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Digital Transformation Case Study

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Abstract

The competition is grim. Means of differentiation from the competition is imperative and innovation is key. Many resort to **Digital Transformation (DT)** investments, yet few truly succeed to reap most of its benefits, misusing a substantial part of the investment. This research aims to examine a successful Digital Transformation Solution (DTS) in the car-rental business, **Key'n Go** using a Case Study (CS) as the research method, in order to understand what were the steps taken to achieve its huge success. This research used an acknowledged often used for Information Systems/Information Technology (IS/IT) projects, approach named Benefits Management (BM), since it provides a wider view of the project, which supports a rational decision on its investments and alignment with the company's objectives.

Keywords

Case study; Digital Transformation; Benefits Management; Information Systems; Car-Rental.

Resumo

A competição é feroz. Meios de diferenciação da competição são imperativos e a inovação é chave. Muitos recorrem a investimentos de **Transformação Digital**, no entanto poucos são os que conseguem recolher o máximo dos benefícios que daí resultam, desperdiçando uma parte substancial do investimento. Este estudo têm como objectivo examinar uma solução de transformação digital de sucesso na indústria de aluguer de carros, **Key'n Go**, utilizando como metodologia de investigação, o Caso de Estudo, de forma a compreender que passos foram dados, que permitiram atingir tamanho sucesso. Este estudo utiliza uma metodologia bastante conceituada e utilizada para projectos de Sistemas de Informação/Tecnologia de Informação, chamada Gestão de Benefícios, visto que proporciona uma visão mais abrangente do projecto, que ajuda a decisão racional no investimento, alinhando com os objectivos da empresa.

Palavras Chave

Caso de Estudo; Transformação Digital; Gestão de Benefícios; Sistemas de Informação; Aluguer de Carros

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Acronyms

ABR	Active Benefits Realization
ATM	Automated Teller Machine
BDN	Benefits Dependency Network
BM	Benefits Management
BRA	The Benefits Realization Approach
BPMN	Business Process Model and Notation
CS	Case Study
CEO	Chief Executive Officer
CJ	Customer Journey
DT	Digital Transformation
DTS	Digital Transformation Solution
HW	Hardware
IS	Information Systems
IS/IT	Information Systems/Information Technology
IT	Information Technology
IoT	Internet of Things
KPI	Key Performance Indicators
MSP	Managing Successful Programs
NPS	Net Promoter Score
OGC	Office of Government Commerce
PM	Project Management
PMP	Project Management Professional

PRINCE2 Projects In Controlled Environments

ROI Return on Investment

SMART Specific, Measurable, Achievable, Relevant, Time bounded

SW Software

1

Introduction

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Digital Transformation (DT) still does not reach a consensual definition among its stakeholders as it does look different for every business, it is very difficult to agree on a definition that can be applied to all, culminating in different points of view of what it means [5], one point it is agreed upon, technology is advancing at a ludicrous pace and culminating in the need to change the business performance accordingly.

The first step into reaching a consensus would be understanding what “digital” in DT means, Dörner and Edelman [6] developed in McKinsey a definition of digital that is composed of three main points, (a) Value creation at the business new frontiers; (b) Customer experience enhanced via optimization of processes; and (c) Creating the new foundations that will support the new approach for the business.

In sum as referred above DT will look different at every business, it is focused less on the processes involved but more on how they manage their business [7]. As the lack of consensus might lead to missed opportunities, slacked initiatives and bad starts in the digitalization of an organization.

Table 1.1 containing multiple definitions of DT will try to help achieve consensus as seen below:

Table 1.1: Digital Transformation definitions

Definition	Author
"Digital transformation is the evolving pursuit of innovative and agile business and operational models fueled by evolving technologies, processes, analytics, and talent to create new value and experiences for customers, employees, and stakeholders."	Solis [8]
"Digital Business Transformation (DBT) is a process of reinventing a business to digitise operations and formulate extended supply chain relationships. The DBT leadership challenge is about reenergizing businesses that may already be successful to capture the full potential of information technology across the total supply chain."	Bowersox et al. [9]
"The use of technology to radically improve the performance or reach of enterprises is becoming a hot topic for companies across the globe. Executives in all industries are using digital advances such as analytics, mobility, social media, and smart embedded devices and improving their use of traditional technologies such as ERP to change customer relationships, internal processes, and value propositions."	Westerman et al. [10]
"The digital transformation can be understood as the changes that the digital technology causes or influences in all aspects of human life."	Stolterman et al. [11]
"DT is the deliberate and ongoing digital evolution of a company, business model, idea process, or methodology, both strategically and tactically."	Mazzone [12]
"DT describes the fundamental transformation of the entire business world through the establishment of new technologies based on the internet with a fundamental impact on society as a whole."	PwC [13]

Taking into consideration the above definitions, even though they are all different one have to agree there are identifiable overlaps, taking those overlaps in consideration, combining them we can conclude that DT jump-starts business transformation as a strategic initiative, it uses digital technology to modernize processes, activities, competencies, and models [5], ripping huge business benefits.

Those benefits require always new or redesigned business processes to impact the organization in DT. If a company wants to keep up with the competition, there is an obvious need to include DT in a continuous form at any business strategy as it seems to be key in achieving new methods to innovate reduce costs and improve productivity, avoiding digital inertia at all costs.

1.1 Research Problem

Alongside DT, Information Systems (IS) and Information Technology (IT) have been in the past recent years one of the core strategies into uplifting an organization performance via innovation [3], however as pressure from an everlasting increase in competition and organizational objectives increasing their measures of success, nowadays the common metrics around success are based on the budget of the project, delivery period, quality and uniqueness [14] [15]. Nevertheless long and gone are the days where Information Systems/Information Technology (IS/IT) investments had an obvious and assured financial return [16].

In success or failure around those metrics, most of the projects, **around 75% fail to deliver the benefits which were aimed for** [17], resulting in mislaying large amounts of money [18].

The lack of understanding on how to identify and manage benefits in conjunction with inertia to DT has led companies into troubled waters, possibly even causing bankruptcy, all due to disruption caused by competitors fully embracing DT as their innovative business model.

There are usually two main examples of once market leaders who found themselves floundering due to digital inertia, Hess et al. define as the *“inability to rapidly develop and implement new digitally-based business models”* [19].

Kodak, once one of the world's main film companies, feared the digital revolution would be the demise of its main business model. Kodak's arrogance into thinking they were the only alternative in the camera market, refusing to embrace the transition to the digital market when the inevitable digital camera arrived and fully disrupted the camera market, was Kodak's last breath, filing for bankruptcy in 2012 [20].

Blockbuster, once the main player for home movie and video game rental service, also faulted when embracing DT. Blockbuster did not keep up with the market availability of entertainment options in the digital world, while Netflix with its innovative business model based on DT, blew Blockbuster completely out of the water, even though Blockbuster tried to respond to all of its competitive threats took too much time to react and perished, filing for bankruptcy in 2010 [21].

Nowadays it is key to assess the IS/IT investment being made and fully grasp if the benefits that are prevailing from the investments are realized.

If managed correctly DT projects likewise IS/IT projects, their benefits can be achieved [22], highly

increasing the chance of success. Benefits Management (BM) as being the approach chosen to try to maximize and attain the foreseen benefits in DT projects.

Citing Peppard [23], *“Quite simply, adding technology does not automatically confer expected benefits; these benefits have to be unlocked and this can only happen through achieving organizational changes. Consequently, it is useful to think about investments in digital as essentially investments in change”*.

Ward & Daniel [1] which defined also BM as *“the process of organizing and managing such that potential benefits arising from the use of IT are actually realized”*, pioneered the most cited model for BM, the Cranfield Benefits Management.

1.2 Research Objective

The goal of this thesis is to showcase via a successful example of Digital Transformation Solution (DTS), Key'n Go, from a car-rental company, InterRent examining it under the BM approach with hopes to learn and generalize steps to achieve a higher percentage of success for future DT projects.

1.3 Organization of the Document

This thesis is organized as follows: Chapter 1 introduces the dissertation, showcases the longstanding problem on IS/IT projects and what this thesis aims to achieve.

In Chapter 2 it is fully described the research methodology chosen for this thesis, Case Study (CS).

In Chapter 3 a theoretical background is given in topics that are directly related to the CS itself.

In Chapter 4, the research question and the design followed are presented.

In Chapter 5 an introduction to the brand and an explanation about the DTS studied in the CS, paired with information about the loyalty metric used by the company.

Chapter 6 is where the CS itself is showcased by doing the data collection & analysis, following all the steps described on Chapter 3.

Chapter 7 concludes this thesis, also taking into consideration limitations and the future work for the dissertation report.

2

Research Methodology

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Since the beginning of time, we humans have a trait that we share among ourselves, curiosity. This fire that drives us into knowing why things are as they are, lead us into questions such as Who? What? When? Why? Where?

Due to the fact research has the main goal of answering questions, this makes all of us researchers [24]. In the far past, we lacked the methods for justifying phenomena with scientific rigour, but now we have the means to do it, CS. A CS slightly differs in definitions according to the authors backgrounds and points of view.

For example, Bromley defined it as a “*systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest*” [25], but the most agreed on is the definition by Yin where he defines a CS simply as “***an empirical inquiry that investigates a contemporary phenomenon within its real-life context, addressing especially situations where the boundaries between phenomenon and context are not clearly evident***” [26].

Yin [27], underlies his CS based on the constructivist paradigm. In other words, the truth is relative and relies on one’s point of view [28]. The main advantage of this philosophy is enabling participants to tell their stories [29], working very closely with the researcher. Since the researcher can work on their different points of view, he will better understand their actions and the thought process behind it [30].

2.1 Identifying the Scope/Unit of analysis for the Case Study

There is an early need to identify what the case will be and what will not be. Researchers tend to find answers to questions that are too broad for the study [28]. As narrowing the scope of your questions is the key to success, defining limits on your case may be the answer as suggested by Yin [27].

Examples of limits for your case can be:

- Context and definition [31],
- Time and activity [32],
- Time and place [33].

2.1.1 When should you use a Case Study

In the scientific community case studies have been frowned upon when compared to another research methods as lacking rigour and objectivity, nonetheless since we can achieve unique insights with them, they are extensively used [34].

Yin [27] specifies that a CS should be taken into consideration as the right approach when:

- The objective is to answer “*How*” and “*Why*” questions with the study,

- The boundaries between the context and phenomenon are not well defined,
- The performance of the participants in the study is not manipulable,
- There is a need to include contextual conditions as it is believed by the researcher that they are pertinent to the phenomenon being studied.

A CS is very flexible in comparison to other research methodologies hence being chosen as ideal for the initial and exploratory steps of a research project [34].

Still, Yin suggested five main pillars of the CS design [26], those are:

- The questions related to the study,
- The propositions you may have,
- The CS unit(s) of analysis,
- The reasoning between the data and the drawn propositions,
- The principles and metrics in which the researcher interprets the results.

2.2 Pinpointing the type of the Case Study

Choosing the type of CS is your next step. Taking into consideration the purpose of your study, you need to choose according to your needs what type shall the case be. There is a panoply of different expressions that categorizes different case studies [28]. According to Stake, case studies can be collective, instrumental or intrinsic [32].

Yin, on the other hand, differentiates case studies into descriptive, explanatory and exploratory, also distinguishes between single, holistic and multi-case case studies [27].

Definitions according to the mentioned types will be given in Table 2.1:

Table 2.1: Case Study Types and Definitions

Type	Definition
Collective	Provides the means for the researcher to find and compare differences between cases. Trying to achieve the same findings covering different cases. Similar to Yin's Multi-case.
Instrumental	The case study plays a supportive role. The of the researcher is to understand a particular scenario, the case just supports and eases the pursue of the findings.
Intrinsic	When the researcher goal is to deeply understand the case, for its uniqueness. There is not a need to understand a generic phenomenon or generate a theory.
Descriptive	When describing a phenomenon or event in real-life and the context it was developed in.
Explanatory	If you are answering a question that tries to explain the casual relation of real-life events that are too complex for other approaches such as surveys.
Exploratory	When the event you are studying does not possess a specific and easy identifiable set of results.
Multi-case	Provides the means for the researcher to find and compare differences between cases. Trying to achieve the same findings covering different cases. Similar to Stake's Collective case.

2.2.1 Choosing between Single and Multiple-case

We must consider which of the options between single and multiple CS fits best with our research goals.

Yin suggests there are four types of designs for case studies as shown on Table 2.2:

Table 2.2: Case Study Design Types

	Single-case	Multiple-case
Holistic	Type 1	Type 3
Embedded	Type 2	Type 4

If the CS brings something unique to investigate, a single case might be the ideal choice. They are also very useful in the early stages of a Multiple-case.

Multiple-cases, on the other hand, tend to be preferred due to the fact they will try from different points of view, culminate into a more vigorous research outcome, by proving or disapproving a theory [34].

Case studies can be breached into holistic or embedded studies. Yin differentiates holistic case studies, where the case is scrutinized as one single unit, whereas embedded studies, multiple units are all examined within the case [35]. Yin refers to holistic design is ideal when the researcher is unable to identify logical sub-units, it gives a very broad sight on the problem but can lack details in the phenomenon worked.

On the other hand, the embedded design will face difficulties giving a broad perspective from the set of individual analysis of each sub-unit [35] [26].

2.2.2 Getting Propositions

According to Yin, if you desire to point awareness into something that needs to be further examined inside the scope of the study, propositions are your way to go [26].

Baxter & Jack suggest that propositions may surge from the researcher's personal experience, theories, generalizations from empirical data and literature [35].

2.3 Collecting your Data

One of the most attractive points of a CS is due to its panoply in data sources. Yin even suggests it is a way of achieving higher data trustworthiness [27]. Due to the fact, multiple data sources are utilised, for whatever technique and source you may follow, it is recommended to triangulate findings, in order to support the findings.

Lethbridge et al. split into three degrees of ways to collect data, as shown in Table 2.3: [36]:

Table 2.3: Techniques for Data Collection

Degree	Definition	Example
First	Direct Methods, direct exposure between the researcher and the subjects in real-time	Focus Groups, Interviews, Observational Techniques
Second	Indirect Methods, there is no exposure to the subjects, only their work environment	Monitorization tools, Video Recording, Fly on the Wall
Third	Only work on artifacts	Source Code, Document Analysis

2.4 Analysing the Gatherings

In case studies there are two different data analysis approaches, quantitative and qualitative.

For quantitative data, Runeson et al. enumerate the typical data to be correlation analysis, development of predictive models, descriptive statistics and hypothesis testing [35].

Usually, case studies tend to lean more on the qualitative side due to its natural research method flexibility. The qualitative analysis aims to withdraw results from the data. While doing so, Yin refers that the reader should be capable of following the thought process of the researcher and his conclusions from the collected data [27].

Seaman [37] suggests there are two sections on analysing qualitative data as shown in Table 2.4:

Table 2.4: Qualitative Data Analysis Technique

Technique	Definition	Example
Hypothesis Generation	Focus on using the data to find hypotheses	Cross-case analysis
Hypothesis Confirmation	Focus on verifying the truthfulness of the hypotheses	Triangulation, Replication

Yin [27] enumerates six crucial techniques for analysis, those are:

- Linking data with propositions,
- Time-series analysis,
- Pattern matching,
- Building explanation,
- Logic models,
- Cross-case synthesis.

All the above techniques give a CS a sense of very structured analysis approach, however, analysis prides in being done at four different levels as Robson suggests [38]:

- **Immersion:** Very flexible approach, with few to none structure, the researcher will follow his intuition mainly. Not very indicated according to Yin, due to difficulties in following the researcher thought process,
- **Editing:** During analysis, codes are defined based on results and utilized,
- **Template:** A priori questions are included to give a more formal approach,
- **Quasi-statistical:** The most formal of the four approaches, for example, calculates rates of words used, giving a more statistic finesse.

2.4.1 Validating the Data

Validating the data used is what gives the seal of approval for the results checking its trustworthiness and proving is not influenced by the researcher's opinion. Yin [27] splits validity into four parts, verifying the quality of the empirical research, those are:

- **Construct validity:** Considers if the research questions and measures applied by the researcher matches his train of thought,
- **Internal validity:** Checks if the researcher while dealing with casual relations is aware conditions are visible to point in other conditions from bogus relationships,
- **External Validity:** Determining how generalised the results can be and how applicable the results are for people outside the studied case,
- **Reliability:** Proving via documentation to what extent the data collection is dependent on the researcher. If repeated by another researcher can achieve the same results.

2.5 Reporting the Case Study

The final step for the CS should be reporting it. The report is how the researcher shall announce the findings and let the readers judge the quality of those same findings [35].

Robson [38], suggests a group of characteristics every CS report should possess and as Runeson et al. [35] simplified very well are:

- Telling what the study is all about,
- A CS shall have a very clear understanding of its findings,
- Provide a way to track on how everything was done, by whom and how so the reader fully understands the case,

- Show data used in the most focused way, to make possible for the reader to follow-through,
- Eloquenty provide conclusions as well as set them into the context they apply.

As with his all-around flexibility compared to other scientific research methods, Yin [27] suggested different structures to every need for CS reports, those are:

- **Linear-analytic:** The most common structure, based on the problem, related work, methods, analysis, and conclusions,
- **Chronological:** Good structure for longitudinal studies, where observing the same variables during different periods,
- **Comparative:** In its essence repeating the case multiple times to find and compare different explanations, points of view and descriptions,
- **Theory-building:** Provides a logic based on theory-building, making it follow the chain of evidence culminating in the theory,
- **Suspense:** First reports conclusions, providing evidence to justify them after,
- **Unsequenced:** If chosen to not follow the above paths.

2.6 Alternative research strategies

Three main conditions should weight on the decision to choose a research strategy according to Yin [26], those are:

- The questions type investigated,
- How much can the investigator control the behaviour of the events,
- How focused on contemporary events in contrast with historical events the study is based on.

Table 2.5 summarizes these three conditions on the most common research strategies.

As showcased in Subsection being the CS the most fitting strategy for our study.

As with every scientific approach, even though this method is a different form of empirical inquiry, many researchers lack respect for this methodology. Case studies have been set aside when compared to other traditional methods such as surveys or experiments [26].

Yin [26] indicates three main concerns that almost always surge with case studies. The biggest concern is often the **lack of rigour of a CS**, Yin [26] references that *“too many times, the case study*

Table 2.5: Relevant situations for different research strategies

Strategy	Form of research question	Requires control over behavioral events?	Focuses on contemporary events?
Experiment	how, why	yes	yes
Survey	who,what,where, how many, how much	no	yes
Archival analysis	who,what,where, how many, how much	no	yes/no
History	how, why	no	no
Case study	how, why	no	yes

investigator has been sloppy, and has allowed equivocal evidence or biased views to influence the direction of the findings and conclusions”.

Secondly, case studies offer very little room for scientific generalization, a typical question raised is **“How can you generalise from a single case?”** Yin [26], as they are based on a single or small number of subjects [39]. Yin [26] answers this concern by saying *“The short answer is that case studies, like experiments, are generalizable to theoretical propositions and not to populations or universes. In this sense, the case study, like the experiment, does not represent a “sample,” and the investigator’s goal is to expand and generalize theories (analytic generalization) and not to enumerate frequencies (statistical generalization)”.*

Finally, usually case studies tend to be very long and difficult to conduct, culminating in an enormous amount of unreadable documents [26].

Yet, there are advantages such as, they enable the researcher to achieve a holistic view of a certain phenomenon or series of events [40] due to the use of different sources of information. They examine the data within the context of its use [26] where for example directly differs from experiment, where it isolates a phenomenon from its context, focusing on a limited number of variables [39].

3

Theoretical Background

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3.1 Benefits Management

Making its debut during 90's [41], under different authors such as Atkinson [42], Farbey et al. [43] and Ward et al. [44] from the need to justify IS/IT investments, which traditional financial appraisal methodologies were not achieving satisfactory results [44], on numerous occasions, the expected benefits do not manage to happen even though the project is delivered in the intended time-frame, on budget and respecting the usual technicalities [45].

A "benefit" is defined by Ward & Daniel [3] as any leverage gained in order to be used by any singular or group of stakeholders interested. Ward et al [44] emphasizes that **BM main focus is the effective management from tangible and intangible values originated from IS/IT investments.**

Ward & Daniel [3] also emphasize unless a benefit can be observable, it should not exist. The benefits can be classified into four types:

- **Observable:** When there is a need from the stakeholders to reach an agreement if the benefit was or was not accomplished, based on their knowledge,
- **Financial:** When a value is calculated from a cost/price or formula,
- **Quantifiable:** When there exists enough proof to estimate how much improvement/benefit the changes originate,
- **Measurable:** When the benefit can be measured but is not enough to forecast how much improvement is generated from the changes.

In today's digital era, the business started more than ever creating intangible assets that encourage from problem-solving to innovation, such as customer relation, skills and knowledge between contributors. Intangible assets became the biggest leverage over competition between organizations and there is not a single tool that can forecast or quantify the value they can generate for the company, as its value does not be conferred on the asset itself but from the group of assets and strategy connected by it.

Like any other scientific approach, BM have different approaches to its application as they diversify between them by their own characteristics. Since the scope for this CS, was limited by time and space, for this case study we will be following The Cranfield School Model by Ward & Daniel [3] as it is more IS/IT investment-oriented, where the key part of the model is the keep track of the benefits. By comparing the project results from start to end of the realization plan, continuously checking for internal or external factors that impacted the expected benefits realization. If new benefits are identified during the process, a new benefit realization plan is started.

Examples of other BM approaches are The Benefits Realization Approach (BRA) [46], Active Benefits Realization (ABR) [22] and, Managing Successful Programs (MSP) [47].

As Ward & Daniel [3] referenced, benefits are achieved in a more easily if taken inside the pace of a change management process.

BM is composed of five main stages, that will be further explained in this section. The following sub-sections will follow mainly Ward & Daniel [1] knowledge and proposed approach to each stage.

3.1.1 Benefits Identification and Structuring

The first step in BM is to identify and structure the potential benefits within your programme/project. According to Ward & Daniel [1] this first stage has the purpose of:

- Reach agreement on the objectives for the investment and if they relate to one or more driver for change in the organization, where the driver is seen as what is key to the business,
- Identification of all potential benefits,
- Understand what change in the business can be done to achieve the benefits and who proclaims ownership of said benefits,
- Identify potential issues for stakeholders that could jeopardize the project,
- Produce a business case to give the green light or not to the investment.

As soon as the benefits are identified and accounted for, the next step would be to identify how IS/IT will enable the necessary changes for the benefits to take place.

From this activity, an important output is a Benefits Dependency Network (BDN) where it **“relates the IS/IT functionality via the business and organizational changes to the benefits identified.”** as defined by Ward & Daniel [1], shown in Figure 3.1

Further benefits may be identified as the process goes on.

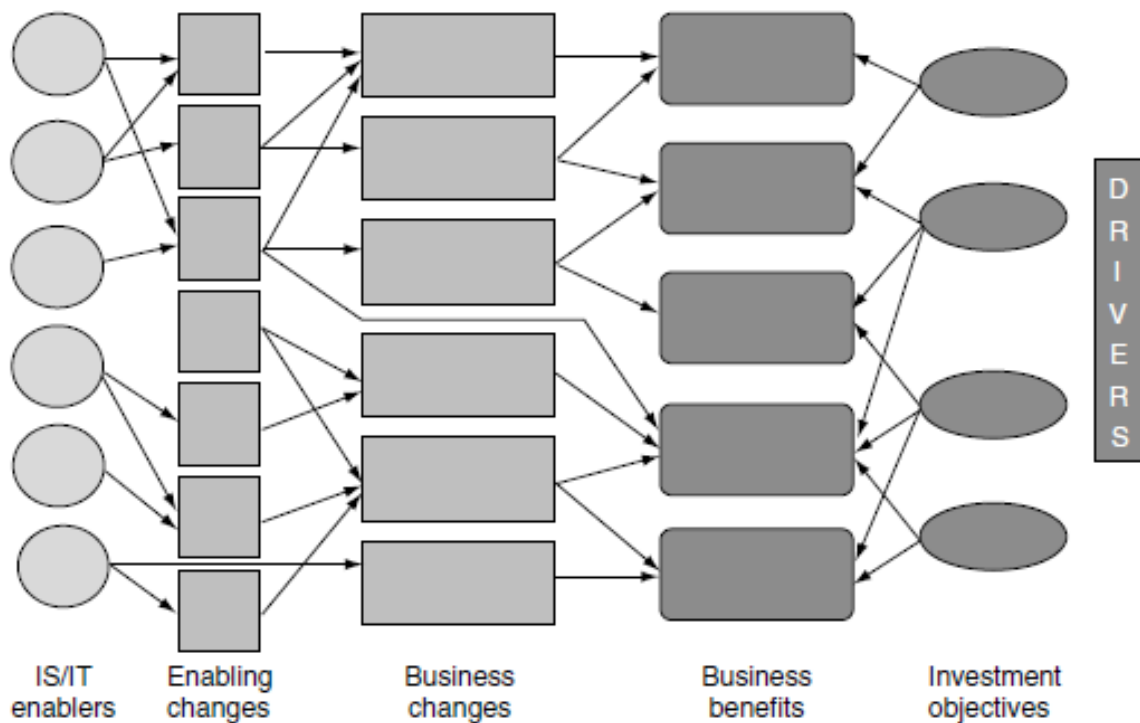


Figure 3.1: Benefits Dependency Network from Ward & Daniel [1]

3.1.2 Planning for project/program Benefits Realization

This stage pretends to identify what will have to be done for the benefits to be realised and how will it be attained, in other words, will create a business case and plan for the investment, where it will then be yield for approval by the management.

Ward & Daniel [1] enumerate some steps for this to be realized:

- Every benefit and change fully described, responsibilities defined and agreed upon,
- Measures and if possible values for each benefit at the end of the investment,
- Measures to establish the current 'baseline' at the beginning of the investment, may require updates along the way,
- All the changes and actions owned by the stakeholders are appointed,
- Proof, if the changes applied, were successfully carried out,
- A fully documented BDN.

In essence, the benefits realisation plan serves as an audit for the leading milestones detailed in each benefit. A stakeholder analysis must be concluded before delivering a completed business case

with the respective BDN and benefits plan. Everyone involved by the process of development should be taken into consideration as a stakeholder as their opinion may influence the final result of the investment.

According to Ward & Daniel [1], the objective of a stakeholder analysis is to fully comprehend the organizational and human factors that may affect the organizational capacity to implement the necessary changes to accomplish the expected benefits.

Since projects tend to lack in cooperation by the stakeholders resulting in failure, addressing what each stakeholder benefits from resulting in more dedication.

3.1.3 Execution of the Benefits Plan

After the plan is detailed, now the next logical step is executing and adjusting the plan as necessary due to new issues/events. All the progress should be monitored routinely to track the plan progress of each milestone identified in the previous step.

A common practice at this stage is to appoint a project manager to ensure the project is on track and meets the business needs. If along the way, plans have to be modified to accommodate changes, such as issues or new benefits identified or even the erstwhile identified benefits need to be discontinued due to lack of feasibility, its the project manager's responsibility to react accordingly.

3.1.4 Reviewing and Evaluating the Results obtained

Successful companies tend to evaluate their IS/IT investments after they are completed, the main reason is to try to augment their Return on Investment (ROI). The projects will be learning opportunities and should be considered as a positive approach.

Ward & Daniel [1] describe five main objectives for reviewing the planned benefits, those are:

- Figure out and certify which planned benefits have been completed,
- Identify the expected benefits that were not accomplished and possible disbenefits that may have resulted from them,
- Identify the unexpected benefits that were accomplished and possible disbenefits that may have resulted from them,
- Identify the reasons why benefits were or were not achieved and take notes for future programmes/projects,
- Identify and understand steps to be done to improve the organization's BM process.

This review and post-evaluation should consider the involvement of every fundamental stakeholder while trying to identify what went well and what went wrong, with future improvements in mind, important

to avoid pinpointing blame on stakeholders when something went not accordingly to plan as this is just to seek improvements, therefore, learning from mistakes.

3.1.5 Establishing the Potential for Further Benefits

The final step of the process is to identify after reviewing what occurred during the project, what can be improved for future projects following the same implementation and changes.

The main stakeholders should contribute to the identification of possible new benefits and opportunities as the new benefits identified could be forgotten otherwise.

Ward & Daniel [1], shows the key areas of difference on each stage of the BM approach and in essence summarizes the five stages process until now describe in the following Figure 3.2 shown below:

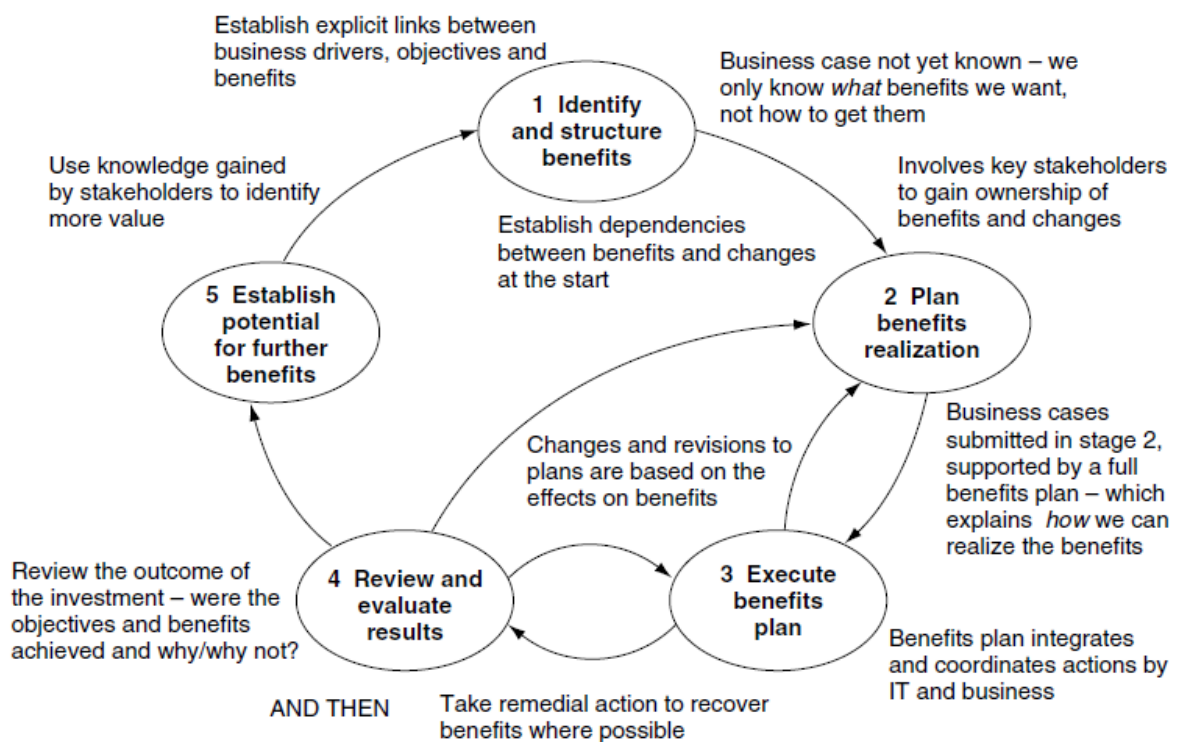


Figure 3.2: Key areas of difference in the benefits management approach, from Ward & Daniel [1]

4

Case Study Design & Research Question

Ideally DT projects as a core part of organizations strategy investments would carry a near-perfect success rate. Yet their success rate is extremely low, this directly impacts economically the organization as it will make a dent in their ROI [17] [18].

KPMG [48] in 2005 conducted a study where the result from the surveyed organizations demonstrated that 98% of the cases in 12 months fail to achieve all the purposed benefits, this showcases a clear daunting scenario as their main goal is to maximise their ROI still not being close to it.

This paper aims to tackle this enduring problem by aiming to identify using BM what steps need to be done to achieve a higher percentage of success in DT projects.

In order to do so a question arises:

- Why was Key'n Go a successful digital transformation solution?

A plan in order to perform the CS is needed, the goals must be defined and according to Robson [38] it must have at least the following parts.

(a) An Objective; (b) The Case itself; (c) Background Theory; (d) The Research Question; (e) Data collection methods; and (f) Strategy to select the data.

This case covers mainly the situation after Key'n Go was live and during the process of it, trying to understand the transformation of this DT solution and its impact on the InterRent results, which were interpreted from the analysis of the context.

The CS has the following characteristics:

- **Descriptive and exploratory** [38], it showcases the phenomena and tries to discover what does happen while seeking new understandings and generating new ideas for future research,
- **Interpretative** [49], the goal is to fully comprehend the phenomena using the project participant's (interviewees) point of view based of their context, alike exploratory and descriptive type [27],
- The data used for the study is in the **qualitative** format, this provides an improved perspective on the phenomenon when analysing it,
- Since the essential parameters of the study are able to change during the course of the study, the research design is considered as **flexible**,
- **Triangulation of the data** sources is made, multiple data sources were used such as document analysis and interviews,
- It has a **single unit of analysis** in the form of the DT solution and is a **holistic** CS, Type 1.

The interviews were done in an unstructured format with different members of the Key'n Go project. There were made two different types of interviews as can be seen in Appendix A. Questions were open, the true goal was to create a panopoly of observation from the interviewees.

All the interviews were planned in advance its execution. At the beginning of the interview, the researcher presented the objectives of the interview coupled with context and theoretical background of the work and how the data collected would be used later in the work, in order for the interviewees fully understand the reasoning.

At the end of each interview, the conclusions taken were summarized and reviewed by the researcher, so feedback could be given with the intent to avoid any misunderstandings.

Before the interviews were taken, the researcher reviewed company internal documents such as videos showcasing the project and financial reports [50] coupled with others found publicly online such as [51] [52] [53], helping to provide beforehand a better perspective of the company and a better baseline knowledge for the interviews.

All the interviewees were familiar and previously experienced the Key'n Go customer journey, being them the Operations Director, Product Owner and Project Director.

5

Data Collection

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Hans Åke Sand, Interrent's Chief Executive Officer (CEO) for 20 years in Sweden in 1993 [54] once said *"Over ten years ago, when this industry was starting to grow here, we realized that we should not just provide our customers with a car if they ask for one, which our competitors were doing, and still to some extent seem to be doing. Instead, we wanted to position ourselves as a provider of transportation services. We developed a service concept, according to which we provide immediately accessible transportation solutions to temporarily occurring transportation problems"*.

From the blooming days in the '80s until this day providing an exceptional experience to its customers remain true to InterRent's roots, even though due to pressure from the everlasting competition has led to a merge with Europcar in 1988.

Europcar is one of the main actual players in the car-rental industry, only in 2018 having a revenue of 2.929 billion euros [50] and being in over 140 countries, its **behemoth status can be a hurdle for innovation** has it comes with little to no flexibility for change in an agile way, all changes taken take way too much time to globally be implemented. As we pointed out before during this paper **innovation inertia can be the biggest threat to any organization** and one of the common mistakes that peril the greatest organizations in the market.

InterRent as a mid-tier at the Europcar's group, being rather smaller yields much-desired advantages Europcar lacks, providing the necessary agility and flexibility to implement in a swiftly fashion innovative solutions. Making InterRent the best pilot for testing innovative solutions that if proven to be successful, will be implemented in Europcar, consequently, the creation of Key'n Go.

5.1 Key'n Go

The average consumer chooses a service based on what is grasped as the option with better *"value for money"* as it is, in fact, the most logical approach in the options presented to them. Brokers are the ones responsible for the suggestions presented, turning them into one of the most important bridges between a brand and the consumer.

Brokers consider their options by comparing the brand's Net Promoter Score (NPS) amongst its competition if a brand has higher NPS it goes up in the suggestion if it has lower NPS it goes lower or does not even show as an option.

As it seems one of the most important factors to get exposure for consumers is the NPS and NPS mainly comes from differentiation factors against the competition. Following differentiation strategy definition that goes by *"the strategy that aims to distinguish a product or service, from other similar products, offered by the competitors in the market."* [55], a common mistake is to think that if you lower your prices, new customers will be drawn into making a purchase, yet if everyone lowers their prices a stalemate is in hands and it will only result in lower profit margins for every brand.

Allen & Helms [56], suggested that “*For the differentiation strategy, innovation seems to be the most critical factor for success*” nothing spells innovation like Key’n Go.

This DTS is essentially a hassle-free/seamless experience, has its goals set on stopping the main pain points that were discovered on the Customer Journey (CJ) which were negatively impacting the NPS score, the pain points used to be:

- The **extremely long queue** in order to be served by the car-rental desk,
- Being annoyed by an **employee trying to sell extras** and repeating the process regarding insurance again,
- The **need to check for inventory damage before** being able to pick the car,
- At the **checkout** when returning the car, **having to check for damaged inventory and waiting more time** before delivering the vehicle.

The following CJ and its identified pain points can be consulted in the Business Process Model and Notation (BPMN)’s in B.

Key’n Go surpasses the identified pain points by getting rid of excessive queue times utilizing kiosks which are assisted with a ground-hostess, making it possible to deliver the car in a shifty minute while also as a sweetener giving the customer the power to choose a car he wishes from the fleet accessible.

Considering the last-mentioned solution, Key’n Go bundles all the extras this protects the customer so has to not be pressured in acquiring further extras by an employee and as the customer did already pay for a premium, nothing could be easier for the customer as dropping off the vehicle, just delivers the keys in the concerted place and go his way.

During all this process the customer is impacted by the **Wow-factor**, which in marketing means that the customer “*relates to exceptional customer service in which an employee gives the customer more than he expected or something he did not expect at all*”, as it overtakes the customer’s expectation for the service, the customer feels very happy and turns into an ambassador for the brand, publicizing the service via word-of-mouth, increasing the NPS, resulting in a positive cycle that boosts sales.

A standard NPS level in the car-rental Industry, for Premium Companies is 52 – Key’n Go, albeit being a Mid-Tier brand, not a premium, reaches an average 54 with peaks over 60 during high season (comparison effect).

5.2 Net Promoter Score

Organizations can only prosper and achieve success in this competition fueled world if they keep on growing. Those who do not, perish in oblivion.

Customers are the core of any business, without them, there would be no business. The path into flourishing as a successful company does not depend only on attracting new customers but holding their already acquired customers, nourish them into spending more and getting them to recommend the product or service [57].

Since it **can cost five times more to attract a new customer than retain an already acquired one**, Reichheld mentions if customer retention rates are increased by 5% profits may increase between 25% to 95%, why you may ask? Customers that return tend to purchase more in the long run from the company [58].

Taking those numbers into consideration is ludicrous to not focus mainly on retaining customers and their apparent loyalty with the company.

In 2003 Fred Reichheld an already acclaimed loyalty consultant, which defines loyalty as *“Loyalty is the willingness of someone – a customer, an employee, a friend – to make an investment or personal sacrifice to strengthen a relationship.”*, introduced to the world his new loyalty metric, NPS.

Comparing the NPS with similar survey-based questions until then practised on customers, Reichheld says *“is the best predictor of growth”* [59] and that it is *“the one number you need to grow”* [60].

5.2.1 How does NPS work

NPS is a word of mouth metric, where according to Reichheld the survey questions where the strongest correlation between repeated purchases and referrals was *“How likely is it that you would recommend [company X] to a friend or colleague?”* [60].

The answer given by the customers is evaluated on a scale from zero to ten, where zero means *“not at all likely”*, five means that the customer is neutral and ten means *“extremely likely”*.

Reichheld then proposed the identification in three sections of customer referral and repurchase behaviour, as seen below:

- **Detractors:** Customers that mention their life got worst after purchasing the product/service. Criticise the company in public and would never make business with the company again unless in extreme situations,
- **Passive:** Customers that buy services or products based on necessity. They are not loyal nor hyped about the company,
- **Promoters:** Customers that mention their life got better after purchasing the product/service. They became loyal to the brand, give feedback and are very supportive.

NPS is then calculated by subtracting the percentage of detractors found from the percentage of promoters, ignoring the passive, as shown in Figure 5.1:

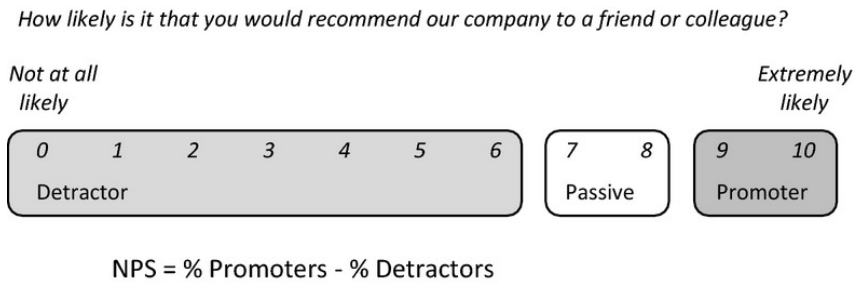


Figure 5.1: Net Promoter Score, figure from Krol et al. [2]

You are left now with a number, NPS is possible to classify into 4 sections that go from a -100 to 100 scale, the section where the company is when calculating the NPS, reflects how well she is according to customer satisfaction:

- **Critical zone:** From -100 to 0, companies here own more detractors than promoters. NPS will gradually fall over time. If the company does not take action to enhance user experience in a continuous form, customers will stop doing business with them,
- **Improvement zone:** From 0 to 50, the detractors and promoters percentage are similar, needs to improve as it is still easy to increase the NPS in this zone,
- **Quality zone:** From 50 to 75, companies demonstrate already they are focused on offering a positive experience to its customers, from this zone, is hard to increase the NPS since it is an already high value,
- **Excellence zone:** From 75 to 100, companies in this zone are the hallmarks of excellence in the market, the goal is to keep on improving and maintaining their high NPS overtime.

We can conclude that NPS if we take into account all other metrics for customer satisfaction evaluation has the key benefits of ease of use, simplicity, very agile feedback and gives the possibility of benchmarking your company success versus your competition, although the NPS system is not specific enough since it does not identify the specific reasons why the customers can be detractors, it should be complimented with customer satisfaction surveys and should be followed up with a customer experience plan to fix possible customer dissatisfaction factors, nonetheless it is the industry's standard to measure loyalty to the brand.

5.3 Trail Blazer Examples

Two car-rental brands come to mind with alike characteristics as finding digital ways to differentiate themselves from the competition, Car2Go and Iberia.

Gerpott & May [61] while reaching for the goal of evaluating the quality of their Internet of Things (IoT) increased offerings in comparison with their current portfolio, showcasing examples on how IoT components can aid in accomplishing business development objectives.

Taking this context into consideration, the example of Car2Go is shown. Being Daimler subsidiary, **Car2Go** is a car-rental service with a pay-per-use hourly fee, by coupling its smartphone app and the fleet of connected cars linked to the company's schedule platform. The customer chooses to pick-up at short number of outlets available and delivers the vehicle at an agreed location. Transaction costs are decreased with this process restructuring, even though the start (reservation placement) and the end of the process (picking up the vehicle) remain the same as a "traditional" car-rental service, by rearranging the steps in between they find their differentiator factor.

The latter, **Iberia** introduced in 2012 [62] their "virtual travel agents" as their attempt to reduce the waiting times at check-in. Audiovisual projections at newly introduced check-in kiosks would pass on the necessary information for the customer resulting in cost reduction and faster times in the process of the check-in.

6

Data Analysis & Reporting

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6.1 Benefits Management Process

Following Ward & Daniel [3] literature, the BM process is composed by five different stages as mentioned previously, the first three stages aim to identify and structure, plan and execute the benefits, the last two stages are focus on reviewing what was done and evaluate the results in other to obtain identify from lessons learnt potential future benefits.

6.1.1 Identify & Structure the Benefits

The first step in BM is to identify and structure the potential benefits within your programme/project. Where the difference between a programme and a project according to Ward et al. [1] following the Office of Government Commerce (OGC) guidelines *Managing Successful Programmes* [48], defines a project as “a particular way of managing activities to deliver specific outputs over a specified period and within cost, quality and resource constraints” and a programme as “a portfolio of projects that are coordinated and managed as a unit such that they achieve outcomes and realise benefits”.

6.1.2 Key'n Go Drivers

In order to do so, it is mandatory firstly to identify the business drivers from the organization and their investment objectives.

A business driver is what the management understands as the core for the business, bounded on a time-frame where transformation in the business needs to happen. Drivers can be internal or external based on the fact, if they come from internal factors such as improve a process performance or external factors such as achieve higher customer satisfaction.

Having the drivers, we can define the investment objectives. The following tables demonstrate the the respective business drivers and investments and the linkage between them.

Table 6.1: Drivers of Key'n Go

Investment Drivers	Type
Need for improved customer retention rate and achieve a higher market share in the mid-tier segment	External
Find differentiation factors against the competition	External
Increase process efficiency and speed-up business processes	Internal

- **Customer retention rate is key** on any business and InterRent had a subpar performance on this stage culminating into a negative NPS, highly impacting the number of sales. Since the mid-tier market segment is unclear and made of perceived new brands, it generated the need to find a way to get the name recognized and increase the market share of this segment.

- **Car-rental became a commodity**, the service is widely available, profit margins shrink and the real importance factors such as brand name perish, leaving only price as the main factor, thus the urgency to find a way to differentiate from the competition as the key to success, by reverting the negative cycle that all brands suffer where their only way of “differentiating” is by lowering their prices and thus their profit margins.
- InterRent smartly identified their business had flaws, their NPS was negative and they had to understand the root of the problem. While doing so, they managed to pinpoint on their CJ **four major pain points** the customer faced while renting a car by using their service, those pain points can be found on Chapter 5, elimination of the latter was of the uttermost urgency in order to improve their NPS.

6.1.3 Key’n Go Investment Objectives

From the business drivers previously identified, the next step should be to define the investment objectives derived from them, these objectives directly reflect the end goal of the project.

Table 6.2: Investment Objectives of Key’n Go

Investment Objectives	Code
Improve the company’s image through change on the customer’s mindset	O1
Define the product and its price	O2
Release the project in a timely manner	O3
Increase the business volume	O4

- **O1:** The first objective of this DTS was to improve the company’s image by changing the customer’s mindset on how they perceived the InterRent brand, by **offering a service that would cause them a Wow-factor** thus boosting the NPS level, snowballing positively on the volume of sales.
- **O2:** In the attempt of leaving the low-tier market sector due to the harsh reality of very low profit margins practice, focusing on rebranding themselves in the mid-tier sector by **introducing different forms of innovation** on their services.
- **O3:** As in any industry the **first mover advantage** is one of the main success factors of a service, as the service with it gets the competitive advantage by being the first on the market. Generally enables the company to set up a solid customer loyalty and brand recognition before any competitor tries their luck, this also pairs with the previous objective as it lets the company set the market

price for the new service and culminates with additional time to perfect the service, staying ahead of the curve.

- **O4:** As with any innovation solution, Key'n Go being a DTS that **inverted orthodoxies on Inter-Rent's business model**, this objective is a direct consequence of the necessity of diversification on their now new business model.

All the investment objectives should at least be linked to one business driver, this connection makes it possible to demonstrate how the investment directly impacts the business strategy.

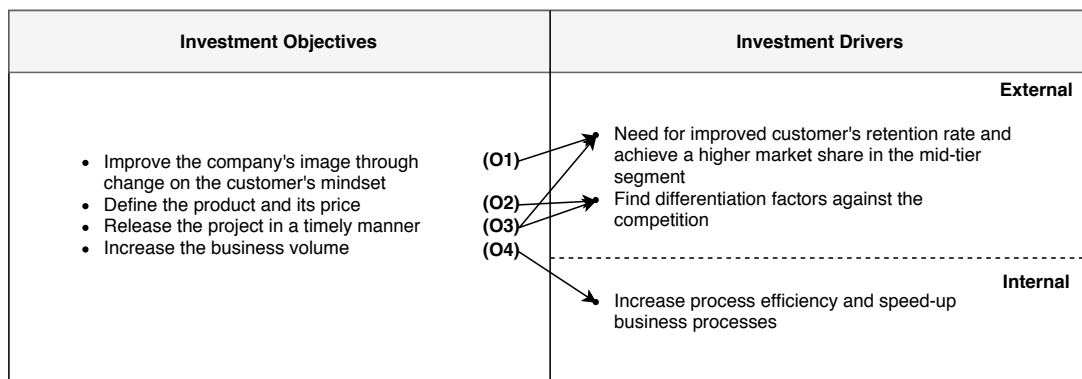


Figure 6.1: Drivers and investment objectives linkage

After defining the required investment objectives and answering the following questions suggested by Ward & Daniel [3] as can be seen in Figure 6.2, in order to proceed with the identification of the tangible benefits of Key'n Go.

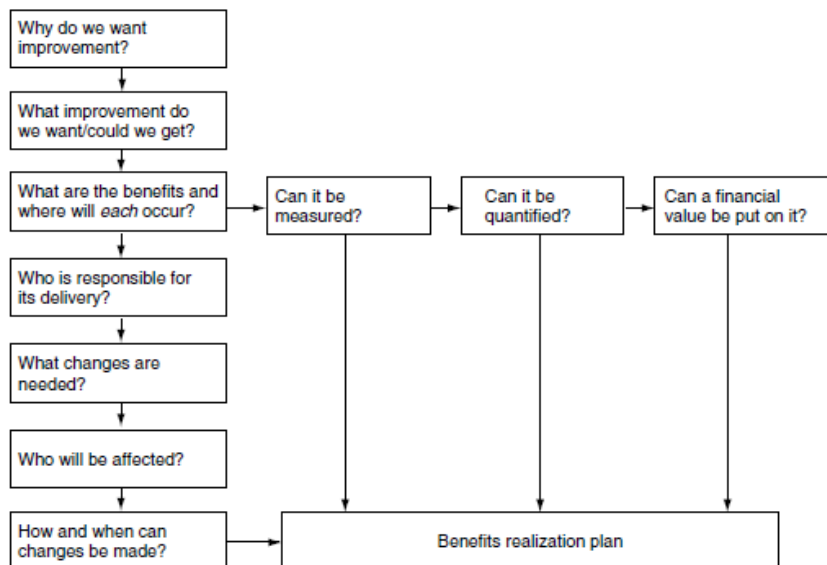


Figure 6.2: Essential benefits plan questions to be answered, from Ward & Daniel [3]

6.1.4 Key'n Go Benefits

Having the definition of the investment objectives done it is now possible to define which benefits arise from them while executing the investment plan, every benefit should consider a stakeholder as an owner on the project.

Table 6.3: Identification and structure of the benefits from Key'n Go

Benefit	Code	Type	Metric	Owner
Increase customer's satisfaction level	B1	Quantifiable	NPS	Customer Service Department
Increase the volume of sales and their respective margins by increasing the basket value	B2	Financial	RPD, Top-Line	Commercial Department
Achieve higher performance on the processes	B3	Observable	Avg time fulfilling customer's order	Operations Department
Conquer market leaders	B4	Measurable	Market Share	Sales Department

- **B1:** Increasing the customer's satisfaction level is a huge benefit for the company, like any business an **important part is the word-of-mouth factor and a happy customer is the best marketing campaign**. The happier they feel, the more they share amongst their relatives and generate a positive snowball effect of publicity, boosting sales.
- **B2:** The main goal of any business, InterRent included is to **increase their profit margins**, this benefit directly relates to that. Increasing the volume of sales and their margins due to the increase of the basket value, while reducing costs doing so, is the perfect scenario for any company investment.
- **B3: Achieving higher performance** on the processes is very important, since this DTS simplifies and speeds-up the process of the car-rental booking, culminating in more sales and thus more profit, while also by **simplifying everything** on the customer's end by providing a better customer experience, boosting their level of happiness while purchasing the service.
- **B4:** This is an essential benefit, as conquering the market leaders by showcasing a clear case of **competitive advantage via innovation**, fetching a bigger slice of the car-rental market mid-tier segment.

6.1.5 Key'n Go Business Changes

The business changes are made of new ways of working that are necessary in order to make sure the previously defined benefits are realized.

Table 6.4: Business Changes of Key'n Go

Business Changes	Code	Owner
Create new points of sale	BC1	Product Owner, Marketing Department
Bundle creation	BC2	Product Owner
Fight the adversity to change	BC3	Operations Department
Define a Product Director	BC4	Board

- **BC1:** One key aspect of this DTS is the many ways it **differentiates from the competition using innovation**, being one of them the creation of new points of sale, on this DT project it was the Kiosks. **Kiosks can be seen as very simple and practical innovation** since they do not require the human interaction obligation, similar to a vending machine or an Automated Teller Machine (ATM), turning a typical pain point of the car-rental experience, the waiting time, into a very fast experience via automation of the process.
- **BC2:** Key'n Go provided the brand with **another differentiation factor**, the **creation of a bundle**. The creation of a bundle with a fixed higher price but that includes already some extras such as insurance has a big advantage has it provides a way to deny another identified pain point, the need to deal with an employee trying to sell extras. This way the customer does not need to stress about the human interaction nor does it need to worry with extra expenses that could show up at the end of the purchase. The **customer has a more positive experience** while also increasing the basket value of the product.
- **BC3:** A huge business change that had to occur was the **need to fight the adversity of change by the sales agents**. This new Key'n Go system eliminated the possibility of receiving commissions when selling extras, a typical practice in this area of work. The sudden lack of extra money from the sales agent raised some adversity to the new system, even though **in the short term, this DTS increased the number of jobs** due to the increased volume of sales.
- **BC4:** The biggest business change and the most important was to **find the right project director**. Key'n Go success does not shy away from this. Having a powerhouse of a product director is essential as it manages the bridges between the different teams involved in the project. It has the power to rally and motivate everyone on the project to give their best, while also due to massive experience and knowledge within the organization, hassle the bureaucratic needs with the higher ranks in the organization, all culminating in a successful DT project.

6.1.6 Key'n Go Enabling Changes

Enabling changes are the critical factors that will affect the success of the project, the actions that must be taken in order to execute the business changes to be able to achieve the defined benefits.

Table 6.5: Enabling Changes of Key'n Go

Enabling Changes	Code	Owner
Training the customer in how to use the new solution	EC1	Operations Department
Ground hostesses	EC2	Operations Department
Educate staff on how the new solution works	EC3	Operations Department
Define adequate business rules	EC4	commercial Department, Product Owner
Collect data to further improve the process	EC5	Product Owner
Respect the project budget	EC6	Product Owner
Integrate the solution in the current system	EC7	Information Systems

- **EC1:** Since this DTS is, in fact, an innovation, **with any innovation comes a learning curve**, which shall take its time for the customer to get used to. Multiple-ways of speeding-up the learning curve can be found such as video tutorials, or ground hostesses to aid in the process near the kiosk.
- **EC2: Ground hostesses** are one essential part of the customer experience, they **provide the “human touch”** of the process. Even though the process is extremely simple, some users may still prefer the feeling of being guided by a human employee, feeling a more **“premium” experience**. The ground hostesses provide just that, they also contribute highly for the training of the customer, since they are there to solve any issues the customer may find during the process. They are very important, there is a reason for one of the company's in chapter ??, Iberia to missed the mark some years ago, as they substituted every employee on the ground for automated robots, the learning curve showed to be very steep and the lack of “human touch” left the customer's ultimately not wanting their solution.
- **EC3:** One of the **first steps in order to fight adversity is knowledge**, and this is the starting point to spread knowledge about the new technology. The staff must understand fully how the new system works in order to transfer that knowledge for the customer in need.
- **EC4:** Define adequate business rules is essential, **with innovation comes new means of exploitation**. There is an urgency to define new rules to go accordingly with the new needs, adapting the product to the rent-a-car reality.

- **EC5:** Collect data to further improve the process is very important because there is a need to **followup the defined Key Performance Indicators (KPI)**, as this is the main path to understand if the solution is on the right track or not.
- **EC6:** Respecting the project budget is important as a good practice of management.
- **EC7: “Keep it simple”.** This motto can be applied to the Key’n Go experience as it does with the system behind it, this way it cuts the costs, training of the staff and usability as it is integrated into an already known platform by the customer such as the InterRent website.

6.1.7 Key’n Go IT/IS Enablers

The introduction of the IS/IT enablers lets the company get the differentiation factor against the competition as also a new digital channel.

Table 6.6: IT/IS Enablers of Key’n Go

IS/IT Enablers	Code	Owner
InterRent App	IE1	E-Commerce
Solution features implementation	IE2	Information Systems

- **IE1:** The InterRent App has launched already after the launch of the Key’n Go project, as an extra digital channel for sales.
- **IE2:** From being able to choose any vehicle from the available fleet to the possibility of a contactless and hassle-free solution by bypassing the queue, the present features on Key’n Go and the future ones that will come are a very important part on the user experience.

6.2 Benefits Dependency Network

A BDN *“provides the framework for explicitly linking the overall investment objectives and required benefits with the business changes necessary to deliver those benefits and the essential IT capabilities that enable these changes”* according to Peppard et al. [63]. Being a problem-based type of investment or an *“ends-driven”* [3], its main goal is to *“identify the most cost-effective and lowest risk combination of IT and business changes that will achieve the required improvements, most of which can be expressed as explicit, quantified benefits”* [3]. The process of building the BDN can be split into three major phases.

Firstly, we identified the investment objectives and the benefits, this provided us with the “ends”. Then, we follow-up with the changes needed in the business to achieve the potential previously identified benefits, also known as the “ways”, this was possible by the identification of the customer’s pain points, which were pinpointed by multiple international focus groups that were made in order to recreate the most truthful CJ.

We end the second phase by choosing the optimal combination between the business changes and performance from Key’n Go which are the “means”, that are the most consistent way on achieving the potential benefits. In general, **Key’n Go released the customer’s from the identified pain points** and launched InterRent to stardom.

The Key’n Go BDN can be seen in Figure 6.3 and Key’n Go BDN with the respective owners can be seen in Figure 6.4. We would like to emphasize the fact the Key’n Go solution offers a hostess to Meet&Greet and help customers across the kiosk operation, in case there are any doubts left – the “human touch”.

This allowed an acceleration on the customer’s learning curve and in consequence, an over-achievement in the NPS levels with all the positive consequences to the business. We conclude the third phase by identifying the business changes needed for Key’n Go benefits to be achieved.

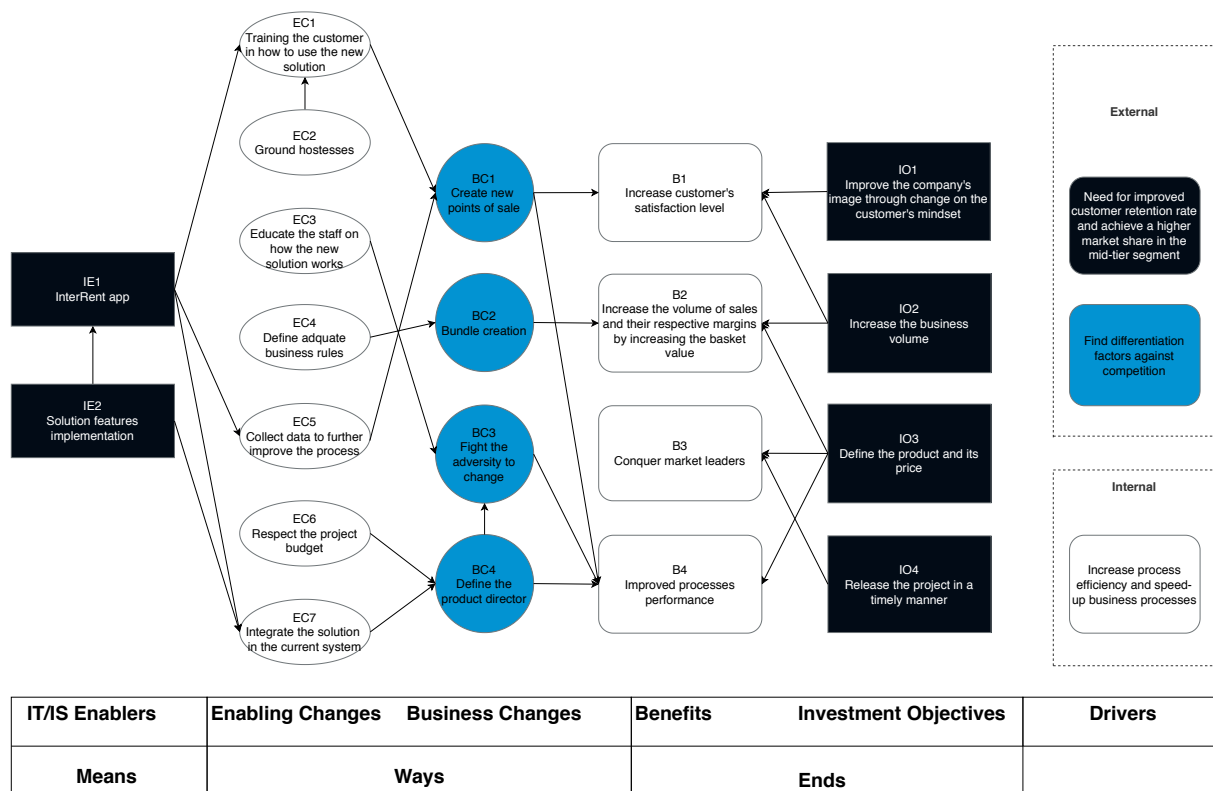


Figure 6.3: Key'n Go BDN

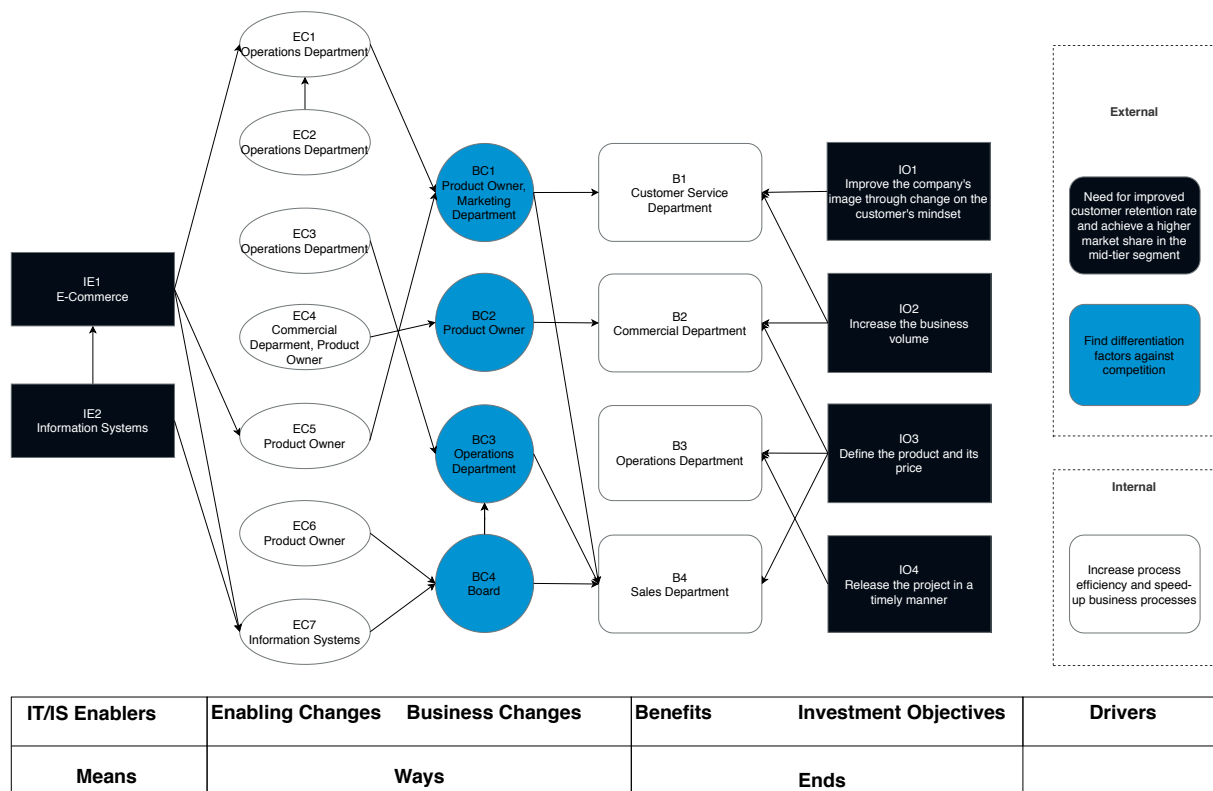


Figure 6.4: Key'n Go Owners BDN

6.3 Reviewing & Evaluating the Results

Taking into consideration the data collected from the different interviews we can achieve the following conclusions in this chapter, starting with the positive aspects of the Key'n Go project.

Firstly, overall Key'n Go gets its **success mainly due to first mover advantage**, it was the first company to deploy such DTS on the market and in a massive fashion, they hold the rights of the design and the specific Software (SW) developed, Key'n Go is even protected by utility model and European design protection. Having **every single department in the company working as a team**, towards the same goal was essential. The customer's understood that they could get from this service their car in few minutes compared to other solutions available in the market, even if they were new to the process, it would take a fraction of the time compared to the other solutions, the elimination of the pain points identified proves its success and everything reflects in the NPS score.

The analysis will be more specific in different aspects of the Key'n Go project in order to evaluate the different contributors to its success.

6.3.1 What went well

Starting with **the company** itself, different work-streams were set and the **different departments as a unit worked together with a clear objective**. The **Key stakeholders were involved from the start**, their guidance and support proved to be essential for every step to run smoothly, another key aspect was the fact they run **permanent reviews on deliverables and the goals** that were achieved.

In terms of **teamwork & communication**, as previously said, there were distinct work-streams and everyone worked together with clear objectives, including external communication other projects and suppliers, also the key stakeholders showing interest and always being accessible for any doubt or decisions to be taken. The **communication was continuously shared with the different teams involved** and colleagues in the offices, that worked on the Key'n Go service, there were constant update when new releases happened, improvements, changes etc.

On the Key'n Go **project start-up**, the **objectives and the benefits were set for the first pilot** of Key'n Go and for the following release, the objectives were implemented in a continuous improvement mode.

As any project **planning & tracking** is essential, at the beginning of the project it was established a project manager, who then followed the best practices of Project Management (PM) such as Project Management Professional (PMP), Projects In Controlled Environments (PRINCE2) and Agile methodology, including activities of the whole areas. Any risk change or risk that was identified, was very quickly informed to the sponsor in order to be accepted or not, prior to going forward with the project. Thanks to **recurrent internal project meetings** (follow-ups), dependencies were found and rightly dealt with.

In the **development process**, thanks to proper management, **all the steps in the development process were followed accordingly**, there was **multiple points of control** (milestones) in order to check the results, at the end of the year, the objectives early defined were reviewed and controlled to verify if they were still **following the Specific, Measurable, Achievable, Relevant, Time bounded (SMART) ideology** and the benefits were very clear, everything had a process behind in order to guarantee that the different teams were getting closer to each goal at every step taken in the most efficiently way possible.

In the **quality process** phase, the manufacturing of the machines (kiosk) was controlled in terms of the quality process, the **SW releases** and IT developments were in a systematical fashion **tested prior to production** by the execution of multiple test plans.

The **implementation**, the **manufacturing of the kiosks and the SW was clear in all the different stages of the process**, everything went smoothly from the infrastructure and IT side. The external support was a big key to success, especially on the SW development, but overall all the **external support of different certified companies did great**.

Documentation & training, overall worked perfectly, the documents were produced, sent and up-

dated as needed, all done by the training team. The **training team always managed to solve the problems** that were faced in a swift fashion.

Finally the most important part, **the people**. **Team spirit was rated a solid 10**, a true key for success as DT is not all about the technology but the people around it, the true challenge to be faced is always the company culture, how to modify the people's mindsets and the way people think and do things coupled with having the right knowledge and skills is one short step to achieve success.

6.3.2 What could have been done better

Of course, in reality, there is always thankfully in inferior number, **situations where it could have been done better** and in order to learn lessons as in the final step of the BM approach, following the same order as the positive aspects, we have the following situations.

In **the company**, some roles and **main tasks required some continuity but sometimes it has proven to be difficult to guarantee it**, for reasons non-related to the project. **Focusing on the sales agents**, this new DTS brought an evident issue to them, the end of commissions, this showed to be a **difficult step to overtake on changing the mindset** of the sales agents as they lost an extra personal revenue. **Once the project was in "Business as Usual" mode** in other words after the pilots were done and the stabilization period, the **participation was reduced and the objectives were not always the same for the different departments** involved, this can negatively impact the pace of the work to be done and the final results.

In terms of **teamwork & communication, different channels were used and even sometimes information was shared informally**, for instance, a unique channel could have been used to share the information, as it **resulted in information not reaching everyone necessary**, the problems not being swiftly dealt with and resulting in a problem hoard.

In the **project start-up, there was no Business Case**, as a business case forecasts the costs, benefits and risks of the project, it is essential for the key decision-makers to decide what approaches to choose from or even if the project is worthwhile. Even though on a theoretical part is true, we must take into consideration the possible "paralysis by analysis" if doing so, since one of the main goals was to be the first on the market and in order to achieve this, everything that stalls the project release speed must be taken into consideration if it out-weights the benefit of an early release. The **terms of reference were modified a lot**, especially the language of sale. The terms are always being updated and there is a current need to find a place and own language in order to be clear and everyone from the sales agent to the customer to understand on their own.

During the **planning & tracking** of the project, **there were changes in requirements once the scope was set**, this negatively impacts the planning and the final results, the handover between different people due to some leaving the project, could have been more undoubtedly done.

The **development process** faced **bottle-necks** in some parts of the process all **due to lack of resources or priorities changing**, sometimes internal issues took way to much time to be solved.

The **quality process could have been more dependent on the company's staff**, it is better to count on internal resources as their knowledge remains inside of the company and in case of need, it is always faster to start new test plans and finish them instead of always relying on other sources, since time is of the essence.

The **implementation** faced some problems of communication, **some communication could have been handle better to update the news release in order to inform the company**, not always it was possible to get the ideal kiosk location as the airport could raise issues. During implementation, **some Hardware (HW) stock-outs did happen** (electronic components for example), this needs to be taken into account to avoid possible delays.

Documentation & training faced also communication problems, **there is a current need to find a proper way to communicate and keep updates as different methods and platforms can make it more difficult and less efficient**, the training is too much centralized even though the worked very well, since the training personnel was scarce, if one trainer is on vacation or has any problem, everything stops, **there is a need to have more trainers**.

6.3.3 Recommendations

Following the researchers, personal opinion coupled with the interviewees insight, the following recommendations are given in order to improve next future similar DTS projects, that face similar hurdles.

Facing **the company**, a kick-off project is always necessary in order to agree on the scope of the project and people from each department responsible for each task. It is positive to involve everyone necessary as the feel of participation as a team for a cause, is vastly superior as just solving the tasks needed, for example, a higher rank CEO pushing, can improve the dedication from everyone involved, aligning with the importance of the project. Since during the project, it felt difficult to guarantee some roles and new people continuously entering the project as other leave and one of the biggest problem was communication, finding ways to integrate the new people on the teams is essential.

In terms of **teamwork & communication**, there may be a need to carry out more frequent follow-up meetings in order to share the advances (and possible deviations) with the team. It is important to know what pain points might appear and to try to solve them together, avoiding them escalating out of control. Since communication faced some problems on to define who can do what or who can help who, an implementation of a more agile methodology such as Scrum, so everyone knows the issues and who is solving them, so it does not escalate and the inclusion of all the parties involved in the project is achieved with success.

On the **project start-up**, creating and establish the communication channels and frequency at the

project start-up phase. Who needs to be informed and how and when is essential. Also, defining thresholds by providing more power to individuals, so one can take decisions within that margin, without the current need to escalate to a superior, making the process run smoothly and faster by freeing the higher ranks for more important decisions.

During **planning & tracking**, a lot of changes were done once the scope was set, it is very important to stick to the requirements and do not change them constantly, this negatively impacts the work of the different teams (review with sponsors/ product owners help to avoid it).

On the **development process**, setting priorities on everyone involved seems essential, this way everyone knows the importance of their responsibility at each step and how they help to achieve the common goal/objective.

At the **quality process** scheduling, different Demos for main stakeholders is very important. This is the best way to validate the requirements and changes in production are easily avoided during this early phase.

On **implementation** it was noticed multiple HW stock-outs, it is recommended to ask in a preventative way the partners in order to provide different options to avoid these HW stock-outs or lack of key resources.

At **documentation & training** even though the training team did wonders, they were few and if for some reason there was a vacation schedule or another issue, everything stopped. The creation of a training and communication channel, that centralizes all the doubts and has all the answers in the same place is very important, this coupled with at least one person responsible in each country where InterRent will deploy this DTS will solve any problems for training. On the customer perspective, creating a more in-depth tutorials, such as videos or written guides, on the InterRent app and site, on how to use the DTS will greatly improve the customer training process and accelerating the learning curve, letting a smoother transition for future similar projects.

Lastly, **the people**, as noticed on this review, the people involved on the project are the true key of its success, finding ways to keep everyone motivated and focused on the big picture is what will turn any DT project on a successful DT project, because even though being the first opens a world of possibilities in front of you, and you can work in the fine tuning of your first prototype before the competition, the real heroes are still the people around it, thank your team, they are the true driver of success.

7

Conclusion

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7.1 Contributions

BM is a well structured methodology which provides a holistic overview of a project, it provides an easy identification and realization of the planned benefits, while making sure to identify the actions needed and decisions to be made in order to reach success.

BM is a complementary methodology, it was not created to substitute other PM methodologies. The main goal of this thesis was to understand, *why was Key'n Go a successful DTS*.

From a **customer perspective**, Key'n Go success derives from its outstanding quality. This is was the core of its success. InterRent's NPS reflects it, being the clear customer's "voice", InterRent wisely listened and understood its needs, obviated their pain points identified on the CJ, transforming the customer in (its best) brand ambassador, but above all, the customer returns. Quality as a source of differentiation, InterRent managed to transform a traditional business into a digital business, by prioritizing the customer needs and reacting accordingly.

From a **DT perspective**, the BM methodology allowed us to identify multiple success factors. The main success factor and the basis for its success was its **leadership**. Leadership is crucial when changes are needed, the correct mindset must come from the higher ranks. The Key'n Go project benefited from an outstanding leadership scenario, the key stakeholders were involved from the very start with a crystal clear purpose on the benefits this project would generate for InterRent. With the project director being able to rally every department to work as unit on the same goal coupled with its forward thinking, constantly pushing for new opportunities and being able to stay always interested and accessible for the project needs.

A powerful leadership is most effective if the **strategy is placed prior to the technology itself**. Key'n Go is based on the pain points and experience of its customers. InterRent by starting from the end and **re-imagining their CJ**, managed to invert orthodoxies and achieve the technological and cultural changes required to support their DT.

The third success factor is its **agility**. DT runs at a very fast pace, in order to achieve success being agile and flexible is a must. Key'n Go from its start to finish, always used an agile methodology, it made sure everyone was on track and informed on the current goals by making use of multiple points of control, it showed to be flexible to issues that appeared as the objectives and benefits were constantly reviewed in order to accomplish them in the most efficient way possible.

Lastly but not least, **the people**. As referenced before DT is not all about the technology but the people around it. People empowerment is key, team spirit was rated as high as it could be, everyone managed to work as a unit, the sense of ownership pushes even forward the results as engaging employees directly compliments the strong basis of success, the leadership.

On a more **technical perspective**, as referenced previously, Key'n Go gets its **success mainly due to first mover advantage**, InterRent was the first company to deploy such DTS on the market and in

a broader scale while also holding the rights of the design and the specific SW developed, providing enough barriers for in the short-term to fence from the everlasting competition.

7.2 Limitations

During the realization of this thesis, there was some limitations. To begin with, the interviewees were not familiarized with the theme of BM, although comprehensible it was necessary to provide explanations of the concepts and to resort to practical examples.

By being seeded abroad, some interviews had to be done using virtual means, which enhances the previous limitation.

The CS is based on a *à posteriori* perspective, not being able to provide a active benefit management with the purpose for them to be realized.

7.3 Future Work

For future work, even though investment objectives have been fully achieved, it does still leave space for future developments and improvements on the process. Following the referenced recommendations is interesting to discover if applied in future similar DT projects, success is again achieved. Also it is very interesting to follow-up on the new consumer behaviour caused by the present pandemic, and what is the impact of contactless services on the consumer choices.

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Interviews & Questionnaires

Most interviews were conducted in Portuguese and the questionnaires accordingly but in order to achieve a better document consistency, they were translated into English as seen below.

One interview had to be done in English, since Spanish was his mother tongue and it presented a language barrier for the researcher.

Before answering any question, the interviewees were given a formal definition of the concepts that would be asked in the next question, as they were not experts on the subject, in order to obtain the best quality answer possible.

The questions were elaborated by the author while taking into consideration Ward & Daniel [3] literature and different sources such as [64].

A.1 Key'n Go General Questionnaire

- **Identifying the motivation for the project:**

- What motivated Key'n Go?
- What are the objectives of the investment?

- **Identifying the benefits:**

- What benefits can be derived from the objectives previously identified?
 - i How can they be measured?
 - ii Who is responsible for each benefit?

- **Identifying the Business Changes:**

- Were new or redefined processes adopted?
- Did new roles & responsibilities emerge?
- Did it create new operation teams, groups or divisions?
- Did it involve new governance agreements?
- Was there a use of new metrics & measures?
- Did it create new reward schemes?
- Did it create new practices in how to manage & share the information internally?

- **Identifying the Enabling Changes:**

- Was there any training required on how to use the new system?
- Was there a need to educate how the new system worked & would improve the performance as a whole?

- Did it involve the creation of fresh measures & the required information necessary in order to use them?
- Was there any collection of data from the performance of this solution?
- Did you map the process as-is & proceeded to design new processes?
- Did you define new roles, job descriptions, responsibilities & organization structures?
- Did you create new business rules?
- Did you stop using any legacy systems?
- Was there a need to reallocate resources/budgets?

A.2 Post Project Review - Key'n Go

A questionnaire in order to evaluate the strengths & weaknesses found by the team involved in the project from the very start until the end of the project, so lessons can be learned & applied to future projects where similar practices may be applied.

The following questions are only to aid the memory of the interviewees and to help contextualize what was asked, they were required if possible to provide the top three things that went well & the top three things that could have been done better in each section of the project, since it was a more qualitative and flexible interview, they were also encouraged to provide recommendations based on their personal opinions, if the interviewee was not familiar or comfortable to answer a certain section of the questionnaire were told to answer "not applicable".

General Perspective

- In general, how was Key'n Go a successful project?
 - Rate from 1 to 10 where 1 is a giant flop & 10 an amazing success
- Please provide a brief description based on your opinion why Key'n Go was / was not a successful project

The Organization

- Take into consideration the following:
 - Do you feel the organisation structure overall did work?
 - Did the key areas of the organization had balanced resources?

- Do you feel there was a well balanced organisational structure & hierarchy of the project team (for example, as a separate unit & as part of the organisation as hole)?

Communication & Teamwork

- Take into consideration the following:
 - How was the internal communication (inside the Project team)?
 - How was the external communication (With suppliers, support groups, or other projects within the organisation)?
 - Do you feel the key decision makers were made accessible any time they were required?
 - Do you feel information was well exchanged with other different areas such as problem sharing?

Start of the Project

- Take into consideration the following:
 - In the startup, were the project terms of reference agreed & announced?
 - Were the objectives of the project defined & openly stated?
 - Did the key stakeholders take part on the startup process of the project?
 - Did the project team from the get-go identify the benefits of the project if successfully completed?

Project planning & tracking

- Take into consideration the following:
 - Did the scope of the project change?
 - * How were they communicated & controlled?
 - For the requirements, did any date or method be imposed on the team?
 - * Did it directly impact your work?
 - Were responsibilities well defined?
 - During the planning of the project, did the schedules take into consideration activities for all areas involved?
 - The key deliverables /milestones were well stated?
 - Was there a good control/oversight & tracking of the information?

- * How did you monitorize the information?
- * How was the information communicated?
- Was there a risk management process applied?
- Did you have any dependency with other projects/areas of the organisation?

Development Process

- Take into consideration the following:
 - How did the key stages that had to be followed such as definition, requirements, design, technical design & development, testing, implementation perform?
 - The methods used?
 - How defined were the objectives & the practicality of achieving these?
 - * Were the objectives following a S.M.A.R.T methodology?
 - Were there any benefits or problems faced by following this process?

Quality Process

- Take into consideration the following:
 - Were there any checks or controls used during requirements, design, coding, testing & implementation?
 - Did the test plans respect the testing requirements?

Project Implementation

- Take into consideration the following:
 - Did all participating parties take part in an implementation plan?
 - * Was it nonetheless, well communicated with those not involved?
 - Did the process of release to production clear?
 - Did you get external support on this phase?
 - * Was there any hurdle on their part?

Training & Documentation

- Take into consideration the following:
 - Were the training planned & dealt accordingly with the requirements?

- Did the documentation produced for the project, come in the correct format, content & right distribution at the right time?

Development & Support tools & Test Environments

- Take into consideration the following:
 - Stability of environment or problems encountered?
 - Feedback from support areas?
 - Support for any tools adequate?

People - Project teams

- Take into consideration the following:
 - Was the skill level of the project team correct?
 - Were the resources available when needed with the right skills?
 - Was there any support between the project different teams?
 - * How you rate the team spirit? Rate from 1 to 10 where 1 is a giant flop & 10 an amazing success
 - How was the management of the project & support areas?

B

Glossary

Benchmarking - Organization quality measurement, policies, product, programmes or strategies and its comparison with its peers.

Benefits Management - The process of organizing and managing such that the potential benefits arising from the use of IS/IT are actually realized. [3]

Benefit Owner - An individual or group who will gain advantage from a business benefit and who will work with the project team to ensure that benefit is realized. [3]

Business as Usual - Continue to run the business in its as-is state, no attempt to evaluate additional necessities, identify possible improvements or implement changes.

Business Benefit - An advantage on behalf of a particular stakeholder or group of stakeholders. [3]

Business Case - Makes it possible to analyse the economical and financial viability of an investment.

Business Changes - The new ways of working that are required to ensure that the desired benefits are realized. [3]

Business and Organizational Drivers - Views held by senior managers as to what is important to the business – in a given timescale – such that they feel changes must occur. [3]

Competitive Advantage - Conditions that allow a company to produce a good or service of equal value at a lower price or in a more desirable fashion. It allow the productive entity to generate more sales or superior margins compared to its market rivals. [65]

Enabling Changes - Changes that are prerequisites for achieving the business changes or that are essential to bring the system into effective operation within the organization. [3]

Financial Benefit - By applying a cost/price or other valid financial formula to a quantifiable benefit a financial value can be calculated. [3]

Investment Objectives - Organizational targets for achievement agreed for the investment in relation to the drivers. As a set they are essentially a description of what the situation should be on completion of the investment. [3]

IS/IT Enablers - The information systems and technology required to support the realization of the identified benefits and to allow the necessary changes to be undertaken. [3]

Intangible Benefits - those that can only be judged subjectively and tend to employ qualitative measures. [3]

Hardware - Machines, wires and other physical components of a computer or another type of electronic system.

Key Performance Indicator - Set of quantifiable measurements used to gauge a company's overall long-term performance. [65]

Measurable Benefit - This aspect of performance is currently being measured or an appropriate measure could be implemented. But it is currently not possible to estimate by how much performance will improve when the changes are completed. [3]

Milestone - A significant event or stage in the life, progress, development of a project.

Observable Benefit - By use of agreed criteria, specific individuals/groups will decide, based on their experience or judgement, to what extent the benefit has been realized. [3]

Quantifiable Benefit - Sufficient evidence exists to forecast how much improvement/benefit should result from the changes. [3]

Stakeholder - An individual or group of people who will benefit from the investment or are either directly involved in making or are affected by the changes needed to realize the benefits. [3]

Software - Set of instructions or programs instructing a computer to do specific tasks.

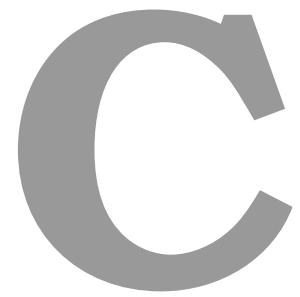
Tangible Benefits – those that can be measured by an objective, quantitative and often financial measure. [3]

Top-Line – The top line is a reference to gross figures reported by a company, such as sales or revenue. It is called the top line because it is displayed at the top of a company's income statement, and is reserved for the reporting of gross sales or revenue. A company that increases its revenue or sales is said to be generating top-line growth. [65]

Value – Value is the monetary, material, or assessed worth of an asset, good, or service.

Value for Money – The real value for the invested money.

Wow-Factor – A quality or feature of something that makes people feel great excitement or admiration.



Key'n Go Customer Journey

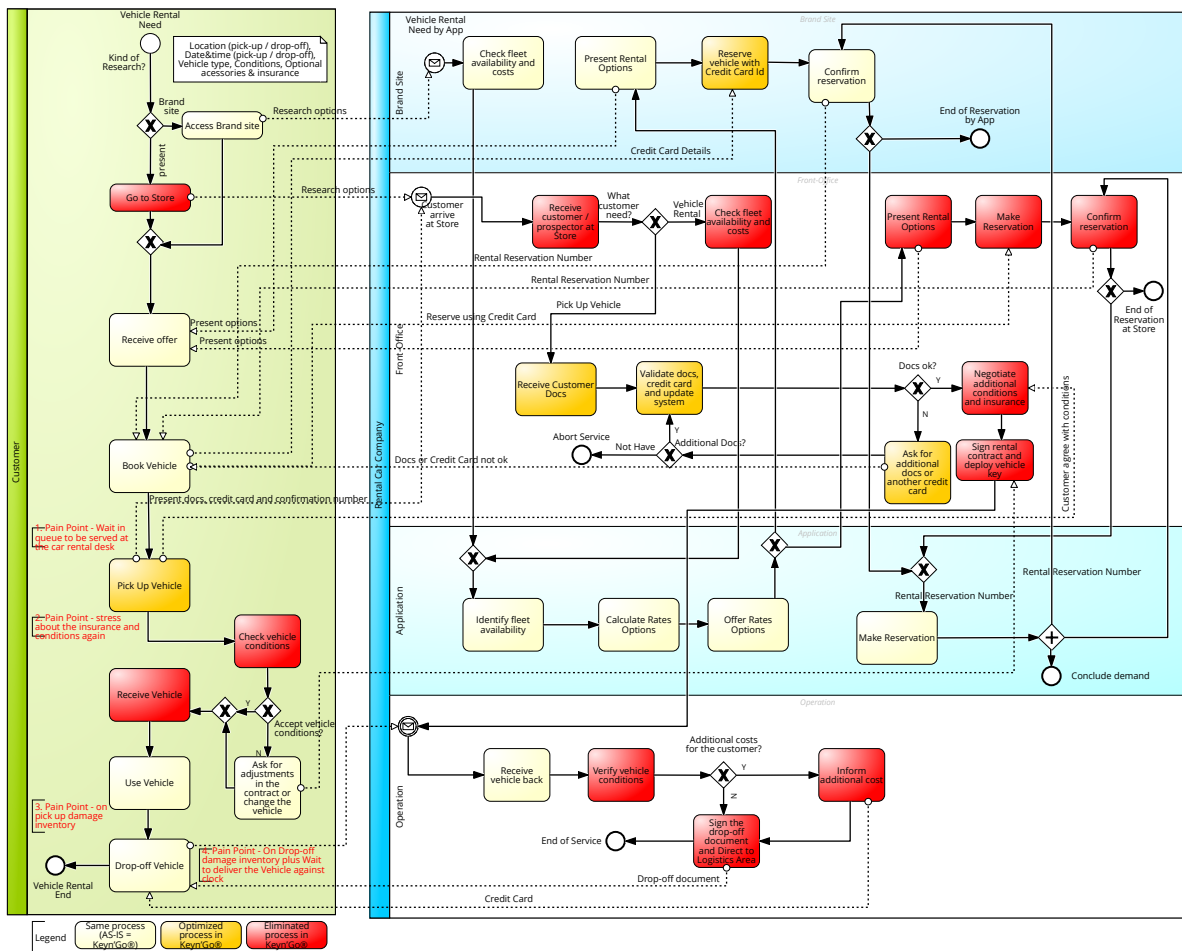


Figure C.1: Key'n Go As-Is process [4]

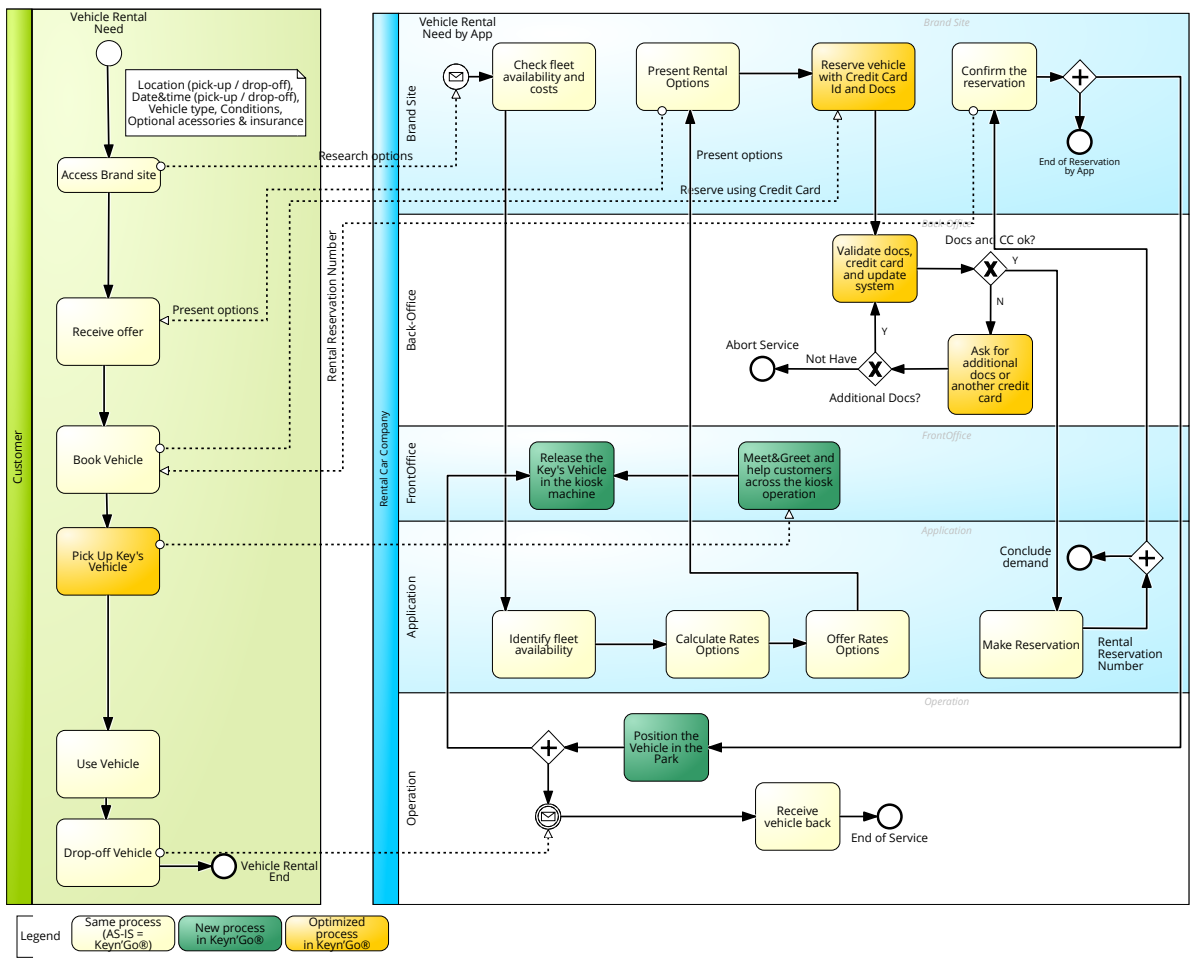


Figure C.2: Key'n Go To-Be process [4]