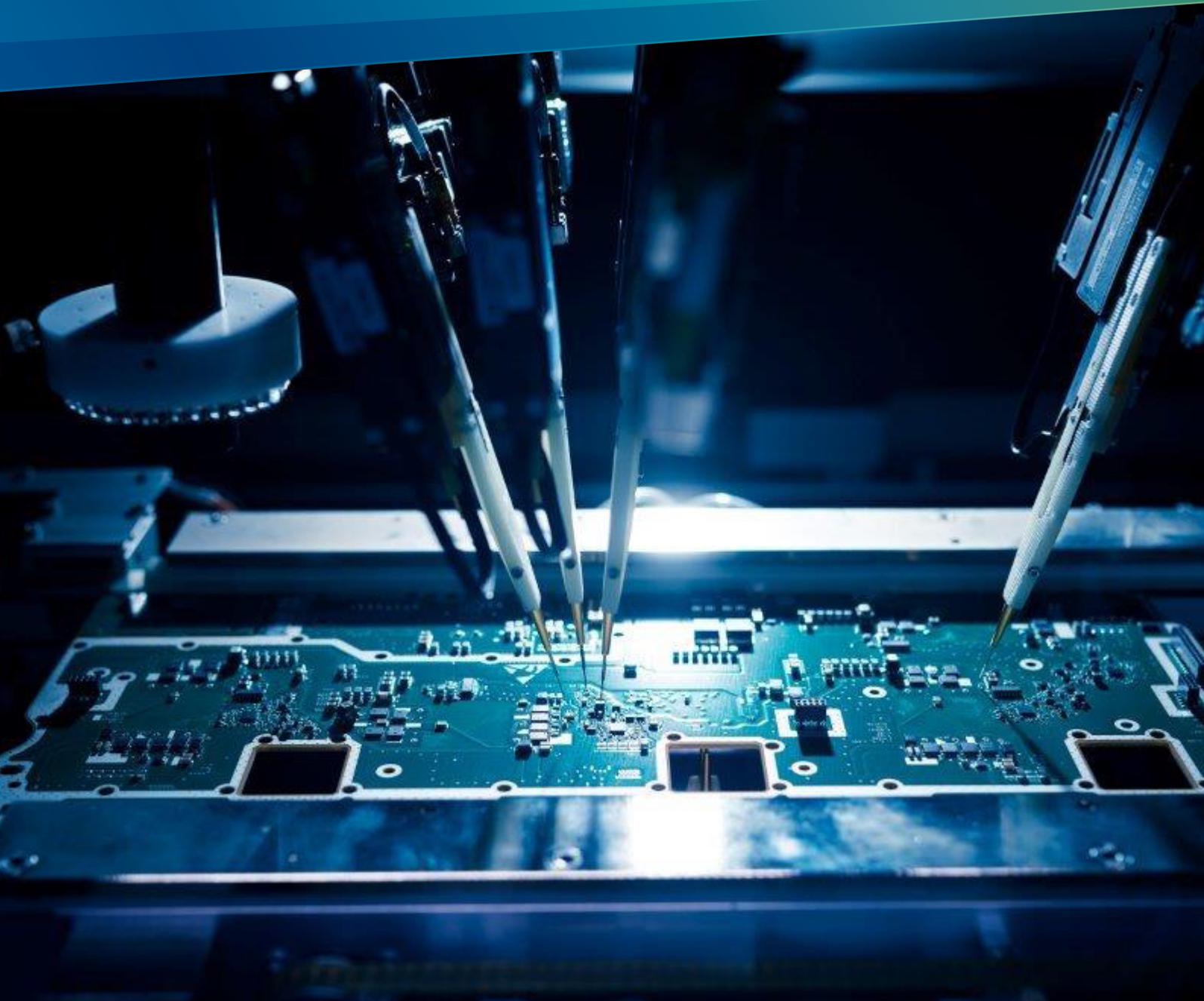CASE STUDY

Nokia

Building an innovation ecosystem

EXECUTIVE SUMMARY

Nokia is the world's largest provider of telecommunications technology, with more than 114,000 employees and over €23 billion in revenue (2015).

Over the past decade, Fabian Schlage, Innovation Manager at Nokia, has built a powerful innovation management ecosystem for the company, backed by HYPE's innovation platform. Including efficient processes, tools, and proven methods, it is designed to industrialize innovation management, i.e., to standardize processes, routines and culture, and thus to make innovation success repeatable.

Today, the innovation team at Nokia is connected throughout the entire company. They maintain a network of 120 innovation managers who in turn reach out to 300 so-called "sub-funnel experts", who support the innovation program with their expert knowledge on specific business areas.

In this case study, we look at some key elements of innovation management at Nokia and how it grew from a single department across the entire business.

"

If large organizations today do not have an innovation tool and adopted methodologies, they are leaving themselves exposed to disruption. That gap must be plugged.

Fabian Schlage,
Head of Idea and Innovation Management

BACKGROUND

Nokia is a long-standing client of HYPE, having started in 2007, and continuously expanded the reach and maturity of their program. Today, Fabian Schlage and the team run the Idea-to-Innovation-Enabling organization within the world's largest networks provider.

Before becoming Nokia's innovation manager, Fabian was working in the research department, and initially, he purchased the HYPE tool to draw ideas from 80 people in CTO research. It was the time when Gartner with IBM just had proclaimed that innovation – contrary to what was the received wisdom then – is manageable, along a so-called "managed anarchy" model.

The original goal was to replace Excel and move idea management towards a shared, collaborative database. Initially, idea campaigns did not find many supporters, and people did not believe in them till they saw first successes. However, over time people outside of R&D desired to profit from the tool's capabilities as well.

In the early days, the individual departments of Nokia were only loosely connected and it meant a lot of effort to come up with a shared innovation roadmap. Nokia realized: it was not about the tool – they had to change the culture, the way people worked. Innovation management no longer was perceived as risk management; it became part of the cultural change management. The voice of the crowd became more important than management decisions. But also the management profited from formulating challenges for Nokia, reaching a wider audience then ever before.

With the achievements along the roadmap of the cultural program, the team had set up a renewed innovation platform to scale up that collaborative process. In this way, over time, Nokia's program organically grew its reach. Today, Nokia is one of HYPE's most far-reaching client projects, both in terms of vision and business impact.

TIMELINE

2007

DEVELOPMENT OF NOKIA'S INNOVATION ENABLING ROUTINES OVER TIME

The Nokia innovation program grew organically, bottom-up, and Fabian believes that this led to a strong innovation culture among the employees. However, if he were to start over again, he would begin top-down. According to Fabian, the alignment with business goals and top management support are simply more important to deliver business-critical results.

Today, the team has the attention of Nokia's management board and solidly rooted innovation management within the company.

LAUNCH DEDICATED INNOVATION PLATFORM

Approach
Replace Excel, install shared collaboration platform

Results
New phase-gate innovation process;
Focus: Research, Technology & Platforms unit
Reach: 50 users
Idea implementation rate: 0,5%
New revenue: in development
Submitted ideas: 70

2008

GROWTH

Approach
Knock on doors, integrate product lines, special matter campaigns

Results
Focus: Research Technology & Platforms and Services
Process: Phase-gate abolished, now "Managed Anarchy" model
Reach: 200 users
Innovation champions: 5
Implement. rate: 2%
New revenue: €20M
Ideas: 400

2009

GROWTH – BREAKTHROUGH

Approach
Innovation competition, a spotlight event in Services BU, increase visibility through top management sponsoring (CTO, board members), professional video promotion, involve idea managers who first showed early successes

Results
Process: introducing idea campaigns
Reach: 5,000 users of RTP, Services, IT, Real Estate, Startups BUs
Innovation champions: 80
Implement. rate: 8%
New revenue: €170M
Campaigns: 9
Ideas: 2,000

2010

1. FOUNDATION OF INNOVATION (ONGOING TO PRESENT)
2. CROWDSOURCING

Approach
1. Membership of various innovation forums (e.g., ISPIM, HYPE), research academia and related sources; do benchmarking (join Fraunhofer Consortium)
2. Integration of key success factors for crowdsourcing (following Karim Lakhani, Harvard Business School)

Results
1. Complementary approaches: platform strategy, complemented by startup approach to innovation projects; introduction of maturity models; Fraunhofer award for technology management in 2011
2. Introduction of Innopoints, increasing the amount of submitted ideas significantly, and boosting the implementation rate to >30%

2011   2012   2013

OPEN INNOVATION

CUSTOMER & SUPPLIER IN-NOVATION (ONGOING TO PRESENT)

1. DESIGN THINKING
2. NOKIA INNOVATION AWARD

Approach
Learn about OI challenges first hand, conduct *true* open innovation, with the public

Results
Run first OI challenge in Israel, significant product enhancement, Nokia brand gains visibility as the company is connected with innovation in press articles

Approach
Develop a co-creation process for customers, partners, and suppliers

Results
>25 Think Tanks running, innovation positively impacts supplier ranking, customer intimacy increased

Lesson learned: Don't fuel customer demands beyond feasibility! Don't share everything, have contracts in place to handle IP issues

Approach
1. Industrialize design thinking for the innovation process at Nokia
2. People can apply for an award and submit ideas for: best practices, products, features, services, etc. These are captured and shared globally for early trend detection

Results
1. Design thinking method is available to Nokia; opportunity to foster more radical innovations
2. Increased transparency of the innovation portfolio, recognition for ideators; track keeping of trends and developments that could have been missed otherwise; raised profile for the innovation platform

2014

2015

2016

1. USER EXPERIENCE (UX COMPARABLE TO KICKSTARTER)

2. INDUSTRIALIZATION OF THE OI CHALLENGE

1. CULTURAL CHANGE

2. FUTURE PROSPECTION

1. KICKSTARTER MODELS

2. BUSINESS MODELLING

3. VALUE WEBS

4. DIGITAL IDEATION

5. AUTOMATION

6. INTEGRATION OF FORMER ALCATEL-LUCENT SITES INTO NEW NOKIA (NOKIA + ALU)

Approach

1. Improving UX and UI of the platform, performance of the platform
2. Defining key steps for successful OI challenges

Results

1. UX meets user expectations
2. Establish annual OI challenge (in 2014: Sillicon Valley), including top management support, high profile promotion, big celebration event

Approach

1. Apply change management methods to create an innovation culture at Nokia, review inovation platform, change of mode of operation between HYPE and Nokia (HYPE deploys one FTE for Nokia)
2. Create a cross-industry vision for 2025 with Future Agenda, running several idea campaigns; offer access to a trend database

Results

1. Codified trainings, innovation platform is simplified
2. Nokia vision disseminated globally, integration of HYPE Trends in innovation platform

Approach

1. Research concepts to integrate kickstarter models in large companies.
2. Learn more about the most advanced and simple business modelling tools next to BMC
3. Make use of commercial intelligence gathered through Nokia Open Innovation Challenge submissions
4. Generate ideas from data mining
5. Improve platform AI to deliver results quicker and smarter
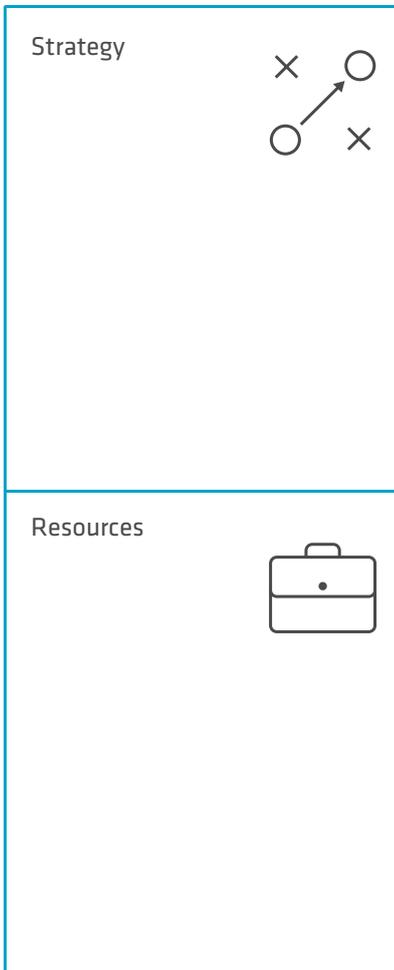6. Train people at the sites

Results

1. Concept development placed on mid-term roadmap for GIM platform
2. Start set will be evolved to fit large-scale deployment
3. New technologies are incorporated from the outside into Nokia products
4. Number of submitted ideas doubled every year
5. First successes through automatization
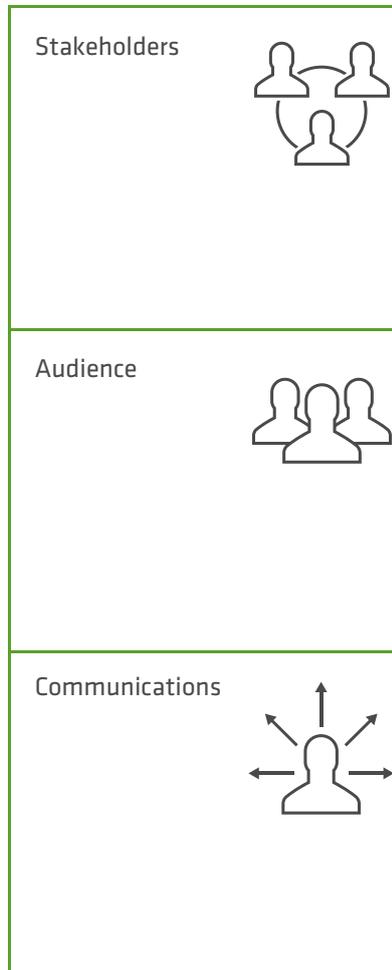6. Several sites have been trained in process, methods, best practices
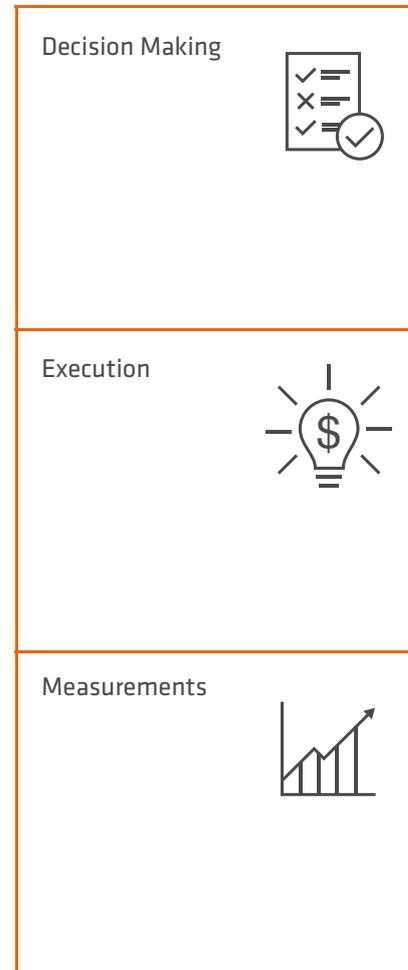
# THE COLLABORATIVE INNOVATION CANVAS

Alignment	People	Process
Strategy	**Stakeholders**	**Decision Making**
Resources	**Audience**	**Execution**
	Communications	**Measurements**

The Collaborative Innovation Canvas is a simple way to map out the key components of an innovation management platform. It focuses on three main aspects: alignment (with the larger strategic goals around innovation); people (the stakeholders, advocates, and general audience); and process (selecting, funding, and tracking ideas). The canvas captures the big picture, and the crucial relationships and activities for success, and allows everybody involved to easily understand and share it. Therefore it lends itself well as a frame for explaining a case study.
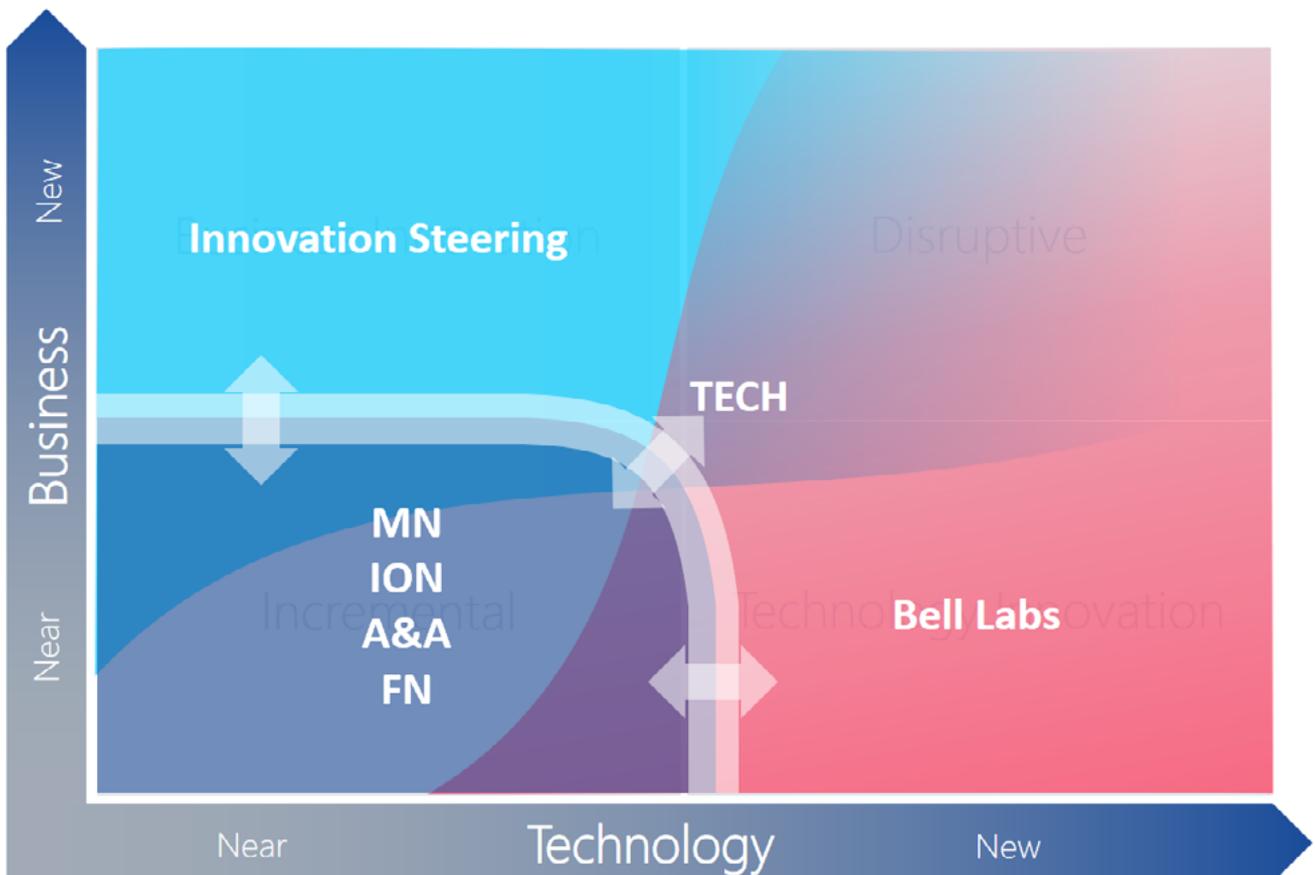
Further reading:
http://www.hypeinnovation.com/canvas
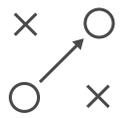
STRATEGY

How the innovation management program is aligned
with overall strategy goals for innovation.

Fig. 1: Areas of innovation and associated business groups at Nokia (MN=Mobile Networks, ION=IP & Optical Networks, A&A=Applications & Analytics, FN=Fixed Networks, TECH=Nokia Technologies)

"To innovate is to turn ideas into money!"

High value IPR

Transformational innovations
New markets, products, solutions, technologies, patents, business models

Outside-in innovations
with customers, partners, ecosystem, standards

Customer led innovations
For value points

Incremental innovations
For product & servi...

Product Revenue/ Profits

Customer intimacy and operational excellence zone

Sales innovations
Pricing models, channels

Process innovations

Product Leadership Zone

Need for Renewal

Growth   Maturity   Decline
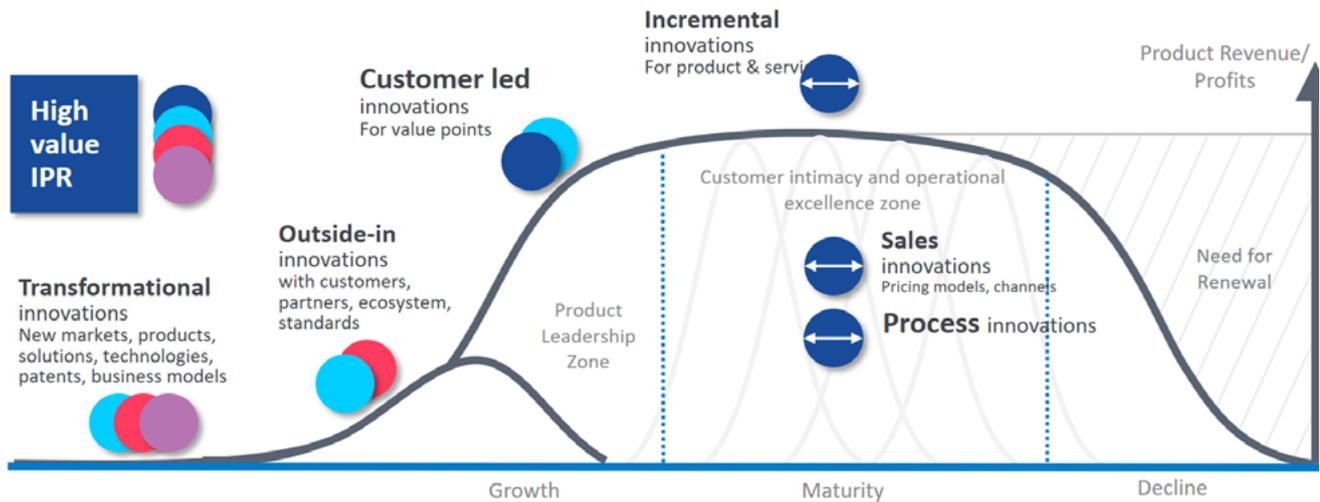
NOKIA

Fig. 2: Nokia's innovation management strategy (based on Geoffrey Moore's "Crossing the Chasm", 1993); the goal of the strategy is to cross the chasm faster. Bubble colors indicate the innovation's mapping based on the innovation areas in Fig. 1.

At the highest level, strategy at Nokia is framed around certain innovation focus areas, including new technology, new business models, and new customer segments. In this way, the strategy very broadly targets the way Nokia is going into the future, i.e., how to best support human life with technology. This overall vision then formulates into a technology strategy. On the department level, this raises the question, how this strategy can best be supported. This question then formulates into strategic innovation areas.

However, Nokia's innovation team does not simply serve the company strategy, but actively helps to reshape it. The team regularly runs idea campaigns to gather evidence to justify or challenge the present strategy. For example, they helped to reshape the technology strategy for 2020 and 2025, as they ran an idea campaign and asked for proof for the strategy's validity and crucial points that were missing. As a next step, HYPE Trends will be implemented, which further helps to verify the strategy against global trends and shifts in the market.

The role of the HYPE platform in this respect is twofold: first, it helps to actively shape or reshape the strategy; second, the platform helps to implement the strategy as the team derives strategic innovation areas for new growth opportunities. Nokia runs idea campaigns within all areas to develop technologies, areas of application, and opportunities for cost saving. Campaigns can have a global topic, relevant to all areas of Nokia, or focused on a special matter, like 5G, they can be internal or external, or both, in scope.

In general, all departments can request to run campaigns. But since it is the innovation team who constantly measure the input for the individual strategic areas, it is more often than not the innovation team themselves who decide to run a campaign whenever they discover input gaps in strategic innovation areas. For example, in 2014 a new security unit was launched, which naturally led to launching an idea campaign to help fulfill the mission of that unit.
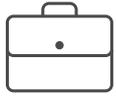
RESOURCES

The resources, methods, physical spaces, and budgets available to support the program.

Trainings

The Nokia innovation team provides process enablement trainings on "Learning Central", Nokia's internal academy. This includes training units for different groups of stakeholders, process enablement, and innovation methods. For example, the innovation team offers trainings on how to run idea campaigns successfully. This covers elements like defining search fields, selection criteria, review teams, making sure the budget for the implementation is available, and – crucially – defining how to turn ideas into revenue-generating products and services.

More recently, the innovation team released the "All Employees Training" for innovation. This training comprises a number of tools and methods to get started with innovation: material on how to use the HYPE platform, the Business Model Canvas, Blue Ocean strategy, and many more.

The standardization and codifying of trainings significantly reduce the workload for the innovation team, since they do not have to provide training for each campaign manager individually. Also, the trainings are certified: trainees have to pass a test to ensure the content is fully understood.

While the trainings for campaign managers and employees are focused on practical tools and hands-on methods, the training for management targets the question of how you can create an innovative environment at Nokia. This aims at physical space as much as at cultural considerations. The team also asks managers to assume the role of challengers, challenging the status quo of how things are done. Both training and process enablement are thoroughly informed with innovation methodology.

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I know I talk a lot about methods, but this really lies at my heart.

Fabian Schlage, Head of Idea and Innovation Management

Methods

A methodological approach to innovation is a key component to success for Fabian Schlage. A set of proven methods helps his team to approach idea management in a systematic and transparent way.

Certain methods are directly built into the HYPE platform, which is called "GIM" at Nokia, short for "Global Innovation Mall". HYPE Trends, for example, offers trend analysis directly integrated in the innovation platform. The platform also offers a range of evaluation tools to collect structured feedback from participants and expert reviewers.

Other methods are applied offline. After discussions with individual teams and reviewing the vast amount of available methods, Fabian chose 22 core methods for the Nokia program. The final selection was based on the effectiveness and scalability of the methods. To name but a few: TQM, Six Sigma (DMAIC), TRIZ, CIP, QFD, and Lean.

Four core disciplines have been industrialized, to make them easily repeatable throughout the company: NABC, Business Model Canvas, Design Thinking, and Continuous Improvement (Kaizen).

One method every contributor has to follow is the Stanford Research Institute's NABC method. It helps to guide Nokia's contributors in describing their ideas in a comparable and easily accessible way. All recently implemented ideas and projects have been put through the NABC process, which has proven to be very effective.

However, sometimes NABC is not enough to find the right approach to implement a solution. In these cases, the innovation team employs different methods that help deal with the problem, e.g., design thinking. Design thinking helps to develop radical solutions, as it provides guidance for iteration and prototyping. So while idea campaigns help to find a solution to a challenge, methods like design thinking help to find the right approach to get a solution implemented.

What if design thinking fails? The innovation team also works with TRIZ to address complex and contradictory challenges.

Once an idea is accepted and turned into an innovation project, another set of methods becomes applicable. For this phase, the innovation team turned the Business Model Canvas into a physical set of cards; the individual boxes of the canvas can be attached to, e.g., a flipchart, and individual ideas and notes can be pinned to them with post-its. This translates the idea into a structure optimized for an entrepreneurial view. In this way, it is ensured the idea and its development always stay focused on business value. In 2017, Nokia transferred this method into the digital world, offering it to collocated teams in different time zones worldwide.

The tools backing up the Nokia innovation process obviously have to align with these methods as closely as possible. HYPE Innovation works closely together with Nokia to identify functions which make the life of innovation professionals easier, adding commonly used methods to the HYPE platform.

EXHIBIT: METHODS

Design Thinking

Design thinking is a method to simplify complex challenges by focusing on the human being. Originally a method for science and engineering, it got adopted to business purposes by David Kelly, a co-founder of IDEO. The exact process may differ from one design thinker to another, but most design thinking processes share the following principles, as they require you to:

- Focus on and learn from people, e.g., by interviewing them
- Identify patterns in your target group's behavior
- Run experiments and build tangible prototypes; test them with your target audience
- Iterate ideas and solutions to discover alternatives

The ideation phase in a design thinking process is characterized by openness, aiming at a broad range of alternatives. For the implementation of the most promising ideas, prototypes are built, and tested with the target group early on to gather feedback and identify potential pitfalls for the iterative development.

Learn more about design thinking on the IDEO website:
https://www.ideo.com/about

NABC

NABC was developed by the Stanford Research Institute (www.sri.com), in order to provide a systematic way to state value propositions.

NABC stands for:
- Need. What is the (human) need for my idea?
- Approach. What is my approach to fulfill the need, my solution to solve the problem?
- Benefit. What are the benefits – and costs?
- Competition. What alternatives are there, why is my idea better than others addressing the same need?

These questions help the contributors to "pitch" their ideas, i.e., to "sell" them to others with a value proposition in mind. For the development phase of the idea, additional methods are employed, like design thinking or Edward de Bono's Six Thinking Hats.

Download an MS Word doc by SRI, explaining NABC in greater detail:
https://web.stanford.edu/class/educ303x/wiki-old/uploads/Main/SRI_NABC.doc

TRIZ

TRIZ helps to solve complex challenges based on common principles drawn from extensive research of a patent database. Originally designed for technical challenges, it is nowadays more widely applied, e.g., to management problems. Challenges are analyzed to identify contradictions, or trade-offs, that prevent an easy solution, e.g., increasing the power of an engine requires an (undesired) increase in the size of the engine. The contradictions are then resolved by different tools.

Best known are the 40 inventive principles, which account for almost all patents which were part of the original research. An example:
8.a. (Counterweight) –
Compensate for the weight of an object by combining it with another object that provides a lifting force.

Other tools are the "laws of technical system evolution" and the "substance-field analysis".

The 40 principles and other tools have been included in the ARIZ algorithm of inventive problem solving, which is a step-by-step procedure to identify the right solution for a challenge. This algorithm is the basis of many TRIZ software programs.

Visit the Altshuller Institute's website for more details:
http://www.aitriz.org

Business Model Canvas

Alex Osterwalder's Business Model Canvas is a visual tool to map out new business models. The chart contains different topic sections to document key elements of a new business and how they relate to each other, e.g., a value proposition, key metrics, customers, and revenue streams.

As a popular alternative to Osterwalder's original canvas, the Lean Canvas by Ash Maurya replaces 4 of the original sections to make it more actionable and to better address the needs of startups.

In this video, Alex Osterwalder presents the Business Model Canvas in a nutshell:
https://youtu.be/2FumwkBMhLo

Maurya provides a nice overview of his motivation and actions to change the original canvas in this blog article:
https://leanstack.com/why-lean-canvas

"

HYPE has the capabilities and technical flexibility to integrate future innovation concepts into the virtual world.

Fabian Schlage, Head of Idea and Innovation Management
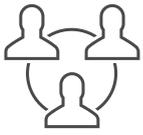
STAKEHOLDERS

The key individuals involved in supporting the program and innovation in general. Including campaign sponsors and management stakeholders.

The central innovation team consists of only a few full-time employees, who belong to Nokia's Innovation Steering. With these few, they manage to help with innovation process and innovation portfolio considerations, innovation routines and methods, IT innovation services, and they provide the overall innovation agenda. A recently added team member now oversees the community management.

The team connects people with a responsibility for innovation throughout the company, e.g., representatives from research labs, incubation labs, and from all main business units. They are supported by a global network of 120, volunteer innovation managers and 300 so-called sub-funnel experts. These are organized in regional innovation boards at each major Nokia site. Nokia maintains about 35 bigger sites globally, and in average an innovation board consists of roughly 10 people. Sub-funnel experts are typically responsible for a specific sub-topic at Nokia. An example for a topic hierarchy would be: MOBILE NETWORKS – RADIO (sub-funnel) – ANTENNA (sub-funnel) – AMPLIFIER (sub-funnel). These experts are then appointed for their role in the innovation program. They are well connected within their particular area of expertise and can point to additional experts where needed.

The innovation managers, who are responsible for managing the idea campaigns, actively engage the sub-funnel experts to collect their feedback or ask them to involve more experts if needed. Maintaining this network also accounts for a substantial part of the innovation team's job: they check the funnels every month for changes in personnel, and look to address new colleagues who might qualify for the innovation program.

Sometimes, sub-funnels are not relevant anymore and are closed down. But the ideas in that funnel remain researchable on the innovation management platform. If the sub-funnel is opened again, maybe due to a strategy change, or if the topic becomes relevant in another area, the ideas can be revisited and re-evaluated.

Every innovation board has an "Inno-Master", who reports to the local Head of Technology Center. In this way, each local innovation group is closely aligned with the site's management. The Inno-Master also appoints the members of a local innovation board, who are responsible for setting up the local agenda for idea campaigns. They also make sure ideas are assessed properly and that contributors are recognized, and take care of the organization of local innovation town hall meetings.

Crucially, they are the agents of Nokia's "idea broker" network. Idea brokers help to identify ideas which cannot be implemented locally, but which may be interesting for a different business unit or site, or in case a global product decision is required.

A key takeaway from this approach is that local challenges and opportunities are best handled locally. However, you need to have a tool in place that allows for collaboration beyond regions to be able to exchange ideas and offer a wider publicity to ideas with global relevance.

Every two months, all innovation board members are invited to the "Innovation Managers Forum" meeting. Here, the participants share success stories from all areas and hear news from the innovation team. The team also collects feedback from the local innovation board members and provides guidance where necessary.

"

As a single innovation manager like myself you can't do anything. You need to knock on doors, promote your program, and build a network.

Fabian Schlage, Head of Idea and Innovation Management

AUDIENCE

Who is invited to use the platform, whether it's internal only, or also open to externals? Who can help you expand the success of the program, such as innovation advocates?

Nokia runs internal idea campaigns, "closed" collaboration campaigns with customers, suppliers and partners, as well as open innovation campaigns with the public. For internal campaigns, all Nokia users are permitted to participate. However, Nokia invites a targeted audience for each campaign, e.g., the staff of the Technology Center Munich was invited to a campaign on energy efficiency in the Nokia labs.

Nokia ran four open innovation campaigns so far: in Israel, Silicon Valley, Europe, and, in 2016, they ran a global campaign. For these campaigns, intense preparation and post-event follow-up are crucial success factors:

- 3 months planning and preparation phase to define the scope, geolocation and potential investors
- 1,5 months campaign launch and promotion
- 1 month submission management and evaluation
- 2 months planning and execution of the results event, defining winners, find speakers, handle the press
- 6 months for finding new business opportunities, including make-or-buy decisions, project work, R&D
- Celebration at major events, e.g., at *Slush* in Helsinki

For Fabian, the main force that pulls the right people to a campaign is the topic and how it is presented. People will contribute to campaigns they can relate to, and this is the audience you should invite. However, after a few years, you also know the innovators in your company. Usually, it's a defined group of enthusiasts, who are just generally interested in innovation. Their participation in campaigns does not depend on the topic as much as this is the case with other contributors.

However, it is important to keep the campaigns open to everyone, since you can never know where great ideas may hide.
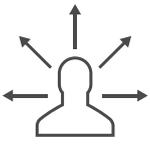
COMMUNICATIONS

How to communicate effectively, create momentum, and build trust with your audience and stakeholders.

The typical channels to communicate internal campaigns include intranet, blogs, community groups, the most effective channel still being email – although the potential blocking of HTML content can make it difficult to create an inspiring invitation. Open innovation campaigns are additionally communicated on incubation hubs and on social platforms like Twitter, Facebook for Work, Yammer, Nokia's intranet and others.

However, as the collaboration between previously isolated areas increased and when the first 5,000 users were online, the innovation team realized they didn't need to motivate the audience that much anymore – people just kept submitting ideas. Innovation management had become part of their routines. As the community was virally growing over time, the main challenge was to stay on top of submissions. Software features like HYPE's community graduation helped to filter ideas and to discover topics of interest.

Nevertheless, communication is key to generate momentum. Nokia regularly conducts a survey with a representative sample of employees of between 2,000 and 5,000 people to determine the state of the company culture.

Part of this survey are two statements addressing the innovation mentality at Nokia:

- "I think Nokia is an innovative company," and
- "I am able to contribute my ideas"

The answers to these questions lead to the "Internal Innovation Culture Index", which in 2015 reached the highest value ever measured.

DECISION MAKING

How ideas will be judged, selected, and improved. Who is involved, and what criteria and process should be used.

There is an innovation framework, providing governance in place. However, the decision-making process details for ideas at Nokia can be highly customized per team, depending on the results a sponsor is seeking. For example, ideas submitted to "permanent" campaigns can run through a continuous or periodical bulk assessment. Other campaigns lead to prototypes, which are evaluated offline, together with stakeholders, which could be, e.g., a customer. Those prototypes are then developed further along a maturity model. This option, of having a non-linearity in decision making is a powerful property of Nokia's decision making process: it enables Nokia to act according to the actual maturity and doesn't force decision makers into a sequential process that doesn't fit the situation. It reflects the entrepreneurial leadership approach at Nokia.

Using a common set of criteria that would fit all scenarios turned out to be an impossible endeavor, as campaign goals, and hence the submitted ideas, differed vastly. Based on this experience, Nokia encouraged HYPE to develop the Evaluation Wizard. This feature is now widely appreciated by HYPE clients as it helps to quickly set up individual evaluation sessions with unique criteria, if needed.

Sometimes, ideas are submitted that are valuable, but don't fit the search field or the scope of the campaign. Useful ideas that cannot be dealt with where they were submitted are connected with the right people and moved to the place where they are needed. Since all ideas are stored in a shared space, ideas can easily be assigned to the business units who do have resources and an interest to get the ideas implemented. This is the basic idea of an innovator's network: connecting people, budget, and ideas. Innovation success then incarnates as a lightning flash, connecting the dots.

EXECUTION

How ideas are iterated upon and developed towards implementation.

At Nokia, challenges are distinguished into growth and cost challenges and the scope of ideas ranges from little improvements to radical breakthrough ideas. Growth challenges are answered with open innovation idea campaigns, customer co-creation campaigns, or partner campaigns, depending on the individual need. Whenever the team detects a strategic innovation area that might need some input, the innovation team talks to the respective business line. In each case, they make sure the campaign has a decision maker, a budget, a review team, and management commitment.

The idea process is checked "from right to left", meaning campaign sponsors have to say what outcome they would like to see before the campaign is set up. The innovation team offers guidance on selection criteria and evaluation best practices. Sponsors are asked to complete the following set of questions:

1. Results: What outcome would you like to see? New revenue of 50% in IoT within the next five years?
2. Evaluation: The type of innovation you would like to see? Product, Service, Feature, Combination of several?
3. Selection: What is the output KPI that leads to the desired outcome? How can you measure whether you are reaching your goals?
4. The scope of implementation: who can implement the ideas and do you have the resources to implement them?
5. Inspiration: Market research? Future prospection?
6. Audience: Who can best relate to that topic and may provide the most promising ideas?
Success can thus look different for each campaign.

To make idea submission both easy and comparable, an idea capturing wizard guides the user through the drafting process with a few simple steps, following the NABC method. Once an idea has been selected as "Jewel", the contributors have to pitch their ideas in offline meetings. In these feedback sessions, contributors receive structured feedback from a group assessing the idea from different perspectives. Feedback sessions can be iterated to continuously evolve an idea and shape it towards a solution that can be implemented. These offline activities have now been mapped into the software as well, so answers and results can be stored in the tool. In addition, if required, the entire process can be carried out online.

For promising ideas, different implementation approaches on different canvases are created to refine the implementation. Thus, iteration and comparison are crucial components of Nokia's innovation process and key to the program's business impact. Over time, Nokia's innovation team was able to increase the implementation rate of ideas from initially 4% in 2008 to 40% today!
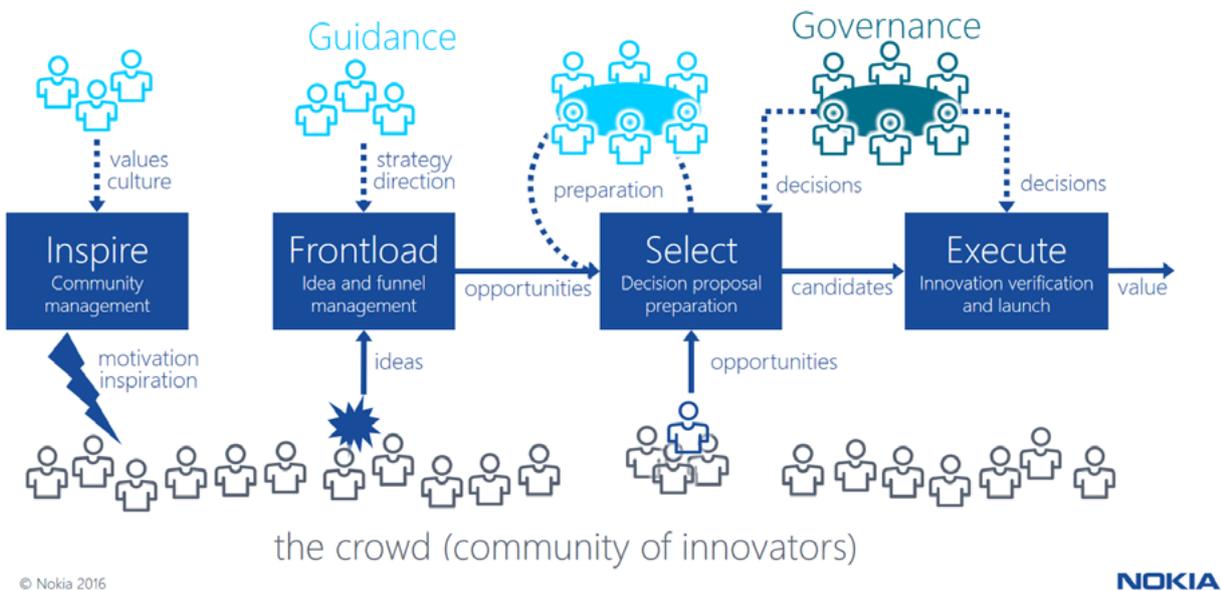
Fig. 3: Nokia's process planning goes from right to left.

Fig. 4: Pitching an idea in an offline meeting. Different hats represent different perspectives in the feedback group.

MEASUREMENTS

What KPIs are important to measure, and how you can track and judge success over time?

In the early days of systematic innovation management, innovation managers had a hard time to provide evidence for success. Today still, in many cases, you cannot easily link a great new product or business initiative to an original idea. Often it is a combination of great ideas and the iteration of review and development phases that lead to a result. However, the Nokia innovation team did manage to track individual success stories and over time the initiative built a solid reputation for delivering value.

To give an example: a recent idea campaign looked for opportunities for the company to get engaged in the drone market. The team received ideas with a lot of potential, e.g., sending drones to visually inspect antennas, which is cheaper, faster, and safer than sending a technician. However, after a couple of iterations on the submitted ideas, Nokia developed a new project, potentially worth billions of € in revenue: the Nokia UAV Control Center, providing control and security for the world's drone traffic, now being tested in the UAE.

Today the program has reached a maturity where management trusts in the results. It is well known at Nokia that these success stories exist. That does not mean, however, that tracking success and governance is not important.

Following Davila et al., the Nokia innovation team measures idea input, throughput, output, and the outcome of the innovation program. KPIs, as opposed to simple measures and metrics, are about delivery, about the outcome of the innovation program. Tracking is not always easy, as great ideas often become part of something bigger or are sold in a bundle of products or services, so you cannot easily say how big the idea's part of the success actually was. To make tracking easier, the team now considers to let contributors only enter the recognition phase of the idea process once they've filled in a document describing their idea and how it contributed to the outcome of the ensuing project.

A KPI to measure throughput is the "InnoPoint Scheme": contributors receive one point for every idea for which an implementation project is started and two points for every idea that was implemented in any way. At first glance, this may appear overly simple, but it is also very effective because of its simplicity. The aggregated InnoPoints are reported to the board of the business units. This already led to healthy competition between Nokia sites and locations and a sharp increase in participation. Outcome is measured by a data model to calculate the value of the output for all incremental innovations. Dedicated outcome is calculated in innovation business cases. Community-driven innovation means a multi-billion dollar business impact in terms of revenue and cost savings for Nokia.

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It is crucial to set specific KPIs for innovation, supported by executive management, to deploy innovation *activities* top-down. Innovation *content* will then be generated bottom-up.

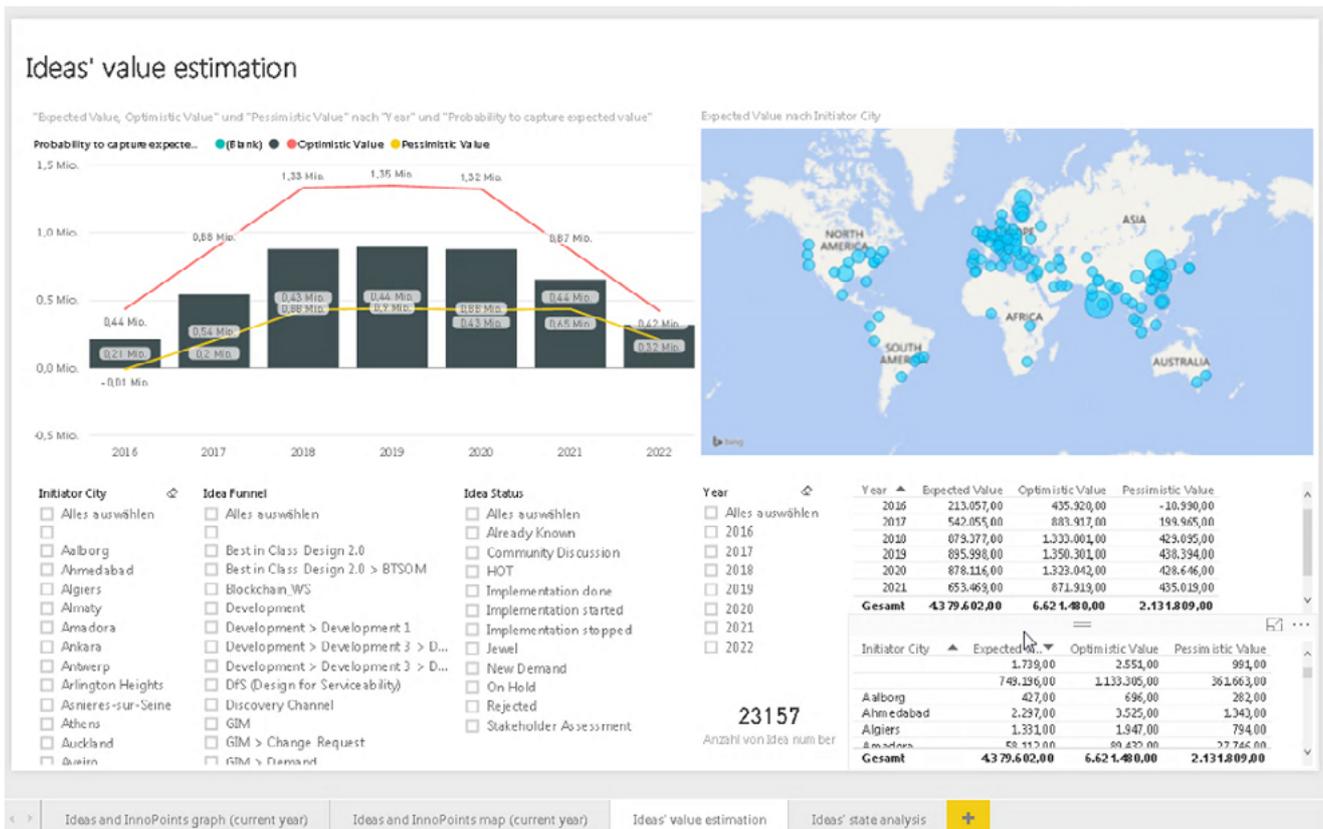Fabian Schlage, Head of Idea and Innovation Management

Fig. 5: Portfolio Value Estimation (figures shown are for illustrative purposes only)

WHAT'S NEXT FOR
NOKIA'S INNOVATION INITIATIVE?

Project "World Class GIM": this project aims at making the innovation platform ready for the future of innovation management. Together with the Cultural Program, the innovation team has identified crucial functions for enterprise-scale innovation programs over the course of 2-3 years.

To optimize co-creation and alignment, Nokia receives features in the beta stage from HYPE, offering every new function for the team early to test and provide feedback on. In addition, Nokia will regularly meet with HYPE's senior management and the customer counsel to decide on next steps, and provide input for the product roadmap. Nokia created a backlog of features and concepts being implemented along an execution roadmap committed together with HYPE.

To reduce administrative efforts, Nokia is expanding the possibilities of automation and robotics for innovation management. The newly issued innovation portfolio database within the HYPE tool offers transparency and enables innovation portfolio management across to the entire company.

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Nokia will help to make HYPE the world's leading innovation management platform. This is one of my projects.

Fabian Schlage, Head of Idea and Innovation Management

KEY ADVICE FOR INNOVATION MANAGERS

When starting out….

- If possible, start it top-down; a change in strategy may require to establish an innovation program rather quickly, and aligned with strategic business goals. If it is not possible to start top-down, viral growth will work too!
- Try to start it as a consulting project, targeting a change in the way people collaborate.
- After the initial phase, introduce tools to support the initiative.
- Celebrate every little success early on!

Use academic and business networks for innovation intelligence!

- Nokia frequently meets with a local business consulting agency which brings together SMEs and larger enterprises to jointly discuss and work on challenges.
- Fabian is also a regular guest and speaker at HYPE forum events, sharing his insights and exchanging with other professionals from the industry.
- It's crucial to be tightly connected with, and learn from, other innovation professionals, and academic thought leaders!

Advice for senior managers:

- You cannot tell people "show me the money" and at the same time expect them to behave like an entrepreneur without a strong support!
- Innovators need the right social, physical, and organizational environment to deliver innovations. It is your job to make sure that the innovation manager has all the resources and freedom that is required to pursue innovation successfully.
- Consider yourself a gardener: did you put a fence around the program to keep it safe from interruptions? Did you ask around what kind of plants (ideas) need to be grown? Have you arranged for seed money to let them grow?
- Use open innovation!
- Focus on change, rather than on particular innovation management disciplines!

It's not about hierarchies and functions!

- The key component for successful innovation management is the network of people who are engaged in the topic.
- They are the ones who will eventually and sustainably make innovation work for individual departments and the company as a whole.

"

For me, HYPE is an excellent partner. They don't just provide me with software, but also with consulting, and a network of peers across all industries, inviting each other over to collaborate and co-create."

Fabian Schlage, Head of Idea and Innovation Management

About Fabian Schlage

Fabian S. Schlage was born in 1970 in Munich, and studied computer science at Technical University Munich. Since 1994, he's been working in the telecommunications industry. He's got a background as personal business consultant to the chief executive board of Siemens. At Nokia, he established the innovation management process described in this case study.

A selection of his roles and commitments:
- Head of Innovation and Idea Management at Nokia
- Lecturer for innovation management at THI Ingolstadt (Germany) and NW university (Switzerland)
- Scientific panel member at ISPIM
- Heading functions within Business Transformation
- Research on applied innovation management within international innovation management networks.
- International Consultancy / Speeches / Awards: e.g., at CoDEV, Marcus Evans, Management Circle, World Innovation Convention, ASUP, EURAM, ISPIM, Fraunhofer Society, Bavarian State Chancellery, Girls' Day Germany

Fabian on social media:
Blog: **www.youtube.com/fabsinnovationtv**
Facebook: **www.facebook.com/fabianschlage**

About Nokia

Nokia is a global leader in creating the technologies at the heart of our connected world. Powered by the research and innovation of Nokia Bell Labs, we serve communications service providers, governments, large enterprises and consumers, with the industry's most complete, end-to-end portfolio of products, services and licensing.

From the enabling infrastructure for 5G and the Internet of Things, to emerging applications in virtual reality and digital health, we are shaping the future of technology to transform the human experience.

www.nokia.com

About HYPE Innovation

HYPE Innovation is a global leader in full-lifecycle innovation management software. HYPE's powerful platform allows organizations to engage thousands of employees in idea generation and collaborative problem solving. Our client community includes global companies such as Bombardier, Nokia, Merck, Airbus, AkzoNobel, Saudi Aramco, Liberty Global, Petronas, and Deutsche Post DHL.

www.hypeinnovation.com

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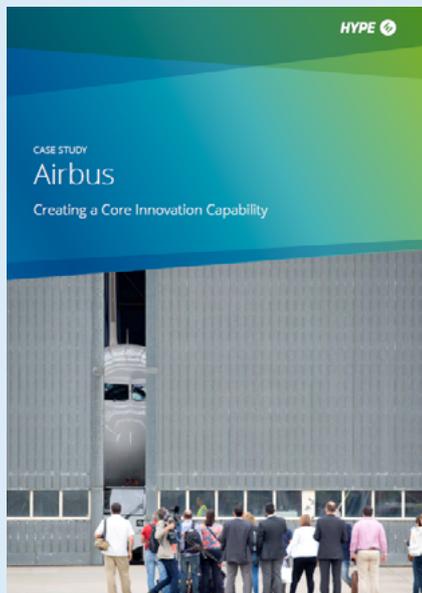
Airbus

Airbus is one of the world's foremost aerospace companies, with 133,000 employees, manufacturing sites in France, Germany, Spain, UK, US, and China, and revenues of €43 billion (Dec 2016, www.airbusgroup.com).

In 2010, Tom Enders, CEO at the time, initiated an effort to increase and structure innovation activities around an end-to-end innovation process. This led to the creation of the Airbus Innovation Cell, a team dedicated to fueling the innovation engine with ideas, deploying an efficient process, and delivering results through innovation.

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Liberty Global

Liberty Global plc ("Liberty Global", "Liberty") is the largest international cable company with operations in 14 countries. They connect people to the digital world and enable them to discover and experience its endless possibilities. Liberty Global's market-leading products are provided through next-generation networks and innovative technology platforms that connect 27 million customers subscribing to 57 million television, broadband internet and telephony services in September 30, 2015. In addition, they served five million mobile subscribers and offered WiFi service across six million access points.

Liberty Global's consumer brands include Virgin Media, Ziggo, Unitymedia, Telenet, UPC, VTR, and Liberty Cablevision. Our operations also include Liberty Global Business Services and Liberty Global Ventures.

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HYPE

CORPORATE HEADQUARTERS

HYPE Softwaretechnik GmbH
Trierer Straße 70-72
53115 Bonn
Germany

Phone: +49 228 2276 0
Email: info@hype.de
www.hype.de

NORTH AMERICA OFFICE

HYPE Innovation Inc.
625 Massachusetts Ave.
Cambridge, MA 02139
USA

Phone: +1 617 401 7917
Email: info@hypeinnovation.com
www.hypeinnovation.com