UNIVERSITY OF TWENTE.

MASTER THESIS

Measuring the effectiveness of Inside Automotive, BASF's first cross-divisional talent development program.

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Executive Summary

In the framework of completing the master studies Business Administration, this thesis focuses on BASF's global talent development program Inside Automotive. BASF is the largest chemical producer in the world that has its business subdivided into 13 operational divisions. With four of these divisions (Coatings, Catalysts, Performance Materials and Fuel and Lubricant Solutions) supplying the automotive industry, BASF is the industries' number one chemical supplier. In their strategy for 2025, BASF wants to put more focus on the industry group Automotive and enforce a 'one company' approach. Meaning the company wishes to act as one entity towards customers, not as different division entities. For this reason 'Inside Automotive' was initiated. Inside Automotive is a global talent development program for graduates or young professionals, with a focus on marketing and sales. Over the course of two years, candidates get to see three to four different divisions, as they do an assignment there for six to eight months. One of these rotations is international, allocating the candidate to another continent to have a global experience. In 2016, the pilot phase of the program will be completed and the question is raised by BASF on how effective the program is and how this effectiveness can be measured. This translates into the main research question of this thesis; *what tool can be developed to measure the effectiveness of BASF's talent development program Inside Automotive?*

Based on theory, effectiveness in the context of this research is defined as the accomplishment of objectives that satisfy all important stakeholders, which are identified as the organizational, divisional and individual candidate level of the program. A common set of objectives as well as a clear program communication structure are also prerequisites for an effective and successful program. To measure the extent to which the objectives are being accomplished, indicators can be used. In this research, a distinction based on literature is made between:

- *Key performance indicators*, which focus on how essential program components are performing individually and show management (coordinator of the program) what can be done to improve these individual aspects and thereby ultimately the overall performance reflected through the result indicators.
- *Key result indicators*, which measure objective outcomes after the program, are the consequence of a number of actions and are useful for the board of the 'Automotive' industry group (Global Automotive Steering Committee) to evaluate the program.

In this qualitative research, desk-research followed by a number of 17 semi-structured interviews with participants from the three aforementioned levels are conducted to gain insights into the program. The results are used to develop a set of common objectives for Inside Automotive and a set of performance and result indicators that reflect these objectives. To determine which indicators are most

important, and thus key, a multi-criteria decision making (MCDM) analysis is performed with a focus group of four participants from the interview population. In this focus group, all three involved levels are again represented. Finally, a sensitivity analysis is conducted to validate which of the top indicators from the MCDM analysis can be recommended to BASF as key (performance and result) indicators.

From the interviews a number of five overall objectives that satisfy all stakeholders are distilled for Inside Automotive:

- To create new talents with a helicopter perspective of the whole value chain of automotive products, allowing an enhanced industry focus and cross-divisional thinking.
- To make the company a more attractive employer in the automotive industry.
- To have suitable target positions (entry position after program) available and good development paths for the candidates after the program.
- To create internationally oriented talents.
- To strengthen the 'one company' approach through creation of organizational awareness and the network built up during the program.

Based on the MCDM method and the sensitivity analysis a total of ten key result indicators and eight key performance indicators are identified. Examples of key result indicators are "retention rate" or "number of qualified program applicants". Examples of key performance indicators are "number of divisions rotated in" and "number of key projects worked on". The key (result and performance) indicators that result from this approach are suggested to BASF in a plan of action to be instated for the evaluation of the effectiveness of the Inside Automotive program, thereby delivering an answer to the main research question.

Effectiveness however, is an external standard applied to the output of activities and for it to be measured, the necessary prerequisites need to be in place. Before BASF is able to gain insight into the effectiveness of Inside Automotive through a set of indicators, key prerequisites for a compatible and successful program need to be addressed:

- *A common set of objectives* is addressed in this research. It is needed to align all stakeholders internally and externally on a global scale to support the business strategy and global operations of Inside Automotive. Without this alignment the program cannot be effective because a missing alignment of objectives leads to inconsistencies in the program implementation.
- A *well-patterned communication structure* is also a prerequisite, which is currently not present. This is leading to too little cross-divisional communication, a loss of information and a missed chance to optimally develop candidates. For example: feedback after a candidate's first rotation is often not known to the supervisor of the candidate's second rotation.

Besides endorsing literature on the need for these prerequisites, *transparency* and *equal global acceptance* are added to the prerequisite spectrum for successful cross-divisional global talent development programs.

- Currently it is not clear to the involved stakeholders who all the other stakeholders are. For example, the supervisor in division two is often not aware who the candidate's supervisor was in division one. A lack of transparency within the program contributes to a poor communication structure; *transparency* is therefore a prerequisite for an effective program.
- Inside Automotive does not receive an equal level of acceptance in every region. In North America, the acceptance of the program is much lower in comparison to for example Europe or Asia. In order to develop candidates and provide them with the full overview of the global BASF value chain to the automotive industry, an *equal global acceptance* is a prerequisite.

Furthermore, it appears that the program structure could also be improved as it is still too silo based. The homeport division (division where a candidate starts and returns after the program to fulfil a predetermined target position), who is responsible for the headcount of its candidates in the program, has too much influence in the candidate's development path. This impedes a true cross-divisional industry focus. A centrally arranged and controlled budget by the Global Automotive Steering Committee and open target positions for the candidates could help improve the overall objective of a cross-divisional 'one company' approach.

Based on these results, a plan of action to implement the objectives, corresponding key indicators, a better communication structure and increased transparency is designed and the following recommendation are made:

- We recommend BASF to instate the five objectives for both current and future stakeholder alignment as well as the ten key result and eight key performance indicators to measure the effectiveness of Inside Automotive.
- We recommend BASF to use the plan of action as it provides crucial first steps in the implementation of the objectives, key indicators and the improvement of both the communication structure and transparency of Inside Automotive.
- We recommend the BASF to investigate the possible solution of a centrally controlled budget to the problem found with the structure of the program.
- We recommend BASF to increase the internal and external promotion activities of the program in its North American region, as candidates currently experience the lowest level of acceptance compared to other regions.

This research provides an understanding of effectiveness in a cross divisional context by identifying the objectives of the different involved levels in the program while at the same time uncovering organizational and divisional topics that are important to the success of a global program. Moreover, it supports the assumption that no unique one-fits-all design approach for a global talent management program exists which

creates a challenge for organizations and academics to define appropriate program designs and related measures. This research adds to the existing talent management literature by providing another insight into the design and the challenges related to the structure, frequency and flows of communications, (budget) coordination and responsibilities of a global talent development program, as well as providing an example for the development of a measurement framework to monitor effectiveness.

For navigation through this thesis, a reader guide is provided.

Reader Guide

Chapter:	BASF	GASC	Global coordinator Inside Autmotive (thesis supervisor)	Practitioners	Academics
Introduction	✓	✓	✓	✓	✓
Research design			✓		✓
Business context & the Inside Automotive program			✓		✓
Literature review			✓		✓
Methodology			✓		✓
Findings		✓	✓	✓	✓
Plan of action		✓	✓	✓	✓
Conclusions & Recommendations	✓	✓	✓	✓	✓

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1. Introduction

In the framework of completing the business administration master study at the University of Twente, this thesis focuses on how the effectiveness of a talent development program, which has a cross-divisional set-up, can be measured. The research is based on a case study conducted within the business context of BASF, a large listed chemical multinational that is based in Germany. The case specifically focuses on BASF's cross-divisional talent development program 'Inside Automotive'. BASF, founded in 1865 as the "Badische Anilin- & Soda Fabrik" in Mannheim, has its business divided into 5 different segments. These segments are subdivided into 13 operational divisions (ODs), or business units (BUs), which provide chemical solutions to almost every industry worldwide, generating over €70 billion in sales in 2015. One of these industries where BASF is currently the number one chemical supplier is the automotive industry. This industry makes up for €12.3 billion in sales worldwide (17.5% of the total sales), making it a strategically important industry to BASF. Four of the operational divisions supply the automotive industry with products like coatings, foams and polymers to every major player in the industry such as Daimler, BMW, General Motors and VW.

Within BASF strategy for 2025, the importance of BASF's industry group 'Automotive' is specifically emphasized, aiming for more focus on the automotive industry while at the same time enforcing a 'one company' approach. The 'one company' approach relates to BASF's ODs being represented and recognized as one entity, as one BASF. This approach translates into a more cross-divisional value proposition. The divisions' large globalizing customers, who demand a more unified approach and standard from BASF, also strengthen the need for this proposition. For this reason the Global Automotive Steering Committee (GASC), the overarching board for the industry group 'Automotive' within BASF, initiated a new global talent development program in February 2014 called Inside Automotive, which is the subject of this very research.

The Inside Automotive program aims to provide its candidates with a complete overview of BASF's automotive product portfolio from a marketing and sales perspective. Candidates of the program are either graduates or young professionals, typically with a background in chemical, technical or commercial studies and/or functions, and are new to the company. All four operational divisions that supply the automotive industry participate in the program. Inside Automotive has a duration of 24 months in which a candidate goes through three, if possible four, assignments within the participating divisions. Each assignment is focused on marketing, sales, key account management or a combination of one of these directions. A candidate is recruited for a target position in marketing or sales (entry position after the program) by one of the operational divisions, which is from that point on its homeport division. After the program the candidate will return to the homeport division to fulfill the

target position. Inside Automotive currently has ten active candidates with the first one soon to finish meaning that the program is nearing the end of its pilot phase.

The Inside Automotive program is unique to BASF as it is their first global cross-divisional talent development program, meaning that the company has no previous experience concerning the management and other related challenges of such a program. Every operational division has its own working culture and (possibly) own objectives for the Inside Automotive program, already providing a huge challenge to realize the set up in the first place. The pilot phase of Inside Automotive ends this year, 2016, and the BASF wants to know:

- Are the different stakeholders' objectives for the program aligned?
- How effective is the program?
- How can this effectiveness be measured to further improve the program and thereby its strategic objectives?

Many different angles and definitions on the concept of effectiveness exist within the scientific literature. In the essence however, the key element of the effectiveness concept is about the extent to which the objectives of the different stakeholders are met (Hines et al., 2000; Jokela et al., 2003; Pfeffer & Salancik, 2003; Borgström, 2005; Blash et al., 2010). Even though the general roll-out and coordination of Inside Automotive is going considerably well, as they currently do not face major problems, the program still raises many challenges on a variety of levels. The objectives of the different stakeholders involved are not well understood consequently leading to a missing clear common set of objectives for the program. (1) Such a common set of objectives as well as (2) a clear understanding of these objectives are both prerequisites to a program's success (Kerzner, 2015). The objectives of the different stakeholders, which in the case of Inside Automotive are the organizational level (BASF), the different divisions and the candidates, should be clear in order to organize assignments and related objectives accordingly. To continuously monitor and improve the program and thereby its effectiveness, indicators reflecting these objectives are needed. These indicators will enhance the understanding of the effectiveness of the Inside Automotive program and its contribution to BASF's strategic objective of a more unified approach to the automotive industry. Therefore, the research objective of this master thesis is to *"identify objectives and indicators reflecting the objectives from the organizational, divisional and candidate level, to measure the effectiveness of the cross-divisional talent development program Inside Automotive".*

To investigate and contribute to improving the effectiveness of the Inside Automotive program, this research follows a theory based and design focused method on business problem solving as given by Van Aken, Berends and Van der Bij (2012). Using designed focused research approaches such as the work by Van Aken et al. (2012) has

become increasingly common in recent years as it allows the researcher to directly focus on an individual organization and a specific business problem (Van Aken & Romme, 2009), which is the case in this research. The method of Van Aken et al. (2012) focuses on designing a solution based on theory that is specific for a business case, allowing for a complete focus on the business problem at hand. Based on the work of Van Aken et al. (2012), this thesis uses a classical problem solving cycle elaborated in the regulative cycle by Van Strien (1997), which is shown in the figure 1. The scope of this master thesis does not extend further than the first four phases:

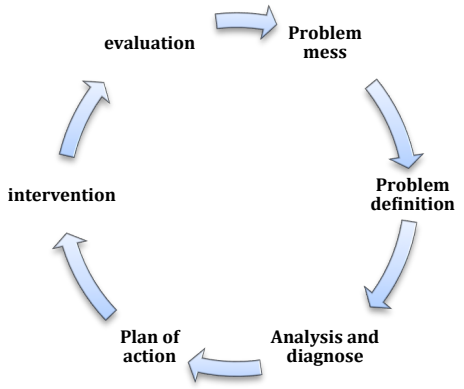


Figure 1. Regulative cycle Van Strien (1997)

1. In the first phase the business context of BASF and the Inside Automotive program in relation to the three aforementioned questions are investigated to create a *problem mess*.
2. The initial problem, or in this case the request by BASF, is placed in the context of the problem mess to provide a *problem definition*. This problem definition translates into the main research question, related sub questions and serves as the guideline for this research.
3. To *analyze* the problem, we closely work together with the program coordinator and take over an observing role through a 6 month internal master thesis position. Within this position a literature review on talent management, effectiveness, objective setting and indicators is conducted alongside with 17 semi-structured interviews with participants from the organizational, divisional and candidate level. Based on this information the problem is *diagnosed* providing an overview of objectives, related indicators and the organizational and divisional challenges that the Inside Automotive program faces. Using a multi-criteria decision making method, the indicators are prioritized based on criteria derived from literature and the business context of BASF.
4. Based on the findings a *plan of action* is designed to implement the objectives and corresponding indicators so that the effectiveness of Inside Automotive can be measured. Furthermore, recommendations on found organizational and divisional challenges are elaborated upon.

The final two phases, *intervention* and *evaluation*, are out of scope due to the time and resource constraint of this research. A follow up and possible implementation remains the responsibility of BASF.

2. Research Design

In this chapter, the research design of the thesis is discussed. The main research question is explained in 2.1 and is subsequently broken down into sub questions including a brief explanation on how the question will be answered. In section 2.2, the deliverables of this research are specified.

2.1 Research question(s)

As explained in the introduction of this thesis (chapter 1), the research objective of this thesis is to identify objectives and indicators reflecting the objectives from the organizational, divisional and candidate level, to measure the effectiveness of the cross-divisional talent development program Inside Automotive. This research objective translates into the following main research question:

What tool can be developed to measure the effectiveness of BASF's talent development program Inside Automotive?

To answer to the main research question, the question is split up into the following four sub questions:

1. *What are the business context and the set-up of the Inside Automotive program?*

To comprehend what BASF wants to achieve with Inside Automotive, the business context of BASF, their relation to the automotive industry and how BASF's strategy translates into the set-up of the Inside Automotive program are researched. The answer to sub question 1 is provided in chapter 3.

2. *How is effectiveness defined within the scope of this research?*

To define effectiveness within the context of this research, a literature review is conducted. A theoretical framework is created as a fundament for evaluating the effectiveness of Inside Automotive. Sub question 2 is answered in chapter 4.

3. *What are the objectives from the organizational, divisional and individual candidate level for the Inside Automotive program?*

A common understanding of a set of objectives is a prerequisite to a programs success (Kerzner, 2015). Therefore, objectives of the different levels involved in the program need to be understood and are determined using qualitative semi structured interviews. Sub question 3 is answered in section 6.1.

4. *What indicators express the objectives of all levels so that the effectiveness of the Inside Automotive program can be measured?*

To monitor the effectiveness of the program, indicators to measure the program objectives are needed. Based on the information from sub question two, involving input from all levels on the objectives and indicators, these indicators are created. Sub question 4 will be answered in section 6.2.

5. *What organizational and divisional challenges impede the effectiveness the Inside Automotive program?*

To increase the effectiveness of the Inside Automotive, possible organizational and (inter)divisional challenges are investigated during the interviews. Participant are asked about the possible organizational and (inter)divisional challenges that the Inside Automotive faces and what improvements can be made. The answer to sub question 4 can be found in chapter and 6.3.

2.2 Deliverables

In light of this research, we aim for the following deliverables:

- Provide an understanding of effectiveness in the context of a cross-divisional program like Inside Automotive.
- Provide a grounded understanding of the objectives for the Inside Automotive program from different levels of perspective.
- Uncover possible organizational cross-divisional issues in talent development programs, using Inside Automotive as an example.
- Provide a tool to measure the effectiveness of the Inside Automotive program.
- A business case example of the application of the business problem solving method of Van Aken et al. (2012).

The proposed deliverables can be, when answered at the end of this thesis, used by practitioners who have to deal with similar challenges but also by academics that want to gain more theoretical background knowledge into measuring the objectives and thereby the effectiveness of similar talent development programs.

3. Business Context & the Inside Automotive program

In this chapter we provide an answer to sub question 1 by explaining the business context of BASF and the Inside Automotive program. An insight in the business context is needed in order to understand the environment in which Inside Automotive is active. The topics are explained in two parts. In section 3.1, the business environment of BASF and its affiliation with the automotive industry is described. In section 3.2, the set-up of Inside Automotive is illustrated based on the candidate profile, a program description and the program's strategic objectives. A summary of chapter 3 is provided in section 3.3

3.1 BASF and Automotive

BASF was founded on April 6, 1865 as the "Badische Anilin- & Soda Fabrik" in Mannheim. The company was initially founded to produces dyes and inorganic materials needed to do so. Now, over 150 years later, BASF is the number one chemical manufacturer worldwide, is active in close to every chemical segment and caries the slogan 'we create chemistry'. With close to 380 production facilities worldwide and over 100.000 employees, BASF had over €70 billion in sales in 2015. The company's business is divided into five segments: Oil & Gas, Agricultural solutions, Chemicals, Performance products and Functional Materials and Solutions. These segments are subdivided into 13 different operational divisions, which all have a personal working culture and business model. BASF group lives by four guiding principles:

- We add value as one company.
- We innovate to make our customers more successful.
- We drive sustainable solutions.
- We form the best team.

BASF is the number one supplier to the automotive industry worldwide, with four operational divisions who manufacture for close to every major car manufacturer like BMW, Daimler, Toyota, General Motors, Ford and many more. The four operational divisions are Coatings (EC), Catalysts (CC), Performance Materials (PM) and Fuel and Lubricant Solutions (EV) and they provide products like plastics, foams, coatings, catalysts, battery and brake fluids, leather and textiles. The full range of BASF automotive product portfolio categories are depicted in figure 2.

Every single one of these divisions has a talent development program in place, mainly focused on candidates with a chemical background. Each program is silo based, applying a sole focus on the division where the program is offered. The programs have a strict emphasis on the technical development and education of its candidates to foster product development and innovation. Innovation is one of the core principles of

BASF and this also applies to its automotive products. With over €200 million in expenditures on R&D related to Automotive in 2015, BASF innovates on topics as weight reduction, heat management, fuel efficiency, quality, comfort and safety.

Figure 2. BASF product portfolio for the automotive industry

In its strategy for 2025, BASF emphasizes a strong focus on the internal industry group Automotive using a 'one company' approach due to the industry becoming increasingly important for the company. For that reason, the Inside Automotive talent development program was initiated. Its main purpose is to attract talent, allow candidates to get to know the diverse automotive industry and provide a complete overview to of the company's product and service portfolio to the industry from a marketing and sales perspective.

3.2 The Inside Automotive Program

Inside Automotive is a global talent development program to create talents that are highly equipped with the knowledge of the company's automotive portfolio with a specific focus on business-to-business marketing and sales. The four divisions of BASF that are active in the automotive segment all participate in the program. The intention is to provide the candidates with a good understanding of the respective products, technologies, business models and practices from these divisions with regard to key account, sales and marketing activities. A brief description of the candidate profile and the program are given.

3.2.1 The Candidate profile

The Inside Automotive program targets university graduates and young professionals who have a passion for marketing and sales as well as affinity with the automotive industry. The following prerequisites are set by BASF for a candidate profile:

- The candidate needs to possess a university degree, masters or higher, with above average results in (industrial) engineering or business administration/economics, preferably with a technical background.
- Automotive affiliation, demonstrated through relevant experience with a global player in the automotive industry.
- An international as well as customer oriented mind-set and approach.

Currently, there are ten candidates in the program who all have a background in either engineering or marketing/economics and have worked in either automotive firms or suppliers to the industry. The first candidate will finish in May 2016.

3.2.2 The Program

The Inside Automotive program is a 24-month global talent development program that is initiated by the Global Automotive Steering Committee in February 2014. A candidate is recruited for a target position in one of the four participating division where he/she will start with her first assignment. This division is called the homeport division and is also the place where the candidate will end up after the program in the aforementioned target position. The recruitment process exists of two rounds. First, the shared service centre of BASF checks the candidate's profile and motivation for a match with the Inside Automotive profile. If a match exists, the shared service centre will conduct a competence interview with the applicant. Based on these two aspects, considering hard- and soft skills of a candidate, a positive or negative reply is given to the applicant. When positive, the second step consists of three interviews, two interviews with the division where the target position is open (one with HR and one with Sales & Marketing) and one interview with the global coordinator of the program. Both the coordinator and the division have to decide unanimously in favour of the candidate for him/her to get the offer. To provide an overview and a better understanding of the recruiting part of Inside Automotive, the process is illustrated in figure 3.

When the recruiting process is finished, the candidate starts with the first assignment at the homeport division, followed by two to three rotations through the other participating divisions. Every rotation has a duration of about three to ten months, depending on the individual path set out for the candidate by the coordinator of the program. Currently, the entire program path for a candidate is unknown before he or she starts with the program. As the candidate progresses, the coordinator of the program arranges the next assignments at the other divisions but no pre set-up

infrastructure exists. From the total number of rotations, one rotation is international, bringing the candidate to another continent than the homeport location. It is important to know that the program has no stage gate structure where the candidate gets a go/no go decision after each rotation. Feedback is given to the candidate solely by the direct supervisor on assignment and shared with the coordinator of the program.

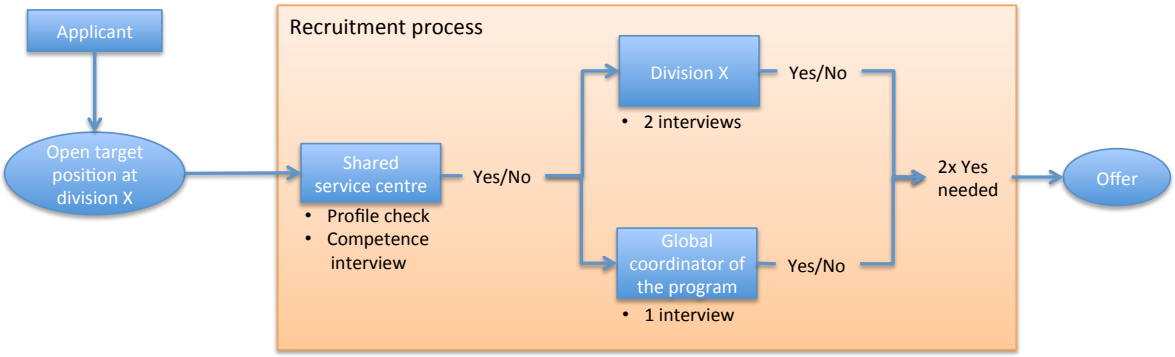


Figure 3 Recruitment process Inside Automotive

A lot of actors and stakeholders are involved in the global set-up of the Inside Automotive program. These actors can be categorised in the organizational, divisional and individual level. On the organizational level, the Global Automotive Steering Committee (GASC) and the global coordinator are active. On the divisional level the four involved operational units are considered on both a regional and local level. On the individual level, the candidates in the program are considered. These different levels make for a large number of stakeholders that are involved in a single rotation:

- The coordinator of the program;
- The regional business unit including a regional HR business partner/manager;
- The local business unit consistent of one or two supervisors and a local HR business partner;
- The candidate.

This number of stakeholders, times four rotations, creates a highly complex program coordination structure where good alignment and communication is key to the program success. To increase the understanding of the complexity of the program, a stakeholder flowchart is illustrated in figure 4.

To create more relation to and understanding of Inside Automotive, a candidate's personal program path is illustrated with the use of a persona. The persona is here referred to as Bas F and his story is told in italic. *Bas F. is 24 years old and graduated cum laude from his master industrial engineering at the University of Hong Kong. During his studies, Bas worked as a working student in the marketing department of VW and did an internship at Toyota for almost to six months. Bas is recruited right after his studies by BASF Catalysts, which produces catalysts and is situated in Shanghai. Having overcome the recruitment process for a target position as junior sales manager, Bas*

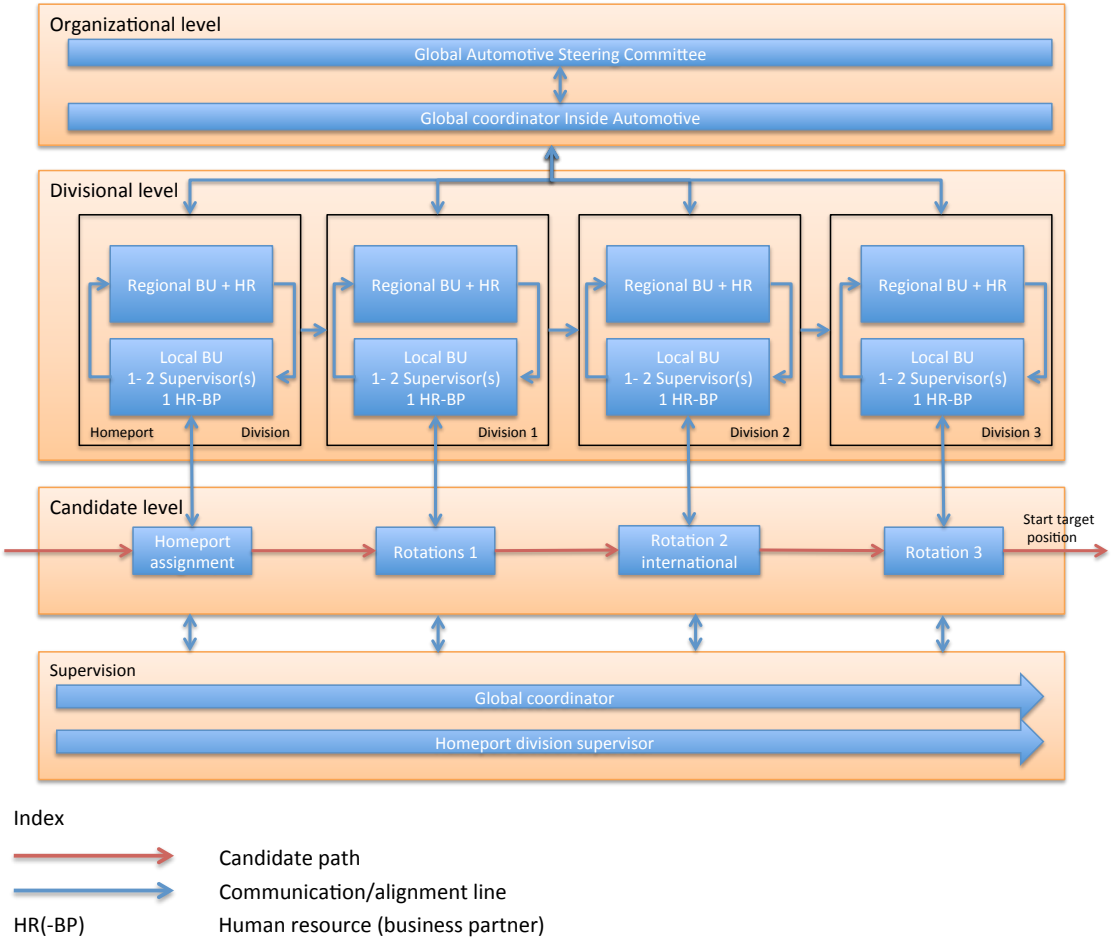


Figure 4 Stakeholder flowchart Inside Automotive

starts on his first ten-month assignment with the sales team of his homeport. In his assignment, Bas learns all about the market and added value of Catalysts. Ten months within the program, Bas finishes his first assignment and is flown to Europe for a two and a half week joint face and training with all the Inside Automotive candidates to strengthen the relationship between candidates, which is important for future (interdivisional) cooperation. After the training, Bas starts his second assignment as part of BASF Coatings in Shanghai where he operates similar markets and customers as at Catalyst but from a different product angle, namely automotive coatings. During this assignment, Bas starts to understand the magnitude of the BASF and more importantly, its strong relation with the automotive industry. His six-month period at Coatings is completed successfully and Bas looks back at a good learning experience and development of his sales skills. For his international and also final rotation, Bas is delegated for seven months to the US headquarters of BASF Performance Materials in Detroit, Michigan. Here he fulfils an important role as he supports the key account manager who is responsible for Ford in the USA. The role involves a combination of marketing and sales while at the same time gaining insights in the importance of customer relations. Bas is surprised mainly by the different way of working compared to what he is used to in Shanghai as he is granted more responsibility. The way the market functions in the USA and how BASF tackles business problems are also different, which

inspires Bas to take with some key learnings. Over the course of almost 24 months, Bas has gained insights in the wide range of products that BASF offers to the automotive industry, understanding what kind of business models are used and also what best practices he can take with him as he starts on his junior sales manager position back at his homeport Catalysts in Shanghai. All in all, a great learning experience that inspired Bas to tackle his target function with a solid set of sales and marketing skills. A flowchart of Bas' Inside Automotive path is illustrated in figure 5.

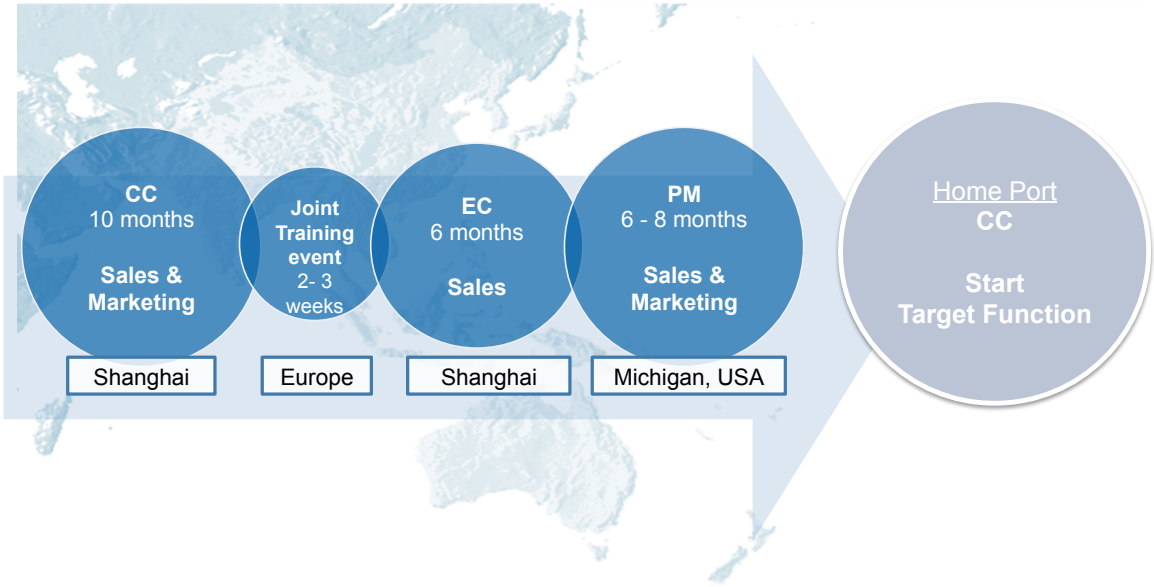


Figure 5 Inside Automotive program example

3.2.3 Strategic objectives

The Global Automotive Steering Committee initiated the program with a set of strategic objectives, compliant with the company's 2025 strategy. The main strategic objectives of Inside Automotive are:

- To attract, recruit and retain outstanding external candidates with a strong focus on sales and marketing for the industry group Automotive.
- To develop cross-BU competence and knowledge to strengthen BASF its strategic objective of a 'one company' approach.

These objectives are further specified in the following three parts:

- Have a pipeline of well-trained candidates with a cross-divisional customer understanding of the automotive value chain.
- Get access to applicants who never thought of BASF before as a potential employer.
- Strengthen the company's role as one of the key suppliers to the automotive industry.

Cross BU competences and knowledge have a high priority within BASF and the Inside Automotive program is a translation of this 'one company' objective. To illustrate this 'one company' approach, the current and aspired company picture for the automotive group is visualized in figure 6. The current company picture on the left shows how the different ODs interact with the automotive industry independently. Each division has its own product portfolio and contacts within the industry, meaning a lot of double work is currently done.

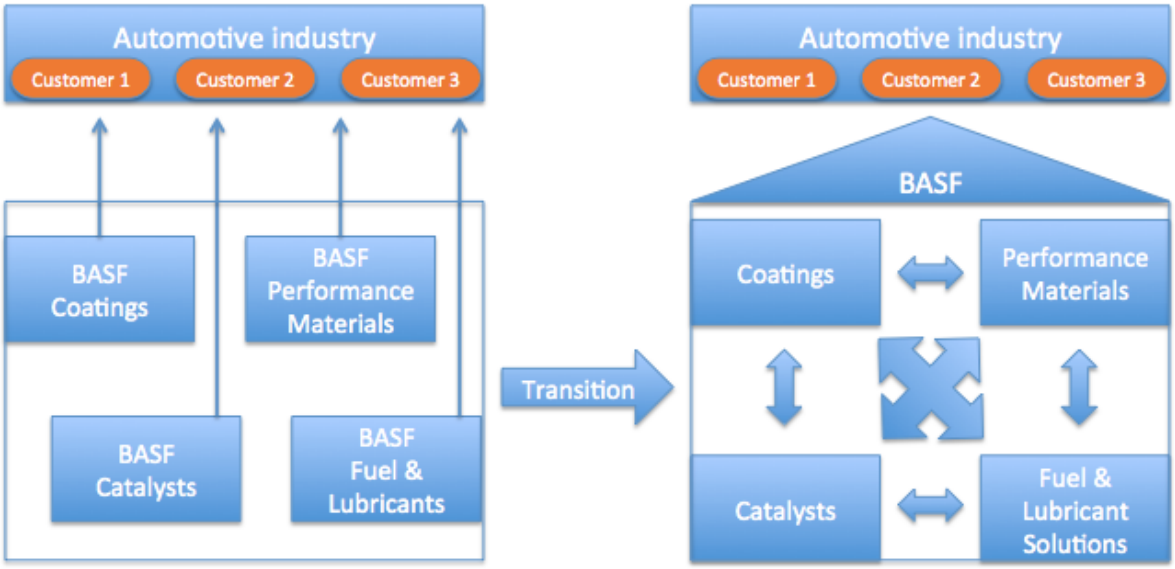


Figure 6. Essential strategic objective of Inside Automotive

The strategic 'one company' objective for Inside Automotive, illustrated on the right hand side, shows interdivisional cooperation and a unified approach to BASF's customers. The new set-up allows for best practice sharing, optimizing of processes and a 'one company' approach, which is considered to be a major advantage and unique selling point. It does need to be noted that the picture is somewhat 'black and white' as interdivisional cooperation already exist. This, however, occurs on a low scale, meaning that progress still can and needs to be made.

The initial overall strategic targets of the Inside Automotive program have been pre set from a BASF perspective. In the set up of this program however, no indicators have been developed to monitor these objectives. The same holds for the more technical development programs that exist within every automotive division at BASF, the same conclusion applies, as no indicators exist to specifically measure program performance.

3.3 Chapter summary

This chapter provides an answer to sub question one: *What are the business context and the set-up of the Inside Automotive program?* BASF, the biggest chemical player

worldwide, is increasingly active in the automotive industry. Currently the number one chemical supplier, the company has four divisions active in the industry group "Automotive", providing products like plastics, textiles and coatings. Within the company's strategy for 2025, a strong focus on the automotive industry is emphasized where the BASF wants to act as 'one company' to its customers. For this reason the Inside Automotive, a talent development program with focus on marketing and sales, was initiated in 2014. The program structure allows its candidates, graduates or young professionals with an engineering or business background, to get a complete overview of the company's automotive value chain by rotating through the four automotive divisions in a timeframe of 24 months. The program is highly complex, having many stakeholders involved on a global, regional and local level. The purposes of the program are:

- To attract, recruit and retain outstanding external candidates with a strong focus on sales and marketing for the industry group Automotive and
- To develop cross-BU competence and knowledge to strengthen BASF its strategic objective of a 'one company' approach.

The first candidate of the program finishes in 2016, ending the pilot phase of the Inside Automotive program.

4. Literature review

So far the research design containing the research questions for this thesis has been discussed in chapter 2, followed by the business context of BASF and the Inside Automotive program in chapter 3. In this chapter the conceptual theoretical framework to understand and measure effectiveness is discussed. In section 4.1 we start with discussing the topic of talent management and its relevance in the modern business environment to provide an understanding of the importance of talent development programs like Inside Automotive. Consecutively in section 4.2, relevant literature on effectiveness is reviewed to provide a definition on the topic within the context of this research and, by doing so, answering sub question 2. In short, effectiveness is defined as accomplishing objectives that satisfy all stakeholders. In 4.3, the concept of value-focused thinking is explained. This concept is used to extract relevant information on the program objectives during the interviews conducted in this research. To be able to measure these objectives, relevant literature on indicators, indicator characteristics and appropriate number of indicators is reviewed in section 4.4. Based on the adopted literature, a conceptual framework is created in section 4.5 to serve as a research set-up used in the methodology in chapter 5.

4.1 Talent management

Since the publication of the "War for Talent" study by McKinsey & Company's (Chambers et al., 1998), the topic of talent management is well discussed both in practice and in literature. Talent, often also referred to as high-potentials, has been defined in a number of ways by academics and practitioners (Gallardo-Gallardo et al., 2013; Church et al., 2015). Due to its context-based nature, especially practitioners define the term in relation to its specific meaning for their own organisation (Church et al., 2015). Talent definitions can, however, be distinguished based on their nature of being *objective*, referring to personal characteristics such as talent as nature, mastery, commitment or fit (Garavan et al., 2012), or *subjective,* referring to certain people, for example talents as high performers, high potential (exclusive approach) or all employees (inclusive approach) (Gallardo-Gallardo et al., 2013). Within organisations, talent definitions are usually based on organisational levels, roles, talents pools and promotion rates. Indicators to identify talent often include past or current performance and assessment data. However, Church et al. (2015) consider leadership potential or ability as an essential element of the talent definition and thereby support an objective talent definition approach based on personal characteristics. Building and sustaining a strong and healthy talent pipeline is one of the biggest challenges western companies face today with executives ranking "finding the right number of leaders" as their top challenge in a survey by the Hay Group (Maxwell, 2006). Businesses encounter difficulties filling talent pipelines due to shifting demographics, changing workforce preference and a highly competitive environment whilst

developing new capabilities and globalizing their operations (Stahl et al., 2012). Moreover, the traditional way of career development, which was mainly driven by the employer through promoting the individual employee and providing lifetime employment security, has been replaced by new career development approaches characterized by employee pro-activism, motivation and career responsibility (Boselie, 2010; Garavan, et al., 2012). Thus, the responsibility for career development has shifted from the employer to the individual employee. The downside to this development is that, even though providing development opportunities is an essential prerequisite to enhance pro-activism and motivation, moving the responsibility to the employees reduces the predictability and structure of careers, lowers employee trust and thereby increases fluctuation especially of highly skilled talents (Crawshaw et al., 2012). Moreover, filling the talent pipeline and enabling continuous development is of strategic importance to ensure effective economic performance (Boselie, 2010; Crawshaw et al., 2012). Therefore, employers increasingly have to balance the degree of career development responsibility and consider new approaches to retain and manage talent through different approaches that can be categorised as (Boselie, 2010; Garavan, et al., 2012; Church et al., 2015):

- Formal programmes;
- Relationship based developmental experiences;
- Job-based developmental experiences;
- Informal/non-formal developmental activities.

Falling into the formal programs category, talent or leadership development programs, represented by the Inside Automotive program, are the focus area of this research. These programs have a strong focus on talents or "high potentials" and cover the critical elements from attracting and selecting to developing and retaining talents (Stahl et al., 2012). Companies achieve a competitive advantage through such programs by guaranteeing their talent management systems are aligned internally and externally on a global scale to support their business strategy, operating model and global operations (Evans, 2002). Moreover, prerequisites for a program to not only be competitive but also effective and successful are a well-patterned program and communication structure as well as a clear set of objectives (Kerzner, 2015).

Applying the discussed theory to the case of BASF and Inside Automotive, it means that for the program to be compatible and successful, all stakeholders of the program need to be aligned to support their 2025 strategy objectives and the program needs a well patterned communication structure as well as a clear set of objectives.

A currently underutilized development tool, according to literature, is the use of job rotations across functions and business units. Firms seem to lack the ability to implement this tool, despite common belief that job rotation, international and also challenging assignments are very effective as a career development tool (Stahl et al., 2012). This gap might be caused by the tendency of managers to focus only on interests of their own unit rather than the whole organization referred to as "silo

thinking", hindering job rotation as an effective talent and career development tool. The study by Guthtidge et al. (2006) state that over 50% of the CEOs, HR executives and business unit leaders who participated thought that silo thinking and a lack of collaboration across the organization prevented their talent development programs from delivering added value to the business. The described development tool discussion emphasizes the importance and effectiveness of the cross-divisional set-up of the Inside Automotive. To allow talent to be of added value to BASF, fostering cross-divisional competences should receive high priority.

Finally, although programs as Inside Automotive are important and suitable tools for talent development, the study by Stahl et al. (2012) considers sophisticated training programs, tools and practices alone as insufficient. For a company, in this case BASF, it needs to make leadership development an integral part of its culture by actively involving their senior leaders in the process in order to excel and exploit all benefits of their talent management. Thereby the organisation ensures the effectiveness of its talent management and its positive impact on the overall business performance (Boselie, 2010; Crawshaw et al., 2012).

4.2 Effectiveness

In order to clarify the meaning of effectiveness in the overall field of economics and more particular in the context of this research, which seeks to investigate and measure performance of a talent development program, the term needs to be defined. It is essential to understand the difference between effectiveness and efficiency. The most common understanding refers to efficiency as a so-called "value free" quantifiable measure as it is two dimensional, consisting of only input and output (Borgström, 2005). For that reason efficiency is considered an internal standard of organizational performance, usually measuring the amount of input units needed to generate an output unit. Effectiveness however, is generally considered as an external standard, which is applied to the output of activities of an organization (in this case the Inside Automotive program) and the extent to which the output meets predefined evaluation criteria (objectives) (Pfeffer & Salancik, 2003). All individuals, groups and organizations that are effected by the focal organization apply this effectiveness concept. Each organizational evaluator assesses the concept of effectiveness based on satisfying the criteria of the evaluator himself (Pfeffer & Salancik, 2003). Applying the concept of Pfeffer & Salancik (2003) to the present research translates into the three levels (organizational, divisional and individual) at which the effectiveness can be measured. Each group is presumed to have its own criteria of evaluation that need to be taken into account to consider the programs performance, and thus its effectiveness to meet the different evaluation criteria (objectives). Referring to efficiency on the contrary, it might also be considered and applied as a performance indicator, however one needs to take into account that it might merely be used as a

standard for judging the program's effectiveness. As the organizational effectiveness, or in this case the program's effectiveness, is a construct that consists of values and preferences of the evaluator, no single definition exists. Several models and definitions appear in the literature addressing organizational effectiveness, which include (Cameron, 2015):

- The natural systems model where effectiveness means obtaining the needed resources.
- The objective model where effectiveness is about accomplishing objectives.
- The abundance model where effectiveness refers to producing flourishing and virtuousness.
- The bureaucratic model where effectiveness means matching the ideal characteristics of the organization.
- The strategic constituencies model where effectiveness relates to satisfying important stakeholders.
- The internal process model where effectiveness is about achieving a high quality of internal processes.
- The paradox model where effectiveness concerns the presence of simultaneous opposites.

For effectiveness within the scope of this thesis, the objective and strategic constituencies models are adopted as the two approaches fit the requirements of the research purpose best and are therefore identified as most important. Effectiveness for the Inside Automotive program is defined as accomplishing objectives that satisfy the important stakeholders, identified as the organizational, divisional and individual level. To monitor how well these objectives are being accomplished, indicators reflecting these objectives need to be developed.

4.3 Value focused thinking

In order to measure effectiveness of the Inside Automotive program, knowing the objectives of the different stakeholders is crucial. Identifying the program objectives requires information to make decisions on what is important. According to Keeney (1994), decision-making is typically done by considering possible alternatives, to then focus on the criteria or objectives they need to be evaluated on. This decision making approach is called 'alternative focused thinking' and is criticized by Keeney (1994) as he argues that it is reactive instead of proactive. Instead Keeney (1994) proposes the method of 'value-focused thinking', which involves "*clearly defining and structuring your fundamental values in terms of objectives and using these objectives to guide and integrate decision making"* (Keeney, 1994, p.33). Value-focused thinking allows for constraint-free thinking as opposed to alternative-focused thinking, which focuses on well-defined and constrained thinking. Values are considered principles used to evaluate the desirability of any consequence or alternative and should be the driving force for every decision. The idea of this method lets the decision maker, prior to

solving the actual decision problem; zoom in on the essential activities that must occur. Thus more appealing alternatives can be generated, so that better decision situations can be identified which finally enable uncovering hidden objectives (Keeney, 1994, 1996). How central the role of values is here, is depicted in figure 7.

Figure 7. Thinking about values: The basis for quality decision making (Keeney, 1994)

Values are often integrated in mission statements and objectives but need to be made more explicit for evaluation and should be clarified with a specific statement of objectives (Keeney, 1996). In the case of this research, finding the program objectives is crucial for setting up a framework for performance measurements. Identifying and structuring objectives is, according to experts however, a difficult task (Keeney, 1994). The process of identifying these objectives is included in the method of value-focused thinking, which involves discussion with relevant decision makers and stakeholders. Within the framework of this research this is realized through conducting the semi-structured interviews with the involved levels. Several different techniques can be used to stimulate the creativity in identifying possible relevant objectives. Possible techniques are depicted in table 1. According to Keeney (1994) an objective is defined as a statement one wants to strive towards and is built up in relation to a decision context, object and a direction of preference.

	Method	Explanation
1.	Develop a wish list	What do you want? What do you value? What should you want?
2.	Identify alternatives	What is a perfect alternative, a terrible alternative, and some reasonable alternative? What is good/bad about each?
3.	Consider problems and shortcomings	What is wrong or right with your organization? What needs fixing?
4.	Predict consequences	What has occurred that was good or bad? What might occur that you care about?
5.	Identify objectives, constraints and guidelines	What are your aspirations? What limitations are placed on you?
6.	Consider different perspectives	What would your competitor or your constituency be concerned about? At some time in the future, what would concern you?
7.	Determine strategic objectives	What are your ultimate objectives? What are your values that are absolutely fundamental?
8.	Determine generic objectives	What objectives do you have for your customers, your employees, your shareholders, yourself? What environmental, social, economic or health and safety objectives are important?
9.	Structure objectives	Follow means-end relationships: Why is that objective important? How can you achieve it? Be specific: what do you mean with this objective
10.	Quantify objectives	How would you measure achievement of this objective? Who is objective A three times as important as objective B?

Table 1. Techniques for identifying objectives (Keeney, 1994)

A simple list of objectives is too shallow within the value-focused thinking method. Thus, a clearer structure and a sound conceptual basis are needed for relating objectives to one another. Therefore, we make a distinction between so-called "fundamental objectives" and "mean objectives". Fundamental objectives are the ends in a specific context that decision makers value most whereas mean objectives are the methods to achieve these ends (Keeney, 1994). To separate the fundamental from the means objectives, Keeney (1996) proposes the Why Is That Important (WITI) test. This test gives two possible answers: (1) the objective is highly essential within the context of the subject and is therefore a fundamental objective, (2) the objective is important as it has implications on some other objective and is therefore a means objective. Through this test, more fundamental objectives can be revealed. We use the

value-focused method by Keeney (1994, 1996) as it allows uncovering essential fundamental objectives of the rotational program while at the same time uncovering the means that are important to get there. Moreover the value-focused method describes the importance of different stakeholders, viewpoints and perspectives.

4.4 Performance measurements

When discussing the question "how to measure effectiveness", or in the case of Inside Automotive, the objectives of the relevant stakeholders, the answer provided in the literature moves into the direction of performance measurements. Using performance measurements to assess effectiveness has been done in literature for a long time (Angle & Perry, 1981; Carter, 1989). Moreover, the use of performance measurements has increased drastically after the publication of '*The balanced scorecard – measures that drive performance'* by Kaplan and Norton in 1992. A definition appropriate for this research is given by Parmenter (2015), who defines performance measurements as: "*a set of measures that are focusing on those aspects of organizational performance that are most critical to the current and future success of the organization".* This definition is adopted in the context of this research, as the performance measurements are critical for the current and future success of the Inside Automotive program. Performance measurements are reflections of the critical success factors and objectives that are pre-set for a project or program (Kerzner, 2015). Being a first cross-divisional program, developing suitable measurements before instating Inside Automotive has not been done and is therefore the main objective of this research. In determining valid characteristics for performance measurements, most literature (Bovend'Eerdt et al., 2009; Locke & Latham, 2006; Moeller et al., 2012) uses the "SMART" rule as first introduced by Doran (1981), meaning that KPIs should be (1) Specific, (2) Measurable, (3) Attainable, (4) Relevant and (5) Time specific. Eckerson (2010) elaborates on the SMART that characteristics above all must be context driven. Finally, in his book "*Key Performance indicators – developing, implementing and using winning KPIs",* Parmenter (2015) makes a distinction between types of performance measures that are adopted in this research:

1. *Performance indicators (PI)* consider performance aspects and indicate what needs to be done to meet or increase performance. They allow teams to align themselves with the organizations strategy as they complement the KPIs. Possible examples of PIs are the 'net profit on a key product line' and 'percentage increase in sales with top 10% of customers'.
2. *Key performance indicators (KPI)* represent the critical performance indicators (PIs) that drastically increase performance or accomplishments of the objectives. The KPIs are a set of indicators for management that focus on the most critical aspects of program's performance to achieve current and future success of the program. For example 'quarterly overall sales increase'.

3. *Key Result Indicators (KRI)* refer to what is done with respect to the critical success factors. The KRIs are the result of many actions (measured through (K)PIs) and give a clear picture if one is following the right direction. However, they do not indicate what to do to improve these results. KRIs replace outcome measures that are typically measured over a longer period of time, monthly or quarterly. KRIs provide information that is ideal for the board. Possible examples of KRIs are 'customer satisfaction rate' and 'net profit before tax'.

The KRIs express the result of the performance of the PIs. The KPIs are the critical PIs that have the largest influence on the KRIs. A visualization of these performance measures and how they are related to one another is depicted in figure 8. Having this in mind, Parmenter (2015) his work is adopted as the basis in creating a valid set of performance indicators for the Inside Automotive program.

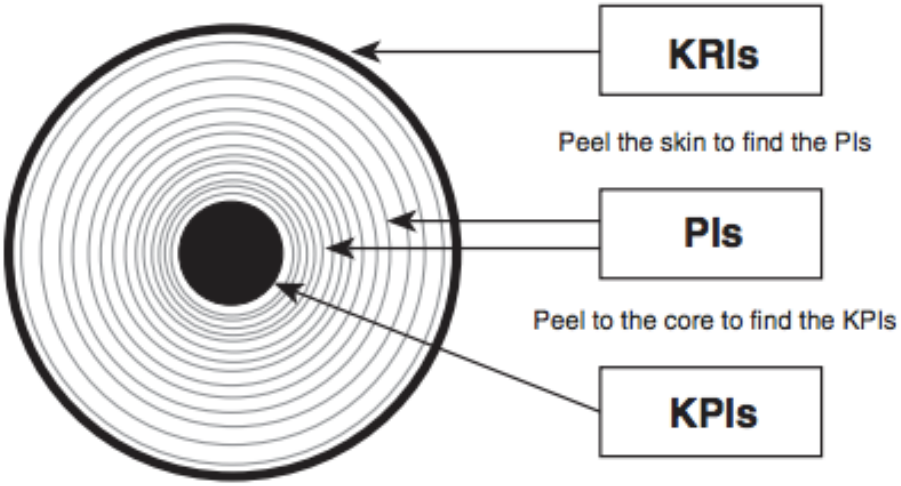


Figure 8. Relation types of indicators (Parmenter, 2015)

Applying the concept to the Inside Automotive environment, the measurements distinction is defined as:

- *(Key) performance indicators* address aspects that fall within the scope of the two-year program, monitoring the process and components of Inside Automotive and are therefore a form of process indicators. A performance indicator is considered to be 'key' (a KPI) when it expresses an essential part of the program. These indicators depict actions necessary to improve the program and are therefore ideal for management (global coordinator Inside Automotive). Examples are the 'number of divisions a candidate rotated in' or the 'number of key contacts acquired that are useful for the target position'.
- *Key result indicators* reflect the results regarding the program objectives and are ideal for the board (Global Automotive Steering Committee). These results are measured outside the timeframe of the program itself as they indicate to what extent the program objectives are being achieved and if the different aspects or components of the program interact in a successful way. Examples

of such KRIs for the Inside automotive program could be the 'number of qualified applicants' or the 'retention rate of candidates'.

The number of (key performance) indicators that are appropriate for a program or project differ according to literature. Kaplan and Norton (1996) assume that a good framework does not contain more than 20 KPIs. Hope and Fraser (2013) argue that it should not exceed the amount of ten whereas Kerzner (2015) considers range of six to ten KPIs to be appropriate to measure a program's performance. Parmenter (2015) advises to use the 10/80/10 rule, derived from the Pareto principle, which is an economic rule first introduced in 1964 by Vilfredo Pareto. In general the Pareto principle states that 20% of the indicators will impact 80% of the project. Parmenter (2015) states that the 10/80/10 represents a good guide for the selection of suitable measurements. Thus, a good set of measurements has up to 10 KPIs, 80 PI and 10 KRIs. Rarely more measurements are needed; in many cases even fewer measurements are necessary to remain focused on critical aspects. The 10/80/10 rule is, in a modified form, adopted as a guide in setting out the indicator framework for Inside Automotive as it coincides with the inquiry of BASF to have up to ten key result and up to ten key performance indicators. The 80 performance indicators suggested by Parmenter (2015) are considered over excessive by BASF and are therefore not developed. Ensuring objectivity and the completeness of understanding the different perspectives and related objectives are essential prerequisites for the development of an appropriate measurement framework. The 'value-focused thinking' method by Keeney (1994), as elaborated upon before, has been identified as being in line with these requirements of this research.

4.5 Conceptual Framework

Building and sustaining a strong and healthy talent pipeline is one of the biggest challenges western companies face today. Filling this talent pipeline and enabling continuous development is of strategic importance to ensure effective economic performance (Boselie, 2010; Crawshaw et al., 2012). Therefore, employers increasingly have to balance the degree of career development responsibility and consider new approaches to retain and manage talent through different approaches (Boselie, 2010; Garavan, et al., 2012; Church et al., 2015). One of these approaches is the use of formal programs such as Inside Automotive.

Effectiveness in the context of Inside Automotive, providing an answer to sub question 2, is defined as the accomplishment of objectives that satisfy all important stakeholders (Cameron, 2015). These stakeholders are the identified as the organizational, divisional and individual candidate level of the program. Moreover, prerequisites to such a program's effectiveness and success are a common set of objectives and a clear program and communication structure (Kerzner 2015; Evans,

2002). To identify this set of objectives, Keeney (1994) proposes to use the method of value-focused thinking. The method involves discussions with relevant decision makers and stakeholders, identified as the organizational, divisional and candidate level of the program, in which the true values and objectives for the program are identified. In the process of identifying objectives, a distinction is made between 'fundamental objectives', which are the ends in a specific context that decision makers value most, and 'mean objectives', which are the methods to achieve these ends (Keeney, 1994).

To measure the effectiveness of Inside Automotive, the work by Parmenter (2015) proposes the use of an indicator framework. Parmenter (2015) framework, applied to Inside Automotive environment, distinguishes between:

- *(Key) performance indicators* address aspects that fall within the scope of the two-year program, monitoring the process and components of Inside Automotive and are therefore a form of process indicators. A performance indicator is considered to be 'key' (a KPI) when it expresses an essential part of the program. These indicators depict actions necessary to improve the program and are therefore ideal for management (global coordinator Inside Automotive). Examples are the 'number of divisions a candidate rotated in' or the 'number of key contacts acquired that are useful for the target position'.
- *Key result indicators* reflect the results regarding the program objectives and are ideal for the board (Global Automotive Steering Committee). These results are measured outside the timeframe of the program itself as they indicate to what extent the program objectives are being achieved and if the different aspects or components of the program interact in a successful way. Examples of such KRIs for the Inside automotive program could be the 'number of qualified applicants' or the 'retention rate of candidates'.

These definitions are adopted and used for setting up the indicator framework for Inside Automotive. A healthy set of program indicators is set up with the 10/80/10 rule, meaning a set of indicators has up to ten KPIs, 80 PI and ten KRIs. The 10/80/10 rule is, in an adapted form, accepted as a guide in setting out the indicator framework for Inside Automotive. It coincides with the inquiry of BASF to have up to ten key result and up to ten key performance indicators. The suggested 80 performance indicators are considered over excessive by BASF and are therefore not developed.

We relate the objective distinction by Keeney (1994) directly to the measurement distinction made by Parmenter (2015):

- The fundamental objectives are the ends that are directly measured by the key result indicators and indirectly by (key) performance indicators.
- The mean objectives are the methods to achieve these ends, which are only measured by the (key) performance indicators.

It is therefore possible that fundamental objectives are related to both key result indicators and (key) performance indicators. The performance indicator will only

measure an underlying aspect of this fundamental objective and depict the action needed to improve this indicator and thereby ultimately the result indicator. Mean objectives will only have (key) performance indicators to reflect the objective. The conceptual framework for this research, which provides the set up for the methodology in chapter 5, is illustrated in figure 9. The four categories depicted on the left relate to the sections discussed in this chapter accompanied by an overall framework that illustrate how the topics cohere to ultimately provide an answer to the main research question.

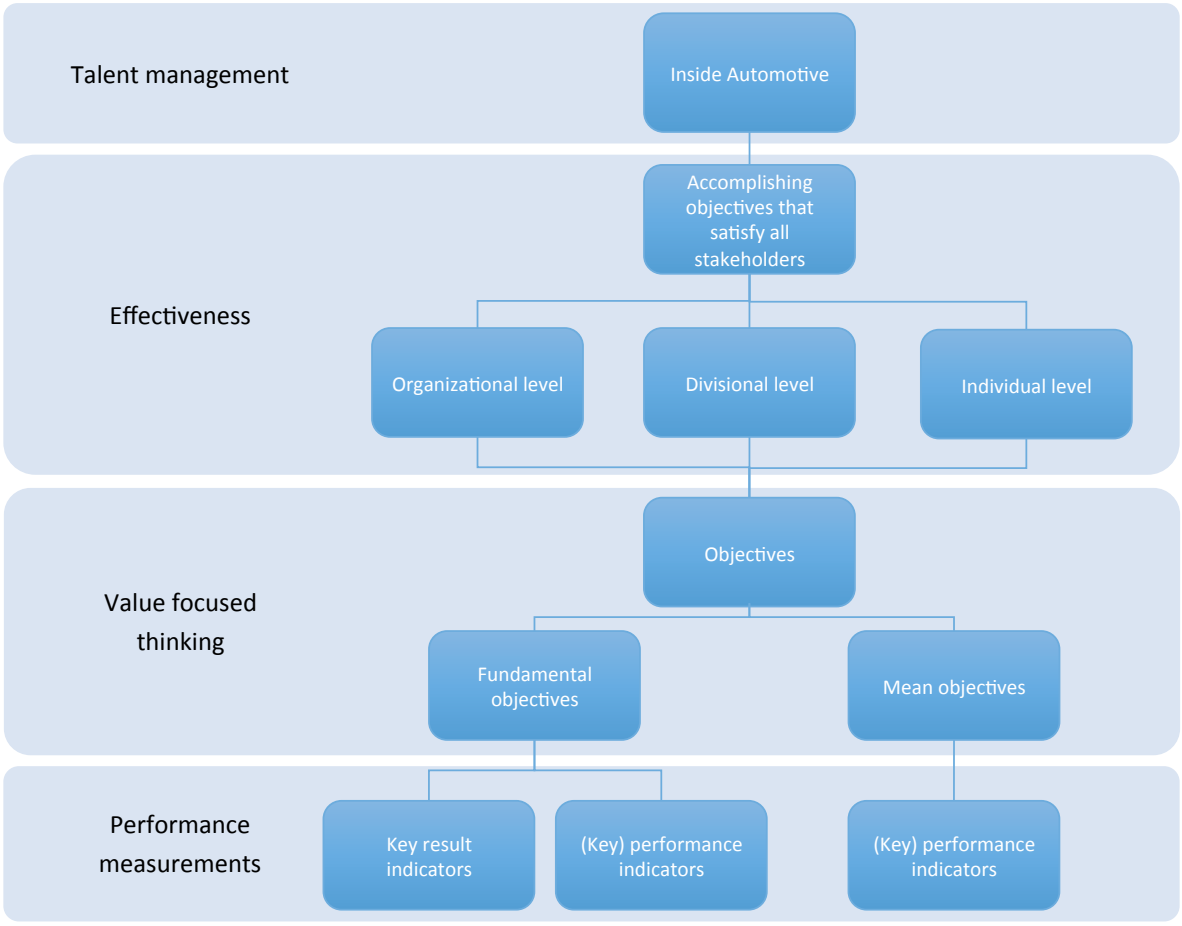


Figure 9 Conceptual framework

5. Methodology

In this chapter, we discuss the methodology that is used in this research. In 5.1 we discuss the research approach to our given business problem, based on the problem solving theory of Van Aken et al. (2012). Using designed focused research approaches such as the work by Van Aken et al. (2012) has become increasingly common in recent years as it allows the researcher to directly focus on an individual organization and a specific business problem (Van Aken & Romme, 2009). Therefore, this approach is adopted for the business case of Inside Automotive. In 5.2 the method for data collection and analysis are presented together, containing information on the interviews, analysis and diagnosis of the results and the multi-criteria decision making method that is used to prioritized the indicators found in this research. The chapter closes with part 5.3, providing a brief summary of the topics of chapter 5.

5.1 Research Approach

This research follows the approach of business problem solving by Van Aken et al. (2012), represented by the regulative cycle by Van Strien (1997) as shown in Figure 1. From the six phases of the classical problem solving cycle, only the first four phases are executed within the scope of this research. These are the following four phases:

1. *The problem mess* is the starting point for this research and illustrates the research field where the problem is experienced. For the problem mess phase, a mind-map is created to visualize the research field, allowing focus on the issues at hand (Buzan et al., 2010). The mind-map is illustrated in figure 10.
2. *The problem definition* consists of the inquiry by BASF to develop knowledge about critical issues concerning effectiveness and stakeholder alignment for the Inside Automotive program. To define the problem, a thorough understanding of the research field is needed, which is created through preliminary desk research, daily support of the coordinator of the program and informal talks with involved parties such as candidates. The problem is defined as 'what are the objectives and reflecting indicators that satisfy all stakeholders to measure the effectiveness of the Inside Automotive program'. The problem definition and the core focus of this research are depicted in the area with red arrows in the mind-map illustrated in figure 10.
3. For the *analysis and diagnosis phase* a conceptual framework is needed. Therefore, all relevant materials on the program are gathered and a literature review is conducted by making use of scientific databases Scopus, Web of Science, Google Scholar and accessing books available in the university library. In this review topics like talent management, effectiveness, objective setting, performance measures and on methods to extract the needed information by using a qualitative method are researched and theory best fitting to the business case of Inside Automotive is adopted to form the conceptual

framework for analyzing and diagnosing the problem. This is the framework as presented in figure 9 in section 4.5. In this framework the organizational, divisional and individual level have been identified as the important stakeholders involved in the program. To gain insights into the perspectives of the different levels, we closely work together with the program coordinator and take over an observing role through an internal master thesis position. Within this position, besides the desk-research, semi structured in-depth interviews are used for the empirical analysis as is prescribed by the value focused thinking method by Keeney (1994) that has been adopted in the framework for this research. Moreover, understanding objectives is something that is of qualitative nature, validating the use of a qualitative approach through interviews. Elaboration on how the interviews are set up and who the participants are is found in section 5.2.1. The results from these interviewed is analyzed by coding the results per level into objective categories with corresponding indicators, which are then compared to find synergies and gaps between the levels. Moreover possible organizational and divisional challenges for the program are also identified and compared to prerequisites needed for an effective and successful program. A more detailed description of the analysis and diagnoses phase is given in 5.2.2. To determine which of the indicators that have been identified, are most relevant for measuring effectiveness within the context of the BASF, a multi-criteria decision making (MCDM) method is conducted (Turskis & Zavadskas, 2011). The method involves rating the indicators based on a set of weighted criteria to create a prioritized list of indicators. The method is explained in section 5.2.3 in more detail. Moreover, a sensitivity analysis is conducted to test the reliability of the weights used in the MCDM method. The sensitivity analysis is explained in chapter 5.2.4. The 10/80/10 rule by Parmenter (2015) allows up to ten key result and ten key performance indicators. Based on the sensitivity analysis, the result indicators and performance indicators that always fall into the top ten, are recommended to BASF as the key result and key performance indicators to best measure the effectiveness of the Inside Automotive program.

4. In the final phase of this research a *plan of action* is developed to insert objectives and corresponding key result and key performance indicators into the context of Inside Automotive. The plan of action consists of steps that the BASF could take in order implement the proposed key indicators. Moreover, actions needed to address organizational and divisional challenges are also incorporated. The plan of action gives BASF a starting point for the following stage of the business problem solving cycle.

The last two phases of the cycle are the *intervention* and the *evaluation* phase. These phases will have to be conducted by the company, based on the recommended plan of action that comes from this research.

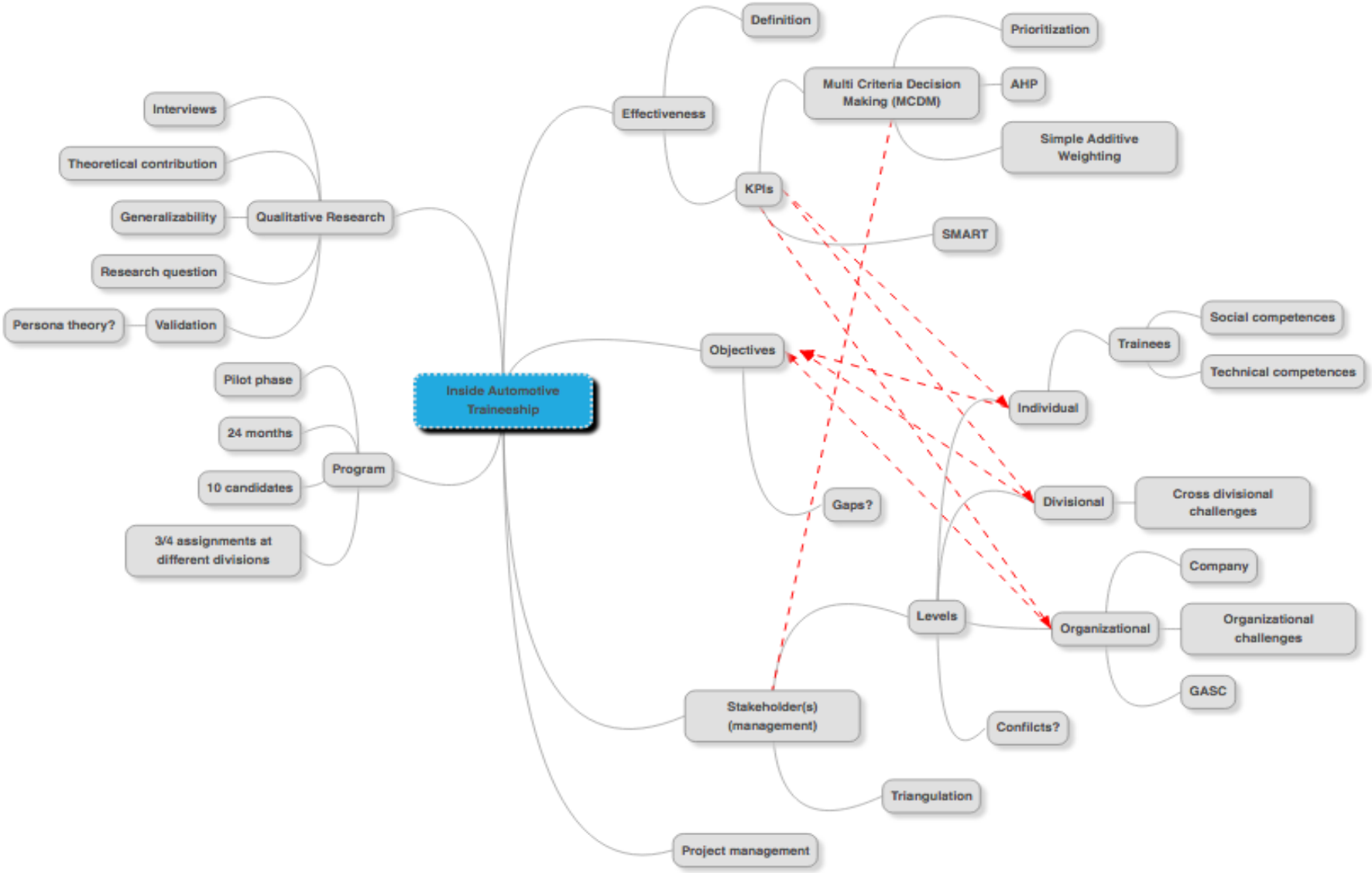


Figure 10 Map of research field

5.2 Data Collection and Analysis

5.2.1 Interviews

For the empirical analysis of this qualitative research, semi-structured interviews are conducted with key stakeholders from the organizational, divisional and candidate level. These stakeholder groups are, based on literature, determined as the important stakeholders for the Inside Automotive program. The global coordinator of the program, being the person who is most aware of all the important stakeholders in the program environment, identified the key stakeholders within these groups based on involvement and experience with Inside Automotive. In total, 17 interviews have been conducted within a time frame of one month. A landscaping of the interviewees containing their function and time within BASF can be found in table 2. After these 17 interviews, the empirical analysis using is considered saturated, as additional interviews would yield no new information (Glaser & Strauss, 2009).

Interviewee	Function	Perspective (Level)	Time in firm (Years)
1.	Gobal Automotive Steering Committee delegate	Organization	13
2.	Initiator of program	Organization	30
3.	Program Coordinator	Organization	3
4.	Automotive Strategist	Organization	14
5.	Key Account Manager (program supervisor)	Division 1 (CC)	5
6.	Local HR specialist	Division 1 (CC)	3
7.	Global HR specialist	Division 1 (CC)	10
8.	Team leader marketing (Program supervisor)	Division 2 (EC)	16
9.	HR coordinator Asia	Division 2 (EC)	5,5
10.	Key account manager (Program supervisor)	Division 3 (PM)	11
11.	Team leader Sales EU (Program supervisor)	Division 3(PM)	20
12.	Head global marketing (Program supervisor)	Division 4 (EV)	13
13.	Candidate	Individual	1,5
14.	Candidate	Individual	1,5

15.	Candidate	Individual	1
16.	Candidate	Individual	1,5
17.	Candidate	Individual	1

Table 2. Participants

For the interviews an interview protocol containing open-ended questions is created to obtain the needed information on objectives for the program and to develop indicators that reflect these objectives. The interview protocol used is semi-structured and are recorded and documented by taking notes. The recording serves as back up. The semi-structured interviews are set up based on the value-focused thinking approach by Keeney (1996) with a main focus on the following six out of the ten points indicated in table 1 of section 4.3:

- (3) Considering problems and shortcomings;
- (5) Identifying objectives, constraints and guidelines;
- (6) Consider different perspectives;
- (7) Determine generic as well as (8) strategic perspectives;
- (10) Quantify these objectives.

These points are of interest as they relate most to the research objective of creating a tool to measure the effectiveness of Inside Automotive. The other points are, although not directly considered, kept in mind during the interviews with stakeholders.

In these interviews, we discuss the objectives from the perspective of the interviewee. The interviewee is also asked to suggest suitable indicators that reflect the objectives they have. Besides objectives and indicators, the interviewee is also asked about possible organizational and divisional challenges.

5.2.2 Analysis and Diagnoses

The analysis of the data is done using a combination of the notes and the audio recording taken during the interview. The results of these interviews are coded using a three step approach of (1) open, (2) theoretical and (3) selective as prescribed by Van Aken et al. (2012). First, open coding is used to cluster the results based on the notes taken during the original interview. Second, the results are coded into fundamental or mean objectives and corresponding result or performance indicators based on the literature. Finally, selective coding is used to determine the most relevant objectives and indicators that came forth from the interviews and create an overall objective and indicator framework for the program. Moreover, the results on the organizational and divisional challenges are analyzed and placed in the context of prerequisites that are needed for an effective and successful program. This framework and the results on the possible organizational and divisional challenges of this are presented with exact interview quotes from participants in the findings in chapter 6.

To illustrate, for the organizational level four interviews were conducted. The coded results of these interviews are compared and similarities are put together, differences are checked for relevance and immeasurable concepts are filtered resulting in one overview on the organizational level angle for the Inside Automotive program. In this process, we merge objectives and indicators that are mentioned in different words by the interviewees but pronounce the same intention. The three overviews (one organizational, one divisional, one individual) are compared to find synergies and possible differences that can create problems. The latter is also essential for the recommendations part of this research. The objectives and indicators that do not conflict and are relevant for the program are merged into the overall objective set-up and indicator framework for the Inside Automotive program.

5.2.3 Multi Criteria Decision Making and Prioritization

In order to determine which indicators are best suitable for measuring the effectiveness of the Inside Automotive program, a multi-criteria decision making method is applied (Turskis & Zavadskas, 2011). The method simplifies decision making by rating alternative options, in this case the indicators, based on a set of criteria or characteristics that an option needs to fulfill. With the MCDM method, a prioritized list of the result indicators and a prioritized list of the performance indicators are created. The reason the MCDM method is used as opposed to other alternative rating methods like the Analytical Hierarchy Process (AHP) Model for example is its simplicity, user friendliness and relatively low amount of time that is required per participant. These characteristics are best fitting to the research environment, as especially the time availability of the focus group participants in the MCDM method is limited.

Building on literature on indicator characteristics (SMART plus the extension made on SMART by Eckerson (2010)) and practical characteristics related to the company's business environment, we developed a set of criteria for the MCDM method. The selection and weighting of the criteria is done in cooperation with the coordinator of the Inside Automotive program and reflects the business context as well as the strategic objectives of the Inside Automotive program. The resulting criteria consist of one exclusion criterion and seven evaluation criteria that are depicted in table 3. The exclusion criterion rates an indicator on the corporate culture fit. If the criterion is answered with a 'No', the indicator will be excluded from the list. The remaining criteria are evaluation criteria, based on which every indicator receives a final overall score. The weights distributed between the evaluation criteria vary between very important (weight: 20), important (weight: 15) and relevant (weight: 10) and add up to 100. The assigned weights are justified in table 3.

Criteria	Classification	Weight	Justification	Measurement
Corporate culture fit	Exclusion	-	Corporate culture fit is a prerequisite for the implementation of an indicator. If the fit does not exist, the indicator is excluded.	Yes/No
Relevance to cross BU cooperation	Evaluation	20	The indicator needs to be important to the cross BU cooperation as this is the primary objective of the program (program objectives shown in section 6.1). It is very important (20) indicators reflects this criterion	Very high – high - moderate - low - very low
Measurable	Evaluation	15	The indicator needs to be measurable within the organization or it cannot be successfully implemented. It is therefore an important (15) criterion.	Very high – high - moderate - low - very low
Realistic	Evaluation	15	An indicator must be realistic or it will not be easily adopted in the BASF. It is therefore an important (15) criterion.	Very high – high - moderate - low - very low
Time specific	Evaluation	15	The indicator should have a time frame of completion to provide structure. Without, progress cannot me measured and therefore this criterion is important (20).	Very high – high - moderate - low - very low
Linked to program strategy	Evaluation	15	It is important (15) that the indicator must be linked to the overall strategy of the Inside Automotive program if it is do be adopted.	Very high – high - moderate - low - very low
Simple	Evaluation	10	To foster implementation and acceptance within the BASF it is relevant (10) that a indicator is simple to understand.	Very high – high - moderate - low - very low

Amount of resources needed	Evaluation	10	The amount of resources needed to measure the indicator is relevant (10) for its possible implementation. If the amount of resources is to high, the indicator will likely not be implemented.	Very high – high - moderate - low - very low

Table 3. MCDM criteria and weights

Based on these criteria, the result as well as the performance indicators that are derived from the interviews are rated. The rating is done by a focus group, which consist of four stakeholders taken from the 17 participants of the interviews. The focus group reflects all levels (organizational, divisional and individual) involved. These four stakeholders are the Global Automotive Steering Committee delegate, the global coordinator, a division supervisor and a candidate. Involving all levels in this process reduces the resistance in the realization of the designed framework (Van Aken, 2012). From the results, we transcribe every participant rating per criterion to a numerical score between 0 and 100 points. The best indication receives a score of 100 and the worst a score of 0, all scores in-between receive a score to equal weight distribution as is illustrated in table 4. An example of the approach is illustrated next:
Measurable: when the best-assigned value to the criterion 'measurable' is very high, it will receive a score of a 100. If the measurability is very low, the criterion will receive 0 points. The point distribution for the criterion 'measurable' is illustrated below. The criterion 'amount of resources needed' however, will be assigned a 100 points when rated with a score of very low as this is its best assigned value and 0 points when rated very high as this is its worst assigned value.

Very high	High	Moderate	Low	Very low
100	75	50	25	0

Table 4. Assigned scores

A performance indicator that came forward from the interviews, *number of business units rotated in*, is used to exemplify the calculation of the final score per indicator and is shown in table 5. The example uses the input data of the Global Automotive Steering Committee delegate:

	Criteria								Final score
	Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
Weight	-	20	15	15	15	15	10	10	
Number of business units rotated in	Yes	Very high	High	High	Very high	High	Very high	Very low	8875
		100	75	75	100	75	100	100	

Table 5 Example of final indicator score calculation

Multiplying the numerical score per criterion with its weight, and then accumulating the scores calculates the final score per indicator. Following the example of table 5, the final score of "*number of business units rotated in"* is:

*(100*20)+(75*15)+(75*15)+(100*15)+(75*15)+(100*10)+(100*10) = 8875*

A final score for each indicator is calculated per stakeholder, resulting in four final scores for every result and performance indicators. These overall score tables, like table 5, are presented in appendix A.1 and A.2. The four scores per indicator are averaged and based on these averages, a prioritization is made of the result as well as the performance indicators for the inside automotive program. The results of these prioritizations can be found in section 6.2 where the findings are presented. Moreover, the standard deviation of the final score of the participants is briefly highlighted.

5.2.4 Sensitivity Analysis

In order to make a final recommendation on which indicators BASF could adopt in order to measure the effectiveness of Inside Automotive, a sensitivity analysis is conducted. The process on how the weights of the criteria have been determined motivates conducting the sensitivity analysis. The weights are developed in cooperation with the coordinator of the program and are therefore sensitive for subjectivity. To verify which indicators can be recommended, the sensitivity analysis is implemented. With the sensitivity analysis, the certainty of an indicator's position in the top ten of the prioritized list based on the MCDM method is tested by changing the weights that are appointed to every criterion to then analyse the effect on the final position in the prioritization. The sensitivity analysis is conducted under the assumption that the weights of every criterion will not change more then 50%. This means that the range for the weight of every criterion minus 50% and plus 50% is tested under the condition that the other criteria act in the same ratio as the original situation. According to the 10/80/10 rule by Parmenter (2015), no more than ten result and ten key indicators should exist for a program. Therefore the result indicators and performance indicators that always fall into the top ten under the circumstances of the sensitivity analysis will be identified as the key result and key performance indicators for Inside Automotive and recommended to BASF. The results of the sensitivity analysis are given in section 6.2.

5.3 Chapter summary

The methodology in this research follows the approach of business problem solving by Van Aken et al. (2012). The scope of this master thesis does not extend further than the first four phases of this approach:

1. In the first phase the business context of BASF and the Inside Automotive program in relation to the inquiry of BASF is investigated to create a *problem mess*.

2. The initial problem, or in this case the inquiry by BASF, is placed in the context of the problem mess to provide a *problem definition*. The problem is defined as 'what are the objectives and reflecting indicators that satisfy all stakeholders to measure the effectiveness of the Inside Automotive program'.
3. To *analyze* the problem a literature review on talent management, effectiveness, objective setting and indicators is conducted to create a conceptual framework followed by 17 semi-structured interviews with participants from the organizational, divisional and candidate level. Based on this information the problem is *diagnosed* providing an overview of objectives and related indicators plus the organizational and divisional challenges that the Inside Automotive program faces. Using a multi-criteria decision making method, the indicators are prioritized based weighted criteria to identify the key (result and performance) indicators. These criteria are derived from literature and the business context of BASF. Using a sensitivity analysis, it is validated which of these key indicators can be recommended to BASF.
4. Based on the findings a *plan of action* is designed to implement the objectives and corresponding indicators to measure the effectiveness of the program. Furthermore, recommendations on found organizational and divisional challenges are given.

The final two phases, *intervention* and *evaluation*, are out of scope this research remain the responsibility of the BASF.

6. Findings

In this chapter we discuss the outcomes of the interviews that will provide an answer to sub question 3 (objective expectations from the organizational, divisional and individual candidate level), sub question 4 (measureable indicators) and sub question (organizational and divisional challenges) Firstly in section 6.1, the results concerning objectives for the Inside Automotive program are presented. Then, in section 6.2 a framework of key result and key performance indicators for the Inside Automotive program is presented based on the MCDM method and sensitivity analysis. In section 6.3, organizational and divisional challenges that impede the effectiveness of Inside Automotive are discussed. The final section, 6.4, provides a summary of the topics discussed in chapter 6.

6.1 Objectives of the program

In general, we found a high consensus about the objectives stated by the 17 interviewees. Five main objectives, reflecting the most important aspects of the Inside Automotive program, can be distinguished when the perspectives of the different levels are consolidated.

1. A fundamental, and the overall most important objective of the Inside Automotive program is **to create a new generation of talents who have a helicopter perspective of the value chain of BASF automotive products from a marketing and sales perspective, allowing an enhanced industry focus and cross divisional thinking.** This objective is a direct translation of the 'one company' approach BASF wants to create. The term 'helicopter perspective' is a commonly used term within BASF and is equal to a 'complete overview'. The former is used, as it suits the BASF environment best. Respondents from every level mentioned the topic first and as the number one objective. However, the underlying reasons differ. The Global Automotive Steering Committee delegate (organizational level) sees the fundamental reason of the objective's importance in its strategic relevance. He points at the high organisational complexity and the related difficulty to create an overarching understanding of the entire industry:

"We are a hugely complex company, most of the time we do not know ourselves or what we have to offer to our global customers. Getting a complete overview of the automotive industry within the company is extraordinarily difficult."

   Being employed by one of the operating divisions, for instance Coatings, an employee has knowledge about the Coatings product portfolio, markets and its customers, but lacks an understanding of the products and activities by another operating division that supplies the same customers. Respondents from all

different perspectives experience the diversity of the company and more importantly the silo thinking, on a daily basis. The objective of Inside Automotive is to close this knowledge gap by enabling such a helicopter perspective and a broader view on the entire BASF value chain instead of just one division. To remain the number one automotive industry supplier, the company needs talent with a complete overview of the company's product portfolio offered and sold to the automotive industry. One objective of the overall 2025 business strategy is to increase the focus on the industry group Automotive, requiring talent with an industry focus. From a company perspective, having talent with a complete understanding of the automotive sector is considered to be of high added value and is also a key contribution of the program. From the divisional perspective the underlying reason specifically relates to this need for talents and their added value for the specific division. After having completed the program, a candidate has a higher added value for its homeport division. The head of global marketing from Fuel and Lubricant solutions emphasizes the added value of the program:

"From a divisional perspective, such a helicopter view is valuable because we get talent who have seen the different worlds, the different products and the different applications but we also get a person who knows different ways of doing business."

From the individual perspective, the helicopter perspective specifically increases a candidate's flexibility to move within the firm but also increases his value on the labor market. However, the candidates also recognize the need to for the helicopter perspective to be able to build a better front line architecture in marketing and sales as to leverage not only the broad BASF product portfolio but also its innovations as well. Candidate five:

"We have nice innovation but we do not necessarily have the value architecture in place to make money out of that. We pump billions of dollars into the innovation pipeline but we need to have the front line in place, the people who are building up the right architecture and the right business models to leverage on those innovations."

All the interviewees are also asked to state indicators that reflect possible indicators of the aforementioned objective. A couple of examples they came up with are *the number of cross-divisional projects worked on by candidates*, *the involvement of the candidate in both emerging and existing markets* and *the post program performance rating of a candidate, based on the companies performance scale*. We coded the indicators into result indicators and performance indicators based on the literature. The indicators, categorized per objective, can be found in the appendix.

2. A second, also fundamental objective of the program stated by the interviewees is **to make the company a more attractive employer in the automotive industry**.

Every level recognises the importance of this objective, as it is also one of the strategic objectives that was set up at the beginning of the program. The team marketing leader of Coatings states:

"I think the programs should make the company a more attractive employer, a more attractive company. As we all know, times will change, and I think with these kinds of programs we become attractive for outside people. Also placing the company as an attractive employer inside the automotive industry."

The explanation shows that not only the development of talent but also the attraction and retention of talent within the industry and company in order to respond to the changing demographics and the related war for talent is important. A large consensus exists on this objective between the different levels, BASF needs to find the right people to ensure the future of the company and profit of tomorrow. According to the interviewees, this objective can be reflected by indicators like *the number of qualified applicants for the program* and *the retention rate of candidates.*

3. The Inside Automotive program is set up as a means for talent development that provides added value to the organization. The infrastructure to make use of this talent after the program is an essential prerequisite. The third fundamental objective is the **availability of suitable target positions and good developments paths for the candidates after the program**. These quotes by the key account manager of Performance Materials and candidate four, underline the importance of this objective to both the organization and the individual:

"One thing would be, are we able to position these people in an attractive and challenging position after the program. I think this is really important."

"When you're done with the program, where do you go after that? So one expectation also is what kind of position I get after I am done?"

The program can be of high quality but the absence of an appropriate infrastructure for a future growth path to benefit from the talent, would make the program useless. A small difference can be found in the motivation for this objective when comparing the organizational & divisional versus the candidate perspective. The first two represent BASF as a company who wants to make use of the talent developed whereas the candidate emphasizes the desire for business opportunities and career path development. Possible indicators that reflect the accomplishment of this objective are: *does the candidate fulfil a target position after the program*, *the number of talent pool nominations* (company talent pool for possible future leaders) and *the career path development of a candidate based on promotions*.

4. The fourth fundamental objective of the Inside Automotive program is reflected in its global characteristic. The program should **create internationally oriented talents.** Respondents from every perspective level underline the importance of the international aspect. Candidate number four shares his vision on this objective:

"Well, one thing that comes handy with this program is the international exposure. By doing so creating candidates that you can place in pretty much every country in the world, my expectation is that the company leverages that very well."

The global set-up of the program does not only allow the candidate to obtain a complete overview of the automobile industry, it also develops talents who think globally, are versatile and can be delegated on a global level. Both the organizational and the divisional perspective specifically name this objective from a company perspective, emphasizing the added value of the aforementioned talent characteristics. From the candidate level, this objective is important as it allows for good personal development as well as being an important characteristic to attract talent. Mentioned indicators that reflect this topic are *the number of regions a candidate worked in*, *the number of regions a candidate worked with* and *the number of international delegation after the program*.

5. The first and only mean objective of the program is **to strengthen the 'one company' approach through creation of organizational awareness and building of a network during the program**. The objective focuses on organizational understanding and the network candidates create. The key account manager of Catalysts and candidate number three, explain:

"The candidate really needs to know for each assignment where they are, that they really get the deepest understanding of the division that they're working in and that the candidate can take over responsibility for different topics."

"We also develop a really good network within this industry group. I think the network and the connections in this industry group of the company are really important."

An understanding of the company does not only mean knowing its portfolio but also how things work in the company environment as well as a network to support the way of doing business is needed. The organizational and divisional perspectives recognize the need for organizational awareness as an important aspect, as understanding how to navigate through the organization and how to deal with office politics is critical for success. Building up a solid network in the industry group is part of this process. Of this indicator, all candidates value and emphasize the network part the most, which is understandable from their young and ambitious perspective. Possible indicators reflecting this objective are *the*

agility at which a candidate moves through the organization and *the number of useful contacts build up by a candidate in each rotation*.

All together, these five objectives encompass the visions of the organizational, divisional and individual perspective, reflecting the expectations for the Inside Automotive program. The first two initial strategic objectives of the program from section 3.2.3, to 'have a pipeline of talent of cross-divisional understanding' and to 'get access to applicants who never thought of BASF as a potential employer' are reflected in the first and second objective that came forward from the interviews. The third strategic objective from section 3.2.3, to 'strengthen the company's role as a key supplier in the industry', is not mentioned as a specific objective by the interviewees. However, the five objectives are objectives for an effective talent development program. When Inside Automotive is effective, it will allow BASF to serve their customers better, thereby strengthening their role as key supplier to the automotive industry.

In the process of developing these objectives, many synergies are found, as five out of the five objectives are supported by all of the participating perspectives. Motives as to why a perspective supports an objective however, differ, illustrating the importance to view each objective from different angles. Based on these findings, we assume that the reason why the Inside Automotive program exists and what its objectives are can be communicated to all the involved parties. We recommend the company to include these objectives to assist in the communication and alignment for all current and future stakeholders of the program.

6.2 Indicator framework

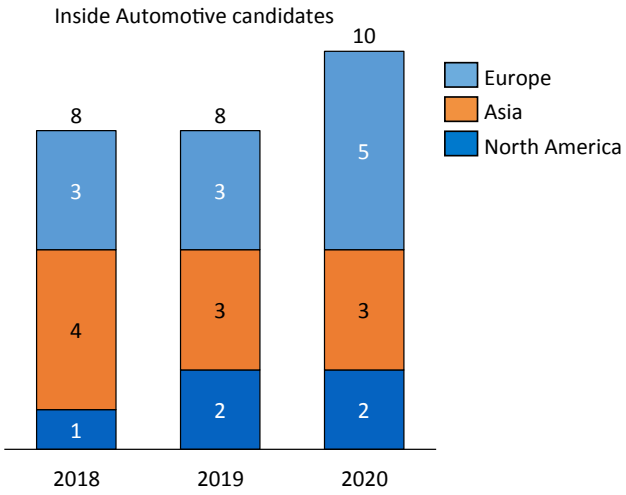
The objectives, as stated in chapter 6.1, are accompanied by a set of indicators that could reflect the objectives. The indicators are divided into result indicators and performance indicators, based on the literature. Result indicators reflect the outcome indicators that are measured before or after the program. Performance indicators actually reflect performance aspects of the program itself. Result indicators can be used to see how well strategic objectives are being achieved and can be addressed to the Global Automotive Steering Committee whereas performance indicators show a course of action to improve the program for the stakeholders that managed the Inside Automotive program (global coordinators Inside Automotive). Based on the scores per respondent for each indicator using the MCDM method, a total average score per indicator is determined and thereby the prioritization of the result indicator respectively performance indicator is made. The indicators per objective and (priority) calculations can all be found in appendix A.1 to A.4.

In this research, a total number of ten result indicators and 23 performance indicators are identified. The first eight result indicators directly relate to fundamental objectives of the program, the last two are indicators that are considered relevant for mapping the effectiveness of the program. The result indicators, prioritized by the MCDM method, are found in table 6. From the 23 performance indicators that are identified, 22 are considered to be valid performance indicators for the BASF. One indicator, global homogeneous applications, is excluded based on the exclusion criteria of corporate culture fit. All the performance indicators focus on the two-year timeframe of the program plus the outflow of candidates into BASF. Through the MCDM method, the most important (key) performance indicators are determined. The prioritized list is depicted in table 7. The indicators in both table 6 and table 7 are, if possible, related to the objectives as elaborated upon in section 6.1.

	Result Indicator	Explanation	Measurement frequency	Related to objective number
1	Number of candidates in the program	The indicator depicts the total number of candidates that are active in the program. It allows the BASF to monitor the continuity of their talent pipeline	Once per year	1
2	Number of times candidates move between divisions in their career.	This indicator directly shows the mobility and cross-BU mindset of former candidates, which is the first objective of Inside Automotive	Once per year	1
3	Number of qualified applicants for the program.	Qualified applicants are candidates who are able to pass the shared service center assessment (1st recruitment step, application documents screening + competence interview) based on matching candidate profile and skills with pre-defined position requirements. The indicator reflects the attractiveness of BASF and the program.	4 times per year (quarterly)	2
4	Retention rate of candidates	Retention rate is defined as the number of years a candidate stays within BASF. This also reflects the attractiveness of the company within the industry	Once per year	2
5	Number or nominations for a company talent pool	The BASF works with regional as well as global talent pools. The indicator monitors how many candidates get nominated for a talent pool after the program and thereby reveals how effective the program is in its first objective of creating talent.	Once per year	1
6	Number of cross-divisional projects worked on by candidates post program	Fostering cross-divisional cooperation is part of the first objectives of the Inside Automotive program. This indicator directly illustrates that objective.	Once per year	1
7	Number of international delegations of a candidate after program	The indicator show how often candidates do international assignments after the program. Creating internationally oriented talents is the fourth objective of the Inside Automotive program. To measure how well this objective is achieved post program, the BASF can measure the number of international delegations.	Once per year	4
8	Promotion frequency of a candidate after the program	The indicator shows the career path development of candidates over time based on frequency of promotion. The indicator reflects the third objective of suitable development paths for candidates	Once per year	3
9	Post program performance assessment of candidates, based on company's performance scale	BASF works with a employee performance scale, ranging from 'below average' performance to 'best team' to 'outstanding'. Monitoring these provides insight in the performance behavior of the Inside Automotive candidates after the program.	Twice per year (standard within the BASF)	No relation to a specific objective
10	Number of cross divisional meetings of non candidates per year	The objective to foster cross-divisional cooperation does not only have to refer to the candidates but also to the rest of the BASF (non candidates). Tracking the number of meetings that take place by non candidates because of the program serves as an illustration of the cross-divisional side effect of the program.	Once per year	No relation to a specific objective

Table 6 Prioritized result indicators

To develop a better understanding of the result indicators in table 6, examples of some of the indicators are visualized. From the result indicators, the first four are illustrated in figure 10.



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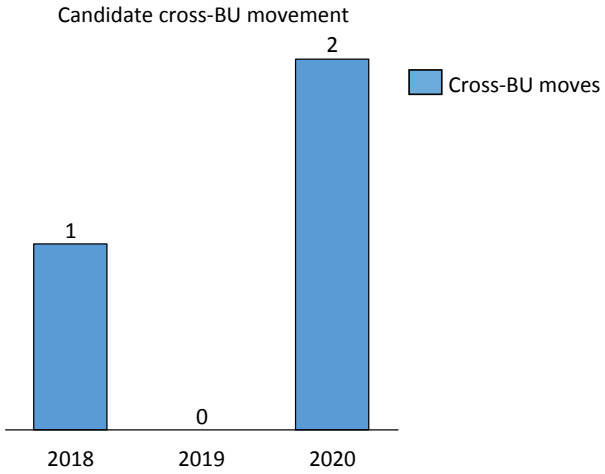

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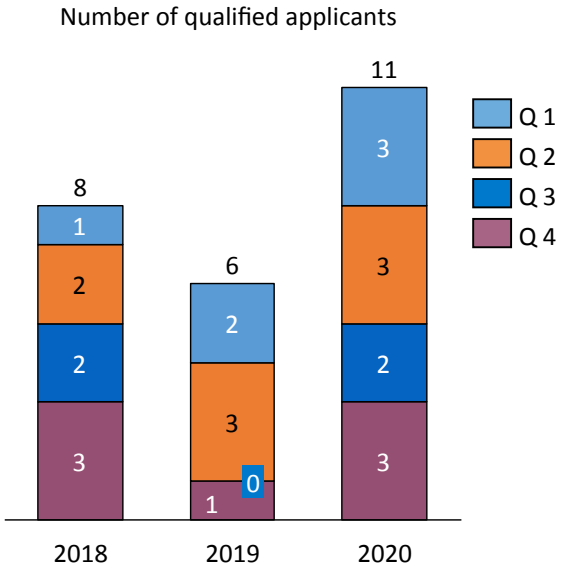

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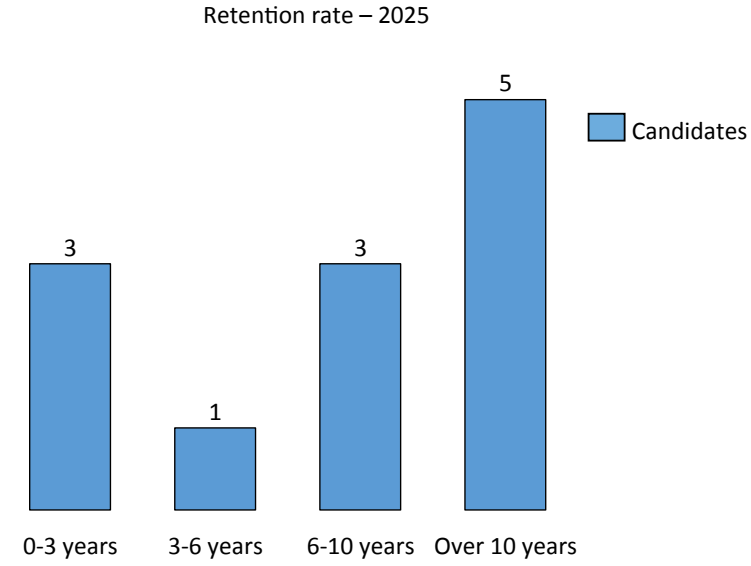

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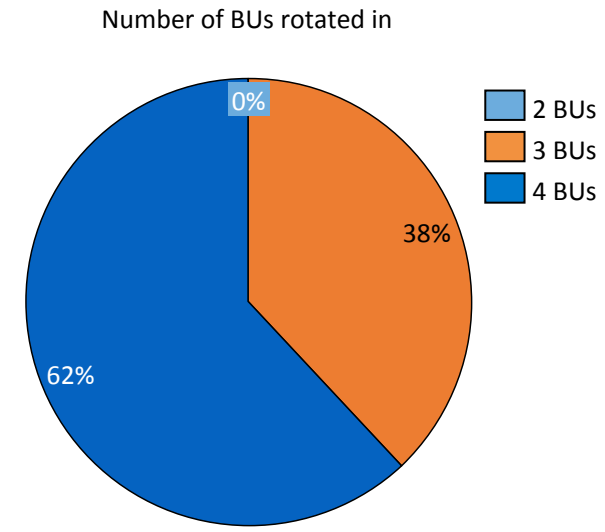
Figure 11 Visual example result indicators

	Performance Indicator	Explanation	Measurement frequency	Related to objective number
1	Number of operational divisions rotated in (expressed in percentages)	The indicator reflects how well candidates got an overview of the whole BASF automotive value chain	End of program	1
2	Number of regions worked in (expressed in percentages)	The indicator monitors the international aspect of the program where candidates gain insights in other markets	End of program	4
3	Number of candidates that worked regional as well as global (expressed in percentages)	The automotive value chain has regional as well as global aspects which are reflected by this indicators	End of program	1 and 4
4	Average agility index per rotation	The indicator reflects the agility at which candidates move through the organization. Measures after each rotation on a ratable scale of 1 to 5 by the supervisor, the indicator monitors the development of organizational awareness throughout the program.	After each rotation (by supervisor)	5
5	Number of key projects worked on	To really understand the automotive value chain, it is important the every candidates works on at least one key project per rotation	After each rotation (by candidate)	1
6	Number of key contacts acquired that are useful for in target position.	Acquiring relevant contacts for when a candidate starts in its target position is a important aspect of the program. The information gathered from candidate survey after rotation	After each rotation (by candidate)	5
7	Number of regions worked with (expressed in percentages)	The indicator monitors to what length candidates come in touch with the full length of the global automotive value chain	End of program	1
8	Number of candidates that fulfill their target positions (expressed in percentages)	The target position are a key aspect of the program structure, measuring how well BASF actually places their candidates after the program is therefore essential to the program's effectiveness	End of program	3
9	Number of different functions a candidate worked in	The indicators relates to the marketing and sales focus of the program. Ideally a candidate worked in both segments and also gains experience in key account management, which is a combination of both functions	End of program	1
10	Best practice sharing/cross divisional thinking by candidate	The creation of a cross-divisional mindset is the number one objective of the program. Measured after each rotation on a ratable scale of 1 to 5 by the supervisor	After each rotation (by supervisor)	1
11	Performance rating of candidates on rotation	Measuring performance is essential part of talent management. Therefore the performance of candidates should be measured after each rotation on a ratable scale by (1 to 5) supervisor. The standard performance scale can not be used here due to candidates always receiving 'best team' performance for bonus payout reasons	After each rotation (by supervisor)	No relation to a specific objective

12	Time spent abroad	Reflecting the time candidates spent in a different country and working culture, this indicator shows insight in the international orientation of the candidates	End of program	4
13	Number of candidates that achieve their development targets (expressed in percentages)	Also a part of talent management, this indicator provides insights in the development target structure in the program. The indicator shows to what extend these targets are being achieved	End of program	No relation to a specific objective
14	Market understanding of a candidate per division	Market understanding is an essential part of the automotive value chain. As each division operates in a different market segment of automotive, the indicator is evaluated on a ratable scale of 1 to 5 by the supervisor after each rotation	After each rotation (by supervisor)	1
15	Number of joint faces for candidates	The number of times candidates meet face to face enhances the probability of future collaboration and therefore strengthens cross-BU thinking	Once per year	1
16	Number of trainee calls	Similar to the previous indicator, the number of contact moments between candidates enhances their cross-BU thinking	Once per year	1
17	How independently can a candidate work on day-to-day task	The ability of being able to work on day-to-day tasks independently is an illustration of the performance of a candidate as well as being a very important skill once the candidate fulfills its target position. The indicator is evaluated on a scale of 1 to 5 by supervisor after rotation	After each rotation (by supervisor)	No relation to a specific objective
18	Number of candidates that worked in both existing and emerging markets	The BASF is active in both emerging and existing Automotive markets. Understanding both types is important for the development of the candidates	End of program	1
19	Job grade after program (per division)	The job grades candidate get when going into their target position shows where the candidate starts its career on a salary basis. The indicator is designed per division as no universal system currently exists	End of program	No relation to a specific objective
20	Number of meetings on program planning and preferences	This indicator reflects the amount of personal input candidates have on their personal program path	End of program	No relation to a specific objective
21	Satisfaction rate of candidate with target position	This indicator depicts how satisfied a candidate is in its target position. The indicator can be used to adjust the target position policy if the results are below of what is expected	2 times per year (during performance evaluation)	3
22	Time between certainty where next assignment will be and prior assignment ending	The indicator provides a time indication as to how well the program path for candidates is structured and information on rotation is clear	After each rotation (by candidate)	No relation to a specific objective

Table 7 Prioritized performance indicators

Similar as with the result indicators, the first four performance indicators that have been identified in table 7 are illustrated as an example in figure 12. In figure 12b a scale is provided as the indicator is based on evaluation of a supervisor on a scale form one till five.



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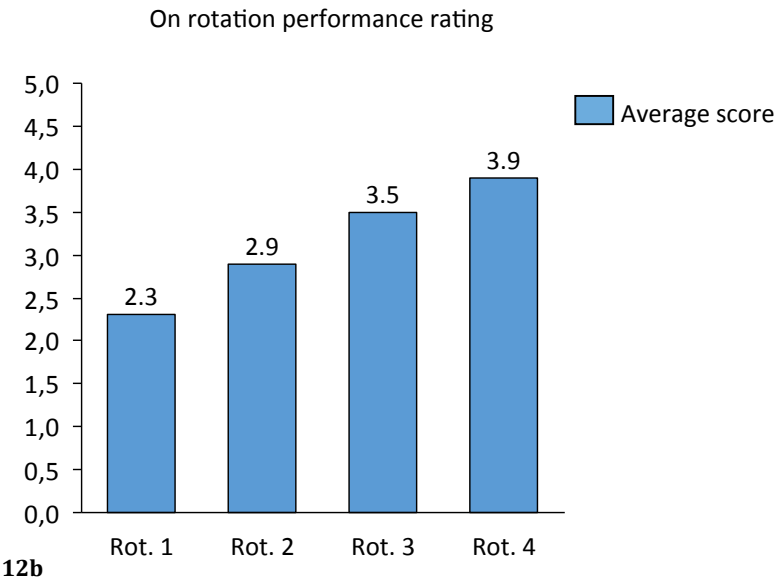

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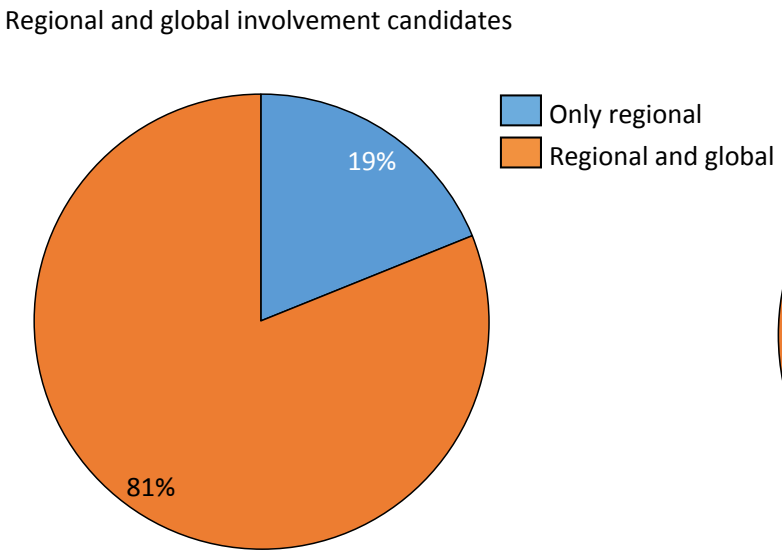

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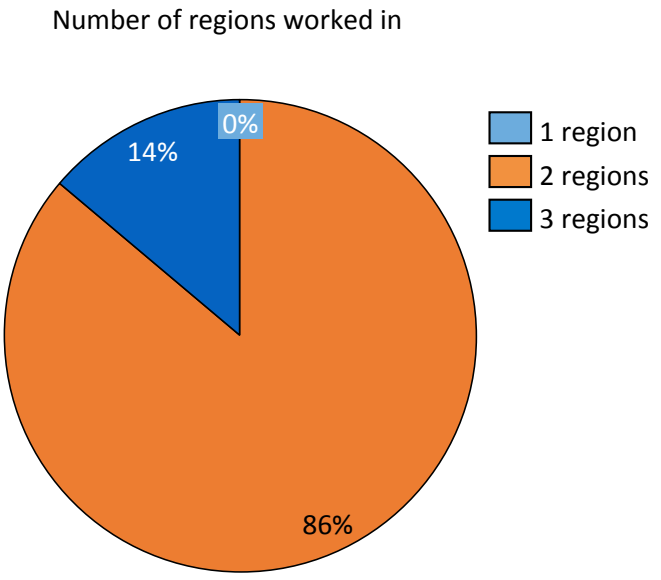

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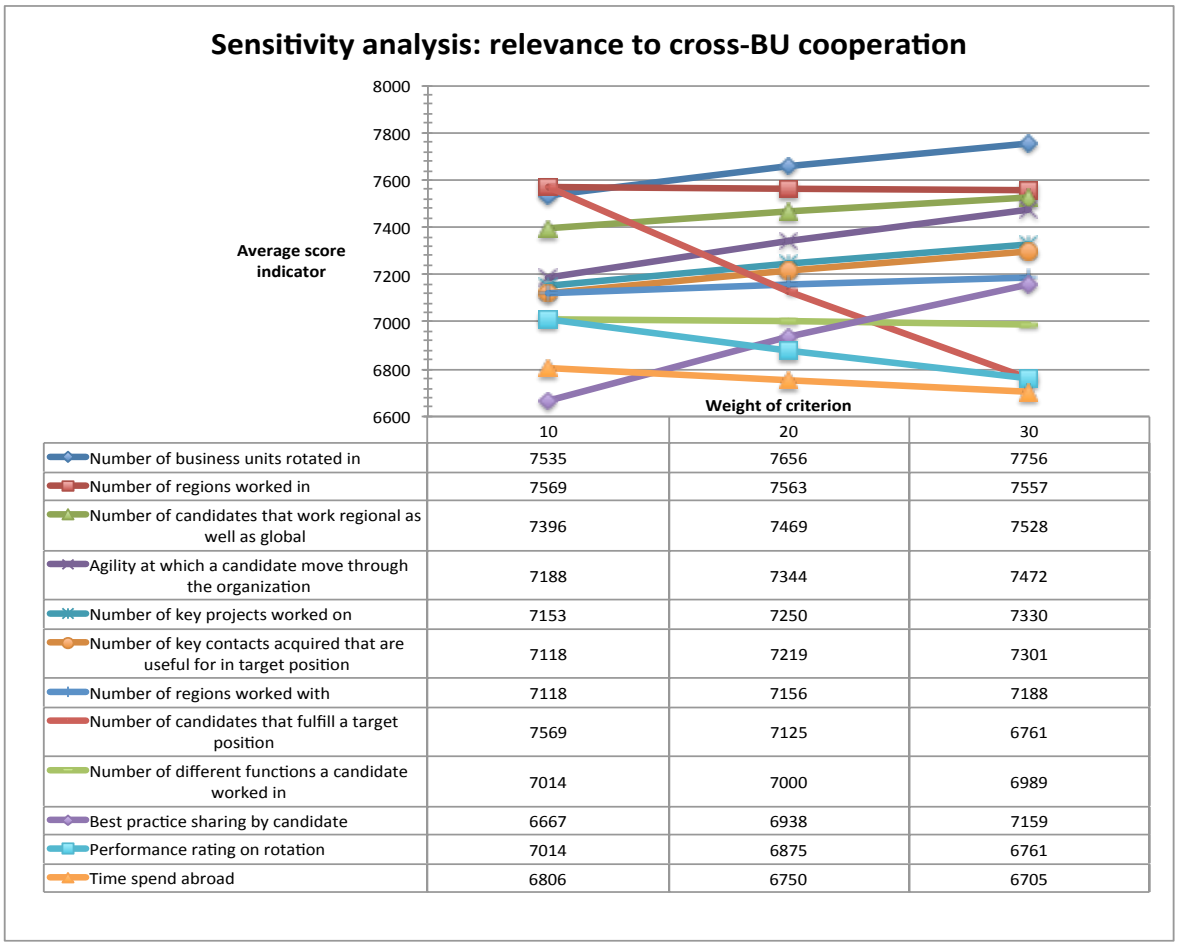
Figure 12 Visual example performance indicators

The prioritization made in table 6 and 7 are based on the average results of the MCDM method. An evaluation of the standard deviation of these averages could possibly provide interesting insights. The smaller the standard deviation, the more similar minded the participants are about rating a specific indicator. The participants are most similar minded about the performance indicator 'number of regions worked in' and result indicator 'number of qualified applicants' with standard deviations of 285 respectively 347. Close to all other standard deviations are anywhere between 600 and 1500, illustrating that the opinions of the participants on what indicators are important differs. The standard deviations can be found alongside the MCDM score in appendix A.3 and A.4. No pattern in the standard deviation can be discovered however, that can be related to the vision of one of the levels involved in the research. Furthermore, it is difficult to draw conclusions based on the standard deviation due to the relatively low number of participants that could cooperate in the MCDM process because of the internal situation at BASF. What is interesting however is that the performance indicators receive a higher overall rating than the result indicators. Looking at both top tens, the performance indicator on the tenth place has a score of 6938 which is almost the same as the score of 7000 received by the number one result indicator. This illustrates a common preference on the quality of the performance indicators over the result indicators. Both are however needed for the evaluation of the effectiveness of the program.

Having identified the performance indicators and the result indicator, a selection needs to be made based on the MCDM method and a sensitivity analysis to conclude what indicators can be recommended to BASF. The 10/80/10 rule by Parmenter (2015) prescribes that no more than ten key result indicators and no more than ten key performance indicators should exist for a program. This also coincides with the demand of BASF, for whom ten key result and ten key performance indicators are an appropriate starting point for a first indicator framework. As only ten result indicators are identified, all result indicators are considered to be key result indicators and no sensitivity analysis is conducted. For the 22 performance indicators that are identified however, a sensitivity analysis is conducted to investigate which indicators always fall in the top ten even with different weights assigned to the criteria so that they can be recommended to BASF. The sensitivity analysis is performed under the assumption that the weights of every criterion will not change more then 50%. An example of the sensitivity analysis for the criterion "relevance to cross BU cooperation" is provided, as this criterion is found to be the most sensitive. The sensitivity analysis for the other criteria can be found in appendix A.5. In the example in figure 13 and in the appendix, three situations for only the top twelve performance indicators of the original situation are plotted as these are the only indicators that fall in the top ten in each of the three scenarios[1]. The X-axis in the example delineates the original prioritized situation with a criterion weight of 20 in the middle, the situation of a weight of 10

[1]Full sensitivity data made available upon request. Contact the author.

(50% of the original weight) on the left and the situation of a weight of 30 (150% of the original weight) on the right. The Y-axis shows the average indicator score.



	10	20	30
Number of business units rotated in	7535	7656	7756
Number of regions worked in	7569	7563	7557
Number of candidates that work regional as well as global	7396	7469	7528
Agility at which a candidate move through the organization	7188	7344	7472
Number of key projects worked on	7153	7250	7330
Number of key contacts acquired that are useful for in target position	7118	7219	7301
Number of regions worked with	7118	7156	7188
Number of candidates that fulfill a target position	7569	7125	6761
Number of different functions a candidate worked in	7014	7000	6989
Best practice sharing by candidate	6667	6938	7159
Performance rating on rotation	7014	6875	6761
Time spend abroad	6806	6750	6705

Figure 13 Sensitivity analysis example

Figure 13 is further explained with the example of indicator "number of business units rotated in". This indicator has the highest score in the original situation where the weight of criteria "relevance to cross BU cooperation" is 20. This is depicted in the middle column of figure 13. As we recall from section 5.2.3, multiplying the numerical score per criterion with its weight, and then accumulating the scores calculates the final score per indicator for each participant. The score of the Steering Committee delegate for "number of business units rotated in" is calculated as follows:

$$(100*\mathbf{20})+(75*15)+(75*15)+(100*15)+(75*15)+(100*10)+(100*10) = 8875$$

The final score of an indicator is calculated by averaging the scores of four participants for that indicator. For our example indicator this averaged score is 7656 as is depicted in the middle colon of figure 13. The weight of criteria "relevance to cross BU cooperation" in the calculation is written in bold, as this is the weight that will be changed in this sensitivity analysis example. For the analysis, the weight of the criteria is changed to 10 (50% deviation of the original situation) while at the same

time normalizing the other weights so that the ratio remains the same and the total remains 100. The new calculation, using the same example as before, is as follows:

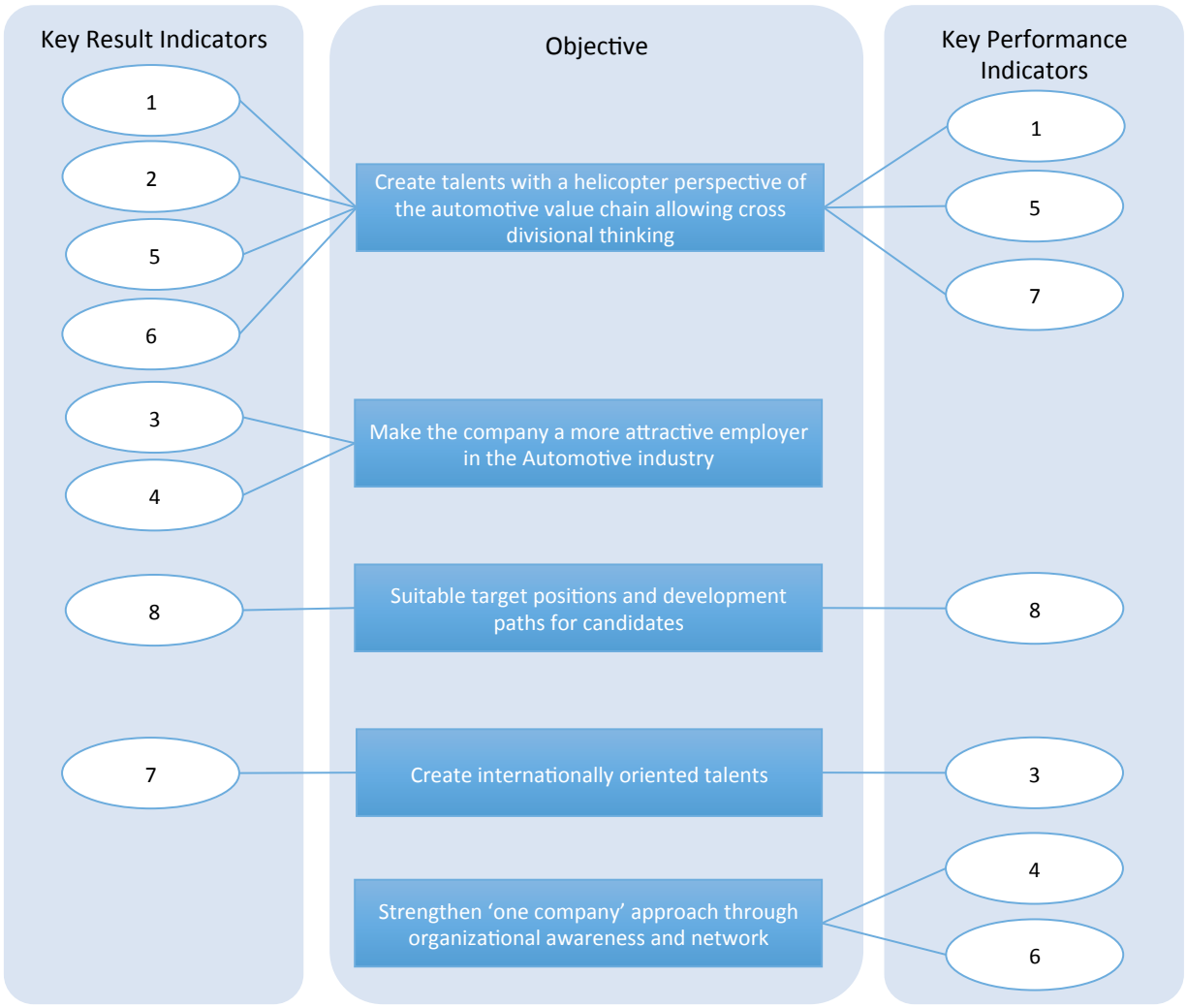
*(100*__10__)+(75*16.9)+(75*16.9)+(100*16.9)+(75*16.9)+(100*11.3)+(100*11.3) = 8734*

Again written in bold we see that the weight of criteria "relevance to cross BU cooperation" has been set to 10, leading to a score of 8734. The same is done with the scores of all participants, leading to an averaged score of 7535 for the indicator "number of business units rotated in", as is depicted in the left colon in figure 13. The right column in the figure depicts the averaged scores when the weight of the criterion is set to 30 (150% of the original situation). Based on these three situations an evaluation is done which of the top ten indicators from the original situation remain in the top ten in the other two situations where the weight is changed.

From figure 13 it can be derived that the top eight indicators in the original situation are represented in the top ten in every situation. The results from the other criteria, as provided in appendix A.5**,** are less sensitive than the criterion "relevance for cross BU cooperation". This means that for the other criteria more than eight of the top ten original indicators are represented in the top ten in the other two situations. The first eight indicators are therefore considered to be the key performance indicators because these remain within the top ten throughout the entire sensitivity analysis. These key performance indicators are recommended to BASF. The other four indicators do not always fall into the top ten and can therefore not directly be recommended within the 10/80/10 restriction by Parmenter (2015).

Based on the key result and key performance indicators, a plan of action to implement the indicators into the BASF environment and to start measuring the effectiveness of the Inside Automotive program is created. The plan of action is depicted in chapter 7 of this research. As an extra, an option might be the possible comparison of these key indicators between candidates of the program and people who take of a direct position in marketing or sales within one of the divisions. The Inside Automotive program is a large investment in talent development by the company, comparing candidates with people with a direct position will allow BASF to get an idea of how well their investment is paying off. In other words, it will allow the company to see how effective the program actually is.

Now that all the key indicators are identified, the overall framework of objectives and indicators can be presented. In figure 14 the framework is illustrated. Please note that key result indicator nine and ten and key performance indicators two are not directly related to a specific objective but are identified as important for monitoring the effectiveness of Inside Automotive. Moreover, where possible, minimum and optimal measurement indications are provided that are based on the conducted interviews.



Key Result indicators

1. Number of candidates in the program
2. Number of times candidates move between divisions in their career
3. Number of qualified applicants
4. Retention rate of candidates
    1. Minimum: 5 Years
5. Number of nominations for a company talent pool
    1. Optimal: 80 %
    2. Minimum: 60%
6. Number of cross-divisional projects worked on by candidates post program
7. Number of international delegations of a candidate after program
8. Promotion frequency of a candidate after the program
9. Post program performance assessment of candidates, based on company's performance scale (no relation to a objective)
    1. Minimum: Best team
    2. Monitor: how many receive outstanding
10. Number of cross divisional meetings of non candidates per year (no relations to a objective)

Key performance indicators

1. Number of operational divisions rotated in (expressed in percentages)
    1. Optimal: 4
    2. Minimum: 3
2. Number of regions worked in (expressed in percentages)
    1. Minimum: 2
3. Number of candidates that worked regional as well as global (expressed in percentages)
    1. Optimal: All candidates
    2. Minimum: 80%
4. Average agility index per rotation
5. Number of key projects worked on
    1. Minimum: 1 per rotation
6. Number of key contacts acquired that are useful for in target position.
    1. Minimum: 10 per rotation
7. Number of regions worked with (expressed in percentages)
    1. Optimal: All regions
8. Number of candidates that fulfill their target positions (expressed in percentages)
    1. Optimal: (global) key account manager role
    2. Minimum: junior sales manager/segment manager

Figure 14 Measurement framework Inside Automotive

To provide an understanding at which point in the Inside Automotive process the key indicators are measured, an illustration is provided in figure 15 and 16. The numbers used in the illustration correspond with the numbers in the framework. Key indicators such as 'number of candidates in the program' are not shown, as they are not related to a specific point in the Inside Automotive process.

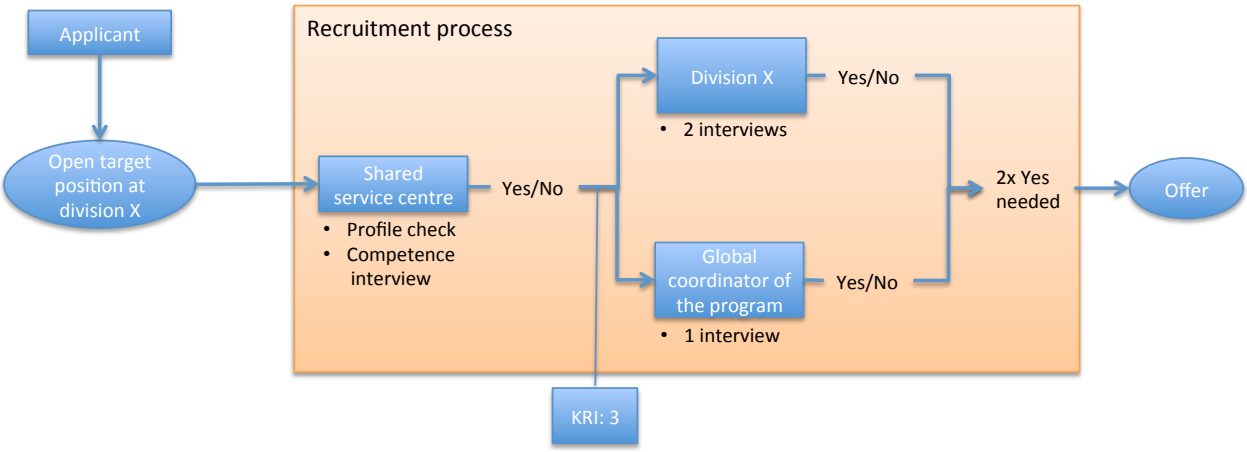


Figure 15 Indicator in relation to recruitment process

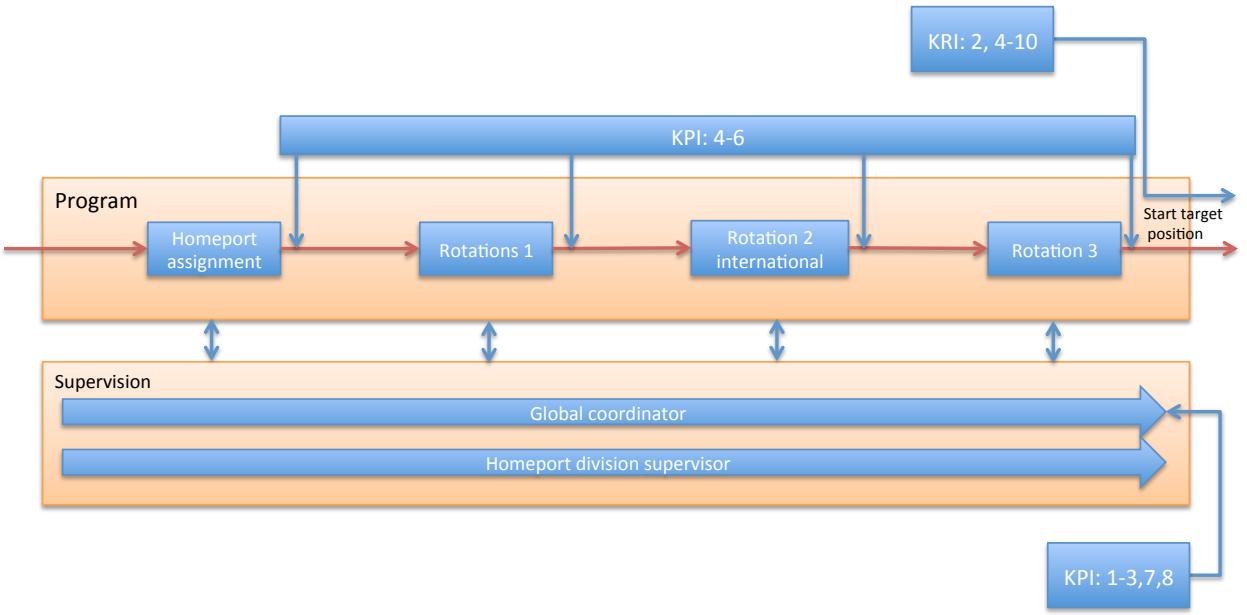


Figure 16 Indicators in relation to Inside Automotive process

6.3 Organizational and Divisional Challenges

The general trend in the interviews was positive; all levels are satisfied with the performance on both the organizational and (inter)divisional level and the divisions are very willing to participate in the program. There are a few topics however, that need to be addressed by BASF before they can start measuring the effectiveness of Inside Automotive.

This research started with the inquiry of BASF to measure the effectiveness of the Inside Automotive program. What has come forward from the interviews however, is that key prerequisites for a compatible, successful and effective program are missing (Evans, 2002; Kerzner, 2015). When researching possible organizational and divisional challenges, it is discovered that Inside Automotive lacks the structure to create a consistent, or 'one' program. Currently, it might rather be considered an accumulated output group, a set of consecutive unstructured steps through different divisions. The first prerequisite is a common set of objectives for the program to align all stakeholders internally, externally as well as globally to support the business strategy and global operations of Inside Automotive. Without this alignment, the program will not be effective. Another prerequisite is a well-patterned communication structure, which is currently not present. Besides endorsing literature on the need for these prerequisites, transparency and equal global acceptance are added to the prerequisite spectrum for successful global programs. Moreover, although not considered a direct prerequisite, it is discovered that the structure of the program allows it to still be too silo based, which is exactly what the program tries to overcome. The aforementioned topics are discussed in more detail.

The first prerequisite, directly emphasizing the importance and reason of this very research, is a set clear of objectives and possible indicators for the Inside Automotive program. A common understanding of objectives, what do the Global Automotive Steering Committee and involved parties want to achieve and how to get there are missing. The HR coordinator of division Catalysts:

"An absence of a common set of objectives, KPIs: There are no clear targets or objectives set, how does it look when it works fine and how will we measure this. What are the things that shouldn't happen? These points could be clarified from the hierarchy more."

When discussing the communication structure if the Inside Automotive program, a good form of top down communication is essential for a program's success as all parties involved need to be on the same page to provide a unified approach, especially in an cross-divisional program like Inside Automotive. This can be a challenge, which is recognized on both the organizational and the divisional level, as sometimes a good top down communication is missing. Structural changes within the spectrum of the

program are sometimes not clearly communicated to all involved stakeholders as this quote by the HR coordinator of Catalysts exemplifies:

"A form of better communication about developments of for example the structure within the program would be good."

On the (inter)divisional level, the feedback on the topic of communication is predominantly positive. The coordinator of the program, who deals with all divisions on a daily basis, reported the absence of problems. The key account manager of Coatings supports this opinion when asked about the interdivisional cooperation:

"Good, it is a huge benefit, the supervisors talking to each other. We have the HR coordinator of the program, who is very cross divisionally minded. The people taking care of the trainees are really doing it in a pragmatic way."

Currently however, no solid guidelines exist on what is expected of a supervisor concerning feedback of a candidate and more importantly, to whom this feedback is communicated. Every supervisor gives a feedback to the candidate at the end of his or her rotation, discussing the candidate's performance and possible improvement areas. This feedback is in general always shared with global coordinator of the program. What is missing however is the communication about this feedback to the next divisions where the candidate performs the following rotation and to the homeport supervisor, which would create more cross-divisional cooperation. Some supervisors already do so, but it has yet to become a standard. For closer and effective cooperation, clearer communication guidelines are needed. Furthermore, to overcome bias of the feedback that candidates get due to having different supervisors during the program, the key account manager of Catalysts proposes that the supervisors of a candidate have a meeting at the end of the program to create a final overall feedback report. This will not only counter bias, it will also allow supervisors to provide feedback to the organizational level on the structure, development and accomplishments of the program, providing a channel of feedback from within the organization. It is therefore recommended to include this meeting in the communication guidelines. The key account manager of Catalysts:

"It would make sense to have once a year or once every program is completed (one round) a feedback meeting with the core supervisors of the candidates. The purpose is to exchange views on the candidate and the program to then generate a useful final feedback report about the candidate and also on the program for the Gobal Automotive Steering Committees."

Transparency within the program is a prerequisite to a solid communication structure. With its global set-up, transparency remains a challenge within the scope of Inside Automotive but is crucial to its performance. A good example of this issue is the

fact that the homeport supervisor is sometimes not aware who the supervisor of his candidate was while he was on rotation. The key account manager of catalysts states:

"Currently, as a homeport supervisor, it is often the case that you do not know who the supervisor of the candidate is when they are on rotation in another division. The contact usually runs over the coordinator of the program."

This problem, as stated by the key account manager, is also related to the communication structure of the program. Often, the involvement of the homeport supervisor when the candidates is at another division has been very low to none, which is a far from ideal situation as the homeport has the highest interest in understanding the development of its candidates within the program. The current situation is illustrated in figure 17.

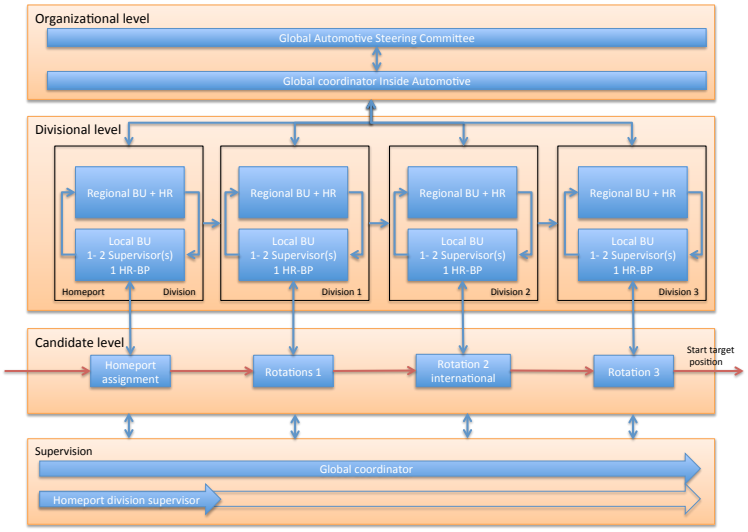


Figure 17 Current situation with homeport supervisor

A solid communication structure and transparency are prerequisites when trying to create cross-divisional thinking and cooperation. The quote by the key account manager shows that although the cooperation is going well, steps can be taken to better achieve the program's objectives. In discussion, we came to the conclusion that to start with, an up-to-date file naming all candidates, homeport supervisors and normal supervisors including contact details should be developed and implemented to increase transparency. The candidate level confirms the challenging aspects of interdivisional communication and transparency. To complement, a candidate recommended to make use the success-factor page, a shared portal where a candidate's after rotation feedback is processed which will be implemented as a way of improving transparency, to incorporate all relevant contact date of all stakeholders that are involved in the program. The shared portal allows the company to implement these recommended procedures without having to develop a new infrastructure.

Considering the topics of communication and transparency, it appears that the coordinator of the program plays a crucial role, as she is currently often the communication link between involved stakeholders and receives all the feedback concerning candidates. An improved and more transparent communication structure will not only enhance cross-divisional cooperation; it will also alleviate the pressure

on the coordinator of the program as more information flows directly between the divisions. The coordinator will then only have to be involved where needed, allowing time for more emphasizes on increasing the quality of the program.

For another improvement area, a strong signal from the candidate perspective about the global acceptance of the program comes forward. Two candidates experience a much lower acceptance in the North American region than in Europe or Asia. In order for Inside Automotive to become one collective program and to be as effective as possible, the quality, support and acceptance needs to be universal. Candidate four elaborates:

"In North America there is a low level of expectations of the program compared to Europe and China. Also the level of acceptance in North America is very low. So there needs to be more internal awareness about the program. The feedback in the region is low because of low acceptance of the program."

The final and most important finding concerning challenges for the program, is the problem with the program structure that came forward from both the divisional and the individual level. The key account manager of Catalysts:

"I still have the feeling that the program is too silo based as the expectation is that the candidate after the 2 years is definitely coming back to the homeport division. For me that is not the task or objective of the program, it is more to have 2 years of experience and after that deciding what was my best and most confident position."

The key account manager's observation conflicts with one of the most fundamental objectives of the program, which is to overcome this silo thinking and allow a more unified approach as one company. Candidate four confirms this problem going through the program:

"Homeports want, if they invest money in you as they pay your salary, to drive the program their way. So the division says, if you want to be successful in our division, this is what you'll need XYZ. This is very different from the overall picture that the company tries to create, so for that reason I would remove the homeport situation."

The first consequence that arises due to this program structure is already witnessed, as another division than the homeport division wants one of the candidates that is soon to finish. According to the set-up the program, the candidate is to return to his homeport to fulfill its target position that he or she applied for, as the homeport is also where the headcount is and therefore pays for the candidate during its program. This leaves no room for the candidate to be placed where he fits best and possibly is most effective for the BASF industry group Automotive. The organizational perspective of the program should address this problem, experienced at both the individual and

divisional level. Both levels agree on the recommendation of the key account manager to approach this challenge. He states:

"Money for the program should not be related to one division but from the Gobal Automotive Steering Committee because then you really foster this global mind-set and this "One company" objective. Otherwise you will always keep this division related thinking. If you want to overcome silo thinking you have to overcome money."

The company's involvement in the automotive industry is growing fast and for them to really allow focus on the industry, the topic of money and therefore headcount should be more centrally controlled instead of being divided over the divisions. This would still allow for divisional control and steering by divisions. A centrally controlled budget by the Global Automotive Steering Committee would enable the candidates to develop with a true industry focus and finding a position after the program where they can serve this focus best. This would allow the program to focus on the complete company perspective and proposition to the automotive industry, making it much more effective in achieving its objectives.

6.4 Chapter Summary

Based on the 17 interviews that are conducted within this research, a number of five overall objectives are distilled for the Inside automotive program:

- To create new talents with a helicopter perspective of the whole value chain of automotive products, allowing an enhanced industry focus and cross-divisional thinking.
- To make the company a more attractive employer in the automotive industry.
- To have suitable target positions (entry position post program) available and good development paths for the candidates after the program.
- To create internationally oriented talents.
- To strengthen the 'one company' approach through creation of organizational awareness and the network built up during the program.

This common set of objectives answers sub question 3: w*hat are the objectives from the organizational, divisional and individual candidate level for the Inside Automotive program?*

Based on the objectives, several result and performance indicators are developed to measure how well BASF achieves these objectives. Making use of the multi-criteria decision-making method, both the result and the performance indicators are prioritized. With a sensitivity analysis, the validity of this prioritization is tested and based on these results the top ten result indicators and top eight performance indicators are identified as key result respectively key performance indicators. These key indicators are considered to answer sub question 4: *what indicators express the*

objectives of all levels so that the effectiveness of the Inside Automotive program can be measured?

However, the results indicate that Inside Automotive can rather be defined as an 'accumulated output group' instead of one single entity program as prerequisites for a effective and successful program are missing. These prerequisites are a common set of objectives (this research), a solid communication and feedback structure, transparency and equal acceptance of the program in every region, which need to be addressed by BASF to develop Inside Automotive into a competitive, successful and effective program. Moreover, the program's structure is still too silo based, allowing too much influence of the homeport divisions in the candidate's development. This impedes a true cross-divisional industry focus. A centrally arranged and controlled budget by the Global Automotive Steering Committee and open target positions for the candidates could help improve the overall objective of a cross-divisional 'one company approach. The problem with these prerequisites and program structure answer sub question 5: *what organizational and divisional challenges impede the effectiveness the Inside Automotive program?*

These overall results are used in the following chapter to build a plan of action and thereby provide an approach for BASF concerning these topics.

7. Plan of Action

In this chapter we discuss the final step of the business problem solving method of Van Aken et al. (2012), the plan of action for BASF based on the results of this research as presented in chapter 6. The main focus of the plan of action is on the implementation of the found program objectives and key indicators as they are the core answer to the main research question of developing a tool to measure the effectiveness of Inside Automotive.

In this research a number of five consolidated objectives are identified, as presented in section 6.1. Achieving these objectives is what is understood by effectiveness in the context of this research. These results are of high added value to BASF as it allows for a 'common set of objectives' to help keep all stakeholders aligned, which is a prerequisite of a successful program. For these objectives, ten key result and eight key performance indicators have been identified to measure the progress and thereby effectiveness of the aforementioned objectives. For the implementation of the objectives and corresponding key indicators we propose the framework as presented in section 6.2 figure 14 in combination with the measurement frequencies in table 5 and 6. Moreover, prerequisites like the communication and feedback structure, transparency, equal acceptance of the program in every region and also possibly a different program structure need to be instated to develop Inside Automotive into an effective program. We have developed a plan of action for the following topics:

- The objective and indicator framework
- The communication and feedback guidelines
- A first solution the problem with transparency within the program

The topic of equal program acceptance in every region and possible problem with the overall structure of the Inside Automotive program do not fall within the scope of this research. A plan of action on these topics will therefore not be provided. However, for the organizational structure problem of Inside Automotive, a solution is created. The budget for Inside Automotive should move from the separate divisions to the centrally controlled Global Automotive Steering Committee and target positions after the program should be open for candidates. How and if this can be done, should be further investigated by BASF. Before implementing the plan of action, it first needs to be approved by the Global Automotive Steering Committee. The plan of action is illustrated in figure 18**.**

As a final remark, this research only covered the first four step of the business problem solving method of Van Aken (2012), *problem mess, problem definition, analysis and diagnosis* and *plan of action*. *Implementation* and *evaluation* is the responsibility of BASF. We would like to stress the importance of the evaluation of the suggested objectives and key indicators as incorporated in the plan of action.

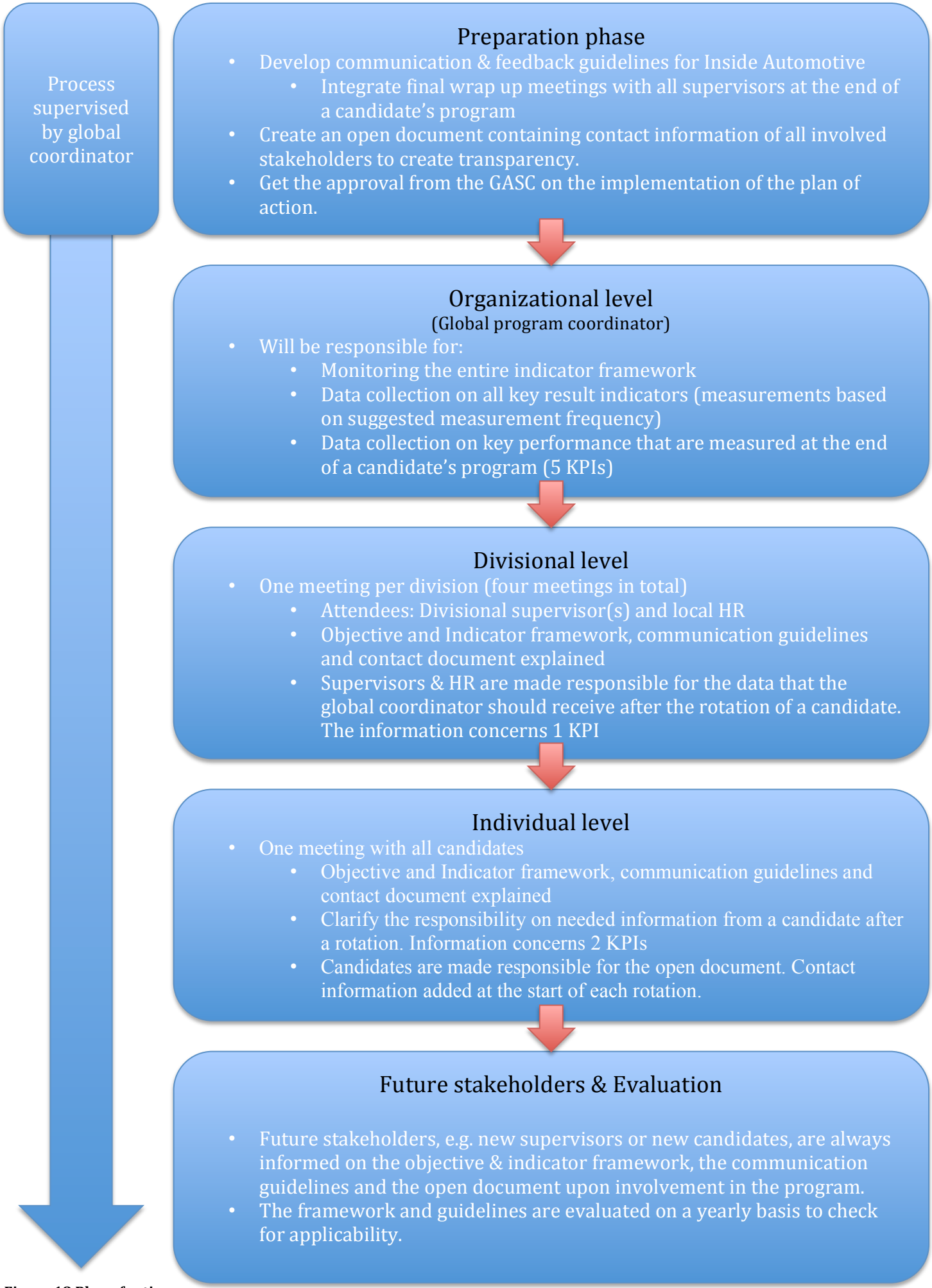


Figure 18 Plan of action

8. Conclusions and Recommendations

The findings in chapter 6 and the plan of action in chapter 7 are the base for the final chapter of this research where the conclusions and recommendation are discussed. In section 8.1, the conclusions that are derived from the findings are presented followed by a set of recommendations in section 8.2. To conclude, possible limitations and future research are discussed in section 8.3.

8.1 Conclusions

This given master thesis investigates the effectiveness of the global cross-divisional talent development program Inside Automotive, which was instated in the business environment of BASF in the beginning of 2014. Inside Automotive, a two year talent development program for graduates and young professionals with a focus on marketing and sales, is a translation of BASF's strategy for 2025 in which more emphasize is put on the industry group 'Automotive' through enforcing a 'one company' approach. With four operational divisions (Coatings, Catalysts, Performance Materials and Fluid and Lubricant Solutions) supplying the industry group, BASF wants more cross-divisional cooperation so that added value can be delivered as 'one company'. The Inside Automotive program, as a translation of this strategy, rotates its candidates through these divisions to allow them to get a full understanding of the entire automotive value chain from a marketing and sales perspective. The Inside Automotive program's pilot phase ends this year (2016) and BASF inquires insights in its effectiveness. Therefore the main research question of this thesis is: *What tool can be developed to measure the effectiveness of BASF's talent development program Inside Automotive?*

Following the business problem solving approach by Van Aken et al. (2012), this research provides insights in the effectiveness of the program. Based on theory, effectiveness in the context of this research is defined as the accomplishment of objectives that satisfy all important stakeholders, which are identified as the organizational, divisional and individual candidate level of the program. A common set of objectives, alongside a clear program communication structure, are also prerequisites for an effective and successful program. To measure the extent to which the objectives are being accomplished, indicators can be used. In this research, a distinction based on literature is made between:

- Key performance indicators, which focus on how different program components are performing individually and show management (coordinator of the program) what can be done to improve these individual aspects and thereby ultimately the overall performance reflected through the result indicators.

- Key result indicators, which measure outcomes after the program, indicate the consequence of a number of actions and are useful for the Global Automotive Steering Committee to evaluate the program and;

In this qualitative research, desk-research followed by a number of 17 semi-structured interviews with participants from the three aforementioned levels is conducted to gain insights into the program. The results are used to develop a set of common objectives for Inside Automotive and a set of performance and result indicators that reflect these objectives. To determine which indicators are most important, and thus key, a multi-criteria decision making (MCDM) analysis is performed with a focus group of four participants from the interview population. In this focus group, all three involved levels are again represented. Finally, a sensitivity analysis is conducted to validate which of the top indicators from the MCDM analysis can be recommended to BASF as key (performance and result) indicators.

From the interviews a number of five overall objectives that satisfy all stakeholders are distilled for Inside Automotive:

- To create new talents with a helicopter perspective of the whole value chain of automotive products, allowing an enhanced industry focus and cross-divisional thinking.
- To make the company a more attractive employer in the automotive industry.
- To have suitable target positions (entry position after program) available and good development paths for the candidates after the program.
- To create internationally oriented talents.
- To strengthen the 'one company' approach through creation of organizational awareness and the network built up during the program.

Based on the MCDM method and the sensitivity analysis, a total of ten key result indicators and eight key performance indicators are identified. Examples of key result indicators are "retention rate" or "number of qualified program applicants". Examples of key performance indicators are "number of divisions rotated in" and "number of key projects worked on". The key (result and performance) indicators that result from this approach are suggested to BASF in a plan of action to be instated for the evaluation of the effectiveness of the Inside Automotive program, thereby delivering an answer to the main research question.

Effectiveness however, is an external standard applied to the output of activities and for it to be measured, the necessary prerequisites need to be in place. Before BASF is able to gain insight into the effectiveness of Inside Automotive through a set of indicators, key prerequisites for a compatible and successful program need to be addressed:

- *A common set of objectives* is addressed in this research. It is needed to align all stakeholders internally and externally on a global scale to support the business

strategy and global operations of Inside Automotive. Without this alignment the program cannot be effective because a missing alignment of objectives leads to inconsistencies in the program implementation.

- A *well-patterned communication structure* is another prerequisite that is currently not present. This is leading to too little cross-divisional communication, a loss of information and a missed chance to optimally develop candidates as for example feedback after a candidate's first rotation is often not known to the supervisor of the candidate's second rotation.

Besides endorsing literature on the need for these prerequisites, *transparency* and *equal global acceptance* are added to the prerequisite spectrum for successful cross-divisional global programs.

- Currently it is not clear to the involved stakeholders who all the other stakeholders are. For example, the supervisor in division two is often not aware who the candidate's supervisor was in division one. A lack of transparency within the program contributes to a poor communication structure; *transparency* is therefore a prerequisite for an effective program.
- Although being a global program, Inside Automotive does not receive an equal level of acceptance in every region. In North America, the acceptance of the program is much lower in comparison to for example Europe or Asia. In order to develop candidates and provide them with the full overview of the global BASF value chain to the automotive industry, the level of *acceptance* needs to be *equal in every region.*

Furthermore, it appears that the program structure could also be improved as it is still too silo based. The homeport division (division where a candidate starts and returns after the program), who is responsible for the headcount of its candidates in the program, has too much influence in the candidate's development path. This impedes a true cross-divisional industry focus. A centrally arranged and controlled budget by the Global Automotive Steering Committee and open target positions for the candidates could help improve the overall objective of a cross-divisional 'one company' approach

This research provides an understanding of effectiveness in a cross divisional context by identifying the objectives of the different involved levels in the program while at the same time uncovering organizational and divisional topics that are important to the success of a global program. Moreover, the research contributes to the field of studies on prerequisites for a competitive and successful program like the work of Kerzner (2015) and Evans (2002). Having a measurement framework in place will only contribute to the effectiveness of a program if the prerequisites are given. As discussed in the talent management literature, it appears that no unique one-fits-all design approach for a global talent management program exists which creates a challenge for organizations and academics to define appropriate program designs and related measures (Church, Rotolo, Ginther and Levine, 2015). This research adds to the existing talent management literature by providing another insight into the design

and the challenges of a global talent development program, as well as providing an example for the development of a measurement framework.

8.2 Recommendations

Build on the findings in chapter 6, the plan of action in chapter 7 and the conclusions in section 8.1, a set of recommendations for BASF and the Inside Automotive program are developed:

- A number of five consolidated objectives for the Inside Automotive program have been identified that reflect the interest of the organizational, divisional and candidate level of the program. We recommend BASF to instate these five objectives for both current and future stakeholder alignment.

- Ten key result and eight key performance indicators that convert the five objectives into measurable concepts are identified in this research. These indicators can provide insights in the effectiveness of the program and also uncover improvement areas to increase the overall quality of Inside Automotive. We recommend the BASF to adopt these indicators for the Inside Automotive program.

- We recommend BASF to use the plan of action, as presented in chapter 7 of this research, as a starting point for the implementation of the objectives, the key indicators, the improvement of the communication and feedback structure and the transparency within Inside Automotive. The plan contains crucial steps to realize these aspects.

- The finding about the problem with the fundamental structure of Inside Automotive is crucial, offering solid room for improvement. A centrally controlled budget solution in combination with open target positions that is offered allows for more focus on the industry group automotive, strengthening BASF's 2025 strategy. We therefore recommend BASF to investigate how this solution can be implemented.

- Inside Automotive needs to have an equal level of acceptance in every region, which is currently not the case. We recommend BASF to increase the internal and external promotion activities of the program in its North American region, as candidates currently experience the lowest level of acceptance compared to other regions.

8.3 Limitations and Future Research

This research started out with the objective to develop a measurement tool for the effectiveness of Inside Automotive. The tool, as presented in this research, provides insights into how BASF develops with regard to the objectives of the program. For most of the indicators a standard of minimum and/or optimal values is also provided. For the remaining indicators this could not yet be determined as standards for these indicators are dependent on a variety of aspects that fall outside of the scope of this research. We therefore recommend BASF to conduct a future research on setting these standards. Moreover, this research comes with a few limitations. Due to internal reasons at BASF, a focus group of only four of the seventeen people interviewed could participate in the MCDM process. Therefore, the recommended indicators are subject to the opinion of these four individuals. All the perspectives are however represented in the 17 interviews conducted, which lead to the input for the multi-criteria decision process. The prioritization could have looked different if the entire interview population was available instead of the focus group. Furthermore, the criteria and their weights used in the MCDM process are developed in cooperation with the global coordinator. Additional or different criteria could lead to another overview of key result and key performance indicators but we assume that the given criteria best reflect the requirements of BASF. However, the potential bias needs to be kept in mind as a possible limitation. Moreover, in the sensitivity analysis, the indicators are researched under the assumption the original weights will not deviate more the 50%. The effect of a larger deviation of the weights of the criteria, thereby possibly changing the prioritization, is not taking into account within the scope of this research.

Determining objectives and indicators for a global program like Inside Automotive has proven to be a challenge. The BASF is a highly diverse company with a number of different divisions that have a different external as well as internal environment. BASF internally, is very different from region to region. Every region, and within that region every operational division, has its own way of doing business, culture and has its own emphasize on what is considered to be important. This is a huge challenge for Inside Automotive, as it makes aligning on a global scale and adjusting objectives and indicators to the needs of every region, difficult but very important. The objectives and indicators developed in this research are applicable to the global scale of the Inside Automotive program but the diversity of BASF should always be taken into regard.

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Appendix

A. Tables and Figures

A.1 Multi Criteria decision making – Result indicators

Global Automotive Steering Committee delegate:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Result indicator	Post program performance assesment, based on companies performance scale	Yes	Moderate	Very high	High	Very low	Very low	High	Very high	3025
			50	10	75	0	0	75	0	
	Number of times people move between divisions in their career.	Yes	High	High	High	Low	High	High	Very high	6000
			75	75	75	25	75	75	0	
	Number of cross divisional projects worked on by candidate post program	Yes	High	Low	Moderate	Very low	High	Very low	Very high	3750
			75	25	50	0	75	0	0	
	Number of cross divisional meetings non candidates	Yes	High	Very low	Very low	Vey low	Moderate	Very low	Very high	2250
			75	0	0	0	50	0	0	
	Number of qualified applicants. Qualified means getting through the shared service centre.	Yes	High	Very high	High	Very low	Very high	High	Low	7125
			75	100	75	0	100	75	75	
	Number of candidates in the program	Yes	High	Very high	Very low	Moderate	Very low	Very high	Very low	5750
			75	100	0	50	0	100	100	
	Retention rate of candidates	Yes	High	High	Vey low	very low	Moderate	Very low	High	4125
			75	75	0	0	50	0	75	
	Career path development of candidate over time based on promotion	Yes	High	HIgh	High	Low	High	Low	Very high	5500
			75	75	75	25	75	25	0	
	Number or nominations for a talent pool	Yes	Moderate	High	Moderate	Low	Moderate	High	Moderate	5250
			50	75	50	25	50	75	50	
	Number of international delegations after program	Yes	Moderate	High	Moderate	Low	Moderate	High	Moderate	5250
			50	75	50	25	50	75	50	

Coordinator of the program:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Result indicator	Post program performance assesment, based on companies performance scale	Yes	Very high	High	High	High	Moderate	High	Low	7625
			100	75	75	75	50	75	75	
	Number of times people move between divisions in their career.	Yes	Very high	Very high	High	High	High	High	High	7875
			100	100	75	75	75	75	25	
	Number of cross divisional projects worked on by candidate post program	Yes	High	High	High	Moderate	Moderate	High	Moderate	6500
			75	75	75	50	50	75	50	
	Number of cross divisional meetings non candidates	Yes	High	High	Moderate	Low	High	High	High	5875
			75	75	50	25	75	75	25	
	Number of qualified applicants. Qualified means getting through the shared service centre.	Yes	Moderate	Very high	High	High	High	High	Moderate	7125
			50	100	75	75	75	75	50	
	Number of candidates in the program	Yes	High	Very high	High	High	High	High	Moderate	7625
			75	100	75	75	75	75	50	
	Retention rate of candidates	Yes	Low	Very high	Very high	High	Very high	High	Very high	6875
			25	100	100	75	100	75	0	
	Career path development of candidate over time based on promotion	Yes	Very high	High	High	Moderate	High	Moderate	High	6875
			100	75	75	50	75	50	25	
	Number or nominations for a talent pool	Yes	High	Very high	High	Moderate	High	High	High	7000
			75	100	75	50	75	75	25	
	Number of international delegations after program	Yes	High	High	Moderate	Moderate	High	High	Moderate	6500
			75	75	50	50	75	75	50	

Supervisor of the program:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Result indicator	Post program performance assesment, based on companies performance scale	Yes	Low	High	Moderate	Moderate	Moderate	High	Very low	5625
			25	75	50	50	50	75	100	
	Number of times people move between divisions in their career.	Yes	High	Very high	High	Moderate	High	High	Very low	7750
			75	100	75	50	75	75	100	
	Number of cross divisional projects worked on by candidate post program	Yes	High	Moderate	Moderate	Moderate	High	Low	Very high	5500
			75	50	50	75	75	25	0	
	Number of cross divisional meetings of non candidates	Yes	High	High	Low	Low	High	High	Moderate	5750
			75	75	25	25	75	75	50	
	Number of qualified applicants. Qualified means getting through the shared service centre.	Yes	Moderate	Very high	High	Low	High	Very high	Very low	6375
			50	100	75	25	25	100	100	
	Number of candidates in the program	Yes	High	Very high	High	Very low	High	High	Low	6750
			75	100	75	0	75	75	75	
	Retention rate of candidates	Yes	High	Very high	Moderate	Very low	Very high	Moderate	Moderate	6250
			75	100	50	0	100	50	50	
	Career path development of candidate over time based on promotion	Yes	Moderate	Moderate	Moderate	Very low	Moderate	Very low	High	3500
			50	50	50	0	50	0	25	
	Number or nominations for a talent pool	Yes	Low	Very high	High	Llow	Moderate	High	Very low	5625
			25	100	75	0	50	75	100	
	Number of international delegations after program	Yes	Moderate	Very high	Moderate	Moderate	Moderate	Very low	High	5000
			50	100	50	50	50	0	25	

Candidate:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Result indicator	Post program performance assesment, based on companies performance scale	Yes	High	High	Moderate	Moderate	Moderate	Moderate	Low	6125
			75	75	50	50	50	50	75	
	Number of times people move between divisions in their career.	Yes	High	High	Moderate	Low	High	Moderate	Low	6125
			75	75	50	25	75	50	75	
	Number of cross divisional projects worked on by candidate post program	Yes	Very high	High	Very high	Moderate	High	Low	Moderate	7250
			100	75	100	50	75	25	50	
	Number of cross divisional meetings non candidates	Yes	High	High	High	Low	Moderate	Low	Low	5875
			75	75	75	25	50	25	75	
	Number of qualified applicants. Qualified means getting through the shared service centre.	Yes	Moderate	High	Very high	High	Moderate	Moderate	Moderate	6500
			50	75	100	75	50	50	50	
	Number of candidates in the program	Yes	Very high	Very high	High	High	High	Low	Low	7875
			100	100	75	75	75	25	75	
	Retention rate of candidates	Yes	Very high	Very high	Very high	Moderate	Very high	Moderate	Moderate	8250
			100	100	100	50	100	50	50	
	Career path development of candidate over time based on promotion	Yes	High	High	High	High	Moderate	Moderate	Low	6875
			75	75	75	75	50	50	75	
	Number or nominations for a talent pool	Yes	Moderate	High	Very high	Moderate	Low	High	Low	6250
			50	75	100	50	25	75	75	
	Number of international delegations after program	Yes	High	High	Moderate	Moderate	High	Moderate	High	6000
			75	75	50	50	75	50	25	

A.2 Multi criteria decision making – Performance indicators

Global Automotive Steering Committee delegate:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Performance indicator	Number of business units rotated in	Yes	Very high	High	High	Very high	High	Very high	Very low	8875
			100	75	75	100	75	100	100	
	Number of key projects worked on	Yes	Very high	High	High	Very high	Moderate	High	Low	8000
			100	75	75	100	50	75	75	
	Market understanding of a candidate, evaluated on a rateble scale by the supervisor after each rotation	Yes	High	High	High	Very high	High	Moderate	Moderate	7375
			75	75	75	100	75	50	50	
	Best practice sharing/cross divisional thinking by candidate, evaluated on a rateble scale by supervisor after each rotation	Yes	High	Moderate	High	Very high	High	Moderate	Moderate	7000
			75	50	75	100	75	50	50	
	Do candidates achieve their development targets	Yes	High	Low	Moderate	High	High	Moderate	High	5625
			75	25	50	75	75	50	25	
	Number of different functions a candidate worked in	Yes	High	Very high	High	Very high	Moderate	High	Low	7875
			75	100	75	100	50	75	75	
	Candidate worked in both existing and emerging markets (Yes/No)	Yes	Moderate	High	High	Very High	Low	High	Low	6625
			50	75	75	100	25	75	75	
	Number of joint faces for candidates	Yes	Low	High	Moderate	High	Low	High	Low	5375
			25	75	50	75	25	75	75	
	Number of trainee calls	Yes	Low	High	Moderate	High	Moderate	High	Low	5750
			25	75	50	75	50	75	75	
	Performance rating on rotation, evaluated on rateble scale by supervisor	Yes	High	High	High	Very high	High	Moderate	High	7125
			75	75	75	100	75	50	25	

Performance indicator	Equal quality in applications worldwide/homogeneous applications	Yes	High	Very high	High	Very low	High	Moderate	Moderate	6250
			75	100	75	0	75	50	50	
	Does the candidate fulfill a target position after the program? (yes/no)	Yes	Low	Very high	Very high	Very high	Very high	very high	Very low	8500
			25	100	100	100	100	100	100	
	Job grade after program (per division)	Yes	Low	Very high	Very low	High	Low	High	Low	5000
			25	100	0	75	25	75	75	
	Satisfaction rate of candidate with target position	Yes	Low	High	Moderate	Very high	Moderate	Moderate	High	5375
			25	75	50	100	50	50	25	
	Number of regions worked in	Yes	High	Very high	High	Very high	High	Very high	Low	8500
			75	100	75	100	75	100	75	
	Number of regions worked with	Yes	High	High	High	Very high	High	Moderate	Moderate	7375
			75	75	75	100	75	50	50	
	Did the candidate work regional as well as global? (Yes/No)	Yes	Very high	very high	High	Very high	High	Very high	Very low	9250
			100	100	75	100	75	100	100	
	Time spend abroad	Yes	Moderate	High	Moderate	High	Moderate	High	Low	6250
			50	75	50	75	50	75	75	
	Number of key contacts acquired that are useful for in target position. Information gathered from candidate survey after rotation	Yes	High	High	Moderate	High	High	Moderate	Low	6875
			75	75	50	75	75	50	75	
	Agility at which a candidate move through the organization, evaluated by supervisor on a ratebla scale after each rotation	Yes	Very high	High	High	Very high	Very high	Moderate	Moderate	8250
			100	75	75	100	100	50	50	
	How independently can a candidate work on day-to-day task, evaluated on a scale by supervisor after rotation	Yes	Very low	High	Low	High	Low	Moderate	Moderate	4000
			0	75	25	75	25	50	50	
	Number of meetings on program planning and prefereneces	Yes	Low	High	Moderate	Very high	High	High	Moderate	6250
			25	75	50	100	75	75	50	
	Time between certainty where next assignment will be and prior assignment ending	Yes	Very low	High	Very low	High	Very low	Moderate	High	3000
			0	75	0	75	0	50	25	

Coordinator of the program:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Performance indicator	Number of business units rotated in	Yes	High	High	Low	Moderate	High	High	Low	6375
			75	75	25	50	75	75	75	
	Number of key projects worked on	Yes	High	Moderate	High	Moderate	High	High	High	6250
			75	50	75	50	75	75	25	
	Market understanding of a candidate, evaluated on a rateble scale by the supervisor after each rotation	Yes	High	Moderate	Moderate	Low	Moderate	Low	High	4625
			75	50	50	25	50	25	25	
	Best practice sharing/cross divisional thinking by candidate, evaluated on a rateble scale by supervisor after each rotation	Yes	Very High	Moderate	Moderate	Low	High	Low	High	5500
			100	50	50	25	75	25	25	
	Do candidates achieve their development targets	Yes	Moderate	High	High	High	High	Moderate	High	6250
			50	75	75	75	75	50	25	
	Number of different functions a candidate worked in	Yes	High	High	High	High	High	High	Low	7500
			75	75	75	75	75	75	75	
	Candidate worked in both existing and emerging markets (Yes/No)	Yes	Moderate	Very high	High	High	Low	High	Low	6625
			50	100	75	75	25	75	75	
	Number of joint faces for candidates	Yes	Moderate	Very high	High	Moderate	Moderate	High	Low	6625
			50	100	75	50	50	75	75	
	Number of trainee calls	Yes	High	High	High	High	Moderate	High	Low	7125
			75	75	75	75	50	75	75	
	Performance rating on rotation, evaluated on rateble scale by supervisor	Yes	Low	High	High	High	High	High	Low	6500
			25	75	75	75	75	75	75	

Performance indicator	Equal quality in applications worldwide/homogeneous applications	Yes	Low	Moderate	Moderate	Moderate	Low	Low	High	3625
			25	50	50	50	25	25	25	
	Does the candidate fulfill a target position after the program? (yes/no)	Yes	Low	High	High	High	High	High	Low	6500
			25	75	75	75	75	75	75	
	Job grade after program (per division)	Yes	Low	Moderate	High	Moderate	High	High	Low	5750
			25	50	75	50	75	75	75	
	Satisfaction rate of candidate with target position	Yes	High	Moderate	Moderate	Moderate	High	Moderate	Moderate	5875
			75	50	50	50	75	50	50	
	Number of regions worked in	Yes	High	High	High	High	High	High	Low	7500
			75	75	75	75	75	75	75	
	Number of regions worked with	Yes	High	High	High	High	High	High	Low	7500
			75	75	75	75	75	75	75	
	Did the candidate work regional as well as global? (Yes/No)	Yes	High	High	High	High	High	Moderate	High	6750
			75	75	75	75	75	50	25	
	Time spend abroad	Yes	High	High	High	High	High	High	Low	7500
			75	75	75	75	75	75	75	
	Number of key contacts acquired that are useful for in target position. Information gathered from candidate survey after rotation	Yes	High	Moderate	High	High	High	High	Low	7125
			75	50	75	75	75	75	75	
	Agility at which a candidate move through the organization, evaluated by supervisor on a ratebla scale after each rotation	Yes	High	Moderate	High	High	High	High	Low	7125
			75	50	75	75	75	75	75	
	How independently can a candidate work on day-to-day task, evaluated on a scale by supervisor after rotation	Yes	High	High	High	Moderate	High	Moderate	High	6375
			75	75	75	50	75	50	25	
	Number of meetings on program planning and prefereneces	Yes	High	High	Moderate	Moderate	High	Moderate	Moderate	6250
			75	75	50	50	75	50	50	
	Time between certainty where next assignment will be and prior assignment ending	Yes	High	Low	Moderate	High	Moderate	Low	High	5000
			75	25	50	75	50	25	25	

Supervisor of the program:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Performance indicator	Number of business units rotated in	Yes	High	Very high	Moderate	High	High	Moderate	Moderate	7000
			75	100	50	75	75	50	50	
	Number of key projects worked on	Yes	Moderate	High	High	High	Moderate	Moderate	Moderate	6125
			50	75	75	75	50	50	50	
	Market understanding of a candidate, evaluated on a rateble scale by the supervisor after each rotation	Yes	High	Moderate	High	High	High	High	Low	7125
			75	50	75	75	75	75	75	
	Best practice sharing/cross divisional thinking by candidate, evaluated on a rateble scale by supervisor after each rotation	Yes	Very high	Moderate	High	High	Very high	Moderate	High	7250
			100	50	75	75	100	50	25	
	Do candidates achieve their development targets	Yes	Moderate	High	High	High	Moderate	Very high	Low	6875
			50	75	75	75	50	100	75	
	Number of different functions a candidate worked in	Yes	Moderate	Very high	Moderate	Low	Moderate	High	Moderate	5250
			50	75	50	25	50	75	50	
	Candidate worked in both existing and emerging markets (Yes/No)	Yes	High	Very high	Low	Low	Moderate	Low	Very high	4750
			75	100	25	25	50	25	0	
	Number of joint faces for candidates	Yes	Moderate	High	High	Low	Moderate	Very high	Llow	6125
			50	75	75	25	50	100	75	
	Number of trainee calls	Yes	Moderate	Very high	High	Low	High	Very high	Very low	7125
			50	100	75	25	75	100	100	
	Performance rating on rotation, evaluated on rateble scale by supervisor	Yes	Moderate	High	High	High	High	Moderate	Low	6750
			50	75	75	75	75	50	75	

Performance indicator	Equal quality in applications worldwide/homogeneous applications	No	low	Very high	Moderate	Moderate	Moderate	High	Low	5750
			25	100	50	50	50	75	75	
	Does the candidate fulfill a target position after the program? (yes/no)	Yes	Very low	High	High	High	High	High	Low	6000
			0	75	75	75	75	75	75	
	Job grade after program (per division)	Yes	Low	Very high	High	High	Low	High	Moderate	5875
			25	100	75	75	25	75	50	
	Satisfaction rate of candidate with target position	Yes	Moderate	Low	Low	Low	Moderate	Low	Moderate	3625
			50	25	25	25	50	25	50	
	Number of regions worked in	Yes	High	Very high	High	High	High	High	Moderate	7625
			75	100	75	75	75	75	50	
	Number of regions worked with	Yes	High	Moderate	High	High	High	Moderate	Low	6875
			75	50	75	75	75	50	75	
	Did the candidate work regional as well as global? (Yes/No)	Yes	High	High	High	Moderate	High	Moderate	Moderate	6625
			75	75	75	50	75	50	50	
	Time spend abroad	Yes	Moderate	Very high	Moderate	Moderate	Moderate	Very high	Moderate	6250
			50	100	50	50	50	100	50	
	Number of key contacts acquired that are useful for in target position. Information gathered from candidate survey after rotation	Yes	High	High	Moderate	High	Moderate	Moderate	Very low	6750
			75	75	50	75	50	50	100	
	Agility at which a candidate move through the organization, evaluated by supervisor on a ratebla scale after each rotation	Yes	Very high	Moderate	Moderate	High	High	Low	Low	6750
			100	50	50	75	75	25	75	
	How independently can a candidate work on day-to-day task, evaluated on a scale by supervisor after rotation	Yes	Very high	Moderate	High	High	High	Moderate	Low	7375
			100	50	75	75	75	50	75	
	Number of meetings on program planning and prefereneces	Yes	Very low	Very high	Low	Moderate	Low	High	Low	4500
			0	100	25	50	25	75	75	
	Time between certainty where next assignment will be and prior assignment ending	Yes	Low	Very high	Low	Low	Low	High	Low	4625
			25	100	25	25	25	75	75	

Candidate:

		Criteria								Final score
		Corporate culture fit (Yes/No)	Relevance to cross BU cooperation	Measurable	Realistic/result oriented	Time Specific	Linked to strategy	Simple	Amount of resources needed	
	Weight	-	20	15	15	15	15	10	10	
Performance indicator	Number of business units rotated in	Yes	Very high	Very high	High	High	High	High	Low	8375
			100	100	75	75	75	75	75	
	Number of key projects worked on	Yes	Very high	Very high	Very high	Very high	High	Moderate	Moderate	8625
			100	100	100	100	75	50	50	
	Market understanding of a candidate, evaluated on a rateble scale by the supervisor after each rotation	Yes	Very high	Moderate	Moderate	High	High	Moderate	Moderate	6750
			100	50	50	75	75	50	50	
	Best practice sharing/cross divisional thinking by candidate, evaluated on a rateble scale by supervisor after each rotation	Yes	Very high	Very high	Very high	High	High	Moderate	Low	8000
			100	100	100	75	75	50	25	
	Do candidates achieve their development targets	Yes	Very high	Very high	High	Moderate	Very high	Moderate	Moderate	7875
			100	100	75	50	100	50	50	
	Number of different functions a candidate worked in	Yes	High	Very high	High	High	High	Moderate	Moderate	7375
			75	100	75	75	75	50	50	
	Candidate worked in both existing and emerging markets (Yes/No)	Yes	Moderate	High	Moderate	Moderate	High	Moderate	Moderate	5750
			50	75	50	50	75	50	50	
	Number of joint faces for candidates	Yes	High	High	High	High	Very high	Moderate	Low	7625
			75	75	75	75	100	50	75	
	Number of trainee calls	Yes	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Low	5250
			50	50	50	50	50	50	75	
	Performance rating on rotation, evaluated on rateble scale by supervisor	Yes	High	High	High	High	Moderate	High	Low	7125
			75	75	75	75	50	75	75	

Performance indicator	Equal quality in applications worldwide/homogeneous applications	No	Low	Moderate	Moderate	Low	Low	Moderate	Low	4000
			25	50	50	25	25	50	75	
	Does the candidate fulfill a target position after the program? (Yes/No)	Yes	High	High	High	High	High	High	Low	7500
			75	75	75	75	75	75	75	
	Job grade after program (per division)	Yes	Moderate	High	High	High	Low	High	Low	6250
			50	75	75	75	25	75	75	
	Satisfaction rate of candidate with target position	Yes	High	High	High	High	High	High	Moderate	7250
			75	75	75	75	75	75	50	
	Number of regions worked in	Yes	High	High	High	High	Moderate	Moderate	Moderate	6625
			75	75	75	75	50	50	50	
	Number of regions worked with	Yes	High	High	High	High	Moderate	Moderate	Low	6875
			75	75	75	75	50	50	75	
	Did the candidate work regional as well as global? (Yes/No)	Yes	High	High	High	High	High	High	Moderate	7250
			75	75	75	75	75	75	50	
	Time spend abroad	Yes	High	High	High	High	High	High	High	7000
			75	75	75	75	75	75	25	
	Number of key contacts acquired that are useful for in target position. Information gathered from candidate survey after rotation	Yes	Very high	Very high	Very high	Moderate	High	Moderate	Low	8125
			100	100	100	50	75	50	75	
	Agility at which a candidate move through the organization, evaluated by supervisor on a ratebla scale after each rotation	Yes	High	High	High	High	High	High	Moderate	7250
			75	75	75	75	75	75	50	
	How independently can a candidate work on day-to-day task, evaluated on a scale by supervisor after rotation	Yes	High	High	High	High	High	High	Moderate	7250
			75	75	75	75	75	75	50	
	Number of meetings on program planning and prefereneces	Yes	Moderate	High	Moderate	Moderate	Moderate	Moderate	Low	5625
			50	75	50	50	50	50	75	
	Time between certainty where next assignment will be and prior assignment ending	Yes	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate	5000
			50	50	50	50	50	50	50	

A.3 Prioritization based on MCDM – Result indicators

		Respondent					
Position	Result Indicator	Global Automotive steering committee delegate	Coordinator of the program	Supervisor of the program	Candidate	Averaged result	Standard deviation
1	Number of candidates in the program	5750	7625	6750	7875	7000	834
2	Number of times candidates move between divisions in their career.	6000	7875	7750	6125	6938	877
3	Number of qualified applicants. Qualified means getting through the shared service center.	7125	7125	6375	6500	6781	347
4	Retention rate of candidates	4125	6875	6250	8250	6375	1487
5	Number or nominations for a company talent pool	5250	7000	5625	6250	6031	664

6	Number of cross divisional projects worked on by candidate post program	3750	6500	5500	7250	5750	1311
7	Number of international delegations of a candidate after program	5250	6500	5000	6000	5688	596
8	Career path development of candidate over time based on promotion	5500	6875	3500	6875	5688	1382
9	Post program performance rating, based on company's performance scale	3025	7625	5625	6125	5600	1659
10	Number of cross divisional meetings non candidates	2250	5875	5750	5875	4938	1552

A.4 Prioritization based on MCDM – Performance indicators

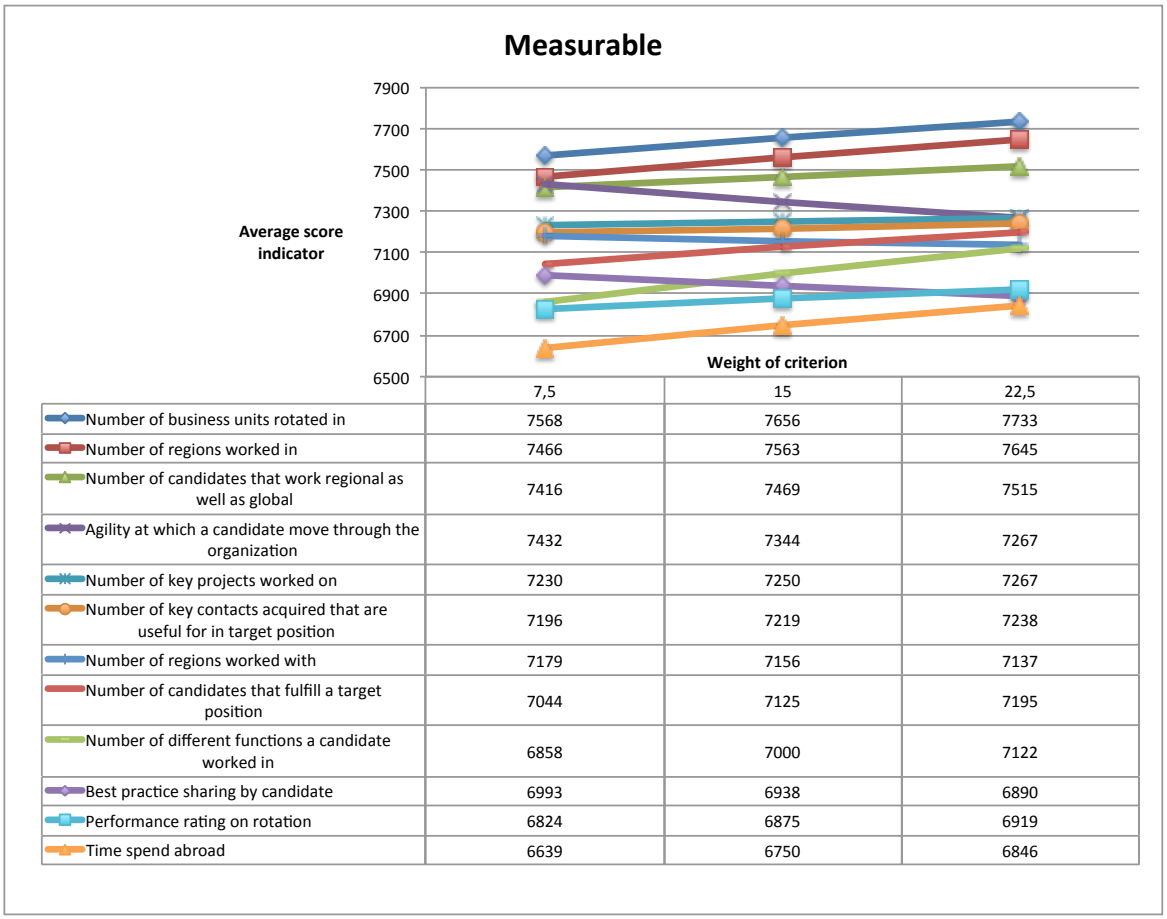
		Respondent					
Position	Performance Indicator	Global Automotive steering committee delegate	Coordinator of the program	Supervisor of the program	Candidate	Averaged result	Standard deviation
1	Number of business units rotated in	8875	6375	7000	8375	7656	1009
2	Number of regions worked in	8500	7500	7625	6625	7563	664
3	Did the candidate work regional as well as global? (Yes/No)	9250	6750	6625	7250	7469	1055
4	Agility at which a candidate move through the organization, evaluated by supervisor on a ratebla scale after each rotation	8250	7125	6750	7250	7344	555

5	Number of key projects worked on	8000	6250	6125	8625	7250	1086
6	Number of key contacts acquired that are useful for in target position. Information gathered from candidate survey after rotation	6875	7125	6750	8125	7219	540
7	Number of regions worked with	7375	7500	6875	6875	7156	285
8	Does the candidate fulfill a target position after the program? (yes/no)	8500	6500	6000	7500	7125	960
9	Number of different functions a candidate worked in	7875	7500	5250	7375	7000	1027
10	Best practice sharing/cross divisional thinking by candidate, evaluated on a rateble scale by supervisor after each rotation	7000	5500	7250	8000	6938	908
11	Performance rating on rotation, evaluated on rateble scale by supervisor	7125	6500	6750	7125	6875	265

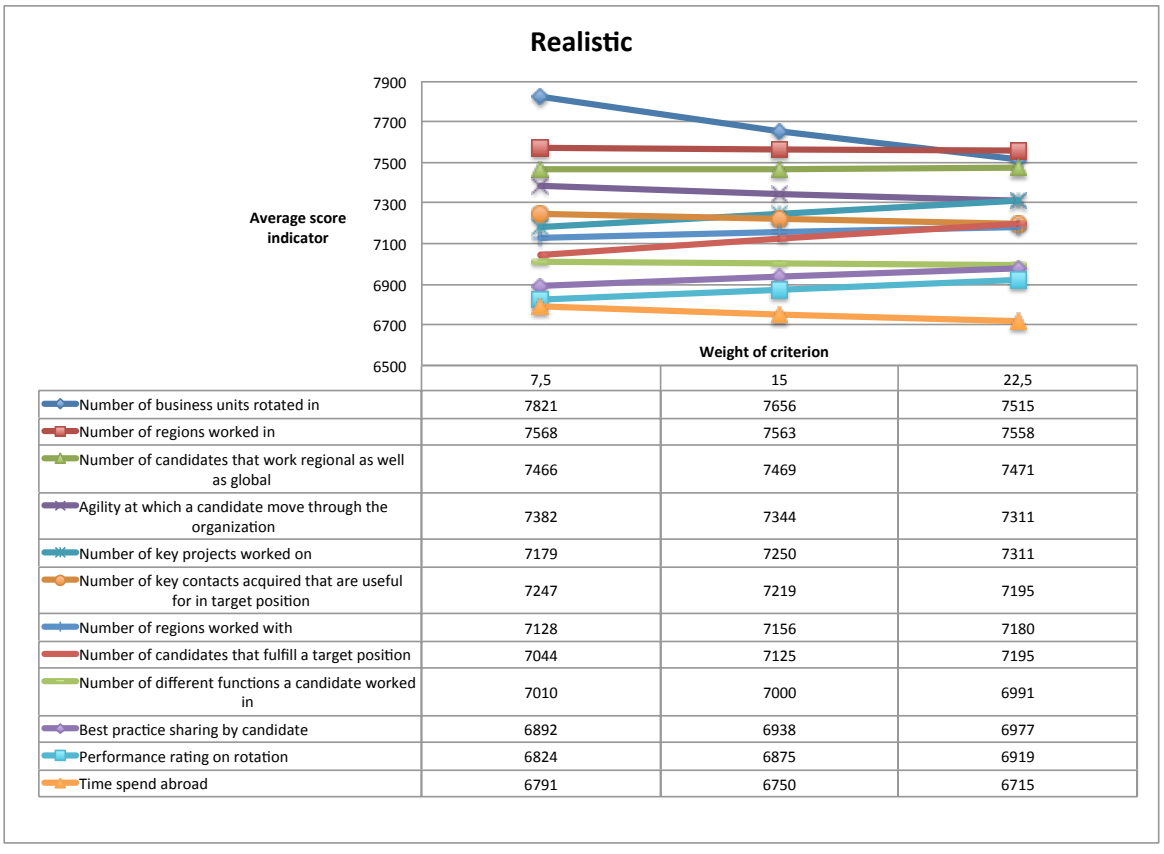
12	Time spend abroad	6250	7500	6250	7000	6750	530
13	Do candidates achieve their development targets	5625	6250	6875	7875	6656	831
14	Market understanding of a candidate, evaluated on a rateble scale by the supervisor after each rotation	7375	4625	7125	6750	6469	1087
15	Number of joint faces for candidates	5375	6625	6125	7625	6438	817
16	Number of trainee calls	5750	7125	7125	5250	6313	832
17	How independently can a candidate work on day-to-day task, evaluated on a scale by supervisor after rotation	4000	6375	7375	7250	6250	1355
18	Candidate worked in both existing and emerging markets (Yes/No)	6625	6625	4750	5750	5938	773

19	Job grade after program (per division)	5000	5750	5875	6250	5719	454
20	Number of meetings on program planning and prefereneces	6250	6250	4500	5625	5656	715
21	Satisfaction rate of candidate with target position	5375	5875	3625	7250	5531	1297
22	Equal quality in applicationsworldwide/homogeneous applications	6250	3625	5750	4000	4906	1116
23	Time between certainty where next assignment will be and prior assignment ending	3000	5000	4625	5000	4406	826

A.5 Sensitivity Analysis

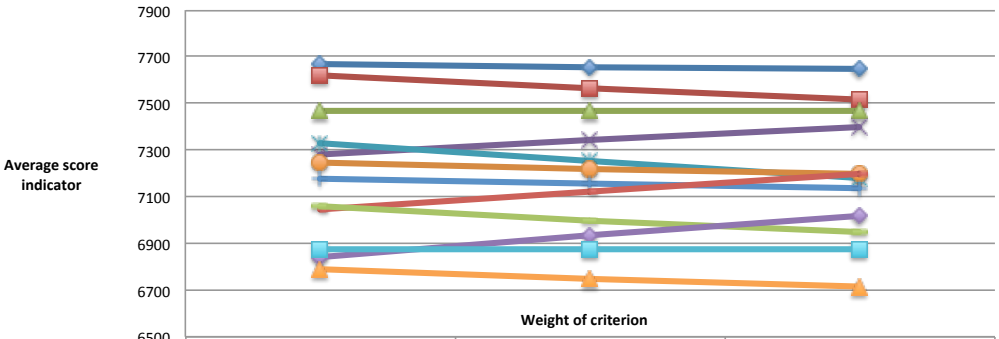


	7,5	15	22,5
Number of business units rotated in	7568	7656	7733
Number of regions worked in	7466	7563	7645
Number of candidates that work regional as well as global	7416	7469	7515
Agility at which a candidate move through the organization	7432	7344	7267
Number of key projects worked on	7230	7250	7267
Number of key contacts acquired that are useful for in target position	7196	7219	7238
Number of regions worked with	7179	7156	7137
Number of candidates that fulfill a target position	7044	7125	7195
Number of different functions a candidate worked in	6858	7000	7122
Best practice sharing by candidate	6993	6938	6890
Performance rating on rotation	6824	6875	6919
Time spend abroad	6639	6750	6846



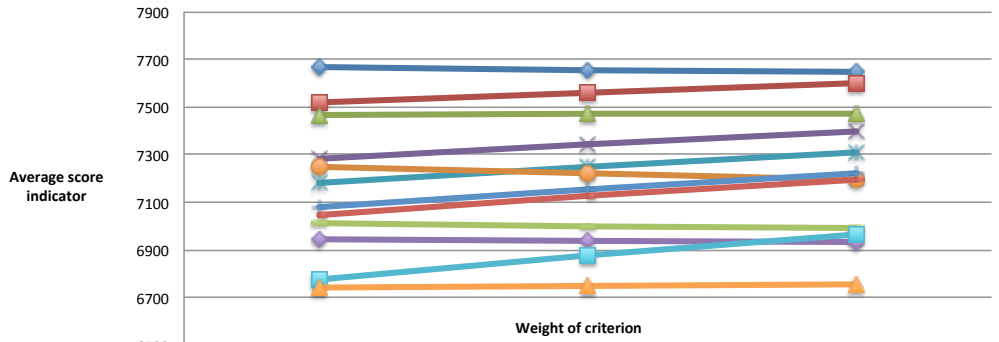
	7,5	15	22,5
Number of business units rotated in	7821	7656	7515
Number of regions worked in	7568	7563	7558
Number of candidates that work regional as well as global	7466	7469	7471
Agility at which a candidate move through the organization	7382	7344	7311
Number of key projects worked on	7179	7250	7311
Number of key contacts acquired that are useful for in target position	7247	7219	7195
Number of regions worked with	7128	7156	7180
Number of candidates that fulfill a target position	7044	7125	7195
Number of different functions a candidate worked in	7010	7000	6991
Best practice sharing by candidate	6892	6938	6977
Performance rating on rotation	6824	6875	6919
Time spend abroad	6791	6750	6715

Linked to strategy



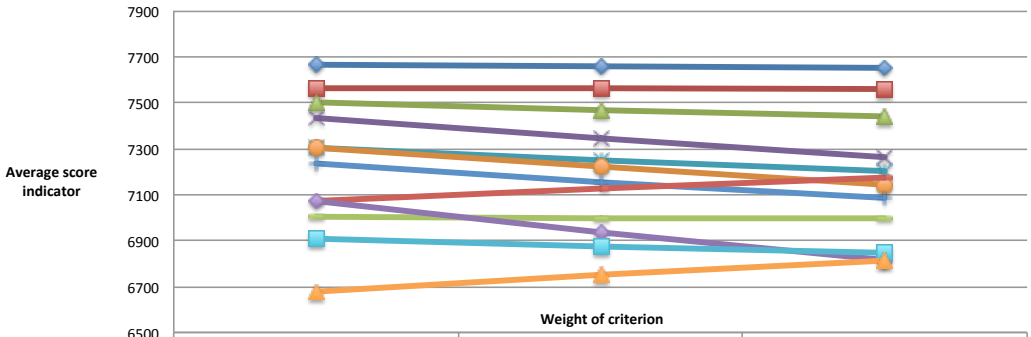
	7,5	15	22,5
Number of business units rotated in	7669	7656	7645
Number of regions worked in	7618	7563	7515
Number of candidates that work regional as well as global	7466	7469	7471
Agility at which a candidate move through the organization	7280	7344	7398
Number of key projects worked on	7331	7250	7180
Number of key contacts acquired that are useful for in target position	7247	7219	7195
Number of regions worked with	7179	7156	7137
Number of candidates that fulfill a target position	7044	7125	7195
Number of different functions a candidate worked in	7061	7000	6948
Best practice sharing by candidate	6841	6938	7020
Performance rating on rotation	6875	6875	6875
Time spend abroad	6791	6750	6715

Time specific



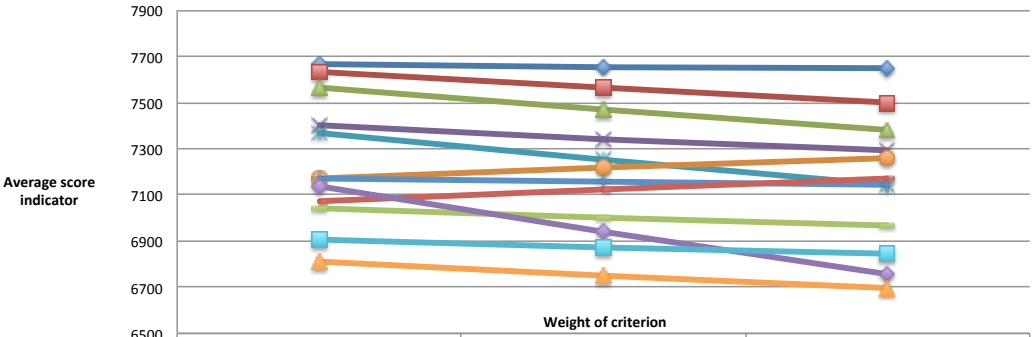
	7,5	15	22,5
Number of business units rotated in	7669	7656	7645
Number of regions worked in	7517	7563	7602
Number of candidates that work regional as well as global	7466	7469	7471
Agility at which a candidate move through the organization	7280	7344	7398
Number of key projects worked on	7179	7250	7311
Number of key contacts acquired that are useful for in target position	7247	7219	7195
Number of regions worked with	7078	7156	7224
Number of candidates that fulfill a target position	7044	7125	7195
Number of different functions a candidate worked in	7010	7000	6991
Best practice sharing by candidate	6943	6938	6933
Performance rating on rotation	6774	6875	6962
Time spend abroad	6740	6750	6759

Simple



	5	10	15
Number of business units rotated in	7664	7656	7649
Number of regions worked in	7566	7563	7560
Number of candidates that work regional as well as global	7500	7469	7440
Agility at which a candidate move through the organization	7434	7344	7262
Number of key projects worked on	7303	7250	7202
Number of key contacts acquired that are useful for in target position	7303	7219	7143
Number of regions worked with	7237	7156	7083
Number of candidates that fulfill a target position	7072	7125	7173
Number of different functions a candidate worked in	7007	7000	6994
Best practice sharing by candidate	7072	6938	6815
Performance rating on rotation	6908	6875	6845
Time spend abroad	6678	6750	6815

Amount of resources needed



	5	10	15
Number of business units rotated in	7664	7656	7649
Number of regions worked in	7632	7563	7500
Number of candidates that work regional as well as global	7566	7469	7381
Agility at which a candidate move through the organization	7401	7344	7292
Number of key projects worked on	7368	7250	7143
Number of key contacts acquired that are useful for in target position	7171	7219	7262
Number of regions worked with	7171	7156	7143
Number of candidates that fulfill a target position	7072	7125	7173
Number of different functions a candidate worked in	7039	7000	6964
Best practice sharing by candidate	7138	6938	6756
Performance rating on rotation	6908	6875	6845
Time spend abroad	6809	6750	6696

B. Additional information

B.1 Multi criteria decision making process

Process:

1. Determine exclusion and evaluation criteria
2. Assign weights to evaluation criteria
3. Weigh indicators based on determined criteria
4. Calculate final score per indicator
5. Choose most viable indicators

1. Exclusion Criteria

Corporate culture fit: Does the indicator fit too the corporate culture of the company?
Measurement: Yes/No. If the indicator does not fit with the corporate culture, the indicator will not be considered and is excluded.

2. Evaluation Criteria

Relevance to cross BU cooperation: How relevant is the proposed indicator for (strengthening) cross BU cooperation?
Measurement: very low, low, moderate, high, very high. Proposed indicators with the highest relatedness to cross BU cooperation receive the highest amount of points (100), indicators with the lowest relatedness to cross BU cooperation receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

Measurable: Is the proposed indicator easily measurable?
Measurement: very low, low, moderate, high, very high. Proposed indicators that are very easy to measure receive the highest amount of points (100), indicators that are extremely difficult to measure receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.
Realistic: Is the proposed indicator realistic for the program?
Measurement: very low, low, moderate, high, very high. Proposed indicators that are very realistic for the program receive the highest amount of points (100), indicators that are very unrealistic receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

Time specific: Does the indicator reflect a specific time indication of measurement?
Measurement: very low, low, moderate, high, very high. Proposed indicators that have a very distinct time specification receive the highest amount of points (100), indicators

that are very unspecific in their time indication receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

Linked to the strategy: Is the proposed indicator linked to the strategy of the Inside Automotive program?
Measurement: very low, low, moderate, high, very high. Proposed indicators that are highly linked to the strategic objectives of the program receive the highest amount of points (100), indicators that are very unrelated to the strategy for the program receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

Simple: Is the proposed indicator a simple indicator that can be easily adopted?
Measurement: very low, low, moderate, high, very high. Proposed indicators that are very simple receive the highest amount of points (100), indicators that are very complicated receive the lowest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

Amount of resources needed: Are there a high amount of resources needed to implement and measure the proposed indicator?
Measurement: very low, low, moderate, high, very high. Proposed indicators that require a very low amount of resource to use receive the highest amount of points (100), indicators that are very resource intensive receive the highest amount of point (0), all other solutions receive points according to equal distribution and range within 0 and 100 points.

3. Weight

Criteria	Weight	Justification
Relevance to cross BU cooperation	20	As the promotion of cross BU cooperation is the main objective of the program, this criterion is very important.
Measurable	15	An indicator needs to be measurable to reflect the effectiveness of the program and is therefore important.
Realistic	15	A proposed indicator needs to be realistic to implement in the corporate environment and is therefore important.
Time Specific	15	Good indicators indicate a timeframe for its measurement, which makes this criterion important.

Linked to strategy	15	If an indicator is not related to the strategy of the program, it is considered irrelevant. This relatedness is therefore important.
Simple	10	A simple indicator is easier to implement and therefore relevant.
Amount of resources needed	10	Resource to instate and use an indicator need to be present and are therefore relevant.

4. Calculations and final scores

For the calculation and final scores per indicator using the MCDM method, please see appendix A.

B.2 Glossary

BU	=	Business unit, same as operational division
CC	=	Division Catalysts
EC	=	Division Coatings
EV	=	Division Fuel and Lubricant Solutions
GASC	=	Global Automotive Steering Committee
HR	=	Human Resources
HR-BP	=	Human resource business partner
KPI	=	Key performance indicator
KRI	=	Key Result indicator
MCDM	=	Multi criteria decision-making
OD	=	Operational division, same as business unit
PI	=	Performance indicator
PM	=	Division Performance Materials