Innovation culture, management, and process at ⊛ Lufthansa Systems

Lufthansa Systems is a 100% subsidiary within the Lufthansa group founded in 1995. Today Lufthansa Systems GmbH & Co. KG[1] is one of the world's leading providers of IT services in the airline industry. It draws its unique strengths from an ability to combine profound industry know-how with technological expertise and many years of project experience.

Lufthansa Systems offers its more than 300 airline customers an extensive range of successful and in many cases market-leading products for the aviation industry. The innovative IT products and services in this portfolio offer customers a wide range of economic benefits while also contributing to improving efficiency and competitiveness. In addition, Lufthansa Systems also supports its customers both within and outside the Lufthansa Group with consulting services and the experience it has gained in projects for airlines of every size and business model.

In Germany, Lufthansa Systems has offices in Berlin, Frankfurt am Main (Raunheim) and Hamburg being also three major locations of the company[2] and it has a presence in 16 other countries. Overall, Lufthansa Systems has about 1900 employees, half of whom are based in Germany.

How did this spin-off start, particularly, in innovation? Here we explore how Lufthansa Systems first focused on innovation and how it has built on this early experience.

Prior to 2008 within Lufthansa Systems there was little formal innovation activity – no R&D or innovation department. The main thrust in R&D was done mainly via product development and enhancing existing services and products, or reacting to customer requests.

When the company did establish the innovation department, the process of managing innovation was around placing new ideas into production. It worked with a stage-gate process along the following lines.

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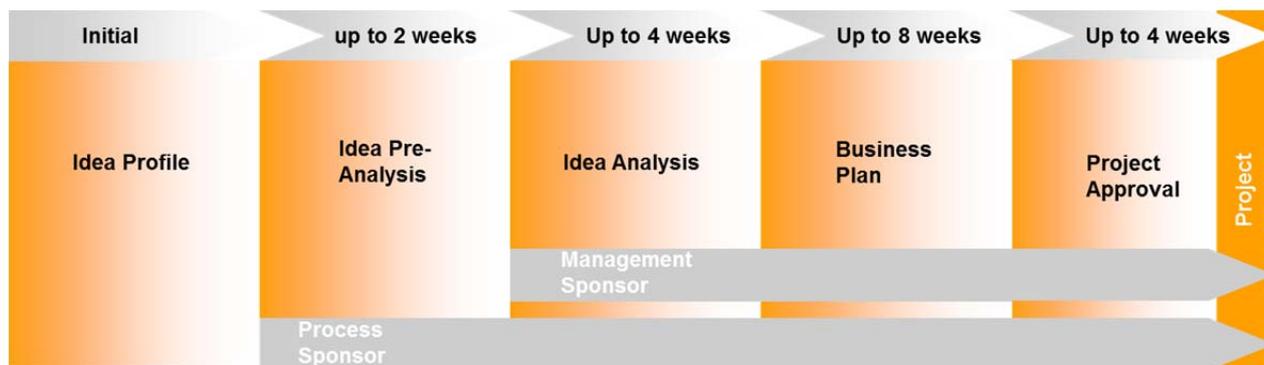
[1] For more details www.lhsystems.com.

[2] The office in Frankfurt has a centre for innovation and business development which is a part of 3-year EU TACIT project at hand. This unit is responsible for building innovative culture within the company.

First, the ideas were evaluated against broad criteria – did they make business sense and were they feasible? If the answer was in the positive, then the idea would be taken to the next stage. This involved someone in the innovation department taking responsibility for trying to find someone who would be knowledgeable about the area, and asking that person to give a detailed review of the idea. If that review was also in the positive, the next point was to find a department who would actually put the idea into action to make innovation happen.

With the benefit of hindsight Lufthansa Systems admits that at that point of time innovation management was a kind of bureaucratic and political process dependable on the decision of individual managers. It was also a non-transparent process when often innovations were simply buried, hopelessly.   As Joerg Liebe, Chief Information Officer comments, "*At that point, basically, if you're talking not just about ideas for improving something, but really about innovation, the whole process breaks because, if you do have an idea for a product or a service that is not in the focus of the company at this point in time, you won't find a department to do something about it, because everyone will say, 'Well, that's not in my focus area,' and, if you can't find someone, basically, this idea is doomed to go to the grave. That was a process we had within the Lufthansa Group. So, it was, ultimately, denying any innovation*". So pretty soon the company came to realise that it had to do things differently!

The big change in today's innovation system within Lufthansa Systems is that the political element has been removed. When someone comes up with the idea, he or she doesn't need to go to see the manager, the idea will be brainstormed at creative and design-thinking workshops and it is up to colleagues to decide about its future. Comparing before and after, people notice that in the past innovation selection was mysterious, as it was hard to get feedback. As one of the engineers commented, "*It was as if there was someone sitting in an ivory tower deciding: 'It's a good idea,' 'It's a bad idea.' At least that's how I felt about it*".

The company realised that their old approach to innovation management also had an impact on employee commitment; employees felt that they could hardly influence the company. People felt that that they had no answers to questions like: "*How can we have input into a strategy? How can we actually see and shape the future of our company?*" To achieve that and to support innovative bottom-up initiatives the company began to explore ways to 'democratise' innovation.

The thinking was that "*If such crowd funding platforms as Kickstarter or IndieGoGo are so successful, why can't we transfer that into the company and use that as an internal tool to actually involve our employees, and try to get them an entrepreneurial behaviour back into the company, and, also, entice them to creatively think about new ideas and new things?*" And so Lufthansa Systems developed a platform for posting innovation challenges.

There are two kinds of innovation challenges the company are currently interested in. One is with an open-kind of a question, namely: '*How can we ensure the future of Lufthansa Systems of our company?*' This would be the place for asking employees: '*Do you have an idea about what we can do?*' And the second type involves closed questions around a technical, product, service or any other issue. Experience so far suggests that the open-question challenge is not very helpful for company's innovation performance. At the same time, the challenges with the closed-type of questions seem to be more beneficial. To illustrate, Lufthansa Systems would, for instance, post:

'There's a new technology, how can we use that technology within our company to make something, to create value for our customers?' or, *'We have that product, and how can we enhance that product?'* or *'Here's a customer request, how can we fulfil that customer's request?'*.

All challenges have a natural 'lifetime' of three months.
In this next section we look in a little more detail at how the current innovation process operates.

Lufthansa Systems employees visit the platform as part of their workload. Every employee is asked to pose an idea. Every employee who works with the platform receives an equivalent of a notional €1000 for 'crowdfunding'. With that €1000 each employee can decide which idea to fund. It is no longer the management who decides, it is the trust of colleagues in the idea that matters. For the idea to move forward inside the company, it needs to get 20 votes with at least €50 funding out of virtual €1000. It would mean: *"That is a cool idea, I believe in it, and we should work on it"*. If the idea receives 20 votes of confidence (the phase called as 'sponsoring an idea'), within the forthcoming four weeks a team starts working on it. The idea is brought into the design-thinking workshop where it is scrutinized on a number of filters. The first most important issue is the customer value and the answer to the question *"why should we do this?"*.

The second step in the process is a one day design-thinking workshop where the team working on the idea will develop their understanding around: *'OK, this is the idea, this is what we want to do, and we need this amount of money to do that and so-and-so many resources"*. At the end of the design-thinking workshop, the team produces a short (one or two minutes) video which serves as the innovation pitch for the acceleration phase.

With that video, the person who has the idea or the team who takes the idea forward will go into the funding stage. The process works here as follows. The short pitch video is published and becomes available to all employees who have the right to vote with the above-mentioned 1,000 EUR. Now, the employees decide further how much they give out of their virtual venturing capital to the now pitching innovation. Once the innovator or the innovation team gets the required virtual amount, the company starts looking into the issues of how soon the required resources can be taken out of the normal operational management and how it could be prototyped.

The next element in the process is called 'an acceleration phase'. As Carina Leue-Bensch, New Business and Innovation Manager explains, this is the point at which the business says *'This employee, or the one who has the idea, ideally, if he/she wants to be part of making that idea happen and going into the acceleration phase, he/she will receive up to three months to work on the innovation project'*. Additionally for the acceleration phase, the decision is made whether a new software development is needed. At this stage a decision is also taken about the core of the potential product, what would be the MVP[3] of innovation and if there is a market for it.
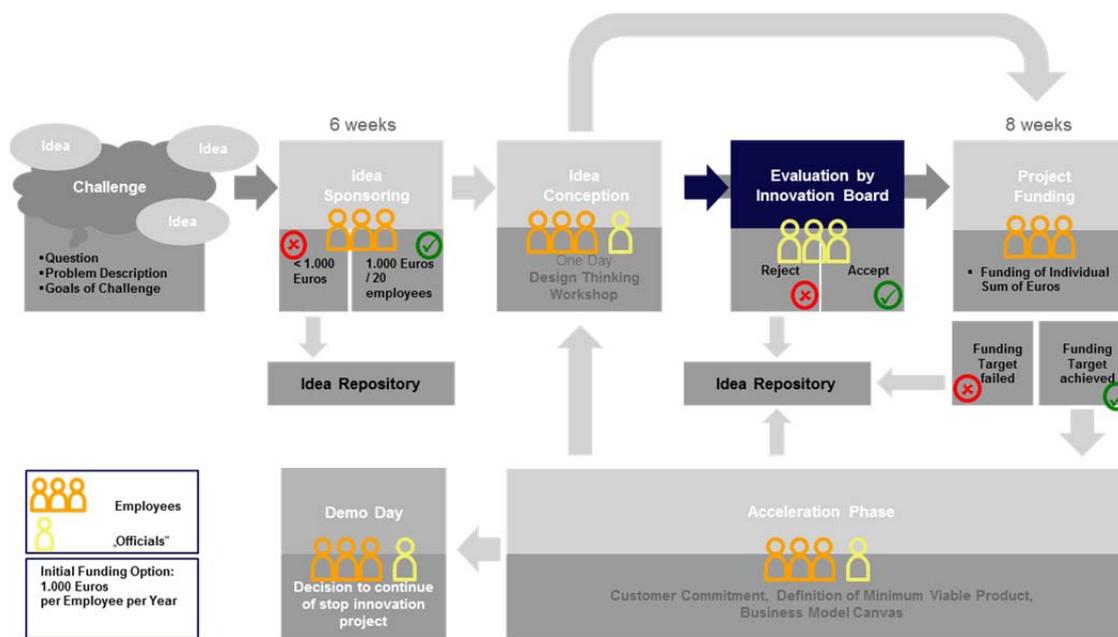
If one looks at Kickstarter and other crowdfunding platforms specifically for services and products there is the following procedure about moving the idea forward. In particular, if someone suggests something and he/she gets a vote of confidence in real money from people, the immediate step that

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[3] Minimum Viable Product

To sum up, if the idea passes through the issues of (i) customer value and creating the MVP, (ii) finding a potential customer and getting the customer's commitment, but also (iii) building the pitch – the acceleration phase would be fulfilled. The good news for employees with innovative ideas is that they won't be left alone in this innovation wild forest. At Lufthansa Systems, within the acceleration phase, there would be support from in the innovation department. This assistance would be provided within two so-called separate 'acceleration labs'. The acceleration lab lasts five days when anyone who has the initial innovative idea is supported in the process of coming up with a MVP, addressing customer value proposition, filling out business model canvas for the idea, finding the real customer and creating the pitch.

Then comes the demo day. At the demo day managing directors and line managers, who are required, get together to see three to five pitches which have already passed the acceleration phase. The pitching team will be given 10-minutes timeslot to present their idea to management and each and every employee, regardless of whether they are in Germany or whether they are in Budapest are invited to join. In order to make that happen, demo days are available via link throughout the

company also in the foreign locations, so that all employees are able to be a part of innovation pitching.

A key question around this new framework is why would other employees participate? How to make people interested in it? To address these issues, Lufthansa Systems uses some gamification techniques. One of the challenges is to motivate as many as possible people to vote - and the gamified element here involves giving voters points. Depending on how many points an employee gets, he/she can be upgraded from 'innovation pioneer' to 'innovation master'. Another gamification element is around funds. For instance, if one employee funds the idea and that idea on the demo day receives the green light to go to the next stage with something like "please go ahead for full information', then the money that person has put in can be re-used again for different voting..
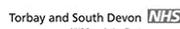
Joerg Liebe explains here more: "*In order to ensure that people are constantly interested and have something which they can work with, we start with the 1,000 euros, but then, each and every month, you do receive 85 euros. So, even if you pledged all of your money after a month, you've already got another 85 euros. We do this, but you can never get more than 1,000 euros, unless, through receiving enough points, you can raise the maximum amount of euro equivalent that you can then pledge into the innovation process. So, this is like what we are doing here, and it seems to be quite successful*".

Since the introduction of the new system (in less than a year) almost 40% of the workforce has joined the company's 'innovation community' and at least 25% are looking into the tool and working with the tool, on a monthly basis. The next stage of improving this system of innovation management in the company is to make the platform available on a mobile phone or any mobile device, so that employees can even do it at home. For the time being, Lufthansa System employees have access to the innovation platform only when they are in the office. With mobility, the company's hope is to increase participation.

But it is not only mobility the company is working on, it is the entire innovation culture. Before the crowdfunding tool was introduced, people were complaining that they had no vehicle to help them engage with the company's strategy. At the same time, management sensed that there were many great people who should be given a voice and should be involved into the innovation process. That's when Lufthansa Systems budgeted €2m for innovation implementation. At present only 40 % of employees participate, so only 40 % of these funds are being requested. The aspiration is for 100 % employee involvement so that each and every person in the company will be looking at company's strategy and its innovations.

In other words, innovation culture is more than just a tool for Lufthansa Systems. It is innovation thinking that the company wants to encourage. With the thinking that *'I'm able to decide which ideas I want to push, I also think about how I can shape and make ideas better,'* this is helping to create innovative culture within Lufthansa Systems.

Acknowledgement