

Implementing the Asset Management approach

*Contributing to efficient organizational change at Schiphol Group
following Process Consultation methodology*

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September 2014

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Thesis Information

Subject: *A thesis research following the process consultation method to assist department Airfield Maintenance Services of Schiphol Group with the implementation of the asset management approach*

Duration: March - September 2014

Preface

This thesis is the result of the last half year of my education at Delft University of Technology. In this half year, I conducted a research for Schiphol Group and Delft University of Technology, which has emerged from an interest in organizational change in a technical environment. An investigation of several companies yielded Schiphol Group as the best suited client to conduct this research for. Their department Airfield Maintenance Services, about to implement the Asset Management method, provided an excellent practical case to conduct this study on. It is the goal of this research to combine the thesis work for the Delft University of Technology with a practical application of the study at Schiphol.

In this preface I would like to thank the employees at Schiphol Group for the information they provided to enable me to conduct this study. In particular the management team of department AMS for having the confidence and giving me the freedom to develop the study in the direction I thought was best. Particularly Annemieke Nuesink has helped me a lot with rigorously reading my documents, helping me keep a cool head and supporting me with insight and influence in the organization.

I am also grateful for the support of Robert Verburg, who helped me a lot with steering the research in a meaningful direction. Our discussions, illustrated with metaphors, inspired me and enabled me to see the joy of doing research and the instructive power of writing a master thesis.

Although it first evoked confusion, the detailed feedback of Haiko van der Voort in the final stages of the thesis helped me to improve the usability of the research and resolved an important conceptual misunderstanding.

Conducting this research has provided me the opportunity to learn a lot about the complexity and difficulty of defining, managing and leading change in an organization, and the hardship found in developing a rigorous qualitative research method in social science. Eventually the goal of developing an approach to practically apply scientific knowledge has been achieved. All in all, I am happy with the results, have learned a lot and hope to have provided the university and the company with satisfactory results.

Delft, September 2014

Executive Summary

This study is performed to contribute to efficient organizational change at Schiphol group. The company is currently implementing a technical process improvement method and finds it difficult to engage employees to commit to the change. The question is how to develop an approach that enables the organization to efficiently implement the Asset Management approach, to realize outsourcing of all maintenance tasks to main contractors, and transform the organization to a coordinating- only organization functioning in a new organizational structure.

The method used is process consultation. This method is based on the value of helping. Unstructured interviews form the starting point to find out what the exact problem of the organization is and in which direction help is of best use. This yields a first problem statement and boundaries for a literature research, with which knowledge on all facets of the identified problem area is gained. These facets are factors concerning the content of the change, the context in which the change place (internal and external environment), the process of changing, and the factors expressed by individuals under influence of the change. This knowledge is put to practice in a second round of process consultation which consists of semi structured interviews with managers and unstructured interviews with employees. Based on this information, a further focus area is defined. The main issues appear to be in the actual process of changing the department's structure. A further investigation shows that this process consists of three main elements, the technical content of the change, the way this content is managed and the mindset and behavior of employees involved with the change.

From this model, an approach is formulated to address all factors concerned. This approach consists of two modes of help, providing expert advice and process consultation. The advice addresses the general change factors, the process consultation reveals practical Asset Management and Schiphol specific factors, and is conducted to help change mindset of employees to become more committed to change. In this way, a comprehensive approach is developed to contribute to an efficient organizational change program for department Airfield Maintenance Services of Schiphol Group. The limitation of the method is that although very useful for the practical case, it is hard to develop generalizable findings from the results of this research due to single case and limited scope.

The method of process consultation itself is a method worth to be used more often by managers and consultants, to contribute to organizational change in an efficient way. This thesis ends with a conclusion about the difficulties witnessed in the practical case, and recommendations how to resolve these difficulties.

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1 Introduction

Schiphol Group, the organization in charge of running the Netherlands' largest airports, is under increasing competitive pressure. The company has identified the necessity of cost reduction and increasing efficiency to be able to retain their position as 'Europe's preferred airport'. The priority of management of assets and maintenance has long been subordinate to operations and commerce. A more integrated approach, where commerce, operations and maintenance are equally important is necessary to increase the organizations' efficiency and reduce operating expenditure. A solution for this problem can be found in the Asset Management approach, as documented in the ISO 55000 standard in Asset Management. Currently numerous organizations, for instance the Dutch Ministry of Infrastructure and Environment and the Rotterdam Harbor, are adopting these asset management practices in order to make more efficient use of their assets. The main philosophy of this standard is that assets should make an optimal contribution to the organization's core process. This means the acquisition and maintenance of the asset is optimally adjusted to the performance required. This approach can be described as optimizing *cost- effectiveness* of assets. Cost-effectiveness is the optimal balance between availability, reliability, productivity, level of utilization and accompanied cost (NVDO 2014). Implementing this strategy inflicts changes in the way the organization works. This change concerns a change of mind-set of employees and of work portfolio. Companies implementing the Asset Management standard define how the organization should be organized to be able to facilitate this new way of working. While a new organizational structure and way of working might be clear, the journey towards this goal often is not. This is also the case at Schiphol Group, where departments concerned with Asset Management find hardship in implementing the proposed way of working. This thesis contributes to the improvement of this process by identifying the main concerns associated with implementation of optimization methods like asset management, and provides solutions to cope with these concerns. This research answers the following research question:

How to contribute to an efficient transition method to a new organizational structure, to enable the implementation of the Asset Management approach for Schiphol Group?

The research is based on process consultation methodology (Schein 1990), an approach where the researcher has the objective of helping the organization to jointly identify why the companies' processes are functioning suboptimal, and what should be done to resolve this.

This thesis consists of five chapters. In the introduction the problem is elaborated, which is followed by the formulation of an objective and research questions. In chapter two the methodology is explained. In chapter three results are presented. In chapter four the research is reflected, followed by a conclusion and recommendations in chapter five.

1.1 Schiphol Group

Schiphol Group is an airport development company with Amsterdam Airport Schiphol as most important airport. The company aims to create value for its stakeholders, and relates the activities necessary to achieve this to her core values, being 'reliable, efficient, hospitable, inspiring, sustainable and open'. In the past decades, Schiphol airport has developed itself as a 'mainport' which is more than only an airport with a worldwide network. It is a conglomerate of companies that together deliver services to facilitate aviation, which creates a value stream of people, goods, money, information, knowledge and culture. Amsterdam Airport Schiphol facilitated 468.996 air traffic movements in 2013, these flights contained 57.6 million passengers and 1.5 million tons of freight. In 2013, Schiphol's network reached 323 destinations (Schiphol Group 2013b).

Schiphol Group uses the 'Airport City' formula for the exploitation of Schiphol Airport, which is an approach to airport development based on the idea that an airport should facilitate a seamless link in the travel process, where the traveler is offered all necessary goods and services. The Airport City formula is achieved by activities in three business areas. Business area 'Aviation' facilitates all aviation related activities, business area 'Consumer Products and Services' offers the traveler goods and services and business area 'Real Estate' manages and develops real estate at Schiphol Airport. Next to these activities, Schiphol has participations in international airports, for instance in Aéroports de Paris and New York's John F. Kennedy airport. These activities are conducted to enforce Schiphol's international strategic position.

The mission of Schiphol is to connect the Netherlands with all important economic, political and cultural cities and centers in the world. Schiphol has the ambition to achieve this mission by being 'Europe's preferred airport'. This means that Schiphol aims to retain their position of airport of preference for travelers. The company achieves this by offering a smooth process and good facilities, so the traveler is assured of a pleasant journey. Next, Schiphol Group aims to deliver the users of the airport (airlines and passengers) products and services against competitive prices. The increasing competition from local and international competing airports and a demand from airlines for the reduction of tariffs forces the organization to become more cost- efficient. Schiphol Group aims for continuous improvement of efficiency to be able to stay cost competitive and retain their position amongst competition.

The main strategic goals of Schiphol Group are

1. Top connectivity; improving the international network and landside accessibility.
2. Excellent visit value; improving traveler comfort and increasing cost-competitiveness for airlines.
3. Competitive marketplace; offering a good climate for entrepreneurs at Schiphol Airport.
4. Sustainable performance; a good balance between people, planet and profit.

The information is obtained from the Schiphol annual report 2013 (Schiphol Group 2013b).

This research is conducted for the department Airfield Maintenance Services (AMS). This department is part of the department Asset Management, which is part of business area Aviation. Within the business area Aviation, department Asset Management takes care of the maintenance and life cycle management of existing assets, and has a role in the development and acquisition of new assets. Department Asset Management has four subdivisions of which AMS is one, as shown in figure 1, the organogram below.

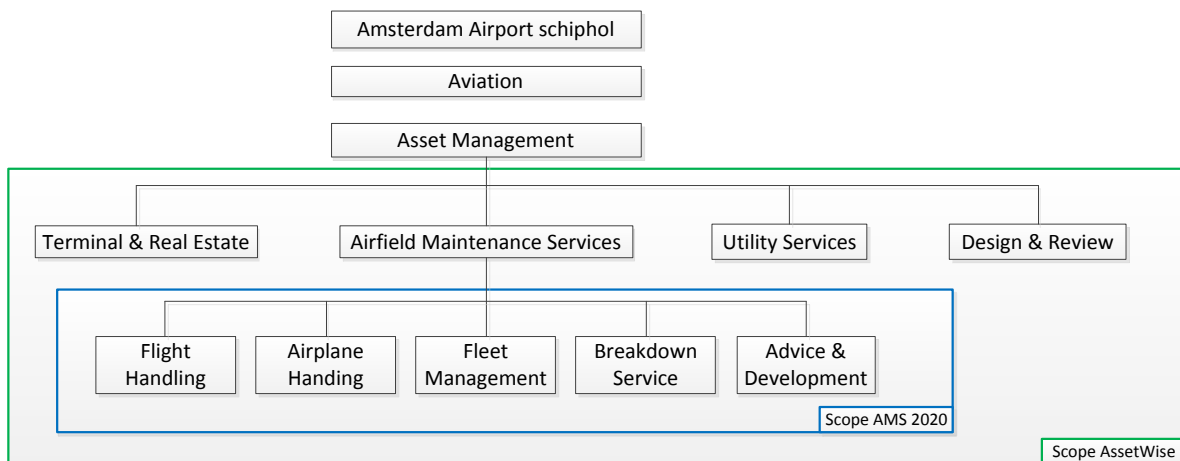


Figure 1 - Organizational structure Asset Management

As described, Schiphol Group is trying to increase efficiency and reduce operational cost. For the department Asset Management, Schiphol developed a change program to contribute to these goals, called AssetWise, an interpretation of Asset Management methodology. For department Airfield Maintenance Services a related change program is set up. These change programs are related to the Asset Management methodology and are elaborated in section 1.3. First, the essence of the Asset Management methodology is explained in section 1.2.

1.2 Asset Management

The Asset Management methodology as described in the ISO 55000 standard has originated from the PAS 55 standard for the management of assets. This methodology was first established in 2004 by the British Standards Institute and was the result of a collaboration of 49 organizations in 15 industries in 10 countries (Woodhouse & Fiam 2013). The core principles of Asset Management in PAS 55 were 'the optimal management of physical assets; which involves managing people, information, finances and other asset classes (...) and the removal of 'silos' and the consideration of assets in systems, along with the cross-functional optimization of their life cycles (Woodhouse & Fiam 2013, p.1) 'It has been very widely adopted around the world, with great success as a tool for integrating and improving business practices, raising performance and assuring greater consistency and transparency.' (Woodhouse & Fiam 2013, p.1) From the success of the PAS 55 approach, the International Standards Organization (ISO) has developed a standard to be used as an international standard way of executing asset management. The development of the standard is completed in November 2013.

The asset management approach provides techniques for converting the strategic aims of an organization into the practical implications for acquiring, utilizing and maintaining the assets that help to achieve these aims. The aim of this method is to achieve the best 'total value approach'; the optimal combination of cost, risks, performance and sustainability (Edwards 2012). This enables an organization to improve decision making and expenditure on assets to a strategic level. Next, this approach also allows an organization to show key stakeholders (employees, shareholders, directors) insight in the way assets are managed (Edwards 2012).

The main goals of Asset Management are (Woodhouse 2013):

1. Alignment of the asset management strategies, objectives, plans and day-to-day activities with the strategic goals of the company.
2. Development of life cycle planning of assets from a total cost of ownership approach where cross-disciplinary collaboration is used to achieve the best value outcome.
3. Establishing an organizational infrastructure that provides information on assets and performance which enables risk-based decision-making; to enable calculated risk taking and avoid policy that delivers 'too good' quality.
4. To be able to establish these goals, there are enablers defined which an implementing company should pay attention to. These enablers contribute to efficient integration and sustainability of the method; particularly leadership, consultation, communication,

competency development and information management are important aspects a company needs to improve.

These goals are described in three ISO standards; ISO 55000 which describes an overview of Asset Management in terms and definitions, ISO 55001 for the requirements of an organization using an Asset Management system and ISO 55002 as a guideline for implementation. The way the Asset Management method enables an organization to realize the aforementioned four goals is described below.

Good asset management is visible in an organization as an alignment of processes, resources and functional contributions (Edwards 2012). This means that all departments of a company work together to contribute to one goal. Decisions should be made with the goal of the organization in mind, instead of the goal of only one department. This is often referred to as an 'integrated' approach. The Asset Management approach aims to make optimal use of data collected from the process, to make decisions based on facts; informed and consistent. The activities are documented in such a way that auditing is possible. This makes the organization able to measure performance. The information collected can be used to develop consistent, prioritized and auditable risk management, and when these practices are in place it is also easier to make a reliable planning. When there is insight in the complete performance of the process, it becomes possible to measure improvements from innovations and new technologies (Edwards 2012). The core elements of the methodology are displayed in a conceptual model (figure 2).

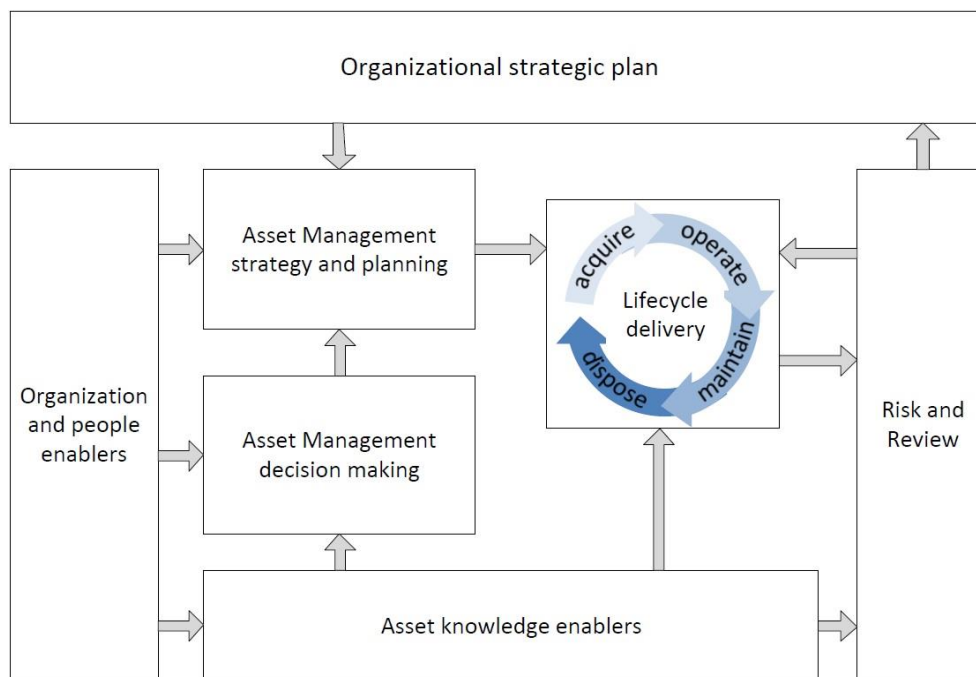


Figure 2 – Conceptual model of Asset Management (lay-out free to Edwards (2012))

Aspects of Asset Management

In the above conceptual model (figure 2), all aspects of the Asset Management system are displayed. A short illustration of these aspects is given in this paragraph.

Strategy and planning

From the strategic direction of the firm, a specific strategy for the asset management department is developed. This strategy concerns the ‘core activities required to develop, implement and improve Asset Management within an organization, taking into account business and organizational objectives and the effects of changing demand’ (Edwards 2012). This entails the set-up of an integral way of thinking upon which decisions concerning assets and maintenance can be made. This strategy aims to develop an Asset Management system that is consistent, compliant with regulations, has clear principles and frameworks and that has mechanisms for continuous improvement. Strategy builders also conduct demand analyses, with which it is possible to make investment and lifecycle cost- and benefit calculations. With the knowledge from these calculations, decisions can be made to enable the organization to meet its objectives. It also becomes clear which competences and capabilities the organization needs to be able to achieve these objectives. The vision of the asset management strategy is further rolled out through all parts of the asset management system, as described below.

Asset Management decision making

Asset Management decision making transforms the imperatives from the asset management strategy into decisions concerning capital and operational expenditure, lifecycle cost, shutdown and outage planning optimization and resource strategy (the resource strategy defines how to retain sufficient knowledge about assets when most activities are outsourced).

Lifecycle delivery

Activities related to lifecycle delivery are concerned with the practical execution of maintenance work. It concerns taking care of compliance with technical standards and legislation, the acquisition of new assets, the development of new technical systems. It is also concerned with planning and dimensioning of maintenance, coordination of maintenance work, and incident and breakdown management. The guidelines for these activities come from the decision making and strategy, and uses information from the knowledge enabling unit.

Asset knowledge

Asset knowledge enablers are concerned with the management of the correct information and knowledge on assets and maintenance. These sources of information are drawings, maintenance schedules and routines. These contribute to efficient lifecycle delivery and decision making.

Organization and employees

The organization and employees part of asset management is concerned with the realization of the appropriate structure and culture, and ensures the right competences are available to make the system function optimally. Also this aspect concerns caretaking of creation of consistent and clear information for employees, contributing to clarity and understanding on job roles, responsibilities and the chain of command. In asset managing companies which have outsourced maintenance operations to main contractors, the organization and people enablers take care of contract management, where it is essential to build a value free and transparent relationship with the contractor offering the work, as well as retaining key information on assets within the asset owning company.

Risk and review

The risk and review aspect concerns the trade-off between performance, cost and risk whilst providing the feedback and review mechanisms to facilitate the adaptation of objectives and evolution of understanding asset criticality to the delivery of business aims.'

Asset Management and outsourcing

It is the aim of the Asset Management methodology to provide transparency and uniformity in managing complex asset systems. This makes the methodology especially suitable for application in types of companies that manage diverse assets. For instance, institutions like the Dutch Ministry of waterways and public works, which has a portfolio consisting of a wide variety of assets; from traffic lights to sluice complexes and dykes. Schiphol Group's assets fit this description too, with assets ranging from the runway lighting systems to smoke detectors in the terminals. Especially when one asset is under control or use of multiple entities within the organization it becomes difficult to keep overview of asset performance. This is where the envisioned 'integrated approach' of Asset Management is beneficial.

One can imagine that companies that need a complex and asset intensive infrastructure for the delivery of their product or service, have high cost in keeping all required knowledge, human resources, spare parts inventory and specialist maintenance tasks under their own management. From this recognition, the question rises whether it would be useful to transfer the specific

maintenance and operational tasks to third party contractors that have the specific expertise in these diverse disciplines.

Outsourcing these activities will reduce overhead cost of the company and transfers the responsibility of well-functioning of assets to the contracting party. Although not explicitly mentioned in the objectives of the Asset Management methodology, the ISO 55002 guideline for implementing Asset Management states that 'outsourcing is a common method for an organization that prefers to perform certain asset management activities not by itself, but by an external or internal service provider. When these activities influence the achievement of the asset management objectives, these should be part of the asset management system' (ISO 2014, p.20).

As is often the case in management buzzwords the definition of Asset Management is freely interpreted in practice. Strictly speaking, the core of Asset Management does not contain an imperative for outsourcing. In practice, most implementations of Asset Management go together with the establishment of outsourcing, due to the type of company implementing the standard (as described above) and the useful framework that Asset Management offers to base outsourcing on. In the ISO 55002 guideline for implementation this is recognized and a guideline for outsourcing is included. In the practical case of this study at Schiphol, the Asset Management methodology is implemented to professionalize outsourcing, and thus outsourcing and Asset Management are used in conjuncture. For this research, this broader interpretation of 'Asset Management as a framework for outsourcing' is adopted.

Asset Management in an organization

The implementation of the Asset Management method is always adapted to the organization implementing the method, accustomed to the type of organizations and the objectives of the program for the organization. Therefore the structure designed by the company implementing does not necessarily have to be based on the conceptual model presented here. The Schiphol interpretation of Asset Management is described in the next section.

1.3 AssetWise

Schiphol Group's department asset management has translated the strategic aims of Schiphol group in an Asset Management program called AssetWise. The cause for this program is the necessity to reduce cost and prevent the organization from losing their profitability due to declining growth in the aviation market. Next, the organization is undertaking large renewal projects to keep its position as Europe's preferred airport, but wishes to offer this high quality service at lower cost. A gap analysis has defined most important aspects of the organization that need improvement. These findings are

translated in a set of goals of the AssetWise program. This goal is related to Asset Management methodology, and to the outsourcing of activities. The aim of the program is to enable the organization (department asset management) to deliver “best in class Asset Management”. This is achieved by pursuing the following main targets:

1. Establish an integrated approach. Currently the responsibilities for assets and maintenance are dispersed throughout the organization, which leads to difficulty in aligning activities. With one asset owner, it becomes clear what expenditure is on assets, and investment and operational cost are under control of the same entity. An ‘integrated approach’ also concerns a standardized approach on data, management tools and control systems, processes, risk analyses and corporate governance. Decision making concerning assets will be more transparent and grounded when they are made with the concerns of all stakeholders in mind. Also a more conscious consideration of function, risk and cost can be made when a complete overview is available. This will deliver more transparent assignments for main contractors which benefits outsourcing efficiency. This is the Schiphol interpretation of a connected network of stakeholders and knowledge on assets as displayed in the conceptual model of figure one. This first target is directly coupled to what Woodhouse (2013) calls ‘alignment of activities’.
2. Improving the strategic importance of department asset management. In the past decades, maintenance has been of subordinate priority for Schiphol Airport. This has led to a culture where commerce and operations have been privileged and had the authority to postpone maintenance activities. The AssetWise program aims to increase the strategic position of department asset management, to resolve this inequality.
3. An integrated approach and strategic importance for asset management will contribute to controlled portfolio management where projects are based on a planning and a strategy, instead of ad-hoc and bottom up.
4. The AssetWise program sets the goal of professionalizing outsourcing by improving contract development and data management. This enables the organization to transform to the ‘coordinating- only’ organization that Schiphol wishes to be.
5. Last main goal of the program is the realization of a mindset for cost- reduction, the courage to take appropriate risk and abandon the desire for complete risk avoidance and choosing for the best quality.

The AssetWise program managers aim to realize these goals by encouraging the organization’s members to behave accordingly and to change mindset, and by coaching people in engaging in new projects in an ‘AssetWise’ way. The goals of the program inflict changes in the way of working,

management techniques and mindset of the personnel. This program aims to realize Asset Management goals of taking controlled risk, striving for solutions that are good enough instead of the best and enable the organization to make efficient and coordinated decisions, by integration. Next, the program managers are working on the implementation of standardized management control systems based on new ways of data collection to provide insight in the effect of the new ways of working. The information in this section is obtained from the blueprint for Asset Management of Schiphol Group (Schiphol Group 2013a).

Outsourcing benefits

Schiphol's desire to adopt Asset Management partly stems from the ambition to transform to a coordinating- only organization. One of the aims of the AssetWise program is to enable the organization to create transparent and unambiguous definitions for maintenance tasks, which can be used for the development of clear contracts for the outsourcing of maintenance work.

The aim of outsourcing is to find collaboration with the maintenance specialists companies in the market, to join forces in optimizing maintenance efficiency. Outsourcing makes the organization more flexible and doing this following Asset Management philosophy provides more freedom for a contracting company to provide creative solutions that are more cost effective. Outsourcing also diverts the responsibility for well-functioning of assets to contractors. Next, the company is able to function with less core employees, this reduces overhead cost.

Outsourcing difficulties

Whilst it is possible to implement most parts of the Asset Management methodology with a process optimization program that improves current operations and teaches employees new ways of working, the implementation of the outsourcing part of the change has more structural consequences for the organization. Employees will get new tasks and responsibilities, and might need re-education to be able to execute these tasks satisfactory. This recognition shows that the real difficulty of implementing Asset Management is found in the challenge of outsourcing former core company tasks. This is also visible in the department Airfield Maintenance Services.

Department Airfield Maintenance Services

For department Airfield Maintenance Services (AMS), the most important part of the AssetWise program is the goal of professionalization of the outsourcing of maintenance. The organization has defined the ambition to be coordinator several years ago. In 2009 this ambition was put into practice with the establishment of relationships with main contractors that are currently in charge of executing maintenance. This first attempt did not yield desired results; maintenance work is transferred, but responsibilities have remained at Schiphol (appendix 1 p. 3). 'For some reason, people do not take their new roles' (appendix 1, p. 5). The goal of this program was 'to create a more flexible organization, which can operate more efficient and cheaper by outsourcing maintenance tasks'. (appendix 3, p. 1) An issue that remains with employees is that they question the improvement of efficiency by outsourcing maintenance tasks. 'Does outsourcing of critical company processes really benefit the organization (appendix 3, p. 1)?' Until now it has proven to be hard to change the mindset of employees to really adopt the new way of working and abandon the old.

Department AMS is still structured as it was when the department was still in charge of the maintenance activities themselves. This makes it hard for employees not to fall back into old work routines. This has led to the current state where the contractor is executing maintenance work, but has not yet received full responsibility. To put it baldly, outsourcing has led to a 50/50 division of work between the main contractor and Schiphol employees, where the division should be 90/10. This means, Schiphol employees are still doing 40% of the work that should be done by the main contractor. This shows that the envisioned improvement of efficiency of outsourcing is not yet totally realized.

This leads to the recognition that when the organizational structure stays as it is, and the functional descriptions of the jobs of employees stay the same as they were when Schiphol was still in charge of the whole process, transforming to a coordinating- only organization is difficult. In conjuncture with employees, the management of the department AMS has developed a new organizational structure to enforce the transition to outsourcing. The management has set up a program to establish this structural change by the name of 'AMS 2020', the envisioned department of the future. This change program is the core of the change under study in this research. In the following section is explained what this structural change entails.

The current organizational structure

AMS is currently in charge of managing all assets that are related to the handling of flights and aircraft. Amongst the assets in the portfolio are runways and taxiways, the aircraft parking spaces at the gates and the equipment for de-icing and snow removal. A part of the maintenance is done by the department AMS, and a part is executed by external contractors. Because these contractors have long term relationships with Schiphol Group, they are called *main contractors*. It is the goal of AMS to coordinate maintenance in such a way that it does not disturb normal operations and to manage the maintenance intensity in such a way that the availability of assets is guaranteed. These activities are currently executed by roughly fifty people, organized in five divisions. The responsibilities of these divisions are divided geographically; per parcel of the airport. The five parcels are: flight handling, airplane handling, fleet management, breakdown services, and advice and development.

- Department flight handling is responsible for the operations necessary to facilitate starting and landing.
- Airplane handling is responsible for facilitating parking airplanes and (dis-) embarking passengers and (un-) loading freight.
- Fleet management is in charge of maintenance of all automotive equipment.
- Team breakdown service is in charge of solving technical calamities and incidents.
- Department advice and development consists of advisors that aid the organization with expertise and decision making concerning new assets and maintenance contracts.

These departments are organized in the current organizational structure displayed in figure 3.

Airfield Maintenance Services					
Dept	Flight handling	Airplane handling	Breakdown service	Fleet management	Innovation & Development
Responsibilities	Assuring availability and reliability of assets related to flight handling	Assuring availability and reliability of assets related to aircraft handling	In charge of problem solving in case of calamities and breakdowns	Assuring availability and reliability of all rolling equipment	Responsible for the support of other departments and for the development of new products and services
Functions	Department manager Service manager Technical administrators	Department manager Service manager Technical administrators	Department manager Operators	Department manager Technical administrators	Strategic advisor Product developer

Figure 3 - Current organizational structure AMS

The new organizational structure

The new organizational structure is designed to optimally facilitate outsourcing activities. When outsourcing, one needs a good contract to base activities on, need to define the maintenance task, need to audit the contractor and need to plan the activities. This is how the organization has set up the new structure, shown in figure 4.

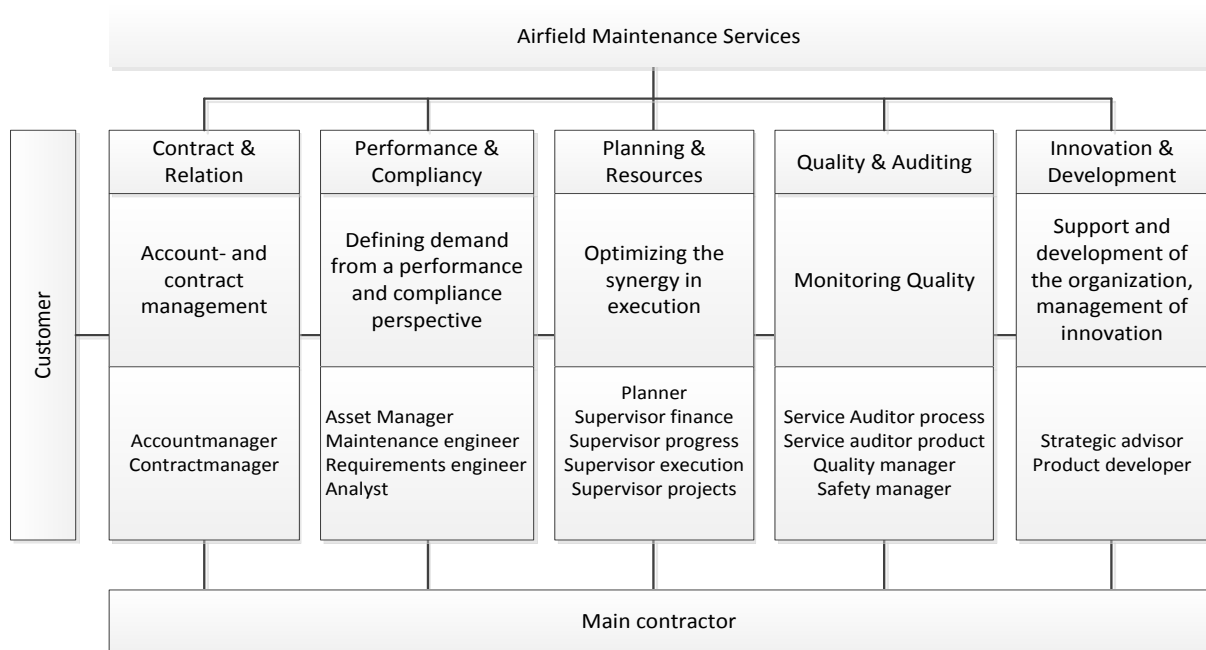


Figure 4 - New organizational structure AMS

The structure is based on the assumption that the organization will have a group of main contractors executing all maintenance work. The work is executed to keep the customers, shown on the left, satisfied. Customers of AMS are internal customers; other departments of Schiphol Group. The five departments are:

- Department 'contract and relation' will setup service agreements and will monitor the commitment of the main contractor to agreements made.
- Department 'performance and compliancy' will define what the agreements consist of in terms of technical content and compliance with legislation.
- Department 'planning and resources' will guard successful implementation of the work in daily operations.
- Department 'quality and auditing' will check if work will be executed on desired safety level and the delivered work will be of required quality.
- Department 'innovation and development' will provide the necessary expertise to keep the organization able to follow development of the market.

The objective of the new structure is to enable the organization to function on a coordinating-only basis. The goal of the new approach is to make the organization more efficient. The objective of the transition is not to lay off people, but to supply them with a new context to do their job, which will consist of different tasks. The consequences for the employees of the department are that their jobs will substantially change. They might need other skills and competences than they have now and might need re- education. Also the composition of the teams they work in will change.

Current state of project AMS 2020

The implementation of the new organizational structure has stopped. This is because the management of the whole department Asset Management demands the other departments under their control to adapt this structure at the same time. These departments are behind in development. Next to this, the new roles evoke more change in the work than was anticipated, so forming the new roles and dividing the work takes more time. As a positive side effect, this increases the usability of this research.

1.4 Practical problem definition

The management of AMS is still searching for an effective method to change the organization to a 'coordinating-only' organization. Previous attempts did not yield the desired results. This is remarkable, because Schiphol is a professional organization and the workforce is highly educated and committed. Why is it still so difficult to achieve this change? It is time to develop an approach for efficient change that enables the organization to achieve their goals.

1.5 Scientific relevance

The increasing speed of technological development and the increasingly complex environment of companies operating in high-tech markets require them to alter their strategic direction more frequent and faster than before (Binns et al. 2014). To be able to do this, it is important that a company is able to change work practices quickly and effectively (Gordon, Stewart Jr., Sweo & Luker, 2000). Currently, firms implement process improvement programs as Lean, Total Productive Maintenance, or the Asset Management methodology. These approaches offer companies methods that contribute to reducing cost by increasing efficiency. Especially adopting Asset Management and the outsourcing associated requires structural change of organizations. Since the Asset Management methodology is new, it is relevant to conduct research in finding out what the main considerations are when implementing the method, and how these issues might be mitigated. This research provides a first step in establishing understanding in the difficulty of outsourcing core activities, related to Asset Management.

The method designed for this research provides a researcher with a replicable approach to support organizational change, which consists of an approach to systematically identify the core of an organization's problem when the organization's members themselves do not exactly know what the problem is, and provides an approach to reveal practical factors that can be linked to the change objectives. This is a novel combination of existing and tested methods and is therefore relevant for science.

These two achievements contribute to understanding the specific elements of implementation of Asset Management and outsourcing and offer the possibility of creating a suitable approach to mitigate the breakdowns found and to establish efficient change. This is relevant for the domain of Management of Technology because it contributes to developing new ways of enabling efficient organizational change in a technical environment, and provides insight in the dynamics of outsourcing core activities, and how these dynamics should be addressed by management.

1.6 Objective

It is the objective of this research to develop and test a method for the implementation of a proposed change of organizational structure based on asset management methodology, by systematically inquiring the organization to find out what the root causes are that hinder effective change, and to develop and test a successful method for implementation that deals with these root causes.

1.7 Research questions

From this objective, the following research question is formulated:

How to contribute to an efficient transition method to a new organizational structure, to enable the implementation of the Asset Management approach for Schiphol Group?

This main research question is divided in sub- questions, formulated as follows:

1. Which factors are concerned with organizational change?
2. Which of these factors play a role in the practical case?
3. Which method could be used to find the root causes of these factors?
4. How can these factors be influenced; barriers mitigated and enablers used?
5. How can this process be executed in a replicable approach?
6. What are the generalizable implications found in this study?

1.8 Values

The main values of this research are twofold. The overall efficiency improvement is the main goal of the change program. In that sense, this research contributes to the value of reduction of cost and optimization of the companies' processes. However, the main value of *this research* is different, being the value of helping the organization's management to conduct a change program to enable the change process to develop in such a way that it is beneficial for the company's efficiency, but also acceptable and understandable for the employees involved in the change.

Even if this research contributes to the improvement of the efficiency of the organizational system, it is questionable if this research actually contributes to increasing efficiency. The definition of efficiency is free for interpretation and clearly differs from which angle one looks at the situation. The management team would say that efficient is the establishment of required performance with the smallest amount of human and capital resources involved. From the viewpoint of the employee involved in daily operations for over thirty years, the definition of efficiency might be that the expertise, knowledge and skill of the employees currently employed, delivering the performance in the current organization, is fully crystallized and functions optimally. They have seen the arrival of main contractors as an increase of the amount of resources involved and thus of a reduction in efficiency. The employees might need to re-educate themselves to be able to conduct a new role, which they might not even like. From the viewpoint of the employee, an organizational change of this magnitude is not efficient at all.

One could state that doing research to contribute to organizational change contributes to the change of the lives of employees, and increases the possibilities of employees becoming unemployed. From that viewpoint, the value of this research is not at all efficient. Since the explicit notion is made that no employee has to fear for compulsory redundancy, it is acceptable to state that the striving for efficiency of the department Airfield Maintenance Services contributes to the long term health of the firm. Since no employees will be fired, it is also in their long term benefit to embrace the change and participate in the structural reorganization of the firm and the establishment of new ways of working, how difficult or inappropriate this might look like at first glance.

Concluding, the efficient functioning of the organization is in the benefit of all employees involved, and thus is striving for efficiency a value that is worth pursuing.

1.9 Boundaries and scope

This research is concerned with development of an approach for the implementation of asset management and outsourcing of core activities in one department of the business unit Asset Management of Schiphol Group. It is the goal to develop a methodology for this change and find generalizable implications for the implementation of technical process improvement methods in other situations where similar problems occur.

2 Methodology

2.1 Introduction

This chapter describes the methodology of the research and features a description of the research process, the nature of the sample and the way data is collected and analyzed. This research is qualitative in nature and relatively unstructured as the different phases of the research develop over time, dependent on the outcome of the previous phase. The data collection comprises semi-structured and unstructured interviews.

For helping out organizations during change processes several research methods are available. Most of these originate from the organizational development research field and qualitative in nature. These methods are, for instance, *action research* (Eden & Huxham 1996) where the researcher develops solutions for organizational change problems and tests these in practice, and by evaluation defines what the organization has learned from these actions. Another method is *appreciative inquiry* (Cooperrider & Srivastva 1987). In this method the researcher helps the organization to find out what the organizational strengths are and how these can be developed in order to realize an even better performing organization. *Process consultation* (Schein 1990) is particularly valuable when an organization needs help without having a clear idea about the specific nature of their problems. The role of the researcher, or process consultant, is to help out with the definition of the problem and to make suggestions on how to tackle this problem. Rather than just providing a solution this method aims to improve the organization's capacity for problem solving. Process consultation is selected as main methodology for this study as this method fits the current situation at the case company. More details on process consultation are provided in the next section.

2.2 Process consultation

Process consultation is based on helping a problem owner in a particular organization to systematically identify the core of a problem and to jointly develop solutions (Schein 1990). This method is used when there is not a clear causal relationship ready for investigation, but a variety of problems all influencing each other. The methodology is explorative in nature and starts with defining a tentative problem definition. By systematically inquiring and challenging the people who contribute to the problem, the process consultant may help the organization to find solutions for the problem. During this process the specific definition of the problem might change when new insights are developed. Process consultation focuses on helping human systems in becoming more effective, on intergroup and organizational level (Schein, 1990). This is done by engaging in group work and sharing observations or knowledge from which the group can learn.

The process consultant needs to be aware that he or she is helping three different groups of stakeholders: (1) immediate clients; those with whom the process consultant interacts, (2) primary clients; real targets of change and the ones who pay you for your effort, and (3) the ultimate clients; the ones who are under influence, but with whom one does not interact directly, but who's needs need to be incorporated (Schein 1990). As a precondition, Schein (1990) states that one should only engage in a process consultation task when it is clear that the consultation will contribute to an improvement for all three groups of stakeholders.

Process consultation is based on the value of helping. Schein (1990) identified three modes of help:

1. *Providing expert information.* This is based on several assumptions. These are that the client knows what the real problem is, that the client has communicated the real problem and that the consultant has the right knowledge and skills to provide the required information. The last assumption of this mode is the fact that the client accepts the consequences of the information provided.
2. *Diagnosing.* This methodology implies the consultant provides the solution for the symptoms that the client describes. Assumptions are that the client's diagnosis is right, the consultant has the right knowledge and that the solved problem remains solved after the consultant has left.

When these assumptions hold, these modes of help are usable. Unfortunately, often these assumptions do not hold. Then the third mode of helping, defined as process consultation, might be useful.

3. *Process consultation.* This method is based on the following assumptions. The first and most strong assumption is that clients seek help when their problem is *not* exactly clear. They know something is wrong but do not exactly know what. Next, clients do not know which ways of helping may exist and which solution is most relevant. Problem solving in organizations benefits from the participation of stakeholders as these are usually part of the problem. Process consultation involves the problem owners in the process. The assumption is made that the client has a 'constructive intent' (Schein 1990) which means that one actually *wants* to contribute to solving the problem. The client does not transfer the problem to the consultant, but remains the problem owner. With the use of process consultation the consultant provides the organization solutions for their issues, but also a way to learn from what is going on and to develop problem solving capabilities themselves.

The practical application of process consultation is often a blend of the three modes of help, used whenever one of the modes is appropriate. The appropriateness is judged by the researcher. This research is executed by following through a number of process consultation rounds, all executed in one of the modes of help. These rounds together form the research process.

2.3 Research process

In this paragraph the research process is elaborated. The research is organized in five different rounds (see figure 5). Each of these rounds has its unique goal, a particular help mode, sample and way of data collection.

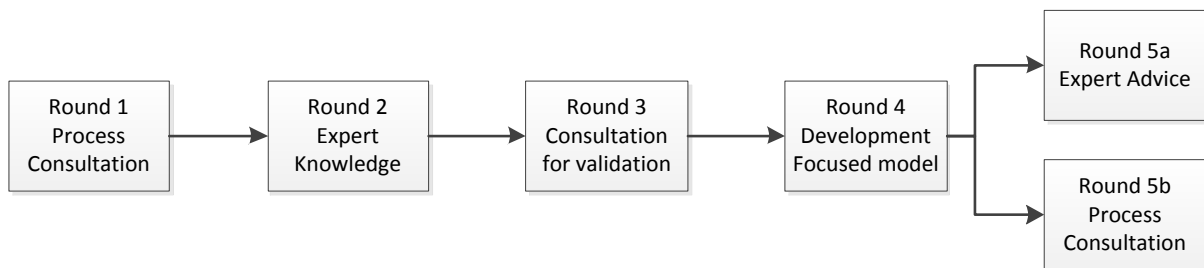


Figure 5 - Research process

Round one: exploratory process consultation

The first round starts in the *process consultation* mode. This round is used to gain insight in the problem area and develop a tentative problem statement. This is done by gathering information from various sources. These sources comprise of corporate documents; annual reports and project mandates. Papers from the institute for asset management and the Dutch association for effective maintenance (NVDO) are used to comprehend the Asset Management methodology. Papers from key scholars in the field of strategy are reviewed to understand how technical process optimization programs relate to corporate strategy.

Hereafter, explorative interviews with three members of the management team are conducted. The management team is chosen as the sample frame because they have developed the change program. They are best able to explain how the plan is expected to evolve. Because the management team is the problem owner, the exploratory interviews are conducted with them to find out what their perception of the problem is, as this will be the start of the research. The persons interviewed are the manager of the advisors group, the manager who leads the airplane handling department and the financial controller. The controller is interviewed because he is external to the firm and able to shed an objective light on the project; useful to be able to place statements in perspective. These interviews are conducted semi- structured with open ended questions. The list of question is the same for all interviews, so that some questions could be re-asked to see if members give the same

answer, and to steer following interviews in the direction of unanswered questions. The questions and answers are attached in appendix one.

The investigation and exploratory interviews yield a first problem statement, a set of research questions and a tentative methodology for investigation. The results of the first process consultation round are then presented to the problem owners, to challenge the outcome with their expectations. In this session, the direction of research is validated. In this validation, the decision is made to first form an overview of all that is concerned with change, to see in which area of the problem field solutions for witnessed problems might be found. The results of this first round of process consultation are presented in the introduction.

Round two: development of expert knowledge

In order to acquire the required knowledge, a round of *development of expert knowledge* is conducted. This is done by means of a literature review. The goal of this study is to develop the theoretical insight to be able to comprehend the total magnitude of the problem. The literature review is conducted to answer sub-question ‘Which factors are concerned with organizational change?’ The literature review starts with an investigation of two meta-analyses on organizational change research in the 1990’s. These two researches are selected because of their relevance, high number of citations and publication in A-level journals. By inquiry of these two studies and their references, the most important factors of change are identified and categorized. The categorization is done under the judgment of the researcher, based on categorization from literature. The results of this review are presented in chapter three and as an overview in appendix two, as a large *model of organizational change*, which is also the deliverable of this round. The results of the theoretical work are tested for completeness and validity by inquiry within the company. And the model can be used to determine in which part of the field the factors of highest importance lie; in which part help is of best use. This is done in the next round.

Round three: process consultation

The first part of round three consists of *process consultation*, which is executed to validate the larger model and see to which part of this model the practical problem is most related. This validation is executed to answer the second research question; ‘Which of the factors play a role in the practical problem?’ This validation is conducted by three interviews, accompanied with a validation these interviews based on recognitions in informal observations. The people interviewed are selected by judgment sampling. The criteria for selection are:

- The interviewees have to be able to understand the model and have experience in the organization to relate the model to practice.

- In order to reduce response bias, two advisors are selected that do not have a direct personal incentive in the change, and thus are believed to respond honestly and not be preoccupied.
- The first advisor has more than thirty years working experience at Schiphol Group, and has a clear view on the way the organization functions.
- The second advisor is selected because of his analytical capacity and research experience.
- The third interviewee is the supervisor who is the representative of the management team. This respondent is included to keep connection with the problem owner.

The interviews consist of several questions related to the model. The transcript of these interviews is appended in appendix three.

Process consultation addresses the opinion of all three groups of stakeholders. Therefore the outcome of these interviews, which are considered to have taken place with primary clients, is compared with the opinion of another group of stakeholders, ultimate clients. These opinions are gathered with unstructured interviews in an informal setting. This provides insight in the way the employees perceive or interpret behavior and plans. The reactions of people in an informal setting are often more revealing and open than in a formal setting. The findings were all written into transcript, displayed in appendix four.

The informal observations and interviews are coded via open coding. The coding process is executed by reading transcript and labeling statements with words or sentences (codes). These codes could then be counted for occurrence. With this information, a grounded decision can be made on which parts of the large model the research will continue.

Round four: focusing expert knowledge

From the interviews and information obtained in the previous rounds follows that the focus area is the change process. In this round, as a *focus of expert knowledge*, an overview of all factors concerned with the change process is developed, displayed in a model. This is developed from a deeper investigation of the literature related to the process factors. The model shows all aspects that will have to be addressed in an advice in order to develop a complete solution how to lead a change process. In this way, the focused model is the imperative for the rest of the research; when all aspects of the model are included, one is assured of a comprehensive approach. The deliverable of this round is a *focused model of change*.

Providing advice that addresses all the aspects in the focused model meets the objective of the research. Although advice is useful, restricting to advice only would be a limitation. As discussed in

section 2.2, Schein (1990) stated that giving expert advice only is not the best mode of help. Engaging employees to participate in problem solving and providing solutions themselves is expected to create commitment and understanding, and insight in the usefulness and necessity of the change. This counts too for this situation. To make the change understandable for all three groups of stakeholders, and to make the change strategy more practically relevant, it is necessary to complement the expert advice with a more practical approach. Therefore, the last two parts of the research will consist of two modes of help: providing expert advice, and process consultation.

Round 5a: providing expert advice

Some of the aspects in the focused model can be addressed by *providing expert advice*, based on information from literature, linked to observations from practice. This expert advice can be used to build a change process strategy. The objective is to develop *a change process strategy*, as the deliverable of this round.

Round 5b: third round of process consultation

The objective of the last round is to *help the organization to build their problem solving capacity*, and to *find out which practical factors are the biggest barriers* to a change process. Next to these, the third objective is *testing the method* with which this is done. In this way it can be determined whether or not the method is appropriate, and how it is best executed. This round of process consultation will answer the research question ‘Which method can be used to find the root causes of identified factors?’

A balanced approach

Fine et al. (2008) describe the hardships found in implementing process improvements based on the ‘lean’ process optimization program. The main message of this research is that that often in technical improvement programs, the focus lies on the technical content of the improvement, and the managerial considerations and the considerations for employees are left underexposed. This is an explanation for the reason why it often occurs that after a process improvement program is finished, people revert to old behavior, their habit, or the way things are done embedded in the company’s culture. The statement is made that in the cases where all three aspects are equally addressed, which Fine et al. (2008) call a ‘balanced approach’, chances are higher that the proposed improvements last (Fine et al. 2008).

For a lot of people in the organization, ‘Asset Management’ is too abstract. The method is too theoretical, not tangible and difficult to comprehend. The link with practice is not clear. To make employees understand, a more practical component for the implementation process is required. The method gives employees a stage to express their concerns and give input to the process, so that they

become engaged and see the usefulness of the improvements themselves. The benefit is that the method develops feedback from the bottom up, which is expected to create involvement and commitment, because people are felt to be heard, and the practical concerns can be taken into consideration when developing a strategy for the change process. For this research, the following interpretation is used.

The method

The method is based on technical fault finding methods; root cause analysis methods. These methods are usually applied in situations where for instance repetitive failures of production lines are witnessed and engineers wonder why these problems keep occurring. Instead of solving the symptoms, the root cause of the problem is sought and solved, which prevents the failure from reoccurring. This contributes to a more efficient process. In this research, this methodology is used to find root causes of problems witnessed in the organizational system. This is done by means of a root cause analysis based on the three parts of the balanced approach; the technical corporate process of delivering value to the customer; the management infrastructure or system to govern this process, and the behavior and mindset of the people working in the organization (Fine et al. 2008). The sample for this method consists of four people, one of each main department of the organization. In this way, the sentiment of all departments is considered to be included. How the practical implementation of the root cause analysis is executed is described in the next section.

Root cause analysis

The goal of the root cause analysis is to identify what the employees think that should be incorporated in a change program. This will yield feedback for the change process strategy under construction.

For this research, two main tools from the root cause analysis toolbox are selected. These are 'five why' and 'Pareto' analysis (Gano 2007). The five why method is executed by keep asking why (around five times), until the answer on the question does no longer change. Then the root cause of the problem is exposed. The Pareto analysis is a method to rank root causes in a particular sequence, by scoring the impact of the occurrence of the root cause, and the frequency of the occurrence. This yields an impact factor. Ranking the statements by impact factor, it becomes clear which root causes are most important to solve. Below is explained which tool will be used in which session. The method consists of six steps in three sessions and is executed in the following way. One could describe the design and testing of the method as a field experiment.

Session one

The first session consists of three phases. The first phase is explaining the attendees the goal of the method; which is finding out what needs attention when AMS 2020 will be resumed, secondly how that this will be done by means of mapping of practical factors that the attendees think that are the most important. Third, the method is executed. This takes place by presenting the three aspects of the balanced approach on a large paper, and ask participants to write down statements both on what is going right and what could be better. The attendees are asked to write down their statements in the area they think their statement adheres to, and then explain the reason why they have put up this statement. Letting them explain the statement is the trick to trigger the other participants to contribute to these statements which might lead to a more complete description of the phenomenon. In this phase, the researcher operates strictly in a facilitating role; which is in essence the value of a process consultant. The researcher guards the process, asks open questions and summarizes, to help the attendees to clarify their thoughts. When all statements are written down, the first session has come to an end.

Session two

The next session will consist of a 'five why' technique to further investigate the statements to derive root causes. The five why tool is selected as it is one of the most simple yet effective root cause analyses, and applicable for the situation. The statements from the first round are assessed by keeping asking why until the root cause is found. Goal is to cut through to the core, and end with a reduced number of statements.

Session three

Session three consists of a Pareto analysis, where the list of statements is prioritized by the attendees. In this way, a list emerges in which all statements and their importance are displayed. This product can then be used by the management team to consider in their process strategy.

After prioritizing, the attendees are asked to give their opinion on the process, and the discussion is opened to see how this process can be executed better.

This marks the end of the methodology chapter. In the next chapter, the results of the execution of the method are presented.

3 Results

The results of the research are presented in this chapter. These are presented per round of the research.

3.1 Round one: process consultation

The results of round one are already presented in the introduction. This information is used to form a tentative problem statement and research questions.

3.2 Round two: expert knowledge

This literature review consists of the development of an overview of the research field. This is achieved by developing a categorized overview of factors. This paragraph starts with an introduction and general observations of the research field, continues with a categorized overview of all factors, and concludes with the development of a sequential ordering of the categories of factors.

Organizational change is defined as ‘a difference, at different temporal moments, between states of an organizational unit or system’(Van de Ven & Poole 2004). Although a lot of research on change is conducted, there are not many studies that give an overview of all the aspects of the organizational change process. Research is dispersed between subcategories of change and tends to develop in silos; researchers recognize the need for a more integrated approach (Van de Ven & Poole 2004).

It is worth to mention some general observations. First is the distinction in approaches to change. This distinction is between theories on *change*, and theories on *changing* (Bennis 1966). Theories on change are concerned with what produces change, and how it is produced (Van de Ven & Sun 2011). These theories help defining the strategic direction of a firm. Theories on changing focus on how to bring about change, individuals’ reactions and their ability to cope with change. This distinction is maintained in contemporary research, where theories of change are mostly represented in strategic management literature and theories of changing are mostly represented by research in the organizational development field of study (Choi & Ruona 2010). Strategic management change methods often have coercive elements and try to evoke change solely looking at economic value. Organizational development theories are more dialectic and focus on evoking change by establishing understanding with the people undergoing the change (Beer & Nohria 2000; Choi & Ruona 2010).

A second observation is the focus of research on changing. These studies focus on the process of bringing about change and individual reactions to change. Lewin (1952) was the first to coin the term ‘resistance to change’, in his perception resistance to change was meant to be a process term, used to label general breakdowns during the change process like the emergence of unforeseen issues, and certainly not individual responses to change. This is though how a lot of later change scholars

focusing on research in changing have interpreted Lewins' first notion of 'resistance to change'. These studies often have research questions like 'how to establish readiness to change' (Rafferty et al. 2012) or 'how to resolve resistance to change' (Ford et al. 2008). This kind of research has as implication that the one initiating the change is the one who has the right perception on the reasons why the change is conducted or why for instance 'resistance' occurs. This is aptly put by Ford, Ford and d'Amelio in their 2008 study: "Studies of change appear to take the perspective, or bias, of those seeking to bring about change, in which it is presumed change agents are doing the right and proper things while change recipients throw up unreasonable obstacles or barriers intent on "doing in" or "screwing up" the change. Accordingly, change agents are portrayed as undeserving victims of the irrational and dysfunctional responses of change recipients (Ford et al. 2008, p362)." Ford et al. argue that this view is too limited:

"This change agent centric view does not consider the possibility that change agents contribute to the occurrence of what they call "resistant behaviors and communications" through their own actions and inactions, owing to their own ignorance, incompetence, or mismanagement. (Ford et al. 2008, p362)."

Resistance does not reside totally 'over there' at the change recipients, but is a resultant force, evoked by a number of factors; enablers and barriers. It is a management task to develop an approach to best cope with the factors; make use of the enablers and resolve the barriers, to make the change effort effective. This not only has to do with one's mental model, but also with the inherent complexity of a change initiative:

'The ambivalence employees feel toward an organizational change initiative does not necessarily represent opposition as disobedience; instead, it may reflect the complexity of most organizational changes as having both positive and negative aspects' (Van de Ven & Sun 2011, p. 63).

The following overview will provide insight in this complexity, by means of an overview of all the major factors influencing organizational change efforts. These factors can be categorized into four groups: content factors, context factors, process factors and individual factors. This overview is built up from a review of change literature of the last twenty years, where change research reviews of Armenakis and Bedeian (1999) and Van de Ven and Poole (1995) have served as a starting point.

Armenakis and Bedeian (1999) have tried to give an overview of the state of research on all aspects of organizational change. They made a categorization of these aspects in three categories, being content (the magnitude of the change) context (the environment in which the change takes place) and process (the process of implementing change and employees' reactions). The distinction is

adopted for this research, complemented with an overview of individual factors specific to the subjects undergoing the change. The personality traits of change recipients have influence on the implementation process. Therefore the model is complemented with a category of individual factors: affective, behavioral and personal aspects of the change recipients. The observation of a missing category for individuals was also made by Walker (2007). In the following paragraphs, the categories are further elaborated.

3.2.1 Content factors

The first category consists of content factors. With these factors, it is possible to make an inventory of what is concerned with the change; to show the magnitude of the change. In the '90s, several scholars have made an attempt to map the magnitude of the change with a model. Two of these models are worth mentioning and complement each other in identifying all factors concerned. These models are the 'transformation imperative' (Vollmann 1996), which is based on a matrix which shows the factors on the left side and the parts of the organization it influences on the top side. With this model one can ask questions like 'what are the consequences of a new way of working for the organizational structure of the organization?' The second is 'a causal model of organizational performance and change' (Burke & Litwin 1992), which shows the influence of changes in the external environment on most of the aspects of an organization. These two models have been used to identify the factors in the overview below.

The first factor to deal with is *Environment- organization fit*. This is the consideration which is often the start of organizational change, and concerns the assessment of how well the organization is adapted to the external environment. A way of dealing with this aspect is systematically mapping the external environment, and looking for ways to adopt the firms' strategy to it. This can be done with techniques like the five factor model of Porter (Porter 2008). The model is based on five factors, being threat of competitive entry, competitive rivalry, supplier bargaining power, buyer bargaining power and threat of substitute goods. Although the basic theory is over 30 years old, it is still one of the most used strategy building tools to date.

The analysis of the external environment is followed by the next factor, being the *strategic intention* of the firm. This is a definition of how a company should act and develop to be able to meet the demands of the market. For Schiphol, this is thus 'increasing cost-effectiveness. Following from this strategic intention, a *mission and vision* will be developed, to convey the strategy to stakeholders, of which employees are one group (Burke & Litwin 1992). Part of the strategy is decision on what the output of the organization will be; which products or services will have to be made to satisfy the demand (Vollmann 1996). This has influence on the required *organizational competences* to produce

these products. (Vollmann 1996). The organization might need new skills or stop old processes to be able to produce the new products or services. In the case of Schiphol, products will not change. This means that processes have to change, to be able to be more cost-effective. This has influence on the *organizational structure*: how the organization should be structured to deliver the desired performance. (Vollmann 1996). New skills, products and structure ask for a way to be controlled, which can be achieved by policies and procedures. Performance systems can be used to check if organization performs as required, control systems are necessary to influence the measured performance, and incentive and reward systems are used to motivate and appraise personnel (Burke & Litwin 1992). A large part of the content of a change is the effort to make the change sink into the daily routine, which can be described as making the new procedures and policies part of the organizational culture, where culture is defined as 'a system of shared meaning held by members that distinguishes the organization from other organizations' (Robbins & Judge 2012). At the same time, when a change takes place in a division of a larger company, the aspect of organizational culture can also be seen as a contextual factor.

3.2.2 Context factors

Context factors describe the context in which the change takes place. These factors influence the way the change unfolds. These factors can be further categorized in factors external and internal to the organization. These factors mostly find their origin in strategic management literature.

External factors

The external environment is shaped by several factors. These factors influence the strategic direction and are important to take into consideration. The most important factors are *government regulation and legislation*; in a lot of cases, government regulation forces organizations to change their practices or products. For instance the automobile industry is forced to increase their product performance or switch to other energy sources to meet new emission regulations. Further, *technological advances and pace of development in the industry* (Meyer et al. 1990; Tushman & O'Reilly 1996; Tushman & Romanelli 1985) define how radical and quick an organization is required to change. *Marketplace competition, competitive pressure*, drives organizations to change their practices to keep up with or ahead of competition (Haveman 1992). The level of pressure also defines the type of changes necessary. This is an intensively studied concept, there are two types of changes possible, coined by several researchers, described as incremental versus radical change (Tushman & Romanelli 1985), or continuous versus episodic change (Weick & Quinn 1999), both meaning roughly the same. Radical change in an industry requires radical change in an organization, for instance the emergence of digital camera which radically disturbed the incumbent market for analog cameras. Slow changes in the environment allow firms to adapt more gradually, called continuous or incremental change.

Concluding with customer demands; when demand changes, in quantity or quality, company has to adapt with different practices, thus change is required.

Internal factors

For the internal environment of the firm, the following factors are of importance. A company's *technical knowledge resources* is the amount of specific knowledge in house and provides an organization more possibilities for flexibility and adaptation, and thus more possibilities for change (Damanpour 1991). As described before, *organizational culture* (values, norms, beliefs and reward system) is the way people value decisions, or cope with decisions, which influences changeability (Burke & Litwin 1992; Kotter 2007). Culture is related to work unit climate; impressions, expectations, feelings and relations of people within the team influencing the effectiveness of the change (Burke & Litwin 1992). *Organizational responsiveness to external environment* (Tushman & Romanelli 1985; Binns et al. 2014; Floyd & Lane 2000; Gresov et al. 1993) determines the adaptability of the organization to changes in the external environment. It depends on the industry and type of products how fast the external environment changes and thus how fast the internal organization should be able to adapt. The ability to be responsive is determined by firm structural inertia, which is defined by the type of products or services made and the size of the firm, and priority to be responsive.

3.2.3 Process factors

The process factors have influence on how to shape the change process and to deal with employee's responses (Armenakis 1999).

The process of change concerns the central question of how to transfer the change message. The change message consists of a communication of the strategic change plan, which is the result of the analysis of context and the definition of content. On paper, this is easy to state, but in practice often the content and context are changing when the change process is already initiated, which makes the process more complex and less set in stone as it might look like.

Several researchers have studied the change process, of which Kurt Lewin was first with his study in 1952 where he proposes change as the process of unfreezing, moving and freezing. In short, the process of decoupling the employees from current work practice (*unfreezing*), *moving* them to the proposed new work, and guiding them in making the new work the new routine (*freezing*). This is a quite brief and simplistic description of a change process, which in practice is often more complicated. In its simplicity, it is a striking description of the core of the change process. Van de Ven and Poole have made a categorization of methods for change processes. This research has yielded four archetypes of change process, as published in their article 'explaining development and change

in organizations' (Van de Ven & Poole 1995). In 2011, Van de Ven and Sun have complemented these four models with typical breakdowns and barriers (Van de Ven & Sun 2011). An overview is given below:

1. *Teleological change* (planned change): is a process cycle of goal setting, implementing, evaluating and modifying the goal, where after a new cycle of change starts to reach the modified goal. This form of change is focused on social construction of the change goal with the individuals within the organization undergoing the change. In this situation typical breakdowns are a lack of urgency for change, and a lack of consensus.
2. *Life cycle process change* is a form of change which is characterized by a 'prescribed sequence of stages and activities over time' (Van de Ven & Poole 1995). These activities are prescribed and regulated by natural, logical or institutional routines. In this process, common breakdowns are resistance and a lack of compliance to the proposed process.
3. Dialectic process theory is a way of establishing change by 'the resolution of conflict between the current thesis (A), and an antithesis (not- A) which results in synthesis (not-not-A)' (Van de Ven & Poole 1995). Typical breakdowns can be that conflict becomes destructive, better negotiators get their favored outcomes and consequentially imbalances occur, or that irresolvable differences remain which stand in the way of a solution.
4. Evolutionary process theory is the process of competitive selection of best alternative; best described by the sequence of variation (developing new ways of for instance doing work), selection (picking the one best suited) and retention (making these new ways of working stick). For this process, the breakdowns can be a lack of variety to choose from or a lack of scarcity, which means a lack of competition to initiate change, and thus strategic necessity for change.

These typical change process approaches are based on examples from practice, but seldom one change process follows exactly the path of one archetypical implementation. A change processes tends to consist of different elements of the four models displayed above, where one strategy is leading. Next to the recognition of the barriers and enablers of these processes, the study of Van de Ven and Sun (2011) makes the important recognition that the change agent must be aware of the fact that his approach might be suited to his own thoughts, but that the change recipients might have other beliefs about what is right. The power of the change agent lies in his ability to not only look at the breakdowns occurring when implementing his own mental model, but also recognizing situations where his mental model should be adjusted and a remedy from another model would be more appropriate. By being able to vary in approaches, change can be brought about more effective. Van de Ven calls this combining the action strategy (correcting breakdowns) with the reflection

strategy (adapting strategy to unfolding change process). In table 1 an overview of these process models and their enablers and barriers is given.

	Teleology <i>planned change</i>	Life Cycle <i>regulated change</i>	Dialectic <i>conflictive change</i>	Evolution <i>competitive change</i>
Process cycle	Dissatisfaction, goal setting and implementation	Prescribed sequence of steps or stages of development	Confrontation, conflict, and synthesis between opposing interests	Variation, selection, and retention among competing units
Situations when model applies	Social construction of desired end state; goal consensus	Prefigured program regulated by nature, logic or rules	Conflict between opposing forces	Competition for scarce resources
Typical breakdowns	- Lack of recognition - Decision biases - Groupthink - Lack of consensus	- Resistance to change - Lack of compliance - Monitoring and control	- Destructive conflict - Power imbalance - Irresolvable differences	- Requisite variety - Lack of scarcity
Remedies	- Triggering attention - Critical thinking - Consensus building	- Responding to complaints - Local adaptation - Internalizing mandates	- Conflict management - Negotiation skills - Political savvy	- Niche development - Marketing - Strategies for competitive advantage

Table 1 - Four common implementation strategies and their common breakdowns (Van de Ven & Sun 2011)

The overview and breakdowns of Van de Ven and Poole are useful, but theoretical and not practical. They describe events abstractly, and on firm level of analysis. The model is useful to gain insight in the aspects of a particular change at hand, to identify the typical strategy and diagnose the breakdowns. The problem is the difficulty to transform this abstract theoretical review into a practical approach to solve a practical problem. There are more practical factors that play a role, which can be identified and for which a specific solution needs to be developed. A more practical approach can be found in for instance Kotter's theory of 'leading change' (Kotter 1995) which emphasizes on some practical manager must-do's when leading a change initiative. These practical factors are dividable in enablers and barriers, and defined below.

Enablers

A change process is also under influence of factors that contribute positively. These factors can be labeled as enablers. The factors are collected and described below. A clear *goal* (Kotter 1995) helps to clarify why change is needed. Part of this is establishing a sense of urgency; when there is a clear need for change, people will be more willing to cooperate. There is always an inherent resistance, but when it is shown that the unknown is less dangerous than the current practice, change becomes a good alternative. A *vision* on how to achieve the goal is necessary to effectively communicate the change message. Being able to transfer and explain the problem is a key element of a successful change process and will contribute to the understanding of employees of the necessity and the goal. Therefore the *communication* of the vision has to focus on creating clarity and understanding. The change message consists of five aspects (Armenakis 1999): first the discrepancy between the desired

state and the current state, which identifies that change is necessary. Second the appropriateness of the proposed plan, third that the organization is able to achieve the proposed goal, fourth that change leaders show their support for the plan (also identified as principal support (Rafferty et al. 2012)), and at last that the individual will benefit from the change (Armenakis 1999). A good *influence strategy* defines the way in which the leader influences employees to commit to change; which globally consists of three possible approaches (Chin & Benne 1989), being power-coercive, empirical- rational and normative re- educative. The first, power- coercive approach is based on the use of power. The second, rational approach is based on convincing by rational reasoning; an approach focused on the work. The last, normative re-educative, is the method focused on the non-cognitive, personal aspects of a change process which consists of relationships, attitudes, values and norms and tries to create individual awareness. Goal of this approach is to create long term performance improvement. Amongst the goals of this method is fostering growth in employees. The observation when reading this is that this normative strategy focusses on aspects of organizational culture. The change agent does have the choice which approach to use but it is clear that the coercive strategy evokes the most resistance (Burke et al. 2008) and the rational might only create understanding. The normative approach will cost the most time, and might be hard for a manager to effectively practice. In most implementation strategies, elements of all the three approaches play a role, but one of the approaches is leading (Choi & Ruona 2010). Scholars in the organizational development literature agree that to make changes become part of routine and get embedded in culture, the normative approach is the most effective, and in that sense most of an enabler.

Leadership is an important factor that has influence on the performance and personal well-being of employees in a firm. To start, leadership is not the same as management. As Kotter (2008) describes; management is dealing with complexity, developing a stable organizational structure and ensuring processes are running well. Leadership is coping with change; developing direction, embodied in a vision. Communication is used to align people with this vision, which leads to an inspired workforce which is encouraged to overcome hurdles (Robbins & Judge 2012). Globally, there are four styles of leadership defined (Robbins & Judge 2012). These are transactional, transformational, charismatic and authentic leadership. Charismatic leadership characterizes by a leader that puts emphasis on the expression of the following aspects of leadership; the expression of a vision that consists of an idealized goal better than status quo, taking personal risk and making self- sacrifices, the charismatic leader shows to be sensitive and responsive to followers' needs. Charismatic leaders show unconventional behavior. Charisma is for a part innate, but one can certainly develop charismatic traits by learning. Transactional leadership is characterized as guiding followers by clarifying role and task requirements. This is done by correcting employees from deviations and an exchange of reward

for effort and recognition of accomplishments. A good leader complements these traits by transformational leadership behavior; inspire employees to transcend their self-interest to the benefit of the organization (Robbins & Judge 2012). This behavior is characterized by the four I's of transformational leadership;

- *Individual consideration; personal attention*; the leader provides coaching and advice
- The leader stimulates the individual's *intelligence*
- *Inspires and motivates*
- Creates *idealized influence*; provides vision and sense of direction

The effectiveness of an active leadership style, consisting of transformational aspects, is displayed in figure 6.

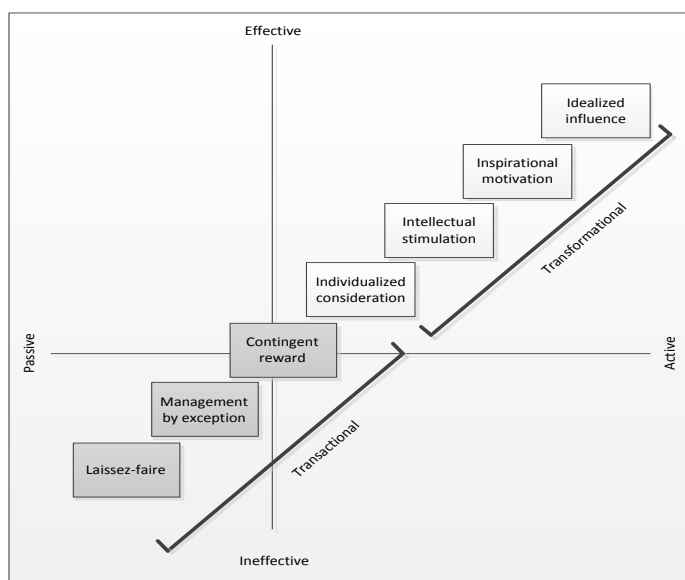


Figure 6 - Leadership style (free to Robbins & Judge, 2012)

These elements of leadership behavior tend to improve productivity because it increases employee self-efficacy. The vision created by a transformational leader is one of the most important elements. It makes people understand the goal they are working to. To conclude, aspects of authentic leadership concerns ethical leadership behavior which creates trust among employees and shows the honest intentions of the leader. The authentic leader knows itself and what he believes, and what his values are. The authentic leader acts upon this and communicates about this openly. Ethical behavior gives trust and brings faith, which encourages risk taking, facilitates sharing of information and increases effectiveness of groups, which causes an overall increase of performance. Planning and time (Kotter 1995) is of crucial importance when implementing. The breakdown in a lot of situations is that the whole process is executed too fast. It is the key distinction that preparation

needs time and is hard to execute fast, but once the plan is finished the implementation process has to be executed quickly. This is only possible when the preparation steps are effectively taken. Forming of a guiding coalition (Kotter 1995) is a critical enabler, a team consisting of multiple organizational members of different hierarchy work together to solve problems and lead the change. One of the members is the change agent (a change leader); an individual external or internal to the firm in charge of leading the change and steering the guiding coalition. Creating support for the change is also an enabling factor. This can be done by building relationships, seeking participation and showing fairness (Robbins & Judge 2012). Creating short term wins to communicate success of change (Kotter 1995) shows the organization that the change increases performance, showing that the change is useful and the method effective. Coupling performance improvement to changes helps to make changes stick and become incorporated in routines, which is especially important in organizations with strong cultures. When the change agent tries to connect performance increase to change; this help employees see the connection, and will encourage them to embrace change (Kotter 1995). All these enabling factors are strongly related to effective communication of change aspects.

Barriers

Uncertainty (Judge et al. 1999) and lack of clarity (Ford & Ford 2010) are barriers for a successful change process as they cause ambiguity and create fear of the unknown amongst change recipients. This increases resistance and reduces understanding. Uncertainty can emerge from changing or unclear change plans or lack of consensus about goals, as a result of insufficient preparation. When preparation is done well and uncertainty and lack of clarity are covered, it can be that the current workforce does not have the capabilities to execute the new work. In that case, a *competence gap* might exist. An assessment has to be made whether it is possible to perform as desired with the current workforce. This assessment can be made with methods like competency modelling (Shippmann et al. 2000; Campion et al. 2011) which is a tool to systematically identify the core competences of personnel, to assess which gaps exist between current and desired competences of the workforce. When the context does not show direct and obvious reasons why a change is inevitable, organization members might lack motivation for change. This can also come forth from low needs for personal development from the workforce. This hinders the acceptance and effectiveness of the change effort (Kotter 1995; Oreg et al. 2011). In many cases, organizational culture is also seen as a barrier to change. Culture consists of a number of factors, but is described by Robbins & Judge (2012) as the amount of innovation and risk taking an individual is allowed to take, the orientation of management; on the outcome, the individual or the team, the aggressiveness, the organizational stability and job security and the punishment vs. encouragement orientation, the level of formality and the decision making style.

3.2.4 Individual factors

The effectiveness of a change can be improved by focusing the change process to personality aspects of employees. Also, some personality traits or behavioral aspects play a role in the effectiveness of formulating new teams or organizational sub-units. Thus, information about the individual is of high importance in change processes, both for the understanding of the dynamics of change within the change recipients, as in their personal aspects valuable for new team formation. In this paragraph an overview is given of the most encountered individual factors.

Tolerance for ambiguity concerns the degree to which an employee is able to handle uncertainty. Some employees are better able to cope with uncertainty than others. There is a relationship with level of education, because higher educated people have a broader skill set and thus can do more different types of work, and are better able to understand the reasons why a change is necessary. Nevertheless, tolerance for ambiguity is a personal trait, and influences one's ability to cope with the uncertainty associated with change (Judge et al. 1999).

Openness to experience is a core personality trait, one dimension of the five factor model (personality test which identifies the score on the five highest valued personality traits) of McCrae & John (1992), which explains the amount of which an individual is curious, interested and open to new experiences. This reflects in his or her values, ideas and actions (Judge et al. 1999). Higher openness to experience has shown to improve one's ability to handle risk and uncertainty. Risk aversion is the degree to which an individual seeks to avoid taking risk. In the literature there has been debate on the existence of a relationship between risk aversion and change. Judge et al. (1999) have found significant evidence that risk avoidance does influence the change capacity of the individual (Judge et al. 1999).

Internal / external locus of control defines the amount to which people think they have control over their own lives (*internal locus of control*) or that their life is controlled by others (*external locus of control*). An internal locus of control contributes to a positive attitude towards change (Walker et al. 2007; Judge et al. 1999; Strauss et al. 2009). Intrinsic motivation (Robbins & Judge 2012; Judge et al. 1999) tends to influence effectiveness of change, motivated people are more willing to actively engage in a change program. Intrinsic motivation refers to motivation that is driven by an interest or enjoyment in the task itself, and exists within the individual rather than relying on external pressures or a desire for reward (Ryan & Deci 2000). Intrinsic motivation consists of two main aspects, job satisfaction and organizational commitment. When one is highly satisfied with current work, this will influence the willingness to participate in a change. And an employee highly committed to the organization will be more willing to change.

Extrinsic motivation (Robbins & Judge 2012; Judge et al. 1999) concerns the external motivators that influence the individual's motivation. The aspects of extrinsic motivation are globally

- Job performance
- Career plateau (glass ceiling)
- Salary

Work role performance (Griffin et al. 2007) concerns the way an individual performs on the job, and in particular how people cope with changes in the content of their work. In this distinction, three levels can be identified:

- Proficiency, which determines the level of professional execution of the work; the ability to perform the tasks as demanded.
- Adaptivity defines the ability to cope with changes in job tasks
- Proactivity defines to which degree one is able to develop or change his or her job tasks to a changing or uncertain external environment.

This distinction can make clear how people cope with change, but more how they perform in normal job circumstances. For instance for team composition, it can be the case that when in a transition new teams are formed, one team ends up with all proactive people. This team will become hard to manage because these people are taking too many initiatives and have problems being proficient in their core tasks. Then other teams might have only proficient teams, which makes them very good in executing demanded tasks, but will lack ability for self-improvement. Knowing the work role performance level of individuals gives valuable information for team composition. Griffin, Neal and Parker (2007) have developed a questionnaire to measure the level of proactivity of the employee. Employee commitment to change (Walker et al. 2007; Strauss et al. 2009; Judge et al. 1999) is the amount to which people are willing to cooperate in the change effort. Identified as being a part of organizational commitment this can also be seen as intrinsic motivation, but in many cases it is judged as a standalone trait. Of course the commitment is dependent on the content of change, but also on personal factors being;

- Affective commitment/positive affectivity; 'represents an underlying personality disposition typically manifested in characteristics such as well-being, confidence, energy, gregariousness, and affiliation. In general, it is associated with a positive worldview' (Judge et al. 1999).
- Cynicism; the perception of the change, mostly cynicism stems from a build- up of previous experience with failing change initiatives (Walker et al. 2007).
- Belief in the change agent.

Role breadth self-efficacy (Griffin et al. 2007; Judge et al. 1999; Walker et al. 2007) refers to ‘the employees’ perceived ability to carry out a broader and more proactive set of work tasks.’ A person high in role breadth self-efficacy is considered to be better in adapting to a changing work environment, and gives the employee the confidence to be able to engage in proactive behavior (Strauss et al. 2009). After all these personality traits, also the more tangible aspects of a person, competences; knowledge, skills and abilities have influence. People with a higher general mental ability tend to be better able to cope with change, both because they can conceive more of the underlying factors evoking the change as well as their ability to do more diverse tasks, so when change occurs there will be more options for them for new tasks in the changed situation. Stress-resistance (Robbins & Judge 2012) relates to a lot of the above factors, but initially contributes to suppressing negative emotions, in this case concerned with change. Stress resistance is thus an individual enabler in organizational change. With this last factor the literature review is finished. The overview of factors is displayed in a model in appendix two. In the following paragraph is explained how the information from the literature review is made presentable.

3.2.5 Factors related: a sequential overview

The literature review yields overview of the factors concerned with change. However, it is still hard to find sequence in the factors. The complication witnessed is that most factors have influence on each other. Almost all factors have some relationship, whether or not proven in literature. This observation shows the core of the complexity of organizational change; a seemingly non-linear process and interdependence of factors. Next to this, the influence of some factors is actually recurring at different phases in the change process. In order make the findings from the literature review presentable, an attempt is made to form a sequential model. Logically, a sequential approach is possible when one acknowledges that a program for organizational change emerges from the recognition of a change in external environment. The internal environment of the firm has to be adapted to this new external environment. This defines the content of the change. When this is clear, a custom program can be made to lead the process of changing. This program is custom to the organization and adapted to employees undergoing the change. This leads to actually a change in employee’s behavior and aspects of the work, and in the end a judgment can be made about the effectiveness of the change effort. On an abstract level, this is how change is executed. In figure 6 this sequence is displayed graphically. This model can be used to assess the practical situation to the theoretic background. This is done in the next section.

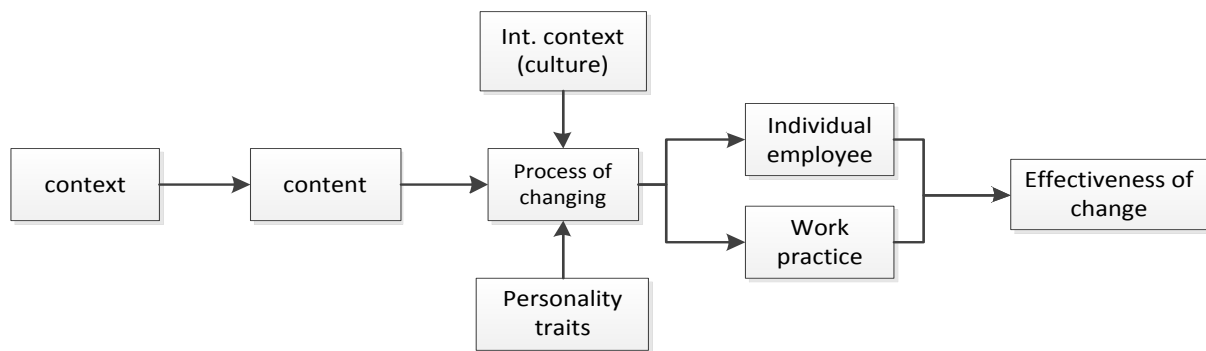


Figure 7 - Sequential overview of change factors

3.3 Round three: consultation for validation

The results of the two validation rounds are displayed below. The semi-structured interviews for the validation of the large model are complemented with unstructured interviews. The results of the interviews are displayed in tables two and three. These tables consist of the main statements of the employees and the occurrence of these statements, as a result of the coding process. The transcript of the interviews is included in appendices three and four.

3.3.1 Validation part one

The results of the validation round are presented here. The interviews addressed two subjects, first the validation of the completeness of the large model, and next the definition of the focus area.

interviewee	A	B	C	total
Professional does what he wants and likes rather than what is asked	1	1	1	3
Professional is hard to manage	1		1	2
Professional does not like control	1		1	2
People find it hard to stop doing old work	1	1	1	3
There are not many management control tools in use	1		1	2
Company culture limits implementation	1	1		2
The change could benefit of a good strategy to engage employees	1		1	2
Interest in each other and cooperation could be better	1			1
The goal of the change is not totally understood	1		1	2
Establishment of commitment to the change		1		1
Strategy is limited to technical aspects of the change		1		1
Communication	1	1	1	3
Leadership	1	1	1	3
Which competences are there and how to deal/divide them		1		1
Is outsourcing really beneficial?	1		1	2

Table 2- Results formal interviews validation part one

Concerning the validation, the interviewees were positive, and found the overview complete. However they missed factors that concern politics and the position of the department in the whole organization. The scope of this research prohibited further investigation on these subjects. Concerning the focus area, the interviewees have made the following statements.

Interviewee A

(All citations in this section refer to appendix 3 p.1)

The first interviewee (A in table 2) explains that he thinks the most important factor is culture and the way work is done. He states that 'people have to start letting work go, but for some reason they don't do that'. 'Employees appear to keep reverting to their old and trusted ways of working.' He relates this to the large freedom people have in executing their work. There are not many control mechanisms that enable the organization to take action on people not doing their work right. And the fact that a lot of people are quite individualistic, and not interested in the way other people do their work or which problems they encounter. 'We need more collaboration, nobody seems interested in other's work, and people do not communicate to each other about important things. I think this is an issue of good manners and work ethics.' The interviewee considers this to be an aspect of organizational culture. 'Also people have too much freedom, and can have an own interpretation of work. That is too why change initiatives fail, because so often people revert to old work after an improvement program is finished. We have seen this in 2009 and I am sure it will happen again if our approach is not fundamentally different this time.' 'A method is needed that makes changes last when the program comes to a hold and the work becomes routine.' 'This should be accompanied with a management control system to monitor the progress made with the new approach.' 'Next, I sometimes have doubts with the effectiveness of outsourcing core maintenance tasks. Is it really useful to outsource these tasks? Does the organization really benefit? It is really hard to make a performance based contract for a critical process.' 'Next, communication and leadership is currently not optimal. This evokes uncertainty'.

Interviewee B

(All citations in this section refer to appendix 3 p.2)

The most important statements of the interviewee (B in table 2) of the second consultation were as follows.

'I think that the factor culture is one of the most important factors at the moment; we see that people do not take their new roles, what are the reasons for this?' And 'As I have said before, we see plans to change work at Schiphol are often only based on the technical content of the change, and not further elaborated on the organization and consequences for the employees.' Further, the

interviewee states that there should be attention to establishing commitment to change, and how to measure competences, and how to divide tasks in the new situation. The interviewee is also interested in leadership; which styles would be most appropriate and useful.

Interviewee C

(All citations in this section refer to appendix 3 p.2)

Main statements of this interviewee are 'How can it be that it is so hard to manage people? I see that people do what they want to do, not what they should do. Problem is that people get away with it. Apparently there are not enough management control mechanisms to correct this behavior.' Next to this observation in lack of compliance of employees and the absence of enough adequate management control systems, the interviewee recognizes opportunity for improvement in the change process and the way of communication. As personal interest, the interviewee would be interested in focusing on culture, because the aforementioned factors adhere to attitude and mindset. How should these be changed?

The statements made in these interviews all refer mostly to factors concerning the change process. The results permit to conclude that focus needs to lie on the elements communication, leadership, culture, letting go old work and management control.

3.3.2 Validation part two

In table 3 the results of the unstructured interviews are displayed. In this table an overview is given of the most occurring sentiments amongst the change recipients.

interviewee	D	E	F	G	H	I	J	total
Lack of clarity concerning:								0
goal of the change	1		1		1			3
necessity of change	1			1				2
what work is in new situation	1	1		1				3
who will do the old work		1		1	1			3
the changing plans	1	1	1	1				4
Communication	1	1		1				3
Openness of management	1	1		1				3
Leadership				1				1
Trust in the new organizational structure	1	1	1	1				4
Pace of change	1	1						3
Stress	1	1						2
Capacity within the organization to develop fill in of new structure	1						1	2
We would like it when our opinion would be more heard		1		1				2
There is no clear plan	1	1	1	1				4
A Schiphol wide concern; decisions made are not executed by employees; people do what they want	1					1	1	3
Too many people are involved in decision making; people have opinions on things they should not be concerned with	1					1	1	3
Skepticism		1	1	1			1	4
In asset management, everything is sealed on paper. This reduces freedom of the professional. That makes it hard to accept						1	1	2
There are currently not many management control systems that make the organization able to steer employees or challenge them on their performance							1	1

Table 3 - Results informal interviews validation round two

As can be seen in the table above, the most occurring factors are the ones concerning lack of clarity, concerning the goal, necessity, and the content of the change. Next, the trust in the new structure is

a concern, as well as the need for a clear plan. This missing information and conviction evokes skepticism. Relating these statements to the large model, the following can be stated.

Context and content

As explained in the introduction, the case company has identified a strategic necessity for change; the external environment demands higher performance at lower cost. The case department has to realize this cost reduction. The solution for this reduction is the optimization program AssetWise. This program defines the content of the change. The content of the change is further translated in the organizational structure change program; AMS 2020. The employees state that this necessity and the change goal are not clear enough.

Next, people express concerns regarding clarity of the content of the change (what will actually change) and the ability of the organization to define the content themselves. Furthermore, there are concerns regarding how the work will be divided and who will do the old work. Also, people feel that there are parts missing in the plan; it is not yet complete.

The individual

Factors concerning individual character traits and behavior are identifiable with the change recipients. These are skepticism, trust, stress and uncertainty. The assumption can be made that these factors play a role in the effectiveness of the change. One can put effort in mapping the personality traits of the individuals to reveal which factors are most present, or appear to have the highest influence in the change. This can provide insight in which factors management has to focus on when formulating an implementation strategy. However, the usefulness of such an attempt is questionable. There are two downsides of this approach. First, one might end up with a dispersed outcome that means the strategy has to incorporate too many different personality traits. Second, inquiring what the specific personality traits and their frequency or magnitude of occurrence is, does not add value when their existence is already known. Having identified these traits from literature and developing a general strategy that takes into account the needs of the individuals expressing these traits should be enough. For instance, people low in tolerance for ambiguity can be helped with a clear and implementation strategy. People who have an external locus of control are also helped with a clear goal and insight in what the change entails for them. The solutions for coping with these character traits thus should lie in the formulation of a good process strategy making use of the enablers and avoiding the barriers as mentioned in the literature review.

The process

The highest scoring statements in table 3 are statements concerning clarity of the change, the

proposed planning and communication, and skepticism. From these results, it can be concluded that most statements relate to factors in the process category.

From these statements, a focused approach can be developed, that includes all aspects mentioned. This model is analyzed in the next round.

3.4 Round four: development of focused model

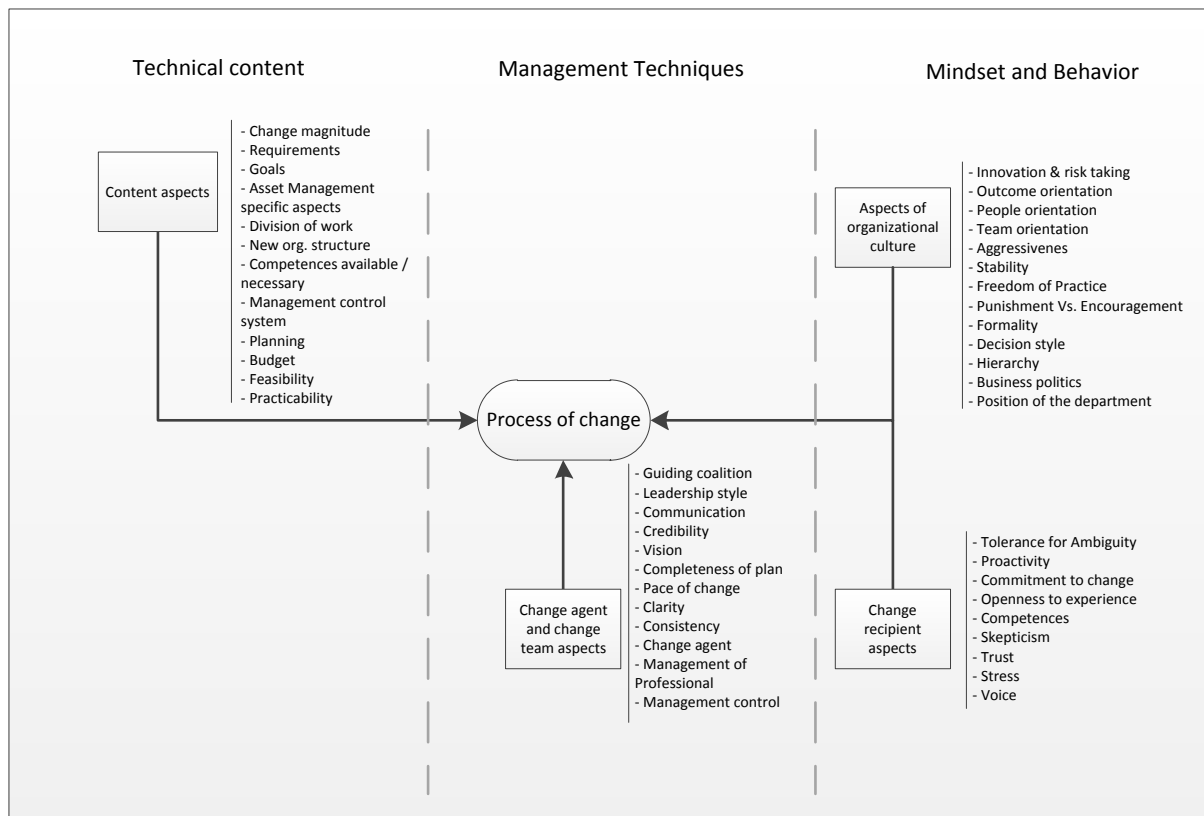


Figure 8 - Focused model of change

From the factors identified, related to theory, the above model is formed. Addressing all these aspects will deliver an efficient change strategy. Fine et al. (2008) have found that implementing changes in an organization benefits from a strategy concerning three main categories of factors. These are technical content aspects, aspects of management techniques and aspects of mindset and behavior. The aspects displayed in the focused model appear to fit this categorization. This connection is also displayed in the focused model.

As stated by one of the interviewees, Schiphol's change or improvement programs often focus too much on the technical content of the change (interviewee B). Another interviewee characterized Schiphol Group as a 'technocratic organization' (Interviewee C). This is also considered to be the case

for the change program under study. The observed concerns are mostly related to mindset and behavior and management techniques.

This observation makes clear that a change strategy has to incorporate the technical elements of the change that need to be worked out, but that the elements concerning management techniques and mindset and behavior are at least equally important. In the following round it is explained what a good approach for the management techniques is. In the last round, 5b, the approach to the mindset and behavior is addressed.

3.5 Round 5a: providing expert advice

As can be seen are most identified factors not even related to Asset Management. Most of the factors are generalizable to any change program. These factors can be adequately addressed with advice. Many aspects of the focus model find connection with the strategy defined in the research of Kotter (1995). Applying the core elements of the change model of Kotter may help the organization to develop a strategy which will help to reduce the observed concerns.

Two important factors in leading change are communication and explaining why change is necessary (what Kotter calls creating sense of urgency). The problem with technical improvement programs is that they are often complex and they are initiated by people who often have a technical education. The issue with technical people is that they tend to be less good communicators. Therefore, putting extra emphasis on good communication and explaining the necessity is extra important. Change starts with the manager of the department. This person has identified the need for change and will have to lead his team through this change. This can be done by taking the following steps.

Establishing sense of urgency

The results of this research show that the necessity for the change is not really clear enough among employees. A change program is almost always the consequence of a change in strategy of the company. When losses are high and the company is at the verge of going bankrupt, the strategic necessity for change is easily communicated to the employees in the firm. However, with good business results the necessity for change is not obvious. Apparently, change is needed and there are reasons why. By communicating these reasons, it will become clear why the change is needed which will make people understand the urgency of the change program. This is what Kotter calls creating urgency; making the employees understand that the unknown is better than current business.

Forming a guiding coalition

Of course, communicating urgency is not enough. The second step is the formation of a guiding coalition. A team is required that will collaborate with the change leader to develop a change plan and to help the initiator of the change to communicate about the change through all layers of the organization. The change team is composed of members from all layers in the department. The change team is used to develop the content of the change and to communicate the content to all members of the department. The change team is used to develop momentum in the beginning of the change process; engaging key people in the department helps to overcome opposition. Also, these key people are able to voice the interests of all subgroups, so that these will be taken into account in the change. The team is used to make an assessment of problems and possibilities within the company, and can together make a comprehensive approach on how to conduct the change. In this way, issues from all levels in the organization are addressed. Referring to leadership, a key element of the change team is that it should be led by the line manager; in this way the importance of the team and the change is clear, and the guiding coalition has the right power to gain credibility. This is mentioned by Kotter (1995), but also Fine et al. (2008) refer to this as an important acknowledgement (Fine et al. 2008; p1); 'they (*line managers*) often delegate the responsibility for change programs to ... lean experts who have the technical knowledge but often lack the authority, capabilities or numbers to make changes stick' Selection of change team members can be done by keeping in mind some personality traits, people involved in the initial stages of the change will benefit from traits like openness to experience, tolerance for ambiguity and proactivity.

When the change team is formed, the content aspects of the change can be worked out. Defining the magnitude of the change, and which competences are necessary to do the work in the new situation, in which structure this will be done are all subject of discussion in this team. The team can then work on a complete picture of the change. This will increase the completeness of the plan, and by communicating this continuously to the other members of the department, this guiding coalition will contribute to clarity of the plan and to the communication of the plan.

Developing a vision

Together with the definition of the content of the change, the change team is in charge of the development of a vision. Kotter (1995) defines that the development of a vision is key in the process of change, because having a clear vision enables the members of the change team to efficiently communicate the magnitude of the change to the employees. The vision is a description of the change and is communicated in less than five minutes. Following Armenakis (1999), the change vision will consist of the following elements. The change is necessary, the goal is appropriate, the

organization is capable, the individual employees will benefit and that management supports the change.

‘In failed transformations, you often find plenty of plans and directives and programs, but no vision’
‘There can be a sense of direction, in a vision, but when it is not transferrable in less than five minutes and does not yield a reaction of understanding and interest, the vision is not good enough.’
(Kotter 1995, p. 63)

A vision that helps the organization to understand the change increases clarity and trust, which in turn reduces skepticism and stress.

Communication

As mentioned before, communication has to be exhaustive. As Kotter (1995) states, usually the vision is largely under-communicated. The guiding coalition and leading manager have to take every opportunity to communicate about the change. This will take a lot of time, but will pay back in the end, as it contributes greatly to resolving the associations with the change witnessed in the previous section. Another important acknowledgement is that it is key for managers to take the lead in showing new behavior themselves first. Communicating the change in this secondary way, ‘walking the talk’ is believed to increase the credibility of the communication. Besides, the credibility of the communication is something one has to keep in mind all the time. It is also possible to voice elements of the vision during day to day business, where decisions or remarks can be coupled to the vision, in this way increasing the appropriateness of the change.

Removing obstacles

To keep the change credible, it is important to remove obstacles witnessed. This is of course an abstract term, but it is related to all resistance witnessed by dealing with it. It can be in someone’s head, in an old protocol, or related to work practice. When obstacles remain intact, the credibility of the attempt is reduced and people will become skeptical.

Kotter; ‘In the first part of the transformation, no organization has the momentum, power, or time to get rid of all obstacles. But action is essential, both to empower others and to maintain the credibility of the change effort as a whole.’ (Kotter 1995, p.65)

Next, to keep momentum and urgency up, it is advisable to celebrate short term wins. People have to see the change is working, but not finished yet. One can use the credibility built up from short term wins to tackle a bigger problem. The following recognition is also important. Remember that real change takes years. ‘Celebrating a win is fine, declaring victory too soon can be catastrophic’ (Kotter 1995, p65).

For instance, an important aspect of change is making the changes become routine. This is a fact acknowledged by the interviewees in the validation round. How does it come that people keep reverting to old work?

Making changes become part of the culture requires two things:

1. Show the organization how the increased performance is related to the changed approaches, behavior and attitude. Help people see the right connections.
2. The next generation of management does personify the new approach. Succession decisions are key for the sustainment of change.

Two recognitions remain; changing an organization's culture is expected to be one of the most difficult things. At least, it may take years to effectively change an organization and its culture (Schein 2010). The advice is not to hurry this process but take ample time to develop a good plan and create understanding for the necessity and acceptance for the goal, when this is achieved and plans are worked out, the department can continue to make the transition fast and efficient.

The first four parts of Kotter's change strategy seem to adhere to the sentiments found in the organization. People need to see why the change is needed, that the change is appropriate and that the organization is able to achieve these improvements. These aspects can best be communicated with a vision, the change leaders have to communicate this extensively to the employees, and this can best be achieved by the establishment of a guiding coalition that helps the formulation of a plan and communication.

However, not all aspects of the process model are incorporated yet. Especially the two observed factors of 'people keep reverting to their old work' and 'it seems so hard to make changes become routine'. For these statements, embedding the change in culture, the recognitions of Kotter are very general and abstract. A way to develop commitment and engagement is necessary. These elements are addressed in the following part.

3.6 Round 5b: process consultation

The results of the last process consultation round are presented in this section.

Goal of the first session was to make an inventory of what is going right and what should be incorporated in the content of the change, to see what is really bothering people on the work floor, and to engage these people and make them see the necessity of the change.

The results of the first session are displayed in appendices 7a and 7b. The findings were found to touch upon three main subjects; the position of the AMS department within other departments of the organization, the relationship with the contractor and communication within the organization. The first session, which lasted around 75 minutes, was extensive as a lot of information was provided. There was also a lot of discussion between the attendees of the session about the formulation, or the cause of the things noticed. This was good, since it was one of the goals of the method to evoke discussion and to find statements that are supported by all attendees.

The results of the second session are displayed in appendix 8. These results were mainly an elaboration of the statements from the first round. This was the actual root cause analysis session. For some statements, as much as 20 minutes were needed to fully comprehend the issue. Some statements from the first round changed, some stayed the same. Some statements of the first rounds related to the same main concepts, these statements could be clustered. It is the task of the researcher to lead the discussion, and take enough time to find root causes, but not to squander it on unnecessary elaborations. This was difficult, because one of the goals is to give employees voice.

After the second session, the researcher translated the session in transcript. The attendees then provided feedback on these statements. Thereafter the prioritization was done. The final information is displayed in appendix 9. The main findings from the root cause analysis are described below.

1. Mindset: The operational department cancels planned maintenance too often without providing a good reason.
2. Mindset: Employees of the department love their work, so they will try their best to keep doing what they want.
3. Management infrastructure: Organization AMS with only day shifts seems incapable to deliver the adequate service for the 24h operation of Schiphol.
4. Management infrastructure:
 - a. The expectations and tasks of the main contractor have to be more transparent. It has to be clear what is paid for and what not.
 - b. What is the validation for the outsourcing of maintenance? Cheaper, more flexibility?

5. Management infrastructure: Shorter job rotation times are questionable for technical specialists
6. Management communication (from our managers up to the managing director) is often not clear or complex; hard to comprehend
7. Management infrastructure: Plan for AMS 2020 was indistinctive, which resulted in the fact that goal, purpose and necessity were not totally clear.
8. Technical content: Procedures and protocols have become too bureaucratic; getting small things done takes way too much time.

Reflection of participants

In a reflection moment, the participants of this method mentioned some aspects they liked and some they would like to improve. Statements were as follows (quotes from appendix 9).

This is a good way to put sentiment under words. It is a good way of getting overview. It clarifies what is at play, and the group session shows that there are more people that share the same opinions. Before a change is conducted, it is important to know what already is going wrong, to take these elements into account in the change.

But, we must not forget that so many things are actually going right. For instance, a contractor has a lot to organize to be able to execute an incidental breakdown. Sometimes this takes a bit longer, for instance during the general contractor's holiday. It is also a matter of keeping the relationship healthy instead of getting the most out of a service level agreement.

3.7 Analysis of the results

With the proposed method in 5a/5b all factors identified in the focused model are addressed. Technical content is addressed in the general change strategy by the formation of a change team, which will take care of the formation of the content of the change and to develop an efficient strategy. This team must be able to judge the practicability and feasibility of the change program. This addresses the technical content and the management elements. The individual aspects are addressed in the last process consultation round, where also feedback from practice is given on the plan composed by the change agent and team. This gives a complete approach for the development of an adequate change strategy.

The last round revealed practical factors that explain why it is difficult to implement the asset management methodology. The distinction between general change management and specific asset management factors consists of the following recognitions.

The Asset Management method is complex; the translation to an explanation that is comprehensible for lower educated people is difficult. Asset management demands a change of work from technical content to only the management of the process. This is something people do not like, because they like doing the content related work, and are used to being involved in the content. It is thus a combination of preference and habit. Next it is difficult for people is to let work loose when they are not sure that the main contractor is capable enough of outsourcing the work himself, especially when the Schiphol employee is still responsible for the functioning of the asset. There has to be an incentive for the main contractor to take responsibility, otherwise it will keep reverting it to the asset owner, which will keep the Schiphol employees involved in the technical content of the work. This is currently under construction in the transition to performance based maintenance contracts. Next, professionals often do not see the benefit of the change and are not able to accept the change until they do see the benefit. This counts too for this case, the employees are not convinced of the benefit of outsourcing.

Two last questions remain from the validation interviews;

Why did they not take new roles? The trust in the ability of the contractor to execute the work successfully themselves is not yet established. The responsibility is still too much at Schiphol employees. The employees like to do their work themselves, and do not have new work or responsibilities yet. This makes them retain their current work as long as possible.

How do you get commitment to change? By engaging the people to think actively about the change process and provide information about the important practical aspects, the change starts to become real for them and they see change is necessary. A method like the balanced approach is useful to gain this commitment.

With these last recognitions all factors of the focused model are addressed.

4 Reflections

4.1 Reflecting on this study

Reflecting on the method of this particular research, several remarks can be made. These are stated in this section. The appropriateness is judged and a scientific assessment of the method is made.

The first round of process consultation is useful to gain insight in the problem. The literature research is necessary to enable the researcher to become knowledgeable on the subject of change. Especially to make the distinction in the results between issues that are related to the implementation of technical improvement programs and the issues found in general change implementation strategies.

The second round of process consultation was necessary to find out in which focus area the issues of the organization could be placed and how the researcher could best provide help to solve these issues. To provide this help, two modes of helping were appropriate, advice and process consultation. The different modes of helping were appropriate in the situation. Considering the steps taken in the research, I would not conduct it differently. Though there were some things that could have been better or deserved more attention.

For a start, the recognition of the value of data. All conversations, communiques, statements and short talks are sources of data. Documenting all these moments extensively helps a lot in finding connections, structuring a problem and enabling a researcher to make grounded statements. This is something I did not realize enough in the beginning. When the study continues, the researcher gains more knowledge on the subject and the context. With this increased knowledge, the researcher is better able to make connections when reading back statements. All data contributes to a better fundament to build statements on. All data together builds an 'exhaustive chain of evidence' which is needed to make statements. In this type of study, most statements and decisions the researcher takes are based on this information. Being aware that all ways of communication are worth to document, is valuable to keep in mind at the start of a research of this kind.

Since the departments differ quite much, the rigor of the method would have been improved when I would have spoken to more people, explicitly from different departments. Then I would have been able to provide insight in the differences in the sentiments of the people in the different departments, and the advice could have been complemented with what would have been focus points for the different departments.

In studies like these, guided by encountered events, the great difficulty lies in keeping overview and structure in the research process. It is the trick to have the courage and confidence to be tolerant for

ambiguity. As the typical qualitative study benefits from a unstructured and open approach, it is not necessary to have everything clear at the start. However, one has to guard for a process that is methodologically sound, so documenting all steps taken is very important. The literature study conducted in this research was very broad and comprehensive. When I would have lead the literature review more by the findings from the first exploratory round of process consultation, the literature review could have been more efficient, and it would have been easier to judge which elements to include and which not.

As a researcher, I found it my responsibility to find the right approaches and to define the direction of the research largely by myself. The problem is, that explaining others your ideas, progress and findings helps you greatly in understanding and assessing the correctness of what you are doing and helps you find new insights. Told by the one you are talking with or by yourself when explaining. In this study, I relied too much on myself and tried too much to come up with results instead of asking questions. As a graduate student, conducting this kind of research for the first time, communicating and explaining is even more important than for a seasoned researcher. I would advise any student conducting a thesis research to form a group of fellow students and regularly come together to discuss their progress. These meetings and regular deadlines provide structure to prevent the student from losing track, and provide a regular dose of motivation.

Concerning the composition of the sample for the balanced approach, the following remark can be made. The attendees were all line employees. I could have increased the usability for management if I would have had one member of the management team join the sessions. I did not do this because I did not want to take the risk that attendees would feel restricted to speak out their concerns because of the presence of one management team member. I chose for a composition of sample of only technical administrators. I chose to do this to find all the issues related to their practice, as a pilot. This yielded root causes from their practice. For the other departments, a similar approach could be repeated. I think that with a sample composed of a more heterogeneous group of employees it might be able to find all root causes in one sequence of sessions. This saves time because the sessions have only to be done once, but will make the actual sessions take longer, maybe an afternoon, two to three hours.

To reduce the amount of time involved for participants, I tried to do the last session of consultation, the prioritization, by email. This was a bad choice as the response rate was zero. Multiple times asking and sending reminders did not help. An individual consultation with all attendees was needed to gain feedback. The attendees found it difficult to read the summarized statements. Therefor I advise to take all steps in sessions, asking feedback from email does not work.

There is a limitation in the Coding process, as there was subjective coding applied as the data analysis tool, which was not validated by another researcher. This could limit the objectivity of the coding process. As a final remark, this study did only conduct one iteration of a helping approach. The limitation is that the real effect of the advice on the change process is not tested.

4.2 Limitations of the method

Process consultation is a good way of addressing the myriad of problems line organizations face when trying to keep the operation running. The method allows investigating these problems and their impact, to identify which ones are most important to solve, and in which way help can best be applied.

One contributes where necessary, thanks to orientation on where the problem lies, and thus provides useful advice. This is an advantage of process consultation. The field research enables the researcher to provide help, in the form of advice, diagnosis or guidance in a process, exactly where it is needed.

Another benefit is that the method allows, or encourages the organization to build problem solving capacity themselves, helping the organization to improve their problem solving skills to enable them to replicate the approach, which makes the consultant's effort useful in providing a method that can be used again, with which the usability of an advice is greatly improved.

After these main advantages, there are some limitations to the usability of process consultation. It takes a researcher time to gain insight to know where to contribute, and to plan and execute an intervention. Process consultation is suitable for this. The difficulty lies in the pace in which the formulation of an adequate helping intervention has to be formulated. In this case, the change program was postponed during the study. This gave the researcher more time to reflect on theory and test a certain solution, and at the same time still be in time to provide help that comes in time to contribute to the improvement of the change process.

A researcher conducting process consultation would benefit from previous experience in qualitative research, in particular for skills concerning interview techniques, ways of structuring the research and coping with the ambiguity and scope. This enables the researcher to arrive faster at advice, which increases the usability of the intervention. One could say that this makes the approach not so suited for graduate student research, because of the difficulty in applying the method. However, it does provide the opportunity for the student to build consultation skills that can be valuable in a career as a consultant or manager.

Another big limitation for science lies in an advantage for practice. The fact that the practical situation defines the goal of the research makes it practically very relevant, but makes it almost impossible to develop a predefined contribution to science. At best, the method reveals situations where existing knowledge, models or tools can be applied. The focus of this method thus does not lie in the contribution to generate more knowledge, but the coupling of theory to identified problems in practice. This provides the opportunity to connect existing researches in a search for an optimal mode of helping. The limitation is indeed, that this method does not explicitly contribute to the development of new knowledge.

The balanced approach

The limitations of the last round of process consultation, based on the balanced approach, are displayed in this section.

Apparently, lower educated employees find it difficult to adequately voice their opinion and sentiment and convey their concerns to management. With these sessions, the researcher helps the employees to convey their message to the management by catching sentiment in summarized statements. In this way, sentiments do not strand in rumors or discussions next to the coffee machine, but end in 'statements you can take action upon'. This enables management to address the right cause.

The method is useful to connect the goals of the change program to issues in practice. This increases the acceptance of the change and makes the reasons why the change is conducted more obvious. The approach is also useful to incorporate issues from practice into the change plan; the approach might change the insights the manager has in the change process, what is going wrong and what should be improved.

The method provided insight in main questions of management; for instance insight in the reason why people did not take their new role; not enough trust in the contractor and not enough insight in the reason why change is necessary. However the development of root causes is not the only goal of the method. The establishment of some commitment and understanding for the change is at least as important. This is even further improved if one can find the connection between key points in the change program and the issues mentioned in these sessions.

Maybe the method yields results that were already known. That is not a problem. The people who told you this did not know that you already knew it. When you couple your plans to these results, people will feel heard. A crucial element of the method is that it creates the opportunity for employees to voice their opinion and find that management cares about this opinion. This will create commitment to change.

Of course, this method has limitations too. The method takes quite some time, not only the method itself but also summarizing the sessions. This is not really immediately returned into value. The value is found in an improved relation in the long run. Another downside is the promise made that giving voice requires action from management. This has to be recognized and accepted. Another limitation of using this method is the difficulty of using continuous improvement tools for organizational change, since the method also yields results that might not be directly related to the change program. Another limitation of the balanced approach is the necessary skill of the researcher to be able to listen, summarize and ask the right, open questions at the right time.

A last limitation of the overall method of process consultation is the concern of limited generalizability. A dilemma emerges with the use of this method. The difficulty is that to gain insight in the problem, the focused and explorative approach of observing and participating in an organization is useful. To make it generalizable, different cases should be addressed. In order to develop useful results in limited time this would force the researcher to revert to more superficial techniques, which limits the insight necessary in a study like this. It thus appears to be difficult to combine these both worlds, offer the highest helping value and at the same time generate generalizable results, at least in a master thesis research.

Concluding, one might find a lot of restraints in this study. None of them are strong enough to refrain from using this type of research. However, one has to be aware of these limitations when choosing for this method.

4.3 Contribution to theory

The goal of process consultation and other types of action research is the development of solutions for problems witnessed in an organization, in a way that is scientifically grounded. This implies that the research method does not have a specific contribution to science. The application of process consultation, or any other method based on action research, is at its best the connection of the practical problem to an approach found in literature that enables the organization for which the researcher works. This implies that the study will at its best test the practical applicability of theory.

A contribution is the application of a process optimization tool (the balanced approach) to support change and make the connection of practical issues to the formulation of a change process strategy. The research has shown that this method, in essence an extensive interpretation of the five why technique found in lean/six sigma process optimization programs, is also suitable to make a practical contribution to an organizational change process.

4.4 Generalizability

This research does not provide information that is statistically generalizable. The single case and the limited sample size are simply too limiting to enable any justifiable generalization to other companies. However, the case has illustrated that the most important observable factors that emerge when implementing a technical process improvement method are not fundamentally different than the findings from research that focuses on general organizational change. Purpose, necessity, communication and organization's ability to change are important findings, also for this study.

Process consultation is useful for consultants. Usually, consultants provide answers to management's questions. The advantage of a consultant conducting process consultation is the addition of first making an assessment of the problem definition of the client. Is the problem as perceived by the client exactly the core of the problem? When one is able to find support for the problem definition in the organization, it can provide advice without the assumption that management has defined the problem right. This improves the quality of the advice and the chance that it will contribute to solving the organizations' problems. Same is the case for managers. Using the root cause analysis methods in their own organization can contribute to efficient problem solving, to learn to listen better, and to improve communication with employees in the organization.

Concluding, it is not the results that need to be generalized, it is the method that needs generalization. This method can be used for other companies to make a quick scan of which specific factors play a role in the context of that particular company, whatever they may be. Management then knows on what to focus, and employees feel heard.

4.5 Agenda for future research

A limitation of this study was providing advice and help without the ability to check if the advice really helped. Questions remain if the method really improves the practicability of the change, if people really get more engaged, if findings from practice are easily connected to the plans from the change and if the method is good to use when the change process is already going. Further research is necessary to assess the actual practicability of the method and the value of the results.

The employees did not like the fact that it was difficult to come up with examples of work that was actually going good. It might be useful to combine elements of the appreciative inquiry (Cooperrider & Srivastava, 1987) method with process consultation to reduce negativity, find the core strengths of the organization and find ways to use these strengths to reduce the weaker points found with process consultation. A future study may find out how these studies can best be combined.

This study can be seen as an exploratory investigation of factors related to implementation of asset management. The findings from this study are not generalizable due to single case and limited sample size. A contribution would be a study, preferably based on a quantitative method, which is intended to find out if organizations implementing similar programs witness similar breakdowns. If these factors are found to reoccur, the approach can evolve into a generalizable approach.

As recognized by the founders of the Asset Management method displayed in the introduction, the effectiveness of the implementation of Asset Management is largely dependent on effective leadership and the establishment of changes in organizational culture. One of the reasons for this is that Asset Management is often implemented in organizations where professionals are at work. These people are highly educated and have a strong opinion, and are Therefore considered to be hard to convince of the necessity and appropriateness for change. In these cases, well-considered choices for leadership style, establishment of organizational culture and skills for the management of professionals are extra important. Future research on the implementation of Asset Management should be identifying which of the styles and techniques concerning leadership, changing cultures and managing professionals are most appropriate to apply. This could contribute greatly to improving the efficiency of organizational change towards Asset Management.

5 Conclusion

This thesis research is conducted to develop an approach to enable efficient implementation of the Asset Management approach. The most important findings are summarized here.

Conclusions concerning the method

Process consultation is a suited approach for the support of organizational change projects, as it enables the researcher to provide the right help where it is most needed. The limitation of the method is that because of this, the results of process consultation research are hard to generalize. Communication runs in two directions. Next to telling, listening is just as important. Not only to know what is at play, but to give employees the feeling they are heard. The balanced approach is an appropriate tool to facilitate this aspect of communication, and a useful addition to process consultation in change projects. Especially in the case of the implementation of the Asset Management methodology, of which the goals are hard to comprehend for lower educated employees, the method is especially suited, to bring sentiment under words and connect the aims of the change program to the issues witnessed in practice.

Conclusions concerning the findings

The answer on the main research question *‘How to contribute to an efficient transition method to a new organizational structure, to enable the implementation of the Asset Management approach for Schiphol Group’* is best summarized in the following conclusions and recommendations.

The Asset Management methodology provides companies ways to improve the efficiency of maintenance and management of physical assets by establishing an integrated approach to guard initial and operational cost whilst considering interests of all stakeholders involved, and provides ways to take appropriate risk to derive at quality standards that are optimally cost-efficient instead of offering total security and availability of assets against high cost. The method enables an organization the possibility to deliver their service against lower expenditure on assets. This is especially useful for companies with a diverse and large asset portfolio like Schiphol Group. Although not explicitly part of the Asset Management methodology, an important contribution to these goals is the outsourcing of maintenance tasks to main contractors specialized in these tasks. At the same time, outsourcing is the hardest part of the implementation of Asset Management related programs. This also counts for department AMS of Schiphol Group, the change to outsourcing is more extensive and drastic than is first realized. Consequences are that most employees’ jobs will change; they will get new sets of responsibilities which might require new skills and competences they do not possess yet. Employees lose their current tasks, which they have passion and commitment for.

Compared to the less hostile aims of Asset Management, it is outsourcing that evokes the most structural changes. To establish a coordinating- only organization that really outsources core activities, a radical change is needed, to provide employees a new context to do their work, and prevent them from reverting to the old. A change in organizational structure is a good way to achieve this radical change, and help employees to let go of old work and embrace the new. However, a dialectic change process that aims to realize the new situation on the go and in conjuncture with employees is not suitable for this type of change. This is also witnessed in the case company when consulting employees about their concerns. Most frequent heard statements consisted of concerns about the clarity of the change program; the goal of the change is not clear, the necessity for outsourcing is questioned, employees find it hard to picture how the new work will be done and who will do the old. Next, people see that plans are incomplete and that these plans are subject to change. Employees express the need for extensive communication to resolve these questions. Next, employees find it regrettable that their core job aspects are outsourced. The last remark is the existing contradiction in the objective of the change program; the aim of outsourcing is the reduction of employees for Schiphol, but at the same time it is stated that 'no jobs will be lost'.

These concerns evoke skepticism, distrust, stress and uncertainty among employees. These feelings make them less willing to cooperate. It appears that especially for the establishment of structural changes that outsourcing evokes, leadership, communication and clarity are of utmost importance. It shows that a dialectic change program that depends heavily on employees is not advisable. Especially for change programs to enable outsourcing related to Asset Management, it is important to develop a clear plan and extensively communicate this plan to employees undergoing the change.

Establishing organizational change, especially a change of the magnitude witnessed here, requires time, resources, and energy in amounts more than a line manager can cope with to manage 'on the side'. Also witnessed in this research, the employees do not have sufficient skills, abilities and time to completely fill in the proposed organizational structure themselves. The approach to mitigate these most important breakdowns for department AMS in this situation is proposed in the next section.

6 Recommendations

To resolve the observations displayed in the conclusion, the following agenda for action is proposed.

The change at hand is sizeable, complex and has substantial consequences for most employees. The management team implementing the change needs to acknowledge the magnitude of the change and the difficulty of the change for the employees. A thorough and planned approach is needed that requires effort and dedicated resources. Such an approach should consist of the following steps.

1. First it is important to make the goal clear. This is done by stating clearly to the departments' employees what the goals of the change are and how these will be achieved, and from where these plans originate; Schiphol's desire to retain the position of 'Europe's preferred airport'. It is important that this goal is communicated in a short and catching way; which can be achieved in forming a vision of the change that entails all important elements and is communicated in less than five minutes. In this way the necessity of the change and the appropriateness of the new structure will become better understood.
2. Next a complete plan has to be made that includes all that is necessary for outsourcing. This plan contains of making detailed descriptions of the new departments concerning tasks and responsibilities, and composition of jobs that will execute these tasks. These activities can best be done by a change team, or 'guiding coalition' that consists of members of the organization. Because it is witnessed that employees do not have the skill and knowledge to work these plans out completely themselves, it is advisable to add one or more (external) experts to the team to help them realize these plans. Research has shown that it is important to have this change team lead by the department manager and not an external consultant; to show it is in the interest of the department's management that the change is conducted in a thorough manner. Next to the making of the plans it is also necessary to communicate them with regular communiques to keep everyone updated about the progress. It is important that the change team receives dedicated time and resources to develop the plan, instead of an extra work burden next to normal operations. The development of a plan will contribute to resolving doubt and skepticism among employees, and will resolve the concerns currently witnessed.
3. To create commitment, the change team should consult other members of the department to find their concerns, opinions and recognitions about what is going right and wrong in the current organization. By using the balanced approach for these consultation rounds, the employees will feel heard and see their concerns incorporated. Especially the interpretation of this method proposed in this research enables employees to put their sentiment under words. Also does this technique provide the opportunity to incorporate more practical

considerations in the change. Next, this method provides the opportunity for the change team to link the goals of the change program to practical issues in current operations, which will provide employees with insight in the benefits of the change program for their daily operations. It is advised to use multiple consultation rounds with employees of the different departments to find out how the views on the change of these employees differ, and which elements are important for which department.

4. When the change plan is worked out the magnitude of the change is clear. The next phase of the change commences; the preparation phase. The new functions are available and choices can be made on who qualifies for which task. Then a division can be made to define which employee will receive which tasks. This goes together with a gap analysis concerning skills, competences and preference. When this is done, the department can continue preparing for the transition. Employees can be trained for their new tasks; missing skills and competences can be filled in.
5. When this is done, the organization is ready to make the transition to the coordinating- only organization. With ample preparation, clear goals and plans, the change to outsourcing will yield desired results, and people will be able to let their old work go. The explicit distinction has to be made between the preparation phases and the actual transition of the organization to the new structure, these are to take place in sequence and not in parallel.

Acknowledging the magnitude of the change, the consequences for employees and the resources required to transform the organization, and accepting that establishing change requires substantial time and effort is a prerequisite. Recognizing the importance of good communication in both ways; establishing dialogue, is essential to guide employees in the department through this disturbing time. The distinction between the organizational change and the actual transition to the new organizational structure also needs emphasis; an efficient transition is only possible when the department is ready to change. Establishing this readiness is achieved by going through steps 1 to 4. In contradistinction to the transition, which has to wait until the whole department Asset Management is ready to change, the first four steps of preparation should be commenced as soon as possible. A good preparation enables the department AMS to change efficiently once the whole department Asset Management is ready to change too.

Following the above approach, main concerns of employees are mitigated and efficient organizational change is realized. These recommendations mark the end of this thesis.

7 Bibliography

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8 Appendices

8.1 Appendix 1 – Transcript explorative interviews March 2014

Interview Arnoud Terpstra 3 Maart 2014

Introductie

Wat is precies jouw functie?

Arnoud Terpstra – sr. Adviseur techniek – civiel (?)

Manager van afdeling adviseurs van AMS.

Samen met Paul Zeeuw besloten dat AMS 2020 noodzakelijk was om de organisatie klaar te maken voor professioneel opdrachtgeverschap en het goed kunnen aansturen van main contractors noodzakelijk was; om echt vruchten te kunnen plukken van het outsourcen van onderhoudstaken.

Doelgroep: Met welke groep mensen gaan we aan de slag?

In principe gaat het om iedereen die hier op de gang zit, dat is ongeveer 50 man. Deze zijn allemaal hier werkzaam, in dienst van Schiphol. Voor sommigen gaat het werk er heel anders uit zien, voor anderen zal dat minder zijn. Voor adviseurs bijvoorbeeld veranderd er niet zo veel, maar voor een perceelgerichte technisch beheerder of service manager natuurlijk wel.

Zijn er nog grote verschillen in de problematiek die speelt bij de binnen en buiten dienst?

We zien wel dat er meer weerstand zit in de hoek van de TB/TCD, waar men toch meer met de inhoud bezig is. Daar is de perceptie wel anders dan in de rest van de gang. Wel is het zo dat er niet een speciale binnen of buiten dienst is, iedereen werkt in principe vanuit de afdeling hier en de supervisors en werkcoördinatoren komen vaker buiten.

Wat is de huidige stand van zaken?

De gewenste situatie is duidelijk, we willen een organisatie die alleen nog maar het proces stuurt en zich niet meer inhoudelijk bemoeit met onderhoudszaken, dat is de kern van de doelstelling. We hebben AMS 2020 als organisatiestructuurverandering opgezet om deze omslag te kunnen bewerkstelligen. De kern van de organisatiestructuurverandering is een omschakeling van een perceelgerichte naar functiegerichte indeling. We hebben samen met medewerkers een doel opgezet en het is de bedoeling dat we daar in de komende maanden naartoe gaan werken. De nieuwe rollen worden momenteel uitgewerkt, maar we zeggen tegen de mensen hier dat ze het werk wel vast op de nieuwe manier kunnen gaan doen.

Is er al een voorgestelde aanpak

De eindsituatie is duidelijk, maar hoe dit plaatje gaat passen bij de organisatie is nog niet helemaal duidelijk .

Zo ja wie heeft die opgezet? Is dat assetwise groep of interne manager van AMS?

Het AMS 2020 programma is niet door assetwise opgezet maar door de interne AMS organisatie. Dit is gedaan met een stuurgroep van 17 man op een heisessie. Het is gebaseerd op een eigen inzicht en

niet zo zeer op een strategische theorie of iets dergelijks. De structuur wordt momenteel wel getest door een consultancy bedrijf gespecialiseerd in asset management.

Komt deze overeen met een visie vanuit de organisatie, misschien vanuit hoger management of iets dergelijks?

Wanneer wordt deze aanpak doorgevoerd? Is er een planning, deadline, overgangsdatum?

Het is de bedoeling dat eind april de afdelingsplannen af zijn, zodat het precies duidelijk is waar de afdelingen en de werknemers in hun nieuwe rol aan moeten voldoen. Dan kunnen we op dat moment gaan omschakelen.

In hoeverre zijn de veranderingen AMS 2020 en AssetWise aan elkaar gerelateerd?

AMS 2020 is in zoverre gerelateerd aan AssetWise dat zij allebei als doel hebben elementen van de ISO 55000 standaard in Asset Management te implementeren. Dit zijn wel verschillende doelen, maar de overlap zit hem in het loslaten van sturen op de inhoud.

M.b.t. doelenboom AssetWise fase 1

Welke doelstellingen zijn van toepassing op de AMS organisatie?

In principe wordt alles wat in AssetWise staat geïmplementeerd, maar wel stapsgewijs. Het is de bedoeling dat AMS 2020 eerst geïmplementeerd wordt voordat we met Asset Wise aan de slag gaan. Daarom willen we ook zo snel mogelijk om.

De belangrijkste doelen zijn efficiëntie, effectiviteit en mindset. Komt dit overeen met de belangrijkste doelen van AMS? Ja.

Wat wordt bedoeld met mindset? Readiness for change?

Mindset heeft te maken met het veranderen van besturen op de inhoud naar besturen op het proces. En een verandering in de manier waarop mensen dingen doen hier, met betrekking tot verantwoordelijkheden en nakomen van afspraken.

Verder is het zo dat we een eerste poging hebben gedaan om de organisatie meer alleen opdrachtgever te laten zijn. Deze poging was een programma waarin werd uitgelegd wat de beste methode was om met main contractors om te gaan. Dit werd voorgesteld om werk te gaan doen zonder organisatieverandering. Opdrachtontwikkeling waarin eisen worden gesteld, maar vervolgens geen inmenging meer is in de manier waarop de opdracht uitgevoerd wordt. Dit was geen succes. We denken dat er een structuurverandering nodig is voor een mindset verandering. Het loslaten van het oude werk gaat alleen als er nieuw werk is. Daarom laten we de mensen nu vast wennen aan de nieuwe manier van werken door ze informeel al te vragen om het werk op deze manier te gaan doen, zonder dat daar formeel alles al rond voor is. Zo kunnen ze er vast aan wennen.

De verandering

Hoe wordt de change gemeten?

Hier hebben wij geen systeem voor.

Hoe meet je zo'n change? Met KPI's?

Er wordt niet gemeten met KPI's op de verandering. We zijn wel bezig met het implementeren van performance meetings waarin we werken aan een methode om op KPI's te kunnen gaan sturen en waarmee we met beter data beheer de organisatie op een inzichtelijke manier kunnen gaan managen op deze cijfers.

Wat zijn de concrete veranderingen van AMS 2020 en AssetWise?

Het gaat om de cultuur en om de structuur, breed gezegd.

Wat zou jij graag willen

waar ik achter ga komen?

Wat ik ga ontwikkelen?

Wat mijn deliverable wordt?

Wat mijn bijdrage aan het change proces wordt?

Ik dacht dat je onderzoek ging doen naar weerstand tegen verandering? Dat hadden we toch afgesproken?

Ik denk dat het doel voor het bedrijf niet het allerhoogste doel is. Het is jouw onderzoek, dus jij bepaalt wat je gaat doen. Wij faciliteren hier een plek. Ik denk dat je je niet te druk hoeft te maken over wat Schiphol wil. Misschien vinden wij het wel genoeg als jij hier met de mensen over de verandering praat, laat zien dat we er in het mt aandacht voor hebben.

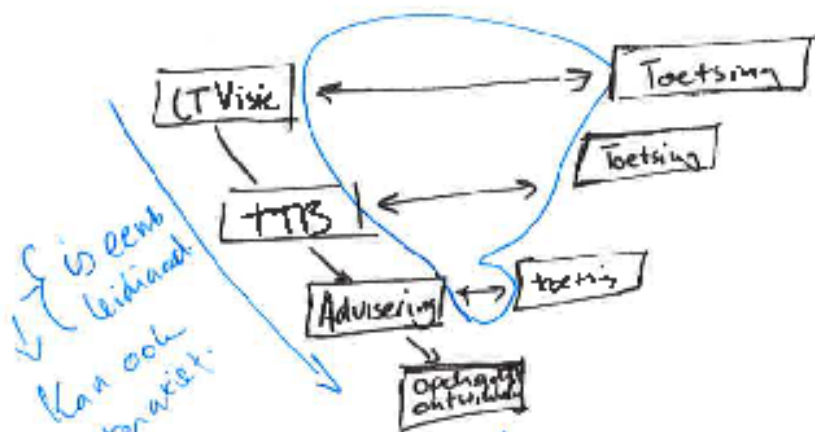
Waarmee kan ik de organisatie het beste helpen?

Misschien is er een bestaande theorie die in een bepaalde andere context goed werkt die we hier kunnen testen? Kunnen we iets toevoegen wat specifiek voor een veranderproces in een technische omgeving relevant is?

Eigenschappen van technici meenemen in veranderproces. Eigenwijs, pas geloven als er bewijs is, technische cultuur, kan dit een discriminerende factor in onderzoek zijn? Kijk ook naar opleidingsniveau en neem een keer Big 5 persoonlijkheden test mee, kan leuk zijn om hier uit te voeren.

Technische omgeving en outsourcing kunnen ook nog relevante afbakening zijn. Kijk naar trends in de markt om recent onderzoek te vinden: combinatie van outsourcing met organisatieverandering. Kan de aanpak hier ook nog uniek zijn? Eigen aanpak? Eigen oplossingen? Hoe verhouden die zich tot de theorie?

→ Terugkoppeling is moeilijk



↓ Opdracht ontbrekend. opdracht naar de markt, maar nog wel sturing / controle.

- leidraad kan ook te abstract geworden zijn. Mensen zijn aansluiting kwijt?

Eerste poging: - Professioneel opdrachtgeverschap
- Naar opdrachtgeverschap, zonder organisatieverandering. Geen succes.

AMS 2020: Formeel nog niet van start.
Informeel al bezig!

Na: AMS 2020: Structuurverandering
Nodig voor Mindset verandering.

Wslaten gaat alleen als er nieuw werk voor in plaats komt.

Introductie

Annemieke Nuesink – Bedrijfskunde Groningen – 7 jaar bij Passenger Services, sinds een jaar bij AMS.

Zoals je gehoord hebt van Eric zijn we met AssetWise aan de slag, maar hebben we voor AMS specifiek nog een ander programma, namelijk AMS 2020. Dit programma is opgezet om de organisatie te helpen met het implementeren van professioneel opdrachtgeverschap, door een nieuwe organisatiestructuur voor te stellen waarvan wij denken dat deze een goede structuur is om professioneel opdrachtgeverschap uit te kunnen voeren. We hebben die structuur opgezet in een meeting afgelopen september en we zijn nu bezig om de taken van de verschillende functies in de nieuwe afdelingen verder uit te werken. Dit betekent dat de komende maanden nog in het teken zullen staan van het uitwerken van de nieuwe afdelingsplannen maar dat we daarna, zoals Paul nu wil, eind april, om gaan schakelen naar de nieuwe organisatiestructuur.

Doelgroep: Met welke groep mensen gaan we aan de slag?

Alle mensen hier zijn de doelgroep, alleen schiphol werknemers. (ook al aan arnoud gevraagd, niet verder op ingegaan).

Wat is de huidige stand van zaken?

We hebben de eindsituatie bedacht, maar de invulling daarvan en de weg er naar toe, en wie wat gaat doen dat moeten we nog duidelijk maken. Zoals het altijd bij Schiphol gaat is het technische deel van het plan uitgewerkt, maar is er weinig aandacht voor de mensen en organisatiekant. Dat maakt het af en toe lastig. Ook in dit geval, ik denk dat we daar nog een slag moeten maken. Ook moeten de praktische zaken nog worden uitgewerkt, welke rollen en wat hun functie wordt moet nog voor de meeste afdelingen helemaal uitgewerkt worden.

Start AMS 2020 wordt geremd door hoger management, AssetWise krijgt voorrang. AW is alleen nog niet helemaal gestart. Er wordt nog aan implementatie gewerkt. Dit maakt het lastig voor AMS, omdat het MT heel graag wil, maar dit levert natuurlijk wel vertraging op. Ook als wij geen duidelijkheid kunnen communiceren zullen de werknemers moeite hebben met het gaan uitwerken van de afdelingsplannen en nadenken over de nieuwe situatie.

Optredende problematiek is dat men vaak bij de voorgestelde veranderingen terugvalt op de inhoud van het werk, niet zo zeer op het proces. Vanuit AssetWise is er niet genoeg communicatie geweest over de doelstellingen en de concrete consequenties voor het personeel op de werkvloer. Daardoor is er weinig begrip en dat maakt het accepteren van de veranderingen lastiger.

Indirecte aanleiding voor AMS 2020 is de eis om 10% kostenbesparing door te voeren, terwijl alle andere eisen constant blijven of hoger worden

Waar is deze aanpak op gebaseerd? Eigen inzicht, leidraad, theorie?

De methode is ontwikkeld in samenwerking met Traduco. Ik denk niet dat het op een bepaalde theorie gestoeld is. Dit zou je aan Arnoud of Paul kunnen vragen.

Wanneer wordt deze aanpak doorgevoerd? Is er een planning, deadline, overgangsdatum?

De planning is om eind april alles uitgewerkt te hebben en dan in een keer om te gaan. Dus voor die tijd nog zoals het nu gaat, en daarna aan de slag met de nieuwe methode.

Wat zou jij graag willen dat ik ga doen?

Zoals gezegd is de structuur klaar maar hebben we eigenlijk nog geen goed plan om naar de nieuwe structuur toe te werken. We weten niet goed wie wat kan gaan doen in de nieuwe situatie en wie waar voorkeur voor heeft. De competenties en voorkeuren zijn nog niet bekend. We weten niet goed wie wat kan gaan doen. Daar moeten we toch duidelijkheid in zien te krijgen.

Interview Peter Bochane – 8 maart 2014

Introductie

Wat is precies jouw functie.

Peter Bochane; interim controller- zelfstandig ondernemer dus van buiten schiphol.

Peter ziet er op toe dat de kwaliteit van accounting en financiële administratie voor AMS, en is daarmee onderdeel van het management team.

Peter heeft als een externe een wat andere kijk op de verandering en legt deze hierbij uit.

Wat vind jij van de organisatie en het plan?

AMS organisatie bestaat uit ongeveer drie groepen;

oud en bijna met pensioen; niet graag meer veranderen

ouder maar nog wel bereid, maar wat vaster in de taak

enthousiastelingen die graag meegaan in nieuwe ontwikkelingen.

Er zijn vrij veel van de bovenste twee types, en dat maakt het mijn inziens lastig om de organisatieverandering succesvol te maken. Misschien wil het management wel te snel en kan de rest van de afdeling dat niet helemaal bijhouden, of wordt het hun niet voldoende duidelijk wat de doelstellingen van het MT zijn, doordat er haast is en niet goed gecommuniceerd wordt. Daarnaast heb ik het gevoel dat AMS 2020 en AssetWise elkaar een beetje bijten, het management van AMS wil liever eerst AMS 2020 doen, De AssetWise projectleiders willen liever eerst resultaat boeken met Asset Wise.

Wat zijn dan volgens jou de problemen die hier spelen waar eerst aandacht aan besteed moet worden?

Grootste probleem is dat er veel plannen worden gemaakt voor kostenbesparing, maar dat er nooit echt goede data management methoden zijn om ook daadwerkelijk te meten of de genomen maatregelen ook zinvol zijn geweest, en waar de besparing uit voortgekomen is. Of er wordt wel data verzameld, maar er wordt niks mee gedaan, of er wordt überhaupt geen data verzameld over werkzaamheden. Dit is te vergelijken met de doelstellingen van het MT ASM, wat streeft naar 10%

kostenreductie in 2015, 0 ongelukken, nummer 1 in asset management en 20% energie duurzaam opgewekt in 2020. 0 ongelukken, de beste in asset management en 20% duurzame energie is logisch, maar 10% bezuiniging kan je moeilijk hard maken. 10% meer begroten en dan weer 10% minder uitgeven geeft ook al weer een besparing! Hoe meet je dit? Hiervoor moet je dus ook je huishouden op orde hebben om goed te kunnen meten hoe je geld uitgeeft en wat je aan besparing realiseert. Nu is besparing vaker toeval dan toename in efficiëntie of effectiviteit, en als er niet- begroot extra werk is gaat dat weer van de besparing af. Wat is nu de daadwerkelijke besparing? Hoe is die te meten? De beleving van nog hoger management is wel dat als er telkens onder budget gerealiseerd wordt, dat dit voor de organisatie goed is. Terwijl AMS zich af kan vragen of zij hun begroting wel goed maken als ze er steeds toevallig onder uitkomen. In mijn ogen zit de kern van de problematiek in data management. Er is te weinig data aanwezig om bijvoorbeeld desinvesteringen te bepalen, te veel investeringen worden gebundeld waardoor specifieke informatie over investeringen verloren gaat. Dit is al een tijd zo maar lijkt maar niet beter te worden. Dit gebrek aan data maakt het ook moeilijk om projecten te evalueren en bijvoorbeeld een business case van de lease auto's te valideren. Bijvoorbeeld MCRS kan heel goed functioneren maar nu is er gewoon niet genoeg data om deze tool goed te kunnen gebruiken.

Ik pleit ervoor dat er in de komende tijd veel meer aandacht besteed gaat worden aan het op orde krijgen van het data beheer, en de data generatie van alle onderdelen van de organisatie zodat we op een kwantitatieve manier de prestaties kunnen gaan meten, en initiatieven als MCRS (Management Control Reporting System) en de 'performance meeting' ook daadwerkelijk zin zullen gaan hebben. Nu zijn deze systemen en meetings beperkt nuttig. Dit zal lastig zijn, want de organisatie is al 8 jaar bezig met het implementeren van deze methoden.

Hoe verhoudt dit zich tot de organisatieverandering?

In de organisatieverandering moet het belang voor goed data management worden meegenomen, het beste is het als in de nieuwe functies ook kernpunten voor data management worden opgenomen.

8.2 Appendix 2 – Complete overview of factors concerned with organizational change

Organizational change											
	Research on change (Bennis 1966)				Research on changing (Bennis 1966)						
	factors that initiate and evoke change				factors related to conveying the change message						
← →											
content factors		context factors			process factors			individual factors			
"the substance of the change" long term relationship of the firm to its environment, overall character, mission and direction of the firm		"the context in which the change takes place"			"The implementation process and employees' responses"			"Affective, personal and behavioral aspects of the change recipients"			
		External environment			communication of the change	discrepancy: belief change is necessary	kotter (1995), armenakis (1993)	Tolerance for ambiguity		Judge et al. (1999), Walker et al. (2007)	
the organizational structure	Vollman (1996), Burke-Litwin (1992)	Government regulation and legislation		Haveman (1992)		appropriateness: the organization will benefit of the change		Openness to experience		Judge et al. (1999)	
performance systems	Vollman (1996), Burke-Litwin (1992)	Technological Advances		Haveman (1992)		principal support: the change targets believe mgmt supports the change		Risk avoidance		Judge et al. (1999)	
incentive systems	Vollman (1996), Burke-Litwin (1992)	Marketplace competition		Meyer, Brooks and Goes (1990)		self-efficacy: the organization has the capacity to change		Internal locus of control		Judge et al. (1999)	
environment - organization fit	Burke-Litwin (1992)	Competitive pressure		Meyer, Brooks and Goes (1990)		personal valence: the changes in the job will positively influence feelings about the job		External locus of control		Judge et al. (1999)	
Strategic intention	Vollman (1996)	stable environment: enables incremental change high competitive pressure: requires radical change						Job Satisfaction		Judge et al. (1999)	
Organizational Competences	Vollman (1996)				Type of implementation process	1. Life cycle theory: regulated program of change	Van de Ven & Poole (1995)	Job role performance		(griffin et al. 2007)	
		type of change	Episodic vs. continuous change Radical vs. Incremental change	Weick & Quinn (1999) Tushman & Romanelli (1985)	4 motors of change: main effects of the generating mechanisms underlying the ideal-type theories.	2. Teleology: purposeful enactment, social constructivism of a solution for a change			proficiency		
Products / output	Vollman (1996)					3. Dialectical theory: conflict and confrontation of thesis and antithesis.			adaptivity		
mission	Burke-Litwin (1992)		Competence enhancing vs. Destroying	Abernathy & Clark (1985)		4. Evolutionary theory: competitive selection of best alternative.			proactivity		
strategy	Burke-Litwin (1992)	customer demands		Vollmann (1996)							
culture	Burke-Litwin (1992)				Practical process factors	enablers	barriers	employee commitment to change, affective (to the change) commitment		Walker (2007), Strauss (2009)	
		Internal environment				goal	fear of unknown		cynicism		
		level of specialization of work		Damanpour (1991)		vision	ambiguity		belief tolerance for ambiguity		
		specificity of existing technology		Damanpour (1991)		communication	lack of vision				
		Level of organizational slack (traagheid)		Damanpour (1991)		implementation strategy	lack of consensus / changing goal				
		Previous change experiences / cynical feelings		Armenakis & Bedeian (1999), Reichers et al. (1997)		magnitude of the change	competence gap	role breadth self-efficacy		Strauss et al. (2009), Griffin et al. (2007)	
		Organizational decision making		Sastry (1997)		leadership style	motivation	organizational commitment		Strauss et al. (2009)	
		Organizational culture		Burke-Litwin (1992)		principal support: the change targets believe mgmt supports the change	group inertia				
		a 'meaning system' for organization members	values norms beliefs Reward system (mirror of culture)			time / planning guiding coalition conviction	organizational culture too much pace distrust	Competences	knowledge skill	Vollman (1996), Burke-Litwin (1992)	
		managerial attitude towards change		Damanpour (1991)		support culture for change	personal valence belief in 5 factors of armenakis (discrepancy, necessity, appropriateness, organizational self-efficacy, personal valence)	individual needs and values	abilities	Burke-Litwin (1992)	
		level of professionalism		Damanpour (1991)		urgency		individual motivation		Burke-Litwin (1992)	
		knowledge resources		Damanpour (1991)		change agent : external / internal?					
		organizational responsiveness to external environment		Gresov (1993)		understanding		leadership style	transformational	Burke (1992), Strauss (2009)	
		Organizational inertia		Gresov (1993)		short term successes			transactional		
		structure		Burke-Litwin (1992)		personal relationship					
		management practice		Burke-Litwin (1992)							
		systems		Burke-Litwin (1992)							
		work unit climate		Burke-Litwin (1992)							

8.3 Appendix 3 – Transcript validation round one

Uitwerking gesprek Marien – validatie ronde 1 – Interviewee A

Doel van dit gesprek: Overzicht verandering: welke aspecten zijn het belangrijkste volgens jou en welke aspecten ontbreken nog?

Overzicht is volledig. Alleen aan de context factoren zijn nog toe te voegen het borgen van innovatiemanagement en de positie van de afdeling ASM in de hele organisatie. Hoe bekijk je de factor politiek? Waar zou je die onder scharen?

Als ik naar het overzicht kijk denk ik dat het probleem in deze situatie neerkomt op de volgende hoofdpunten: Cultuur: het loslaten van oud werk blijft een groot probleem, mensen kunnen de verantwoordelijkheden niet loslaten. Daarnaast zie ik een probleem in de samenwerking; er is gewoon te weinig interesse in elkaars werk, en geen goede communicatie over de belangrijke dingen die spelen. Teamwork, interesse, manier van handelen. Het zou normaal moeten zijn in het proces dat je interesse hebt in elkaars werk, en goede omgangsvormen. Zo weet je wat je aan elkaar hebt. Dit levert energie en motivatie. Dat is wat we nodig hebben.

Daarnaast is een terugkerend probleem vrijheid van handelen. Er zijn veel projecten en initiatieven die worden opgezet om nieuwe methodes of procedures in te voeren. Vervolgens worden deze nieuwe methodes gedaan tot het project afloopt en iedereen weer verder gaat op de manier waarop hij het vroeger deed. Ook zijn er vaak nieuwe regels waar men zich vervolgens niet aan houdt. Na een verandering moet een nieuw proces ook daadwerkelijk overgenomen worden door de lijn. Dus geen terugval meer na het aflopen van een project. Er is een methode nodig om de verbeteringen te laten voortbestaan nadat de consultant vertrokken is of het programma is afgelopen. Dit moetje kunnen doen door de prestatie te meten en bij te kunnen sturen. Dit moet goed geborgd worden. De lijn moet functioneren en getoetst worden, daar moet vervolgens op gestuurd worden door het management, maar dat gebeurt niet.

De kern van het werk vindt men saai en wordt vaak niet serieus genoeg aangepakt. Dit zou zo mooi kunnen met MCRS en een goed ingerichte beoordelingscyclus voor de verantwoordelijken van de kerntaken. Lopend proces gedaan door een team met een waarderingscyclus er achter. Het borgen van het overnemen van nieuwe functies in de lijn is kern van het probleem. Vervolgens het werken volgens afspraak is het volgende probleem. Iedereen doet het op zijn eigen manier hoe hij het leuk vindt.

Doel van P.O. was een slankere organisatie die flexibel kan meebewegen met de vraag. Doel was goedkoper en efficiënter. Dus door de onderhoudstaken uit te besteden aan aannemer ben je zelf flexibeler en daardoor goedkoper. Vraag is nu; is dit wel goedkoper? Is het wel handig om je kritische processen uit te besteden? Levert dit wat op? Het is gewoon heel moeilijk om een prestatiecontract voor een kritisch proces te maken, omdat de kwaliteit zo geborgd moet zijn dat het heel moeilijk is om zich als Schiphol niet inhoudelijk met het werk in een prestatiecontract bezig te zijn.

Daarnaast zien we ook dat de communicatie en management en leiderschapstijl niet helemaal optimaal functioneert. Blijkbaar heeft Paul het aan de MT-ASM kant niet goed kunnen verkopen dat we om moesten, daarom loopt het nu vast. Dus communicatie.

Uitwerking gesprek Annemieke - Interviewee B

Volgens mij is dit een volledig overzicht van een organisatieverandering. Ik vraag me wel af waar je de factor regievoering onder kan plaatsen. Als we kijken naar waar volgens mij nu de prioriteiten liggen is toch de factor cultuur momenteel er eentje die het meest problemen oplevert. Verder ben ik erg geïnteresseerd in wat je kan vertellen over leiderschap en het krijgen van commitment to change.

We hebben zoals ik al wel eens eerder heb verteld vaak gezien dat bij Schiphol veel aandacht wordt besteed aan de technische inhoud van een verandering, of een nieuw bedrijfsproces. Maar wat dan vaak tegenvalt is de aandacht voor de individuen die het uit moeten voeren. Ik denk dat we daar in onze methode nog wel meer aandacht aan moeten besteden.

Competenties en communicatie zijn ook twee dingen waar ik persoonlijk nog wel meer over zou willen weten.

Uitwerking gesprek Gé – Interviewee C

Volgens mij is het een goed overzicht, volledig en uitgebreid, misschien wel iets te uitgebreid. Maar wat wil je er nu precies mee? Wat wil je gaan onderzoeken? Wat is je model?

Antwoord; dit overzicht is bedoeld om mee te consulteren, om er achter te komen wat de organisatie van vindt dat het momenteel de meeste aandacht nodig heeft. Dit betekent dat ik van jou wil weten wat je van al deze factoren het belangrijkste vindt

Ik denk dat het probleem zit in de manier waarop men hier werkt. Hoe komt het nou dat men hier zo moeilijk te managen is? En dat veel mensen hun eigen gang gaan, minder leuk werk blijft liggen, en iedereen zich overal mee bemoeit? Er lijkt gewoon vaak weinig structuur en hiërarchie te zijn. ER is ook maar weinig controle in het huidige systeem. Iedereen heeft veel vrijheid, en neemt die ook. Dit is niet altijd efficiënt. Centraal in het probleem staat het proces van meenemen van werknemers in het veranderproces. Ik denk dat daar nog veel te halen is.

Wat interessant is, is het verband tussen de factoren. Hoe kan je de factoren in een goede volgorde krijgen? Wat wordt beïnvloed door wat? Is er een causaal model van te maken? Hoe verhouden de factoren zich?

8.4 Appendix 4 – Transcript validation round two

Transcript validation round 2 - unstructured interviews

During my thesis research @ Schiphol group I gathered data by short informal interviews. The information obtained from these observations is displayed in this document.

Jeanette Ginjaar 23 – 04 – 2014 : Interviewee D

Jeanette is adviseur en heeft een rol in de stuurgroep die als taak heeft om de functies in de nieuwe organisatiestructuur uit te werken.

Hoe vind jij dat het project gaat?

Het problem is dat wij op dit moment niet weten hoe we verder moeten, er is veel onduidelijkheid. Ook wordt er niet goed gecommuniceerd en gaan verhalen een eigen leven leiden. De onduidelijkheid en de steeds veranderende plannen maken het voor ons moeilijk om aan het uitwerken van de afdelingsplannen te werken, we weten niet waar het heen gaat. Dit geeft onduidelijkheid. Ook spreken leden van het MT elkaar tegen en veranderen plannen steeds. Dit maakt het moeilijk. Ook is het nog onvoldoende duidelijk wat er precies gaat veranderen, hoe het nieuwe werk er uit komt te zien.

Daarnaast heeft iedereen het idee dat het te snel gaat, en er niet genoeg tijd wordt genomen om alles goed voor te bereiden. Sommigen hebben geen vertrouwen in de nieuwe structuur, zien het oude als veel beter, en zien beren op de weg bij de nieuwe methode, aspecten van het huidige werk worden dan niet meer gedaan, wie gaat dat dan doen? Of doen we dat niet meer?

Daarnaast ziet men het doel nog niet genoeg duidelijk voor ogen, men ziet het nut nog niet genoeg maar met name een onzekere toekomst. Ook is er wantrouwen, doordat men toch bang is dat er ontslagen gaan vallen. Dit kan komen door onduidelijkheid. Men heeft problemen met de sturing van boven. Dit geeft stress, zeker bij mensen met een minder hoog opleidingsniveau, die van zichzelf weten dat zij minder flexibel en breed inzetbaar zijn.

Jij zit in het stuurteam. Jullie zijn bezig met het uitwerken van de afdelingsplannen. Hoe gaat het daar mee?

Omdat er niet genoeg duidelijkheid is weet men niet wat er gaat gebeuren, en zodoende worden de afdelingsplannen ook niet uitgewerkt. Ook heb ik moeite om de afdelingsplannen op te stellen. Men heeft niet de competenties om die invulling te maken, en niet genoeg informatie.

Té veel mensen hebben een mening over besluitvorming. Men bemoeit zich met te veel verschillende besluiten. Als een iemand een besluit neemt moeten daar altijd nog andere mensen iets van vinden. Dit leidt tot vertraging van het proces. En ook belangrijk, de besluiten die worden genomen worden vervolgens niet nageleefd. Dit leidt er toe dat niemand luistert naar zijn leidingevenden.

Aad van Dijk 17-04-2014 - Interviewee E

Aanleiding van dit gesprek was de vraag van Aad 'Wat ben jij hier nou eigenlijk aan het doen, Martijn? En krijgen we daar ook nog eens wat van te zien?' Hierop vertelde ik wat ik aan het doen was en wat Aad nu eigenlijk vond van de situatie. Zijn antwoord was als volgt.

Wij krijgen geen informatie, dat is het grote probleem. Niemand heeft een goed beeld van wat er allemaal gebeurt. Dan kan Paul wel zeggen 'als jullie allemaal in de weerstand gaan schieten dan houdt het snel op', maar als wij gewoon niet weten wat er speelt dan kunnen wij er ook geen beeld bij vormen of positief over zijn. Ik heb er verder niet zo'n problemen mee, maar veel mensen, bijvoorbeeld Koos, die hebben gewoon grote moeite met het hele proces. Zij maken zich (terecht) zorgen over de toekomst en krijgen daar veel stress van. Ook omdat het proces zo stroef verloopt worden zij gauw toch sceptisch en soms zelfs onverschillig, want zij krijgen toch geen inspraak, het lot wordt voor ze beslist. Hoezo zou je dan nog participeren of enthousiast meedoen? Nog een voorbeeld, we hadden vroeger altijd een keer in de twee weken een zeepkist waarin we werden bijgepraat. Deze zijn er plotseling niet meer? Hoezo niet?

Ruud / Martin 03-05-2014 - Interviewee F

Hoe vinden jullie dat het nu gaat?

Veel mensen vinden dat de onduidelijkheid over hoe het nu verder gaat moeilijk. Men heeft een eigen mening over het plan. Er wordt veel over gesproken, en niet zozeer positief.

Ruud van Rijssel 03-05-2014 -Interviewee G

Ruud vertelt hij dat hij met name twee hoofdproblemen ziet. Als volgt;

Probleem beheerders

Probleem beheerders; die zijn straks allemaal weg. Ruud noemt een aantal vacatures op die ontstaan en een aantal beheerders die binnenkort gaan vertrekken. De nieuwe beheerders, of de huidige generatie neemt niet voldoende de leiding en verantwoordelijkheid. Ze zouden zich meer moeten identificeren met hun verantwoordelijkheden en zeggen 'hoho, dit is mijn asset!' En beter inhoudelijk weten waar ze het over hebben. Met name bij het opzetten van een nieuw project, waar een nieuwe asset aangeschaft gaat worden. Beheer is onvoldoende betrokken bij het aankopen van nieuwe assets, en het is blijkbaar moeilijk om beheer bij beheerder te laten. Er wordt veel door PLUS (project organisatie en inrichting) en PMA (afdeling die functioneel specificeert: welke functionaliteit is nodig om proces goed te laten verlopen?) onder een hoed gespeeld zonder de beheerders van AMS er bij te betrekken. Dat is jammer want AMS heeft onmisbare kennis die belangrijk is voor de functionele eisen in de praktijk. Functionele wensen en technische invulling van de wens: welke assets heb je daar voor nodig? Dat kon AMS vroeger perfect vaststellen; beheerders in samenspraak met adviseurs.

Tegenwoordig begint het project bij een adviseur en niet bij een beheerder. Dit is lastig. Er wordt niet genoeg overlegd / gecommuniceerd onderling. Dit is niet leuk voor de beheerders omdat zij nu niet genoeg inspraak krijgen in de vaststelling van de functionele eisen van nieuwe assets. Hierdoor worden zij geconfronteerd met ontwerpen die onvoldoende zijn toegepast op de praktijk. Interne

communicatie tussen adviseurs en beheerders is slecht. Adviseurs doen alleen het 'leuke stukje'. Minder leuke dingen zijn niet interessant.

Verder over het functioneren van het management team

Het management team geeft onvoldoende openheid over hun besluitvorming en geeft geen sturing of leiderschap. Ook geeft het geen vertrouwen in de eigen mensen, dit valt op vaak als er dingen gebeuren, worden de beslissingen en meningen van de eigen mensen in twijfel getrokken. Dat is de doodsteek voor je commitment denk ik.

Er is behoefte aan statusupdate AMS 2020: wat voor nieuws dan ook; er moet info komen want het gaat een eigen leven leiden.

Leidinggevende is een beetje een hol begrip. 'Ze doen maar wat' .

Er wordt slecht naar de werknemers geluisterd. Er worden ideeën geopperd, plannen gemaakt, waar door sr. Management om wordt gevraagd, maar die niet worden dorgegeven door midden management. Ik heb laatst op aanvraag van Paul een volledige uitwerking van een bepaald onderwerp gemaakt. Dit heb ik vervolgens naar Arjen gestuurd en die heeft het niet aan Paul gegeven. Daar wordt ik dus heel ongemotiveerd van. Er is mijn inziens ook een probleem met de expertise van managers: die stellen soms domme vragen waar ze het antwoord op hadden moeten weten. Dit kunnen ze beter off-the-record vragen dan in een officieel commentaar dat veel mensen lezen (als een comment in een beslisdocument bijvoorbeeld).

Er is management dat zegt dat men alvast in de nieuwe rol kan gaan werken, wat gebeurt er dan met het oude werk? Komt dit te vervallen? Dat gaat toch niet. Het lijkt er op alsof men niet beseft dat je 'het' niet zomaar anders kan gaan doen. Daar moet een plan achter zitten.

Ook heeft Ruud nog opmerkingen over het veranderproject:

Over AMS 2020

Er is angst voor een brain drain, te weinig inhoudelijke kennis in de nieuwe eindsituatie. Als er geen beheerders meer zijn met technisch inhoudelijke kennis wordt het heel moeilijk om controle te houden over het werk.

Problematiek voorzien met bijvoorbeeld het overgaan naar een nieuwe main contractor; als niemand op SPL nog iets weet van de techniek, wordt overdracht erg lastig.

Op papier zal het allemaal best kloppen, maar hoe gaan we om met de weerbarstige werkelijkheid? Er zijn grote vraagtekens bij de *praktische uitvoerbaarheid*. Met name de 'test case' die gepland is om de nieuwe organisatiestructuur te testen wordt niet al te serieus opgevat.

Communicatie

Echte probleem zit hem niet in de niet kloppende, oude of nieuwe organisatiestructuur, maar in het gebrek aan communicatie binnen de verschillende onderdelen van de afdeling. Zolang dit niet verbeterd wordt, is de kans van slagen voor alle nieuwe structuren, organisaties e.d. niet zo groot.

Vroegere structuur AMS – TME – TSR werkte beter. 1 manager manageerde beheerders en adviseurs, die bedachten een klus en lieten hem uitvoeren door TSR. Overzicht en goede communicatie.

Ook is er onder de beheerders angst voor brain drain: te weinig expertise in de eindsituatie. Men weet straks niets meer inhoudelijk en dat maakt je kwetsbaar. Er zijn straks geen beheerders meer die een technische achtergrond hebben; ook gevaarlijk.

De ouderen op deze afdeling denken dat de mensen hen toch wel oude zeurpieten vinden als ze kritisch zijn en gaan daarom mee in de 'titanic' die een bepaalde kant op gaat, en hebben geen commentaar. Terwijl zij natuurlijk wel de tacit knowledge en ervaring hebben.

Grootste problemen: gebrek aan communicatie en leiderschap in plaats van structuur. Dit geeft stress en onduidelijkheid. Men is sceptisch, heeft geen vertrouwen in de nieuwe structuur, er missen te veel dingen, er zijn te veel taken die er nu nog wel zijn en straks niet meer, de juistheid van de nieuwe functies en hun werkzaamheden wordt in twijfel getrokken. Met name met betrekking tot de beheerfuncties.

Mensen moeten terecht komen op de goede plek, waar zij het naar hun zin hebben. Veel en goed communiceren is belangrijk. Het lijkt misschien een probleem van het personeel dat niet wil veranderen, maar het is meer het probleem dat het management niet in staat is om het personeel mee te nemen in de verandering.

Marien Voorwinde 14-05-2014 Interviewee H

Marien maakt een nieuw business plan voor AMS voor de komende jaren. Ik sprak hierover met hem en hij gaf aan dat hem de volgende zaken opvallen.

Eigenlijk zit het probleem Schiphol breed. In de hele organisatie, en dat is al heel lang zo. Mij vallen de volgende dingen op.

Besluiten worden niet genomen. Er wordt een hoop besproken, maar vaak wordt er niet slagvaardig opgetreden. Als ze worden genomen dan houden de meeste mensen zich er niet aan. Het is een cultuur probleem. Ook is het zo dat mensen slecht luisteren naar hun leidinggevend. Ze doen liever wat ze zelf willen of leuk vinden. Zo ontstaat er een merkwaardige dynamiek; we hebben iemand in dienst gehad als adviseur die nu op een andere functie zit, maar nog steeds met adviseur achtige plannen aan komt zetten, die altijd stranden.

Daarnaast zie je dat diegene die het geld heeft die bepaalt wat er gebeurt. Het wisselt steeds wie het geld heeft, daarom gebeurt er dus steeds wat anders. Nu ligt dat bij PLUS (projectbureau luchthaven schiphol). Maar die weten vaak niet hoe dingen inhoudelijk in elkaar zitten. Maar omdat zij het budget beheren vinden zij dat ze mogen beslissen. Dit is toch geen manier van werken.

Daarnaast, en dat zie je ook op andere plekken, niet alleen bij AMS, geven mensen leiding aan mensen die helemaal niet onder hun hoede hebben, of men spreekt zich uit over dingen waar men geen verantwoordelijkheid over heeft. Daarnaast is het fundamenteel verkeerd dat iedereen overall iets van moet vinden. Bijvoorbeeld, iemand van corporate strategy die vindt dat A&O niet onder AMS zou moeten horen. Die zegt dan nee A&O zit op een rare plek. Dat is natuurlijk gek want wat weet hij er nou van.

Marien Voorwinde 21-05-2014 – Interviewee I

Later spreek ik Marien nog een keer over de organisatieverandering. Dit keer over hoe Asset Management, Asset Wise en AMS 2020 zich tot elkaar verhouden.

Moeilijkheid zit hem in het feit dat alles nu vastgelegd wordt. Dit is lastig voor de professional, die vroeger alles ook wel deed zoals het nu moet gebeuren, maar het feit dat alles geborgd moet worden om de uitbesteding goed te laten verlopen maakt het extra moeilijk.

Vraagstuk dat hiermee samenhangt is ook hoeveel garantie verlang je, als je niet meer de functionele eisen zelf vaststelt, dan kan je voorschrijven hoe lang iets mee moet gaan, maar hoe weet je nou dat de aannemer hier geen misbruik van maakt?

Je moet eigenlijk een leasecontract hebben. Dan heeft de aannemer er baat bij om kwalitatief een goed product te leveren omdat je anders als aannemer de hele tijd in de weer bent om je product goed te laten functioneren. Een goed business model is cashen en zeker weten dat er niets mis gaat.

Het probleem is eigenlijk dat je dus wil dat degene die het product onderhoudt, het ook levert. Dan heb je alles onder een dak. Nu in het voorbeeld van de passagiersbrug heeft de onderhoudspartij de brug niet aangeschaft. Daarom heeft Schiphol nu nog zijn handen vol aan de afhandeling van de storingen en problemen met functionaliteit, en kan deze problematiek niet uit handen geven. Parallel aan het kopen van een CV ketel bij de goedkoopste en hem dan door een vriendje op laten hangen. Als er dan iets met die ketel misgaat moet je er alsnog zelf achteraan. Dat is nu ook in veel gevallen het probleem.

Volgens Marien kun je beter Volker bijvoorbeeld de passagierbrug laten kopen want dan hebben zij de ellende met niet functionerende bruggen, en niet schiphol. Het verwijderen van die schijf is de efficiëntieslag.

Alles moet aantoonbaar op orde worden gebracht en dat wordt op dit moment nog onvoldoende gedaan. Dit wordt een taak voor K&A om ook de interne vastlegging en borging in de gaten te gaan houden.

Conclusie van dit verhaal:

Het aantoonbaar maken van het voldoen aan normen kwaliteit en regelgeving; vastleggen in protocollen. Méér controle. Dit is moeilijk voor professional. K&A moet dit gaan doen.

Kwaliteit moet een incentive zijn van de aannemer. Hij moet zo'n goed product hebben dat hij er zelf geen last meer van heeft. Voorbeeld betonplaten VOP's; leasen, als hij stuk gaat vervangt de aannemer. Dan zorgt hij wel dat het goede platen zijn. Dit geeft dan een prikkel om echt kwalitatief goed werk te leveren, ipv voldoen aan eis. Nu is het nog vaak zo dat Schiphol de platen bestelt en ze door iemand laat leggen, die heeft dan niet alle verantwoordelijkheid over de kwaliteit en dus is het product minder goed. Nu is geld vaak incentive aannemer. Hoe durven loslaten? Hoe zorgen voor borging?

Roel Hoogland 07-06-2014 Not incorporated

AssetManagement gedachtegoed is goed genoeg onderhouden. Mannen die het werk doen willen graag mooi werk opleveren. Dit bijt elkaar enigszins. Voorbeeld: geen geld meer om de gaten in de muur op te vullen, terwijl het hele project heel duur was. Dit wekt onbegrip; kan die ene tube plamuur er dan echt niet meer vanaf? En werknemers verliezen de motivatie / aardigheid in het werk als ze het werk niet op hun manier mogen doen.

8.5 Appendix 5 – coding validation round one

interviewee	H	I	J	total score
professional does what he wants and likes rather than what is asked	1	1	1	3
Professional is hard to manage	1		1	2
Professional does not like control	1		1	2
People find it hard to stop doing old work	1	1	1	3
There are not many management control tools in use	1		1	2
Company culture limits implementation	1	1		2
The change could benefit of a good strategy to engage employees	1		1	2
Interest in each other and cooperation could be better	1			1
the goal of the change is not totally understood	1		1	2
establishment of commitment to the change		1		1
strategy is limited to technical aspects of the change		1		1
communication	1	1	1	3
leadership	1	1	1	3
which competences are there and how to deal/divide them		1		1
is outsourcing really beneficial?	1		1	2

8.6 Appendix 6 – coding validation round two

	interviewee	A	B	C	D	E	F	G	total score
Lack of clarity concerning:									0
goal of the change	1		1		1				3
necessity of change	1			1					2
what work is in new situation	1	1		1					3
who will do the old work		1		1	1				3
the changing plans	1	1	1	1					4
Communication	1	1		1					3
Openness of management	1	1		1					3
Leadership				1					1
Trust in the new organizational structure	1	1	1	1					4
Pace of change	1	1							2
Stress	1	1							2
Capacity within the organization to develop fill in of new structure	1						1		2
We would like it when our opinion would be more heard		1		1					2
There is no clear plan	1	1	1	1					4
A Schiphol wide concern; decisions made are not executed by employees; people do what they want	1					1	1		3
Too many people are involved in decision making; people have opinions on things they should not be concerend with	1					1	1		3
Scepsis		1	1	1			1		4
In asset management, everything is sealed on paper. This reduces freedom of the professional. That makes it hard to accept						1	1		2
There are currently not many management control systems that make the organization able to steer employees or challenge them on their performance							1		1

8.7 Appendix 7a Results session one balanced approach

Uitwerking Ronde 1 process consultation / balanced approach.

Op het gebied van mindset & gedrag

1. De operatie heeft last van het NIMS syndroom.
2. Er is veel sprake van persoonlijke verschillen in mentaliteit bij de operatie. Met sommigen is te lezen en te schrijven, anderen bepaald niet
3. De operatie vraagt zich af waarom wij geen 24-uurs storingsdienst hebben. Dit verwachten zij eigenlijk wel want nu is er te weinig tijd om reparaties uit te voeren. De luchthaven is een 24-uurs bedrijf, waarom zijn jullie dat eigenlijk niet? Timo merkt terecht op dat dit geen discussie is die de uitvoerende partijen moeten volgen. Daar moeten zij mee naar hun leidinggevenden, want wij kunnen er al helemaal niks mee.
4. Probleem wat wij zien is dat sommigen van ons al 30 jaar bij dezelfde afdeling werken. Hetzelfde clubje met elkaar. We zijn als het ware met elkaar vergroeid. Het is nu de bedoeling dat dit uit elkaar gehaald gaat worden. We hopen dat dat goed gaat! Gaat dan ook de kennis uit elkaar? Hoe moeten we in de toekomst gaan draaien?
5. Verder hebben een aantal van ons echt geen behoefte aan een andere baan, we zijn blij met wat we doen.
6. Ander punt van ergernis is de houding van de partner; op het moment dat het moeilijk wordt trekt de aannemer zijn handen er van af zodat de verantwoordelijkheid weer bij AMS / SPL komt te liggen. Zo wordt het moeilijk om professioneel opdrachtgever te zijn.
7. Ik ben blij met het werk dat ik doe, maar heb er moeite mee dat veel werk naar de contractpartij gaat.
8. We zien dat het werk door de contractpartij vaak veel minder efficiënt gaat dan hoe wij het deden. Zij zijn veel meer van het uurtje factuurtje en morgen is er weer een dag. Dit verschil in mentaliteit geeft vaak problemen met het inplannen van het werk in de operatie want die willen alles graag snel en volgens planning.
9. Daarnaast hebben wij er gewoon problemen mee dat het werk ook gewoonweg minder goed gedaan wordt, de aannemer de technisch inhoudelijke kennis niet heeft om het werk te doen. Dat steekt soms, en dan vragen wij ons af of het allemaal wel zin heeft, dat uitbesteden. De aannemer lacht in zijn vuistje en haalt geld binnen.
10. Wat we nu vaak verkeerd zien gaan is dat er niet meer opgeschakeld wordt als er echt gevaarlijke situaties ontstaan, het protocol wordt gewoon doorlopen waardoor veiligheid in het geding komt; zo'n melding komt pas twee weken later, in plaats van direct. Dat moet echt anders.
11. Kijk, wat ons hier gewoon het meeste opvalt zijn de risico's die geborgd moeten worden. Als dat niet gebeurt is de veiligheid, continuïteit en de efficiëntie in het geding. Dat krijgen wij terug en bovendien kan dat niet de bedoeling zijn van een proces verbetering! Dit zien we in professioneel opdrachtgeverschap, maar ook in Asset Wise en AMS2020.

Kijkend naar management infrastructuur

12. Het functieverblijf op Schiphol is nu 5-7 jaar. Technische supervisor heeft ongeveer een leertraject van 3 jaar. Wanneer deze eindelijk op niveau is werkt deze nog maar 2-4 jaar voordat die weer –min of meer gedwongen- doorschuift en je weer op nieuw begint. Dat moet wel goed geborgd worden! Hoe garandeer je borging kennis als je ook een mobiele workforce wil hebben?
13. Het begint eigenlijk direct met communicatie vanuit het management. Men moet en kan niet voetstoots aannemen dat het gesnapt wordt. Met management wordt bedoeld; iedereen boven mij, dus van Jos tot Arjen (bijv.). Ze kunnen er niet vanuit gaan dat ik het direct begrijp als er een kreet gelost wordt, zoals 'AssetWise' of 'governance'. Duidelijkheid zou beter kunnen.
14. Kleine aanpassingen worden enorm traag uitgevoerd, ook al wordt het nut er van ingezien. Het is niet meer mogelijk om iets ad-hoc te regelen, er zijn te veel protocollen, procedures waardoor alles veel te lang duurt. Het is te bureaucratisch.
15. Als je zo'n verandering wil doen zoals AMS 2020 zorg er dan voor dat je een plan maakt voordat je begint. Op die manier heb je antwoord op alles en kun je duidelijkheid brengen naar de personen die het aangaat. Dan snappen wij ook wat er gebeurt. Nu was het plan niet heel duidelijk wat leidde tot wat onzekerheid en stress. Uiteindelijk kwamen er zo veel moeilijkheden naar boven waarvoor een oplossing gezocht moest worden dat het onoverzichtelijk werd en de plannen steeds langer duurden, waardoor het momentum verloor. Stopzetten was misschien niet echt heel handig, want nu moeten we weer helemaal opnieuw in de 'aangeslagen toestand' komen.
16. De relatie tussen de opdrachtgever en de contractor blijft essentieel voor een goede uitvoering van het werk. Dat is nu vaak toch lastig, heeft tijd nodig om op te bouwen. Probleem met doorwisselende aannemer is dat de relatie elke keer weer opnieuw opgebouwd moet worden.
17. Problematiek van borgen kennis (datamanagement etc.)

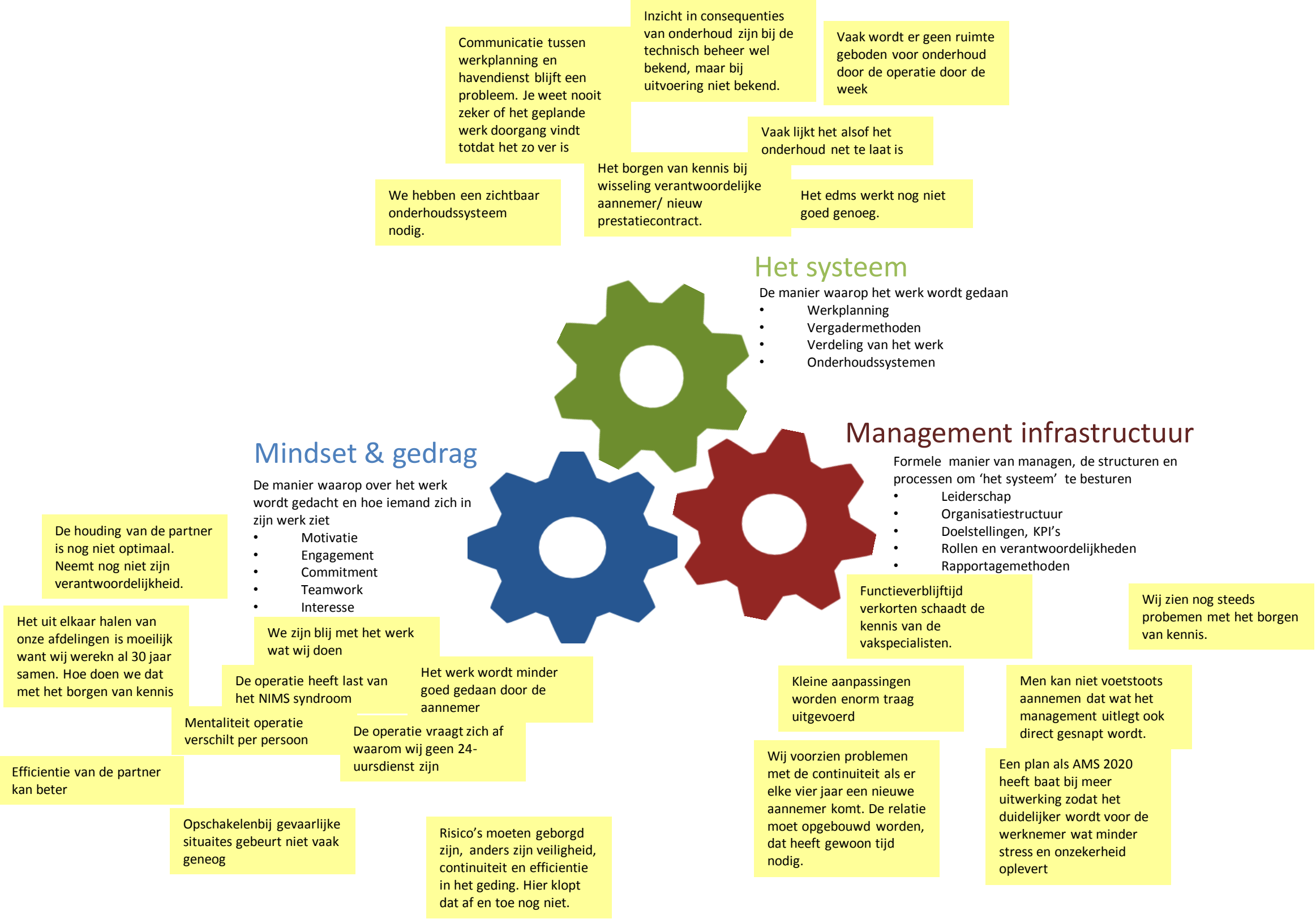
En het systeem:

18. Inzicht in consequenties van onderhoud zijn bij de technisch beheer wel bekend, maar bij uitvoering niet bekend. Bijvoorbeeld beslissingen om niet te onderhouden omdat de asset aan het eind van zijn levensduur is heeft een consequentie voor het risicoprofiel. Als dit goed wordt gecommuniceerd naar de technische bedrijfsvoering komen storingen daar uit een minder onverwachte hoek.
19. Vaak wordt er geen ruimte geboden voor onderhoud door de operatie door de week. Dit zorgt er voor dat er bepaalde storingen escaleren in het weekend waardoor er dan van alles met kunst en vliegwerk opgelost moet worden terwijl dit voorkomen had kunnen worden door eerder met ingepland correctief onderhoud een herstelslag te maken.
20. Vaak lijkt het alsof het onderhoud net te laat is. AssetWise zou er juist voor moeten zorgen dat onderhoud precies op tijd is. Nu is het vaak te laat; dingen moeten eerst stuk gaan voordat ze onderhouden / gerepareerd worden.

21. Hoe gaan we om met de transitie van de huidige inhoudelijke kennis bij Schiphol naar de toekomst, als er alleen nog maar aannemers zijn en we toch kennis over onze assets willen behouden? Het borgen van kennis bij wisseling verantwoordelijke aannemer/ nieuw prestatiecontract.
22. We hebben een zichtbaar onderhoudssysteem nodig (planning) We zijn al drie jaar bezig met nieuwe onderhoudsconcepten maar het lukt ons om de een of andere reden niet om dit helemaal van voor af aan nieuw en professioneel op te zetten. We blijven voortborduren op de oude concepten. Hoe kan het nou dat ons dat niet lukt?
23. Communicatie tussen werkplanning en havendienst blijft een probleem. Je weet nooit zeker of het geplande werk doorgang vindt totdat het zo ver is. Daarmee zou heel veel geld bespaard kunnen worden; het komt nu vaak voor dat de aannemer er staat en alles geregeld is, maar dat er toch geen tijd voor vrij gemaakt kan worden in de operatie.
24. We zouden eigenlijk iemand moeten hebben die als een speer dingen op kan zoeken in het edms. Dat zou zo veel tijd schelen. Een iemand die het databeheer beheert. Vroeger werd het DMS ook wel het document verdwijn systeem genoemd, maar naar eerlijkheid is dat het nu soms nog niet heel goed werkt.

Tot slot moeten we concluderen dat ondanks dat er dingen beter kunnen, AMS nog steeds een hele leuke afdeling is om te werken! Het is niet alleen maar kommer en kwel ;)

8.8 Appendix 7b: Poster balanced approach with results



8.9 Appendix 8 – Results session 2 balanced approach

Deze ronde proberen we de root causes van problemen in kaart te brengen. We gaan dieper in op de statements die we vorige week hebben opgeschreven.

We beginnen met de constatering dat als we kijken naar mindset, er drie hoofdonderwerpen te identificeren zijn.

Timo

Er is geen balans tussen de kosten en besparing die je met onderhoud, Asset Management probeert te doen, ten opzichte van de operatie. In onze beleving sturen ze je weg terwijl je juist onderhoud doet om het optimale te besparen, dus minder onderhoud, afstemming, minimaal onderhoud. Maar op het moment dat je onderhoud wil gaan uitvoeren tellen je afspraken niet meer. Ik snap ook wel dat de dag er heel anders uit kan zien dan je in de planning gedacht had, maar 9 van de 10 keer is dat niet het geval.

Als het mistig is in Brussel, dan snap ik dat het er hier buiten anders uit ziet. Maar dat is lang niet altijd zo, en toch wordt er veel onderhoud afgeblazen. 90% is traffic and weather permitted. Kapstok waaraan de operatie alles aan ophangt om te annuleren. Dus als ik een heel feest heb opgetuigd, en ik sta daar, kunnen zij altijd zeggen 'TWP' en dan wordt het werk alsnog geannuleerd.

Martijn: Dus je zou kunnen zeggen dat onderhoud nog niet genoeg prioriteit krijgt.

Timo: Dat weet ik niet, maar wij krijgen de afweging niet te zien waarom het werk niet doorgaat. Aan de andere kant loop je wel het risico dat als hij uit blijft stellen en wij ons onderhoud niet kunnen blijven doen, dan is straks de luchthaven niet meer beschikbaar omdat niets meer het doet. Dus ergens maak je een planning voor het hele jaar, dus dat moet je ook accommoderen anders kan je je gepland onderhoud niet doen en kan je niet voorspelbaar worden in je beschikbaarheid.

En dat gaat mank, dat zie je aan alle kanten mank gaan. Nou, dan gaan we weer creatief doen. Maar we plegen constant roofofbouw op de bestaande middelen, en dat moet een keer botsen.

Martijn: Ja, en heb je dan eigenlijk ook te maken met wat Leo vorige week zei dat hij vaak ziet dat het werk dus uitgesteld wordt en dat het dan juist in het weekend stuk gaat en dat je dan weer lang bezig bent om het weer goed te maken.

Timo: Ja, ook, maar het toenemen van storingen is eigenlijk het gevolg van geen goed onderhoud. Dat is eigenlijk de balans die je wilt hebben. Je gaat dus gewoon meer risico lopen. Want waarom en wanneer je de storing hebt dat maakt in principe niet uit. Alleen die in het weekend blijft iets beter hangen, omdat iedereen dan in beweging moet komen.

Koos: Veel onderhoud gaat niet door omdat er zo veel projecten gaande zijn dat je je regulier onderhoud niet eens in kan plannen. Wij krijgen bijvoorbeeld geen een gate meer voor onderhoud omdat er zo veel andere gates al voor projecten uit de running zijn. Daar lopen we heel veel tegenaan. Daardoor wordt onze planning zo vaak in de war gegooid.

Martijn: Hoe kan ik dit samenvatten?

Timo: De operationele beschikbaarheid heeft tijd weggegeven aan de grote projecten, waardoor het regulier onderhoud geen plek meer krijgt. In het voortraject hoort daar een balans in gezocht te zijn, maar dat is niet helemaal goed gegaan. Nu wordt het project niet meer gestopt omdat niet kan en prioriteit heeft. Dus dan zijn wij altijd de klos. Die projecten worden op een hoger niveau ingeschoten, en daar komen wij dan nooit meer tussen. Wij maken

Martijn: Is dat dan ook een kwestie van communicatie in het begin? Of komt dit omdat het eigenlijk niet altijd kan?

Koos:

Timo: Kijk het is gewoon het risico dat ze nemen dat ze in het begin kijken en denken, dit kan wel zo dat gaan we managen, maar als puntje bij paaltje komt, dan delft het regulier onderhoud het onderspit en worden we weggestuurd. Terwijl ze vantevoren hebben afgesproken dat er een afwijking van het schema voor het grote werk zou zijn, zodat er regulier onderhoud gedaan kan worden, als het zo ver is wordt je alsnog aan de kant geschoven.

Frits: Dan kom je dus weer op het punt 'not in my shift'.

De afspraak maak je in eerste instantie met een overkoepelende dienst. Diegene die dan in de operatie er zit die is de baas en die beoordeelt het toch weer anders.

Hoe komt het dan dat die mentaliteit zo is?

Hij denkt dat het de enige goede oplossing is. Die mannen worden van uit de operatie vrij strak onder druk gezet door onze blauwe partner.

Timo: Hun en onze voorbereiding zitten er bij als het wordt afgesproken. Op dat moment zie je alleen de operatie van twee kanten en die moeten met zn tweeën het tokootje runnen. De operatie behoudt dus de macht om het af te kunnen blazen. Deze handicap hebben we geaccepteerd, dus waarom vandaag niet weer dan? Wij hebben het vanaf onze kant ook weer niet zo heel goed opgetuigd dat hij direct de kosten om zijn oren krijgt als hij ons werk afblaast. Er zit ook geen prikkel in, want als hij het nu afblaast dan kost het hem niks. Hoe makkelijker hij het heeft hoe beter. Hij heeft er altijd baat bij om je weg te sturen. Dus je moet daar een prikkel leggen dat hij er belang bij heeft om je te helpen in plaats van weg te sturen. Het is nu meer de waan van de dag. En het blijft een persoonsafhankelijke kwestie.

Hoe relateer je dit naar AMS 2020 / AssetWise.

Frits: Wat ik wel het idee heb is dat het steeds drukker wordt op Schiphol en dat het onderhoud daardoor steeds meer onder druk komt te staan. Dat betekent dat we als AMS misschien meer richting de operatie moeten aansluiten en misschien wel richting een 24-uurs dienst moeten gaan, aangezien Schiphol/ operatie dat ook is. Omdat we meer gelieerd zijn aan de operatie. Dan worden de lijnen met de operatie korter en krijg je dus hoogstwaarschijnlijk minder de problematiek van het uitstellen van onderhoud. We zijn nu natuurlijk gewoon een dagdiensten onderneming.

We hebben net een overleg gehad met PLUS over ingebruikname rijbaan tango. Dat moet dan in de nacht gebeuren, dus dan kom ik direct in de problemen met mijn bezetting. Het wordt komende jaren drukker op schiphol, op een dag komen we niet meer weg.

Koos: de extra projecten zijn op een gegeven moment weer klaar he?

Timo/Frits: Geloof ons maar, het wordt alleen maar drukker. Elk jaar weer nieuwe projecten, pieren, terminals. Het wordt steeds drukker.

Eigenlijk kan het onderhoud niet af met alleen een dagdienst. Maar met meerdere shifts op een dag, of ook nog in het weekend. De ploeg werknemers moet je dan wel verdrievoudigen.

Timo: Wat mij verbaasd, is dat alles 24 uur is, maar dat wij nog weggkomen met een dagdienst.

Koos: Je moest eens weten wat wij in de late dienst moeten doen, wat we overdag niet kunnen doen. Probleem is

Hoe kan het zijn dat je al het werk afspreekt, dat alle partijen er dan bij zitten, dat je dan alsnog weggestuurd kan worden als je daar aan komt zetten. Wat is er dan wezenlijk veranderd? Is er dan iets veranderd? Of zegt de operatie gewoon 'ik wil een makkelijke dag'

Voorbespreking, planning van Fokke, heeft in praktijk geen waarde. Keuze waarom operatie het afblaast is ook niet transparant. Ligt dat echt aan WTP, of aan de persoon? Elke uitstelling gaat een paar weken vooruit, moet iedereen weer opnieuw plannen, en alles schuift mee.

Martijn : We gaan door met het onderwerp aannemer.

Aantal uitspraken opgeschreven:

1. Timo: Het is niet inzichtelijk wat we besparen op de huidige manier van uitbesteden. Het is niet transparant te maken wat we netto overhouden in geld, met op deze manier uitbesteden. Het kan zijn dat je geen extra personeel aan wil nemen, dat je dus eigenlijk duurder bent maar minder personeel hebt dus flexibeler, of daadwerkelijk goedkoper, maakt niet uit, maar het is niet transparant. Dat het netto goedkoper is, is niet bewezen.
2. Dan het punt kwaliteit: Er wordt weinig kwaliteitscontrole gedaan, overgeleverd aan willekeur en de waan van de dag. Veel gaat ook wel goed, geen structurele kwaliteitsproblemen. Alleen hebben we gewoon zelf geen goede kwaliteitsbesturing dat moeten we zelf inrichten. Op storingen zowel als op preventief onderhoud.

Koos: Wat net gezegd werd; dat de aannemer de handen er van af trekt als het moeilijk wordt, dat hebben wij toch niet gezien, want dan trekken ze aan de bel en kan je het uitleggen en dan kunnen ze weer verder.

Punt twee valt zeker wel mee. Het is ook een beetje perceelafhankelijk natuurlijk.

Of we hebben geen goede aannemer, of we hebben geen goede controle. Contractvorm is nu nog vaak zo dat het

Frits : Kijk wij doen iets minder werk dan 10 jaar geleden, maar er zijn nog steeds net zo veel man hier. Als je dan ziet wat er bij heijmans is binnengehoosd, daar krijgt een paard de hik van. Deden wij het dan zo goed? Wij deden met deze bezetting de luchthaven met alle storingen en problemen.

Koos; Ieder zijn eigen tak he'? Bij volker heb je natuurlijk ook iedereen die verantwoordelijk is voor zijn eigen expertise

Timo: Ik zie een soort scheefgroei qua uren en bezetting, als ik kijk naar wat wij hier hebben en hun daar hebben. Ik zie een soort scheefgroei als we dan ook nog moeten gaan monitoren, komen er nog meer man bij. Meetrondje is afrekenrondje. Daar moet aannemer aan voldoen. Dat is wel een goed. We zijn niet slimmer met zn allen. Als we dat zo doen, dan hebben we hard en zwart op wit wat hij moet doen. IPV blauwe ogen.

Frits. Waar het om gaat, operator kan buiten kantoortijd geen second opinion krijgen.

Timo: Op dat moment is het zijn verantwoordelijkheid om de boel draaiend te houden. Dus zijn keuze is dan de goede keuze. TB'er zou bereikbaar moeten zijn.

Uitbesteden: Maak het eens transparant. Het is een keuze. Formatieplaatsen niet uitbreiden: rond de 2000 blijven zitten. Is dat de keuze? De keuze dat het goedkoper wordt is voor mij geen heldere keuze. Het is gewoon tegenstrijdig, want ik heb niet het idee dat het efficiënter is zo. Dus wat is nu de beweegreden? Waarom is dat niet transparant? Er komt zelfs weer personeel bij nu. Dus dat is toch tegenstrijdig.

De werkhouding van de aannemer valt wel mee, perceel 1 en 2 hebben een heel andere beleving.

Methode van werken is anders, daarom zit er verschil in. Als je een prestatiecontract hebt dan heb je als aannemer wel de incentive. Dus daar moeten we wel snel naar toe. Elk perceel gaat op zijn eigen tempo richting prestatiegericht, maar gaat er wel heen.

Communicatie is moeilijk om als er risico genomen wordt

De storingsdienst is de klos als je kritisch gaat dimensioneren op onderhoud.

Eigenlijk moet je een paar specialisten hebben van alles die

1. Bibliotheek
2. Fia; document waarin vanaf ontwerp tot opleveren alle data bijgehouden wordt voor de asset. Het klopt en je weet waar het staat. Handboekje voor elke asset die er bij komt. Op het moment van opleveren heb je het.

Verplicht doorschuiven; arbeidsmigratie, de mannen willen echt niets anders gaan doen. Daar zouden ze bijzonder ongelukkig van worden. Twee kanten verlies, want zij worden er ook niet blij van. Wij, als vakidioten, die moet je gewoon koesteren en op hun plek laten zitten. Anders ben je over 4 jaar de hele afdeling kwijt want iedereen zit hier al langer dan 7 jaar op zijn plek.

Ook praktisch gezien, heb je de kennis gewoon nodig.

Je moet beginnen met het op papier te borgen maar soms is een stukje mondelinge toelichting of de vertaling van het papiertje is soms lastig. Als je geen ervaring hebt buiten en als je aan de hand van

een papiertje een klus moet klaren dan snap je er geen reet van. Dus je moet het ook kunnen vertalen.

Martijn: Laatste punt: Onderhoudsconcepten: we zijn al 3 jaar bezig met nieuwe concepten maar we krijgen geen nieuwe.

Timo: zit hem in de capaciteit. Dat is moeilijk. Maar we zijn nu wel bezig om die nieuwe concepten te maken. Het duurt alleen nog even voordat dat uitgestuiterd is.

8.10 Appendix 9 – Summary of results balanced approach

Resultaten root cause analysis als input voor AMS 2020

De statements zijn zoveel mogelijk vormgegeven in de wij- vorm.

De statements zijn geclusterd per categorie:

Management Infrastructuur: doelstellingen, stuurmethoden en organisatie van het werk

Technische inhoud: de inhoudelijke manier waarop het werk gedaan wordt

Mindset en gedrag; de werkhouding van de collega's

Resultaten:

Met betrekking tot de samenwerking met de operatie

M De operatie zegt te vaak gepland onderhoud af zonder daar een goede onderbouwing voor te geven.

1. Dit zorgt voor problemen met het halen van de jaardoelstellingen van het onderhoud en kost veel geld.
2. Het kost misschien wel meer dan de besparing met AssetWise.
3. Wij willen de onderbouwing zien als we weggestuurd worden.
4. Ook heeft het wegsturen van de onderhoudsmensen nu geen consequentie voor de operatie. Dat zou er wel moeten zijn.
5. Nu lijkt het vaak 'Not in my shift' van de operatie.

I Door alle projecten (zoals one XS) is er niet genoeg tijd meer over voor regulier onderhoud. Het wordt vaak wel ingepland maar als het dan zo ver is krijgt het project werk voorrang, men moet zich beter aan de planning houden. Het uitstel zorgt er voor dat er te vaak creatief gedaan moet worden, hiermee plegen we roofbouw op de bedrijfsmiddelen. Hierdoor neemt ook de hoeveelheid storingen toe. Hoe komt het nou dat er wel werk wordt ingepland, waar dan onze planners en die van operatie bij betrokken zijn, maar als puntje bij paaltje komt het werk toch zomaar afgezegd kan worden? Waar maak je dan de planning voor?

T Wat opvalt is dat AMS als enig radertje in het systeem 'wegkomt' met alleen een dagdienst. Misschien past het werk door de groei van Schiphol wel niet meer in een dagdienst en moeten we kijken naar mogelijkheden voor een vroege / late dienst, of doorwerken in de weekends? Of moet AMS qua organisatie dichterbij de operatie komen te staan om het onderhoud beter af te kunnen

stemmen?

Samengevat: Past organisatievorm AMS in een 24 uren dienst?

Met betrekking tot de aannemer

I Er is nog geen transparantie in het nut van het uitbesteden van het werk aan een aannemer. Wordt het er daadwerkelijk goedkoper van? Wat zijn nu de motieven voor die uitbesteding? Daar zouden wij graag inzicht in hebben om de gedachte er achter beter te begrijpen. Ook dat je weet wat je kan verwachten van de aannemer; waar je voor betaald hebt en waarvoor niet. Dan kan je ook beter onderhandelen en weet je wat je kan vragen en waar je extra voor moet betalen. Nu is het altijd eerst de vraag of het extra kost en dat is irritant. Dat moet transparanter. De contactpersoon van de aannemer weet trouwens ook nooit of het wel of niet in het contract zit.

I De kwaliteitscontrole is niet op orde daarom is het nu heel lastig om de aannemer er op af te rekenen als hij zijn werk niet goed doet. Als straks alle aannemers een prestatiecontract hebben en datamanagement op orde is, zodat de controle goed is ingericht, zal dit beter gaan. Ook als alle aannemers straks over zijn op een prestatiecontract dan zal het ook beter gaan. De vraag blijft voor ons nog steeds of het proces er dan uiteindelijk efficiënter van geworden is.

Vraag blijft nog steeds, kunnen we het uitbesteden niet inzichtelijker maken, om te zien waar het voordeel nu echt zit? Wat wordt er nu goedkoper van?

M De werkhouding van de aannemer is vaak niet zo slecht als dat soms gezegd wordt. Als ze het niet meer weten bellen ze op en gaan ze weer verder. Dit verschilt wel per perceel. In perceel 1 kan de aannemer gewoon minder vrijheid krijgen door de aard van de installaties. Daarom neemt hij daar ook minder verantwoordelijkheid.

Met betrekking tot werk

I Wij vinden het onverstandig om de vakspecialisten sneller door te rouleren. Daar zijn de functies niet geschikt voor, bovendien willen we niets liever dan dit werk blijven doen. We zijn blij met het werk dat we nu doen en hebben er moeite mee dat er steeds meer naar de contractpartij gaat.

I Informatie niet meer persoonsafhankelijk maken is goed en noodzakelijk, maar het is volgens ons heel moeilijk om alles in de praktijk van papier te moeten doen. Ervaring over hoe iets er in het echt uit ziet blijkt steeds toch erg belangrijk.

M Mede hierdoor is het soms moeilijk om inzicht te krijgen in het nut of de noodzaak van bijvoorbeeld de voorgestelde verandering; omdat er nog veel vraagtekens staan bij de invulling van het werk in de nieuwe situatie.

I Waar wij soms nog moeite mee hebben is communicatie; men kan niet voetstoots aannemen dat alles begrepen wordt. Bijvoorbeeld, als bepaalde plannen worden gepresenteerd zoals Asset Wise, gebeurt dit vaak te abstract.

I Voor bijvoorbeeld AMS 2020 hadden wij graag een wat concreter plan gezien, in ieder geval wat duidelijker, want we begrijpen ook dat volledig uitgewerkt niet mogelijk is. In ieder geval een plan waarin duidelijk werd wat de noodzaak van de verandering was. Jammer dat we nu niet door konden pakken, daarmee is een half jaar voorbereiding ongedaan gemaakt.

T Procedures en protocollen zijn te bureaucratisch geworden: kleine dingen voor elkaar krijgen duurt veel te lang.

Concluderend; de drie belangrijkste aspecten:

1. Organisatievorm lijkt niet geschikt om een 24-uurs operatie efficiënt te kunnen ondersteunen. Hier moet een concreet besluit over worden genomen en gedeeld met management operatie.
2. De verwachtingen van de partner moet transparanter. Duidelijk zijn waarvoor is betaald en waarvoor niet.
3. Het wegsturen in de praktijk blijft irritant. We willen de afweging waarom we worden weggestuurd. Die reden moet niet de waan van de dag zijn of de lamelendigheid van de operatie.

Methode: Goed om te zien wat er nu speelt en dat er meerdere mensen zijn die er zo over denken en dat het concreet gemaakt wordt en dat het in kaart gebracht wordt om mee te nemen in de verandering.

‘Eerst helder hebben wat er misgaat voordat je wijzigingen gaat doorvoeren. Anders staat men er niet voor open!’ (Timo de Graaf 04-08-2014)