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Budgeting and alternative solutions in Archer – the well company

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FOREWORD

This thesis is the end product of the 3 year executive master in business administration program (EMBA) at the University of Stavanger.

The thesis is written based on the idea of a potential upside of governing an oil service company, in this thesis Archer – The well company, without using a traditional budget. The idea has its roots in the acknowledgement that the budget process is both time consuming and potentially has low actual benefit for the organization. This was introduced to me by Bjarte Bogsnes in his presentation about Beyond Budgeting for the MBA students at UIS in 2015. Bjarte's reflections about the downsides in the budget process coincided with my own reflections while working with budgets, both in Seadrill and Archer, and awakened the interest for further exploration of the field.

The thesis is based on theory from Beyond Budgeting as a management system, data from onshore employees in Archer's Norwegian legal entities and interviews of leaders in Archer.

A great thank to the cost controllers for providing data; Astrid Gudmestad, Kjetil Myrdal, Jone Kartevoll, Martin Sundsteigen and Cecilie Knutsen. I also thank the interviewed leaders in Archer for participation and for being open minded. Jonas Lunde also deserves my gratitude for many interesting discussions as well as Pål A. Johansen for patience and valuable input.

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Stavanger, May 20th 2016

Kristian Sæther

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ABSTRACT

This thesis is based on criticism against traditional budgeting and explores an alternative solution within the oil service company Archer. It is limited to theory from Beyond Budgeting and covers the Norwegian legal entities Archer Norge AS, Archer AS and Archer OilTools AS.

The thesis is based on an explorative design through the method of collecting qualitative data using a cost analysis of the current budget process within the company, as well as interviews of a selection of leaders.

The cost analysis is centered on the cost controller level, but is extended using estimates from leaders and associates giving input to the cost controllers. Thereby all directly involved personnel in Norway are included in the analysis.

The interviews seek to find if the criticism against the budget is valid in within Archer and whether the implementation of an alternative solution could be beneficial.

The interviews are of four Norwegian leaders, at different levels in the organization.

The budget process was identified to be too slow to follow the current market situation of the company, creating a dependency on revised forecasts to be able to act in time on the rapidly changing conditions.

A potential benefit from discarding the current budget process was preliminary confirmed, conditioned by further internal research including involved personnel, stakeholders and an evaluation of identified benefits versus drawbacks.

Negative incentives of setting bonus targets on fixed budget figures was identified to be present in the company, and setting targets with alternative parameters were suggested to be beneficial, regardless of whether the company choose to keep the current budget process or not.

TERMS AND ABBREVIATIONS

AFE: Approval for expenditure

AGA: Norwegian payroll tax (ArbeidsGiverAvgift)

BB: Beyond Budgeting

BBRT: Beyond Budgeting Round Table

CAPEX: Capital expenditure

Corporate: Referred to in Archer; Top level management of Archer

DSO: Days sales outstanding

EBITDA: Earnings before interest, tax, depreciation and amortization Earnings

ERP: Enterprise Resource Planning, a category of business-management software

FTE: Full-time employees

HR: Human Resources

KNOK: Thousand Norwegian Kroner

KPI: Key Performance Indicator

MNOK: Million Norwegian Kroner

NOK: Norwegian Kroner

PMR: Performance measurement and reporting, in Archer it includes personal bonus targets for leaders and managers

P&L: Profit and loss

Support Functions: Referred to in Archer as following departments; Onshore management, QHSE, IT, Finance, Office & Base, Treasury, Payroll and HR

Treasury: Referred to in Archer; Treasury department

USD: United States Dollar

USGAAP: Generally Accepted Accounting Principles in the US

I INTRODUCTION

This chapter introduces the problem statement, structure of the thesis and gives a presentation of the company in question, Archer – the well company.

1.1 The rationale for the thesis

The thesis is written based on the idea of a potential upside of governing an oil service company, in this thesis Archer – The well company, without using a traditional budget.

The budget has been a cornerstone in management of corporations for the second half of this century. But as the business environment progressively has become more complex and fluid the last decades, some claim the budget to be outdated and no longer meets the needs of executives (Fraser & Hope, 2003).

The thesis is limited to Archer and its Norwegian entities. An oil service company is totally dependent on the customers, hereby the oil companies' willingness to invest in oilfields and drill for oil, which is ultimately controlled by the oil price.

To illustrate how fast the business environment has changed the last years for oil related companies, the Brent oil price has dropped by an incredible 65% from \$107 per 1.1.2014 to \$37 per barrel per 31.12.2015 (Hegnar.no, 2016).

As Archer is an international corporation reporting under USGAAP, consolidation of financial figures are done in US Dollars. But as the Norwegian entities operate in Norwegian Kroner, changes in currency rate will also cause deviation against the budget while using a fixed rate.

In the same period from 1.1.2014 to 31.12.2015 the rate between NOK and USD has risen by 45% from 6.07 to 8.83 (Hegnar.no, 2016).

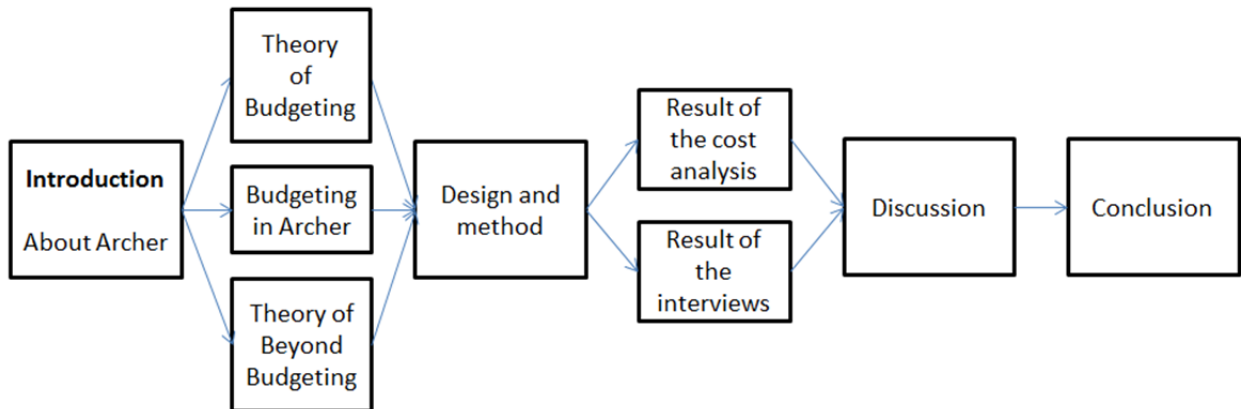
Due to the falling oil price oil companies operating in the North Sea has significantly dropped investments in new fields, drilling new wells, exploration and other activities.

Currency and oil price are thereby factors that can rapidly create material deviations in financial result compared to a budget, but being external factors the employees and management of an oil service company has no power to change or influence these.

This thesis will explore why Archer still has a budget process while facing these rapid changing conditions, what the budget cost to produce annually and if the company could benefit from using an alternative management model.

1.1.1 Thesis structure

The structure of this thesis is as illustrated below;



The thesis will start with an introduction including presentation of the company Archer, followed by theory on the subjects budgeting, budgeting in Archer and Beyond Budgeting. Then a chapter of design and method, followed by results from the data collections, hereby both a cost analysis and interviews with leaders in Archer. The thesis ends with a discussion of the result followed by conclusions of the findings.

1.2 Purpose of the thesis

The purpose of this thesis is to research how much resources an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution.

Theories have evolved the last decade that claims the budget is both outdated and creates negative incentives, and other solutions have been proposed (Bogsnes, 2009).

Prior to Archers budget process for 2016, former CFO Christoph Bausch also states per internal mail September 3rd 2015 regarding the 2016 budget that “a full blown budget is quite some work with potentially limited benefits”. Even so, no actions were taken to change the process at divisional levels. Archer still uses the budget as management tool this raises several questions;

- How much does the annual budget process actually cost in Archer?
- Is the budget still a good way to estimate future outcomes related to revenue and cost for an oil service company?
- Is the budget a good way to plan and allocate available funds for capital expenditures in Archer?
- Can the budget create negative incentives as claimed by theory, and in that case would Archer benefit from setting PMR targets on other parameters than fixed budget figures?
- Could Archer benefit from discarding the budget process?
- Is it possible to implement an alternative solution to the budget in Archer?
- Why does Archer still have an annual budget process?

The purpose of this thesis is to try to give answers to these questions, through both a cost analysis of the current budget process within the company, as well as interviews of a selection of leaders in Norway.

1.3 About Archer – The well company

Archer

Archer is a global oilfield service company with more than 40 years' experience, over 7,000 employees and operations in more than 100 locations worldwide. The company provides drilling services, production optimization, well integrity, intervention and decommissioning. Archer was formed in 2011 by the merger of Seawell and Allis-Chalmers Energy, along with several complementary businesses (Archerwell.com, 2015). Note that due to a challenging market and dropping oil prices throughout 2015 the actual number of employees is reduced by a significant number than the quoted 7,000.

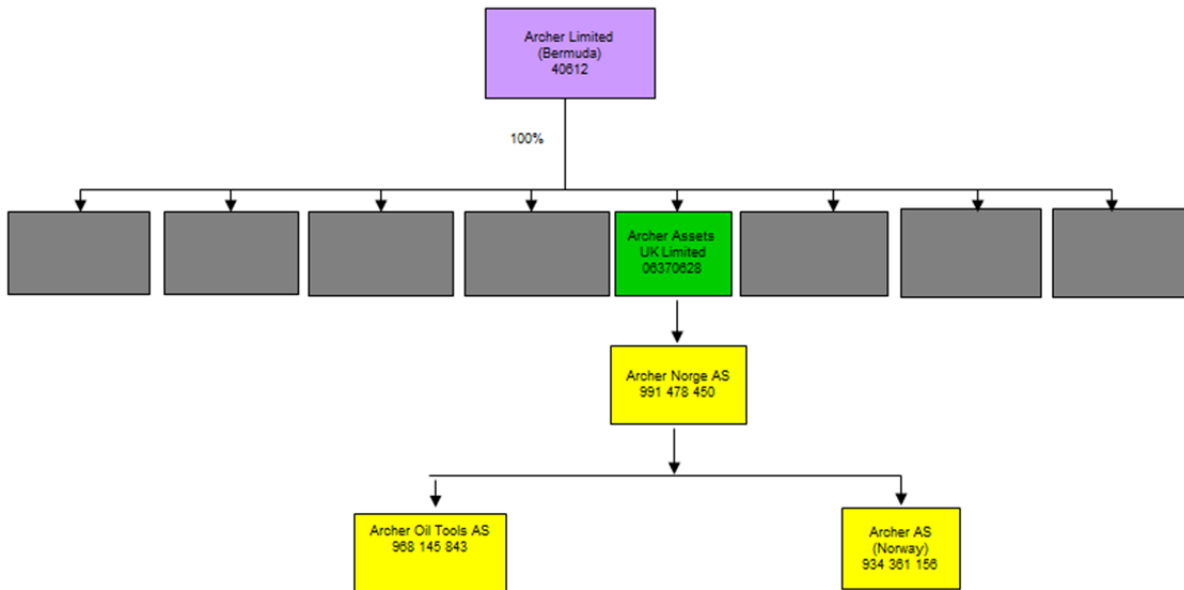
Archer is a Bermuda registered company listed on Oslo Stock Exchange under the ticker "ARCHER". Corporate Management is placed in Chiswick Park London.

In 2014 Archer had an income of 2.254 billion USD (Archerwell.com, 2015), of which the Norwegian companies represent approximately 0.5 billion USD.

In Norway Archer has the following divisions; Engineering, Modular Rigs, Oil Tools, Platform Drilling and Wireline. All divisions are part of the legal entity Archer AS except Oil Tools which is separated by Archer OilTools AS. In addition to this Archer has a management entity in Norway called Archer Norge AS, employing onshore management and personnel, and owns Archer OilTools AS and Archer AS.

The author of this thesis is currently employed as accounting manager in Archer Norge AS. Statements about Archer without further references throughout this thesis are based on first-hand knowledge.

Simplified organisation chart:



1.4 Thesis appraisal

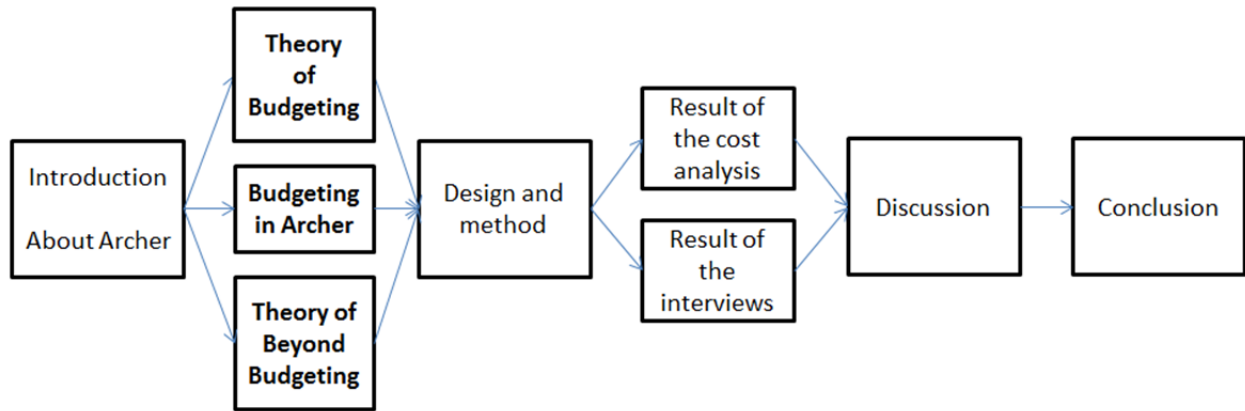
This thesis is limited to Archer's main entities in Norway, Archer Norge AS, Archer OilTools AS and Archer AS, thereby limited to a regional level and does not take in consider corporate level activities.

The thesis is also limited to theory from Beyond Budgeting and its process principles, the budget process within Archer and PMR targets set on budget figures. It does not explore potential benefits from the leadership principles of Beyond Budgeting.

II THEORY

This chapter contains theory about budgeting, introduces how budgeting is done in Archer, criticisms against the budget and gives an introduction to Beyond Budgeting.

The aim of the chapter is to set a theoretical background for the subsequent cost analysis, interviews and following discussion and conclusion.



2.1 Budgeting

2.1.1 Traditional budgeting

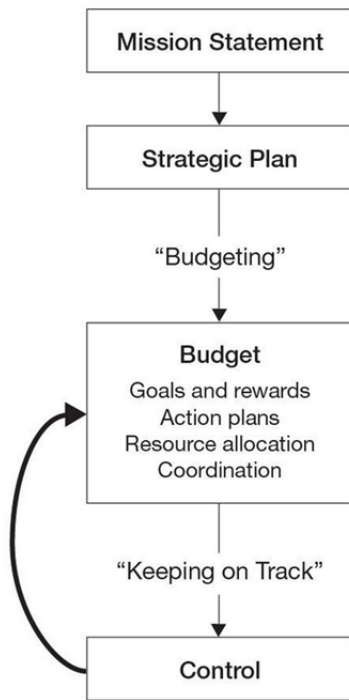
Historically the budget itself started from the French word “bougette”, meaning purse, which refers to the leather purse with money the captain of merchant ships got from the ship owner to travel for. Already at this point the “budget” restricted value added by setting limitations to what could be bought, i.e. if the captain would come over a bargain on his travels, he might not have enough money. Later the budget as we know it today was introduced about hundred years ago by General Motors. (Bogsnes, 2012)

The budget has been a fundamental way of governing businesses the last century. The budget comes in several varieties; among the most common are the finance budget, liquidity budget, result budget, sales budget and national budget.

The budget is defined in many ways, but for the purpose of this thesis Fraser and Hope's (2003) definition in their book "Beyond Budgeting, how managers can break free from the annual performance trap" is deemed appropriate. They define the budget as a "performance management process" which leads to and executes a plan. They further explain the purpose of the process of being about "agreeing upon and coordinating targets, rewards, action plans, and resources for the year ahead, and then measuring and controlling performance against that agreement".

There are three methods that can be used in developing a budget (Raghunandan, Ramgulam and Raghunandan-Mohammad, 2012), (1) a top-down approach or imposed budget – where top management set the budget and lower management is responsible for execution, (2) a bottom-up approach or participative approach – where the lower level management creates their own budget and all divisional budget are consolidated to corporate level afterwards and (3) negotiated budget – which adopts both the imposed and participative styles of budgeting and create s an environment where everybody is responsible for the prepared budget.

A common way of practice budgeting in the business world today is illustrated by Fraser & Hope (2003) in their figure 1-1;



The process starts at a high level with a mission statement setting out an aim for the business,

followed by a strategic plan setting direction and high-level goals for the company. Budget “packs” are sent out from a corporate center to each division and department, including forms to be completed for revenue, cost and capital expenditure forecasts. When completed they are sent back to corporate for review. Often several submissions are sent as each unit negotiates a final outcome. Once the budget is approved, the corporate center requires regular reports enabling executives to control performance against the approved budget.

The final stage of control is often linked to a “fixed performance contract”, a contract between senior executives and operating managers setting target for what their division has to accomplish in order to achieve an incentive or reward. The “fixed performance contract” follows the budget process which usually is fixed in advance by twelve months, and commonly to the calendar year. The purpose is to commit the operating managers and their teams to achieve the agreed-upon target, and enables leaders to control the result against the target. Rewards are fixed to the agreed target and can imply bonus, promotions or other incentives and usually obtained if the division reaches the target. The agreed-upon plan is expressed in strategic and financial terms. It’s often a process prepared bottom up by local teams. Once the budget is approved by management, resources, both operational and capital, will be allocated accordingly. Following a reporting schedule will be set that enables senior executives to establish corrective actions to ensure performance remains according to the agreed plan.

2.1.2 Budgeting, forecast and PMR targets in Archer

Budget process

Budgeting in Archer has broadly the same process as the explained figure in section 2.1.1. It also reflects the negotiated approach where all divisions create their own budget which then gets consolidated at corporate level, followed by a review process and negotiation of figures before final approval by corporate management.

Archer has an annual budget process at autumn, which historically requires board approval before the New Year. The budget gets reviewed at regional level, before corporate consolidation and further review. Each division; OilTools, Wireline, Engineering, Modular Rig, Platform Drilling

and Office&base has its own cost controller responsible for creating a budget annually for their division. Consolidation at regional level is managed by the regional accounting manager, which in the case of Archer is the author of this thesis. Final regional budget review and responsibility lies with the eastern hemisphere finance director.

Capital expenditures are to be included and approved by the budget, but are not limited to what's included by the budget. All major capital expenditures are to be applied for by an AFE, "Authority for Expenditures", creating a case based on cash flow for each expenditure regardless of whether or not it's included in the budget.

Archer limited uses at corporate level USD as currency, but the majority of revenue and cost for the Norwegian entities are in Norwegian Kroner. A foreign exchange rate, in this case NOK vs USD, is established by corporate at start of the budget process. Changes in the currency rates are not to be corrected for at later stages; thereby the previous reports on actuals versus budget had to explain the change in currency, which on occasions has exceeded operational variations against the budget.

Forecast

At corporate level each division has previously had to report actuals versus budgeted for the key figures Revenue, EBITDA and capital expenditure level, in addition to actuals versus forecast on same levels up till June 2014.

Due to rapid changes in market, oil price and currency, divisions have only reported on actuals versus forecast to Corporate from June 2014 and onwards. The forecast is updated quarterly, but builds on data from the approved budget, which get amended to the updated knowledge about revenue and cost for the remaining year. Note that Archer's forecast is not rolling, meaning that it only including what's remaining of the fiscal year. As an example the forecast submitted in June will only include 6 months, following September forecast only includes 3 months.

This process defines the forecast in Archer to be a "revised forecast". Revised forecasts are updated regularly and provide a forecast of the operating result for the portion of the budget period still remaining (Barrett & Fraser III, 1977).

At regional level the practice varies somewhat, Platform Drilling which is the largest division reports monthly both on actuals versus budget and actuals versus forecast. Engineering, OilTools, Modular Rig and Wireline has only reported on actuals versus forecast from June 2014 and onwards.

The forecast is created by amending the budget figures, for all divisions at quarterly basis. The approved budget is thereby working as a basis for the forecast.

Even if routines for internal monthly reporting has shifted away from the budget, the budget is still being produced and used for several purposes, such as basis for forecast, setting bonus targets for management personnel, cost control, giving an overview for the next year and establishing a basis for Capex investments. Support functions, such as finance, HR, QHSE and IT, also report at divisional level on actual cost versus budgeted cost.

PMR Targets

Bonus determined by PMR targets for managers in Archer are set by a number of factors such as hemispherical EBITDA (50%), hemispherical DSO – days outstanding regards to receivables (10%), team achieved EBITDA (10%), cost control within budget (10%), safety (5%), other personal objectives (15%).

As Archer sets bonus targets partly based on budget achievements, this coincides with the definition of “fixed performance contract” in part 2.1.1.

2.1.3 Criticism of the budget

Fraser and Hope (2003) refer to the budget process as the “annual performance trap” and has identified to the following three primary factors of dissatisfaction with budgeting;

1. Budgeting is cumbersome and too expensive

An average annual budget process takes about 4 to 6 months and Fraser and Hope’s study claim that it absorbs up to 20 to 30% of senior executives’ and financial manager’s time.

Hackett Benchmarking & Research's study of 1998 claim that the typical billion-dollar company consumes the astonishing 25,000 person-days per billion dollar revenue on the budget process.

2. Budgeting is out of kilter with the competitive environment and no longer meets the needs of either executives or operating managers

The competitive environment many companies' face today is far more complex than 50 years ago. An environment which previously was predictable with steady continuous change, loyal customers and with prices that reflected cost has changed to an unpredictable state where change is discontinuous, innovation is rapid, customers are fluctuant and to where prices has been driven down by globalization. An annual budget process is claimed to be too slow to be able to follow these new conditions companies currently are facing.

3. The extent of "gaming the numbers" has risen to unacceptable levels

As the fixed performance contract is subject to discussion and negotiation with superiors, and often is linked directly to incentives like bonus, an incentive to negotiate the lowest targets is created by the process. Managers of support functions which do not make revenue would have incentive to argue that cost is going to be high to increase one's chances of achieving bonus. Operational managers on the other hand has two factors to play with, revenue where the incentive is to argue to be low, and cost, to be argued as high for the coming budget year.

Another factor with the budget is that if one can see at the end of a year that one would achieve its budgeted target well below, an incentive to spend more than necessary is created. As long as the reward or bonus is set at achieving a fixed budget target, everything beyond this is "lost money". The author himself has experienced this side effect of the budget process at first hand in the Norwegian army, being ordered to shoot up large amounts of ammunition "to get the same budget next year". This is effect is by Fraser & Hope (2003) referred to as the "use it or lose it" mentality.

These disadvantages with the budget are also identified by Hansen, Otley and Van Der Stede (2003) which categorizes the problems of traditional budgeting into three; time, process and people related. Hansen describes the budget process to be a too long and heavy process, and thereby potentially very costly with little value added for the company compared to resources

restrained. Furthermore if the targets are set too low or too high the process creates dysfunctional behavior and complicates cooperation within an organization when the budget is used for performance measurement and setting personal targets.

2.2 Beyond Budgeting

Over the last decades it has been claimed that traditional budgeting has lost its relevance to the current business environment and no longer meets the needs of managers (Rickards, 2006; Goode and Malik, 2011). In response to this researchers and practitioners has developed several alternative solutions. Among these are zero based budgeting, better budgeting, beyond budgeting, rolling forecasts and activity-based budgeting.

This thesis researches the potential benefits of implementing a solution based on theory from Beyond Budgeting.

Beyond budgeting is an alternative model to the traditional budget process. It's not only about discarding the traditional budget, but to establish a set of leadership and process principles (Bogsnes, 2009). The model originates from Jeremy Hope and Robin Fraser's research in the late 1990s, which lead to the foundation of the "Beyond Budget Round Table" (BBRT). This network founded in 1998 by Jeremy Hope, Robin Fraser and Peter Bunce in response to growing dissatisfaction and frustration with traditional budgeting (bbrt.org, 2016). According to Bogsnes (2009) currently over 100 companies has joined the network and implemented models according to Beyond Budgeting or are working on it.

The leadership and process principles of Beyond Budgeting are as follows (Bogsnes, 2009);

Leadership Principles

1. **Customers.** Focus everyone on improving customer outcomes, *not on hierarchical relationships.*
2. **Organization.** Organize as a network of lean, accountable teams, *not around centralized functions.*
3. **Responsibility.** Enable everyone to act and think like a leader, *not merely follow the plan.*

4. **Autonomy.** Give teams the freedom and capability to act; ***do not micromanage them.***
5. **Values.** Govern through a few clear values, goals, and boundaries, ***not detailed rules and budgets.***
6. **Transparency.** Promote open information for self-management; ***do not restrict it hierarchically.***

Process Principles

7. **Goals.** Set relative goals for continuous improvements; ***do not negotiate fixed performance contracts.***
8. **Rewards.** Reward shared success based on relative performance, ***not on meeting fixed targets.***
9. **Planning.** Make planning a continuous and inclusive process, ***not a top-down annual event.***
10. **Controls.** Base controls on relative indicators and trends, ***not on variances against plan.***
11. **Resources.** Make resources available as needed, ***not through annual budget allocations.***
12. **Coordination.** Coordinate interactions dynamically, ***not through annual planning cycles.***

As one can see through these principles, it's not only about the budget itself, but about the way of managing a company as a whole.

As to be discussed later, the relevant principles for this thesis are BB's process principles. These involve the following as reviewed by Hoff (2009):

Goals: goals are set with the purpose of maximizing both short and midterm result potential. It's important that employees are not evaluated in relation to these. The goals are based on what the individual employee and division think they can achieve. BBRT believe this only is possible if the goals not are evaluated like in a traditional budget. In the budget process targets are subject to discussion, which often ends with targets that are the results of compromises. Goals should be measured against relative improvement in relation to external or internal benchmarks, and not fixed budget targets. By comparing to equivalent internal divisions, external divisions or activities the organization can avoid the "this is impossible" mentality, since others actually has achieved the goal.

Rewards: reward shared success as mentioned above based on relative performance, not on meeting fixed targets. It's recommended that rewards are achieved through team performance,

and not through individual performance to motivate for best possible cooperation. One important point is that performance evaluations are done in hindsight by qualified employees. Criteria's for rewards are thereby not to be based on predefined fixed targets which are subject to discussion.

Planning: make planning a continuous and inclusive process, not a top-down annual event. One important reason to make planning a continuous process is that the calendar year seldom will be an appropriate timeframe to govern an organization by. Projects, strategic goals and the implied action plans almost always have targets stretching over several years. Another valid point is that leaders and teams should focus on creating customer and shareholder values, not predefined targets set by a budget process. BBRT claims that when leaders and teams no longer follow an annual plan, they automatically get more focused on change in market conditions, and are thereby better prepared to act accordingly.

One way of follow this principle is to use a rolling forecast as management tool instead of the traditional budget. A rolling forecast is projections of consolidated income, cash flow and capital expenditures for the company (Sorvari, 2010). Commonly it's updated quarterly and looks one year ahead to foresee changes in sales, profit, costs and investments.

Controls: base controls on relative indicators and trends, not on variances against plan. BBRT advises that there should be developed multilevel reporting and that performance should be reported as soon as possible after period end. Its further recommended that the reports show developing trends, accumulated average figures, rolling forecasts and KPI's that shows relative improvement compared to previous period, last year or even further backwards. Year and strategic goals also to be included, and these should be adapted individually to each organization. BBRT recommends further that performance is monitored by management through explanations of deviations ("Management by Exception").

Resources: resources should be available as needed, not through annual budget allocations. A key point in BBRT's model is that cooperation is based on trust. Top management establishes frames for under-divisions to follow, which are measured against KPI's. Routines for investments should also be established. Normally operational leaders will operate within given investment frames, and as long as they operate within their given frames great liberty to act on their own is to be given. Another point within the model is that decisions regarding investments in capital

expenditures should be a continuous process which get reviewed by quarterly evaluations and not predefined by an annual budget process.

Coordination: Coordinate interactions dynamically, not through annual planning cycles.

BBRT's model is strongly customer focused and also highlights that cross-divisional cooperation should be facilitated. Resources should be made available based on what the customers really need, not based on what the individual division requires. As the organization no longer should have a fixed annual budget, BBRT claims that this forces leaders and teams to coordinate effort according to what the market and customers requires at any given time.

2.3 Evaluation of theory contributions

Even if Beyond Budgeting is argued to be a better solution than the traditional management system of budgeting, several criticisms are raised against it.

One of these criticisms is that the organization will have no framework for planning, coordinating and controlling its activities. The organization might thereby lose its direction without detailed plans of its current position and future goals (CIMA, 2007).

Hoff (2009) raises several other points of criticism against Beyond Budgeting;

1. Beyond budgeting seems to be most focused on result P&L reporting, and organizations referred to which has implemented Beyond Budgeting largely has kept financial plans like liquidity budgets. For many organizations liquidity is a great challenge which has to be planned and controlled carefully and is very difficult to manage without detailed budgets.
2. Part of the rhetoric of BB is that management assumes that the employees are always interested in goals with some slackness, and that this is due to the budget. This is related to how leaders perceive their employees, and based on McGregors X and Y theory. These employees are defined by McGregor as X workers, and that leaders get what they deserves. If a leader sees his employees as underperforming this might lead to a self-fulfilling prophecy. Theory Y-employees are the opposite, and takes responsibility and

initiative. If a leader facilitates for these capabilities then this is what the Y-employee can achieve. BBRT is based on X-worker mentality, and that budgets are developed on low ambitions. If management expects that they have most X-categorized employees, the largest problem might be within management itself and not the budget.

3. The impact of corporate culture is probably underestimated in regards to its influence of behavior, and thereby the need for budgets. Handelsbanken is referred to as a prime example of how well it can go if the budgets are discarded. Jan Wallander, former Handelsbanken CEO, claims that one factor that has not been highlighted when managing without budgets has been discussed, and that is the strong cost-consciousness which is incorporated within Handelsbanken. Cost budgets have therefore never been a necessity in Handelsbanken. As there are great differences in corporate culture the question whether budgets are necessary thereby might depend largely on the individual demand for detailed management tools.
4. BBRT seems to assume that tactical governance is supported by own divisions for strategy development, “best practices”, and so on. Many of the corporations described by BBRT are fairly large, with divisions that can maintain strategy development and internal and external benchmarking. Other smaller corporations demands divisions to handle wider work scope, and lack internal divisions or external benchmarks to measure against. This argues for maintaining the budget as management tool within the smaller organizations. But it is noted that it is expected that the largest corporations which has the greatest need for budget reforms, in addition to be the ones who have organizational capabilities to implement the changes.
5. BBRT underestimates the value of a well-planned periodical budget process. Annual planning, strategy and budget meetings are often held outside the corporations own sites, and can provide a time-out from operational disturbances. This implies that one can focus other and higher levels of organizational challenges than the daily duties includes. The basic concept of BBRT’s model includes a continuous process. A relevant question then

might be if the employees are mentally ready to adapt the new situations and challenges in an otherwise hectic schedule, or if the “time-out” is needed time to time.

6. The need for budgets will probably increase further down in organizations. Many divisions are probably managed through an annual cost path, which often is given by a cost frame. BBRT claims that fixed cost can be controlled by a few KPI's, expressed in example by cost per produced ton. This mixes fixed elements (the cost) with a dynamic element (volume), this can result in control issues if the volume gets volatile.
A relevant question is thereby if organizations can manage without budgets for fixed cost or within projects.
7. BBRT's statements are not specific about applicable business areas. The need for a budget will probably vary depending on the organization and where it is placed in the supply chain. Another factor to be considered is how stable or unstable the given market conditions are.

2.4 Missing theory

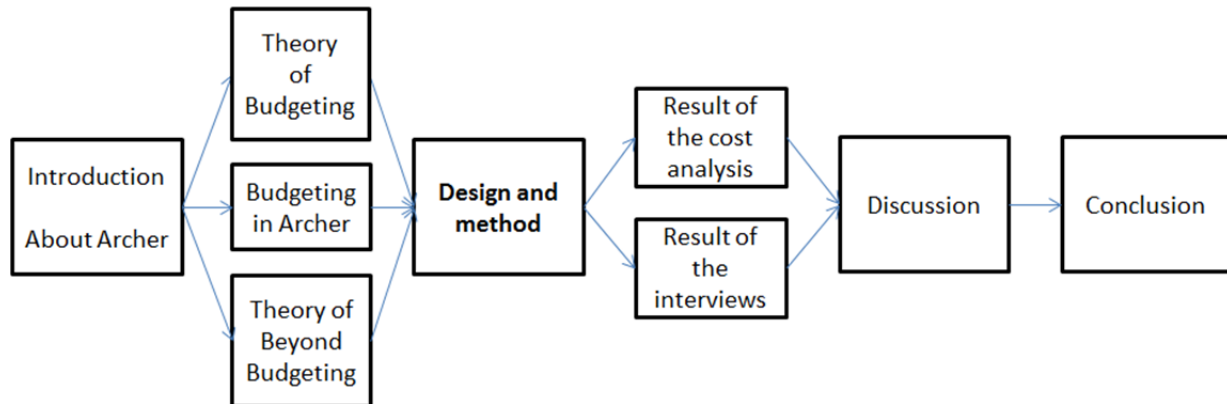
Throughout this chapter an introduction to the traditional management system of budgeting has been given, followed by criticism which claims the budget to be too cumbersome, expensive, and slow as well as implying potential negative incentives of “gaming the numbers”. At the end of the chapter criticism against Beyond Budgeting was also raised. Beyond Budgeting was introduced as a potential better alternative to the traditional budget process. BB includes both leadership and process principles, but the further discussion will be limited to the process principles regarding the budget process.

Theory from Beyond Budgeting refers to several cases of implementation. I.e. Bogsnes's book “Implementing Beyond Budgeting” (2009) refers to the oil company Statoil, the petrochemical business Borealis and the bank Handelsbanken. Fraser & Hope (2003) also refers to several other companies like banks, a petrochemical company, a distributor, a car manufacturer, a charity, a brewer, a furniture retailer, a truck manufacturer and several others. But little theory has at this point been identified to speak directly of oil service companies or their given market conditions.

This thesis will thereby aim to research the potential benefits of Beyond Budgeting within an oil service company and to discover whether the criticism against Beyond Budgeting is valid, with a limitation to explore the process principles of BB within the oil service company Archer. The process principles involve discarding the budget process and make planning a continuous and inclusive process, set goals on continuous improvements, rewarding shared success based on relative performance, and making resources available as needed.

III RESEARCH METHODOLOGY

This chapter describes research design, scientific grounding, credibility criteria's, choice of method and method of data collection both for the cost analysis and the interviews. A discussion of challenges with the data collection will follow.



3.1 Research design

To answer the research questions it is necessary to use a superior execution plan which is feasible practically and applicable to the problem at hand. This plan is often referred to as the research design. The research design has to be customized for each research project, and to which resources are available (Ghuri & Grønhaug, 2010). Choice of method will have implications for which kind of data one is to collect, and to how these are to be collected.

This chapter introduces the most known research designs and a conclusion of chosen design.

3.1.1 Scientific grounding

There are three main types of research designs, explorative, descriptive and causal.

Exploratory design

An exploratory research design is suitable for research questions where more information is the main goal. The main purpose is to acquire knowledge, insights and ideas about a given topic.

According to Iacobucci & Churchill (2010) an exploratory design serves as a good method to

break down larger indefinable research questions into smaller, more precise ones, ideally in form of specific hypotheses. In an exploratory design there is a need to research and collect data about what's written earlier about the subject in form of literary studies. The design is most commonly built upon secondary data, but collection of primary data may also be needed. This is often done by in-depth interviews.

Descriptive design

Descriptive design is used when an analyst already has basic knowledge about the subject. The purpose is to describe a given situation or problem. The method is often based on quantitative techniques of analyzing, making it a more precise design than the explorative.

Descriptive design can for example be used to identify the frequency of how often a phenomenon occurs, or the relationship between two variables. Data collections are usually made by surveys or observations (Iacobucci & Churchill, 2010)

Causal design

The purpose of the causal design is to explain causal connections, and thereby investigate the cause and effect relationship which can be observed through use of experiments (Iacobucci & Churchill, 2010).

In an experiment the researcher has to be able to manipulate and observe one or more variables to study the effect these have on one or several outcomes. The researcher has to control for the effect of possible other variables as well. This is done by keeping each variable constant in a systematic order. According to Gripsrud et al. (2010) experiments has a central role in the causal design as it provides verification about a causal relationship.

3.1.2 Credibility criteria - validity and reliability

The scientific method is based principles of validity and reliability. The quality of the research is dependent how valid and reliable the collected data's are. The terms thereby have the purpose of giving insight to the precision of the data.

Validity is about whether the researcher has succeeded in obtaining results that are of significance for the current research question, and if the research question satisfactory measures what it intends to.

Internal validity reflects the extent the causality in the survey is up to standard, while external validity concerns the extent the results of a study can be generalized and transferred to other similar situations (Gripsrud et. al, 2010).

Reliability is about the degree trustworthiness the results have. This implies that the random errors which occur by a repeated survey have to be as small as possible for the survey to be reliable.

3.2 Choice of method

The challenge with choice of design lies upon what could best answer the purpose of a thesis.

As the purpose of this thesis is to research how much resources an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution an explorative design based on primary data is considered most suitable. A qualitative approach is therefore deemed the most useful.

An important benefit of using a qualitative method compared to other methods is that it provides increased knowledge through studying the research question at a deeper level, leading to better understanding of the context and overall picture (Johannesen et. al 2011).

One should still be critical of the choice of method in the thesis. Criticism against a qualitative approach is that it can limit the ability to generalize the results of the researched questions.

The first step will be to analyze the actual cost the budget process implies in Archer, based on hours written by cost controllers and estimates from other employees and leaders. Interviews with leaders in Archer will follow. The leaders will be presented with result from the analysis and theories about the budget and Beyond Budgeting, giving knowledge and a better understanding of the subject with the aim to give them a better ability to respond to the questions asked. This is to

study opinions and aspects around the budget process with the aim to give necessary input to give an answer to the purpose of thesis.

3.2.1 Qualitative data collection

Qualitative research can be based on several collection methods. This might be observation, analysis of documents, depth interviews or focus group interviews. Based on ease of access to data, for this research the most suitable method is considered to be a cost analysis in combination with following depth interviews of leaders at different levels or positions within Archer.

Data collection – Cost analysis

The first part of analyzing actual cost associated with the budget process is to identify employees involved in the budget process and collect data on hours spent from all these. All cost controllers were asked to write hours used on the budget during the process. This was agreed either per mail or conversations before the 2016 budget process started in autumn 2015. As the cost controllers are the ones who actually build the budgets for each division, they are the ones spending most time and thereby driving the cost in the process. By asking the controllers to write hours in advance of the process this will give as accurate as possible estimate of the cost, increasing reliability in the results.

Seven cost controllers were identified to be involved in the process. They were to document time spent divided into personal time and time in meetings with leaders. Time sheets were sent to the controllers in advance of the process (appendix 8.1). In this way one could estimate the hours used by leaders of each division without involving the leaders directly, to avoid too much organizational stress regarding the thesis. Time sheets were collected by end of budget process mid February 2016.

Sixteen leaders were identified to be involved in the process. Hours from four of these was collected by mail and based on estimates from each person in hindsight in mid February 2016. For the eleven remaining leaders time spent is estimated on the basis of meetings recorded by the cost controllers.

For other employees giving input to the cost controllers, totaling 24 employees, they were asked to give an estimate per mail in hindsight mid February 2016. Due to the number of people at this level there was not any opportunity to send out time sheets to all these employees. As these employees are not expected to contribute by a significant amount of time, estimates in hindsight are considered to give sufficient accuracy.

All who has a considerable input or role to play in the budget process has been included in the analysis giving an as accurate as possible input on hours used.

To complete the analysis there is also the need another factor, salary for each person. This is to be collected from the payroll department. Factors included are annual salary, other salary, bonus, pension cost, and company payroll tax (AGA). Sum salary is divided by hours per FTE of 1850 hours, giving a budget cost per hour per employee. As the salary factor is based on input from the payroll department, full reliability by this factor is expected.

The purpose of the cost analysis is to get an overview of the number of employees associated with the budget process and to calculate an approximate estimate of cost involved. As it will most likely be difficult to obtain any figures from other competing firms within the oil service industry, the aim is to research if leaders are aware of how restraining the budget process is within the company.

For the purpose to research budget cost awareness an approximate estimate is considered sufficient. Even if some of the variables included in the calculation are based on estimates, sufficient accuracy is considered to be achieved in order to meet the calculation's purpose.

Data collection - Interviews

The second and main part of collecting data will be based on one-to-one interviews of four leaders at different levels in Archer.

Qualitative interviews can essentially be carried out in two ways, by structured or semi-structured interviews (Saunders et al. 2007). Structured interviews imply that all interview objects are presented with the exact same questions, while semi-structured interviews are based on an interview guide. The benefit of a semi-structured interview is that it provides some degree of

flexibility and the respondent can influence the direction of the questions, thus enabling to a larger degree of viewpoints not previously considered. An interview guide also provides a basis which gives the same direction to all interviews, and enables the key parts to be compared in hindsight. A semi-structured interview method is chosen, which gives better opportunity to explain the background for each question if the interviewed leaders should be missing insight to answer satisfactory.

When interviews are used it is important to be aware of what can affect the quality of the data collected. In semi-structured interviews the data quality is linked to two terms which are reliability- how reliable the data's are and validity which is the degree of trustworthiness. (Saunders et al. 2007).

To enhance reliability it is important that the interview object is given a thorough description of context. There should also be an evaluation of whether the same observations had been done if another researcher had carried out the interviews.

The data used are result of conversations with four leaders from different levels in Archer, which is considered to be sufficient to gain broad insight to the questions asked. This is employees who in their position deals with the budget as management tool as part of their job, and that are rewarded based on PMR targets based on budget figures. All were leaders with personnel responsibility with the title of director, manager or cost controller. These factors considered the reliability of the data is deemed significantly reliable.

Validity reflects meanings and opinions that the leaders actually obtain. All names were anonymized, with the purpose to eliminate any barriers against freely speaking about negative budget incentives, PMR targets etc. The anonymity was informed in advance. The leaders also seemed comfortable by sharing their opinions, and did not seem to withhold any opinions.

Validity of the interviews is thereby also considered sufficient.

An interview guide has been made containing questions regarding the budget process in Archer. In addition some theory about beyond budgeting as well as the result of the cost analysis was presented and shown to the interviewed. All leaders were presented with the same questions and theory.

The four interviews were carried out 19th, 20th, 21st, and 27th April 2016 face to face at Archers meeting room facilities in Travbaneveien 3, Forus in Norway. All interviews lasted approximately 1 hour.

As all leaders involved are Norwegian, as is the author, so the interviews were carried out per native language. An audio recording were made for backup purposes, but answers were noted directly together with the interview object in English to avoid any translation issues, also to avoid answers out of context.

Interview guide

It was necessary to give the interview guide a thorough consideration to ensure it served the purpose of giving relevant answers to the research questions and to ensure a link to the theory.

The interview guide included the following:

- Summary of the cost analysis
- Questions about implementing an alternative solution than the current budget process in Archer
- What the budget currently is used for
- If the process could create negative incentives in Archer
- Whether the process is too slow to follow the current volatile market situation
- If the budget is necessary to get an overview of forthcoming capex investments
- Theory from beyond budgeting
- If Archer could benefit from implementing another solution
- Why Archer still has a budget process

3.2.2 Challenges of the data analysis

Challenges with the cost analysis:

Accurate hours used is only given by the cost controllers, as these wrote hours by timesheet during the budget process. These are the key personnel in the budget process, and as they wrote hours throughout the process high reliability is expected.

Hours used by 11 of 16 leaders identified are only reflected by meetings with cost controllers and are thereby represents only estimates. Hours spent by these leaders regarding the budget in their own time are excluded. Actual leader time expenditure is thereby expected to be higher than calculated, increasing the cost result.

For the remaining 5 of 16 leaders estimates were also given in hindsight, expected not to be totally accurate either, but does include time spent including own time.

Of the 21 employees who give input to the cost controllers, 9 did not respond. The non-respondents were given an estimated time based on the ones who responded, reducing accuracy in calculation. However these employees do not reflect a majority of cost implied by the budget process, thereby this should not significantly affect the total estimate.

Time spent at corporate level reviewing and ensuring correct ERP uploads are not included, as the thesis is limited to the Norwegian entities. This would also increase the cost calculated if it was included.

Challenges with the interviews:

A challenge with the interviews is to achieve desired correlation between questions asked per interview guide, and the research questions within the thesis.

As the interview objects do not have a complete insight to the background of the thesis and its research questions, the questions asked was to some extent interpreted differently by the different leaders interviewed. A discussion and explanation of what some the questions actually was meant to answers was often needed to obtain sufficient reliability.

In hindsight the interview guide and its question admittedly could be written in a better way, but overall its' aim to give answers enabling further analyze the research questions by the thesis was achieved satisfactory.

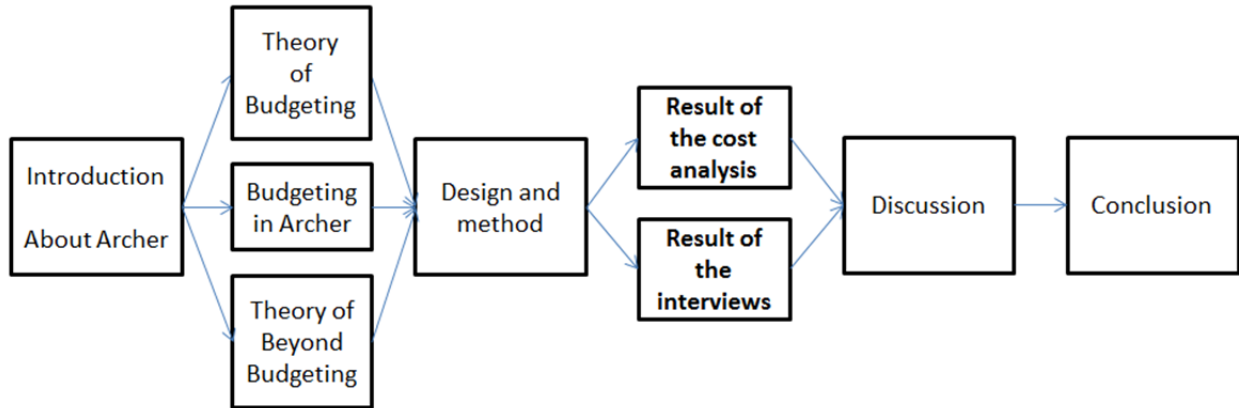
3.2.3 Ethical research aspects

The interview objects were asked and informed about the audio recordings and anonymity in advance of the interviews, thereby following ethical principles of voluntarism and anonymity, which is important to create transparency and mutual respect.

Recorded and estimated hours per employee in addition to salary per employee are not presented in detail since this is considered sensitive information.

IV RESULTS

This chapter first presents the result of the cost analysis and then describes the result from the interviews.



4.1 Cost analysis

Of the onshore personnel in Archer AS, Archer OilTools AS and Archer Norge AS a total of 47 employees were identified to be involved in the budget process for 2016.

Collected and estimated hours from cost controllers, leaders and other employees gave a total 1642 hours spent in the budget process for Archer Norge AS, Archer AS and Archer OilTools AS for the 2016 budget. Average hours spent by the cost controllers are 120, for leaders 30 and for other employees 13.

Based on specific salary for each of the involved employees for 2015, the total cost is calculated to be KR 1.329.125, or USD 153.621 based on the currency exchange rate of 8.652 NOK to USD (26.02.2016).

Identified employees involved in the budget process		47
Total hours recorded or estimated:		1 642
Average cost controller hours:		120
Average leader hours:		30
Average hours by other employees:		13
Total estimated cost i NOK	kr	1 329 125
Total estimated cost in USD (fx. 8.652)		\$153 621
Revenue (2014) - Archer AS & Archer Oiltools AS (fx. 6.3006)		\$538 361 426
Person days		219
Person days per billion dollar revenue		407

Note that this result should be considered as a low estimate as discussed previously in section 3.2.2.

The analysis only includes cost associated with creating the budget and not cost involved by later explanations of deviations against budget, or the use of budget for other purposes.

4.2 Interviews

The goal of the interviews is to present the findings from the cost analysis and negative aspects identified with the budget process from the theory section to research if these aspects could be present in Archer, in addition to answering the remaining research questions about the budget process in Archer.

The four interviews were carried out April 2016, and the included the following results per question;

1. Cost analysis; what would you expect Archer’s Norwegian entities annually uses to produce a budget, related to salary cost? And how many people do you expect to be involved in Norway?

This question was asked with the purpose to research the internal assumptions of how demanding

the budget process is, and if the leaders were aware of the size of resources and personnel involved.

The cost implied was expected by almost all leaders interviewed to be lower than the calculated estimate of NOK 1.329.215 with the answers of 300knok, 382knok, 1mnok and 1.3mnok.

All expected less people involved than the identified 47 employees. The answers were 15, 17, 25 and 35.

2. Do you see this cost as worth it, given the fact that Corporate no longer requires explanations monthly on deviations against budget?

The question was linked to the budget purpose of measuring divisional performance against actuals.

All leaders considered the budget as an unnecessary tool for this purpose and did not see the value added versus cost implied when only considering this purpose.

3. Would you expect this cost to be lower if Archer were to implement an alternative solution to the budget?

All leaders expected an alternative solution to be more cost efficient, and one estimated a possible saving of 50% if the detail level included in an alternative solution was set at a higher detail level than the current budget solution.

4. If Archer had implemented an alternative solution, would you expect this to free up resources enabling the involved employees to focus on more important tasks?

This question is indirectly linked to the previous one and is indirectly answered by this, but it is also concerned with to the amount of personnel involved in the process, an whether an alternative solution could free up some of these resources to focus on more important operational tasks.

All leaders expected that an alternative solution to the budget would free up resources, especially operational resources included in the process. But it was suggested that key personnel included in the process, hereby the cost controllers, might only get reduced overtime by implementing

another process, and not directly much more working hours to spend on other tasks, as an alternative solution also would involve some amount of work.

5. Do you use the budget throughout the year, in case, for what?

The budget in Archer was identified used for the following purposes;

- PMR targets
- Tender process, cost basis
- Cost control
- Divisional reports explained against budget, both for operational divisions and for support functions
- Verification of personnel utilization in some divisions, i.e. engineering
- Overview in contract and sub-contract negotiations for support functions
- Tool for leaders to learn about business, hereby cost and revenue in detail
- Impairment testing
- Covenants/Cash flow forecasting

6. With the current market situation Archer is in, a situation which is rapidly changing and totally given by what the oil companies does, do you still see the budget as a good way for Archer to estimate future outcomes related to revenue and cost, or is the process to slow?

All leaders concluded that the market situation Archer currently is given implies that a yearly budget process is too slow to follow the rapid changes. One also expressed the opinion that the process to start too early in autumn to have relevant assumptions for the coming year. The budget is not used for board or corporate level reporting as the “revised forecast” is already implemented as a solution to keeping up with the current volatile market conditions.

But the leaders noted that the budget still was relevant for cost control purposes.

7. Do you see the factors set in the PMR reflecting budget numbers to achieve bonus to be fair, or do you see the possibility for managers to have incentives to “game the numbers” in Archer as claimed by theory? And do you see the “use it or lose it” mentality to exist in any degree in Archer?

Towards the negative incentive of “gaming the numbers” all leaders admitted that this could exist in Archer based that the PMR targets are set by budget figures.

Regarding the “use it or lose it” mentality, there was different opinions. Two leaders expected that this could exist in Archer, but one only identified this towards the IT department as this leader stated “as they see the budget as a frame for what they can do and spend for the next year.” The last one did not see the “use it or lose it” mentality to exist at all in Archer.

8. As known every capex investment in Archer requires an AFE, regardless or not the capex has been included in budget. Do you still think budgeting of Capex is a necessity?

Three of four identified an overview over forthcoming capex investments as necessary tool to plan investments. The fourth did not see the necessity of budgeting Capex for operational purposes. Capex elements that are not required for maintenance elements were identified to have a direct link to future growth in revenue, thereby an overview or similar was identified as a necessity to be able to plan business ahead. But note that capex elements are also part of the “revised forecast”.

9. Do you still see the need for a budget process within Archer, or would you see a benefit from discarding the budget process setting targets according to theory from Beyond Budgeting?

All leaders recognized an advantage for Archer to discard the traditional budget process and set PMR targets according to theory from Beyond Budgeting.

One leader stated that the potential benefit from another process was dependent of whether the part of the traditional budget process of “learning the business” could be transferred to an alternative process or not.

It was mentioned that there would be a need for another tool to be able to measure performance and cost, but that this could be done in example through rolling forecasts.

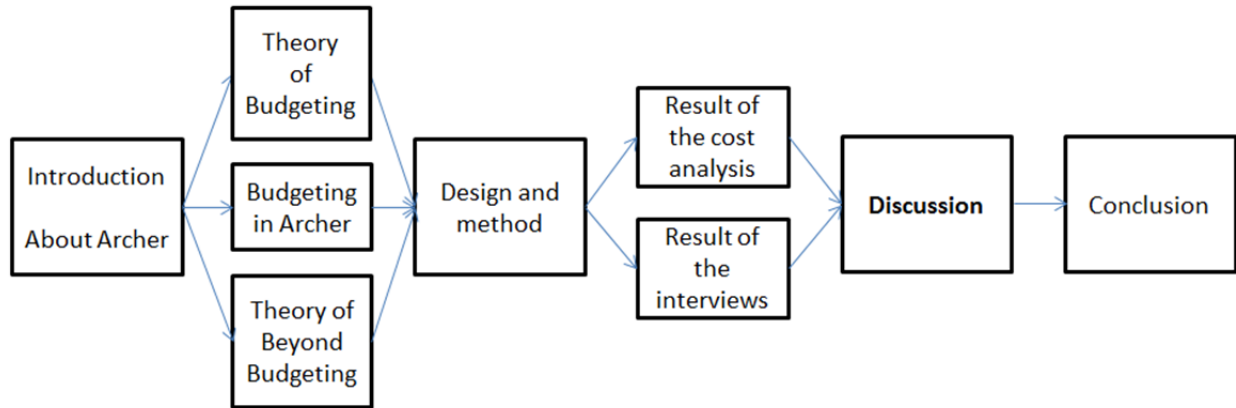
10. Why do you think Archer still has a budgeting process?

The following reasons to why Archer still has a budgeting process was identified;

- It's never been on the agenda to change the process
- There are many stakeholders which demand input
- Financial requirements; hereby expected cash flow on covenants required by banks, and impairment calculations built 4 years ahead based on budget required to be audited.
- The need for cost control and awareness of cost in relevant teams
- Leadership style; people like to have control at a detailed level
- Historically high turnover in top level management
- No strong opinions about the budget even if the negative aspects of the process has been recognized
- Leaders which has recognized the negative aspects has not been in a position with power to change the process
- Might not be an important enough issue at top level in the current market situation where other issues with higher regarded priority are on the agenda.

V DISCUSSION

This chapter discusses the result from the cost analysis and the interviews, possible sources of error and which effects these can have.



5.1 Main challenges

The purpose of this thesis is to research how much resources an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution.

The research questions asked were;

- How much does the annual budget process actually cost in Archer?
- Is the budget still a good way to estimate future outcomes related to revenue and cost for an oil service company?
- Is the budget a good way of allocating available funds for capital expenditures?
- Can the budget create negative incentives as claimed by theory, and in that case would Archer benefit from setting PMR targets on other parameters than fixed budget figures?
- Could Archer benefit from discarding the budget process?
- Is it possible to implement an alternative solution to the budget in Archer?
- Why does Archer still have an annual budget process?

A discussion of each question will follow;

How much does the annual budget process actually cost in Archer?

A cost analysis was made based on input from cost controllers, leaders and other employees. The analysis identified 47 employees involved in Norway, and an annual estimate for 1.3mnok for creating the budget itself, note without any estimate of usage or cost control related to the budget in hindsight. Cost at corporate level for review, meetings and consolidation of the budget for the Norwegian entities is also excluded, as the thesis is limited to the Norwegian entities Archer AS, Archer Norge AS and Archer OilTools AS. But it does include consolidation at Norwegian level.

Some weaknesses upon the accuracy of the estimate was identified, but overall the goal with the analysis was to gain insight of what the process cost at an approximate level, and whether there is knowledge about how demanding the process is in the organization or not.

Leaders interviewed generally expected less employees involved and less cost implied by the process. This can be interpreted as one reason to why there has been no effort to change the process, as it's thereby expected that few leaders actually know the amount of resources restrained by the budget process.

Is the budget still a good way to estimate future outcomes related to revenue and cost for an oil service company?

Archer has a hybrid-version of traditional budgeting and rolling forecast used to estimate future financial figures. A budget is annually made, and is a basis for the updated forecasts made each quarter. The rolling forecast is not used to full extent, as it's only a "budget update" which goes till year end, and not moving i.e. by 12 months which a "rolling forecast" is meant to include by theory. Archer's forecast is thereby a "revised forecast" (Barrett & Fraser III, 1977). Monthly reporting at corporate level is done by explaining deviation in actuals versus the revised forecast.

As claimed by BBRT the traditional annual budget process is too slow to follow the current market conditions. Factors identified as rapidly changing in the current market are currency and oil price. These indirectly affect assumptions of expected revenue such as operating rigs offshore, demand for rental of oil tools and engineering services. These are all reasons implying that an annual budget process can't follow the market conditions Archer currently is operating in.

Leaders interviewed all agreed to that the current budget process is outdated and too slow to follow these conditions, and the budget process thereby was concluded to be an inexpedient way to estimate revenue and related cost. It was also noted that the budget process might start too early in autumn to be based on accurate input from customers.

The revised forecast which also is used by Archer was identified as a necessity to follow the market changes fast enough to be able to act accordingly.

But for cost and cost control, the budget was still identified as an applicable and useful process. This was expressed for both support functions, such as finance and IT and for operational divisions.

The research question refers to “oil service companies”, and not explicitly to Archer. When it comes to the transferability of these findings to other oil service companies it expected the same conclusion for other companies who operate in the same market and still uses the budget as tool for measurement of financial performance.

Is the budget a good way to plan and allocate available funds for capital expenditures?

Archer has a hybrid-version of traditional budgeting and Beyond Budgeting related to capital expenditures, as Archer has an AFE process which implies all investments in capital expenditures to be applied for in advance and approved per object, thereby the budgeting of capital expenditure in Archer is only used for cash flow planning purposes.

Beyond Budgeting argues for making resources available as needed, not through annual budget allocations (Bogsnes, 2009). Archer has already implemented a solution which reflects this principle of BB. The intention with the interview question was therefore to research whether the budgeting part of CAPEX in Archer was a good way to plan for forthcoming capital expenditures.

The question asked per interviews in relation to capital expenditures has in hindsight been identified as misleading towards the research question, as the question asked was “As known every capex investment in Archer requires an AFE, regardless or not the CAPEX has been included in budget. Do you still budgeting of CAPEX as a necessity?”

Three of four leaders identified the need for an overview of forthcoming CAPEX investments, both for related revenue and for cash flow planning, but this does not answer the question whether the budget is a good way of planning for these investments.

But as factors identified making the budget process too slow to follow the current market concluded by the previous question, it's indirectly implied that the budget also would be a poor way of plan for future capital expenditures.

CAPEX is also already implemented to be part of the "revised forecast". This implies that the budget itself is not needed to give an overview of forthcoming investments as identified by interviewed leaders.

Can the budget create negative incentives as claimed by theory in Archer, and in case would Archer benefit from setting PMR targets on other parameters than fixed budget figures?

Archer's PMR process includes personnel from management level and above to be rewarded by bonus payments based on targets set by the budget. Theory claimed that this "fixed performance contract" can create negative incentives of "gaming the numbers" in order to increase chances for bonus or level of bonus achievements, and a mentality of "use it or lose it" which implies possible overspending.

Towards the negative incentive of "gaming the numbers" all leaders admitted that this could exist in Archer based on the fact that the PMR targets are set by budget figures.

This implies a potential for historic bonus payments to be over-calculated and thereby a possibility for inflated salary cost with negative impact on Archer's results. It also implies the same potential for inaccuracy in budgeted figures and forecasts which is based on budget figures.

Regarding the "use it or lose it" mentality, there was different opinions. Two leaders expected that this could exist in Archer, but one only identified this towards the IT department. One of the leaders did not see the "use it or lose it" mentality to exist at all in Archer, as this leader claimed that there were tight control on cost from management in the recent years.

As the theory about negative incentives is coinciding with the interviewed leaders' statements, the possibility for negative incentives to exist in Archer is considered as very likely.

All leaders interviewed also identified it as a benefit to set targets according to theory from Beyond Budgeting and not on fixed budget figures. A potential drawback to use other targets is that they can be harder to set, and that it would possible require more control from HR. The bonus model as a whole is not further evaluated, even if it's noted that BB argue that reward should be based on shared success.

Archer is thereby considered to have a potential benefit if PMR targets were set on other targets than fixed budget figures, to eliminate the negative incentives identified with the effect of more accurate input to the budget or forecast and possibility to save salary cost by reducing the amount of possible undeserved bonus payments.

Could Archer benefit from discarding the budget process?

Related to the budget process itself, as it includes input and work of 47 employees the leaders interviewed identified a potential benefit for Archer to discard the budget process by implementing a less detailed process, for example a rolling forecast to full extent.

But it's a complex question as many factors have to be considered. These were not discussed one by one per interviews. The budget is used for several purposes, some of which might not be transferrable to a different process:

- PMR targets:

As identified by the previous question, it's considered to be a potential benefit to discard the setting of targets based on the budget. An alternative given by Beyond Budgeting is to reward shared success based on relative performance, hereby against peer's, historical performance or industry figures. The budget is thereby not a necessary process by this factor, and potential benefits of an alternative solution have been identified by eliminating the negative incentives earlier discussed implied by the "fixed performance contract".

- Learning the business:

The current budget process is quite detailed, and requires input from a total 47 employees to

compile in Norway. As leaders are asked for details and have to review their budget before submission, they have to familiarize themselves with financial figures at a detailed level. This is what the leaders interviewed refers to by “learning the business”. This also creates cost control awareness at management level.

Experienced leaders with some seniority within their current responsibilities might have limited benefit from this annual process, but for new leaders or leaders who get responsibility over new business areas it’s considered as a beneficial process.

If an alternative solution, i.e. a rolling forecast had been implemented at full extent the work would be centered on cost controllers to a higher degree. For the company to have a benefit and restrain fewer resources by this process, less details included is proposed. This would require an increased use of cost estimates and fewer details to review.

To create an alternative incentive for leaders to gain the same detailed insight, a suggestion is to set a PMR target on continuous cost improvement. This will create an alternative incentive for leaders to gain detailed insight, as they would thereby be interested in their division’s performance at a detailed level. As previously discussed the bonus model as a whole is not further evaluated and that potential drawback from the model is not researched. If further research concludes that using PMR targets to fill the purpose of “learning the business” is not applicable, Archer might lose some of this benefit of the budget by changing the process. The budget forces leaders to gain detailed insight, but a forecast model might not.

- Tender process:

The budget is used as basis for cost lines in tenders, but one leader stated the he expect cost implied by collecting necessary tender information one by one project would be lower than having an annual budget process for this purpose. Previous tenders can also work as basis for new tenders, and that this to some degree already is how tenders are completed. The budget itself is thereby not identified as a necessity for tenders, and the use of fewer resources by leaving the budget process is thereby seen as a net benefit in regards to solely the tender processes.

- Cost control:

All leaders identified the budget as a suitable tool for cost control purposes. The reason for this is

that even if market factors identified to change more rapid than an annual budget process can cope with, cost lines do not vary in the same pace as the current market conditions. Many cost lines are also “fixed cost”, i.e. rent of office, car leasing or canteen services.

To achieve benefits from using fewer resources by a rolling forecast model, it's suggested by the interviewed leaders that a higher level of orientation is required, and thereby fewer details included. The forecast itself would therefore not fill the requirements on cost control. Another solution to this purpose is thereby required.

Hoff (2009) claims that the need for fixed budgets will increase as you go further down in an organization. As many divisions such as support functions get a budget as a frame for spending. Hoff also refers to the fact that Borealis, which is one of the BBRT's pioneer organizations, has reinstated budgets for fixed cost.

On the other hand, Beyond Budgeting (Bogsnes, 2009) argues for measuring cost by relative indicators and trends, not on variances against the plan (budget). One easy solution would be to measure detailed cost lines against historical performance instead of the budget, and use forecasts for higher level review and performance measurement. KPI's can also be established on parameters like the utilization of personnel.

Fraser and Hope (2003) argue that with no fixed target to meet, there is no need for middle managers to manipulate the figures or present them in any misleading ways as to distort the real picture.

For cost control the budget is thereby not seen as a necessity and other available solutions can be used for measurement. Thereby fewer resources will be restrained by leaving the budget process, and in combination with rewards (PMR) based on other factors than fixed budget figures there should be benefits in regards to cost control. Note that a further evaluation towards not having budgets for fixed cost has not been done. As mentioned the BB pioneer Borealis has reinstated the budget for this purpose.

- Utilization of personnel:

Measuring utilization of personnel is a KPI on revenue versus cost per employee, used by the engineering division to measure performance. On the same principle as cost control, this can also

be measured against historical values a not the budget, which makes the budget neither required for this purpose.

- Divisional reporting:

Archer has implemented a hybrid solution between forecast and budget when it comes to divisional reporting. Reports made to the corporate level, which is the basis for board reporting is made monthly by measuring actual performance against the revised forecast. But many divisions internally still use the budget as reporting tool. The principles discussed on the factor of cost control, would also apply for divisional reporting, and the budget is not considered as a requirement for divisional reporting.

- Impairment testing:

To test fair values of shares in subsidiaries and goodwill, Archer annually makes an impairment test. This is built on budget figures for year one and estimates of future cash flow for the next four years, with year one as basis. The Norwegian accounting standard regarding impairment of fixed assets “NSR F Nedskrivning av anleggsmidler” (2009) states no requirements of budget figures, but only refers to “internal reporting” as requirement. There is thus not identified any statutory requirements stating that impairment tests have to be built upon a detailed budget. A rolling forecast is thereby considered sufficient for this purpose, and the use of fewer resources by leaving the budget process is thereby seen as beneficial with regards to the impairment tests. Potential drawback of using the rolling forecast instead of the budget for impairment tests is less accuracy, due to the basis from fewer details. This potential drawback is not further researched.

- Covenants/Cash flow forecasting:

Treasury personnel reports cash flow forecast to the banks to defend covenants set by cash pool and loans. When the budget is “fresh” they use the budget as basis, but as soon as there is made an updated forecast, this used as basis. There are no requirements from the bank to see the budget itself, or that the cash flow plan has to be set by a detailed budget. A detailed budget is not considered necessary for this purpose either, so an alternative like rolling forecast would fill the requirements set by treasury.

- Forecast basis:

It’s also identified that the budget is currently is used in Archer as basis for forecasts. But as the

forecast does not require the level of detail the budget implies, it's not seen as a requirement. Archer currently uses a forecast form identified as a "revised forecast" (Barrett & Fraser III, 1977). If Archer were to discard the current budget process, a "rolling forecast" is suggested instead of the revised. This implies that the forecast "roll forward" each quarter, instead of only looking till year end.

Note that less accuracy in the forecast model can be implied if it no longer should be built on the detailed budget process. Further evaluation of this possible drawback is not evaluated.

Is it possible to implement an alternative solution to the budget in Archer?

This question is linked to what the budget is actually used for by Archer. The following purposes was identified; basis for forecast, PMR targets, learning the business, tender process, cost control/divisional reporting/utilization of personnel, impairment testing and cash flow forecasting.

None of the purposes has been identified to require a budget process, but even if some potential drawbacks were identified, it is regarded possible for Archer to discard the budget process and implement a model of i.e. rolling forecast to full extent.

Why does Archer still have an annual budget process?

Leaders interviewed identified the following reasons to why Archer still has an annual budget process;

- It's never been on the agenda to change the process
- There are many stakeholders which demand input
- Financial requirements; hereby expected cash flow required by banks and auditors for covenant demands and impairment calculations built 4 years ahead based on budget
- The need for cost control and awareness of cost in relevant teams
- Leadership style; people like to have control at a detailed level
- Historically high turnover in top level management
- No strong opinions about the budget even if the negative aspects of the process has been recognized
- Leaders recognized the negative aspects has not been in a position with power to change the

process

- Might not be an important enough issue at top level in the current market situation were other issues with higher regarded priority are on the agenda at Corporate

None of the mentioned factors regarding why Archer has not put any effort toward changing the budget process earlier are identified towards mandatory requirements for having a budget.

So to the reason that Archer still has an annual budget process might lie in organizational inertia, and that top level management with necessary power to change the process might not be aware of the negative consequences. Operational issues for top level management might be regarded as more important in the current challenging market, and the negative impact of the budget process might not be viewed upon as important enough to address properly. High turnover in top level management also indicates less time to focus on what might be regarded as less important tasks like changing the budget process.

5.2 Implications

The purpose of the budget process was in chapter 2.1.1 explained to be “agreeing upon and coordinating targets, rewards, action plans, and resources for the year ahead, and then measuring and controlling performance against that agreement”

Archer does not use the budget as a management tool at the top level of the organization as identified as the purpose of the process. It’s used for rewards and planning resources a head at one point, but a “revised forecast” is currently used to cover the remaining purposes.

Organizational inertia, high top level turnover and possible lack of knowledge about the negative aspects or resources restrained by the current budget process at top level management was identified as main reasons for not having made any effort to change the process within Archer.

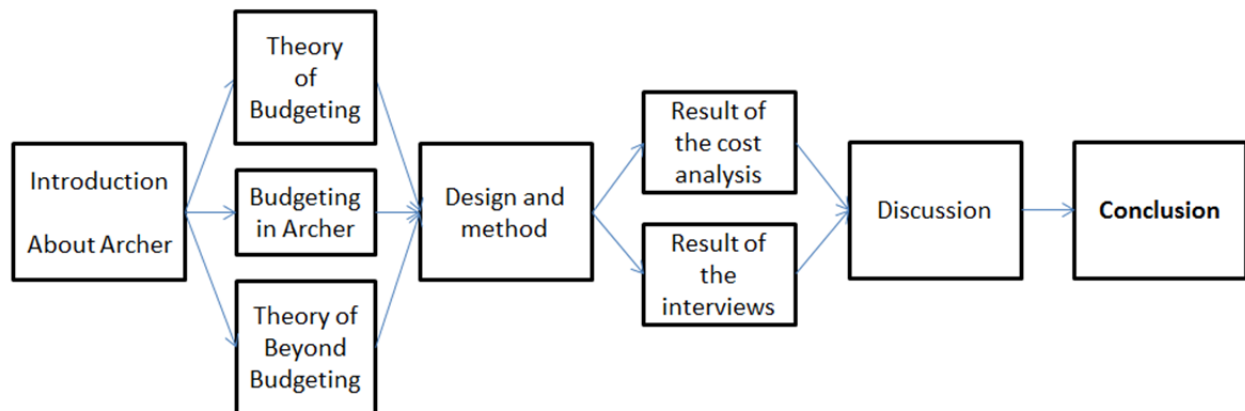
The implications of the results are identified to be a recommendation for Archer to further research the possibility to discard the budget process, since possible positive impacts of a different approach is identified.

The current budget purposes with proposed new solutions are summed up below;

Budget purpose	New solution possible	Potential benefits from new solution	Potential drawbacks
PMR Targets	Yes, can set targets on relative performance, peer's or historical performance.	Negative incentive of "gaming the numbers" eliminated and increased accuracy in forecast figures. Potential "Use it or lose it" mentality would also be eliminated.	Can be harder to find suitable targets to measure against and require more control from HR. Potential drawbacks from having the bonus model only at management level.
Learning the business	Yes: Set PMR' targets for cost control on continuous cost improvement, can create incentive to achieve detailed knowledge	Fewer resources restrained by changing the process.	Possibility to use PMR targets to achieve desired incentives to learn the business not concluded.
Tender process	Yes: Build tenders one by one, or by use of previous ones.	Fewer resources restrained by changing the process.	The budget includes fairly updated information, more costly to build one-by-one.
Cost control	Yes: Measure against historical figures and/or establish KPI's.	Fewer resources restrained by changing the process.	Possible budget requirement for fixed cost.
Impairment testing	Yes: Can use forecast as there are no statutory requirements of a detailed budget	Fewer resources restrained by changing the process.	Less details as basis, possible less accuracy.
Cash flow forecasting	Yes: Already uses forecast for majority of the year.	Fewer resources restrained by changing the process.	Non identified
Forecast basis	Yes: Can change forecast from "revised" to "rolling".	Fewer resources restrained by changing the process.	Less details as basis, possible less accuracy.

VI CONCLUSION

This chapter first concludes the previous findings seen against the research questions, followed by a discussion of whether these findings coincide with previous research or not. Then practical and theoretical limitations within the study are discussed. At last an overview of the thesis is given and finally a discussion with suggestions towards further research on the field.



6.1 Evaluation of hypothesis/research question

The purpose of this thesis is to research how much resource an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution.

An estimate of approximately 1600 hours was calculated restrained by the budget process for 2016 in the Norwegian companies Archer Norge AS, Archer AS and Archer Oiltools AS. A total of 47 employees were included in the process, with the average of 120 hours for a cost controller, 30 hours for a leader and 13 hours for other involved employees. There has not been identified any good comparison to whether this is much or not, but the four interviewed leaders all expected this to be less than calculated and did not see the value added by the process to exceed resources restrained.

The budget process was identified to be too slow to follow the current market situation the company in research currently is given, making the company currently dependent on updated forecasts to be able to act in time on the rapidly changing conditions. Archer does thereby not use the budget for purposes identified with the budget process to be “agreeing upon and coordinating

targets, rewards, action plans, and resources for the year ahead, and then measuring and controlling performance against that agreement”. And the budget itself, even if used for several purposes, is identified to be an unnecessary additional process to the forecast process implemented.

Another solution, such as employing rolling forecasts to full extent has been identified to restrain fewer resources. The possibility to discard the budget and measure divisional performance and cost control based on continuous improvement was also identified. In addition the possibility for impairment tests and cash flow overview to be built on forecast and not budget has also been identified.

It was also identified that the current PMR targets based on the budget which is used to calculate bonus achievements for leaders on manager level and above can imply negative incentives in Archer. A potential benefit from setting PMR targets on other parameters i.e. according to theory from Beyond Budgeting was identified. Setting PMR targets based on other factors than budget figures is recommended even if the budget process itself does not get discarded, as negative incentives implied by the “fixed performance contract” would be eliminated. This would have the effect of both increased accuracy in figures for forecast or budget, and reduced possibility for undeserved bonus payments.

Archer has not done anything with the process, except implementing the “revised forecast” as an addition to the budget. Reasons for not have made any change to this point was identified to be organizational inertia, high top level turnover and possible lack of knowledge about the negative aspects or resources restrained by the current budget process at top level management.

As conclusion to the thesis’s main research question, whether Archer could benefit from implementing another solution than the current budget process, the answer is a preliminary confirmation. Further internal research is recommended towards personnel involved by the process, stakeholders currently using budget input and whether the identified potential benefits exceeds drawbacks.

6.2 Correlation with previous research

Theory refers to several success stories about implementing Beyond Budgeting as management system. Among these are Handelsbanken (Bogsnes, 2009), which discarded the budget and changed their management model in 1970 and has demonstrated to be one of the most cost efficient banks globally. It has also proven to consistently be more profitable than the average of competitors every year since 1972. Handelsbanken has no individual bonus, but a bonus scheme based on shared success. Fraser & Hope (2003) also refer to several companies, but directly describe Rhodia, Borealis and Handelsbanken. Note that the changes these companies has done to their management models are complex, and this thesis only addresses of budgets and rewards aspects.

Organizations which have implemented BB have according to Fraser & Hope (2003) set rewards on how teams perform compared with benchmarks, peers and prior years. Previously they used fixed budget figures. The approaches vary from company to company, but the common factor is that rewards are divorced from fixed annual targets which are negotiated in advance. Rewards are also based on team performance rather than individual performance. The benefit they gained in all cases is reduction in “gaming” behavior, as there is little point of gaming with no fixed contract. In addition these companies believe that they recognize and reward the best performers, not the ones who are best skilled in negotiating achievable budget targets. This coincides with the acknowledgement of existing negative incentives related to PMR targets within Archer, which is concluded by this thesis.

This thesis also identified the budget process to be too slow to follow the current market situation Archer is given. This parallels with the criticism BBRT have against budgets (Hoff, 2009) which claims that budgets are too rigid and prevents quick action if given market conditions are volatile.

6.3 Limitations and possibilities

Results from qualitative studies can be difficult to generalize, which can be explained with the challenge of finding a representative selection of data based on limitation in given time and cost.

Another challenge is to find sensible answers from large and possible unstructured data as well as how to reducing these in way which is usable and understandable (Johannessen et al., 2011).

The thesis is limited to Archer's Norwegian entities Archer Norge AS, Archer AS and Archer OilTools AS. The thesis is based on how Archer uses the budget as management tool and indirectly input for bonus target setting (PMR). Data selections are only based on a cost analysis of these entities and interviews from four leaders within Archer.

The conclusions within the thesis are considered difficult to generalize. But if one could find similarities within other companies towards how Archer manage its organization, it's implied that further research within these companies can conclude with the same result.

The interviewed leaders are placed at different levels at the organization, but the interviews did not include any personnel below managers, or leaders at corporate level above the interviewed. This is an unbalanced selection which is as a weakness with the research the thesis is based on.

6.4 Thesis overview - From head to tail

The purpose of this thesis was to research how much resource an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution. Several further detailed questions towards the current way of using the budget as management tool within Archer was also raised.

The research started by presenting theory about the traditional budget process, criticism against the current budget process and Beyond Budgeting. No theory regards oil service companies or their current market challenge was found within Beyond Budgeting's theory, thereby the need for additional research was identified.

Further an explorative research design based on qualitative data was considered suitable for the thesis. For the question regarding how much resource the company restrains by the process, a cost analysis based on input on hours was completed. Further research towards a potential benefit from implementing another solution than the traditional budget process was done through four interviews of leaders within the company.

The result from the cost analysis estimated a cost total of approximately 1.3mnok and 1600 hours restrained by producing the budget for 2016, limited to Archer's Norwegian entities. There was not done any comparison on the relative size compared to competitors, but it exceeded the interviewed leaders' expectations.

Result from the interviews concluded that the budget process was too slow to follow the current market conditions and that the company is currently dependent on forecasts. Potential benefits from discarding the budget process and setting PMR targets on alternative targets were also identified.

The discussion identified several budget purposes and possibilities to solve these purposes alternatively.

Finally it was concluded that there were potential benefits from discarding the current process and further research within the company was recommended to obtain a final conclusion.

6.5 The need for additional research

As the research only includes limited theory based on Beyond Budgeting and interviews from only four leaders further research is recommended to obtain a definitive conclusion. This should include involvement of personnel who are affected by the budget process, discussions with stakeholders who demand input, evaluation of potential benefits versus identified drawbacks and research of corporate involvement in the process. Theory from other management models than Beyond Budgeting is also encouraged for research.

Further research on the relevance of the negative aspects of Beyond Budgeting identified by Hoff (2009) as applicable to Archer is also recommended.

Beyond Budgeting also advises several leadership and process principles in their management model which are not explored in this thesis. A recommendation towards further research of these principles within Archer is also given.

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VIII APPENDIX

8.1 Time sheet sent to cost controllers

Time keeping sheet sent out to each cost controller:

Hours per cost controller - Archer budget process 2016														
September 15'			October 15'			November 15'			December 15'			January 16'		
	Own time:	Meetings:		Own time:	Meetings:		Own time:	Meetings:		Own time:	Meetings:		Own time:	Meetings:
1 tu			1 th			1 su			1 tu			1 fr		
2 we			2 fr			2 mo			2 we			2 sa		
3 th			3 sa			3 tu			3 th			3 su		
4 fr			4 su			4 we			4 fr			4 mo		
5 sa			5 mo			5 th			5 sa			5 tu		
6 su			6 tu			6 fr			6 su			6 we		
7 mo			7 we			7 sa			7 mo			7 th		
8 tu			8 th			8 su			8 tu			8 fr		
9 we			9 fr			9 mo			9 we			9 sa		
10 th			10 sa			10 tu			10 th			10 su		
11 fr			11 su			11 we			11 fr			11 mo		
12 sa			12 mo			12 th			12 sa			12 tu		
13 su			13 tu			13 fr			13 su			13 we		
14 mo			14 we			14 sa			14 mo			14 th		
15 tu			15 th			15 su			15 tu			15 fr		
16 we			16 fr			16 mo			16 we			16 sa		
17 th			17 sa			17 tu			17 th			17 su		
18 fr			18 su			18 we			18 fr			18 mo		
19 sa			19 mo			19 th			19 sa			19 tu		
20 su			20 tu			20 fr			20 su			20 we		
21 mo			21 we			21 sa			21 mo			21 th		
22 tu			22 th			22 su			22 tu			22 fr		
23 we			23 fr			23 mo			23 we			23 sa		
24 th			24 sa			24 tu			24 th			24 su		
25 fr			25 su			25 we			25 fr			25 mo		
26 sa			26 mo			26 th			26 sa			26 tu		
27 su			27 tu			27 fr			27 su			27 we		
28 mo			28 we			28 sa			28 mo			28 th		
29 tu			29 th			29 su			29 tu			29 fr		
30 we			30 fr			30 mo			30 we			30 sa		
			31 sa						31 th			31 su		
SUM	0	0		0	0		0	0		0	0		0	0

8.2 Cost analysis data calculation

To ensure anonymity specific salary, names and cost per employee has been censored.

Cost analysis - Budget process, Archer AS, Archer Norge AS and Archer OilTools AS												
Names and salary related items are anonymized per line												
	Own time	Meetings	Sum Hours	Salary	Other salary	Bonus 2015	Sum wage 2015	Norwegian payroll tax 14.1%	Pension	Social cost	Sum personnel cost	Price per hour (1850y)
Recorded hours per controller 2015:												
CostController1	80,0	6,0	86,0									
CostController2	90,0	27,5	117,5									
CostController3	70,0	5,5	75,5									
CostController4	250,0	34,0	284,0									
CostController5	86,0	15,0	101,0									
CostController6	14,5		14,5									
CostController7	59,5	12,0	71,5									
Sum	650,0	100,0	750,0	5 246 173	371 350	6 100	5 617 523	792 071	591 129	-	7 006 823	-
Recorded hours per controller 2016, budget load												
process:	Own time	Meetings	Sum Hours	Salary	Other salary	Bonus 2015	Sum wage 2015	Norwegian payroll tax 14.1%	Pension	Social cost	Sum personnel cost	Price per hour (1850y)
CostController1	3,5		3,5									
CostController2	3,5		3,5									
CostController3	34,0		34,0									
CostController4	16,0		16,0									
CostController5	3,5		3,5									
CostController6	4,0		4,0									
CostController7	24,0		24,0									
Sum	88,5	-	88,5	5 246 173	371 350	6 100	5 617 523	792 931	591 129	-	7 007 683	-
Leaders and management, based on recorded hours by meeting with costcontroller or estimate from leader:												
Leader1		6	6,0									
Leader2		6	6,0									
Leader3		5,5	5,5									
Leader4		5,5	5,5									
Leader5		5,5	5,5									
Leader6		5,5	5,5									
Leader7		5,5	5,5									
Leader8		19,5	19,5									
Leader9		5,5	5,5									
Leader10	65	10	75,0									
Leader11		15	15,0									
Leader12		15	15,0									
Leader13	25	12	37,0									
Leader14	56,0	34,0	90,0									
Leader15	135,0		135,0									
Leader16	48,75	7,5	56,3									
Sum	339,8	148,0	487,8	29 103 483	2 576 926	8 399 960	40 080 368	4 258 154	1 266 706	-	45 605 229	-
				29 103 483	2 576 926	8 399 960	40 080 368	4 258 154	1 266 706	-	45 605 229	-
												645 033

Estimated hours by other co-workers in hindsight:	Own time	Meetings	Sum Hours	Salary	Other salary	Bonus 2015	Sum wage 2015	Norwegian payroll tax 14.1%	Pension	Social cost	Sum personnel cost	Price per hour (1850y)	Budget cost		
Co-worker1	3		3,0												
Co-worker2	1		1,0												
Co-worker3	1		1,0												
Co-worker4	5		5,0												
Co-worker5	15		15,0												
Co-worker6	5		5,0												
Co-worker7	1		1,0												
Co-worker8	2		2,0												
Co-worker9	30		30,0												
Co-worker10	40		40,0												
Co-worker11	11,25		11,3												
Co-worker12	26,25		26,3												
Co-worker13	30		30,0												
Co-worker14	18,75		18,8												
Co-worker15	8		8,0												
Co-worker16	13,15		13,2												
Co-worker17	13,15		13,2												
Co-worker18	13,15		13,2												
Co-worker19	13,15		13,2												
Co-worker20	13,15		13,2												
Co-worker21	13,15		13,2												
Co-worker22	13,15		13,2												
Co-worker23	13,15		13,2												
Co-worker24	13,15		13,2												
Sum	315,6	-	315,6	22 736 255	1 331 896	3 001 634	27 069 785	3 515 620	1 942 403	-	32 527 808	-	219 892		
Identified employees involved													Total cost:		
SUM BUDGET 2016 COST													1 329 125		
In USD													Fx. Rate	8,652	153 621
Identified employees involved in the budget process													47		
Total hours recorded or estimated:													1 642		
Average cost controller hours:													120		
Average leader hours:													30		
Average hours by other employees:													13		
Total estimated cost i INOK													kr 1 329 125		
Total estimated cost in USD (fx. 8.652)													\$153 621		
Revenue (2014) - Archer AS & Archer Oiltools AS (fx. 6.3006)													\$538 361 426		
Person days													219		
Person days per billion dollar revenue													407		

8.3 Interview guide

The thesis will at first be explained in short. Result from cost analysis and theories from Beyond Budgeting will be presented through the questions. Names will be anonymized.

Answers will be noted through the interview, but I will make an audio record the interview for backup and control purposes.

Name: (to be anonymized)

Position: (to be anonymized)

Date:

Interview time:

The purpose of this thesis is to research how much resources an oil service company actually restrains by having an annual budget process, and if the company could benefit from implementing another solution, limited to Archer the well company's Norwegian legal entities.

Theories evolved the last decade's claims that the budget is both outdated and creates negative incentives, and thereby refers to other solutions (Bogsnes, 2009), but as Archer still uses the budget as management tool this raises several questions;

1. Cost analysis; what would you expect Archer's Norwegian entities annually uses to produce a budget, related to salary cost? And how many people do you expect to be involved in Norway?

The cost of my analysis for Archer As, Archer Norge AS and Archer OilTools shows that 47 people are involved in the process of creating the budget and that the annual cost is

approximately 1.3million NOK for creating the 2016 budget. Sum hours recorded or estimated is 1642. This does not include reporting or control work in hindsight.

2. Do you see this cost as worth it, given the fact that Corporate no longer requires explanations monthly on deviations against budget?

3. Would you expect this cost to be lower if Archer were to implement an alternative solution to the budget?

4. If Archer had implemented an alternative solution, would you expect this to free up resources enabling the involved employees to focus on more important tasks?

5. Do you use the budget throughout the year, in case, for what?

Two factors which directly or indirectly influences Archer's result in Norway compared to budget are Oil Price and Currency rate NOK vs USD.

From 1.1.2014 to 31.12.2015 the Oil Price dropped 65%

From 1.1.2014 to 31.12.2015 the currency rate between NOK and USD changed 45%

6. With the current market situation Archer is in, a situation which is rapidly changing and totally given by what the oil companies does, do you still see the budget as a good way for Archer to estimate future outcomes related to revenue and cost, or is the process to slow?

Theory claims that the budget creates negative incentives.

In example, an operation manager who has bonus based on result will have incentive to claim expected cost to be high and revenue to be low, in order to achieve bonus later.

Another negative incentive is the “use it or lose it” mentality. Which implies managers to have incentive to spend up to what they are given as budget target, or else the money is lost.

7. Do you see the factors set in the PMR reflecting budget numbers to achieve bonus to be fair, or do you see the possibility for managers to have incentives to “game the numbers” in Archer as claimed by theory? And do you see the “use it or lose it” mentality to exist in any degree in Archer?

8. As known every capex investment in Archer requires an AFE, regardless or not the capex has been included in budget. Do you still budgeting of Capex as a necessity?

Beyond budgeting represent an alternative to the traditional budget process. It does not only argue towards discarding the budget itself, but includes a set of both leadership and process principles;

Leadership Principles

1. **Customers.** Focus everyone on improving customer outcomes, ***not on hierarchical relationships.***
2. **Organization.** Organize as a network of lean, accountable teams, ***not around centralized functions.***
3. **Responsibility.** Enable everyone to act and think like a leader, ***not merely follow the plan.***
4. **Autonomy.** Give teams the freedom and capability to act; ***do not micromanage them.***
5. **Values.** Govern through a few clear values, goals, and boundaries, ***not detailed rules and budgets.***
6. **Transparency.** Promote open information for self-management; ***do not restrict it hierarchically.***

Process Principles

7. **Goals.** Set relative goals for continuous improvements; ***do not negotiate fixed performance contracts.***
8. **Rewards.** Reward shared success based on relative performance, ***not on meeting fixed targets.***
9. **Planning.** Make planning a continuous and inclusive process, ***not a top-down annual event.***
10. **Controls.** Base controls on relative indicators and trends, ***not on variances against plan.***
11. **Resources.** Make resources available as needed, ***not through annual budget allocations.***
12. **Coordination.** Coordinate interactions dynamically, ***not through annual planning cycles.***

The process principles are directly linked to discarding the budget process, with an objective to eliminate the negative incentives discussed and to remove the timing issues reflected by the budget process.

9. Do you still see the need for a budget process within Archer, or would you see a benefit from discarding the budget process setting targets according to theory from Beyond Budgeting?

10. Why do you think Archer still has a budgeting process?

8.4 Interview result summary

	Leader 1	Leader 2	Leader 3	Leader 4
Interview date:	April 19th 2016	April 20th 2016	April 20st 2016	April 27th 2016
Interview time:	50 minutes	1 hour	1 hour 10min	50 minutes
1. Expected budget cost (1.3mnok, 47 involved employees)	1mnok -> 300k below estimate. Expected 25 people involved.	Approx. on estimate 1.3mnok Expected 35 people involved.	NOK 382.500 -> 1mnok below estimate Expected 17 people involved of 37,5 hours	Approx. 1mnok Expected 15 people involved
2. Budget cost considered worth it	No, not worth it for monthly reporting. But for other purposes the cost implied might be worth the work the process includes.	No, not considered corporate requirements and that assumptions change to rapid for the budget to be valid.	No, for many it can be considered as a waste of time.	As a management tool from management level and up it's not worth the cost implied by creating the budget.
3. Expect cost to be lower with an alternative solution, i.e. forecasting	Yes, Archer could possibly cut the cost in half. You could possibly save 50% of the time used by simplifying the input process, templates used and demand less details through a higher level orientation.	Yes, if detail level in an alternative solution could be lower	Yes, I would expect the cost to be lower if implemented i.e. rolling forecast	Yes, definitively.

<p>4. Could an alternative solution free up resources for employees to focus on more important tasks?</p>	<p>Yes, but hard to measure as the hours spent are divided between 47 employees.</p> <p>The key employees in the budget process will get more free time for other tasks, but I expect half of this to be reflected in less overtime, thereby one would not get full utilization from cutting the budget process.</p>	<p>Yes, in the budget process we include operational personnel to give input which has to focus on other tasks than operational in the given period.</p>	<p>Yes, it would free up resources to focus more on operational and other tasks, i.e. strategic.</p>	<p>Yes, resources and hours would be freed for some employees up to focus on more important tasks.</p>
<p>5. What is the budget used for</p>	<ul style="list-style-type: none"> - Reporting - Cost control - Tender process - Impairment testing - Covenants/Cash flow forecasting 	<ul style="list-style-type: none"> - PMR Targets - Cost control - Divisional reports explained against actuals - Verify utilization of personnel 	<ul style="list-style-type: none"> - PMR Targets - Cost control - Explain cost structures, cost drivers and planned spending towards management - Overview in 	<ul style="list-style-type: none"> - PMR targets. - Cost control tool. Cost per FTE per month. Course and travel cost per FTE per month. Deviations against budget are explained monthly for

	- Forecast basis		contract and sub-contract negotiation - Awareness building of cost of services in the team.	operational divisions. - It's also used as a tool to learn the business.
6. Is the budget a good way for Archer to estimate future outcomes related to revenue and cost, or is the process to slow?	<p>Yes, the budget is outdated after 3 months, and the process is thereby too slow.</p> <p>In 2014 Archer only used the budget.</p> <p>In 2015 and 2016 Archer has made quarterly forecast, and is currently dependent on these to be able to act fast enough on upcoming market changes.</p> <p>But I still see it as a valid tool for cost control purposes.</p>	<p>Yes, the process is to slow as the assumptions used as basis for the budget will change monthly. Many input factors regarding revenue is based on estimates and high level assumptions.</p> <p>But for cost control tasks the budget is still relevant.</p>	<p>Yes, it's not agile. An annual budget process can't follow the given market changes.</p> <p>But cost control it's still a healthy exercise and is relevant for measuring actuals versus budget planned.</p>	<p>The budget process starts too early in autumn to give accurate estimates on the first months of the next year, thereby it is outdated before we can use it. The assumptions also change throughout the year making a fixed budget invalid to measure performance against.</p> <p>But for cost control purposes it's still valid.</p>
7. Can factors set in the	<p>Yes.</p> <p>I see that "gaming</p>	<p>Yes, the negative incentives can exist</p>	<p>Yes, the way the PMR is set up can</p>	<p>The incentive of "gaming the</p>

<p>PMR on budget targets create negative incentives?</p>	<p>the numbers” or “sandbagging” can exist in Archer as claimed by theory to some degree, but I don’t see this as directly linked to the PMR targets. But I think this is a leadership issue when it’s not discovered by reviewing management.</p> <p>“Use it or lose it” mentality has been seen towards the IT department, as they see the budget as a frame for what they can do and spend for the next year. As mentioned it’s also seen in operational divisions on capex spending, but as this process has changed to require an AFE for each investment, it’s no longer an issue.</p>	<p>based on how the PMR is structured.</p>	<p>in some situations create incentives which does not benefit Archer overall.</p>	<p>number’s” does exist based on how the PMR is set up.</p> <p>But the incentive of “use it or lose it” is not seen as a negative incentive in Archer as there has been thig control from management on cost the recent years.</p>
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<p>8. As known every capex investment in Archer requires an AFE, regardless or not the capex has been included in budget. Do you still think budgeting of Capex is a necessity?</p>	<p>Yes, budget, overview or forecast is necessary, but not the budget process itself.</p> <p>Overview of planned capex is necessary in relation to related revenue in Wireline, OilTools Platform Drilling and Rental division to be able to plan the cash flow ahead.</p>	<p>Yes, I see the necessity for a Capex overview to see which investments are necessary for the upcoming year.</p>	<p>Yes, budget or overview of Capex is important for planning purposes. The AFE is a good control mechanism for management to stop investments if needed.</p>	<p>No, not a necessity at operational level, the AFE includes all requirements.</p>
<p>9. Do you still see the need for a budget process within Archer, or would you see a benefit from discarding the budget process</p>	<p>Yes, the budget is outdated after three months and I see the benefit from discarding the budget process and use other management principles and process i.e. beyond budgeting.</p> <p>Regarding the</p>	<p>The advantage of the budget process is that the leaders get conscious about the cost implied by business, it's also a driver for ownership towards financial figures for the managers.</p> <p>The process forces leaders to learn business/finance</p>	<p>No, you don't need the budget, but you will still need a baseline, to know the cost elements/cost drivers to measure against, this does not have to be a budget, the KPI's can be measured against previous years, other</p>	<p>No, I don't see the need for a budget process, given an alternative P&L tool to measure performance and cost.</p> <p>Yes Archer could benefit from setting targets according to other</p>

<p>setting targets according to theory from Beyond Budgeting?</p>	<p>negative factors discussed in relation to the PMR I don't see that as an inhibiting factor which demands another process than the budget, but I see that Archer could benefit from setting targets against other goals than fixed targets set by a budget process.</p> <p>Regarding the usage of budget for tender input, I expect cost implied by collecting necessary tender information one by one project would be lower than having an annual budget process for this purpose.</p>	<p>related items at a detailed level. Many leaders have a technical background and could benefit from working with these details.</p> <p>If you could transfer the mentioned advantages into another process, like forecasting, Archer could benefit from discarding the budget as there are too many uncertain factors used as basis for the budget.</p>	<p>divisions or external benchmarking.</p> <p>So, I see the benefit from discarding the budget and set targets, both operational and personal, according to principles of BB.</p>	<p>targets than the current used in the PMR.</p>
<p>10. Why do you think Archer still has a budget</p>	<p>- It's never been on the agenda to change the process</p>	<p>I expect corporate management use the budget to be able to plan ahead</p>	<p>- Leadership style, people like to have control at a detailed level</p>	<p>- Historically high turnover in top level management</p>

<p>process?</p>	<ul style="list-style-type: none"> - There are many stakeholders which demand input - I've never had any strong opinion to change the process, and accepted the tasks related to the budget process as given from higher level management - I've not been in a position where I had power to change the process directly - Might not be an important enough issue at top level in the current market situation where other issues with higher regarded priority are on the agenda at Corporate 	<p>on consolidated level, to be able to plan cash flow, loans etc. and therefore the budget is required by management even if it gets outdated and create negative incentives.</p>	<ul style="list-style-type: none"> - The need for cost control and awareness of cost in relevant teams - PMR objectives - It works as a baseline for forecasting because actuals from previous years does not consider planned upcoming changes - It's a strategic way of planning ahead - It's a way to build cost control culture 	<ul style="list-style-type: none"> - Financial requirements? Cash flow versus Debt
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