty and an incomplete set of facts to develop a feasible and effective solution
- d) Uses established standards/methods to solve common problems responds to recurring problems by investigating the underlying causes and taking steps to eliminate them
- e) Independently analyzes issues and problems and expresses his/her opinion to others Tries different approaches when initial efforts to solve problems fail, anticipates potential problems and develops alternatives
- f) For Leaders: Delegates decision-making responsibilities to the appropriate organizational level and holds decision makers accountable for the results of their decisions
- g) For Leaders: Anticipates potential obstacles/problems & their consequences and develops contingency plans to overcome them
- h) For Leaders: Accurately predicts the outcomes of a variety of alternatives to problems
- i) For Leaders: Presents problem analysis and recommended solution to others rather than just identifying or describing the problem itself.

13. Professional Development

Demonstrates a commitment to professional development by proactively seeking opportunities to develop new capabilities, skills, and knowledge, acquires the skills needed to continually enhance his/her contribution to the company and to his/her respective profession to perform job more effectively.

- a) Engages in continuous learning opportunities to further develop skills and capabilities in technical and functional areas
- b) Uses feedback from co-workers and customers to find ways of enhancing his/her performance
- c) Accurately identifies his/her own strengths and development needs, leverages strengths, and takes action to develop areas that can be improved through training that will enhance job performance.

- d) Takes part in professional associations to maintain a current knowledge base and relationships with others in his/her field
- e) Updates professional knowledge and skills on a regular basis to stay current and apply contemporary trends or best practices to his/her work at the company
- f) Continually looks for ways to expand job capabilities.
- g) Selects appropriate development activities from a range of competing alternatives and pursues them.

14. Technical Expertise

Applies and improves extensive or in-depth specialized knowledge, skills, and judgment to accomplish a result or to serve his/her "customers" effectively. ["Customers" can be co-workers, peers, supervisors, or managers. external partners or other stakeholders]

- a) Understands technical aspects of his/her job,
- b) Makes self-available to others to help solve technical or procedural problems or issues.
- c) Continuously builds knowledge, keeping up to date on the technical or procedural aspects of the job
- d) Acts on own to improve and increase technical or procedural knowledge.
- e) Uses a wide range and depth of technical or specialized knowledge and skills
- f) Keeps up to date on resources available to serve the needs of customers
- g) Thinks of ways to apply new developments to improve organizational performance or customer service.
- h) Applies technical/procedural knowledge to correctly address a situation, taking into consideration the full range of available facts.
- i) Applies technical procedures correctly and in a timely manner.
- j) Recognizes trends in theory and practice of his/her own technical area and electively prepares for anticipated changes.

15. Planning & Organizing

Establishes a systematic course of action for self or others to ensure accomplishment of a specific objective. Sets priorities, goals, and timetables to achieve maximum productivity.

- a) Develops or uses systems to organize and keep track of information (e.g., "to-do" lists, appointment calendars, follow-up file systems)
- b) Sets priorities with an appropriate sense of what is most important,
- c) Keeps track of activities completed and yet to do to accomplish stated objectives.

- d) Keeps clear, detailed records of activities related to the accomplishment of stated objectives.
- e) Plans with an appropriate and realistic sense of the time demand involved.
- f) Always knows status of his/her own work.
- g) Creates action plans for achieving performance expectations.

16. Initiative / Proactive

Does more than is required or expected in the job; does things that no one has requested that will improve or enhance products and services, avoid problems, or develop entrepreneurial opportunities. Plans for upcoming problems or opportunities and takes appropriate action

- a) Does things before being asked or before the situation necessitates action i.e., forced to by events).
- b) Recognizes and acts upon opportunities.
- c) Seeks information from many diverse sources before deciding on own approach.
- d) Does far more than is minimally required in the assignment, task, or job description
- e) Digs beneath the obvious to get at the facts, even when not asked to do so.
- f) Creates opportunities or minimizes potential problems by anticipating and preparing for these in advance.
- g) Tries out innovative ideas after consideration of all factors involved and potential consequences and outcomes.
- h) Seeks out and/or accepts additional responsibilities in the context of the job.

17. Team Leadership

Effectively manages and guides group efforts tracks team progress, anticipates roadblocks, and changes course as needed to achieve team goals, provides appropriate feedback concerning group and individual performance, including areas for improvement

- a) Involves team members in defining ways to achieve desired results and defining expectations about how team members will work together
- b) Sets and communicates clear goals for the team up front
- c) Monitors team performance continuously and provides "real time" project updates to stakeholders (e.g., customers, peers, supervisor) on a regular basis and/or when asked
- d) Provides meaningful feedback to team members to keep them on track toward common goals
- e) Provides feedback regarding both strengths and development needs on a regular basis; appropriately balances positive and negative messages
- f) Uses experience to anticipate potential problems and coach team members on how to successfully navigate around them

18. Coaching

Works to improve and reinforce performance of others. Facilitates their skill development by providing clear, behaviorally specific performance feedback and making or eliciting specific suggestions for improvement in a manner that builds confidence and maintains self-esteem.

- a) Reinforces effective behaviors or results immediately after the event.
- b) Compares and clearly states actual performance to expected or desired performance.
- c) Takes extra time to assist and provides specific, detailed follow-up.
- d) Demonstrates or specifically explains correct procedures or desired performance
- e) Devotes time to providing task-related help to others, as needed
- f) Asks questions that help other people recognize the need for performance improvement.
- g) Expresses confidence in an individual's ability to improve performance
- h) Talks with others openly and directly about problems with their performance, providing necessary focus, guidance, and direction
- i) Tailors feedback and interactive approach to the individual
- j) Discusses problems immediately, before they are forgotten or out of control.

- k) Ensures clarity of and commitment to performance expectations.
- l) Collect and incorporates the reedback of others to create development plans.
- m) Gives specific feedback and examples in a manner that maintains self-esteem

19. Motivation

Works to simulate desire and energy in people to be continually interested and committed to job role of subject or to try to attain a goal.

- a) Gives other opportunities to practice now skills and capabilities and provides or arranges coaches
- b) Works to provide supportive environment by securing necessary resources and removing blocks to elective working
- c) Encourages Work-Life balance amongst team to maintain healthy workforce and prompt long term effectiveness
- d) Gives timely and specific feedback on who has been done world where there is room for improvement
- e) Communicates and gain team commitment to vision of to be achieved
- f) Delegates folly and creates opportunities which help others to develop the potential
- g) Inspires and empowers others to overcome difficulties and achieve goals. Natures
- h) formidable team identity and pride

20. Talent Management

Clearly establishes and communicates expectations and accountabilities, monitors, and evaluates performance provides elective feedback and coaching: Identifies development needs and helps employees address them to achieve optimal performance and gain valuable skills that will translate into robust performance in future roles

- a) Establishes departmental and individual cool, clearly communicate deployment and individual goals and accountabilities.
- b) Provides adequate resources for employees to accomplish their goals up front and upon request of employees removes barriers as needed to help accomplish team gods
- c) Monitors the right performance measures gives frequent and candid performance feedback on how employees are doing their jobs.
- d) Actively coaches' individuals and teams to strengthen their performance, lakes responsible for identifying individual employee development needs and finding ways to address them
- e) Notices and shows appreciation when expected results and behaviors are

realized

- f) Retains high performers through recognition of accomplishments and development/career opportunities
- g) Focuses on the skills needed for the current position opening as well as the qualities needed to be successful in future roles within the company when hiring

21. Conflict Management

Addresses conflicts by focusing on the issues at hand to develop effective solutions when disputes or disagreements occur helps others resolve conflicts by providing impartial mediation when needed

- a) Openly addresses conflicts as they arise to ensure other team members can meet commitments successfully and maintain strong relationships,
- b) Communicates openly and respectfully when addressing problems with other team members
- c) Recognizes the underlying agendas, needs of others, and finds solutions that are mutually beneficial.
- d) Focuses attention on the issues that affect project process, or team success, avoids bringing up topics that do not directly contribute to the success of the team/department
- e) Consistently focuses on the issues of hand and avoids letting secondary or unrelated issues interfere with resolving conflicts.
- f) Takes a problem-solving approach to conflict and generates multiple practical solutions to problems focuses on the needs of all parties and reaches agreements with win-win outcomes.
- g) Avoids accepting solutions that do not meet his/her current personal or department needs; does not compromise prematurely to move past a conflict.

22. Project Management

Electively manages project(s) by appropriately focusing attention on the critical few priorities, effectively creates and executes against project timelines based on priorities, resource availability, and other project requirements (i.e., budget): effectively evaluates planned approaches, determines feasibility, and adjusts when needed

- a) Consistently focuses on the critical few priorities and manages those to achieve expected results
- b) Accurately anticipates resource requirements (i.e., time, budget, and personnel) on projects of moderately complex scope
- c) Spends time up front planning an approach and develops reasoned and feasible work plans given the resources available
- d) Establishes and builds agreement among project team members for project milestones, resource requirements, timelines, and measures of success
- e) Establishes key milestones, monitors progress toward milestones, and takes action to ensure timelines are met or exceeded
- f) Modifies project work plans as appropriate and communicates those changes to the team to ensure the project is not derailed
- g) Provides on-going project updates regarding progress to keep others informed of status and outstanding issues

23. Creativity & Innovation

Applies creative problem-solving skills to his/her (team) work to develop solutions to problems; recognizes and demonstrates the value in taking "smart" risks and learning from mistakes; develops multiple alternatives and understands the feasibility of each; effectively shares and implements his/her ideas

- h) Integrates input and ideas from various sources to share information and/or explore opportunities.
- i) Creates and implements processes and procedures by exploring and selecting opportunities that have a "best fit" with the company.
- j) Identifies and acts upon the underlying connections of potential conflicts between innovative ideas, pieces of data or aspects of a situation.
- k) Implements innovative approaches/ programs that prove to be effective.
- l) Takes "smart" risks including trying new and diverse ways to get the job done.
- m) Challenges the status quo by continuously reviewing personal work processes and questioning traditional or established processes to make improvements.
- n) Effectively applies existing practices or processes to new work situations to benefit the company and its customers.
- o) Takes appropriate action to address inefficiencies in work processes and establishes improved ways of getting the job done.

24. Collaborative Leadership

Promotes and generates cooperation among his/her peers in leadership to achieve a collective outcome, fosters the development of a common vision and fully participates in creating a unified leadership team that get results.

- h) Considers the organization when making decisions, separates his/her own interests from organizational interests to make the best possible judgments for the firm.
- i) Supports and acts in accordance with final leadership team decisions even when such decisions may not entirely reflect his/her own position.
- j) Solicits the input of peers across Nile.Com even when those peers may only be functionally affected or involved.
- k) Finds areas of agreement when working with conflicting viewpoints and opinions.
- l) Identifies and pushes for solutions in which all parts of Nile.Com can benefit.
- m) Builds consensus among his/her peers in leadership.
- n) Communicates key Nile.Com priorities and how his/her division or department contributes to achieving those priorities.
- o) Shares annual goals with peers in Nile.Com to increase alignment, cooperation, and opportunities to collaborate.

25. Delegation

Utilizes direct reports effectively by allocating decision-making and other responsibilities to the appropriate person

- a) Delegates fully and creates opportunities which help others to develop their potential
- b) Assigned accountabilities are clear end results, not simply tasks to complete.
- c) Assignments are delegated to the appropriate personnel are consistent with the person's job and that individuals capable of performing the successfully
- d) Individualizes delegation to meet the needs and abilities of the individual
- e) Encourages others to set own deadlines within time constraints of assignment and hold them accountable for meeting the deadline
- f) Asks employee for his/her plan to address issue to be delegated, allowing person to create and "own" the solution
- g) Manages risks by making contingency plans with employee.
- h) Clearly communicates expectations or boundaries
- i) Provides the necessary guidance and resources when assigning work

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