PROJECT HALF DOUBLE

Project Half Double

PRELIMINARY RESULTS FOR PHASE 1, JUNE 2016

INDUSTRIENS FOND FREMMER DANSK KONKURRENCEEVNE
The Danish Industry Foundation

AARHUS UNIVERSITET

DTU Danmarks Tekniske Universitet

IMPLEMENT CONSULTING GROUP

ISBN: 978-87-7507-427-3
DOI: 10.7146/aul.278.193

CONTENTS

ACKNOWLEDGEMENTS

The authors would like to thank the Danish Industry Foundation for funding this work and acknowledge contributions from Danish organizations involved in Project Half Double.

Authors:

Michael Ehlers	Implement Consulting Group
Karoline Thorp Adland	Implement Consulting Group
Nicolai Elborough Boston	Implement Consulting Group
Christoffer Bækgaard Ludwig	Implement Consulting Group
Martin Malthe Borch	Implement Consulting Group
David Barnekow Erichsen	Implement Consulting Group
Christian Gyldahl	Implement Consulting Group
Sune Edmund Pedersen	Implement Consulting Group
Sara Grex	Technical University of Denmark
Signe Hedeboe Frederiksen	Aarhus University
Per Svejvig	Aarhus University

Reviewers:

Rune Højsholt	Grundfos
Flemming Hedegaard	Grundfos
Morten Lund Overgaard	Siemens Wind Power
Anders Helbo Mortensen	Siemens Wind Power
Birgitte Fogelberg Sommer	Lantmännen Unibake
Christina Sejr Pedersen	Lantmännen Unibake
Helle Haugaard Frostholm	Novo Nordisk
Erik Johnsen Vinther	Novo Nordisk
Inger Fabricius Madsen	Coloplast
Gitte Winkel Missel	Coloplast
Lea Koefoed Lauta	GN Audio
Palle Riismøller	GN Audio
Jacob Kjeldgaard Olsen	VELUX
Mikael Bonde	VELUX
Joana Geraldi	Technical University of Denmark
Gabriela Garza de Linde	Formerly Copenhagen Business School
Jeppe Agger Nielsen	Aarhus University

Responsible editorial team:

Sara Grex	Technical University of Denmark
Signe Hedeboe Frederiksen	Aarhus University
Per Svejvig	Aarhus University

EXECUTIVE SUMMARY

Project Half Double has a clear mission to succeed in finding a project methodology that can increase the success rate of our projects while increasing the speed at which we generate new ideas and develop new products and services. Chaos and complexity should be seen as a basic condition and as an opportunity rather than a threat and a risk. We are convinced that by doing so, we can strengthen Denmark's competitiveness and play an important role in the battle for jobs and future welfare.

The overall goal is to deliver "*projects in half the time with double the impact*", where projects in half the time should be understood as half the time to impact (benefit realisation, effect is achieved) and not as half the time for project execution.

The purpose of Project Half Double is to improve Danish industrial competitiveness by radically increasing the pace and impact of the development and innovation activities carried out within the framework of the projects.

The formal part of Project Half Double was initiated in June 2015. We started out by developing, refining and testing the Half Double methodology on seven pilot projects in the first phase of the project, which will end June 2016.

The current status of responding to the above overall Project Half Double goal for the seven pilot projects can be summarised as follows:

- The Lantmännen Unibake pilot project was able to launch the first stores after 5 months, which is considerably shorter lead time than comparable reference projects, which have had a lead time of 10 months or more. This is in line with the overall goal of Project Half Double of delivering impact faster.
- Four pilot projects have the potential to deliver impact faster, but it is too early to evaluate. Some results might be evaluated in the second half of 2016, while other results take longer to evaluate (Coloplast, Novo Nordisk, GN Audio and VELUX).
- Two pilot projects will probably not be able to deliver impact faster, although it is too early to evaluate them. The evaluation of these pilot projects takes place over a longer period of time as it will take years before many of the key performance indicators associated with them can be evaluated (Grundfos and Siemens Wind Power).

In addition to the current status of delivering impact faster for the seven pilot projects, it is important to highlight that Project Half Double phase 1 has planted many seeds in the pilot organisations concerning project methodology and beyond. The many learning points from each pilot project show that Project Half Double has left its clear footprint in the pilot organisations, and that the Half Double methodology has evolved and developed very much during Project Half Double phase 1.

The specific achievement of each pilot project is further elaborated below:

- **The Lantmännen Unibake pilot project** was able to launch the first stores after 5 months, which is considerably shorter lead time than comparable reference projects, which have had a lead time of 10 months or more. Furthermore, the sales potential was realised in the project execution and with an average pulse check satisfaction of 3.3 on a scale from 1-5.
- **The Coloplast pilot project** is expected to save a potential cost of DKK 1 million due to early insight and collaboration by front-loading. Risks and problems have been mapped on three

levels of the project to ease execution. Furthermore, there is a high degree of voluntary participation in the weekly and monthly co-ordination meetings.

- **The Novo Nordisk pilot project** is expected to reduce time to impact considerably by changing go live from February 2017 to June and September 2016. A new approach to variant planning will be implemented. A reduction of number of hours spent on error corrections per week is expected. An average pulse check satisfaction (from the core team) of 4,3 on a 1-5 scale
- **The GN Audio pilot project** is expected to reduce time to impact by 66% in relation to introducing new digital market places, which means going from 9 to 3 months to deliver a new digital market place. GN Audio also expects to deliver more accurate and channel-specific content with an increase from 50% to 85%.
- **The VELUX pilot project** has reduced lead time to change organisational behaviour from September 2016 to March 2016 by moving from a report-driven approach to a proactive pilot project approach.
- **The Grundfos pilot project** has not directly been able to reduce time to impact, but has achieved other important results such as improving the transition readiness assessment from 63% to 87% and ensuring a relatively high level of stakeholder engagement expressed by a pulse check between 3.5 and 4 on a scale from 1-5.
- **The Siemens Wind Power pilot project** has not been able to reduce time to impact, but to retain the planned lead time from "prototype ready" to "series production ready". This stage is usually delayed according to Siemens Wind Power. The project was awarded "Turbine of the Year", a central contract of 100+ turbines was won, and the average pulse check is 3.6 on a scale from 1-5.

As shown above, the application of the Half Double methodology is promising, although we need to see the expected results turn into actuals over time.

As described, there is much learning across the pilot projects, which is summarised below:

- The Half Double methodology must be applied at the early stage of the project to reach the full potential
- Managerial willingness to work differently is crucial to creating impact – the project cannot kill idiocracy alone
- Local translation in a reflective practice is the key to Half Double implementation and results
- The Half Double sweet spot is with transformation and innovation projects
- Half Double always leaves a remarkable footprint in the organisation – some change more than others

To sum up, Project Half Double can be described as being in good shape and ready to take off for the next phase.

INTRODUCTION

The management of projects is of considerable economic importance and dramatic growth has occurred in project work across different sectors, industries and countries (Turner et al. 2010). Projects have become an important way to structure work in most organizations and constitute one of the most important organizational developments (Winter et al. 2006). Despite the substantial increase in the importance and propagation of projects, the conceptual base of models and methodologies for project management has remained fairly static in the past (Koskela and Howell 2002) and has long been dominated by a technocratic and rationalistic viewpoint (Morris et al. 2011) – denoted classical project management (Svejvig and Andersen 2015) – which has received substantial criticism for its shortcomings in practice (Koskela and Howell 2002; Sahlin-Andersson and Söderholm 2002). The Half Double thinking responds to this critique by offering a novel and radical methodology to manage projects in a different way as outlined in this report.

The Half Double journey: Project Half Double has a clear mission. We shall succeed in finding a project methodology that can increase the success rate of our projects while increasing the speed at which we develop new products and services. We are convinced that we by doing so can strengthen the competitiveness of Denmark and play an important role in the battle for jobs and future welfare. The overall goal is to deliver "*Projects in half the time with double the impact*" where projects in half the time should be understood as half the time to impact (benefit realization, effect is achieved) and not as half the time for project execution.

There is a need for radical thinking in regard to how we generate new ideas, products and services. Chaos and complexity should be seen as a basic condition and hopefully also as an opportunity rather than a threat and a risk that should be eliminated.

The purpose of Project Half Double is to improve Danish industrial competitiveness by radically increasing the pace and impact of the development and innovation activities carried out within the framework of projects.

Our challenge is essentially to conceptualize a project management methodology through research and collection of best practice approaches. In addition, we aim to trial the methodology in real-world pilot projects and gather learning from these experiences - and in the process, get a community of trendsetting professionals involved in this movement.

The journey: It all began in May 2013, when we asked ourselves: How do we create a new and radical project paradigm that can create several successful projects? The challenge is well-known in many Danish organizations. Today we are a movement of hundreds of passionate project people, and it grows larger and larger every day.

The idea behind Project Half Double is to create a simple and effective project methodology that can spread like wildfire; from one person to another; from one project to another; from one company to another; from one industry to another; from one nation to another.

The formal part of Project Half Double was initiated in June 2015. We started out by developing, refining and proving that the method is simple and effective on seven pilot projects in the first phase of the project - up until the summer of 2016.

Subsequently we will launch another ten pilot projects that will run until April 2017. In parallel, we focus on building a community and spreading the concept through conferences, open courses

and knowledge sharing between partnering organizations.

We aim for the ripple effect, and a movement that has its own life – in favor of Danish competitiveness.

To summarize, the formal part of Project Half Double is divided into two phases where phase 1 has taken place from June 2015 to June 2016, and phase 2 will take place from July 2016 to April 2017.

The consortium: We are a highly visionary group consisting of a leading project management consultancy, three universities, seven pilot project partners in phase 1 and a community of several hundreds of passionate project management practitioners. The groundwork for this community was laid in 2014 and in 2015.

The Danish Industry Foundation, an independent philanthropic foundation, is supporting the project financially with a contribution amounting to DKK 13.8 million.

The consortium works closely with seven pilot project companies in phase 1, where the new radical methods are being trialed and evaluated in real business projects.

Implement Consulting Group is leading the project as well as establishing and managing the collaboration with the pilot project companies in terms of the methodology. Aarhus University and the Technical University of Denmark are evaluating the impact of the pilot projects and legitimizing the methodology in academia.

About the report: The purpose of this report is to briefly present preliminary results from Project Half Double project phase 1 finishing June 2016. The target group for this report is practitioners in Danish industry and society in general.

The report has been prepared by Implement Consulting Group, Aarhus University and the Technical University of Denmark. The report has been reviewed by pilot organizations and external reviewers. The research team is the responsible editorial team for the report.

This is version 1 of the report, and updates of the report will follow - the release schedule is not finally settled, but the draft plan is a version 2 by the end of 2016 and a version 3 in mid-year 2017 after finalizing Project Half Double phase 2. The report has been prepared from April to June 2016, which means that late data about pilot projects from June 2016 is not included in this report.

The report is structured as follows: The next chapter presents the Half Double Methodology and the generic implementation approach. This is followed by seven chapters, each covering preliminary results and learnings from the pilot projects. The report concludes with cross-case summary, challenges and conclusion.

Appendices include description of the research process as well as limitations to the results presented.

PROJECT HALF DOUBLE

The Half Double Methodology

Project Half Double was initiated with a clear mission. We were to succeed in finding a project methodology that could increase the success rate of projects while increasing the speed at which we develop new products and services. We were convinced that we by doing so could strengthen Danish competitiveness and play an important role in the battle for jobs and future welfare.

Our challenge was essentially to conceptualize a project management methodology through research and collection of best practice approaches. A project management approach that is based on actual human behavior, unpredictability and complexity rather than assumptions of rationality and predictability. Acknowledging that times have changed, that the external environment is becoming more and more turbulent, that performance requirements are rising and that there is an increasing need to accept continuous change and chaos as fundamental premises. We were not rejecting the classic view of project management. Rather, we built upon it and adapted it where most needed in relation to the situation at hand.

We aimed to experiment with new principles and methods in real-world pilot projects and gather learning from these experiences - and in the process, get a community of trendsetting professionals to help co-create the methodology.

One year has passed, and we can now present the Half Double Methodology in a “ready to go live” version. A methodology demanding a strong focus on three core elements that, combined, reduce time to impact, keep the project in motion and promote the leadership of people rather than the management of technical deliverables. Each core element puts forward a principle – a non-negotiable standard – for how we are to lead our projects. Each principle is directly linked to a method – a proposed approach, procedure or process for bringing the principles to life in practice. And each method is supported by a tool – a specific instrument – aimed to ease implementation.

The core elements, principles, methods and tools are presented in their current form in Figure 1 (next page). Bear in mind that we emphasize the evolving nature of the concept as the methodology is in continuous development - never fully set in stone. Rather, it is constantly inspired by – and adapted to new insights and learning from practice and from our community of engaged project practitioners.

The concept takes us from the core – the non-negotiable standards we bring into all projects – to the local translation wherein we adapt the methods and tools to fit local cultures and practices. The further we move away from the core elements and into the outer circles, the more flexible we become in terms of what approach and tools to apply. We propose that each project applies an Impact Case to drive business impact and behavioral change, but remains open to the idea of applying the organization’s own Business Case template if it is the preferred tool – however it must embrace behavioral change to be applicable. Hence, the actual implementation and adaption will require reflection and translation to work in the local context. Each of the three core elements and their associated principles, methods and tools are briefly elaborated on in the below section.

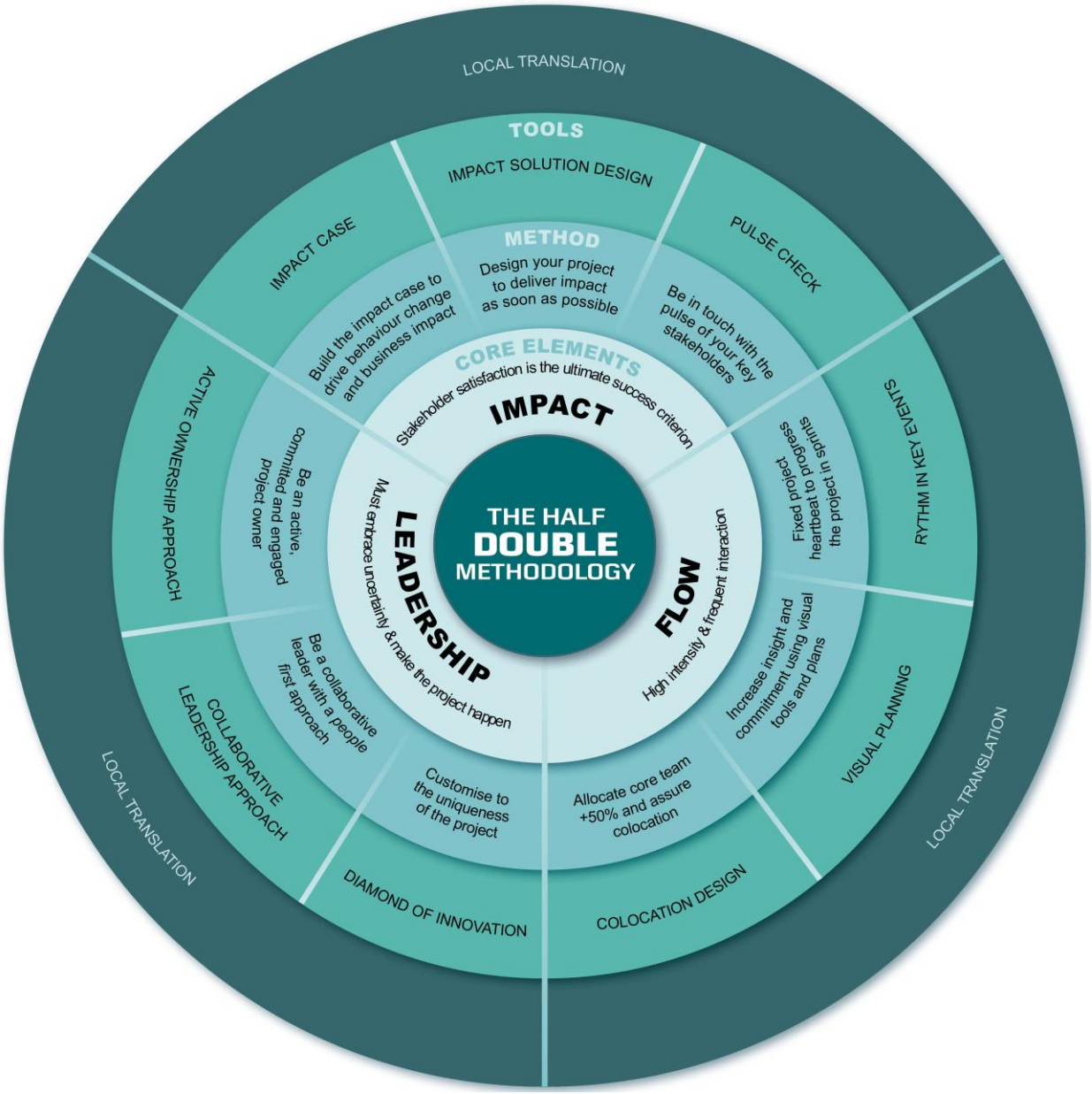


Figure 1: The Half Double Methodology - unfolded

CORE ELEMENT 1: IMPACT

Principle: Stakeholder satisfaction is the ultimate success criterion.

No project exists for the project's own sake. All projects are initiated to create impact. Identifying and focusing on impact right from the start is the key. Impact changes the dialogue from being centered on technical deliverables to how to ensure stakeholder satisfaction throughout the project's lifecycle. The Half Double Methodology

puts forward the following methods and tools to realize impact in practice:

- **Impact method 1: Use the impact case to drive behavioral change and business impact.** Projects should be driven by impact rather than deliverables. Together with key stakeholders and subject matter experts, we therefore formulate an impact case that lists, prioritizes and visualizes the business and behavioral impact the project is set out to create. These impacts are broken down into selected KPIs to navigate the project going forward. The impact case and KPIs are used to follow up on project progress and to continuously adapt plans and efforts to enhance stakeholder satisfaction. **Tool**: The Impact Case and impact KPI tracking.
- **Impact method 2: Design your project to deliver impact as soon as possible with end-users close to the solution.** We need to move away from the premise that projects only generate value at the very end of their lifespan. We need to create early insights through fast prototyping and in the process generate impact – faster. As soon as objectives and key impacts are identified, the project is ideated and analyzed to define the fundamental idea. The fundamental idea summarizes the actual solution design, the approach to realize impact as soon as possible, how to frontload knowledge and involve end-users right from the start, and how to capture learning and insights early and throughout the project duration. Key learning and insights that allow us to adapt the approach to the ever-changing environment and the thoughts and feelings of our key stakeholders. The core idea is the foundation for the impact solution design – an overall map outlining the project's impact realization journey toward its conclusion date, which combines commercial, behavioral and technical deliverables.
  Tool: The Impact Solution Design.
- **Impact method 3: Be in touch with the pulse of your key stakeholders on a monthly basis.** Acknowledging and working actively with the dynamic nature of projects are key to succeed. Interests and focus change rapidly, and we need to gain insights and facilitate a dialog amongst the right people on an ongoing basis to ensure engagement and continuous focus on the right impact. As part of the effort to gain that insight, we identify the project's key stakeholders and once a month distribute an electronic questionnaire consisting of six questions set out to measure the stakeholder's "pulse"; e.g. "Are you confident that your current work is creating impact for the project?" The pulse check report provides a snapshot of each of the stakeholders' experience of the project. This insight functions as a basis for a constructive dialog regarding how to lead the project going forward to leverage impact, ensure energizing working conditions and personal development. **Tool:** The Pulse Check.

CORE ELEMENT 2: FLOW

Principle: *High intensity and frequent interaction to ensure continuous project progression.* We want to create flow in the project. The whole project group should be busy at the same time – not just selected individuals in the project team. However, important project working hours are often lost in coordination, retrospective project reporting and shifts between multiple projects running simultaneously. We can do better. By focusing on the flow of the project, we are using simple methods to intensify project work, ensure the project progress every week and deliver results - faster. The Half Double Methodology puts forward the following methods and tools to enhance flow in practice:

- **Flow method 1: Allocate team +50 % and assure colocation. Reduce complexity in time and space to free up time to solve complex problems.** At a portfolio level there is a best

practice approach aimed at ensuring "short and fat" projects – meaning fewer projects with a more intense resource allocation. The approach has been proven to reduce lead time drastically. Together with the project owner, project leader and portfolio management office, we therefore work to ensure that core project team members are +50% allocated to the project. We furthermore know that locating the project team members in the same physical (or virtual) location enhances their ability to perform as a team as it instantly increases energy and the degree of knowledge sharing among participants. To ensure effective and efficient project work we therefore aim at establishing an energizing virtual or physical colocation setup to remove complexity generated by different time schedules and sites. The collaborative setup is designed through a step-by-step process that supports the fixed project heartbeat and the visual tools.
Tool: Colocation design to support high intensity.

- **Flow method 2: Define a fixed project heartbeat for stakeholder interaction to progress the project in sprints.** A fixed project heartbeat creates higher energy, higher efficiency, better quality and ultimately faster development speed. In short, stringent structures free up energy and the focus needed to do creative thinking and solve complex project tasks. Together with the project leader, we develop a stringent rhythm consisting of monthly sprint planning meetings, weekly 30-minute status meetings and weekly solution feedback meetings where weekly deliverables are presented and evaluated by key users and important stakeholders. Based on the solution feedback from users, deliverables of the following week are planned in detail using a visual poster. Every second week the project owner is invited to join the review meetings to get to know the project in its raw and unpolished form. "Corporate theater meetings" with nice and refined PowerPoint presentations are reduced to a minimum and time spent is optimized and utilized to handle real life project issues and decisions.
  Tool: Rhythm in key events.

- **Flow method 3: Increase insight and commitment using visual tools and plans to support progression.** When operating in a project mode with high intensity and many touchpoints with both internal and external stakeholders, it is important to find an efficient way of communicating progress and solutions as well as progress and traction. Powerful visualization is an indispensable communication tool that drives dialogue and project progress. To enhance commitment and alignment we therefore ensure that the project core team together produces a visual plan for the overall sprint, which is referred to at an ongoing basis at weekly planning sessions, daily planning sessions and weekly solution feedbacks. All plans are kept visual (or virtual) at all times in the colocation setup and are also used to quickly communicate the status of the project to other stakeholders. We furthermore work with visualizing the current solution or process at hand through mock-ups and fast prototyping using simple drawings, simulations with colored cards and posters.
  Tool: Visual planning and project visuals.

CORE ELEMENT 3: LEADERSHIP

Principle: *Leadership embraces uncertainty and makes the project happen.*

We aspire to revolutionize the way projects should be lead. We need less bureaucracy, less formal steering committee meetings and less contractual focus. We need less compliance and more commitment. We need leaders who cope with turbulence, conflicts and people. Leaders, who focus on the human aspects, work closely together on a regular basis, handle issues and complexity in joint force and know the project in its core.

Formal steering committees that lean back and critically assess the project once every two months are in the past. Close involvement of a project owner, sparring with the project and intensity is the future. We want project owners who dare to walk in front and invest and spend real time on the projects – for the simple reason that research has proven an active owner to be a critical prerequisite for project success.

Project leaders who view and promote themselves as the most technically savvy and think that structure can save any project are living in the past. Collaborative project leaders with a people first approach who can embrace a complex human system are the future – simply because they actually succeed with their projects.

The Half Double Methodology puts forward the following methods and tools to enhance project leadership in practice:

- **Leadership method 1: Be an active, committed and engaged project owner to support the project and ensure stakeholder satisfaction.** Research suggests one common denominator across all successful projects; an active, committed project owner who engages directly with the project on an ongoing basis. We therefore work intensively on ensuring that the right project owner is appointed in close collaboration with the steering committee. The project owner will be working closely together with the project leader and steering committee to ensure project success. The project owner should focus on removal of idiocrasy at an organizational level to pave the way for the Half Double mind-set and adapt the project to governance or vice versa. Furthermore, the project owner will spend real time with the project – three hours biweekly as a rule of thumb – to embrace uncertainty and adapt to changes with on the spot decision making as the primary tool. Being part of the meetings will ensure continuous focus on impact and guide the overall project to stakeholder satisfaction.
  Tool: Active ownership approach.

- **Leadership method 2: Be a collaborative project leader (not manager) with a "people first" approach to drive the project forward.** It is no longer enough to be a trained technician who can follow detailed procedures and techniques, prescribed by project management methods and tools, if you are to lead a project to impact. Collaborative project leadership is about leading a complex system of human beings, embracing the inevitable uncertainty and making the project happen. A collaborative project leader possesses the ability to use domain knowledge to provide some of the answers in the project and ask the right questions. At the same time, the collaborative project leader is capable of facilitating a people process with high energy in interactions to utilize knowledge from cross-functional subject matter experts and solve complex project problems in the process. In other words, a collaborative project leader "knows what to do when you don't know what to do". We therefore coach our project leaders to reflect in practice and act on their feet in challenging situations.
  Tool: Collaborative leadership approach.

- **Leadership method 3: Customize to the uniqueness of the project.** Projects are unique and hence one size does not fit all. Each project needs to be customized to the specific governance and local best practice models to succeed. The customization is the first step in the local translation of the Half Double Methodology to fit the context. People should be put before systems when customizing – meaning enhancing human dynamics and interactions in the project over system compliance as much as possible. The diamond of innovation analysis will guide the customization of the project to fit or challenge local project conditions. The project owner and project leader will drive the process in close collaboration with portfolio management office and face key stakeholders to handle idiocrasy and customize the project to fit the local

project conditions.
Tool: Diamond of innovation.

Mobilizing the Half Double mind-set to assist the local translation

The Half Double Methodology and way of leading projects requires that we rethink our current practice. It requires a change of mind-set. This is a change of behavior. Implementing Half Double is implementing change. And, like with so many other change initiatives, we too often see that the best of intentions are in place going in, but that hurdles along the way – in the form of rigid governance structures, misalignment of expectations and lack of real commitment – result in the tendency to fall back into old habits and current practice.

It is a two-way street. On the one hand, there is a need for aligning and tailoring the methodology to the situation at hand. To organizational structures, cultures and to the local nature of the projects. There is no "one-size-fits-all" and the project, the methods and tools must be designed to fit the conditions of the surroundings. On the other hand, the organization needs to be adapted to be in alignment with the Half Double mind-set. There must be executive level commitment and willingness to think differently. To move away from a focus on early predictability in cost and specifications to focusing on impact creation and stakeholder satisfaction. To give up the idea of placing operational needs and hierarchies before the project and rather provide the space and resources needed to ensure high intensity and weekly progression. To dismiss contract and quality/time/cost as the only control mechanisms and allow for trust and relationships to be main drivers. And, last but not least, to move away from placing rules and best practice standardized before the needs of the specific project and rather allow for flexibility in governance and execution model to empower people and impact in gate decisions. In sum, the right choices must be made in order to create successful projects.

This requires change beyond the project at hand. The organization must be assessed and the Half Double mind-set must be mobilized in order to work differently. In order to ensure that the right prerequisites are in place to enable success, we invest substantial time and resources and gather key stakeholders to gain the necessary commitment and to tailor the overall approach. Through a number of workshops, the non-negotiable core elements and principles of the Half Double Methodology are introduced. The methods and tools are then discussed and the specific project approach is co-created. This process is located in the very core of the Half Double Methodology model and functions as the critical basis for the change that is Half Double. Read more about our general approach in the next chapter.
Tools: Half Double reflective tool.

General implementation of the Half Double Methodology in pilot projects and pilot organizations

Successfully implementing the Half Double Methodology in practice requires that we have the methodological freedom to maneuver. The freedom to creatively adapt the core elements, principles, methods and tools to the project and situation at hand. In practice this means that the overall approach is rethought and designed to enhance impact, methods are carefully chosen and fine-tuned, and the terminology is adapted to local terms. At the same time, the implementation requires firm consistency in the way that we apply the core elements and the nine methods in a structured and focused manner. Consistency in the way that we have an overall approach to subscribe to in the experiments in the seven pilot projects, establishing a certain degree of homogeneity. Without such firmness, essence is lost.

The following section aims to describe the generic implementation of the Half Double Methodology. In other words, the overall process of how we approached the challenge of implementing an extreme focus on impact, flow and leadership across the seven pilot projects – while finding the right balance between creative adaptation and firm consistency. While the below is presented in a linear manner, it is important to emphasize that it is an iterative process rather than a step to be conducted at a certain point in time.

Mobilize key people to engage the Half Double mind-set. Having key stakeholders subscribing to the Half Double mind-set and the value of the methodology is an essential precondition for succeeding with Half Double. In this case, "key stakeholders" generally translate into two or three individuals at management level, as well as the project leader and the project owner. These key people will establish the foundation, anchor the approach and ensure new ways of working in the organization.

Put Leadership first. There are three key roles to be casted within every project. First, it is crucial to identify a determined project sponsor who is eager to realize the impact of the investment in the project. Second, there must be an active project owner who is willing to spend real time on the project. Third, you need a truly collaborative project leader who is capable of putting people first, designing the project for impact and driving the initiative on an everyday basis. This calls for an open dialog regarding *who* the right people for these three key roles are. A dialog clarifying the responsibilities and expectations related to each of the roles, ensuring that the appointed individuals are capable of handling the challenge at hand. A challenge that inevitably will be related to the specific nature, uncertainty and complexity of the project.

Set the direction by defining impact creation. The impact solution design is the foundation of every project and should be created early on. Build the first version of the impact case using an objective setting hierarchy outlining the prevailing perception of the project's purpose, success criteria and the main deliverables. Use the impact solution design process as a guideline to identify desired behavioral changes and business impacts, and carve out the fundamental idea of how the project is to create double the impact in half the time. Next to ensuring a continuous focus on impact throughout the project's lifespan, the impact solution design process also ensures that all the right people are involved from the outset. The mini pulse check is an integrated part of the process, used to gain frequent feedback and to continuously be in touch with stakeholder satisfaction.

Make the project flow. As soon as the project's foundation is established and the identified impact and how it is to be delivered is clear to all, the project is ready to be organized. The colocation design and the engagement and input of the core team are used to establish a main physical or virtual team room that supports project progression. The fixed project heartbeat is

defined, weekly working days are agreed on, and a feedback team of subject matter expert and key users/customers are identified. All key stakeholders are invited to fix daily, weekly and monthly meetings to secure availability. The first sprint plan is based on the impact solution design and displays the key impact realizing activities of the first phase. Frequent pulse checks are set up to monitor the project heartbeat and key stakeholders to receive the pulse check are defined. Then the fixed rhythm is commenced, meetings are energized and pulse checks are sent out.

Customize to the uniqueness of the project with Leadership. The uniqueness of the project must be handled on a broader organizational level to ensure the freedom to maneuver and progress. The project is first customized to its surroundings using the impact solution design, core team allocation and the fixed project heartbeat. At the same time, the local governance and project execution standards are assessed to identify whether there is a fit or whether it would be beneficial to deviate from certain standards to ease progression and realize the impact solution design. Having this dialog in advance would be preferable, but it is usually difficult as the specific impact solution design and core team allocation needs are necessary input for converting this dialog about actual choices for e.g. a governance board.

Iterate, reduce time to impact and revitalize the project continuously. The impact creation is clear, the project is in motion and leadership is active and collaborative. Solutions are created in iterations and uncertainty is embraced as the project's learning curve increases. The main focus is now to use insight and learnings to improve impact, stick to the fixed heartbeat and make sure that stakeholders are satisfied as results are generated and released to reduce time to impact. It is now all about leading the process of building energy and releasing it as the project progresses. To sustain the Half Double way of working, it is necessary that the project owner and the project leaders in joint force stop and invest the time to reflect at least once a month. Use the Half Double reflective tool to assess whether the project is falling back to the traditional way of working or whether key people consistently subscribe to the Half Double mind-set and methodology in practice.

As the project approaches the end of its lifespan, sponsor, owner, customer and team evaluation meetings are carried out to capture insight and learning and to retain commitment from the project sponsor and operations. A hyper-care phase might be considered and initiated to support the operational output.

Three overall phases of a Half Double project will usually be apparent – Mobilizing energy, Building energy and releasing energy. The three phases are always interrelated and integrated with one another. They overlap and their form and duration is dependent on the project at hand. In retrospect – however – the three phases will be apparent.

As mentioned, the above section outlines the general implementation of the Half Double Methodology. General in the way that it brings together and presents an overall image of how we approached the change of working with the Half Double Methodology across the seven pilot projects. General in the way that it illustrates how there has been a level of firm consistency of the approach. However, the creative adaptation of the core elements, principles, methods and tools found in the local translation of the concept is of higher relevance and importance. How Half Double is implemented and what form it takes will always differ depending on the current organization at hand. It is in itself a highly collaborative change process which requires strong leadership and Half Double expertise to succeed.

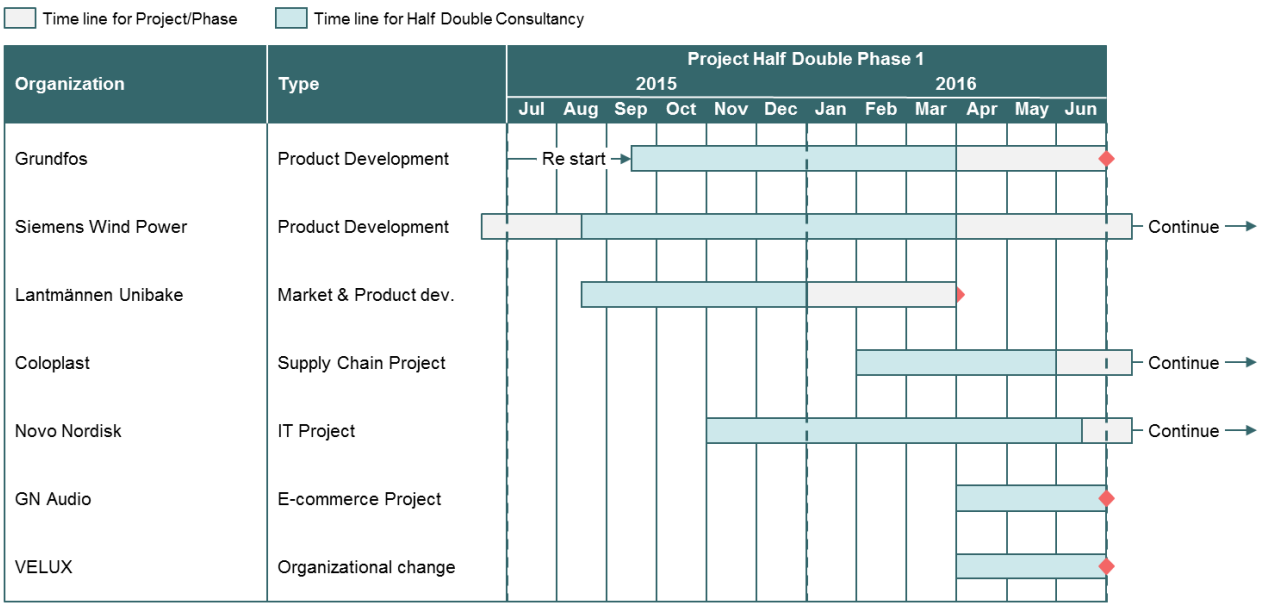
PRELIMINARY RESULTS OF PILOT PROJECTS

Overview of pilot projects

Phase 1 of Project Half Double consists of seven pilot projects which have been launched from August 2015 to April 2016.

The overall time line for the seven pilot projects is shown in Figure 2 below where the pastel green bars indicate the period where Half Double consultants from Implement Consulting Group have been supporting the projects:

Figure 2: Overview of pilot projects



The seven pilot projects differ in several ways:

- One project is completed (Lantmännen Unibake) while three are expected to complete by the end of June 2016 (Grundfos, GN Audio and VELUX) while the remaining three projects continue after June 2016
- The Half Double Methodology has for most of the projects only been applied to parts of the projects (typically a single phase) except for GN Audio and VELUX as shown by the pastel green bars
- The consultants express that there has been much learning from the first three pilot projects to the remaining pilot projects, which means that the Half Double Methodology has undergone considerable changes during phase 1 of Project Half Double

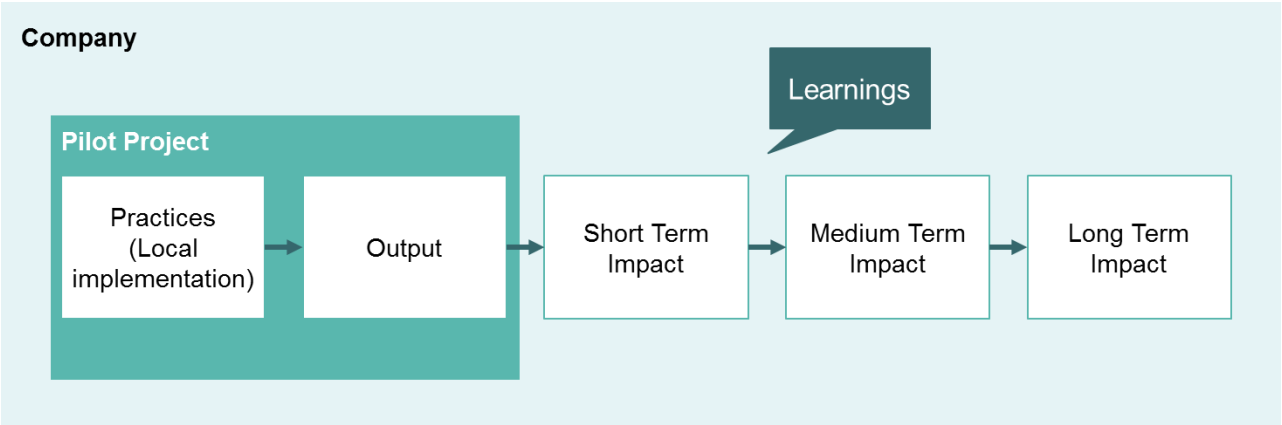
The research process has focused on evaluating the pilot projects with focus on the impact (value, benefit, effect) and the practices applied in the pilot project (e.g. Half Double Methodology). Impact can be divided into short term impact, medium term impact and long term impact, where short term impact can be evaluated shortly after a project is completed or a phase is completed, depending on the kind of impact,

while medium term and longer term impact might only be evaluated after several years.

The evaluation in the individual organization consists of the pilot project and three reference projects, which are used for comparison. The basic idea with the comparison is to evaluate in practical terms to what extent that the pilot project performs better (or worse) than the reference projects (see Svejvig and Hedegaard 2016 for a detailed description of the evaluation process). However, this comparison has been a challenge in phase 1 because it is too early to evaluate impact for most of the projects except Lantmännen Unibake, which was completed in spring 2016. Add to this that the research process always will lag behind the pilot project as it takes time to gather and analyze comparison data, which means that several evaluation activities will take place in autumn 2016 related to the projects that finish by the end of June 2016.

With these precautions in mind, we will briefly outline the content of the pilot projects chapters that follows this chapter. The structure of the pilot project chapters are outlined in the following Figure 3:

Figure 3: Pilot project chapter structure



The pilot project chapters cover several aspects as shown in Figure 3 above and detailed here:

- The company will very briefly be described in order to give high level contextual information
- The pilot project will be outlined including the specific application of Half Double Methodology called local implementation
- The expected or preliminary results with focus on impact will be described with the precautions mentioned
- Finally, the learnings will be outlined

The research process and limitations of the research are described in Appendix A and B. This information is useful for the interpretation of the results in this report. **Especially the limitations should be carefully understood** (see Appendix B).

Grundfos pilot project

Company and pilot project

Grundfos is the world's largest pump manufacturer, based in Denmark, with more than 18,000 employees globally and a turnover in 2014 at 3,168 million euros. The annual production is more than 16 million pump units, circulator pumps (UP), submersible pumps (SP), and multi-stage pressurizing pumps (CR) as the main product groups. Grundfos also produces electric motors for the pumps as well as electric motors for separate merchandising. Grundfos develops and sells electronics for controls for pumps and other systems.

The Grundfos motto is "Be-Think-Innovate", and Grundfos is very focused on innovation and research in order to maintain its market leading position. Day-to-day contacts between research and development centers in Denmark, China, India and the US are made through video conferences and virtual systems. Big global development projects are carried out in several locations in the world.

Grundfos has in 2012 established a project model for frontloading projects consisting of three stages after ideation: Initiate, create and mature. Frontloading projects are used as a way to accelerate the knowledge and remove major uncertainties prior to product development. The tangible output from frontloading projects is a so-called "Fact Pack" which is documentation with the following content: Business evaluation, innovation profile, design ambition, product family master plan, technical documentation (design journals) and transition readiness assessment. The fact pack is used as input to and foundation for the Product Development Project (PDP) which will be carried through after the frontloading project.

The pilot project is a frontloading project and has been initiated to assure Grundfos an increased market share whilst maintaining its leading position as a world-class pump manufacturer. This is expected through the development of a robust concept which not only needs to be technically feasible but also has the projected attractiveness and impact for Grundfos' customer segments. The overall aim with the pilot project is also to reduce time to market in the R&D process.

The pilot project is part of the new generation of pumps in Grundfos. The new generation is going to be more cost efficient while at the same time comprise the requirements of Grundfos' customer segments – and potentially more. The new generation of pumps has to adhere to a strict range of requirements and specifications, which mean that scope is substantially affected in the R&D process.

The pilot project is currently in its mature phase (May 2016), in which the purpose is to establish sufficient proof of the concept's value as well as determine whether the concept has business applicability.

Furthermore, in this gate of the R&D process, the project team is highly focused on managing and circumventing the uncertain elements in order to yield a higher degree of transparency, predicta-bility and reality.

The current gate is projected to terminate in June 2016 whereupon the requirements and specifications are transitioned to the manager for the next gate where the actual Product Development Project will be initiated. Besides a new project leader, the team will increase in size, but the core team will remain the same.

Local implementation

The local translation and tailoring was initiated on a meeting with the project sponsor and the project leader. The purpose was to understand the task at hand, the lifecycle and what was to be

delivered within the project. The project sponsor and leader were also introduced to the Half Double Methodology. Initially Grundfos was interested in trying out the following three guiding stars defined in the early phase of Project Half Double:

- Focus on customer value
- Kill complexity
- Work with visuals

In reality, the pilot project experiment became a mixed approach of leading stars and Half Double Methodology and it is difficult to isolate them from one another.

Impact case, tracking and customer value: The establishment of the impact cases and the project as a whole would serve the purpose to focus on the impact of both the end customer — and the internal customer of Product Development, who should take over the project after the end of the frontloading project in June 2016. The value of frontloading the project was measured in relation to the quality of the insight and learning created to potentially reduce the "time to impact" for the entire project lifecycle.

Impact tracking was especially focused on customer's satisfaction. This was intended to be measured at customer workshops that initially were scheduled for November and December 2015 – relatively early in the project lifecycle and probably earlier than in typical Grundfos projects.

Impact solution design, customer value and kill complexity: The intention was to make the customer feedback the driver of the impact solution design instead of a verification of what Grundfos *believes* the customer wants. In reality it became difficult to carry out in the customer insight simply because parts of the organization that should set up these workshops where measured on other variables than providing an upcoming product with feedback. Because of this, feedback from customers came very late in the project.

Pulse check: The pulse check was setup with the 6 basic questions from the Half Double Methodology after the first sprint. It was sent out to the core team and key stakeholders of the project the day after each sprint planning meeting every four weeks.

The pulse was summarized and visually designed as a basis for a dialog with the core team meetings on how to interpret and act on the scores. Specific actions had an obvious effect; however, change of focus in the overall organization affected the scores on the pulse check even more.

Rhythm in key events: The rhythm of the project was set up early in the project and based on two working days per week. Monday starting up with a weekly planning meeting or a sprint planning meeting (every four weeks). Thursday afternoons were designated to planning meetings, following up on weekly progression and discussing technical solutions in a room called “N5” where all spare parts were accessible.

The head of product development was invited every four weeks to participate in the sprint planning meeting, and more key stakeholders were invited as the project had four to five months left.

Visual planning and work with visuals: Right from the kickoff of the project in September 2015, visuals were used. The overall milestone plan was established at this kickoff meeting with visual tools, and it formed the basis for all sprints in the project. In addition, it was used as a communicative tool for teams and key stakeholders about the project. The plan had four areas of focus:

1. *Project management* containing, among other things, steering committee meetings, decision points, important documents, completion, etc

2. *Requirements* containing activities in relation to describing requirements for pump.
3. *Commercial* containing the key milestones and important points in relation to the respective markets to get feedback and input on the new pump. Workshops, visits, conferences internationally with special focus groups and selected people.
4. *Technical tracks* containing all the "tasks" which essentially are technical elements such as "cable entry", "carbon shaft bearing" etc.

A visual sprint plan was employed. It included "Team performance indicators" which were used to measure the following: Meeting length (with a goal of keeping meetings short and intense), number of meeting participants, number of completed activities out of the total number of activities planned, number of team members in the project room throughout the day. By the monthly end of the sprint, this was evaluated for the purpose of gaining team buy-in and increase participation in the meetings.

Colocation design, allocation and kill complexity: To enforce simplicity the core team was colocated in a project room and had all their materials, drawings and spare parts of pumps available in order to minimize the time spent for communicative latency and waiting time. The team room (N5) was located approximately 1 km from the Center of Grundfos and with a 40% allocation, the team worked every Monday starting with a planning meeting and working on the project. The same thing happened Thursday, where the team was colocated. This enforced working together which can be an issue in the usual team setup in frontloading projects.

Active project ownership: There was a desire to get the steering committee close to the project and participate in sprint finalization meetings (sprint review). One member of the steering committee attended at a few meetings. Bookings were cancelled due to other priorities from steering committee members. Instead a meeting in January 2016 with Niels Due Jensen (chairman of Grundfos) was scheduled. He was presented with the technical elements of the project and gave feedback to the solution. The meeting turned out to have very good effect on the focus and collaboration of the team members.

Active project leadership: The project leader gradually took over all processes and facilitations of meetings. The Half Double consultants served as feedback team and helped the project leader and resources with key scripts and sessions out of the ordinary (reboot workshops, customer workshop scripts etc.)

Put people before systems and tailor to the project model: The frontloading model is well-known in Grundfos, which made it easy to relate gates and deliverables to the team. The model served as a supportive element to the project leader in order to ensure the documentation needed for decisions as well as verification of the impact/business case in the gate process. The impact/business case and the intensive planning made it possible for the team to align and work intensively toward the gates.

Below is a brief overview of the project's key activities:

Table 1: Brief overview of the pilot project's key activities

TIMING	DESCRIPTION
August 2015	• Initial meeting with sponsor. • Designing and defining the impact case: Based on the goal hierarchy, the impact case was

TIMING	DESCRIPTION
	designed along with the key performance indicators to be able to track project impact.
September 2015	• Sept. 14-15: Initial 2-day external kickoff with core team with technical onboarding, introduction to Half Double Methodology, whole brain preference, frontloading (200 questions), objectives and milestone planning. Furthermore, the visual plan was introduced. • Building the colocated project room: Designing and setting up the project's workspace. • Establishing the project rhythm.
October 2015	• Finalization of first sprint: Closing down first sprint and building the plan for the next sprint. Final milestone plan established in project room and sub-teams invited to become acquainted with the plan. • Pulse checks: Introducing the core team to the pulse checks and the purpose of applying it. • Impact tracking established with KPIs.
November 2015	• First pulse check assessed and second pulse check initiated. • Revision of Impact tracking and customer feedback workshops. • Sub-teams and key stakeholders presented to plans and semi-products.
December 2015	• Established meeting with key stakeholder in January. • Pulse check assessed and team evaluation performed. • Revision of meeting structure and rhythm.
January 2016	• Scripts and preparation of customer meetings with commercial team (purpose, impact etc.) initiated. • Presentation of key components for Niels Due Jensen in N5.
February 2016	• 1 day reboot workshop with focus on re-planning the project and the milestone plan. • Revised meeting structure and agendas.
March 2016	• External sparring meeting held with two representatives from the Project Half Double community. • Customer workshops conducted in various markets to verify impact map.
April-June 2016	• Project continues without Project Half Double consultants.

A couple of stories from the pilot project at Grundfos

The project was kicked off with intense workshops and followed up immediately: A lot of planning went in to a two day kickoff workshop with the entire team. A detailed script and all visual materials for the different sessions were made well in advance. Also all team members filled in a survey for a personal preference test in advance. The outcome of the workshop was a clear and common direction of the project and a lot of accelerated insight in the core team. When we left the workshop, everybody knew what to work with and what was going on in the team. The milestone plan worked as a visual tool to establish a common understanding of the scope, the timeframe and interdependencies in the front-loading project.

It was followed up by transferring all output of the workshop to the team room, so everything was visual from day one. Months later, everybody referred to those events as being some of the key

elements that had made a huge difference in the project. Based on this experience the project was rebooted five months later in order to refocus everyone and create renewed team spirit. The effect of the workshop was immediately visible in the pulse check proving the worth of such sessions – the pulse check raised from an average of 3.5 in January 2016 to 3.9 after the workshop in February 2016.

Active leadership create a feeling of purpose and value creation: The meeting with Niels Due Jensen really showed how important the attention from key stakeholders is to a project. It was especially evident in the conversations and meetings planned to prepare for the event. Speeding up core parts of the project were the effect of the meeting. A lot of energy emerged from having the event coming up. The energy was rising from the team itself, which is essential.

Impact case and customer value as a driver for the project: Anchoring the impact case in the steering group and giving the project a high priority seemed difficult, primarily due to issues with higher priority both in business development and sales organizations. The consequence was customer workshops and meetings that were postponed and not prioritized. The design ended up being based on "Grundfos knowledge" and a conversation with one customer in South Africa. The real customer workshops ended up being more of a "verification" of the product rather than basis for the design and verification of the impact case. The consequence was last minute design changes based on customer input.

Preliminary results and key learnings

The tables below describe the overall success criteria and their fulfillment followed by learnings:

Table 2 – Overall success criteria and their fulfillment

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#1	Obtaining and internal rate of return (IRR) >= 14%	To be evaluated after launch of product
#2	Product should replace 90% of current pumps in the same series	To be evaluated after launch of product
#3	Standard unit cost below a certain number with specific technical data	To be evaluated after launch of product
#4	Reduce number of product variants by 50% without increasing number of platforms	To be evaluated after launch of product
#5	Sales doubled within 5 years and a market share of 20%	To be evaluated after launch of product and ultimately after 5 years
#6	Shorter time to market for pilot project where the frontloading phase from Gate 2 to Gate 3 is reduced from nine to six months	Current lead time is expected to be nine months although the project was able to finalize the phase in April 2016 – seven months after G2. It was, however, decided from a portfolio management perspective to postpone the project deadline to June 2016
#7	The first three phases of the product	To be evaluated after gate DP3 is achieved in the product

SUCCESS CRITERIA		
	Target	**Actual / Expected**
	development project are done within six months (from development project gate DP0 to DP3 covering idea, pre-study and concept phases)	development project
#8	Pulse check shows satisfaction among key stakeholders on 4.4	Average rating differs between 3.5 and 4.0 from October 2015 (4.0) to January 2016 (3.5) to April 2016 (3.9)
#9	Key stakeholders assess that the product from the pilot project has a maturity level to be 4.5 on a scale from 1-5 (as an indicator of quality)	To be measured after completion of mature phase
#10	”Transition Readiness Assessment” (TRA) should reach a target of 90% after mature phase	The pilot project has gone from 63% in the beginning of the mature phase to 87% at the end of mature phase

Table 3: Learnings from pilot project at Grundfos

LEARNINGS	
#1	Creating value is important for all – also the team. If the project is not seen as important in the sense that the organization wants to go to market as soon as possible, then it becomes difficult to motivate a team to work hard toward a deadline. In this case the frontloading output were “put on the shelf” until the next step in the product development process was ready (allocated) to take over. Reducing time from nine to six months requires a strong pull in the steering committee to succeed. If the next step in the development process is not ready to take over, other drivers need to be established. In this case it is worth considering whether personal plans for upcoming projects or similar could have created an urge for finishing earlier as a team.
#2	The Half Double approach starts with the project owner and the steering committee. Even with the best intentions from the project leader, it is not possible to radically change everything alone. The organizational readiness needs to be established in the initiation of the project and revisited continuously as the project progresses and new barriers evolve.
#3	Local translation of Half Double Methodology is a key topic. Existing governance, internal best practice and Half Double Methodology need to meet and adjust to each other. Otherwise it will never be a true romance between the two parties.
#4	You will gain a little by applying one or two of the Half Double methods. But to create real impact and reduce time to impact, the combination of all the elements and methods are essential for successful project execution. The organization needs to be ready for impact (not specifications) as the main driver of the project.
#5	The impact case must be developed early and be known to everyone in the project and amongst key stakeholders. If it is not recognized as a key driver, it will never come alive and be the element that pulls the project through. KPI tracking will support the execution of the project.
#6	Impact case(s) and pulse checks are well performing tools that support a higher and better focus on impact in projects. The pilot project had an ongoing focus on value creation and impact may be because the pilot

LEARNINGS	
	project is essentially a cost-down project.
#7	Pulse checks are a strong leadership tool. It is easy to read what has happened and what to correct. It becomes even stronger when the project leader creates an open forum to use the pulse check to give and receive feedback and thus what to improve. It needs to be a balance between important feedback from key stakeholders and just a lot of information without any actions based on pulse checks. In order to scope the use of pulse checks, the project needs to be ready to handle the data and create reliability amongst key stakeholders.
#8	Colocation works. But it needs to be set up and used correctly. The project leader needs to stage how colocation should be used and be in charge of energy through meetings, decoration, visuals and people in the room.
#9	Lack of knowledge about market requirements concerning serviceability resulted in wrong design requirements, which were acknowledged very late in the pilot project (i.e. lack of frontloading of essential market requirements).
#10	Short and fat projects are not always the right principle to follow. Optimizing one project as a short and fat project might have a negative impact on others projects in the project portfolio and might not be optimal if the project is related to other projects (the pilot project is a frontloading project which is followed by a product development project).
#11	The focus on visual planning initiated as joint exercise at kickoff had the result that the plan was a common plan for all project members and not just a “Microsoft project” plan for the project leader. This has also ensured a high degree of awareness of what each individual should deliver to the project. Agile thinking with weekly status meetings does furthermore support this joint ownership of plan.
#12	Certain team indicators such as “tasks finished per week” and “members present at colocation site” were useful in the pilot project
#13	When running a pilot project, it is essential to realize up front, that this project is – even though it may get special treatment – still just one project in a portfolio of many. If this project is not the top priority project, it may now and then suffer from lack of priority focus from top management, which will affect the efficiency in the project.

Siemens Wind Power pilot project

Company and pilot project

Siemens Wind Power is a world-leading supplier of high-quality wind turbines and related services, ranked number one in the global offshore market. With robust, reliable wind turbines and highly efficient solutions for power transmission and distribution, Sielmens provides clean power across the entire energy conversion chain.

- Approximately 7,000 employees around the world
- Total revenue of DKK 22,827 million

From the main Siemens Wind Power development center in Brande, Denmark, and locations around the world, employees are helping to meet tomorrow's energy needs while protecting the environment. World-class engineering and state-of-the-art technology are the drivers behind Siemens' innovation power. Drawing on 160 years of experience and nearly 30 years as a major innovation driver in the wind power industry, Siemens has proven itself a trustworthy and reliable business partner. With high performance and excellent as well as innovative solutions, Siemens Wind Power generates clean power for the future and aims to be among the top three wind turbine suppliers globally.

Siemens AG is a global powerhouse in electronics and electrical engineering, operating in the industry, energy, and healthcare sectors, and employing more than 400,000 people worldwide. Siemens Wind Power is a business unit in the Energy sector of Siemens AG.

The pilot project is characterized as a product development project. It was initiated in 2014 with the purpose of introducing an innovative onshore wind turbine able to produce 19% more energy compared to earlier models. The final gate, G5 – product handover, is set for April 2017, where the line organization will take over full responsibility from product development. The project is a must win battle for the company, which entails that there is an extreme focus on "time to market" and "product cost", as well as on reaching the ambition of breakeven target in only a few years.

At the point of Half Double's entry, the project was situated in the "design and prototype phase" between milestone M3.3.1 (August 2015) and M3.2F (March – June 2016). The main focus was on closing design specifications to prepare for 0-series production in order to retain time to market for the next critical gate – release for serial production and unconditional sales (January 2017).

However, being a large, highly technical project with over 150 project staff members spread across 36 different work areas, complexity naturally presented a challenge in relation to meeting critical development deadlines. And for every potential month the project could be delayed, revenue would be severely decreased as the wind turbine market is based on "windows of opportunity" within fixed timeframes. Thus, the overall focus of the Half Double effort in the pilot project was on ensuring that the critical milestone M3.2F – release of 0-series Bill of Materials (BoM) – would be retained for March 2016. Moreover, to reduce time to impact so potential value would be released as soon as possible in the project.

The pilot project phase was kicked off in August 2015 and was concluded as planned in March 2016 concerning Half Double involvement.

Local implementation

The three core elements of the Half Double Methodology; Impact, Flow and Leadership were specifically tailored to fit the project and the organization Siemens Wind Power and came to life in practice through the following efforts.

Impact case: The project had already defined and approved a business case in a previous phase. The impact case was then prepared as a summary of

the business case linking behavioral changes to the business impact. The overview was used as input for the impact solution design.

Impact solution design – Reduce time to impact by aligning product development and market processes: Early insights pointed to a substantial uncaptured potential related to the quality and technically focused mind-set found in the organization. Early predictability in cost and specification appeared to be the main driver rather than focusing on how to realize higher impact sooner – which essentially was proved in an intensive "cost out process" initiated by the steering committee defocusing the work with the impact case. Consequently, the core idea of the impact solution design in this case was to leverage the focus on critical high impact sub-deliverables set out to realize value in the market. A focus that would create a stronger link between the product development process and the efforts associated with commercializing and taking care of the operation of the turbine. A greater overlap between the technical and the commercial deliverables would help highlight to realize impact sooner that could be frontloaded to ease the transition from one project organization to another. This initiative entailed mapping and aligning critical dependencies between the Product Development Process (PDP) in engineering and the Product Lifecycle Management (PLM) processes in marketing.

However, as the project progressed, new insight and feedback from key stakeholders from the line organization and product development pointed to the fact that the Half Double approach came in too late to substantially impact the project. The reason being that the interaction between PLM and PDP processes and the overall project design were mainly created previously in the period from G0 to G2, which happened in 2014.

Pulse check – Measure and create stakeholder satisfaction by taking the pulse of the project: To keep our finger on the pulse and gain ongoing insight into the experiences and thoughts of our stakeholders, we conducted a monthly pulse check with key project participants and other involved parties. The pulse check survey consisted of four questions, but it was linked to a larger monthly questionnaire. Hence, it became 21 questions in total for each stakeholder lowering the total response rate significantly to about 20%. Results were followed up in monthly core team meetings to facilitate a constructive dialog. Overall, the pulse check served the purpose of maintaining a constant focus on impact, contributing to an energetic working environment, as well as increasing collaboration and personal development in the project.

Intensity project work and colocation design to enhance impact – Core team designed to smaller and cross-organizational groups: An important effort to enhance the impact mind-set was to reorganize the project group from a team of 30 sub-project leaders and line of business coordinators into two smaller, but more agile teams. One team focused on the technical deliverables while the other focused on the commercial aspects of selling, operationalizing and taking care of the turbine. This reorganization made it possible to do biweekly meetings focused exclusively on the commercial and impact creating deliverables in the project.

To ensure that all participants felt the energy and drive in the project, the format of the weekly core team meetings was rearranged. Previously, it was a two-hour meeting right after lunch, mainly focused on presenting the weekly progress of the various track deliverables and planning the next steps. Following the redesign, the team was invited to a one-hour meeting from 09.00 – 10.00 every Monday morning. Here, they were asked to break out into smaller groups to define and discuss critical areas labelled "Attention points!", and to make joint agreements on how to overcome these topics. The smaller groups then

met in plenum to present their key takeaways. Each meeting was concluded by addressing the success stories of the week, celebrating small and great triumphs.

Halfway through the pilot project phase, the team was colocated in a large room making it possible to gather approximately 45 project team members allocated 100% to the project. The colocation was carefully designed to ensure effective and efficient project work and to facilitate energetic team interaction.

Enhance a fixed project rhythm – To account for new core team organization and involvement of an active project owner: In order to support the overall aspiration to enhance the focus on impact, the two new core teams were to work in an adjusted version of the fixed project heartbeat. The technical and the commercial team, respectively, gathered every other Monday to coordinate and plan next steps. Other fixed activities included the weekly status update, monthly intense workshop and project owner sprint review.

In relation to the effort to map and align the PDP and the PLM processes, high-impact deliverables were identified and accelerated through monthly, three intense days with workshops. During these workshops, all key project members were colocated in a meeting room over a short period of time (from one to three days), working determinately on delivering the targeted high impact deliverable.

Visualization and visual planning – to boost team energy: The project plan was established as an overall visual plan and broken down into four to six week sprint plans in approximately six sub-teams. The update of each planning level was defined and supported by the fixed project rhythm, making sure every sub-team had the same pace in review and replanning.

Active project ownership – Enable and motivate project owner to engage with project team biweekly: We knew that our aspiration of changing the overall project mind-set – from thinking in technical deliverables to focusing on impact and the commercialization – was closely related to the project owner being actively committed to the project. To enable and ease the interaction between the project owner and the team, the fixed project rhythm was designed to lay the groundwork for the project owner's active participation at the biweekly commercial core team meeting. In practice it was hard getting the attention of the initial project owner, which was mitigated by assigning a representative for the owner to join the meetings.

Leverage the project leader role – Increase responsibilities to enable impact focus and realization: In order to enable and capture the potential of the reorganization of the project core team, the role of the project leader also needed to be reconsidered. To ensure a continuous focus on impact and the commercialization of the turbine, the responsibility of the project leader was increased – from only reporting on a functional level to reporting on a platform level covering the full value chain. In addition, the project leader received coaching on an ongoing basis to leverage leadership skills.

Put people before systems and tailor to the project model – to fit the pilot organization: The PDP process is broadly institutionalized in the Siemens Wind Power organization and it is deeply rooted in detailed quality deliverables, predictability and specifications. Trying to challenge this by linking to the PLM process was one way to tailor the project to the Half Double mind-set of impact. Another important initiative was to split overall gate milestones into the impact related deliverables first and postpone the rest until later to increase time to impact. This was specifically evident when the project leader split the M3.2F milestone into the most impact creating deliverables first to retain the overall March 2016 deadline for the milestone.

Below is a brief overview of the project's key activities:

Table 4: Brief overview of the pilot project's key activities

TIMING	DESCRIPTION
August 2015	• Pilot project initiation. • Half Double mind-set workshop with the core team: The core team was gathered to kick off the Half Double effort on the pilot project. We brainstormed on what to do to enhance the focus on impact, flow and leadership and established a common baseline for the upcoming six months.
September 2015	• Designing and defining the impact case: Departing from the goal hierarchy, the impact case was designed along with the key performance indicators to be able to track project impact. • Pulse checks: Introducing the core team to the pulse checks and the purpose of applying it as part of the Half Double Methodology.
October 2015	• Mapping of high impact deliverables: Members from both Product Development (PDP) and Product Lifecycle Management (PLM) were gathered with the ambition of identifying and selecting high impact deliverables to help realize impact sooner in the project. • Pulse Check: Distribution of the first Pulse Check and following dialog to identify key actions to raise pulse score with core team. • Intense deep dive workshop 1 - Planning: Team members from across modules and business units met to present, discuss and operationalize a new project organization and fixed project rhythm.
November 2015	• Intense deep dive workshop 2 - Accelerated production of selected high-impact deliverable – part 1. • Intense deep dive workshop 3 - Accelerated production of selected high-impact deliverable – part 2.
December 2015	• Colocation design: We planned and prepared the project colocation floor for colocation Kickoff in January.
January 2016	• Colocation kickoff: We gathered the team an early Tuesday morning with the objective to kick-start and celebrate the new shared workspace. • Intense deep dive workshop 4 - Pulse Check reboot: First of two workshops set out to clarify the why, what and how of the tool.
February 2016	• External Project Half Double review meeting: An inspiring and thought-provoking one-day challenge session with two of our external reviewers from the Project Half Double network. The aim of the day was to disrupt the project, open up for external perspectives and exchange best practice.
March 2016	• The pilot project continues without Project Half Double consultants.

A couple of stories from the pilot project at Siemens Wind Power

The challenge of getting access to and gaining true commitment from the steering committee: We have already been part of the project for three months and established much of the Half Double Methodology. However, there is one critical effort still pending – the steering committee approval of the specific initiatives being introduced in the pilot project. The lack of their approval and commitment to the process has consequently led to very little project owner contact and resistance toward tailoring the standardized governance setup, which again has stalled the progression. The meeting unfolds as expected and the committee appears to nod in recognition to the core elements and principles constituting the methodology. But when it is time for their questions and input, the conversation is not focusing on how to support the initiative and what can be done to ease and enable the process to ensure that M3.2F is realized in due time with higher impact. Instead, the risks associated with such an approach are highlighted. Can it be aligned with the overall governance setup? How would it affect the emphasis on quality assurance that we have worked so hard to establish? The meeting concludes with an uncommitted committee, and we realize that the change of mind-set at the management level is essential for working differently.

The time the project owner entered the room and made a difference: It is Monday morning. We are months into the project and the commercial core team members are once again gathered in the project room. There are flip charts covering the left wall from the Kickoff session in September 2015, and the visual plan with its multicolored post-it is located in the center, alongside colored index cards listing key focus points to address and success stories. In sum; it is messy and it is rather untangled. It is a true reflection of the real nature of the project and what is actually taking place behind polished status updates and steering committee reports. For the first time, the project owner has joined the meeting in the 'engine room' and engages in the discussions as the meeting progresses. And the value is undebatable. He challenges the team on their current prioritization and technical focus and intuitively directs the dialog toward the business impact that the project was initially set out to realize. Consequently, new insight is captured and a newfound awareness arises. Awareness regarding the importance of commercial deliverables such as documentation and type approval, and the potential and substantial risk of continuing current product-oriented practice. At the end of the meeting, prioritizations have been updated and there appears to be a new common mind-set and agreement that commercial deliverables that might otherwise be postponed must be accelerated.

The impact of the first intense workshop: Selected members from the core team have been invited to participate in the first one-day intense workshop set out to accelerate the execution of identified High Impact deliverables critical to reach the next gate and production of the 0-series. The intense workshops have been integrated in the fixed project rhythm only a month earlier, and there is still some uncertainty regarding the value of allocating two full days once a month on working intensively on selected deliverables. However, it quickly becomes apparent that the value of frontloading the effort cannot be open for discussion. The session is initiated and within minutes, the room buzzes with discussion and dialog. It becomes apparent that the process for preparing items for 0-series production is far from clear to everyone due to a recent organizational change. Furthermore, the time schedule is far more critical than first assumed. The outcome of the day is highly appreciated by the team and the project leader, and everyone agrees that it is far more energizing than "business as usual" and that

it enhances collaboration across different organizational units.

Preliminary results and key learnings

The project is still ongoing and it is too early to evaluate the results. However, a few facts are important to share so far: (1) the project won an important contract on more than 100 turbines on a key market – which was enabled by the fact that commercial deliverables were in place. (2) The SWT 3.3-130 pilot project wind turbine was chosen as "Wind Turbine of the Year", a considerable technical and commercial acknowledgement in the market. (3) Retaining M3.2F in March 2016: While the milestone was formally postponed four months to June 2016, time to impact was retained by prioritizing high impact deliverables to the original deadline. Thereby retaining the important G4 and 0-serie production deadline as planned. (4) The implementation of a new cross-organizational product lifecycle management IT-system has challenged the project considerably in retaining the M3.2F deadline.

Table 5: Overall success criteria and their fulfillment

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#1	Breakeven in x years (from 0-series in 2016 to up scaled production in 20xx)	To be *evaluated after* product launch
#2	Create a revenue stream for SWT 3.3-130 of €Xm 2016, €Xm in 2017 and €Xm in 2018	To be *evaluated after* product launch
#3	Impact: Time to market retained for G4. A delay of more than six months will have severe negative business impact	The forecast of keeping time to market is good, and we do not have changes in our planning toward G4
#4	Flow: Reduce time to impact in the "design and prototyping" phase (from M3.3.1 to M3.2F)	M3.2F is delayed to the end of June 2016; however, the delay in the milestone of four months will just give a delay of the next milestone of two months
#5	Leadership: Key stakeholder satisfaction rated 3.5 in impact creation (on a 1-4 scale)	The monthly pulse check varied from 2.6 to 3.4 and is therefore lower than target

Table 6: Learnings from the pilot project at Siemens Wind Power

LEARNINGS	
#1	Creating a strong link between product development and market perspective, splitting milestones and tailoring the development process are fundamental elements supporting an intelligent impact solution design and the aspiration of reducing time to impact. However, the Half Double Methodology will have to be applied in the early stage of a project.
#2	Project reorganization designed with the objective to support the value chain instead of deep functional silos has proven to be a key driver to facilitate an enhanced focus on impact. Fundamental design of the project organization should therefore be an integrated part of considerations taking place during the impact solution design.

LEARNINGS	
#3	The pilot project highlighted how the pulse check is an organizational change in itself and should be treated as such. It requires thorough communication and commitment to a defined process for following up on results to ensure that it becomes the dialog tool it is set out to be – and not merely yet another questionnaire tool used for reporting.
#4	Enhanced team performance: The pilot project has displayed how team mentality and behavior can be optimized by designing team meetings and rhythm to support the value creation, e.g. by dividing project members into technical and commercial teams and by emphasizing the importance of frontloading high impact deliverables.
#5	Consciously designing team meetings to engage motivate and to ensure effectiveness has also proven to be critical to enhance project flow and progress. Shortening the meeting duration, actively using visuals such as visual planning posters and illustrations are just a few of the elements that have proven to work.
#6	Relocation and colocation are effective tools to intensify the project and to break with the 'operational mind-set' often found in long-term projects with high resource allocation. However, larger project teams – such as the case with this project - require conscious colocation design and recurrent anchoring to realize the potential.
#7	The pilot presented a perfect case on how long-term projects can have a tendency to foster an operational mind-set where lack of intensity results in an everyday life of routine work and repetition. The fixed project rhythm, intensive sprints set to deliver each month while intense three-day workshops to deliver an identified high impact deliverable can be core drivers to counteract this tendency.
#8	Maintaining a consistent focus and emphasis on impact in projects of this size has proven to be quite the challenge. The effect of involving the project owner on a regular basis to anchor the new mind-set, however, is undebatable.
#9	A standard product development process and governance mechanism can be barriers to the implementation of Half Double Methodology. Often, it is necessary to tailor the standardized governance setup to ensure impact and progression. This requires strong leadership and commitment from upper management.

Lantmännen Unibake pilot project

Company and pilot project

Lantmännen Unibake is one of Europe's leading suppliers of high-quality bakery products to retailers, wholesalers and the foodservice industry with 35 bakeries in 21 different countries. Key figures are:

- Approx. 6,000 employees and net sales about 1.1billion EUR
- Head offices: Horsens and Copenhagen, Denmark
- Part of Lantmännen

Lantmännen Unibake (LU) is owned by Swedish farmers through the Lantmännen Group with a strong commitment to long-term responsibility from field to fork. Lantmännen Unibake offers a wide range of solutions for both professional customers (B2B) and consumers (B2C). Lantmännen Unibake's aim is to make bread a profitable business for its customers and serve consumer needs through high-quality products and superior solutions – always based on a sustainable mind-set and excellent food safety standards.

The pilot project is categorized as a commercial concept development project. Lantmännen Unibake had been approached by one of its store customers and tasked with developing a whole new concept i.e. a range of bread and pastries as part of a new in-store concept that was to be launched in spring 2016. The new concept should be able to compete with the customer's main competitors (other stores), while at the same time not replacing the existing range of products already being delivered to the customer, but serving as a new and novel consumer appealing concept.

One of the main purposes of Lantmännen Unibake's interest in experimenting with Half Double was to challenge its average project lead time which, at the time the pilot project was initiated, was about 12-14 months for a commercial project, i.e. from the initial customer point of contact, and until the products reached the consumers in the stores. By applying Half Double the project's overall vision was to reduce the standard lead time by more than 50% from August 2015 and thus be able to have the concept ready for launch and testing by having the first batches of bread and pastries ready in the stores by January/February 2016.

The customer's requirements quickly highlighted some profound challenges. In order to meet these criteria Lantmännen Unibake would not only have to work faster and more efficiently, but also start analyzing and changing some of its production setup, as well as its logistical distribution network, hence behavioral changes were needed to accomplish the task at hand.

The project's main purpose revolved around creating a new business model adding value for the involved parties by 1) developing a new in-store concept including defining a range of products and new packaging; and 2) building closer relations with the customer.

When combined, these purposes should result in Lantmännen Unibake's project vision of becoming its customer's preferred supplier within this specific type of concept.

The project was kicked off in August 2015 and the project was estimated to last for approximately seven months, which meant a significant reduction of the lead time compared to the average project lead time. After four and a half months, the steering committee decided in December 2015 to end the initiative organized as a project and continue the implementation of the new concept in an operational setup headed by the previous project owner.

Local implementation

The three core elements of the Half Double Methodology; Impact, Flow and Leadership were specifically tailored to fit the project and the organization in Lantmännen Unibake.

Impact case and impact tracking: The impact case was designed based on the purposes of the goal hierarchy. The majority of the key performance indicators (KPIs) were out of Half Double's time span, meaning that only after project completion, the project team would be able to start measuring these criteria. It was decided to select two sales KPIs (customer stores) and test the products KPIs as the project progressed in order to generate early indicators of whether the market (consumers) would welcome the new products or simply ignore them. Working like this would make it possible for the project team to ramp up the batch size of products that proved successful and in parallel include more and more stores as the project progressed, while constantly having real time testing. This was based in a belief that in order to reduce the lead time of the project, it would be necessary to keep the customer as close to the project as possible and thus be able to swiftly react to early market indicators. A second but very beneficial aspect of progressing like this was that compared to business as usual, daily operations of the new products would start to take place much earlier in the project's lifetime. The work with the impact case started out nicely; however, the key contents and ambition were shared or discussed with the customer too late in the process. I.e. alignment around crucial parts happened too late and led to some waste in the process.

Impact solution design: The project was designed to generate early insight by introducing a few test stores to try out the concept and test consumer behavior. With this approach, it was possible to quickly learn about the audience for whom we were developing a new product and concept; create a point of view based on the consumers' needs and desires; brainstorming and defining solutions (products) that would fit the need of the consumer together with the customer; prototyping of new possible solutions (products) and testing the products and the concept. Working like this made it possible to constantly have indicators and market intelligence while at the same time prototyping together with the customer and then testing the products in a selection of stores.

Pulse check: To support the market insight the customer (the store) was asked to participate in a mini pulse check as part of biweekly solution feedback meetings taking place at Lantmännen Unibake. At the end of each meeting, taking place in the project war room, the project team along with the customer was invited to evaluate the progress of the project based on the four purposes of the goal hierarchy. Both parties were kindly invited to evaluate four categories on a scale from 1 (very low degree) – 5 (very high degree).

The overall question asked was: "To what degree do you think we are succeeding with…": (1) Creating attractive products (that are more fresh, more crispy and taste better than those of our competitors); (2) Designing a packaging that supports the freshness of the product (its crispness and attractiveness to the consumer); (3) Developing a concept that is appealing to the customer; and finally (4) Strengthening the relations between Lantmännen Unibake and the customer?

The first two solution feedback meetings where the mini pulse check was applied proved highly useful and quickly gave insight into the customers' pains and how to solve those pains. Nevertheless, the dynamics and tactics between different customer stakeholders made it difficult to continue the mini pulse checks.

The generic team pulse checks sent to the project's core team proved useful when it came to

inputs to the colocation design. It turned out that the majority of the team was not completely satisfied with being colocated in the project war room, which allowed the project leader to make alterations to the setup and thus accommodating the team's preferences.

Colocation design: The team was colocated approximately 50% of the week in the project war room. The room was installed with a big meeting table and could fit the entire project team. The allocated weekly hours per team member were in the low end of the scale. I.e. the planning processes, status and review were perceived as quite time consuming in relation to the total amount of hours allocated to the project.

Rhythm in key events: The pace of the project was based on three working days per week from 9:00 to 15:00. Mondays and Wednesdays would begin with a 15 min. stand-up meeting around the sprint plan, and Thursday afternoons was designated to planning and discussing the subsequent week's activities in a one hour session. Every second Thursday the customer would meet with the project team (solution feedback meetings) in the war room for a one-hour meeting followed by a one-hour meeting with the internal reference group and the steering committee. The subsequent sprint was planned every fourth Thursday in an afternoon session with the project team.

Visual planning: All plans were kept visual at all times in the project war room along with the goal hierarchy, impact case, and risk matrix and stakeholder analysis. The plans were also visible during customer meetings.

Active project ownership: The Half Double team introduced the method to project owner and steering committee in a mind-set workshop with the exact purpose of both onboarding key stakeholders as well as introducing them to what was expected from them. To follow up on this, the project owner and steering committee were part of the biweekly solution feedback reviews with the customer (sometimes only).

Active project leadership: As part of the Half Double team's support to Lantmännen Unibake, active sparring and coaching with the project leader was taking place on a weekly basis. During these sessions, the project progress was evaluated and different methods on how to motivate each team member were discussed. The team pulse checks proved highly fruitful and gave useful insights into the team's perception of the work carried out. Armed with these insights, the project leader was able to assess, evaluate and tweak the methodology to fit the organization.

Put people before systems and tailor to the project model: As it turned out, the project team members were not trained/experienced in the LU project model. This prescribed that the project leader was highly attentive and constantly required to adapt the applied method to the needs of the project team. At the same time, the project leader was filling out a role, not only as project leader, but also as an on-the-job-trainer within project management for the project team. The organizational project management maturity was relatively low, making it hard to relate to internal best practices and team experience.

Below is a brief overview of the project's key activities:

Table 7: Brief overview of the pilot project's key activities

TIMING	DESCRIPTION
August 2015	• Kickoff workshop with core team: Introduction of the project's vision. Defining purpose, success criteria and deliverables. Followed by the development of a milestone plan and a stakeholder and risk analysis. • Building the project war room: Setting up the project's workspace.
September 2015	• Designing and defining the impact case: Departing from the goal hierarchy, the impact case was designed along with the key performance indicators to be able to track project impact. • First sprint: Initiating the first sprint of the project. • Team pulse checks: Introducing the core team to the team pulse checks • Solution feedback reviews initiated: Mini pulse checks with internal reference group and steering committee. Solution feedback review with customer.
October 2015	• Finalization of first sprint: Closing down first sprint and building the plan for the next sprint. • Team pulse check: Review of first team pulse check with project leader and project core team. • Mind-set workshop with key stakeholders: Introducing and onboarding Lantmännen Unibake's internal reference group and steering committee to the Half Double Methodology.
November 2015	• Evaluation of the pilot project: Evaluation with the project team.
December 2015	• End of pilot project: The initiative was ended as a project, and the implementation continued in an operational setup headed by the previous project owner.

A couple of stories from the pilot project at Lantmännen Unibake

Early customer validations: Although the business case was discussed much too late with the customer, an early and very positive involvement was initiated with customers. On a biweekly basis, the customer (the retail chain) was shown the solution at its current progression. At the end of the discussion, the customer would rate their expectation across 3-4 KPIs. It created a very open atmosphere and a very high level of energy in the team and between the team and the customer. However, after five to six weeks the feedback discussions/ratings faded out. One reason was that internal politics and changing meeting participators from the customer side made the continuity challenging.

Scarce resource allocation and lack of decision making are bottlenecks: Despite a lot of efforts from the project leader to keep the project owner and steering committee as close to the project as possible, it proved to be a challenge. Due to lack of commercial resources, the project owner who was also commercially responsible in Lantmännen Unibake had various roles in the project: Apart from being the project owner and member of the steering committee, this person was also playing the role as project participant being the project's point of contact with the customer. The project owner/project participant was frequently engaged in activities outside of the project and thus had little time to participate in the biweekly meetings. This complicated the speed of the project in general and when decisions were needed, and it led to poor communication and lack of alignment

with the customer. The learning is (not surprisingly) that the project needs allocation of all the skills required to develop and recommend solutions.

Harvesting the fruits of colocation requires the right working conditions. Some empirical studies have concluded that colocated teams simply perform better. This was also the case for the project team at Lantmännen Unibake, which in general spoke very highly of the process and showed good progression. Especially the very structured approach and high degree of transparency proved very fruitful for the thrust of the project. Nevertheless, having the team colocated 50% in the war room was not possible due to the team members' engagement in other projects. The perhaps one biggest obstacle for benefitting truly from the colocation was the physical properties of the war room. It was small, which made bilateral conversations between team members more or less impossible without disturbing the rest of the team. The room lacked oxygen and proper working conditions (e.g. adjustable chairs, tables and monitors). Changing to a different room was not an option, so this challenge was circumvented by reducing the time spent in the war room to only include the joint stand-up meetings, sprint planning and meetings with the customer, steering committee and reference group. The rest of the time each team member was located at their regular working stations. It can therefore be argued that the true output of colocation at Lantmännen Unibake did not reach its full potential. The conclusion is that colocation makes a lot of sense. But colocation is not a meeting room. It needs to be colocated workplaces plus some associated meeting/ visualization space.

The success of Half Double is dependent on the organization's project maturity. From project initiation both management and core team showed high willingness to do things differently and followed the methodology set forth by Half Double. This paved the way for a great project initiation but it quickly became evident that Lantmännen Unibake as an organization and the project's team members had only little experience with basic project management practices and tools. The "organization" had a quite functional view upon things. One team member even argued that it was a huge waste of time to listen in on what other team members were developing/ delivering. So LU still has a long journey in front of them when it comes to collaborative project work.

Results and key learnings

The pilot project at Lantmännen Unibake is one of the pilot projects which are completed within the Project Half Double phase 1 period. This means that we can evaluate the impact at least at short term.

Table 2 below shows some key success criteria and their fulfillment:

Table 8: Success criteria and their fulfillment

SUCCESS CRITERIA		
	Target	**Actual**
#1	Turnover from the pilot project is achieved from April 2016	The status as of May 2016 is that 57 out of 375 stores are implemented. The expected deadline for full implementation is September 2016. The pilot project created turnover already from January 2016 and steadily onwards.
#2	The strength of the relationship	The accumulated average of the customer pulse checks amounted to a

SUCCESS CRITERIA		
	Target	**Actual**
	with the customer should be 4.5 by the end of the project	total of 2.7. The internal and external reference group meetings were discontinued after only two meetings. Various organizational aspects challenged the meeting pace, as well as the size of the project room and the availability of the external customer.
#3	The duration of the project is reduced by four months compared to projects in Lantmännen Unibake	The pilot project was able to launch the first stores after five months, which is considerably shorter than comparable reference projects which have had lead times of ten months or more.
#4	Team evaluation of pilot project is minimum 4.5 by the end of the project	The accumulated average of the team pulse checks amounted to 3.3. It is difficult to make any conclusions based only on measurements points. That being said, it seems fair to state that the reasons behind the relatively low average was the rather large change and thus differences in project management which Project Half Double's methodology presented for the project team. The team did express some dissatisfaction with being colocated due to the rather small project room, a high noise level and less comfortable working conditions (chairs and tables).

There is much learning from the pilot project at Lantmännen Unibake as this was among the first pilot projects in Project Half Double, and Table 9 below sketches out the most important learnings.

Table 9: Learnings from pilot project at Lantmännen Unibake

LEARNINGS	
#1	All organizations are in different situations, and some organizations have a higher project maturity than others. Furthermore, some organizations' approaches to projects are plan-driven and others agile-driven while some are in-between. When Half Double Methodology is introduced, it is important to map the current situation for the organization including but not limited to the following dimensions: (1) Competitive situation for organization, (2) Organizational context e.g. project maturity, (3) Project characteristics, and finally but not least (4) The people involved.
#2	The Half Double Methodology is designed to be an add-on to the organizations existing project management methodology (PMM). In this case the PMM was at a fairly basic level and not well institutionalized in the organization. Half Double Methodology should be seen as an add-on to some of the classic tools such as goal hierarchy, stakeholder management, risk management etc. It is also evident that it is not all but some of the classic tools that should be used – choosing which is the key, and this should be part of the project leader's competences.
#3	Half Double Methodology consists of a set of principles and methods with techniques and tools. While it makes sense to be very strict about the principles in order to claim that you are Half Double compliant, the use of techniques and tools should be adapted to the given organization and the given project, which is referred to as tailoring and embedding.
#4	A true learning from applying Half Double at Lantmännen Unibake is that only collocating the team is not

LEARNINGS	
	sufficient. Colocation has to be designed, meaning the environment has to be carefully considered in order to truly reap the benefits a multi-skilled team working cross-organizationally. The team behind Half Double has included this in the conceptualization of the methodology applying a design thinking approach when collocating the team.
#5	The impact case has to be finalized as early in the project as possible and presented to the customer in order to set the initial direction and decide on early indicators (for e.g. products and prototypes). Secondly, internal key stakeholders have to be presented with the impact case, and a discussion should be facilitated to align the content of the impact case with the two perspectives.
#6	The pilot project has stressed the importance of designing and adopting a project planning pace that fits reality. It is quintessential to balance the proposed generic project rhythm with the team's desired project rhythm. Planning should not constitute too much of the daily project task time. Thus, be flexible, observe how the team is working and design the pace and planning accordingly. In the case of Lantmännen Unibake, one planning meeting per week could have been sufficient.
#7	Pulse checks with the team are beneficial insights into the usability and effect of being colocated – and basis for coaching and feedback sessions with the project leader.
#8	Active project ownership and commitment is crucial for project success, and this has been a challenge for the pilot project because the project owner had multiple roles and simply was too busy.

Coloplast pilot project

Company and pilot project description

Coloplast is a global medical device company. The company was established in 1954 with the invention and production of the first Coloplast stoma bag and today the business includes ostomy care, continence care, urology care and wound care and skin care. Key figures:

- Approximately 10,000 employees around the world
- Total revenue of DKK 13,909 million
- Head office: Humlebæk, Denmark

Coloplast develops and markets products and services that make life easier for people with very private and personal medical conditions. Coloplast works closely with users to develop solutions that consider their special needs. Coloplast markets and sells its products and services globally and supplies its products to hospitals, institutions as well as wholesalers and pharmacies. In selected markets, Coloplast is also a direct supplier to users (homecare).

The Coloplast pilot project is a product modify-cation project. It is connected to the Coloplast Supply Value Stream (SVS) department. This department primarily works with product modifications connected to the current production. The project is a typical product modification project, and Coloplast executes several of this type of project each year. The core project group consists of two people from the Global Quality organization situated at the main office in Denmark. One of them, the project leader, is allocated 60% to the project, and the other 40%. Further the project is allocated staff from various departments in Denmark as well as staff from the Coloplast production site in Hungary. The majority of the project participants are only allocated 10-20% to the project. The project was initiated by Corporate Procurement as part of a larger program to minimize raw materials dependencies and hence the overall risk of production related to raw materials. The project is ongoing and is currently about to finish the preliminary scoping phase. The project is expected to end in April 2017; after ending the pilot phase in June 2016 the project will continue to use the Half Double methods and tools. The project had to be redefined in order to support Coloplast's commercial strategy, which required that several deliverables be aligned with the R&D department.

The main aim of pilot project at Coloplast is to eliminate the need for re-planning and repeated production testing. The goal was to reduce the uncertainties regarding risk, delivery time and use of resources in this project compared to similar projects from the SVS department. The aim will be reached through a systematic approach to dealing with the risks and problems of the project at the monthly and weekly meetings. The approach will be developed to fit the special context at Coloplast.

The key challenge of the product modification project can be split into two main parts. As the time allocation of the participants to the project is limited, and their special expertise needed at very different time frames in the project, the first challenge is facilitation of efficient communication and coordination among the many participants. The second challenge is to develop a risk and problem management process that fits into this special situation, both in terms of frontloading the identification of risks in the scoping phase and to continuously manage the emerging problems and risks as well as making this overview available and transparently communicated to all project participants all the time.

Local implementation

In the next section we describe how the Half Double Methodology with Impact, Flow and

Leadership has been tailored to the local context and implemented at Coloplast.

Impact case: The impact case was used throughout the implementation phase to lay down guidelines and discuss targets as the bulk of knowledge increased. The impact case was developed at the first two workshops in December 2015 and January 2016 and concluded the vision: "The project aims at product adjustments with higher success by gaining maximum insight early in the process. This will reduce lead time (reduced number of test iterations) and time to impact (shorter execution phase)". The project team in Denmark was introduced to the impact case at the kick off meeting in March 2016; here the participants could share their reflections about the project. At an evaluation meeting between the project leader, the project owner, and the external consultants in mid-April, the impact case was revisited and the main focus of the project was re-approved. The key performance indicators (KPIs) for the impact measurements are currently (May 2016) in the process and will be ready for the project execution phase.

Impact solution design: To deliver the goals set in the impact case as early as possible, it was necessary to work with two main elements of the impact case: 1) risk management, and 2) communication and coordination. As communication and coordination to a large extent are included in the flow methodology, we focused the impact solution design on developing a risk methodology suitable for the Coloplast project conditions. The essence of the methodology was to brainstorm on possible problems and risks that might jeopardize the impact and flow of the project. Based on scoring, actions were defined to handle the most critical "unknowns" in order to increase early insight and use it for the design of the execution phase. At the third workshop this was applied along with the project owners, sponsors, and the two core project members. Here the main risks and problems of the project were identified. The approach chosen was viable due to an extensive knowledge base from previous similar projects allowing for a valuable risk and problem frontloading process. The methodology was further replicated with the project members in Hungary and the project team in Denmark at their respective kick off workshops.

Pulse check: The pulse check was established and sent out for the first time prior to the monthly meeting in April 2016. The pulse check will be sent out at the end of each month. The questions have been modified to focus on problems and risk as efficient risk mitigation is a key impact in the project.

It was decided to send out the pulse checks to all project participants, even if they were only loosely connected to the project or were not working on the project at the present time. This was done to keep key stakeholders informed after their introduction to the project at the kick off workshop.

Rhythm of key events: The flow of the project was established after kick off in Denmark (14 March 2016); it consists of a rhythm of the following meetings: 1) weekly coordination and planning meetings in the project room, 2) monthly sprint planning meetings in the project room, 3) weekly coordination with the project team in Hungary through a video conference. Since most project participants are only allocated 10-20%, it was decided to integrate project review, sprint evaluation, and sprint planning in the same meeting.

Coloplast decided to keep their existing governance structure for a SVS projects. This includes a biweekly steering committee (STC) meeting. Inspired by a meeting structure example provided by the Half Double Methodology, reference group meetings were initiated where once a month the two core project members discuss the project methodology and are coached by the project owner and sponsor.

Visual planning: The visual planning tools currently applied in the project are: 1) main plan, 2) sprint plan, 3) risk dashboard (printed from excel). The two plans are printed as empty posters and are dynamically created and updated by the project participants using post-its. Furthermore the workshops and meetings used index cards and flips to highlight conclusions and key input from discussions and workshops.

Colocation design: Due to the low allocation and the fact that the team is situated at two locations, implementation of full colocation with the entire project team has neither been possible nor desirable. A common location has been established through a project room that is available to the project at least two days a week (Mondays, Tuesdays). Project meetings and workshops take place here, and visual tools are left in the room to keep a good overview of the information available. The video conference calls to the Hungarian factory team are also done from the project room allowing the project leader to present and walk the video conference participants through the updated visual material.

Going ahead, the project will use a team website as a common point of reference and as a place to share documentation. To create a common visual platform, the idea is to update this website with agendas and minutes from the meetings, photos of visual plans and posters, upload the risk dash board and the results of the pulse check. The idea is that by making all information available to all project participants, overview and coordination can be improved.

Active project ownership: Coloplast has decided to embed this project in their existing governance structure with a biweekly STC meeting to enhance coordination of a large number of similar projects running simultaneously. The Half Double project is not treated differently than other projects in the portfolio. To increase the project owners' awareness of the status and process of the project, to make them more available for questions and coordination, and to limit the communication and documentation workload of the project leader, it was decided to invite the sponsor and project owners to the project review, which the first part of the monthly sprint meetings is.

Active project leadership: The project leadership is focused on the individual participants and their overall comfort in the project. The project leader prioritized face to face time above all. She took an active decision to invite the project participants to the weekly coordination meetings, but not making it mandatory, allowing them to decide based on their own judgment of the benefit for them and the project.

People before systems and tailor to the project model: Due to the high number of very different and low allocated project participants, flexibility in terms of the system and project governance was deemed necessary from the start. Some points worth noting are: (1) The Half Double implementation put the project participants in focus to discuss how they work and how it would be possible for them to work. The preferred system is now developing from the work processes that have been applied so far; (2) attendance for the weekly coordination and planning sessions is not mandatory. Stakeholders and contributors participate on their own initiative; (3) The project participants' engagement and activities are not measured by specific KPI's but are driven by the individual professional judgement of the needed actions based on the current plan and deadlines.

Brief overview of the project's key activities and meetings

Table 10: Brief overview of the pilot project's key activities

TIMING	DESCRIPTION
December 2015	• 17th Initiation meeting. First draft of impact case.
January 2016	• 7th Second workshop. Pilot project initiation. The common goal, mind-set, and impact case were set up and the main risks of the project identified. • 22nd Third workshop with the core team of the project, the owner, and the sponsor. At this meeting the risks and problems of the project were mapped to the current project model.
February 2016	• 22nd and 23rd kick off in Hungary. Introducing Project Half Double to the factory site and mapping the main risks and problems with the team in Hungary
Marts 2016	• 14th Kick off in Denmark. Participants introduced to Half Double. The first version of a main visual plan is designed by the participants, and they also identify risks and problems based on this first plan. The preferred flow is decided by the project participants and following the workshop established by the project leader.
April 2016	• 18th The third weekly planning and coordination meeting. • 25th Second sprint planning meeting including the results from the first pulse check. • 27th Evaluation meeting between project leader, project owner, and the two external consultants • 29th Project evaluation meeting with researchers from AU, DTU, project leader, and project owner.
May 2016	• Weekly planning and coordination meetings, minor changes made to the meeting procedure. The team is working intensively with the first large deadline. This is to include the project in an existing clinical trial based on input from the impact solution design.

A few stories from the pilot project at Coloplast

Early mapping of problems and risks directly on the existing Coloplast SVS department project model: From the very first meeting, it was clear that Coloplast wanted to focus on a structured approach to work with the risks and problems of the project. At the second workshop, a long list of risks and known issues was identified, but it was not until the third workshop that problems were put into the context of the actual project plan and prioritized that the full picture of what needed to be done evolved.

At the third workshop, the existing project plan was printed on a large poster. Identified risks and problems from the earlier workshop were mapped onto this poster; this exercise showed that the risks clustered around a few project elements, and that some of these were positioned very late in the plan. This made it clear to the project leader and the owners that these "issue actions" had to be moved up to the first part of the project, to mitigate delays later in the project.

Gaining energy and coherence from the weekly project coordination and planning: The weekly planning session is short and follows a predefined agenda. When everyone has arrived, the project leader invites the participants up to the sprint plan and goes through the following points: What did I do last week? What do I plan to do next week? Any challenges? And then the team reflects: What is most important for us right now? Meaning what is the most critical element in the

following week, and how we can support each other to make this better or do this faster?

The entire session takes about 15-25 minutes and after that people can discuss and coordinate issues with each other before returning to their offices. The two core project members stay and work in the project room the remainder of the Monday and Tuesday. They are thus available for face-to-face questions or discussions if needed by the other project participants.

At a meeting 25 April 2016, the team members expressed that they appreciated the weekly coordination meetings. They bring the participants together, provide a good overview, save them for coordination via email, and in general provide them with a positive attitude towards the project. This the project participants emphasized as an element they wanted to maintain.

Expected results and preliminary key learnings from pilot project

The project aims to make more successful product adjustments by gaining maximum insight early in the process. This will reduce lead time and time to impact. Further there is an extensive focus on mitigating risks by frontloading challenges and problems at early stages. The project works across the headquarters in Denmark and the production site in Hungary and is also aiming to establish better and more transparent coordination between the two sites.

Table 11: Overall project success criteria and their preliminary fulfillment

PRELIMINARY SUCCESS CRITERIA		
	Target	**Actual**
#1	Reduced time consumption and improved time to impact.	To be evaluated after project closure Preliminary evaluation: Early impact design in combination with the established flow has successfully frontloaded collaboration and risk management and mitigated costly risks. E.g., it was identified that a clinical trial was needed and that it could be combined with one already planned, potentially saving +1 million DKK as well as time. Further fulfilment will be evaluated during and after the execution phase.
#2	Reduce numbers of test and iterations	To be evaluated after project closure *Preliminary evaluation:* The number of test production runs needed cannot be evaluated until after the execution phase. Currently action has been taken to minimize the risks by involving the production site and mapping their risks and problems, especially dependencies on the remaining project group.
#3	Reduce re-planning through improved coordination	To be evaluated after project closure *Preliminary evaluation:* The main project plan has been established as collaboration. Whether the project will need to be re-planned is not known until after the execution phase. So far improved coordination using the weekly and monthly meetings, the pulse check, and the visual tools has been achieved.
#4	Risks and problems mapped	To be evaluated after project closure

PRELIMINARY SUCCESS CRITERIA		
	Target	**Actual**
	early and continuously throughout the project. Improved risk management facilitates "right" decisions and willingness	*Preliminary evaluation:* Risks and problems have been mapped on three levels of the project. This was done by the management group at the production site in Hungary, and at the kick off in Denmark. This has already been crucial in identifying risks and has been a solid argument towards the STC to recruit the resources needed to conduct laboratory tests. Moving ahead, a KPI or matrix must be established in order to keep track of the risk management of the project.
#5	New way of running projects used on other projects. The concepts of frontloading risk and the new way of running the adjustments projects is used on upcoming projects	To be evaluated after project closure *Preliminary evaluation:* The project leader and the management group have already reflected on how the risk methodology can be applied in other similar projects, but no specific plans or decisions have been made yet. There is a wish to see how the risk handling progress in this project performs over a longer time frame.
#6	Participation in coordination meetings. A changed mind-set is needed.	To be evaluated after project closure *Preliminary evaluation:* Currently there is a high degree of participation in the weekly and monthly coordination meetings as well as in the project kick off. There is no participation log, nor any rules concerning participation. The project leader wanted to invite the project members to participate in these meetings, and let them make an individual, professional decision as regards the benefit of their participation in the meetings not only on their own individual level, but also on a higher project level.
#7	Key stakeholders experience a higher degree of transparency on project process and risk handling. This contributes to a shorter execution phase.	To be evaluated after project closure *Preliminary evaluation:* Pulse check data – still too early to evaluate.

Table 12: Preliminary learnings and best practice examples

PRELIMINARY LEARNINGS	
#1	Frontloading risk getting early insight in the project. The contribution of the risk workshops was an early overview of risks and problems in the scoping phase of the project. The broad co-creation and collaboration approach during the identification of risks, in combination with integrating the visual risk dashboard and risk handling at the weekly and monthly coordination meetings, have ensured that action was taken and results secured. Compared to usual risk management, the new approach has significantly improved risk management.
#2	Frontloading insight with a risk approach has proved to support the impact solution design of the Half Double Methodology. The tool is simple and useful. It is also evident that impact solution design rarely is a one off activity but rather a phase of weeks/month where ongoing frontloading, building insight and dialogue with key stakeholders design the rest of the project to deliver early impact.
#3	Working visually (sprint plans, pulse check, risk dash board) has proven to be efficient, but it also poses a challenge when working across locations as the visual posters and tableaus are difficult to share. Further there is a risk of losing the history of the decisions and actions taken during the project lead time. A change log may therefore be necessary; it will also serve the need for future references in product compliance data.
#4	60% colocation has not been physically possible in the project due to the geographic division. Instead synchronizing the team in time with video meetings, having a shared mind-set, is a useful adjustment of the colocation design.
#5	A short weekly coordination meeting may be beneficial, even though people are only allocated to their project 10-20% of their time. The individual perception of these meetings is that the overview and the coordination by far outweigh the time spent at the meetings. This approach thus creates good energy and good relations between participants as well as trust in the entire project process.
#6	The impact case and the clear overview of the risks and potential consequences have enabled the project to reach critical decisions on resource allocation through management without 'special treatment', thus preventing costly delays.
#7	A segmentation of the pulse check is needed to lift the quality of the data. This will be based on whether the project participants have had any deliverables during the last month (sprint). This is needed as many people are allocated to a very small degree and over a very long project period.
#8	Marketing decides when the improved product is ready for the end-user; as such the project is, like all other projects, dependent on strategic decisions, which cannot be forced by a Half Double approach at the project level. But faster completion of project activities allows for more room and flexibility when making strategic decisions.
#9	When colocation is impossible, the choice of collaboration tools must be based on the current need. The principle "as simple as possible as complex as needed" is viable and the current setup with information and touch points between project leader and the remote team seems to be sufficient for the current phase of the project.

Novo Nordisk pilot project

Company and Pilot Project

Novo Nordisk is a global healthcare company with more than 90 years of innovation and leadership in diabetes care. Novo Nordisk covers more than half of the world's insulin. The company was established in Denmark in 1923 and is specialized within hemophilia, diabetes, obesity and growth disorders. Key figures:

- Approximately 41,600 employees
- Annual sales: DKK 107,927 million (2015)
- Head office: Bagsværd, Denmark. Affiliates in 75 countries and R&D centers in China, Denmark and the US

Novo Nordisk's commitment and contribution is to prevent, treat and ultimately cure diabetes, to discover and develop innovative biological medicines and make them accessible to patients throughout the world.

When Novo Nordisk decides to change a production location or to use a more cost-efficient production method, health authorities in each relevant country must approve these decisions. As a result, Novo Nordisk is required to plan and produce different variants of the same product (Stock Keeping Unit) depending on the country-specific health authority approvals.

The pilot project is categorized as an IT enhancement project with the purpose of creating a more stable and flexible variant planning solution incorporating future business requirements. The current IT solution is cumbersome and complex resulting in sub-optimal processing while requiring constant monitoring to ensure integrity.

Initially the project was planned for launch in February 2017 following the classic IT development approach of *analyze, specify, develop, test and launch*. The project was redesigned in the Half Double process and is currently at the midway point with go-live of the first part of the IT solution set for mid-June 2016. The second part of the solution will go-live by September 2016. The setup and planning of the project is centered on the process and solution design where six primary process steps form the primary phases of the project. The core project team for each sprint combines business and IT resources, which in a colocated environment have analyzed, designed, built and tested the solution together. Approximately 25 end-users and all Novo Nordisk production sites are impacted by this new solution.

Local implementation

A number of elements were essential for creating the desired *impact, flow* and *leadership* in the Novo Nordisk project according to the *Half Double Methodology*.

Impact case with precise KPIs to navigate the project: Very early on, an impact case was defined to clearly describe business and behavioral impact to be generated as a function of the new solution. The impact was related in a combined impact and goal hierarchy to distinguish high-level goals from more detailed impact elements and key deliverables in the project.

The impact case formed the baseline for a common brainstorm and discussion on KPIs and how to measure the impact of the project. This included a behavioral KPI designed as a survey with ten different questions to a group of key users. A baseline measurement of four KPIs was established ahead of go-live in order to establish a clear 'before-and after' picture.

Impact solution design became the overall project plan: As part of the pre-analysis, three workshops were established with the clear purpose of frontloading discussion and decision-making on the overall process and solution design. Two elements were essential in order to succeed:

1) having the right people in the workshops, 2) facilitation with focus on the end-to-end perspective and efficient decision-making.

This combination enabled the workshop participants to visualize an end-to-end IT process flow and define a set of possible solution designs as part of the very first workshop. In the second workshop the overall solution design was chosen, and in the third workshop, the solution design chosen was analyzed even further. The impact case and the solution design formed the basis for the overall project planning.

As part of the pilot project, the traditional IT project approach of *analyze, specify, develop, test and launch* was challenged and reconsidered. Instead, the project phases were designed according to the impact solution design created at the initiation of the project. Each of the defined project phases was planned as individual sprints covering design, development and test activities in order to ensure delivery of the full process step in the phase. This approach helped to focus project work on the process and solution, and to frontload impact.

Constant focus on feedback through pulse checks: A monthly pulse check survey was established and executed throughout the entire lifespan of the project. The pulse check was targeted for three different groups – core project team, review team and steering committee. This approach made it possible to continuously track the 'pulse' of the project as well as to create an energizing and innovative environment.

Along with the formal pulse check, a "mini" pulse check was conducted as part of the weekly Monday morning sprint status meeting and the weekly review meetings on Thursday. This "mini" pulse check was very simple: a poster with one question and a scale from 1 ☹ to 5 ☺: *"Honestly, are we on the right track? What is your gut feeling?"* At the end of each meeting, all participants were asked to add a post-it note with their initials on the scale along with a brief comment. This approach facilitates an honest and easy way for feedback as part of two of the most important touch points of a normal week in the project.

Colocation design: The core project team was colocated approximately 60% of the weeks in a common project office space at the Novo Nordisk headquarters in Bagsværd.

Fixed project rhythm as the project's heartbeat: To manage the high-paced project plan, a number of sprint plans was set up and managed visually in the project team room. Typical sprint plans have duration of four to five weeks with clear deliverables and success criteria. Individual tasks were broken down into weeks and assigned to specific core team members, and every Monday morning a 30-minute stand-up meeting was scheduled to run through last week's progress and plan for the coming week.

It was important to set a fixed rhythm for sprint plans – both in relation to the creation of the plans (defining the right level of detail in the tasks and doing realistic time estimations) and in the ongoing sprint plan follow-up (never skip the follow-up meetings and be rigorous about back-logs, progress and risks).

Along with the sprint plans, a simple 'master plan' of all scheduled sprints was created to provide a high-level project plan overview. And finally, a simple short-term resource allocation plan was defined. As a result of this fixed structure and follow-up, the project managed to set a fixed pace and rhythm, which ensured a clear focus and weekly progression on deliverables.

A number of key stakeholders were selected for a review team. This included a set of end-users, a former solution architect, a business process owner and two steering committee members. The review team was then invited for a weekly one-hour meeting every Thursday. The purpose of

getting this team together with the core project team every week was to ensure a close dialog on progress, process and solution design with key stakeholders outside the core project team. The meetings were used to discuss, present and review parts of the process and solution. An important part of this was to do the meeting in a "raw" and unfiltered manner in order to bring frankness into the project.

The result was an intense and direct interaction about process and solution, which had several benefits: (1) it enabled the project team to frontload several discussions because of the easy access to these stakeholders; (2) the project managed to draw the process and solution much closer to the important stakeholders by shared knowledge and information. The result was trust in and commitment to the solution; (3) the project managed to create a frank atmosphere at these meetings – where several stakeholders characterized the meetings as "the energizer of the week"!

Visualization of process and solution used as efficient communication tool: When operating in a high-intensity project with many touch points towards both internal and external stakeholders, it is important to find an efficient way of communicating. The project team decided on extensive use of visualization for a broad range of communication. Examples include: (1) the impact solution design was visualized in detail on a large piece of brown paper. This 'brown paper process' quickly turned into the "backbone" of the project. (2) In the early stages of the project, mock-ups and prototypes of solution design were visualized through the use of colored index card. (3) Complex and detailed solution details were also visualized through the use of colored index cards on a wall. (4) A0 poster-format sprint plans were placed in the project team room, and then used actively and visually for progress and follow-up. (5) A detailed test plan for solution test purposes was also visualized through a poster on the project room wall with the status of individual test cases.

This vast use of visualization made a positive impact on especially weekly review meetings as it was easier for the review team members to follow a "visualized" solution on a wall instead of written or presented solution on a projector. The challenge of using visualization is to have experienced project team members who can "filter" the details of the solution and be able to creatively present the key message.

Active project owner engages with project team biweekly: As part of the weekly review meetings, the project owner was invited to join. The ambition was clear – the project owner should engage with the team on a biweekly basis! However, at the start of the project, it proved difficult to attract the project owner to the review meetings. But after the first participation, it was clear to all that this was a very valuable constellation. The feeling of having the project owner in the room was amazing and empowering and gave the project team a strong feeling of importance and energy. Also it gave the project owner valuable insight into a very important project.

Project leader coaching sessions to leverage leadership: To support the extensive focus on project leadership, monthly coaching meetings with the project leader were set up. At these meetings subjects ranging from sprint planning techniques, handling of important gate meetings with the governance board and personal development were handled. More importantly these meetings initiated a habit of continuous reflection and change of practice which turned out to be essential for great leadership.

Put people before systems and tailor to the project model: The project and IT governance in Novo Nordisk is very mature, works well and is therefore quite institutionalized. The Novo Nordisk IT project governance model (ITPMM) is a

stage-gate model (five phases and five gates) which defines key activities and approval criteria (Idea (G1), Initiate (G2), Analyze (G3), Execute (G4) and Realize (G5). As the pilot project following the Half Double approach deviated from the ITPMM, the project had to document why and how the project deviated from IT governance requirements, which required some effort from project management.

Brief overview of the project key activities:

Table 13: Brief overview of the pilot project key activities

TIMING	DESCRIPTION
October 2015	• Pre-analysis was concluded and official project was initiated • Initial impact solution designed in pre-analysis workshops, scheduling and start of first sprint plan • Onboarding of core project team members • First draft of impact case prepared with team
November 2015	• Review team meetings initiated and first mock-up of part of solution presented to review team • First sprint completed and gate 2 approval of project by Novo Nordisk Product Supply IT Council • Pulse checks introduced for core team and review team • Impact case finalized and presented to steering team
December 2015	• First review meeting with project owner participation • First sprint started with design, build and test activities included • IT design workshop to discuss and agree on detailed design solution • Review of first team pulse check with project core team
January 2016	• First prototype of part of solution ready for test • First draft on KPI's defined and presented
February 2016	• Development and unit testing of first part of solution (Master data determination) completed
March 2016	• Gate 3 approval of project by local Novo Nordisk IT Council
April 2016	• Development and unit testing of second part of solution (Master data creation) completed • System Test of solution parts 1+2 completed successfully
May 2016	• User Acceptance Test of solution part 1+2 completed successfully • Baseline measurement of KPI's established
June 2016 (expected)	• Final preparation of go-live (cut-over) • User go-live of first part of solution (Master data determination and creation) • Go-live hyper care support completed

A few accounts from the Novo Nordisk pilot project

The surprisingly energizing effect of the weekly review team meetings: Before the first review meetings, questions such as "Will we have something to present every week?" and "Is it relevant to share this with the review team?" were raised by the team. The team also worried that it would require a lot of preparation for the review meeting. However, it was soon agreed that presenting a prototype or work in progress would be the approach. This soon proved to be a good decision. The teams invested energy, inspiration and knowledge, which is reflected in the review team members explicitly stating that the meeting was their "weekly energizer" and mini pulse check – which leans heavily towards the green smiley. Such feedback re-boosts the core team's energy.

The moment when it becomes clear to all – active project ownership is critical: The value of having the review team and the project owner close to the project on an ongoing basis became apparent when the project asked for the project governance body's approval to commence Execute activities (development and implementation) in March 2016. As the project deviated from the overall decision criteria (e.g. full User Requirement Specification was not completed and part of the solution had already been developed and tested), the governance body (local IT council) inquired about the project methodology and how it impacted the project in terms of advantages and risks. The IT project leader explained that the benefits of following the Half Double methodology were the identification of risks and uncertainties associated with the most critical parts of the solution. The importance of strong project ownership was reflected when the project owner highlighted that because of the project Half Double methodology he had been more involved in this project than in other projects and from what he had seen, he was confident that it was the right approach for this project.

When many parallel sprints are needed to meet the deadlines: Some months into the project, it was decided to advance the go-live on part of the solution by three months. As a consequence the project became even more intense requiring that several sprints be run in parallel. This was a challenge, first in terms of aligning the sprints with regard to length and content, and secondly the need for co-ordination increased dramatically, while at the same time there was a need to create space for the individual team members to focus on critical tasks. It was decided to split the team, so the team actually ran two tracks with separate weekly sprint planning meetings but still one common review meeting.

Expected results and preliminary key learnings

With the Half Double approach, the project *expects* to advance the go-live from February 2017 to June 2016 and a later release in September 2016. This indeed drives the *'HALF the time to impact'* agenda, and thus *potentially* realizes business benefits eight month sooner than originally planned. The key success criteria are:

Table 14: Success criteria and their fulfillment

SUCCESS CRITERIA		
	Target	**Expected**
#1	Improve project solution with regard to: (1) variant planning, (2) performance and stability, and (3) trustworthiness	To be evaluated after go-live in September2016
#2	Reduced time for pilot project impact, where go-live time is accelerated from originally planned in February 2017 to September 2016. Go-live is further accelerated for part of the solution to June 2016.	This plan is expected to be realized. To be evaluated by June 2016 and September 2016
#3	Ensure continuous progression through establishing a fixed pace for the project. A fixed pace includes colocation of core team 60% of the week and key flow events (sprint planning, weekly planning and visual status with core team). Weekly solution feedback with feedback team and solution review with project owner	To be evaluated after go-live in September2016
#4	Weekly review meetings to ensure close interaction and feedback from key stakeholders. Review meetings include weekly pulse check, visual planning and other visualizations of the project and the solution.	To be evaluated after go-live in September2016 Average pulse check results from November 2015 to May 2016 are: Core team: 4.4, Review group: 4.3 and Steering group: 4.1
#5	Iterative development through close cooperation between IT and Line of Business	To be evaluated after go-live in September 2016

Table 15: Preliminary learnings from Novo Nordisk pilot project

PRELIMINARY LEARNINGS	
#1	60% colocation for all core team members (both internal and external) is a huge benefit, but needs to be considered carefully at the start of the project. At Novo Nordisk, it was difficult to achieve the 60% allocation for certain key team members, which resulted in situations where either a decision process was delayed or quality of, e.g., a workshop was reduced due to lack of participants. Therefore, it is important to pinpoint the critical resources up front and ensure that 60% allocation can be realized. Resources with much lower allocation should rather be a part of the review team.
#2	It takes stamina to get the project owner close to the project – but it is worth the effort as it makes a world of difference. In the beginning of the project, it was difficult to get the project owner involved in the biweekly review team meetings. However, after a while, a set-up was found where the project owner was involved in steering group meetings and at gate review meetings – and this had a great impact, whereas another key member of the steering group participated in the review meetings. The project owner was very close to the project, and as a result, communication with the project owner shifted from a control mind-set to a trust and a “we are in this together” mind-set.
#3	Local standards for project methodology and related governance processes (both project governance and IT governance) must be aligned to the Half Double approach in order to not “disturb” and slow down

PRELIMINARY LEARNINGS	
	progression and impact. The project experienced that the standard test and validation approach (v-model) does not fit the Half Double approach very well. As a result, the project got into a few critical situations where a rigorous test procedure delayed development and test at a late point – and actually at one point threatened the planned go-live of the project. The learning is that local governance models and related processes must to be considered carefully at the beginning of the project, and that the steering committee should be empowered to challenge the governance process.
#4	Be strict and persistent as regards the rhythm of the project. As the project progresses, we tend to think planning and coordination become less important. It takes a strong project leader to stick to the fixed rhythm of the project day by day, week by week and month by month and convince the team and key stakeholders that it is still necessary. However, in this case it is evident that the fixed rhythm kept momentum in the project and ensured weekly progression. The learning is not to cave in for the pressure but stick to the rhythm of the project.
#5	In terms of the Half Double Methodology, this project was the first to experiment and succeed with an impact solution design. The design has worked as the backbone of the project all along ensuring an early impact. The learning from this project is to use the Half Double Methodology early in the project to affect the direction of the project at an early stage. It is also evident that the impact solution design is not a one off thing that happened in one meeting – it is rather a process of three or four workshops where ideas are gathered and mature.
#6	The colocated environment included people from both IT and Business. A close collaboration between these two units ensured an integration of mind-sets and diminished the normal feeling of “them and us”. Examples include that it was very positive having both perspectives present in the design workshops and it was also a success having IT and Business working side by side during tests. Through close collaboration, it was possible to see problems that would otherwise not have been captured until later in the process. The learning is that integrating different units and competences in the daily work and operations of the project capture feedback and problems at an early stage
#7	Solution design, sprint plans, resource allocations, and pulse checks were visualized on brown paper and large posters using post-its and cardboard cards to visualize tasks, progression and responsibilities. Using visuals has contributed with simple and easy to understand overview at all levels in the project as well as created clear ownership. Further visualization was used for prototyping in the review processes improving both solution and process.

GN Audio pilot project

Company and pilot project

GN Audio is part of GN Great Nordic, a Danish technology group founded in 1869. GN Audio was founded in 1987 as a spin-off from GN Danavox (the current GN Hearing, former GN ReSound) and is among the leading and fastest growing suppliers of hands-free communications solutions. From its global headquarters in Copenhagen, Denmark, GN Audio operates in three regions: the Americas, with headquarters in Lowell, Massachusetts, Europe, Middle East and Africa headquartered in Copenhagen, and Asia-Pacific headquartered in Hong Kong. GN Audio's research and development is based in Copenhagen, production facilities in China and GN Audio has sales offices in 15 countries.

- Approximately 1,000 employees
- Total revenue: DKK 561 million (EBITA)
- Head office: Ballerup Denmark

The pilot project at GN Audio is categorized as a sales/IT project and is about developing new ways of working with digital sales. By launching a test marketplace by applying the Half Double Methodology, GN Audio will be able to reduce its project lead time and time to market dramatically. Since launching online sales channels, one of GN Audio's challenges has revolved around a tendency of launches stagnating due to heavy after work to correct errors from previous launches, thus tying up resources that could have been used elsewhere to perfect existing channels and develop new ones. In order to reach the project's ambition of reducing GN Audio's project development lead time from nine to three months, the three pilot project months will outline the foundation of how information flows between technical platforms and, to begin with, a new channel to be ready for launch 1 July 2016. The pilot project outlines how future online sales via multiple channels will take place: each of these channels addresses different marketplaces across geographies.

From the point of departure, the project enjoyed a high degree of top management attention, largely due to its must win battle status in the organization. At that point in time, the highly dedicated project owner had no team and was consequently struggling with finding and allocating resources in the organization. With only three months from project initiation to the final deliverable, the project was an organizational challenge from start.

Local implementation of Impact, Flow and Leadership

The following elements were firmly anchored into the GN Audio pilot project in order to create the desired impact via the core elements: *impact, flow, leadership* of the Half Double Methodology.

The impact case was developed early to set the direction for all stakeholders: The impact case was developed in close collaboration with the project owner and the business project leader with a few iterations during the project start-up. At the first meeting the objective setting (purpose, success criteria and deliverables) was established. At the second meeting, the impact solution design was developed and the objectives were finally set along with the scope of the project. Afterwards in corporation with the project owner, the impact case was broken down into measurable business and behavioral KPIs, which were printed on a poster and placed for all in the colocation room. Lead time and data quality were the main drivers of the impact case.

Impact Solution Design – Shorter Time to Market with fewer errors by collaborating better: The foundation for the impact solution was initially designed at the first meeting with the project owner and the business project leader. It was

agreed that the time span for the Half Double pilot project was going to be three months. Therefore, the sessions evolved around "what have we achieved after three months?" The answer: A new way of working with projects across business and IT. And, in addition: Successful launch of a critical market, which normally takes up to nine months. The overall idea of this project is to run a trial for "future implementation of new markets". This essentially means that the three-month initiation and applying the Half Double Methodology should set the standard for future projects in terms of how to collaborate effectively across departments. The three months were broken down into four sprints of value adding. The positive effect of this process was immense and allowed the team to gain more knowledge about the project and the potential output and outcome. When the team entered the development phase, it was much easier for them to know exactly what to develop, and therefore they could develop it much faster. Previously this was not the case for similar projects at GN Audio. A developer put it this way during the third sprint (development phase): *"I have never previously known so much about what the other people in the team are doing and how that influences my deliverables as I do in this project".*

Pulse check to follow the gut feeling: Both analog pulse checks and digital pulse checks were established. The analog pulse was conducted every Friday after the sprint meeting. The single question for the pulse check was *"Frankly, what is your gut feeling, are we on the right track?"* There have been four analog pulse checks so far, and the average score started out with 2.5 and has steadily climbed to 3.5 (on a 5-point scale). The digital pulse check with six questions regarding project performance is conducted at the beginning of each sprint. So far two digital pulse checks have been conducted and the average score was 3.4 and 3.5. Throughout, the pulse check was used as input for dialog with the team and stakeholders on how to adjust the project to increase stakeholder satisfaction.

The fixed project rhythm sets the heartbeat in the project: The business project leader is located in Boston, US, and some of the developers are located in the US as well. The rest of the team, including the IT project leader and the project owner, are located in Ballerup, Denmark. The team resources (especially from IT) could not be allocated 60% to the project and a pragmatic approach was needed. Instead, two days a week all involved team parties were to work on the project. The other three days were kept free for other matters. This allowed for 20%-30% allocation of resources (which in GN Audio is a lot for a single project). During the two days, daily 30-minute stand-ups are conducted at a fixed time allowing US East Coast project members to join the meeting via Skype. Three questions are in focus: 1) what did I do? 2) what am I going to do? and 3) what stands in my way to complete my tasks? The Half Double team facilitated the first couple of meetings to set a best practice. After six or seven stand-up meetings, when the pace of the meetings was satisfactory, the facilitation responsibility was handed over to the IT project leader. Today, the stand-up meetings typically last no longer than 20 minutes.

Visual planning sets everything out in the open: We started out by building the masterplan for a period of 14 weeks. This was done on a huge whiteboard with post-its; three work streams were identified. After establishing the masterplan, we developed the first sprint. The first step was to identify deliverables for the first sprint. That was done collaboratively with the team present. The sprint was scoped on a sprint poster with post-its. Where the masterplan is divided into three subject categories for the work streams, the sprint plan is developed on an individual level. This means that the Sprint board lists each team member's name, and each team member has

assigned specific tasks to themselves at the sprint planning session.

Due to the geographical distance between core members of the team, we used a digital master and sprint plans to supplement the analog master and sprint plans in the colocation room. For this purpose, a software, which is an exact copy (format and visually) of the analog project plans used in this project, was introduced.

Colocation – to get everybody in sync and increase efficiency and team spirit: At the very first meeting with the project owner and the business project leader, it was discussed where the team could establish a colocation room. The prerequisites for this room were that it had plenty of space to work in, fresh air, walls to stick posters on and that it was available 24/7. The room we found basically represents a cool industrial atmosphere which fits well with a development project and a creative team like this one.

One of the main challenges for GN Audio was to get people to work efficiently together across departments. Creating the colocation room and setting the fixed heartbeat (Tuesdays and Fridays) in this project have increased the flow across departments significantly. The visual project boards enhanced transparency for all team members and stakeholders. It took some time to acknowledge the value of the room but after the first sprint, an informal culture outlining how to prepare for the visual stand up and what to present (and *not* present) was established.

Active project ownership is needed to kick in top management doors: From day 1, the project owner was deeply involved in the project. He was present at the first two workshops where the Impact Solution Design was developed, and he has been present at all stand ups (except a few). His tasks are visible to all on the sprint plan, and he is overall responsible for the *organizational anchoring* work stream. The project owner has the main responsibility for the steering committee dialog and for getting resources allocated to the project. He is a very informal, direct person who goes straight to the decision-makers when needed. His commitment and his determination to get things moving and get line managers to allocate resources to the project has been pivotal for fast and steady project progression.

Skilled collaborative project leaders with shared responsibility: The business project leader is located in Boston (but visits Denmark every 4-6 weeks) and the IT project leader is located in Ballerup, Denmark. It is imperative for project success that the project leaders know their way around the organization – especially in GN Audio. The project owner has a tough job aligning expectations with senior managers and gets them on board – but it is the project leaders' responsibility to get the project moving and keep the team members engaged and motivated. So far, they have done a great job.

Put people before systems to support each individual in the project: The project team including the project leaders and project owner consists of 12-15 people in each sprint. From day 1 it was communicated that the Half Double Methodology emphasizes a people approach rather than a systems approach. This has been communicated continuously throughout the project. One way of showing this was the active ownership and involvement of everybody in the colocation room – even the "hardcore programmers". Everybody has defined their own tasks and asked for help from others in the project if needed – also asking for help from other parts of the organization.

The GN Audio governance model is rather complex and to some extent non-transparent. For instance, IT is placed in several departments, and thus IT resources needed in the project must be endorsed from different line managers. Everybody seems to agree that this is a complex governance set-up to work with in projects. But when we all

meet in the colocation room – everything appears simpler and solutions are found that fit governance as well as the project.

Brief overview of the project key activities

Table 16: Brief overview of the pilot project key activities

TIMING	DESCRIPTION
March 2016	• Project kick off with project owner and business project leader • Initial Impact Solution Design defined • Mind-set workshop with key stakeholders • Onboarding of core team members • First draft of impact case prepared with project owner
April 2016	• Project kick off with core team • Scheduling and start of first sprint plan • Analog pulse check initiated • First sprint completed and second sprint initiated
May 2016	• First steering committee meeting and commitment established • Roles and responsibilities defined and accepted by core team • Development phase initiated
June 2016 (planned)	• Test phase completed • Major market place launched • Internal GN Audio Half Double Methodology event conducted to present findings and results • Half Double Methodology documented and handed over to GN Audio for anchoring and further implementation

A few accounts from the pilot project at GN Audio

Are they going to destroy us? The Half Double Methodology immediately created attention at top management level – and not necessarily positive attention. The main reason was that line managers realized that the Half Double Methodology would require them to allocate some of their key resources to the project with a much higher allocation than normally. Therefore, before the first steering committee meeting, where the Half Double Methodology was to be presented, the project owner was concerned that the committee would disapprove of the project approach. When the meeting came to an end, the project owner, a bit reluctantly, asked the steering committee: "Anything that concerns you about this way of working?" The straightforward answer was "No, why should we be concerned? It is hard to disagree with the approach. We support it; get on with it and we look forward to seeing the results".

"I am definitely going to apply that frontloading exercise when I initiate my own sprints". At the beginning of all sprint planning workshops, the core team at GN Audio carried out a frontloading exercise, which basically is about generating a wide array of questions that need to be answered, to be able to finalize the sprint deliverables. The frontloading exercise has repeatedly proven to

yield fundamental questions, scoring high on both importance and urgency. One of the external team members expressed his great satisfaction with the exercise and proclaimed that he was definitely going to copy the exercise and apply it as part of his own sprint planning workshops. "The kind of discussion we have, based on these questions, gains more value and enables us to be aligned about what is most important in the next sprint", he stated at one sprint workshop giving us the feeling that we were on the right track with the flow of the project.

"We never had such a high degree of transparency and cross-organizational alignment in a project". At each sprint session, Tuesdays and Fridays, all team members; including those not colocated at GN Audio (but work out of the US) walk through their tasks of the week. Because each meeting helps get the project members to share the same vision and clarifies expectations among project members, the cross-organizational knowledge has increased manifold, which one of the project's core team members positively expressed at the beginning of the third sprint planning workshop. "Throughout this workshop, I finally get to see the huge value of this methodology. I have never before in GN Audio experienced such a deep understanding of what the other team members are doing and how that influences my work. To have this understanding makes it much easier and fun to contribute to the project".

Preliminary results and key learnings from the pilot project

The project is still ongoing. Therefore, the short, medium and long- term impact will be evaluated later in 2016 and 2017.

Table 17 : Overall preliminary success criteria and their fulfilment

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#1	Launch of 26 marketplaces and 2 new channels with decreased complexity by 2017.	To be evaluated in August 2016 and later. Actual: 9 months for launch of new market. Expected: 3 months.
#2	Establish accountability and responsibility for quality, availability and accuracy for prices, order processing and inventory levels across channels.	To be evaluated in August 2016 and later. Actual: 75% accuracy by 1 April 1 2016. Expected: 90% accuracy by June 2016 and 99% accuracy by December 2016.
#3	To implement a new way of working with respect to resource impact, time to market and scoping of future digital projects. Resource allocation impact: Actual: 60% by 1 April 2016 / Expected 70% by June 2016; 80% by December 2016; 90% by June 2017. Time to impact: Actual: +75 days by 1 April 2016 / Expected: 30 days by December 2017. Accuracy (content and pricing): Actual: 75% by April 2016 / Expected 99% 2016.	To be evaluated in August 2016 and later.

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#4	Deliver 99% accurate and channel specific content and rich media for all digital sales channels and marketplaces.	To be evaluated in August 2016 and later. Actual: 50% relevant data by 1 April 2016 / Expected: 85% relevant data by June 2016; 99% relevant data by December 2016.

Table 18: Preliminary learnings from the pilot project in GN Audio

PRELIMINARY LEARNINGS	
#1	Implementing a new way of working, such as the Half Double Methodology, requires a strong and determined project leader, who has the power to make decisions – fast. In this case, the business project leader is a highly skilled person with a long history in the company. In many ways this makes her the most capable decision-maker in all aspects regarding content discussions. She strongly supports the Half Double Methodology. However, if she did not have the level of content knowledge and "respect" throughout the organization, implementing this radically new way of working in an organization like GN Audio would be very difficult.
#2	The project owner has been deeply involved in the implementation of the Half Double Methodology. First and foremost in the frequency of his appearances in the colocation room; participation in status and sprint planning meetings – but also in the way the steering committee has been involved. The project owner was forced to formulate a set of Key Performance Indicators that visualize not only the desired business impact but also what behavior must be changed in order to create and sustain the desired impact. This was carried forward to the steering committee with success.
#3	Colocation is highly effective! Each time people enter the room, adjust plans, discuss challenges, celebrate milestones achieved, the team spirit is enhanced and the effectiveness of the team increased.
#4	Working visually (with visual plans on white boards) has proven to have an enormous positive impact on project progress and transparency. Even more importantly, working visually has highlighted areas of potential pitfalls/missing links and forced the team members to clarify dependencies and ownership along with defining when a milestone or deliverable is reached.
#5	Working with digital and analog pulse checks allows the project owner and project leaders to be constantly aware of the team members' active involvement in the project and has proven to serve as a highly valuable tool for making necessary adjustments to the leadership of the project.
#6	Having people working from different locations (Ballerup & Boston) simultaneously can be done! It requires a fierce focus on discipline (meeting discipline and constant update of project/sprint plans), and topnotch virtual standards to support meeting facilitation. In GN Audio, the Virtual Visual Planning software tool and the physical boards were constantly synchronized and one person was in charge of this synchronization.
#7	Get your resources allocated – fast! In this project, it took a long time to allocate resources due to the fact that GN Audio's complex overall governance. It can be unclear who owns which resources. This slowed the project pace in the beginning. However, the deeply involved project owner was the key driver in getting

	the resources needed.
#8	Not being able to have the whole project team physically colocated is not necessarily a problem. It just needs to be managed in a clever way. E.g. if the project leader is located geographically in another region of the world, virtual planning tools should be applied. It is highly important that plans are constantly updated both on the analog and virtual sprint and masterplan.
#9	The sooner, the better! In order to implement the Half Double Methodology you need to be part of the initiation of the project, to establish a viable Impact Solution Design. In this project, the scoping was done at the very beginning with the project owner and the business project leader, which allowed the Half Double Methodology to be implemented from the beginning.

VELUX Group pilot project

Company and pilot project

VELUX Group is a building materials manufacturer offering roof windows and modular skylights as well as a range of decorative elements, blinds, roller shutters, installation solutions and remote controls. The company was founded in 1941 and is owned by VKR Holding A/S, which is wholly family and foundation-owned.

- Approximately 9,500 employees around the world
- Total revenue: DKK 17,734 million
- Head office: Hørsholm, Denmark

The VELUX Group has manufacturing and sales operations in more than 40 countries and has manufacturing companies in nine countries. As one of the strongest brands in the global building materials sector, they work towards creating better living environments for people around the world – using daylight and fresh air – through products that help create bright, healthy, energy-efficient places in which to live, work, learn and play.

The pilot project is an organizational change project initiated with the aspiration of cutting the time to impact on projects in the total portfolio across the company.

The pilot project "Benefit Faster" was initiated with the specific intent to accelerate efforts set to reduce time to impact in projects and realize benefits faster. More particularly, the overall ambition was to reduce focus on deliverables and enhance focus on impact; reduce tendency to prematurely start executing projects and enhance capability to conduct insightful Impact Solution Design; reduce formalism and enhance focus on actively involving the right project owner and displaying leadership of people in the project; and to reduce level of formal education and enhance focus on on-the-job training to anchor behavioral change.

The pilot is the first phase of the project which was initiated on 1 March 2016 and is expected to finish 1 July 2016. To help realize this ambition, phase 1 of the project was expected to deliver two real project "experiments" designed for faster impact. The two project experiments were in the preparation and start-up phase respectively. Along the way we would train eight practitioners to be "project architects" (a new role defined for designing projects in the early phase) to teach others how to apply the Half Double Methodology in practice in phase 2. Furthermore we would mobilize the VELUX project community to start changing existing practice.

Local implementation of Impact, Flow and Leadership

The three core elements of the Half Double Methodology: Impact, Flow and Leadership were specifically tailored to fit the project and the VELUX organization and came to life in practice through as follows.

Impact solution design for faster impact – Design the project for faster impact, effectiveness in execution and increase commitment: One of the most critical Half Double efforts in the pilot was related to the development and roll-out of the project's Impact Solution Design. Insight and knowledge from selected project experiments would feed directly into the cross-organizational, portfolio-level solution design in an ongoing, iterative development process that would unfold through three phases by which the effort would be scaled and more and more projects would start using the "benefit faster" approach. In other words, we found our basis in a minimum viable product approach and aspired to show and inspire the organization through real life case stories rather than enforcing new behaviors through yet

another perfectly designed governance structure communicated from the corporate level.

Two projects were identified to pilot the new approach set out to design and execute projects for faster and higher impact; these were initiated in parallel. Focus was put on the preparation and start-up phase in order to establish an intelligent Impact Solution Design. To support the collaborative effort of creating the design, a five-step workshop model was developed to clarify what to prepare, who to involve, how to conduct each of the sessions as well as the expected output.

The emphasis on the initial phases in the project model was a result of an identified organizational tendency to prematurely take projects from the idea phase directly to the execution phase focusing on deliverables without being clear on the objectives, the projects ultimate impact creation or on gaining necessary involvement and ownership from key stakeholders – consequently leading to complications, lack of alignment, delays later on during execution and more importantly lack of impact. For that reason, our ambition was to increase the level of insight, learning and alignment early on in the project in order to ensure faster impact realization and reducing time spent in the execution phase to create faster impact.

Impact case – Drive the organizational change with an impact case and create impact from day 1: The impact case and leading impact indicators for the overall organizational change were designed early in order to ensure a clear focus on relevant business and related behavioral impact to navigate the progress of the project – next to the ultimate success criterion: Stakeholder satisfaction with the organizational change. The impact case was at the very core of the Impact Solution Design and was continuously revisited and updated with key stakeholders as new insight and learning were gained, and thus helped guide dialog and effort on an ongoing basis.

Pulse check and mini pulse checks – Engage, involve and create stakeholder satisfaction using biweekly pulse checks and mini pulse check: In order to continuously be in touch with the feel of the organization, we conducted a biweekly six-question pulse check with key project participants and stakeholders – also including the project owners, project leader and team members from our two project experiments. We also conducted mini pulse checks after each of the 10 Impact Solution Design workshops to capture immediate reactions and reflections. The mini pulse check is a visual poster with a single question: *"How confident are you that we are on the right track in terms of creating faster benefits with the project?"* and the participants are kindly asked to place a post-it with their name physically on the poster stating whether they feel that they to a high, low or to some extent are confident that we are on the right track. The dialogue based on the rating is the important part of this as it triggers insight into what to change and what to do more of to increase stakeholder satisfaction.

Fixed project rhythm – ensure progression and facilitate interaction between a broad group of stakeholders: To ensure intense progression we established a fixed pace with set meetings and reviews – designed with close involvement of the end-users in mind (the project leaders, the project owners and the portfolio management office (PMO) consultants). Key points of interaction included weekly review meetings with the project owner, Impact Solution Design workshops, project management coaching and biweekly pulse check follow-up meetings. Each point of interaction was designed and executed with a clear objective in mind and with a strong emphasis on visualization of core ideas to enhance involvement and ownership.

Create intensity with colocation – generate a base for organization change with weekly workshops: The project leader of the organizational change was 80% allocated to the project whereas key change agents such as PMO consultants in the organization were not allocated to the project. The Half Double team consisted of one 20% and one 40% allocated resource. To generate high intensity in project execution, Monday became the core team day and moved around between three well-known rooms close to each other intense Impact Solution Design workshops, review meetings and work sessions were created.

Visual leadership – Visualize plans, tools and solutions to reduce complexity and enhance alignment: Our ability to effectively capture and communicate the insight and thoughts emerging in the Impact Solution Design workshops was thus key to ensure that the core ideas could be transformed into actionable steps that were accepted and owned by key stakeholders. To support this, lots of visuals were used – physical elements such as posters, index cards, illustrations and flip charts: elements that allow us to facilitate group interaction and the active involvement of all participants as well as quickly illustrating how the projects were to generate impact throughout its lifecycle. After each session, the input was documented and adapted to online formats for further reference and sharing.

Active project owner – Follow and challenge the project on a weekly basis: We had weekly half hour touch points with the project owner. The meeting was located in-between workshops with the two project experiments, pulse check discussions and deep-dives on project work. Walls would be covered in posters, key stakeholders would wrap up with their final questions and the mini pulse check would reflect the actual feel of the room – whether it was as satisfactory as we would want it to be or not. The project owner was then presented to the current status of the project, success stories and concerns, and our thoughts for further progression – in its most raw and unpolished form. Although rather provoking and challenging at first, it quickly established an open and frank mode of collaboration in which the project owner actively engaged in the project, challenged us in regard to our prioritization and impact realization, and helped pave the way in the organization to support the project's overall vision.

Collaborative project leader – to anchor behavior change in the organization: To facilitate mind-set change, the project leader used a lot of effort in dialog with project owners, project leaders, PMO consultants and upper management to make the new idea and role of the "project architect" grow and gain commitment. Selected PMO consultants received training in Impact Solution Design and had a fixed role in the preparation and start-up phase of all projects to enable the process and help ensure qualified output. Each of the new Impact Solution Design practitioners were also expected to coach and train other project leaders, owners and PMO consultants on how to integrate the new mind-set and methods in practice. Through this approach we aim toward having a broad group of practitioners capable of designing and leading projects for faster impact realization before 1 January 2017.

Put people before system and tailor to the project model – Mobilize the right mind-set and commitment to impact early in the project: This was done through an intense initiation phase where key stakeholders from various levels in the organization were gathered and introduced to the core ideas and actively contributed by identifying various project experiments and key people to address to make it happen in practice – creating a whole other level of commitment than that we have seen before.

The VELUX project management guide includes four main phases: preparation, start-up, execution and close. Most large projects in VELUX would

follow these phases as it is founded in the governance. The project's critical timeline and dynamic nature disturbed our ability to adhere to the standardized governance process which was accepted. However, going forward to the next phase, the project will be related to the internal governance.

Below is a brief overview of the project key activities:

Table 19: Brief overview of the pilot project key activities

TIMING	DESCRIPTION
March 2016	• Impact Solution Design for "Benefit Faster": The Impact Solution Design was developed through an iterative process taking place over several workshops and on the basis of the objectives hierarchy and the impact case. • Initial mobilizing phase: With meetings and ongoing unformal dialog, the project organization was on boarded to the core elements and principles of the Half Double Methodology and "Benefit Faster". • Mobilization of the two project experiments: Initial meetings with potential project partners were held and two projects were identified as suitable for the "Benefit Faster" experiment.
April 2016	• Two projects committed to experiment with the "Benefit Faster" approach: We gained final acceptance from the selected projects on 1 April and initiated the Impact Solution Design process with key stakeholders. • The fixed project rhythm was designed to organize interaction between broad groups of stakeholders. • Broad communication effort initiated: The VELUX Management Group (VMG) and the PMO community were briefly introduced to the Half Double Methodology and "Benefit Faster". • Reference project process initiated with Aarhus University. • First pulse check distributed to key stakeholders. • First project owner meeting held in the project room.
May 2016	• First review team meeting held: Selected members of the PMO are invited every three weeks to be introduced to project progress and to contribute their viewpoints and experience. • Pulse check distributed to the review team: Adapted version of the pulse check introduced. • Accelerated Impact Solution Design on two project experiments: Key stakeholders are colocated to contribute their expertise in each of the five Impact Solution Design workshops. • Practitioner workshop #1 executed: Selected Half Double practitioners were invited to anchor the new mind-set and to enable them to train others in the Impact Solution Design approach.
June 2016 (planned)	• Impact Solution Design approach version 2 formulated for scaling in new project experiments • Practitioner workshop #2 executed • VELUX project community informed and engaged in the Half Double approach • VELUX Management Group briefed on the "Benefit Faster" approach and results • Phase 1 success criteria and results evaluated and initially compared to reference projects

A few accounts from the Velux pilot project

The review team meeting where common ground is re-established and the way forward crystalizes: The first review meeting with selected PMO consultants from across the organization is held in the project room on a Monday afternoon. The idea is to present the core idea of Half Double and the "Benefit Faster" approach to the ten participants along with a status update on the progression of the two project experiments and what key learnings have been captured along the way. After the first minutes of the meeting, it is evident that there is substantial interest in and engagement present in the room. What also becomes apparent is that despite the apparent alignment there is no clear answer on how to actually involve the project owner actively, although this has long been a wish. "Benefit Faster", the Impact Solution Design and the initial experience from the two project experiments provide the first proposal on how to operationalize this aspiration going forward which appears to create a shared feel of progression and engagement in the room.

"There isn't really anything new to this – is there?" We just finished a truly productive Impact Solution Design workshop together with one of the two project experiments. The overall objectives hierarchy has been established, the impact case has been created on the basis of the overall ambition and the business and behavioral impact to be realized, and the Impact Solution Design reflects the overall journey towards higher impact realization – faster. We have even initiated the process of translating the Impact Solution Design into specific and actionable elements such as the overall project organization and plan, crystalizing the road towards impact and the summer holiday. To wrap up the session, we ask the team how they see the value of the Impact Solution Design approach and if there are any additional topics we should address. The reply is fast and direct: *"I can see that we have produced a more detailed execution plan – but is there really anything new to this? If you ask me, this is what we intended all along".* Two weeks ago, the thought of investing time and resources in consciously reflecting on and designing the project for faster impact had seemed utopian and unnecessary to the project leader. Still, we find ourselves looking into the eyes of the participants who seem to share the same viewpoint; that they themselves would not only be able to conduct the same process without having seen this, but also that they are already doing it in practice. And however frustrating, the session requires that we recognize that Impact Solution Design process in itself appears so straightforward and meaningful that there is no recognition of how it varies from regular practice.

Expected results and preliminary key learnings

The purpose of the Half Double pilot project in VELUX is to empower and accelerate the project management organization's capability to reduce time to benefit on projects.

The overall success criteria of the pilot project are:

Table 20: Success criteria and their fulfilment

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#1	Higher benefit realized soon by using the Half Double approach to organizational change (To be updated by the project)	To be evaluated after phase 1

SUCCESS CRITERIA		
	Target	**Actual / Expected**
#2	Time to benefit on "Benefit Faster" reduced by five months (from September to March) (To be updated by the project)	To be evaluated after phase 1
#3	Two category C projects designed to realize benefits faster. Benefit solution design approved by project owner within two months. (To be updated by the project)	To be evaluated after phase 1
#4	Stakeholder satisfaction above 3.5 (Pulse check) (To be updated by the project)	To be evaluated after phase 1

Table 21: Learnings from pilot project at VELUX

PRELIMINARY LEARNINGS	
#1	Designing projects for higher and faster impact requires early and intense involvement. The most critical decisions are made at the beginning of the project – and must be taken by those with the insight needed to make the right choice and supported by those owning the impact. Key stakeholders and subject matter experts should be enabled to invest the time and resources right from the start before the team is set for execution.
#2	The Impact Solution Design process and the following project execution are enabled through executive management involvement. Conscious involvement creates buy-in, commitment and enhanced focus on impact. However, finding the right balance between involvement and informing is a key issue. The engagement and accountability needed should be established through continuous dialog with the project owner on a biweekly basis as a minimum. To ease such interaction, clear expectations as regards role and process should be established early on. This appears to generate the necessary commitment and trust to tailor the project to governance structures and allow for week-to-week adaptation and execution.
#3	The effect of the Impact Solution Design is two-fold: 1) It creates clear objectives, sets impact targets, frontloads knowledge and designs the project to realize impact – faster. 2) It creates key stakeholder commitment to the project in a very early stage because the value dialog is highly interesting to management.
#4	The Impact Solution Design appears straightforward and self-explanatory in theory but is perceived as more challenging to execute in practice. Leading the process requires both facilitative skills and solution insight. Not all practitioners possess both skills – in fact they seem hard to find. For that reason, the project leader, the project owner and the project architect must work closely together and supplement one another to ensure and qualify an intelligent Impact Solution Design.
#5	It takes time to mobilize the organization to establish willingness to work differently. Time and resources must be invested initially (in this case 2 months) and throughout the project, never assuming that the Half Double Methodology is self-explanatory, but rather as a change initiative that should be treated as such.
#6	The mini pulse check is an effective tool to ensure that all concerns are raised and should be applied following all key workshops. After intense discussions and brainstorming sessions related to the output of the meeting,

PRELIMINARY LEARNINGS	
	there is a need for taking a step back to reflect on the process and whether we are aiming in the right direction.
#7	The VELUX project management guide (reflecting VELUX governance) was enforced and challenged at the same time in the Half Double approach. Enforced in the experiment projects by enhancing the preparation and start-up phases of the project concluding in a project charter for gate approval before execution. However challenges as the phases in reality are not that strictly defined – it already feels like execution when insight is gained and learning increased in the start-up process, hence making it hard to distinguish when a project is at which gate and decreasing the importance of governance board "sign off" as everyone is already on board with the project and working to make it happen.
#8	The Impact Solution Design process can easily be perceived as a five-step workshop process to be followed strictly. However, it should be perceived as a series of "spaces" for understanding the project and setting the direction for impact realization. It is an iterative process with a lot of sensemaking as well as uncertainty created along the way before a common ground is reached with key stakeholders. Being able to handle frustrations and doubt that arise along the process underlines the importance of collaborative leadership in this stage of the project.

CROSS-CASE SUMMARY

In this section, we look at similarities across these seven cases. This is done in order to understand how the learnings of Project Half Double are qualified by local conditions and to clarify possible broader patterns (Miles and Huberman 1994). Even though the pilot projects are at different stages, some common themes can be identified in the learnings from Project Half Double. Important common themes include the focus on engagement of the steering committee and project owner and the local translation of the Half Double Methodology as a change factor in general and in terms of the implementation and use of specific project management tools. In the next sections some of these commonalities will be described in further detail.

The Half Double Methodology is supported by a range of project management tools. The pilot organizations report on the use of those tools and the practice of fitting them into local conditions.

Impact solution design: The pilot companies all emphasize that the Impact Solution Design must be developed and communicated early in the process. It must be acknowledged by all project members as well as key stakeholders externally as well as internally and recognized as the main driver of the project. Yet, it is noted that even though the impact solution design appears straightforward in theory, it is perceived as hard to execute in practice. It is not to be considered as something that can be accomplished in a single meeting. It requires a series of meetings or workshops where ideas are gathered and matured. Discussions should be facilitated to align the content of the impact case between different stakeholder perspectives in order to set the initial direction. Moreover, the Impact Solution Design should be anchored broadly in the organization through collaboration between project leader, project owner, and project architect. Others point to the necessity of creating links between product development and the market perspective and to integrate an awareness of the fundamental design of the project organization in order to focus continuously on impact and value creation. However, early development of the impact case and a clear view of risks were perceived as a good foundation for critical decision-making and the allocation of project resources. Development and communication of the impact case contributed to creating key stakeholder commitment to the project from an early stage. It contributed to a continuous dialog on value and created buy-in and commitment in the project team as well as an enhanced focus on impact.

Pulse check: A majority of the seven pilot projects report the pulse check to be a strong leadership tool. It allows the project owner and project leaders to be constantly aware of team members' motivation and engagement in the project and to make necessary adjustments to the leadership of the project. However, it is also noted that the pulse check never should be a simple control and reporting mechanism. It works at its best when used as a dialog tool, an outset for discussion and as a way to give and receive feedback. In that way, it requires thorough communication and a commitment to following up on the results and to ensure that all concerns are raised. When used in this way, the pulse check is an effective tool for reflecting on the project process and keeping focus on impact.

Colocation: Most of the pilot organizations recognized colocation of the core project team as an effective tool for strengthening collaboration, intensifying the project and enhancing team spirit and effectiveness. Useful experience came from collocating team members with different professions and competences, e.g. IT and business. Easy interaction between different units ensured integration and lessened silo-thinking. It helped an early discovery of problems and in that

way it supported reduced time to impact. However, it also became clear that just placing a project team in the same room is not sufficient to realize this potential. Colocation must be carefully designed and managed. It is not enough to provide a common meeting room. It should be colocated workplaces with associated space for meetings. Not only does it require proper physical working conditions, the project leader must recurrently stage how and why colocation should be used to motivate team members and overcome resistance. At Coloplast where colocation was not possible since the project team was geographically dispersed, synchronizing in time with video meetings was experienced as a useful adjustment of the colocation design.

Rhythm, planning and meetings: Keeping up the rhythm in the project through concurrent status meetings were regarded as a support for creating joint ownership of the pace and the plan in the project team and for enhancing project flow and progress. Team meetings were designed to engage, motivate and ensure effectiveness. In some cases this meant shorter meetings and an active use of visual planning posters and illustrations. A fixed project rhythm, intensive sprints and workshops were seen as counteracting the operational mind-set and sense of repetition and routine work which are bound to occur in long-term projects. Even in the case where people were only allocated to the project 10-20% of their time, short weekly coordination meetings were introduced as part of the project rhythm. These meetings were experienced as beneficial creating good relations between participants and facilitating overview and coordination, which made participation worthwhile. Persistence on keeping the rhythm in the project was in some cases perceived to be important throughout the project progression. However, it was acknowledged that it requires a strong project leader to keep up this project rhythm, to keep momentum and ensure weekly progression. Yet in one case this continuous focus on planning was not just perceived as entirely positive. The time spent on planning was criticized. Instead, it was emphasized that the project pace and planning should be designed flexibly in accordance with the project team and its desired rhythm.

Working with visuals: Large posters, post-it notes and cards were used to visualize tasks, progression and responsibilities. Working visually with solution designs, sprint plans and risk dash boards was experienced as efficient when it comes to creating a high degree of awareness in the project team of what each individual is supposed to deliver to the project. It made it easier to construct a common plan for all project members and not just a plan for the project leader. This practice created an easy to understand transparency and overview on all levels of the project and facilitated a sense of ownership important to the project's progress. Meetings in front of the sprint plan poster helped clarify areas of potential risks and made team members clarify dependencies and ownership as well as defining when a milestone or deliverable was completed. However, it was also noted that working visually is challenging when the project team works across locations, since visual posters and tableaus are difficult to share in these situations. Moreover, there is a risk of losing the history of the decisions and actions during the project lead time. It may therefore be necessary to complement the visual planning with a log of change. This may also serve the need for future references in product compliance data. Another solution to this problem was to constantly synchronize the analog visual planning with complementary virtual visual planning software. One person must be put in charge of this synchronization.

Close involvement of project owner and steering committee: A majority of the participating organizations recognize how the close involvement and commitment of upper management,

steering committee and project owner is crucial for the local implementation of the Half Double approach and in general for project success. Key stakeholder attention is important to a project and the project team's sense of purpose and value creation. Even so, it is not always easy to bring the project owner close to the project or to use the steering committee for active sparring. It requires work and stamina, but when it happens it makes a difference. Several of the participating companies experienced a positive mood shift in the project team, when the project owner showed up for a project meeting or when the project team had to present the project to the chairman of the organization and receive feedback from him. In one case, the project owner took on various roles in the project due to a lack of resources. The project owner also worked as a project team member as the project's point of contact with the customer. Furthermore, this person was frequently engaged in activities outside the project and therefore often had little time to participate in the biweekly project meetings, which affected the pace of the project

Moreover, across the cases the commitment of the steering committee and the project owner is found to be necessary in order to secure organizational readiness in general for the local translation of the Half Double Methodology. Existing governance structures and the Half Double Methodology must adjust to each other. The Half Double Methodology may challenge traditional governance mechanisms in the effort to maintain focus on impact and progression as main project drivers. Strong leadership and commitment are therefore required in order to tailor the standardized governance setup to fit these changes. The steering committee should therefore be empowered to challenge the governance process. Moreover, the implementation of the Half Double Methodology as a new way of working in projects requires a determined project leader with a strong mandate to make decisions.

We will proceed to the next chapter about challenges for the Project Half Double keeping the cross-case summary in mind.

CHALLENGES

The Project Half Double phase 1 was a useful arena for a learning process, and the preliminary as well as expected results and the learnings from phase 1 implies several challenges, which will be outlined in this chapter. This chapter will draw on studies related to agility and agile project management (APM) which is the broad category that Half Double Methodology subscribes to.

Achieving Half Double Competences: The result from Project Half Double was verbalized as the Half Double Methodology, but agility in a broader sense is a team competence and ability as highlighted by Conforto et al. (2016: 670): *"…agility is not a characteristic of a practice or method. Therefore, using terms such as "agile practice" or "agile methods" would not be adequate. Understanding agility as a team's performance is important to provide a more comprehensive view of the agile methods, practices and tools disseminated in the APM approach."*

So the big question is how the team (organization) acquires this knowledge. Findings from this study indicate that a thorough understanding of classical project management (Svejvig and Andersen 2015) is a prerequisite including several years of project / project management experience – most (all) of the pilot project were supported by consultants with many years of experience, which was essential for applying the Half Double Methodology in the pilot projects. This needs to be elaborated much further as part of practitioner development (Crawford et al. 2006; Rigby et al. 2016) and the implementation strategy for the Half Double Methodology.

Finding the sweet spot for Half Double Methodology: *"A sweet spot is a place where a combination of factors results in a maximum response for a given amount of effort"* (Wikipedia 2016). It is important for Project Half Double to find the sweet spot where the methodology is applicable and useful. The findings from this study show that some project types and organizations apparently are more adaptable than others. With only seven ongoing pilot projects and only one pilot project completed it is very difficult to come up with recommendations. However, project duration of less than 12 months and more innovative project types (market and product development, IT implementation / software, organizational change) appear more applicable than long-term engineering projects. This is certainly a topic which needs further investigation related to internal and external factors such as organization structure / maturity, project type / characteristics, team characteristics, market conditions etc. (Conforto et al. 2016; Conforto et al. 2014; Rigby et al. 2016) – it is all about the right conditions for the Half Double Methodology (inspired by Rigby et al. 2016: 46).

The scaling of the Half Double Methodology to the portfolio and organizational levels – achieving organizational agility: One thing is to succeed with a radical project methodology for a pilot project; another is to scale the use to the portfolio level or organizational level. The IT and software development industry has long been challenged by how to scale the use of APM – this includes large projects / programs and using APM at the portfolio level (Dingsøyr et al. 2014; VersionOne 2016), so it seems highly relevant that Project Half Double can learn from this area. A related issue is to decide which methodology to use (plan-driven, hybrid or agile); this is related to which projects should be managed with the Half Double Methodology. This also relates to a broader discussion about organizational agility and how to combine agility and stability (Aghina et al. 2015).

Encourage and accept translation of methods and practices: One of the important learnings

from the first pilot projects was to encourage and accept translation of methods and practices within the Half Double Methodology – an agile philosophy can be enacted in many ways. We need competent and experienced team members to apply and translate the Half Double Methodology (see achieving Half Double Competences above) as Rigby et al. (2016: 46) state "allow 'master' teams to customize their practices".

The Half Double Methodology is not a stand-alone methodology: The Half Double Methodology complements but does not replace the project methodologies in organizations. The challenge is to "merge" methodologies in a fruitful way. The Half Double Methodology focuses on Impact, Flow and Leadership, which are very important topics for doing projects, but a wealth of specific practices and methods are needed as well to complement the Half Double Methodology. The Half Double Methodology and the organization's current methodologies require mutual translation– this mutual translation process must be explicated, which to some extent is addressed by the method of "local translation".

Governance structures: Company and project governance structures are often imprinted by a "command & control style", which tend to be counterproductive to the Half Double Methodology and agile thinking in general. "Some executives seem to associate agile with anarchy" (Rigby et al. 2016: 43), so a clash between rigid governance structure and using the Half Double Methodology might be expected, and Half Double Implementation needs to address the very likely clash. This challenge is seen in many of the pilot projects especially in organizations with strong and mature governance structures.

Barriers – Half Double Methodology: It is too early to nominate the more and less successful pilot projects, but it is clear from Project Half Double phase 1 and other studies that APM is not a silver bullet, and that several agile projects are less successful. Many of the challenges described could be turned into specific barriers and we have seen several barriers in the pilot projects, e.g., the clash between "command & control style" with the Half Double Methodology. Again we can learn from the IT and software development industry where a survey maps the leading causes to failed agile projects (n=3.880) (VersionOne 2016: 11): (1) company philosophy or culture at odds with core agile values (46%), (2) lack of experience with agile methods (41%), (3) lack of management support (38%), (4) lack of support for cultural transition (38%), (5) inconsistent agile practices and processes (38%), and (6) external pressure to follow traditional waterfall processes (36%) – to mention the top six barriers in the survey. The barriers are relevant input to developing the Half Double Methodology and particularly its implementation.

Performance evaluation emphasizes why to go the Half Double Way: The overall intention with Project Half Double is to improve the competitiveness of Danish industry, and this is fully in line with the understanding of APM "*to gain competitiveness and to improve innovation capabilities*" (Conforto et al. 2016: 660). The Half Double Methodology must pay off. This is the case with the Lantmännen Unibake (LU) pilot project: LU was able to launch the first stores after five months which is considerably shorter than comparable reference projects, which has had lead times of 10 months or more. The other pilot projects cannot be evaluated yet, but it is essential to relate performance evaluations to Project Half Double on an ongoing basis. The results from other APM studies are promising (Bazigos et al. 2015; Hastie and Wojewoda 2015) although to varying degrees (Budzier and Flyvbjerg 2013; Serrador and Pinto 2015), and hopefully Project Half Double will pay off in the same vein.

CONCLUSION

This report presents the preliminary results from Project Half Double phase 1. Note should be made that the results are preliminary, in some cases expected, and not firm justified results. Results focusing on impact (short term, medium term and longer term) from projects are a long-time endeavor, which might take years to evaluate and not months as in Project Half Double phase 1.

The overall goal of Project Half Double is to deliver *"Projects in half the time with double the impact"* where projects in half the time should be understood as half the time to impact (benefit realization, effect is achieved) and not as half the time for project execution.

The current status of responding to the overall Project Half Double goal for the seven pilot projects could be summarized as follows:

- The Lantmännen Unibake pilot project was able to launch the first stores after five months which is considerably shorter than comparable reference projects, which has had lead times of 10 months or more; this is in line with the overall goal of Project Half Double to deliver impact faster.
- Four pilot projects have the potential to deliver impact faster, but it is still early days. Some results might be evaluated in the second half of 2016 while other results take longer time to evaluate (Coloplast, Novo Nordisk, GN Audio and VELUX).
- Two pilot projects will probably not be able to deliver impact faster, although it is also too early to evaluate these pilot projects. The evaluation of these pilot projects is medium to long term as it may take years before many of the KPI's associated with them can be evaluated (Grundfos and Siemens Wind Power).

In addition to the current status of delivering impact faster for the seven pilot projects, it is important to highlight that Project Half Double phase 1 has planted many seeds in the pilot organizations concerning project methodology and beyond. The many learning points from each pilot project show that the Project Half Double has left its clear footprint in the pilot organizations and also that the Half Double Methodology has evolved and developed very much during Project Half Double phase 1 ready to take off for Project Half Double phase 2.

APPENDICES

Appendix A: Short note about the research process and research methodology

Overall the research can be labelled as engaged scholarship where we co-produce knowledge with practitioners and are engaged in intervention (Van de Ven 2007).

The research process was carried out in parallel with the pilot projects with the purpose: (1) to evaluate and compare the pilot project with other projects in the same organization (Svejvig and Hedegaard 2016) and (2) to learn from the pilot projects. The research team has met with the seven organizations typically 5-10 times at workshops and interviews supplemented by relevant project documentation (Myers 2009). This was used to make write-ups for each pilot project. We furthermore had dedicated pilot project evaluation workshops in April – May 2016 in order to capture learnings from the pilot projects and to follow up on the fulfillment of the pilot projects success criteria (performance evaluation). This is the empirical data used for the preliminary qualitative analysis in this report (Patton 2002).

This report was prepared by Implement Consulting Group, Aarhus University and Technical University of Denmark. The report has been reviewed by pilot organizations and external reviewers.

The pilot project chapters are authored by Implement Consulting Group then reviewed by the pilot organization and finally the research team. This means that the accounts in the pilot project chapters might be "rosy colored" as both the pilot organizations and Implement Consulting Group potentially want to appear attractive and favorable. The research team would like to highlight the issue, but at the same time toning down that it should not be too compromising for the preliminary results – see also limitations in next appendix.

The research process is described in more detail elsewhere (Heeager et al. forthcoming; Svejvig and Grex forthcoming; Svejvig and Hedegaard 2016).

Appendix B: Limitations and generalization

The report as a whole including the accounts about the seven pilot projects with results and findings should be interpreted with caution due to several limitations, which will be outlined in this appendix along with brief considerations about generalizability.

Limitations: *First,* the pilot projects got "special treatment" by Implement Consulting Group, which could lead to a privileged situation, e.g. getting more attention from upper management as a kind of halo effect (Neuman 2014: 4); the attention itself might create a positive attitude among project team members sometimes referred to as the "Hawthorne effect" (a criticized term itself, but it is beyond the scope to discuss here) (Wickstrøm and Bendix 2000). Most of the authors contributing to this report are probably biased towards being positive to the Project Half Double and its findings.

Second, the results and learnings are at an early stage, which means that they might express findings that cannot be justified in a rigorous scientific sense based on the data available and the empirical observations of this mixed method research approach (Leech et al. 2010; Venkatesh et al. 2013). For instance, a pilot project might turn out later to be much less successful than expressed in this report. Project success and impact are complex constructs, where the timeframe certainly plays a role (Davis 2014; Laursen and Svejvig 2016; Serra and Kunc 2015;

Shenhar et al. 2001), which means that it is highly relevant to follow the pilot projects over a longer time period than Project Half Double phase 1. Add to this, lack of data in some of the pilot project cases and reference projects and that we only followed the pilot projects partially (e.g. a single project phase) for some of them, which also decreases rigidness.

Third, the report is not a critical review of the Half Double Methodology with respect to how radical the methodology is and to what degree it is possible to deliver projects in half the time with double the impact. These statements are "consultancy jargon" and from a research perspective most likely exaggerated and overly optimistic. In the same vein, a comparison with other project methodologies could highlight what the Half Double Methodology offers compared to other methodologies.

Fourth, the Half Double Methodology is in the making and the version presented in this report might be labelled version 1. However as pointed out by several reviewers, certain terms and concepts need further clarification in order to appear consistent, e.g. leadership and complexity, which must be addressed further. This is mentioned by one of the reviewer as follows: "*Complexity and chaos, change and turbulence: great concepts not clear how they are embraced in the [Half Double Methodology]? It is there but taken for granted. Perhaps it is worth spelling out the relationship*."

Fifth, the Challenges chapter discusses the sweet spot of the Half Double Methodology but that discussion might be extended more broadly to context and project setting relating to: (1) the impact of major public projects; (2) smaller projects which cannot be justified on their own; (3) cross-organizational projects with contractual frameworks to mention some relevant areas.

Generalizability: Project Half Double was involved in seven pilot projects in seven organizations. The concept of 'pilot' should be understood as a test in the sense that it is *"used to test how good [the Half Double Methodology] is before introducing it"* (Cambridge English Dictionary) *"more widely"* (Oxford English Dictionary) (Abell 2016: 18). The pilot projects are carried through to give some indication of whether the Half Double Methodology could work on a larger scale, and they are not as such supposed to be generalizable and representative (inspired by Thabane et al. 2010).

However, having said this about generalization, it is possible to apply analytical generalization which is to generalize from a particular case or few cases to come up with theoretical tools, models, or concepts rather than a formalized set of propositions and laws (Schwandt 2007: 5).

REFERENCES

Abell, A. F. (2016). Predicting the future and learning from the past - Developing a framework for evaluating success in IT projects. Department of Business Communication. Aarhus, Aarhus BSS - School of Business and Social Sciences. PhD Thesis.

Aghina, W., A. D. Smet and K. Weerda (2015). "Agility: It rhymes with stability." Mc Kinsey Quarterly(December 2015): 1-12.

Bazigos, M., A. D. Smet and C. Gagnon (2015). "Why agility pays." Mc Kinsey Quarterly(December 2015): 1-8.

Budzier, A. and B. Flyvbjerg (2013). Making-Sense of the Impact and Importance of Outliers in Project Management through the Use of Power Laws. IRNOP 2013 Conference, Oslo.

Conforto, E. C., D. C. Amaral, S. L. da Silva, A. Di Felippo and D. S. L. Kamikawachi (2016). "The agility construct on project management theory." International Journal of Project Management 34(4): 660-674.

Conforto, E. C., F. Salum, D. C. Amaral, S. L. da Silva and L. F. M. de Almeida (2014). "Can Agile Project Management Be Adopted by Industries Other than Software Development?" Project Management Journal 45(3): 21-34.

Crawford, L., P. Morris, J. Thomas and M. Winter (2006). "Practitioner development: From trained technicians to reflective practitioners." International Journal of Project Management 24(8): 722-733.

Davis, K. (2014). "Different stakeholder groups and their perceptions of project success." International Journal of Project Management 32(2): 189-201.

Dingsøyr, T., N. B. Moe, R. Tonelli, S. Counsell, C. Gencel and K. Petersen (2014). Agile Methods. Large-Scale Development, Refactoring, Testing, and Estimation: XP 2014 International Workshops, Rome, Italy, May 26-30, 2014, Revised Selected Papers, Springer.

Hastie, S. and S. Wojewoda. (2015). "Standish Group 2015 Chaos Report - Q&A with Jennifer Lynch." Retrieved 2nd January, 2016, from http://www.infoq.com/articles/standish-chaos-2015.

Heeager, L., P. Svejvig and B. R. Schlichter (forthcoming). How Agile Methods Conquers General Project Management - The Project Half Double Initiative. Proceedings of the 39th IRIS Seminar, Ljungskile, Sweden.

Koskela, L. and G. Howell (2002). The underlying theory of project management is obsolete. PMI Research Conference 2002, PMI.

Laursen, M. and P. Svejvig (2016). "Taking stock of project value creation: A structured literature review with future directions for research and practice." International Journal of Project Management 34(4): 736–747.

Leech, N. L., A. B. Dellinger, K. B. Brannagan and H. Tanaka (2010). "Evaluating Mixed Research Studies: A Mixed Methods Approach." Journal of Mixed Methods Research 4(1): 17-31.

Miles, M. B. and A. M. Huberman (1994). Qualitative Data Analysis: An Expanded Sourcebook. Thousand Oaks, London, Sage Publications.

Morris, P. W. G., J. K. Pinto and J. Söderlund (2011). Introduction: Towards the Third Wave of Project Management. The Oxford handbook of project management. P. W. G. Morris, J. K. Pinto and J. Söderlund. Oxford, Oxford University Press: 1-11.

Myers, M. D. (2009). Qualitative Research in Business & Management. London, Sage Publications.

Neuman, W. L. (2014). Social Research Methods: Quantitative and Qualitative Methods. Boston, Pearson Education Inc.

Patton, M. Q. (2002). Qualitative Research & Evaluation Methods. Thousand Oaks, Sage Publications Inc.

Rigby, D. K., J. Sutherland and H. Takeuchi (2016). "embracing agile." Harvard Business Review 94(5): 40-50.

Sahlin-Andersson, K. and A. Söderholm (2002). Beyond project management - New perspectives on the temporary - permanent dilemma. Copenhagen, Copenhagen Business School Press.

Schwandt, T. A. (2007). The Sage Dictionary of Qualitative Inquiry. Thousand Oaks, Sage Publications.

Serra, C. E. M. and M. Kunc (2015). "Benefits Realisation Management and its influence on project success and on the execution of business strategies." International Journal of Project Management 33(1): 53-66.

Serrador, P. and J. K. Pinto (2015). "Does Agile work? — A quantitative analysis of agile project success." International Journal of Project Management 33(5): 1040-1051.

Shenhar, A. J., D. Dvir, O. Levy and A. C. Maltz (2001). "Project Success: A Multidimensional Strategic Concept." Long Range Planning 34(6): 699-725.

Svejvig, P. and P. Andersen (2015). "Rethinking project management: A structured literature review with a critical look at the brave new world." International Journal of Project Management 33(2): 278-290.

Svejvig, P. and S. Grex (forthcoming). "The Danish Agenda for Rethinking Project Management." International Journal of Managing Projects in Business 9(4).

Svejvig, P. and F. Hedegaard (2016). The challenges of evaluating and comparing projects – An empirical study of designing a comparison framework. Project Management for Achieving Change. J. Pries-Heje and P. Svejvig. Frederiksberg, Roskilde University Press: 107-129.

Thabane, L., J. Ma, R. Chu, J. Cheng, A. Ismaila, L. P. Rios, R. Robson, M. Thabane, L. Giangregorio and C. H. Goldsmith (2010). "A tutorial on pilot studies: the what, why and how." BMC Medical Research Methodology 10(1): 1-10.

Turner, R., M. Huemann, F. Anbari and C. Bredillet (2010). Perspectives on Projects. London and New York, Routledge.

Van de Ven, A. (2007). Engaged scholarship: A guide for organizational and social research. Oxford, Oxford University Press.

Venkatesh, V., S. A. Brown and H. Bala (2013). "BRIDGING THE QUALITATIVE-QUANTITATIVE DIVIDE: GUIDELINES FOR CONDUCTING MIXED METHODS RESEARCH IN INFORMATION SYSTEMS." MIS Quarterly 37(1): 21-54.

VersionOne (2016). 10th Annual State of Agile Report, VersionOne.

Wickstrøm, G. and T. Bendix (2000). "The "Hawthorne effect" - what did the original Hawthorne studies actually show?" Scandinavian Journal of Work, Environment & Health 26(4): 363-367.

Wikipedia. (2016). "Sweet Spot (sports)." Wikipedia, the free encyclopedia Retrieved 21th June, 2016, from https://en.wikipedia.org/wiki/Sweet_spot_(sports).

Winter, M., C. Smith, P. Morris and S. Cicmil (2006). "Directions for future research in project management: The main findings of a UK government-funded research network." International Journal of Project Management 24(8): 638-649.