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Methodology proposal for budgeting process on manufacturing and logistics organisation

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Master in Applied Management

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Summary

Baseado numa análise da literatura mais relevante sobre o tema, nas soluções propostas por académicos ou nas implementadas por outras organizações, nos diferentes modelos de planeamento para melhor entender o processo de orçamentação, as dificuldades mais comuns e as soluções apresentadas pelos diferentes agentes. Dessa forma, este estudo explora os modelos “better budgeting” e “beyond budgeting”, assim como as ferramentas propostas por estes, nomeadamente, “Activity Based Busgeting”, “Zero-based budgeting”, “Rolling Budgeting” e “External Benchmarking”.

Tendo trabalhado na organização por mais de 5 anos em funções de gestão de departamento e tendo um conhecimento profundo do processo de orçamentação utilizado, o foco deste trabalho ficou no entendimento das dificuldades do processo de orçamentação, os métodos e ferramentas comprovados, verificar como estes se encaixam na organização e propô-los como solução.

Várias das dificuldades e problemas referenciados na literatura foram identificados no processo da organização e, seguindo o entendimento dos autores em como ultrapassá-los, foram propostas acções através de alterações comportamentais seguindo os princípios identificados nos métodos ou pelo uso das ferramentas disponíveis nos métodos mencionados.

Based on an analysis of the most relevant literature on the topic, and on the solutions proposed by academics or the ones other organisations are implementing, different planning models to better understand the budgeting process, the common difficulties encountered, and the solutions proposed by different agents. As such, this study explores the better budgeting and the beyond budgeting models, as well as the tools these models propose, namely, Activity Based Budgeting, Zero-based budgeting, Rolling Budgeting and External Benchmarking.

Having worked on the organisation for more than five years as manager and having a deep knowledge of the used budgeting process the focus was on understanding the difficulties on the budgeting process, the existing proved methods, and tools, and see how they fit on the organisation to propose them as solution.

Several of the difficulties and problems mentioned on the literature were identified on the organization’s process and following the author’s view on how to overcome them, actions were proposed though the change of behaviours following the method’s principles or by using the tools available on the mentioned methods.

Keywords: budget, kpi, performance, production, juice, methodology, better budgeting, beyond budgeting, ABB, Activity based Budgeting, Rolling Forecasts,

JEL Classification: L66, M10, M41

Contents

Introduction

The present study has the objective to analyse the budgeting process of an organisation, which acts on the juice manufacturing and logistics markets, evaluate the potential difficulties or gaps on the process and propose actions to improve it.

A Budget is a financial plan for a specified period of time expressed in quantitative terms.

To understand the budgeting process, which are the common difficulties and the solutions proposed by academics or the ones other organisations are implementing, through the available literature, different planning models were analysed.

The main planning methods are better budgeting and beyond budgeting, where the first advocates the improvement of the traditional budgeting process through the use of new methods such as Activity Based Budgeting, Zero-based budgeting, Rolling Budgeting, the second has a more disruptive view of the planning process and proposes a different leadership type by following 12 main principles, the abolishment of fixed measures and periods and the use of tools to guide the organisation on the path to achieve the relative targets such as External Benchmarking and Balanced Score Cards.

The organisation's budgeting process was described through interviews and analysis of the spreadsheets used on the process and the preparedness of the organisation to change the process was obtained through a survey.

Having identified some potential difficulties through the process organisation and system's limitation, a plan of actions was proposed which includes a better understanding of the cost structure, better communication and engaging of the organization's managers on the process and system's improvements to improve the accuracy of the data and facilitate both the data availability and process control.

1. Literature review

This literature review will evaluate relevant studies on budgeting with the goal to propose a budgeting process for the target group of companies.
There are currently two major trends which will be considered, Better Budgeting and Beyond Budgeting where on the prior, budgeting is considered still a valid process if new tools and techniques are applied (CIMA, 2004) whether on the latter, it is advised to abandon budgeting (Hope and Fraser, 2003).
In this chapter there will be a definition of budgeting, how it started, the criticism around the process and how the new trends propose to solve the problems encountered.
Some of the different academic approaches on the budgeting process will be analysed.

1.1 Budgeting Definition and History

The budgeting process was developed in the early 20th century by companies such as Du Pont de Nemours, General Motors in USA, Siemens in Germany, Saint Gobain and Electricite de France in France (Berland, 2000; Chandler,1998). Defined as "a commonsense standard used as a guide in the control of expenses" (Pendlebury, 1942), it was considered a success management concept during the first half of the 20th century.

Since the start of its use, it was considered a powerful tool, meaning much more than a planning and control system (Curry, 1941), since it must mirror the strategic goals of the organization and be defined in quantifiable and measurable values in order to ease the prioritization and coordination of complex competing decisions and transform into operational actions to achieve such goals (CIMA, 2006).

Additionally, it also became a tool to motivate the employees when its objectives are achieved or surpassed.

CIMA's Official Terminology of Management Accounting defines a budget as: "a quantitative statement for a defined period, which may include planned revenues, assets, liabilities and cash flows. A budget provides a focus for the organisation, aids the coordination of activities, and facilitates control. it provides an overall framework of control without which it would be impossible to manage. A budget can provide a road map detailing where the business is, where it wants to go and how it can get there" (CIMA, 2004, p.4).

1.2 Traditional budgeting criticism

In 2001 the Cranfield University and Accenture's Finance and Performance Management Service performed a worldwide review on the planning and budgeting process in which they focused on 15 companies in the USA and Europe which had went through adjustments on their budgeting process and, in addition, they reviewed over 100 academic and practitioner books on the subject. From this review, they compiled a list of the main criticism to traditional budgeting, that can be summarized in the following topics.

- *Budgets are time-consuming and costly to put together.*

Many authors mention that the budgeting is a highly time-consuming process, in some cases evaluating the time consumption in between 20% to 30% of the working time of an employee who is directly involved on the process, whilst in other cases relating the consumed time with the organization's complexity and revenue (Hope and Fraser, 2003; Cokins, 2008). Parmeter (2003) estimates an investment of 2500 person hours per US$100M of revenue. In any case it is widely considered that this process cost is too high and that no significant added value comes from it (Neely, Bourne and Adams, 2003; Hansen, 2011; Libby and Murray, 2010); Gary, 2003; Jensen 2003; Player, 2009; Radu, 2011; Parmeter, 2003; Centage/IOMA, 2007).

- *Budgets constrain responsiveness and flexibility and are often a barrier to change.*

"Budgets can stifle the entrepreneurial, risk-taking culture that, ultimately, can be responsible for value creation" (CIMA / ICAEW, 2004). Traditional budgets set the boundaries in which an organization should work and the possibilities to adjust these boundaries are very limited to none.

- *Budgets are rarely strategically focused and are often contradictory.*

Studies were performed to understand the link between the budgets and the company strategy. One of the most important was the study conducted by Parmeter (2003), in which 90% of the surveyed CFO's answered often that the link between the budgets and the company strategy does not exist. Hope and Fraser (2003) also performed a similar study and found that 66% of surveyed employees considered their budgets to have more influence on politics than on the company's strategy. The situation, however, seems to be improving as there is a study from Centage/ IOMA in 2007 having 75% of the participants to link their budget to the organization's strategy.

- *Budgets add little value, especially given the time required to prepare them.*

Considering all the identified problems on budgeting and its cost, some relevant value should come out of it, other than financial control.

- *Budgets concentrate on cost reduction and not on value creation.*

Budgets are perceived as decisions over scarce resources taken by who has more power on the organization (Jensen, 2003; Cokim, 2008). Additionally, the incentives are to outperform the budget instead of accurately work along its directives therefore being a barrier to improvement and success (Holly and Fraser, 2003; Libby and Murray 2007, Coulman and Law, 2003), there's the risk of, due to budgetary limits, not following important strategic projects.

- *Budgets strengthen vertical command and control.*

It allows the strengthen of vertical command and control where top management use the budget to exercise power over subordinates passing pressure to meet budget targets limiting the two-way communication (Hanninen, 2013; Goode and Malik, 2011). In 2007, the Centage/IOMA performed a study that shows some improvement as around 40% of surveyed companies already use a bottom-up approach for budgeting.

- *Budgets do not reflect the emerging network structures that organisations are adopting.*

With the current tendency towards decentralization the traditional budgeting limit the action of managers and their ability to make use of partnerships, alliances, and customer input to improve the company's performance (Neely, 2001; Wienhold, 2015)

- *Budgets encourage 'gaming' and perverse behaviours.*

In 2003 a published paper entitled "Paying people to lie", from M.C.Jensen , includes several examples on how budgetary targets are met through actions that not only don't add value but in some cases can actually be harmful to the organisation, such as backdating transactions, having non disclosed agreements with business partners (Jensen, 2003). Also related with this dysfunctional behaviour, there is the budgetary gaming, widely studied by several academics (e.g., Collingwood, 2001; Fisher, Maines, Peffer and Sprinkle, 2002; Locke and Latham, 2002). A very high increase on productivity is estimated in case these behaviours can be eliminated (Wienhold, 2015).

- *Budgets are developed and updated too infrequently, usually annually.*

Budgets are not frequently adjusted, if they are at all, to the changing economic environment, neither includes what-if scenarios (Hanninen, 2013; Hope and Fraser, 2003; Libby and Murray, 2010; Vaznoniene and Stončiuviene, 2012; Wienhold, 2015). This lack of dynamic on the budgeting process allows the forecasted numbers to become useless if there are significative changes on the economic environment

- *Budgets are based on unsupported assumptions and guesswork.*

Budgets are frequently based on forecasts which come from non-elaborate processes that do not include a recurrent validation of its assumptions (S. Player, 2009; Wienhold, 2015)

- *Budgets reinforce departmental barriers rather than encourage knowledge sharing.*

The creation of isolated compartments within companies is a subject commonly addressed as one of the problems that arise from budgeting, creating obstacles for cooperation and even causing conflicts within the companies on the pursuit of achieving their targets (Parmeter, 2003; Radu, 2011; Wienhold 2015)

- *Budgets make people feel undervalued.*

People may feel undervalued being the main reasons on the targets set at too high-performance level or too much information is required without considering if that information is useful or not, which can be perceived by the employee that his input has low quality or is work does not add value (Radu, 2011; Wienhold, 2015).

Due to all this criticism two alternative concepts were developed: Better Budgeting, following the lines of budgeting but looking to enhance the process and respond to the critics, and Beyond Budgeting, more disruptive which defends the abolition of budgets and budgeting. These two alternative concepts are explained in the next two subsections.

1.3 Better Budgeting

The Better Budgeting concept proposes a more agile budgeting process, with a focus on the competitors and on the organization's strategy, where the employees should be included as participants engaging them on the target definition, which will positively affect the way they perceive and execute the budget.

Responsibilities on the budgeting definition and execution should be clearly assigned across the organization to lower-level managers improving the accuracy of information (Carlson and Palaveev, 2004; Cokins, 2008; Radu 2011).

On the Cranfield University and Accenture's Finance and Performance Management Service review mentioned on chapter 1.1, and based on CIMA (2014) some principles were identified on the budgeting processes of the leading companies, namely:

- *Have an external focus*

What defines how well the company performed is how it compares with competitors not how it compares with an outdated budget. Additionally, the incentives are linked to external targets to eliminate some of the gaming that tamper with budget achievements.

- *Are explicitly focused on strategy*

The competitive advantage in the marketplace is key to achieve financial performance, even more important than financial management. The analysed leading companies additionally use strategy-related scorecards to keep track of how the company performs on non-financial targets.

- *Invest on IT systems which generate a common set of numbers throughout the company*

The usage of these systems allows a single view across the company and avoids the waste of time on multiple data consolidations.

- *Use explicit forecasting models, separate from their financial management systems*

Use of systems to generate accurate dynamic forecasts based on clear assumptions which can be easily updated when the need is triggered by environmental data change.

- *Put their efforts into managing future results, not explaining past performance*

Focus on generating accurate forecasts that enable decisions to take actions, many of them non-financial, to limit the potential variances, which highlights the limitation of traditional budgeting.

- *Have a high degree of trust on the managers*

Even than all the previous mentioned elements are present, the researchers point out that real change will be unachievable without a high degree of trust.

On the same survey, five principal approaches and techniques were identified (see Table I, Annex).

- The first two techniques on the table – activity-based budgeting and zero-based budgeting - are considered to help improving the focus and accuracy of budget outputs, but they require even more work than the traditional budgets, so the authors advice to use them on a one-off basis instead of on a regular basis.
- The next two – value-based management and profit planning – are referred to be more theoretical techniques and not so much used by organizations so there's not enough information to evaluate its impact on the budgeting process.
- The fifth technique – rolling budgets and forecasts – is consider having the most potential as a better regular budgeting approach as per the author many companies have successfully implemented such system.

According to the authors, none of the techniques provide a complete solution and at best they overcome specific problems on the traditional budgeting processes.

From these five techniques I will include below a more detailed description on the most implemented processes.

1.3.1 Activity Based Budgeting

The activity-based budgeting (ABB) was developed by Coopers and Lybrand Delloite. They've combined some proven management practices with the more recent activity-based cost (ABC). ABB aims for recurrent performance and cost improvement and can be applied in all industries and functions. ABB strengthens the link between planning and budgeting, allowing the planning to be detailed enough to be used as base to individual activities objectives within the business. A matrix with resources and major functions is usually created to relate the costs to the functions, where each resource must be justified in terms of supporting the activities and functions (Wilhelmi and Kleiner, 1995)

The most important benefits of ABB are the following (Wilhelmi and Kleiner, 1995):

- Report accurate costs which allows to identify the profit origin
- Identify the activities cost which allows to find more efficient or alternative ways to perform them
- Identify the future need for resources so that they can be acquired more efficiently
- The cost can be linked to the service level
- Internal activities can be evaluated on the relation between cost and value added to the organisation
- Enables benchmarking of costs and trend analysis
- Enables the operational control on the daily activities

It is important to keep in mind that the analysis doesn't have to be precise, and the goal is not to calculate accurately the activity costs but to create a tool to support informed decisions.
As such, examples of cost drivers for the manufacturing companies are: number of material movements, number of parts, number of suppliers, number of purchase orders, number of batches, number of engineering changes, and number of part numbers" (Wilhelmi and Kleiner, 1995, p.6).

The most important Outputs from ABB are the following (Cooper and Slagmulder, 2000):

- Products – selling prices (typically average selling prices)
- Customers – revenue they generate through their orders
- Distribution Channels – business that is transacted through them

The nonlinear proportional relation between the outputs and the resources makes it necessary to review the impact of any change of the expected outputs on the required resources to generate them. However, as mentioned by Hanninen (2013) and Pietrzak (2014), researchers doubt that the complexity of the process is manageable for smaller enterprises. According to Cokins (2008) and Pietrzak (2014), the in-depth organisational knowledge necessary to link activities to outputs is hard to obtain even for larger companies.

1.3.2 Zero Base budgeting

The "zero-based budgeting" was first used by Peter A. Phyrr in 1970 in the Harvard Business Review. The principle that rules ZBB is the manager's statement of what he believes can be achieved if certain resources are made available to him. A high commitment and creativity are required to elaborate such plans.
Winning the assignment of such resources will commit the manager to the results he stated he could achieve.

ZBB works well where traditional budgeting cannot, when fixed and variable costs can be clearly defined, thus it doesn't work well on manufacturing budgeting. The logic behind ZBB is to create decision packages, something like projects, that go through the multiple company levels bottom-up and are sorted by each level of management according to the level of priority they assign to it, knowing the priority the level below assigned to it.

The benefit of ZBB is that it doesn't require the decision maker to know the details of each decision package costs, he just needs to know that decision package 1 is better than decision package 2 considering its cost/benefit relationship.

On another hand it requires a huge amount of documentation and the accounting systems to be able to capture the data in a way that allows to monitor performance (Wilhelmi and Kleiner, 1995).

1.3.3 Rolling Budgets and Forecasts

Due to the constant changes on the business environment the usage of rolling forecast will serve as a compass pointing to the current financial path. The rolling budgeting estimates the financial outcome on current forecasts using current assumptions but differently from the traditional budgeting it allows the target to be adjusted on periodic reviews. It maintains the estimate into twelve to eighteen months in the future but is constantly reviewed using the most up to date information (Morlidge and Player 2010)

Bogsnes (2009), as cited by Zeller and Metzger (2013), based his work on the BBRT (Beyond Budgeting Round Table) and Hope and Fraser's publications demonstrating that the rolling forecast is a key tool for the management. He compiled some principles that should guide the rolling budgeting process which are listed below, divided into two types of principles:

Leadership Principles

- Customer - Focus everyone on improving customer outcomes, not on hierarchical relationships.
- Organization - Organize as a network of lean, accountable teams, not around centralized functions.
- Responsibility - Enable everyone to act and think like a leader, not merely follow the plan.
- Autonomy - Give teams the freedom and capability to act; do not micro-manage them.
- Values - Govern through a few clear values, goals, and boundaries, not detailed rules and budgets.

Transparency - Promote open information for self-management; do not restrict it hierarchically.

Process Principles

- Goals - Set relative goals for continuous improvement; do not negotiate fixed performance contracts.
- Rewards - Reward shared success based on relative performance, not on meeting fixed targets.
- Planning - Make planning a continuous and inclusive process, not a top-down annual event.

On this process, an initial budget should work as a base to start the company and guide during the first steps.

As soon as the business starts to actually work, relative targets must be set and the leadership should be based on the market dynamics (Morlidge and Player, 2010)

Zeller and Metzger (2013) provided additional guidelines to support the implementation of rolling forecasts, namely:

- Do not over-specify the accuracy of the forecasted values. Rather than spending too much time and resources marginally improving reliability, reasonable estimates should be used.
- Avoid excessive detail in the metrics. A few key variables should that allow management to take corrective action be chosen.

- Do not assume growth or positive results. Rolling forecasts should attempt to measure reality, not projected goals. Taking last year's numbers and increasing them by a certain percentage is not an application of a rolling forecast.
- Make sure that the rolling forecast process is an ongoing integrated activity, not a once-a-year event. It is appropriate, indeed recommended to use more than one time horizon for different metrics.
- The metrics developed should be actionable, i.e. they should point management in the direction of improving performance

An example of what can be a rolling forecast metrics and time frame can be found on Table II (see Annex).

In 2004, ICAEW and CIMA held an event to discuss the budgeting with presentations and discussion around better budgeting and beyond budgeting. From the debate, the overall conclusion was that budgeting is still a valid practice through the use of new tools and techniques. The budgeting process was described as more important than the numbers set as targets. The discussion of the targets requires a high level of inter-functional co-ordination, as referred by one of the participants, budgeting is about "looking into boxes you rarely open". Those new tools and techniques proposed by CIMA (2004) are listed and described in the next lines.

- *Forecasting*

It is considered by some as more important than the budgeting as the assumptions on which the budgeting is based on, changes too frequently that the forecasts are essential to keep the budgets valid. Additionally, the use of forecasting allows a more forward-looking and better linked strategic planning. The frequency the forecasts must be done depend on the environment in which the organization operates being more frequent on fast pacing environments.

- *Non-financial performance measures*

Even considering the importance of the non-financial, the link to the financial targets and strategy is hard to achieve, leading the strategic decisions to be based more on intuition than facts. These non-financial measures should be scrutinised before their acceptance as a cause-and-effect between the four quadrants of the scorecards – financial, operational, customer and learning.

- *Technology*

Technology is the base of the budgeting and forecasting evolution on the most recent years as it has changed the way data is collected, stored, and analysed. It can shorten a process that would take months to a few days making its result more up to date and accurate to the current variables. The usage of a unique set of data can help the alignment between the multiple views such as budgets, financial plans, operational plans, and strategic objectives as well as eliminating the 'silo' mentality where the usage of off-line spreadsheets ends up disconnected from reality.

Technology adds a risk though. It can generate a huge amount of data than can result into a reinforcement of the top-down management of even micro-management, it is necessary to keep the process simple and agile.

- *Culture and Incentives*

Considered to be the biggest influence on how companies operate and the most important factor in their success, it is almost impossible to prescribe a method to achieve the right environment. For the success of the current decentralised management, it is required to support a culture of trust and empowerment which can at same time hold accountable without dropping to the blaming and mistrust behaviour. That culture can only be achieved if there's commitment from the top and with a great help from reward structures which lead to high motivated employees. To avoid budgeting to become a way of negotiating pay, or to have dysfunctional behaviours due to the link between budget and incentives, some companies deliberately use different targets on the incentive's schemes.

On a publication from PWC "Best practice in the budget and planning process", in 2017, a comprehensive list (Table III, Annex) of key characteristics of best practice processes and systems is provided, keeping the alignment with the document from (CIMA 2004) but adding some more practical details to the budgeting process.

1.4 Beyond Budgeting

The Beyond Budgeting Roundtable (BBRT) research consortium which aggregates profit and non-profit organisations and academics, has worked since 1998 on developing an alternative to the budgeting process.

From the research on multiple companies which had fully or partially abandoned their budget, they have developed a generic model with 12 principles which should be implemented on the "ideal" beyond budgeting organization. The first six principles aim to create a flexible organisation structure where the authority is devolved to employees. On the other six there are some guidance for the dynamic management processes to cope with the new organization structure (Hope and Fraser, 2003; de Waal et al., 2004) as follows:

Creating a flexible organizational structure:

- A self-governance framework

Reorganisation of company's structure into smaller and self-managing units where hierarchy is only used when decisions affect all profit centers.

- Empowered managers

Build a framework where local managers have the ability to make fast decisions within the defined limits following the organisation values.

- Accountability for dynamic outcomes

Definition of relational competitive targets instead of pre-defined targets. The desirable results are set dynamically and are adjusted recurrently instead of static ones established at the beginning of the year as that discourage achieving more than established targets.

- Network organisation

Each of the units work independently focused on the customer needs allowing them to adapt to any changes of unexpected opportunities or threats.

- Market coordination

Central support units work to the operative units ad if they were customers and if the cost or service level provided is not adequate, the operative units can contract their support externally.

- Supportive leadership

People are leaded and coached by senior managers to achieve the dynamic goals. The managers of self-managing units are permitted to decide no matter if mistakes happen without being punished for it. Coordination between units is achieved by the senior managers while coaching.

Designing an adaptive management process:

- Relative targets

The strategic goals are related with the market and competitors and are continuously updated being the comparison terms to the unit's performance, not the internal budget.

- Continuous strategy-setting

The bottom-up strategy process is continuous and is updated whenever there are signs of change

- Anticipatory systems

Forecasts are prepared frequently for both financial and non-financial success drivers, being the base for decision making supported by senior managers. These forecasts don't affect the reward scheme so the information can be objectively prepared.

- Resources on demand

Investment plans are prepared based on the current information with the allocation of resources when and where they are needed most. There's no link to prior year's resource allocation.

- Fast, distributed information

On time information is available across the organization through indicators which allows the steering of the self-managing units, and comparison between them or to external benchmarks.

- Relative team rewards

The team spirit is achieved with the reward systems where not only the unit's performance is considered but also the whole organization. The targets are relative to competitors and the markets. (Waal, 2005)

Also, on CIMA report in 2004 a list of these principles was provided (Table VI, Annex)

1.4.1 Balanced Scorecard

The Balanced Scorecard serves to the managers as the instruments on a plane serve to the pilot, they provide information on how the multiple components are, their direction and destiny. There is no advice on how many, or which instruments should be used. Each company must analyse which information they need to understand the environment they're doing business at and how to monitor their key departments or processes (see example on table V, Annex).

There are some difficulties on translating strategy into processes and choosing which indicators and which is the cause-and-effect relationship but when that is achieved, it will engage the employees as it connects their activities to the company's strategy, allowing them to evaluate their contribution to the group. The measures on BSC should include both the outcome and the processes are key to achieve it and it should serve as a communication and learning system.

There are four perspectives to BSC (financial, customer, internal business process, and learning and growth) which are subdivided in several paths, namely:

- Financial
    - Rapid Growth – usually when a company starts, the main goal is to grow sales
    - Sustain – when a business achieves some maturity, main goal is to improve gross margin, operating income and return on capital employed
    - Harvest – when there's a short time in the economic life of business, the main goal is to have immediate and certain cash backs

- Customer
  - Market Share – Shows how well a company is developing on a desired market. The sales might be growing but the market share might be decreasing, meaning that the competitors are working better and gaining market.
  - Account Share – shows how much of a customer's business the company is getting. Similar to market share but oversees each customer's market. Usually, this exercise is done for specific key customers and allows the analysis of the customer's loyalty and satisfaction.
  - Customer Profitability – It allows to understand if the business the customer is creating is profitable and avoid going from a customer focused company to a customer obsessed company. The effort to gain new customers can make a customer to be unprofitable for some time but if that pattern persists actions need to be taken.
  - Customer Acquisition – measure the rate of new business or customers using absolute or relative terms, can also be used to measure the customer's loyalty when business is growing even if new customers are not following the same path.
  - Customer Satisfaction – measures the customer's satisfaction with the product/ service provided, on recent studies it was found that only when the customer rate the experience as "completely" or "extremely" satisfied it is likely he will keep some level of loyalty and buying behaviour
  - Customer Retention – an important way to maintain or grow market share
- Internal Business Process

Identifies the internal processes the company must be great at for the business to satisfy their customers and their shareholders

- Learning and Growth

Identifies what the company needs to build internally to achieve long-term growth and improvement. It is unlikely that with current technology and capabilities the business will stay competitive on a long-term basis.

  - People
    - Employee satisfaction and retention
    - Employee training
    - Employee skills
  - Systems
    - Real time and accurate information on customers and internal processes
  - Organizational procedures
    - Alignment of the employee incentives with company's success drivers
    - Measures improvement in key internal processes

1.4.2 External Benchmarking

"Benchmarking is the process of identifying, understanding, and adapting outstanding practices from organizations anywhere in the world to help your organization improve its performance" (CMA Magazine, 1994, p. 23). The process, even defined as game-changing, an incentive to innovation with profit and performance improvements, is described as very hard to achieve due to the difficulty on getting significative data, for being exhausting and time-consuming and even very expensive. Due to all these difficulties, some companies founded the American Productivity & Quality Centre (APQC) which should serve as a repository and gateway to benchmarking information. Currently many services alike can be found online which could help to reduce the difficulties on implementing a benchmarking process.

To summarize the literature review section, it is important to point that the traditional budgeting process is clearly not to be used, as all literature suggests that there are too many difficulties and problems with it. Both Better Budgeting and Beyond Budgeting, as advocated by some prior authors aforementioned, seem to have found the solution, but at same time neither of them have a recipe that would fit all businesses, and, on both cases, it is proposed that each company evaluates their organisation, their structure, their internal and environmental complexity.

As a matter of fact, both models are not that far apart on the cost control, bottom-up budgeting process or setting up targets. Where they differ the most, is on the absolute targets against relational targets and on the timeframe to achieve those targets, where in first case it is the duration of the budget and on the later there's no deadline if the path is on the right direction.

I will therefore, in the next section of this Project, to keep an open mind when analysing the company's budgeting process and propose the best principles or tools to solve any difficulty or problem identified.

2 Methodology

With the objective to improve the organisation's budgeting process, firstly there was the need to identify how the budgeting process works, how other companies are translating their strategy into planning and control, how they engage their managers on pursuing a common goal and, what do the academics think and write on the subject.

The use of generalization, critical analysis, and conclusion formulation methods to the multiple authors views and conclusions was the way found to create a theoretical base to perform the next stages of the process.

During the literature review a survey (Annex II) together with a review matrix (Annex III) was found on the publication entitled "insight from practice. Is your organisation ready for beyond budgeting?" by Waal, Andre, published on "*Measuring Business Excellence",* in 2005, which pretends to evaluate the organisation's preparedness for the most disruptive of the analysed methods.
It was then considered to be an interesting tool to evaluate if the organization is ready for such a big step and even if it wasn't how happy are the managers with the current process and how willing are they to improve it.

Following the literature revision, the current organisation's budgeting process was described, through own knowledge acquired during the over five years working on the organisation, Interview with key intervenient on the process to understand his view on the future of the process, as well as through the analysis of the main budgeting tables (Annex IV) used to collect and calculate the budgets.
The potential problems or difficulties on the budgeting process, as described on the literature, were identified.

Having the potential problems or difficulties identified on the organisation's process, and based on the literature review, a proposal of measures to overcome the difficulties was proposed either by following some of the principles identified on the planning methods or through the use of the tools those methods suggest.

3 Data Presentation and Analysis

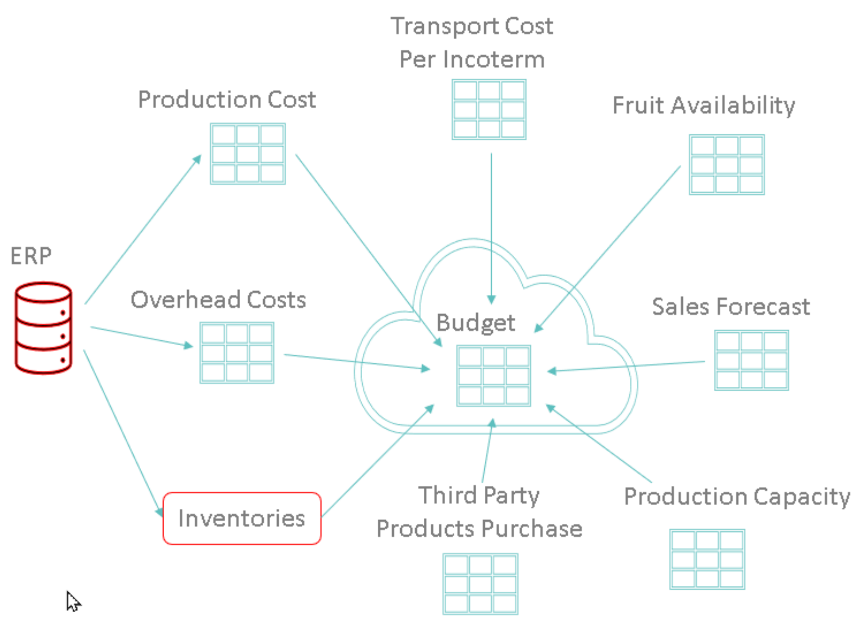
3.1 Presentation of the company and the problem

The organisation, as described on their website, "*A fully integrated juice group with our own global assets in sourcing, production and supply chain management complemented by the knowledge and expertise of our accomplished sales businesses*" has two factories, one based in Brazil and the other in Ghana, one logistics company and a trading company.
It is currently undergoing some enhancements on the budgeting process as the current one is highly empirical and centralised, so for the analysis the planned enhancements will be considered as done so to extend the validity of this study.

The budgeting process at the organisation is based on spreadsheets that are kept on a cloud environment which all the shareholders (Annex V) should have access to (not happening currently). Additionally, the file circulates by e-mail.

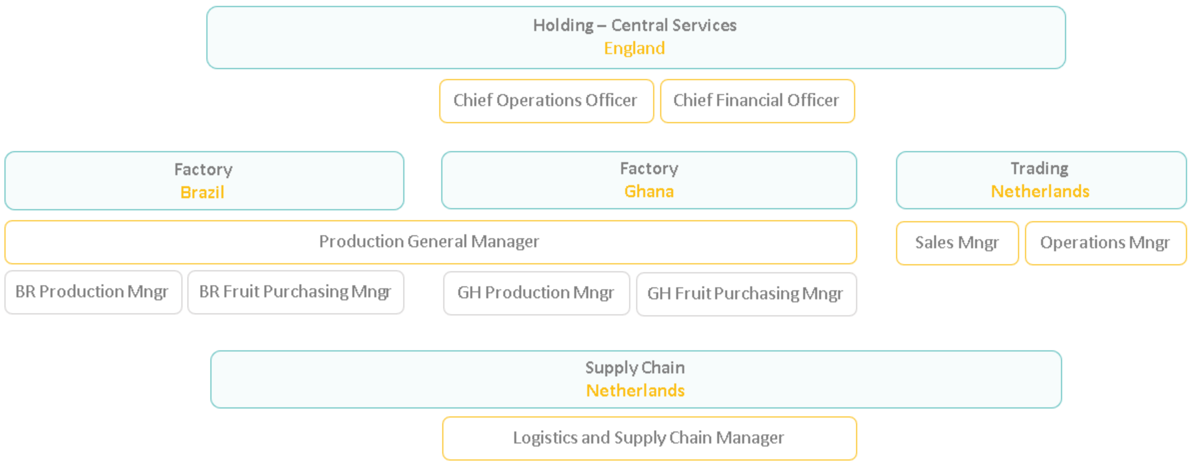
The raw data come from other spreadsheets with manual data input where it regards the forecasts and production planning and exported from the ERP where it regards the actuals. The data is then compiled on the final file containing multiple links to the other spreadsheets, where some of them are not available to all shareholders to look at the breakdown, as shown on Figure I.

Figure I – Data sources and consolidation schema



The budgeting process is strongly focused on the sales forecasts (Figure II and Annex IV), which is based on running contracts and the additional contracts that the sales team expects to achieve, some already under negotiation. The running contracts can have multiple durations and the majority, if not all of them, don't include a schedule of the deliveries, only including total quantity of product and contract duration.

Figure II – Organization's structure and current budgeting participants



To calculate the monthly budgets, it requires to have in consideration the fruit purchasing forecast based on the usual fruit season, which may be affected by the environmental conditions, the production, storage, and logistics capacity, as well as the expected delivery schedule.

The charts of accounts have been standardised across most of the companies and a mapping is required to consolidate one of them. The cost methodology is also following the same logic on all the companies, facilitating the consolidation process.

The process, that consists of gathering the data from the different departments, consolidating into a final spreadsheet (Annex IV) and, then discussing the numbers line by line with only some of the stakeholders (Annex V), takes around 4 weeks to complete and there's no pre-scheduled revision, being the responsibility of the stakeholders to trigger any update when they consider that there are significative changes on the assumptions.

There is a theoretical breakdown of the different product costs on a spreadsheet and the report with the actual cost is under development on the ERP but, as it is, will require manual consolidation of the information.

A reward system is being implemented (Annex VI) using the metrics based on financial targets, such as total sales, sales of top products, margin, overhead costs, EBITDA, and some operational targets such as quality assurance, factory certifications, projects and internal processes implementation and individual KPI's (not included yet on table XII, Annex VI, but they were mentioned on the communication).

There are some improvements already identified by the organisation but no action plan yet.

- Collection of data in a more structured way
- Formalisation of the review process with respective parties
- Development of a timetable that runs the various streams in parallel (sales, production costing, overhead costing) to arrive at the end point where these can be brough together
- Once defined the budget should be available on the ERP where the variance report should become available

3.2 Survey

The survey, included on the "insight from practice. Is your organisation ready for beyond budgeting?" by Andre A. de Waal, published on "*Measuring Business Excellence",* in 2005, had a complete set of questions (Annex II) and evaluation matrix (Annex III) named "The beyond-budgeting entry scan (BBES)" developed by de Waal et al. (2004) as in the forementioned publication.

The survey aims to evaluate the need and preparedness of the organisation to follow the beyond-budgeting principles. As the beyond budgeting is the most disruptive of the analysed methods it was considered that it could be used to also evaluate the preparedness to implement the better budgeting, much closer to the traditional budgeting system, if on the results of the survey the need for changes and will to change would be identified.

The original survey is organised in 14 different groups of questions where the groups have 1 to 3 different questions. The survey was adapted to meet the organisation's structure and dimension and therefore the last question ("Authority to adapt the budgeting process") was disregarded as the survey would be taken on the whole group, thus the authority existed.

On the literature review there were two other obstacles identified, the internal and environmental turbulency (Jurgen and Stefan, 2005), so questions (13 and 14) to evaluate these obstacles were added to the survey.

The remaining questions identification remained as per the original survey.

The survey was sent to 18 employees that included top to lower managers, no age, academic qualifications, or any other grouping was considered relevant to the survey as no reference to any kind of grouping was found on the literature, on the contrary, on the literature there can be found many references to the importance of the bottom-up process (Hope and Fraser, 2003; de Waal et al., 2004). The authors qualify each of the potential answers in a green, orange, and red colour that, as the traffic lights, indicates if it is free to move, must move with careful or cannot move.

Out of the 18 participants, 15 surveys were received, which have been compiled on the table VII below, where on each of the columns Green, Yellow and Red are the number of answers each colour obtained and having the cells been coloured with a gradience representing the weight of each colour on the total of answers. The colour gradience was considered the best option to analyse the results as even if in a lower record, an obstacle is an obstacle and considering the majority as final result would hide potential obstacles.

The result column was coloured with the colour which achieved the majority of the answers, and if there was no answer with the majority, then the two colours with higher number of answers was presented.

(Note: as mentioned before, the groups differ on the number of questions so the total of answers of the three columns will be 15, 30 or 45 depending on the number of questions on the group. The gradience of grey was applied differently on the different groups so that the shades/proportions would be respected)

Table VII – detailed survey results

				Result
A. How satisfied are you with the current budgeting process?	6	9	1	
B. Is the organisation prepared to change the budgeting process?	4	12	0	
1a. To what extent is your organisation currently decentralised?	1	13	2	
1b. Is it possible to implement (further) decentralisation?	8	6	2	
1c. Are the people in the organisation prepared to carry out the decentralisation	5	8	3	
2a. To what extent do managers on lower organisational levels have the freedom to take decisions autonomously?	2	13	1	
2b. Is it possible to enlarge managers authority to act?	10	6	0	
2c. Is senior management in the organisation prepare to delegate authority?	6	10	0	

3a. To what extent are the targets in your organisation dynamic (i.e. they can be adjusted up or down, depending on the circumstances)?	4	11	1
3b. Is it possible to introduce dynamic targets?	12	4	0
3c. Are the people in the organisations prepared to introduce dynamic targets?	7	8	1
4a. To what extent is your organisation currently focussed on customers?	12	4	0
4b. Is it possible to implement a customer-focused structure?	12	4	0
4c. Are the people in the organisation prepared to implement a customer-focused structure?	11	5	0
6a. To what extend can the prevailing management style in your organisation be described as coaching?	2	10	4
6b. Is it possible to develop a coaching management style?	11	5	0
6c. Are the people in the organisation prepared to do so?	7	8	1
7a. To what extent are targets in your organisation set relative to the competition?	0	11	5
7b. Is it possible to implement relative target setting?	5	10	1
7c. Are people in the organisation prepared to do so?	6	9	1
8a. To what extent is the strategy-setting process in your organisation continuous and bottom-up?	2	6	8
8b. Is it possible to make the strategy-setting process continuous and bottom-up?	8	8	0
8c. Are the people in the organisation prepared to do so?2	6	8	2
9a. To what extent does your organisation use rolling forecasts that look six quarters ahead?	4	6	6
9b. Is it possible to implement rolling forecasts that look six quarters ahead?	6	10	0
9c. Are the people in the organisation prepared to do so?3	9	7	0
10a. How are the resources allocated in your organisation?	9	1	6
10b. Is it possible to implement a more flexible allocation process, based on good-quality business plans?	11	4	1
10c. Are the people in the organisation prepared to make the allocation process more flexible?	13	3	0
11a. To what extent does your organisation currently has an efficient and effective management information supply process, including a set of financial and non-financial indicators?	3	12	1
11b. Is it possible to improve the management information supply process?	14	2	0
11c. Are the people in the organization prepared to do so?	10	6	0
12a. To what extent does your organisation use a reward structure based on a combination of individual and group results?	3	2	11
12b. Is it possible to implement a structure based on individual and group results?	12	4	0

12c. Are the people in the organisation prepared to do so?	9	7	0	
. To what extent is the organisation complex? Ex. Multiple levels of management and/or departments which cause communication difficulties	4	8	4	
. To what extent the business is turbulent?	1	11	4	

Additionally, the survey the authors presented included a final analysis of the answers by question group to simplify the reading and understanding of the survey result, and the same logic was used on this study (Table VIII).

The results presentation follows the same logic as the table above.

Table VIII – Survey results summary

				Result
Preparedness to adapt the budgeting process	15	21	1	
1. Self-governance framework	14	27	7	
2. Empowered managers	18	29	1	
3. Accountability for dynamic outcomes	23	23	2	
4. Network organisation	35	13	0	
6. Supportive leadership	20	23	5	
7. Relative targets	11	30	7	
8. Continuous strategy-setting	16	22	10	
9. Anticipatory systems	19	23	6	
10. Resources on demand	33	8	7	
11. Fast, distributed information	27	20	1	
12. Relative team rewards	24	13	11	
13. Organization complexity	4	8	4	
14. Business turbulency	1	11	4	

Based on Table VIII, the survey revealed that the organization is not ready to follow a disruptive budgeting process change, but on other hand there are no subjects where the opposition or misbelieve is high enough to block changes from happening.

The highest results on the red column (which represent obstacles), that anyhow never represent the majority of the answers, are on the “relative team rewards” and on “continuous strategy-setting”. The reward system does not exist at all and that may have induced the mistrust of the participants on

considering this as an option but during the preparation of this study there was communication informing that it will be implemented in the short term.
It does not include any relative targets though but as any process that is starting, there will be room for adjustments.

The highest results on the green column (which represents no obstacles), with more than 50% of the answers are on the "network organisation", "resources on demand" and "Fast, distributed information" showing a good perspective on the implementation of these principles in the company.

The highest results on the Orange column (which represents some obstacles or disbelief), with more than 50% of the answers, are "preparedness to adapt the budgeting process", "Business turbulency", "Relative targets", "empowered managers" and "self-governance framework", which indicates that there's no will to change or that the participants do not consider that the company is ready to follow those principles. The principles can be applied with caution and a high support.

All the remaining principles obtained shared results between Orange and Green with no clear result. It is however a sign that those principles can be followed with some attention to the potential obstacles. Figure III shows and summarizes how the current process compares with the earlier literature presented. The colours are intuitively and follow the methodology explained in the previous paragraphs.

Figure III – Comparison of the results obtained with literature

Main Criticism

- Budgets are:
  - time consuming and costly to put together
  - a barrier to change
  - rarely strategically focused
  - developed and updated too infrequently
  - based on unsupported assumptions
- Budgets:
  - add little value (given the time required to prepare them)
  - strengthen vertical command and control
  - concentrate on cost reduction (an not on value creation)
  - encourage 'gaming' and perverse behaviours
  - reinforce departmental barriers
  - make people feel undervalued

Better Budgeting / Beyond Budgeting Principles

- Process
  - Agile continuous process
  - Have an external focus / Define relational competitive targets
  - Explicit focused on strategy / Continuous strategy setting
  - Digitalise process to achieve data uniformity
  - Use explicit forecasting models (separate from financial)
  - Put effort on managing future results / Anticipatory systems
  - Trust on managers / A self-governance framework
- Tools
  - Activity based budgeting
  - Zero base budgeting
  - Rolling budgets and forecasts
  - Balanced scorecard
  - External Benchmarking

3.3 Analysis of the potential difficulties on the budgeting process

This study being done from within the company and with more than 5 years on the organisation, there was no focus on gathering information regarding the company and budgeting process as it would happen if an unknown company was the target of the study, therefore only one interview was done as an informal conversation with the key responsible for the budgeting process and an exchange of informal e-mails to detail some of the subjects discussed, the rest of the knowledge was acquired during the years of work experience at the organisation.

The budgeting process on the organization does not require too much preparation time neither it represents a high cost, as it takes around 4 weeks to complete and does not involve dedicated full-time resources to complete. There is no information on the time spent controlling the budget though.

However, the process does not include all the managers and departments such as Human Resources (HR), Systems and Finance, which is only represented by the CFO and, from the interview and process analysis there's no reference to strategic discussions.

The overhead costs such as support areas like HR, finance, systems are forecasted using the traditional methods basing the forecasts on previous years costs and have no discussion with the involved managers.

Local managers have very limited ability to make decisions as most of the resources are assigned on demand through direct contact with the top managers, enforcing the vertical control.

Due to the way the resources are allocated and the limitation on decision making, the risk of gaming is very limited and there's no impact on the inter-departmental relationships.

With the forecasts based on individual unsupported assumptions, there's a high risk on the inaccuracy of the budgeting process.

It was already identified by the organisation that the budgeting process data should become more automatised with controls during the preparation process, allowing parallel work, and its availability on the ERP system to ease the information distribution and control.

4 Proposed actions

Until the moment of the delivery of this Project for academic purposes, the implementation process was not executed, and the next steps in the organization would be as follows:

Schedule meetings to discuss the strategy, targets, and the actions necessary to achieve them so that they become clear to the managers. From this discussion external relative targets could be identified for both the organization and the reward scheme, facilitating the generation of a balanced Score Card that would guide the decision makers.
These relative targets could be, as described on the literature review, market share, customer share, on time delivery service levels or production yields, depending on the possible/available benchmarking.

To feed the balanced score card, it would be necessary to also identify the required forecasts and develop methods to obtain accurate information.
Quarterly meetings should be scheduled to discuss the variations, analyse the updated forecasts/ targets, how the actions decided on the previous meeting are being implemented and if the results are as expected and decide the necessary corrective actions.

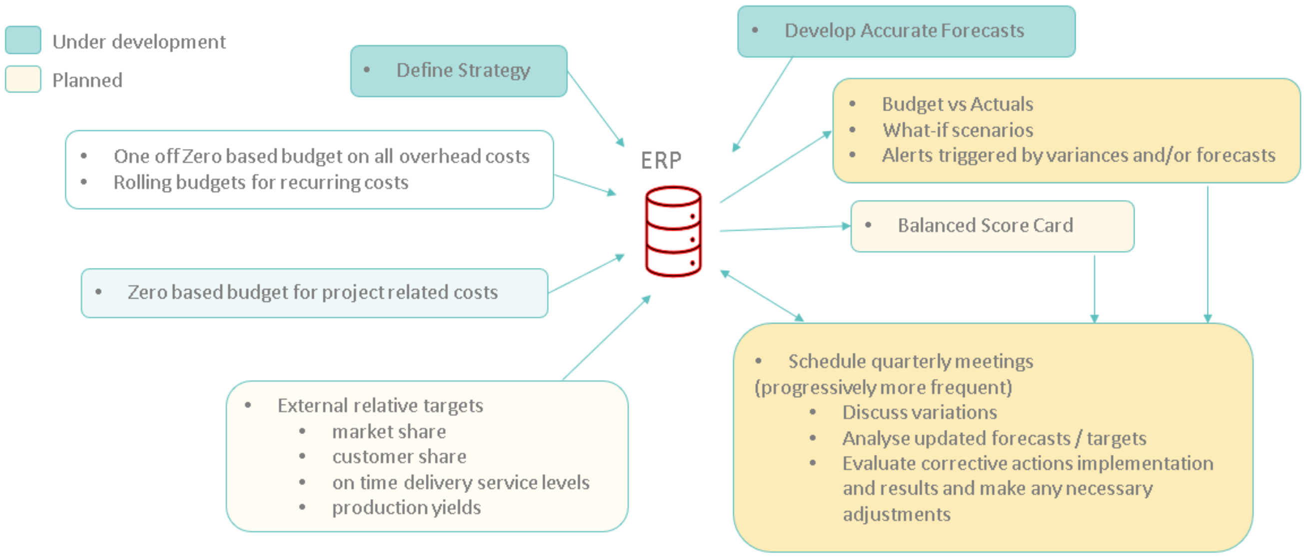
On the overhead costs / support departments the identification of expense groups with the separation of fixed recurrent costs and project related costs together with a one-off use zero-based budgeting would help to evaluate the cost/value relationship of the different expense groups and would enable to identify potential improvements through investment, change of processes or discard the activities where the relation between cost/value added are not justifiable.
After this initial exercise, the rolling budgets could be used on the fixed recurring costs whilst the zero-based budgeting could continue to be used on the project related costs.

As identified by the organisation, the ERP should be updated to facilitate the budget preparation, allowing the different departments to work in parallel. But beyond that, a forecast matrix like the one shown on table II (Annex) should be prepared and the ERP should receive these regular inputs and trigger alerts if the assumptions which the last budget review was based on have significant changes.
The budgeting information, the latest forecasts and the actuals should be always available for consultation.

Additionally, the ERP system should support what-if scenarios, and compare them with the actuals to improve the organisation's forecasting and decision-making.

At the moment of the dissertation's delivery, the Figure IV was drawn with a representation of the proposed actions, it's interaction with the ERP system and an update on the actions implementation, to be presented to the top management team of the company. The strategy has now been defined but the measures to evaluate if the organisation is following the correct path haven't been defined yet. Forecasts are also under development fully integrated on the ERP system. The actions highlighted in dark yellow are now part of the organization's plan for next year and the ones highlighted in light yellow have been mentioned on discussions but are not explicitly mentioned on the current plan.

Figure IV – Proposed actions and its implementation status.



Conclusion

The present study has the objective to analyse the budgeting process of an organisation, which acts on the juice manufacturing and supply chain markets, evaluate the potential difficulties or gaps on the process and propose actions to improve it.

A Budget is a financial plan for a specified period of time expressed in quantitative terms.

To understand the budgeting process, which are the common difficulties and the solutions proposed by academics or the ones other organisations are implementing, through the available literature, different planning models were analysed.

The main planning methods are better budgeting and beyond budgeting, where the first advocates the improvement of the traditional budgeting process through the use of new methods such as Activity Based Budgeting, Zero-based budgeting, Rolling Budgeting, the second has a more disruptive view of the planning process and proposes a different leadership type by following 12 main principles, the abolishment of fixed measures and periods and the use of tools to guide the organisation on the path to achieve the relative targets such as External Benchmarking and Balanced Score Cards.

The organisation's budgeting process was described through interviews and analysis of the spreadsheets used on the process. The preparedness of the organisation to change the process was obtained through a survey.

Having identified some potential difficulties through the process organisation and system's limitation, a plan of actions was proposed which includes a better understanding of the cost structure, better communication and engaging of the organization's managers on the process and system's improvements to improve the accuracy of the data and facilitate both the data availability and process control.

The main obstacles to follow the proposed actions would be the necessary change of behaviour and work methodology, the resources needed to gain more insight on the cost structure and the time frame to accomplish results that with few resources can take too long and the momentum can start to fade away.

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Annex I – Supporting Tables

Table I

Activity Based Budgeting • Similar to ABC (activity-based cost) and ABM (Activity based management) • Involves planning and controlling along the lines of value-adding activities and processes • Resource and capital allocation decisions are consistent with ABM analysis, which involves structuring the organisation’s activities and business processes so that they better meet customers and external needs
Zero Based Budgeting • Expenditures must be re-justified during each budgeting cycle, rather than basing budgets on previous years and periods • Avoids building on the inefficiencies and inaccuracies of previous history • Value of this approach depends on stability of operating environment
Value Based Management • Formal and systematic approach for managing the creation of shareholder value over time • All expenditure plans evaluated as project appraisals and assessed in terms of the shareholder value they will create • Helps to link strategy and shareholder value to planning and budgeting
Profit Planning • ‘profit wheel’ method for planning future financial cash flows of profit centres • Assesses whether an organization or unit generates sufficient cash, creates economic value and attracts sufficient financial resources for investment • Ensures consideration of an organization’s short and long-term prospects when preparing its financial plans
Rolling Budgets and Forecasts • Solves problems associated with infrequent budgeting and hence result in more accurate forecasts • More responsive to changing circumstances, but requires permanent resources to administer • Also overcomes problems linked to budgeting to a fixed point in time – i.e., the year-end and the often-dubious practices that such cut-offs encourage

Adapted from Neely, Bourne, & Adams, 2003, p.24.

Table II

	Economic Relevance	Variability	Speed of Response	Update Frequency	Forecast Horizon
Revenues	High	High	High	Daily	Quarter
Labour Costs	High	Low	Medium	Monthly	Six Months
Raw Material costs	High	Medium	High	Every two Weeks	Quarter
Energy Costs	Medium	Low	Low	Monthly	Six Months
Maintenance Spending	Medium	Medium	Medium	Monthly	Six Months
Machinery Renting/ Ownership Costs	Medium	Low	Low	Quarterly	Year
Other Operating Costs	Medium	Medium	Medium	Every Two Weeks	Quarter

Adapted from the example on Zeller and Metzger, 2013, p.306.

Table III

Key characteristics of best practice processes:

- Control the number of budget iterations developed
- Reduce the number of budget line items
- Flexibility modelling of scenarios based on differing business assumptions
- Standardize budgeting methods with the rest of the company and what senior management is expecting to see
- The link to strategy needs to be clear and clearly linked
- Base budgets on business drivers
- Align incentives and rewards to strategic objectives
- Link the annual planning process to rolling forecasts and management reporting
- Active engagement of the business in the budget process
    - Done by them and not to them, Controlled process, and communication
- People are key
    - The right team –finance and business
    - Analytical capabilities
    - Big picture and the detail

(“Best practice in the budget and planning process”, PWC (June 2017) p.7)

Key characteristics of best practice systems:

- One system and one method of input and analysis
- One language: common assumptions, input, terminology –making it as easy as possible
- Single charts of accounts and consistent costing methodology
- Ensure it is readable and usable in the ERP –to understand, measure and reforecast
- Single system not requiring constant tailoring – 'interfaces' are waste by their very nature

Adapted from PWC, 2017, p.10.

Table IV

Balanced Score Card structure example

Perspective	Measure	
Financial	ROCE (Return on Capital Employed)	
Customer	Customer Loyalty	
Internal Processes	On time delivery	
	Process Quality	Process Cycle Time
Learning and Growth	Employee Skills	

Adapted from the example on Kaplan and Norton, 1996, p.66.

Table V

	Strategic Objectives	Strategic Measures	
		Lag indicators	Lead indicators
Financial	• Improve Returns • Broaden Revenue Mix	• ROI (return on investment) • Revenue Mix • Revenue Growth	
Customer	• Increase customer satisfaction	• Customer retention	• Customer satisfied survey
Internal	• Understand our customers • Create innovative products • Cross-sell products	• Share of segment • Revenue from new products • Cross-sell Ratio	• Product development cycle
Learning	• Build strategic information • Develop strategic skills • Focus resources • Employee effectiveness	• Revenue per employee • Employee satisfaction	• Strategic information availability • Strategic job coverage • Personal Goals alignment

Adapted from the example on Kaplan and Norton, 1996, p.72

Table VI

Beyond budgeting – principles for adaptive performance management

Process principles

- Goals - Set aspirational goals aimed at continuous improvement, not fixed annual targets.
- Rewards Reward shared success based on relative performance, not on meeting fixed annual targets.
- Planning Make planning a continuous and inclusive process, not an annual event.
- Controls Base controls on relative key performance indicators (KPIs) and performance trends, not variances against a plan.
- Resources Make resources available as needed, not through annual budget allocations.
- Coordination Coordinate cross-company interactions dynamically, not through annual planning cycles.

Leadership principles

- Customer Focus everyone on improving customer outcomes, not on meeting internal targets.
- Accountability Create a network of teams accountable for results, not centralised hierarchies.
- Performance Champion success as winning in the marketplace, not on meeting internal targets.
- Freedom to act Give teams the freedom and capability to act, don't merely require adherence to plan.
- Governance Base governance on clear values and boundaries, not detailed rules and budgets.
- Information Promote open and shared information, don't restrict it to those who 'need to know'.

Adapted from CIMA, 2004, p.9.

Annex II - Survey

Welcome to the budgeting survey.

This survey is part of a paper regarding the potential budgeting process improvement. It intends to gather information on how the budgeting intervenient see the current process, their ability to accept changes on the mentioned process as well as evaluate their perception on the company and business complexity and turbulence.

The survey results will be statistically treated, and anonymity is guaranteed.

The completion of the survey will take approximately 6-15 minutes.

Thank you for your cooperation.

#	Question	Possible answers		
		(Green)	**(Orange)**	**(Red)**
A	How satisfied are you with the current budgeting process?	Dissatisfied	Reasonably satisfied	Satisfied
B	Is the organisation prepared to change the budgeting process?	Fully prepared	To a certain degree	Not at all
1a	To what extent is your organisation currently decentralised?	(Almost) completely	To a certain degree	Not at all
1b	Is it possible to implement (further) decentralisation?	Yes	To a certain degree	No
1c	Are the people in the organisation prepared to carry out the decentralisation	Yes	To a certain degree	No
2a	To what extent do managers on lower organisational levels have the freedom to take decisions autonomously?	Large degree of freedom	Limited freedom	Little to no freedom
2b	Is it possible to enlarge managers authority to act?	Yes	To a certain degree	No
2c	Is senior management in the organisation prepare to delegate authority?	Yes	To a certain degree	No
3a	To what extent are the targets in your organisation dynamic (i.e. they can be adjusted up or down, depending on the circumstances)?	All targets are dynamic	Some targets are dynamic	All targets are pre-

				set and fixed
3b	Is it possible to introduce dynamic targets?	Yes	Limited	No
3c	Are the people in the organisations prepared to introduce dynamic targets?	Yes	To a certain degree	No
4a	To what extent is your organisation currently focussed on customers?	Strongly	Partly	Hardly
4b	Is it possible to implement a customer-focused structure?	Yes	To a certain degree	No
4c	Are the people in the organisation prepared to implement a customer-focused structure?	Yes	To a certain degree	No
6a	To what extend can the prevailing management style in your organisation be described as coaching?	Strongly	Partly	Hardly
6b	Is it possible to develop a coaching management style?	Yes	To a certain degree	No
6c	Are the people in the organisation prepared to do so?	Yes	To a certain degree	No
7a	To what extent are targets in your organisation set relative to the competition?	All targets are relative	Some targets are relative	None of the targets are relative
7b	Is it possible to implement relative target setting?	Yes	To a certain degree	No
7c	Are people in the organisation prepared to do so?	Yes	To a certain degree	No
8a	To what extent is the strategy-setting process in your organisation continuous and bottom-up?	Flexible, bottom-up	Yearly, Bottom-up OR Flexible, top-down	Yearly, top-down
8b	Is it possible to make the strategy-setting process continuous and bottom-up?	Yes	To a certain degree	No

8c	Are the people in the organisation prepared to do so?2	Yes	To a certain degree	No
9a	To what extent does your organisation use rolling forecasts that look six quarters ahead?	Completely	Limited	Not at all
9b	Is it possible to implement rolling forecasts that look six quarters ahead?	Yes	To a certain degree	No
9c	Are the people in the organisation prepared to do so?3	Yes	To a certain degree	No
10a	How are the resources allocated in your organisation?	At the time and place where needed	On the basis of previously made investment plans	On the basis of the budget
10b	Is it possible to implement a more flexible allocation process, based on good-quality business plans?	Yes	To a certain degree	No
10c	Are the people in the organisation prepared to make the allocation process more flexible?	Yes	Limited	No
11a	To what extent does your organisation currently has an efficient and effective management information supply process, including a set of financial and non-financial indicators?	Completely	Limited	Not at all
11b	Is it possible to improve the management information supply process?	Yes	To a certain degree	No
11c	Are the people in the organization prepared to do so?	Yes	To a certain degree	No
12a	To what extent does your organisation use a reward structure based on a combination of individual and group results?	For the entire organisation	For some of the managemen t levels	Not at all
12b	Is it possible to implement a structure based on individual and group results?	Yes	To a certain degree	No

12c	Are the people in the organisation prepared to do so?	Yes	To a certain degree	No
13	To what extent is the organisation complex? Ex. multiple levels of management and/or departments which cause communication difficulties	Low to no complexity	A certain degree of complexity	Highly complex
14	To what extent the business is turbulent? Ex. Raw material price and availability fluctuation; Final product demand and price fluctuation throughout the budget period	Low to no turbulency	A certain degree of turbulency	Highly turbulen t

Adapted from de Waal, André A., 2005.

Annex III – Survey evaluation matrix

Beyond-budgeting Survey evaluation matrix

1. Need for beyond budgeting (Opening questions A + B)	
Green	The implementation of beyond budgeting should be seriously considered
Orange	The test result shows that the need or preparedness for changing the budgeting process is moderate. The lack of need or preparedness of the organisation to change should be a point of special attention during the implementation of the beyond-budgeting principles
Red	Implementing beyond budgeting is strongly advised against. The test result shows that there is no need or preparedness to change the budgeting process. Not until the need and preparedness to change has increased, should you consider implementing the beyond-budgeting model.
2. Status of the organisation (principle questions 1-12) The colours for the scores ate given for each principle	
Green	There are hardly any to no obstacles to the implementation of this beyond-budgeting principle
Orange	Some obstacles can be expected during the implementation of this beyond-budgeting principle. Several elements will require special attention.
Red	Many obstacles can be expected during the implementation of this beyond-budgeting principle. Many elements need to be changed substantially.
Questions 13 and 14 were added to the original survey to understand internal and environmental complexity.	

Adapted from Waal, Andre, 2005 p.62.

Annex IV – Current budgeting data structure

The tables below are the main budgeting tables

Sales Target

	Fruit Volume	Expected Yield	Production Volume	Bought in Volume	Stock Volume	Annual Expected Vol	Annual Expected Price	Annual Revenue	Cost of Production	Unit Margin	Annual Margin	% Margin Annual
Factory A	#		#	#	#	#	#	#		#	#	#
Fruit	#		#	#	#	#	#	#		#	#	#
Product	#	#	#		#	#	#	#	#	#	#	#
Factory B	#		#	#	#	#	#	#		#	#	#
Fruit	#		#	#	#	#	#	#		#	#	#
Product	#	#	#		#	#	#	#	#	#	#	#

Cashflow Summary

REVENUE CASHFLOW (USD)		
	Company A	
		Fruit
	Company B	
		Fruit
	Grand Total	
PRODUCTION CASHFLOW (USD)		
	Company A	
		Fruit
	Company B	
		Fruit
	Grand Total	
NET CASHFLOW		
	Purchased Volumes	
	OVERHEAD COSTS	
		Company A
		Company B
NET EBITDA Cashflow		

PRODUCTION BASED CASHFLOW		
	Company A	
		Revenue
		Production Costs
		Overhead Costs
	Total Company A EBTIDA Cashflow	
	Company B	
		Revenue
		Production Costs
		Overhead Costs
	Total company B EBTIDA Cashflow	
TOTAL PRODUCTION CASHFLOW		
	Supporting Departments Overhead Costs	
NET EBITDA Cashflow		

Annex V - Budgeting stakeholders

On the tables below (table IX to XI) it is represented the contribution of each company, department and manager on the budgeting process.

Table IX - Companies

Abbreviation	**Description**
BRF	Juice Factory in Brasil
GHF	Juice Factory in Ghana
NLT	Juice Trader in The Netherlands
NLS	Logistics and Supply Chain in The Netherlands
UKH	Head Office in UK

Table X - Department managers

Company	**Abbreviation**	**Description**
UKH	COO	Chief Operations Officer
UKH	CFO	Chief Financial Officer
NLT	TSM	Sales Manager
NLT	TOM	Operations Manager
NLS	LSC	Logistics and Supply Chain Manager
BRF	PGM	Production General Manager
BRF	BPM	Brasil Production Manager
BRF	BFP	Brasil Fruit Purchasing
GHF	GPM	Ghana Production Manager
GHF	GFP	Ghana Fruit Purchasing

Table XI - Budget contribution

Company	Stakeholders	Contribution
BRF	FPM, PGM	Fruit availability - Supplier - Fruit - Quantity - Quality/Brix
GHF	GFP, PGM	
BRF	BRPM, PGM, COO	Production capacity - Product - Quantity - Yield
GHF	GHPM, PGM, COO	
BRF, GHF	PGM, COO, CFO, GPM, BPM	Production cost
NLT, BRF, GHF	TOM, LSC (+ local resource on each factory)	Transport costs per incoterms
NLT	TOM, COO, CFO	Third party products purchase - Supplier - Product - Monthly quantity - Price - Payment terms - Linked sales contract
NLT / GHF	TSM	Sales forecast - Customer - Product - Package type - Monthly sales Quantity - Monthly offtake quantity - Price - Payment Terms - Incoterms
BRF	PGM	
N/A	ERP (SAP / systems data)	Stock - Product

		- Current stock quantity - Current stock allocation - Current available product
ALL	CFO, COO	Overhead costs - Monthly overhead costs per company
	COO, CFO, TSM, TLM, PGM	The final discussion where each budget line

Annex VI – Reward scheme data structure

Table XII – reward scheme data structure

Metric		Comment
Sales		$'m Sales as per Sales Plan
Margin		Full year as per management accounts
Business Mix		
	Fruit A	Full Year As per Group Sales Target
	Fruit B	Full Year As per Group Sales Target
Expenses		
	Staff Costs	Staff cash cost per Management Accounts $'m
	Remaining Operating Costs	As per Management Accounts
EBITDA		Full year EBITDA - $m
Quality Assurance		
	Quality Issues with Products	Quality Issues on products - customer complaints/credit notes due to quality
	Certification	Successful implementation of certification
Projects, People and Sustainability		
	Project 1	Completion of the project
	Project 2	Completion of the project