

The agile development of the app Grundfos GO Balance

THE PROJECT

The project on which we applied change management methods, is called Grundfos GO Balance. The project consisted of developing a smartphone app for hydronic balancing – together with the launch of a new circulator pump, ALPHA 3, and a Bluetooth Dongle. The project will be referred to as “GO Balance” in the following paragraphs.

The app facilitates that an installer can conduct a hydronic balancing of radiator-and underfloor heating (UFH) systems, which in human language translates into: making sure that all the heating suppliers in the house, e.g. radiators, supply enough heating for each room. As market research has revealed that a lot of radiator and UFH-systems are un-balanced, thereby not spreading out the flow of water from the pump equally to all radiators, there was clearly a need of making a simple app to help this need. The app has a algorithm that needs manual input from the installer about the rooms, the radiators etc. He then receives a target flow that he should balance the radiator valves into.

The project started as an idea in late 2014, whereto it got funding quit fast, so the development could start in start 2015. However – there was a small catch: it needed to be launched before winter 2015 and normally development of new apps took 1-2 years in Grundfos.

CHANGE MANAGEMENT AND THE PROJECT PROCESS

In Grundfos, we are almost 20.000 employees, which sometimes can cause slow processes around development of new products and services. Before 2015 there had been talking about following LEAN start up methodology, but it hadn't yet been applied. Grundfos has since 1945 been a hardware manufacturer of pumps, so doing a transition to quick-and-dirty development and agile processes where as such more a fun though, as something that was thought into the projects.

However, in start 2015 we were a small team of software developers, mathematicians, and a User Experience Lead which wanted to prove that things could be done faster and better with a LEAN start up mentality. If not now, then when – the team asked themselves.

A small department, who makes quick software prototypes in Research & Technology, the development started on making an app. If we could show the developers that there wasn't time to wait to start developing or allocating time, they would actually focus and want to make sure this got into land. They were used to long meetings, complicated prioritization process and simply said: taking their time.

So instead of making the fast and agile development about the product, the app, the team choose another direction: it should be about the customers waiting for this. So: even before the algorithm for the app worked sufficient, we took it out to the market and showed customers this new digital service. Having pictures and quotes from installers in Germany saying “WHEN is this coming? How much is it?” helped the team to understand that this wasn't about the organization and just making sure we reached our KPIs. This was about that there were people, humans, on the other side waiting for this.



Picture from the 3rd month of developing, where the app was taken to a big installer fair.

In this way, we could through the development pivot or persevere quickly and all of the time adapt the product to the market. This of course created a need of having a lot of departments coming together and not just saying “we did our job” and handover. Through the principal of having tight deadlines and clear market need, we involved German Sales Engineers, Legal Departments, Universities in Germany, end-users, Translation Companies – all in order to get the app from notes on a paper to a full-functioning app released together with a

Bluetooth-dongle and a new circulator pump.

By continuously doing customer research on the app, while developing on the feature, it made sure that there was momentum and that there was burning platform. By having the team knowing that all of the time there was people on the other side waiting, it wasn't about work, it was about people. Surely the customer input made the initial plan for “when to do what” change from week to week, but actually daring to do that, the team also discovered that it didn't kill us to have changes coming from customer research – it just made us all work even harder. During the summer a enormous amount of customer testing of the app and algorithm was conducted, which resulted in building a very mature algorithm, which was able to actually do the job that it was supposed to.

There were some opponents internal in the organization, who thought of this approach as having a lower amount of quality. As the project had the tight deadline, as it was important to have it ready for the heating season, there was made a lot of prioritizations. Instead of inventing new features into the app, the tight deadline and the constant focus on what the customers wanted now, the priorities where tight. But instead of developing an *us-them*-approach towards the rest of the organization within development, the team made sure to do monthly presentations for everyone interested. In that way, there was a clear transparency about what we actually learned and developed instead of becoming arrogant and thinking “we will show them!”. Change management is about going from something unowned to something new: that isn't meant to be easy in an organization with high-educated, a bit introvert, somewhat traditional-following engineers. Therefore, it was of importance to showcase the methods of the LEAN start up methodology to everyone – not only the team, but also the people that wasn't a part of them team. In this case, it was kind of lucky that the UX lead on the assignment had a background within sociology – knowing a bit about social process was



highly important in a time where the development was hard. Until the launch in November 2015, there was continuously being done improvements on the app, which some saw as signs of weakness, a sign of lacking quality. However, with the support cross-functional from the organization, the German sales engineers stepped into late-night development on translating new text in the app, even one week before launch. They sales organization didn't see this as a sign of weakness, but instead of a sign of importance – that their help was really needed and that they were important for the development.

THE EFFECTIVENESS INTO THE ORGANIZATION

“This is not possible to do within nine months. It simply isn't” – this was said quite a lot of times during the process of the project. Everyone were used to long decision processes, so making fast decisions simply didn't seem possible – as there was already a template of how to do things and do it in the right way. With GO Balance, there was now a showcase – a case to referer to, to learn by. As the quick development helped increase the sale of circulator pumps in 2015, it got a lot of traction on “instead of making money two years from now, let's do it now!”. Showing that quality and agile methods could actually co-exist, made it visible for both development-teams and business development that there was another way – and that we wouldn't die from using it.

Now, 2017, the agile processes are included in every software development project in Grundfos. Even hardware-focused projects are trying to also implement key principles, as: validated learning, developing prototypes etc.

Recently the CEO of Grundfos, Mads Nipper, launched a new ruleset for R&T project development. No new projects were allowed to take more than two years, whereas it before was scoped to up to four years for some projects. In an industry, where the where there is an increasing blend of hardware and software development also calls for new development methods. Following a stage gate-model is great in some cases, but when a industry is changing so fast, and a company needs to deliver or die, there is also need for new methods to develop within.

The Grundfos GO Balance project didn't only help on the bottom line, it also opened up a new era of thinking about how we develop – and why we develop.

Best regards,

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