



INNOVATION FACTORY

# Case: Bottom up Innovation

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### Introduction

This case describes a bottom up innovation initiative at a large Dutch insurance company. The case shows that bottom up innovation in large enterprises through the use of an internal community, results in lower costs and an improvement of the speed and quality of the first 2 stages of the Stage-gate process.

Bottom up innovation is the concept where ideas 'bubble up' from anywhere in the organisation. Employees lead the idea through the innovation process by utilising relations based upon knowledge, experience, and influence in their network and not so much by navigating company hierarchies.

### Theory

In his book 'Management Innovation' Gary Hamel states that companies need to let go of a large part of the culture of control and tap in to the creative capabilities of their employees. Hamel describes successful companies where employees help solve each others problems or help each other develop new ideas. This happens regardless of hierarchy. Hamel: "Good ideas attract good resources."

A prerequisite for this way of working is that you need to know who you can turn to for help. Robin Dunbar states that, without tools, a human is only capable of maintaining an effective network of 150 people. Hamel uses W.L. Gore as an example of a firm that successfully taps into the creativity of its employees and masters bottom up innovation. As a rule, when a unit within the company grows over 200 people, it is split. This ensures that in every business unit there is personal contact and people know who to turn to. W.L. Gore knows it can run its business more efficiently, but chooses this model as it ensures them to always be a step ahead of competition.

Based on the above, bottom up innovation is for a large part a cultural issue and it is limited by the number of other humans we can effectively network and collaborate with.

Interestingly Hamel also describes Google to master bottom up innovation. However, Google does not have the head count rule and Google employs thousands of people. How do they deal with Dunbars threshold? Google has software tools that enable her employees to find people, share knowledge, and collaborate with people easily. These tools therefore lift the limitation of group size. Hamel does not discuss the capability of tools to lift the limitations of group size. The issue has been dealt with extensively in the field of enterprise 2.0. Andrew McAfee, professor at Harvard and one of the leading thinkers in this field states that "these tools provide the ability to knit people together in novel and productive ways, to harness, collect, and share knowledge (without formally trying to 'manage' it like we used to) and to increase the degree of self-organisation in an organisation."

These enterprise 2.0 tools therefore diminish the limitations Dunbar described. This phenomenon has been called 'ambient intimacy' by Leisa Reichelt. Therefore, online communities can be large while its members still have the capacity to find people, share information, and collaborate.

By saying there needs to be a culture of tapping into the creative capabilities of employees, Hamel does not propagate an unruly chaos for companies. Quite the





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contrary. Hamel does propagate rigour in managing processes. Innovation is best managed by using a 'funnel' where ideas are developed and selected in stages. Research shows that companies that manage this funnel effectively, outperform companies that don't use a funnel approach. The most used funnel model is the 'Stage-Gate' process developed by Robert Cooper. He states that every stage in the innovation process has its own activities and is followed by a rigorous gate where it is decided if the innovation can move on to the next phase of the process, and receive additional resources.

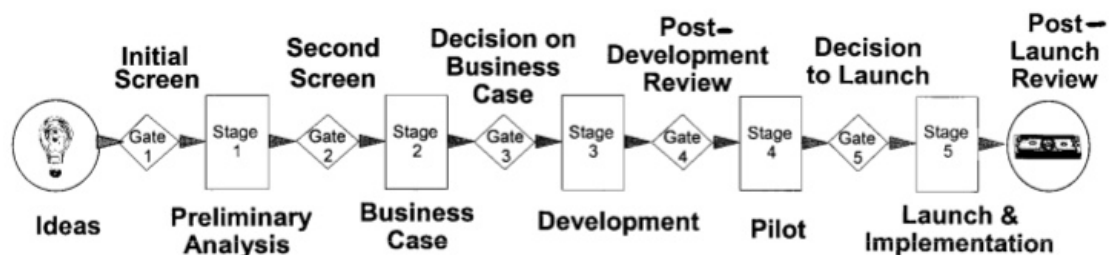


Figure 1: Stage-gate process

The basic problem with selecting ideas for innovation is that the process has to handle uncertainty. If all ideas were developed into products and then introduced into the market, there would be no uncertainty because the market would prove whether a new product would be a success. However, this way of working is too costly as many resources would be spent on products that would not be successful. The funnel provides a means to balance uncertainty and spending by rigorously selecting ideas after each stage and only providing resources for the next stage. Each stage should reduce the uncertainty of the potential success of an innovation, justifying the decision to free up additional resources to bring the idea a step further. If uncertainty is not reduced, the idea will be stopped. The criteria to decide on are the same for all gates, but the data to support decision making should contain less uncertainties as the innovation progresses further through the funnel.

Different sections of the innovation process have different circumstances in which they operate best. The first phases of innovation (up to gate 2) need as much creativity and diversity as possible. After the second gate an idea needs focus and needs to be executed as quickly as possible. Such work is usually better performed by small well focussed teams.

### Case

Literature suggests that internal online communities could support bottom up innovation in large organisations. In our practice, we witnessed an interesting case of bottom up innovation that we would like to describe here. After the presentation of the case we analyse and discuss the findings.

This case study deals with a top 3 Dutch insurer that had grown to its current market position through merger and acquisition, resulting in a corporation with multiple divisions, brands, staff departments, and cultures that hardly interacted at all. As a consequence the corporate executive board felt that ideas, knowledge and expertise were not shared throughout the organisation.





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In 2007 they decided to start a community to connect people throughout the company, across the different brands and divisions. The official goal of the project was “to connect people and have them share knowledge”.

The community was established in June 2007 and has been grown deliberately slowly and carefully over the past two years as the culture of sharing and collaborating, especially on innovative initiatives, was not in place within the company. The community was established with the 120 most innovative people within the organisation, with the 5-10 most innovative people drawn from each division.

The platform was launched during a special event in June 2007. After the initial pilot group, the number members was increased steadily to 600. This group is meant to be a catalyst of innovation towards the other employees in the organisation. Since all divisions are represented within the community, the members are very diverse. Employees from different brand labels as well as departments like IT, Finance, HR, Communication, Legal and even the Executive board are active in the community and 'meet' each other online and off-line in workshops. After about one and a half year of continuously growing interaction we witnessed the first bottom up innovation initiative.

On May 15 2008 a specific discussion started on the community platform. The question was raised if one of the brands had a specific type of insurance and if no one did, why this was the case. The discussion went on for another 5 months until an event took place in the life of an employee. The employee wanted to get a specific insurance coverage but could not find one within his own company. He decided it was time to get to the bottom of why this was the case. He described his amazement, in the online forum, about the fact that no coverage existed for, what seemed to be, a very large market, and called for action to address this gap. He asked his colleagues in the community if they were willing to help him to do initial research. Furthermore, he asked if people had been involved with similar ideas in the past and had relevant materials. 20 people from different divisions and with different functional responsibility reacted to the post and many offered their assistance. Within 2 weeks four large market research reports and a business case were shared from different brand labels within the group. Furthermore, numerous reports, presentations and links about similar products in other countries from other insurers were shared by colleagues. The employee in question stated on the forum that the amount of information shared saved the company hundreds of 'business development' hours.

Seven weeks after the initial post a meeting was called with 5 people that offered their assistance. On the one hand this meeting was described by 2 participants as having a very exciting 'vibe' as all participants were very aware that their undertaking was very unusual for the company. They were attending a meeting to discuss a possible new offering without any formal ownership, sponsorship, responsibility, budget, and mandate from any authority within the company. Furthermore, it wasn't clear for what brand this offering would be. Some attending the meeting had gotten questions from their superiors as to who was the owner, what label this idea would belong to, who was the sponsor, who owned the budget, etc? Everyone had to answer that they didn't know or that there was no owner, budget, etc. There were just 5 professionals that thought there might be potential for a certain type of insurance. Many were just given an OK to attend this meeting and could not be involved unless it was clear how the initiative would be embedded in the organisation. Others simply were not specific as to what meeting they were attending and some felt they had sufficient mandate to make





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such professional judgement themselves. Much of the meeting time was consumed by discussing this matter and people were unsure as to how they should proceed. When the discussion turned to the subject, it very quickly yielded 4 spin-off concepts based on the initial concept. One of the participants remarked: "It is amazing how quickly a group of people can come up with high quality ideas when they have access to rich information and are not hindered by organisational restrictions." At the end of the meeting it was agreed that all concepts would be described in an elevator pitch.

While this initiative was being worked on the credit crunch hit the economy. A result of this was that many employees were getting involved in urgent projects to cut costs and many employees felt reluctant to embark in activities that do not directly tie to the bottom line. For a period of 3 months the group did not take much initiative. When asked, most people in the group mentioned the bad economic climate as the most important reason for this. The forum thread continued to receive valuable information from the community members. The person taking the initiative did proceed to sort and order both his thoughts as well as all information shared by his colleagues. He mostly pursued one of the spin-off concepts from the meeting. He spread his thoughts about the new concept and many people were interested. The most important skills required in the next stage were actuary skills. The person taking the initiative was able to get commitment from a good actuary to work with him to further enrich the concept. This is where the initiative is at the time of this writing.

### **Discussion**

We asked ourselves the question: If one would have an internal community to find people, share knowledge, collaborate, and innovate; how would the resulting cost and quality of innovation compare to the generally accepted stage-gate process?

We found that both in terms of cost and quality, bottom up innovation outperforms traditional innovation in the first 2 stages of the stage-gate process. We also found an interesting side-effect. Based on initial ideas, internal communities seem to generate more ideas than traditional innovation and thereby increase the momentum of innovation. The paragraphs below describe our findings.

### **Costs**

This paragraph describes how bottom up innovation, through an internal online community, can reduce costs in what can be compared to the first 2 phases of the stage-gate process. We distinguish four types of savings.

#### **1- Less time spent on research**

Working with online communities employees can quickly access available knowledge in the organisation. They can search the knowledge base or previous discussions for relevant content. If searching does not yield relevant information they can ask the other participants on the platform a question. This is the way the initiative described in this case study started; the employee asking his colleagues why their company did not offer a specific type of insurance. Employees can also search for people with relevant expertise on the platform and contact them directly with their question. Expertise can be found through searching peoples profiles or from discussions people have taken part in showing their expertise. In this case the employee first asked his colleagues on





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the platform for the availability of such an insurance offering. He soon found out that none of the brands in the enterprise offered this insurance. He then proceeded to ask the question “Why (not)?”. In a short period of time this question yielded a number of reactions from colleagues having been involved in projects where the same question had been researched. Furthermore, four market research reports and a business case were shared. A participant indicated that “hundreds of hours of business development resources were saved.” Therefore, much is saved in terms of the time spent by a person to research a topic and collect information.

We believe that the cost reduction shown in this case is not unique and can be reproduced on a large scale by enterprises. If bottom up innovation takes hold in an organisation the costs should further decrease as the amount of shared information will grow over time increasing its richness. Such a rich collection of information will increasingly help people to quickly test their ideas.

### **2- Reduce costs on commissioned research**

In this case we saw that four market research reports and a business case were shared on a specific topic. The research was drawn from across the organisation, something which had previously been very difficult to do. The research was described as valuable as an initial test of the idea and there was no need for additional research in this stage of the innovation process saving the company money.

As the community grows and more activity takes place we think that a reduction in the amount of duplicate research commissioned by the enterprise will significantly reduce so saving costs. Because people in different parts of the organisation do not know of each other’s knowledge and available research, duplicate research within companies is a well known issue. If research were to be shared one could find it by searching the community or one could state a research requirement and ask others to contribute knowledge. This process reduces the cost of duplicate research significantly. Furthermore, the research will be better focussed and will more effectively build on the present knowledge base within the company. It helps the company to share what it knows.

### **3- Reduce costs of hiring external expertise**

Using all available information in the company and having access to all the brains in the company, the need for external expertise can be argued to decrease. In this case no external expertise was hired. However, we cannot be sure if this was a direct result of the use of the community.

### **4- Reduce costs by more agile resource allocation**

The community themselves parked the initial idea and continued to work on a new concept that sprung from a the initial fact to face meeting. One could describe this as reallocated resources to an alternative, more promising concept. This leads to agile and efficient resource allocation. In the traditional way of innovating, even if the team would already know the idea would not be viable, the team would have had to produce a decision making document for the next gate before the decision makers would decide investigations could be started on the alternative concept. On a larger scale, compared to the community’s agile way of resource allocation, working in the traditional way the company would waste many resources on finalising decision documents while these resources could be pursuing more promising ideas.





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The counter argument for this is that there is no formal documentation for the decision to stop researching an idea. If a community tends to over research non viable ideas or not needs further study.

Furthermore, the storage of the knowledge gained during researching an idea should prevent wasting resources on researching the same idea in the future where one would only need to test if the situation has changed to make the idea viable.

### **Quality**

There are 2 quality aspects of innovation related to the stage-gate process, they are:

- 1) the quality of the decision making at the gates and
- 2) the quality of the information to support decision making at the gates.

#### **1- Quality of decision making**

This case study shows that the crowd selects ideas and allocates its resources to what they perceive as the best ideas. In this case the initial idea was parked and resources were reallocated to an alternative, more promising new concept. As this decision is taken by a group of diverse professionals, all aware of all the available information, the quality of this decision is high.

We believe that this collective selection capability is not unique to this instance and is generic to bottom up innovation in communities. As is the case for all selection committees we do think that a significant level of diversity in the group is required to protect from a collective blind spot and ensure knowledge from multiple functional disciplines.

#### **2- Quality of business cases**

We saw that the community shared numerous market studies and other information. A normal team would never have access to such an amount of rich and good quality information at reasonable costs. If the quality of information is high and it is abundant the business cases built on that information will also be of good quality. Another aspect that positively impacts the quality of the business cases is the diversity of the people involved in building the cases. Greater diversity will lead to a more balanced case as more viewpoints are accounted for. As more bottom up innovation occurs through the community the body of information will grow further and more diverse people will be involved in the process leading to better quality business cases.

### **Innovation momentum**

If you have an idea, quite early in the innovation process you will need to start researching it to try and validate or disprove your idea. In the traditional innovation process that would mean you would need to invest in research quite early on in the process. As research is not free, many ideas will have to compete for the resources to do research and just a few ideas are able to be funded. Because so little is known at this stage chances are real that very viable ideas are not selected to be researched. In this case study we saw that a simple question can yield large amounts of very useful information. This information allows you to quickly test the feasibility of the idea and further enrich it. Looking at this on a larger scale, using a community will allow you to test more ideas without an increase in research spend.





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In this case study the participants informally tested the idea by sharing information and discussing it. When they met, four new concepts were conceived that, to date, seem to be more novel and viable than the traditional concept. Therefore, the sharing of information and using 'the wisdom of the crowd' will generate new and better ideas based on the initial idea and all shared information. As bottom up innovation gains momentum in enterprises and more people get involved in the innovation process, the collective brainpower increases, as well as the diversity of viewpoints. Add more and richer information to that formula and the number of new ideas can grow exponentially.

### Prerequisites for bottom up innovation

The prerequisites for bottom up innovation can roughly be divided into two areas. The first area is the structural availability of knowledge, experience, and information and the possibility for this information to reach the subject that needs it. We refer to this area as 'infrastructural'. The second area deals with the question if the group of people involved share a culture and organisation that supports bottom up innovation. We refer to this area as 'cultural'.

#### Infrastructural

For bottom up innovation to be possible one needs an infrastructure that supports access to knowledge -both the knowledge held by people and the knowledge stored on systems, enables this knowledge to flow, and enables people to collaborate.

As discussed in the theory section above, Dunbar has described that, without the use of tools, a person is able to work effectively in a network of no larger than 150 people. W.L. Gore is described by Hamel as being effective in bottom up innovation because they keep the size of their operating units small to insure that people know each other and where and how to obtain information. Therefore, companies smaller than 150 people could be argued to have a 'natural infrastructure' for bottom up innovation. However, we know that many organisations that struggle to achieve bottom up innovation are large enterprises with thousands of people. They need a sufficient infrastructure to support bottom up innovation.

The technology that has gained momentum over the last years and that contains many aspects of this infrastructure is often referred to as Web2.0, Enterprise2.0, Communities, or social media. We often refer to them as 'communities' as this term clearly contains the human factor. Communities can have numerous functionalities that can make them attractive or not. However, there are three key functions to ensure an infrastructure that supports access to knowledge, enables this information to flow, and enables people to collaborate.

1. **Rich profiles:** Communities need rich profiles of the people participating. The users themselves can build their profile with knowledge, experience and interests. The system can also add to the richness of the profiles by listing the contributions (ideas, questions, knowledge shared, etc.) of the specific participant. By enriching profiles with actual contributions, evaluating someones skills becomes far more effective.
2. **Threaded discussion:** This functionality can be used for different purposes. The most common function is a forum to discuss topics. However, the threaded structure is also very useful to ask the community questions, post problems to be solved, to post ideas, or in some circumstances they are even used as a structure





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to list tasks and manage a project. In the threads the community can add their knowledge, experience, research, tasks, etc. to help enrich an idea or solve a problem. One of the key benefits of working in this manner is that the knowledge is stored around real ideas, problems, or questions making all shared knowledge very relevant. Another key benefit is that every post where knowledge is shared has the person that has shared the knowledge connected to it. First of all this will build networks of people around specific areas of expertise but it will also enable anyone who has further questions to contact that specific person. Depending on its specific use, one can add attributes to the threads that make them more useful. Examples: A simple text may just be used for discussion, adding a due date will make it into a task, adding forecast information may transfer it into a new business idea, and adding a rating may help value good ideas or helpful contributions.

3. **Document and news sharing:** To ensure that people can store relevant information in the community one needs document sharing.

### Cultural

For bottom up innovation to work the organisation needs a culture that supports collaboration and sharing of information. We defined bottom up innovation as the concept where ideas 'bubble up' from anywhere in the organisation. Employees lead the idea through the innovation process by utilising relations based upon knowledge, experience, and influence in their network and not so much by navigating company hierarchies.

One of the key aspects of this culture is that employees engage with each other directly not dictated by hierarchies. In the insurance case we described the phenomenon that a number of people were questioned by their superiors as to where the innovation was positioned within the hierarchy and when they explained it was not positioned yet, the superiors reacted negatively. Hence, organisations that operate very hierarchically will not have a natural tendency to let people collaborate directly.

People themselves need an attitude of helping others. A culture of 'knowledge is power' may hinder this. Furthermore, a culture of enriching other peoples' work instead of the more common critiquing others' ideas will help to be more effective in bottom up innovation.

Bottom up innovation and the use of community platforms will increase the transparency in the organisation. It will become more transparent who truly adds value to the organisation and why certain ideas were stopped or developed. Transparency is not valued in all organisations. In organisations where intransparency thrives, much effort will be needed to create a vibrant community.

For organisations to adopt a collaborative and sharing work culture it is required that the organisations' leadership also adopts this modus of work. Just endorsing this modus of work is not enough.

Finally, fear is the enemy of bottom up innovation. If people are scared to ask questions or post ideas because they may make them look bad, they will not be likely to participate in the process.





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### **Summary**

This unique case study suggests that the effects of bottom up innovation through an internal on-line community on the first two stages of the stage-gate process are :

- reductions in costs and
- an increase in quality.

It also suggests that, compared to the traditional way of innovating, it increases the innovation momentum within the organisation leading to more and better quality ideas and eventually a more innovative, collaborative culture within the organisation

