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Lessons from a Failed Implementation of an Online Open Innovation Community in an Innovative Organization

There are many examples of successful open innovation communities that have helped organizations to improve their innovativeness and solve innovation-related issues. But not all implementations have been successful. This article describes one such case, even though innovation was part of the organization's culture. We identify the challenges faced and the reasons the initiative failed. Based on our analysis, we provide guidelines and a framework for assessing the likely success of implementing online open innovation communities.[1]

Frederik von Briel
Queensland University of Technology (QUT) (Australia)

Jan Recker
Queensland University of Technology (QUT) (Australia)

Open Innovation May Not Always Be an Effective Strategy

With open innovation, firms look for ideas and their execution outside organizational boundaries—for example, through collaboration with suppliers and customers, and sometimes also with competitors. Open innovation thus distributes the innovation process and can result in improved innovativeness, minimized innovation-related risks and external commercialization of intellectual property. Advances in IT and, in particular, the evolution of the Internet have enabled new forms of collaboration that help organizations to overcome geographic, temporal and organizational boundaries in distributed innovation processes.

A 2014 survey showed that 78% of large organizations in Europe and the U.S. embrace open innovation.[2] In fact, 82% of these organizations had extended their open innovation engagements in the previous three years, and none had discontinued them. The only questions seem to concern how to capitalize on all the innovation opportunities and how to reap most of the value potential. In addressing these questions, research has focused on identifying the modus operandi that will enable organizations to gain the potential benefits from open innovation initiatives. As a result, examples of successful open innovation initiatives found in the literature range from idea-gathering to online user innovation communities,[3] from resource

1 Dorothy Leidner is the accepting senior editor for this article.

2 Chesbrough, H. W. and Brunswicker, S. "A fad or a phenomenon? The adoption of open innovation practices in large firms," *Research-Technology Management* (57:2), 2014, pp. 1625.

3 See, for example, Jeppesen, L. B. and Frederiksen, L. "Why do Users Contribute to Firm-Hosted User Communities? The Case of Computer-Controlled Music Instruments," *Organization Science* (17:1), 2006, pp. 45-63.

pooling to organizational innovation networks[4] and from the early idea-generation stages of the innovation process[5] to the later development stages.[6]

However, two key factors suggest that open innovation in its various manifestations is not necessarily and unequivocally an effective strategy. First, practices that have been identified in successful implementations of open innovation do not necessarily prevent failures. Little is known about open innovation failures or the reasons for them,[7] even with such prominent examples as the failures of Boeing, LEGO and Pharma.[8] The second factor is that most studies on open innovation have focused on *large* organizations.[9] While research on open innovation in large organizations is valuable, not all organizations share large organizations' attributes.[10] The question therefore arises as to whether the research findings on open innovation in large organizations are equally applicable to smaller organizations.

This article presents a case study of a medium-sized, innovative organization with an innovation-fostering culture, which we refer to as "ElectriCo." This organization implemented and eventually terminated an online open innovation community. We examine ElectriCo's failed implementation and show that embracing open innovation is not a simple process, even in an organization used to embracing innovation. Based on our analysis of this case, we provide executives in organizations seeking to establish online open innovation communities with a set of managerial lessons and a framework with checkpoints and guidelines. These lessons demonstrate how the successful implementation of online open innovation communities depends on several interrelated conditions and that these implementations often face unique challenges. While the general applicability of our findings is limited by the single case setting, our approach provides an unusual opportunity to learn from a failure.

ElectriCo's Background and its Innovation Culture

ElectriCo is in the electronics manufacturing industry, exclusively serving business-to-business (B2B) customers. ElectriCo started in the 1950s as a family business following a breakthrough innovation invented by its founder. By the mid-1960s, the company had 30 employees and had expanded to three organizations, one of which focused entirely on producing customized solutions to meet individual customers' needs. ElectriCo also started selling products sourced from other organizations under its own label. Over the years, ElectriCo has grown to operate on a global scale, but it remains a family business today, and its primary focus is still on its home market. Most of ElectriCo's subsidiaries are independent entities that fulfill different functions and serve different markets in more than 40 countries, although the company's products are available in more than 100 countries.

ElectriCo's organizational culture fosters innovation.[11] Before setting up the business, ElectriCo's founder was looking for ways to improve a time-consuming step in the electronics manufacturing process and had identified the opportunity for developing what would become ElectriCo's cornerstone product. This breakthrough invention eliminated several steps in the electronics manufacturing process, thereby

4 See, for example, Rehm, S.-V., Goel, L. and Junglas, I. "Role of Information Systems in Empowering Innovation Networks," *MIS Quarterly Executive* (14:3), 2015, pp. 87-103.

5 See, for example, Blohm, I., Leimeister, J. M. and Krcmar, H. 2013, "Crowdsourcing: How to benefit from (too) many great ideas," *MIS Quarterly Executive* (12:4), pp. 199-211.

6 See, for example, Feller, J., Finnegan, P., Fitzgerald, B. and Hayes, J. "From Peer Production to Productization: A Study of Socially Enabled Business Exchanges in Open Source Service Networks," *Information Systems Research* (19:4), 2008, pp. 475-493.

7 For an overview of research on open innovation, see West, J. and Bogers, M. "Leveraging External Sources of Innovation: A review of Research on Open Innovation," *Journal of Product Innovation Management* (31:4), 2014, pp. 814-831.

8 Lindegaard, S. "3 Open innovation failures: Boeing, LEGO and Pharma," February 7, 2013, available at http://www.15inno.com/2013/02/07/3oifailures/.

9 See, for example, Chesbrough, H. W. "Open Innovation: A New Paradigm for Understanding Industrial Innovation," *Open Innovation: Researching a New Paradigm*, Chesbrough, H. W., Vanhaverbeke, W. and West, J. (eds.), Oxford: Oxford University Press, 2006, pp. 1-12.

10 For an overview of open innovation research in the SME context, see Brunswicker, S. and van de Vrande, V. "Exploring Open Innovation in Small and Medium-Sized Enterprises," in *New Frontiers in Open Innovation,* Chesbrough, H. W., Vanhaverbeke, W. and West, J. (eds.), Oxford: Oxford University Press, 2014, pp. 135-156.

11 Characteristics of innovation-fostering cultures include proactive employees who initiate innovation projects, leaders who sponsor innovation projects, availability of funding to pursue innovation opportunities and feedback loops with customers. For more information, see Rao, J. and Weintraub, J. "How Innovative is Your Company's Culture?," *MIT Sloan Management Review* (54:3), 2013, pp. 29-37.

disrupting the whole process and reshaping an entire industry. ElectriCo's innovativeness and pride in innovation development has therefore been ingrained in its culture right from its earliest days. In fact, two of the organization's four guiding principles emphasize the importance of innovativeness, stating the goal of innovating through constant improvement of products, processes and services, and the goal of innovating by addressing individual customers' needs with customized solutions.

The importance of innovation in the business is demonstrated by having a chief innovation officer on the executive board and by a dedicated subsidiary for applied research. ElectriCo's top management formulates business strategy around innovation and charges the applied research unit with exploring technologies that might be strategically relevant in five to 10 years. Strategic long-term focus areas are broken into shorter time frames and sub-areas, with product managers leading the development of products for release in one to two years. As a result, once top management identifies a new strategic market (e.g., railway, e-mobility), it usually takes ElectriCo no more than one fiscal year to begin serving the new market with customized products.

In keeping with its guiding principles, ElectriCo has a holistic perspective on innovation that is not limited to products but also encompasses processes and services. In the words of the Communication Manager, *"[The] goal is to be state of the art and to provide customers with an optimal service and performance."* An example of customer-focused innovation is ElectriCo's ability to provide individually customized products and customized services, such as organizing the entire logistics process with doorstep delivery worldwide, a service few of its competitors can provide. Other examples involve reduced time for order processing and smaller lot sizes to meet customers' needs. Overall, ElectriCo's management strives for constant improvement of products, processes and services with the aim of providing an outstanding customer experience.

Process and service innovations are often triggered by ElectriCo's employees when they proactively identify a latent customer need. Top management provides an annual budget to support employees in such innovation projects, and managers can tap into this budget without board approval, which helps ElectriCo to react to opportunities quickly. According to one of ElectriCo's communication managers, *"an idea usually doesn't have to pass several committees and boards. Of course, in some cases that's necessary. However, to test an idea in general, to think a little bit further—that's possible without much effort."*

Operational management can usually directly approve small innovation projects with relatively short durations and costing less than $20,000; larger projects have to undergo a more formal evaluation process and require a business plan. As a result, employees typically look for operational managers to sponsor the implementation of their ideas. This approach is facilitated by a flat hierarchy, strong internal networks and communication across hierarchies and departments.

In contrast to this *proactive* approach to process and service innovations, ElectriCo follows a more *reactive* approach to product innovations. Ideas for product innovations usually arise via the company's sales force, which frequently visits key customers in order to identify their needs. Once a sales representative has identified a customer need, he or she informs ElectriCo's product management, which analyzes the idea for commercial viability and technical feasibility. This process usually leads to development of a customer-specific product that, depending on its commercial potential, is often then integrated into ElectriCo's standard catalogue. Customers are often involved in this process as testers of prototypes and providers of feedback, especially if product innovations involve changes of production processes.

One of ElectriCo's most recent major product innovations, another breakthrough, provides a good example of this process in action. One of the company's strategic target markets, related to renewable energies, was in an intense price-based competition driven largely by low-cost manufacturers in Asia, which left little room for higher-priced Western suppliers like ElectriCo. However, because ElectriCo considered the market to be strategic, when a large multinational corporation launched a related request for proposals, an ElectriCo employee

attended the information session. After the session, this employee and an employee from a much smaller organization discussed how the request for proposals could be addressed. Both recognized that their organizations had differing but complementary technical competencies that would provide an innovative and competitive solution if the two organizations joined forces. Follow-up phone calls between the two substantiated the idea, and the joint project was proposed to ElectriCo's CEO, who gave his approval. Collaboration between the two organizations was informal and resulted in a patented solution that allowed ElectriCo and its partner to propose a solution in this highly competitive market for a price that was only marginally higher than the cheapest alternatives, but with better efficiency, functionality and quality.

Subsequently, the product was integrated into ElectriCo's standard catalogue, and today it is an integral part of the products of major organizations such as Samsung. While ElectriCo's collaboration with an external partner instead of a customer was unusual, this example of how a customer's request triggered development of a new product illustrates ElectriCo's reactive approach to product innovation.

Even though reactive product innovation is the norm, ElectriCo's top management also actively encourages proactive product innovation by, for example, holding an annual internal topic-oriented ideas competition where product developers can compete for expensive rewards (e.g., cars).

In summary, ElectriCo's top management nurtures a culture that fosters innovation. It does this by committing to innovation projects and acting as project sponsor, and facilitating cross-hierarchy communication. The company also provides considerable freedom to managers and employees, who are allowed to perform their jobs relatively independently as long as they are able to justify their actions. As a product manager described, *"They [top management] are not that rigid that they impose on you 'I'm the boss and you have to do this!' They don't do that; they are pretty open to discussion."* ElectriCo also tends to source required knowledge and components externally where possible, so the not-invented-here syndrome[12] is not present at ElectriCo.

How ElectriCo Decided on its Open Innovation Approach

Even though ElectriCo has a culture that fosters innovation and has had a track record of successful innovations, it faces two key issues. The first is that feedback between customers and product development is usually either absent or mediated through the sales force. Key customers in ElectriCo's home market receive frequent personal visits from its 55 sales representatives, who gather their customers' requirements and transfer them to the product development teams. However, most of its 16,000 customers have no channel through which they can funnel their needs or make suggestions. As a result, most of ElectriCo's products have been developed for one or two of its key customers, and product development teams typically have little interaction with the majority of customers and their needs. This makes it difficult for product development teams to identify and pursue innovation opportunities proactively.

The second key issue faced by ElectriCo is that, despite its foundation being based on a breakthrough innovation and being known for product quality and customer support, the marketplace does not perceive the company as innovative. ElectriCo does not have a reputation for innovation because most of its innovation efforts happen deep within the organization.

While investigating the potential of new digital media in general, ElectriCo's marketing department became aware that open innovation provided an opportunity to overcome these two key issues. Subsequent internal analysis of open innovation's potential for the organization led to insights on the relative merits of offline and online innovation approaches, and these insights were used to guide decision making on which approach to follow. *Offline open innovation* approaches such as lead-user integration (engagement of users whose needs and preferences are ahead of time) would require

12 For an analysis of the not-invented-here syndrome and its antecedents, underlying attitudes and behavioral consequences, see Antons, D. and Piller, F. T. "Opening the Black Box of 'Not Invented Here': Attitudes, Decision Biases, and Behavioral Consequences," *Academy of Management Perspectives* (29:2), 2015, pp. 193-217.

intensive face-to-face interaction and would be limited to a few known actors. In contrast, *online open innovation* requires no face-to-face interaction and empowers both known and unknown actors. Online approaches include:

- Online toolkits (web-based applications that enable actors to virtually create and test product innovations)
- Online open innovation communities (virtual communities that enable actors to interact for innovation purposes)
- Online innovation contests (platforms that facilitate competitions between actors who provide solutions to innovation challenges).

Moreover, online approaches could enable worldwide actors to be integrated into innovation processes at comparably low costs.

Online toolkits have high development and operational costs because the information required for new product development must be transferred to users. In contrast, online open innovation communities have comparably lower costs and enable interaction with and between external actors, thereby fostering the growth of collective intelligence. Online communities could also be used to host online innovation contests, thereby enabling the use of multiple open innovation approaches at the same time. Lastly, an online open innovation community would provide the opportunity to establish a worldwide employee suggestion program at a time when many of ElectriCo's international subsidiaries lacked access to the organization's intranet.

After the internal analysis of open innovation approaches, the marketing department surveyed managers in customers, and potential customers, of ElectriCo's products to obtain their perspectives on open innovation approaches. The survey asked participants about topics like the potential of customer feedback in product development, and opportunities that could arise from the use of online open innovation. The survey results provided a positive outlook and suggested that integrating customers into product development via online open innovation could provide a variety of benefits, such as helping to foster customer retention, shortening the innovation process and increasing ElectriCo's overall innovativeness.

Launch and Demise of the Online Open Innovation Community

Based on the results of the internal analysis and the survey, ElectriCo determined that an online open innovation community was a suitable way to address its key issues. In particular, the product development teams and the marketing department considered that such a community would help to:

- Establish a direct channel of communication between product development and ElectriCo's worldwide customers
- Improve the marketplace's perception of the organization's innovativeness.

Because the marketing department had carried out the initial analysis, ElectriCo decided that marketing would lead the implementation of the online open innovation community, while the product development department would take the lead in the community's subsequent operation.

ElectriCo was aware that an online open innovation community would not be attractive to its key customers, who were served directly by sales representatives and so already had a channel through which to funnel their needs. However, the company believed that an online open innovation community would provide customers that had smaller order volumes, and thus were not personally visited by sales representatives, with opportunities to provide feedback and interact with ElectriCo's product development teams. ElectriCo's top management therefore approved the project to establish an online open innovation community, with the chief innovation officer as the sponsor, assigned employees to the project and provided funding in excess of $200,000. The community was launched in ElectriCo's home market, and, inspired by successful communities from B2C organizations such as Dell's IdeaStorm, management set the humble goal of obtaining just one idea per year that was worth implementing.

The community launch was accompanied by marketing initiatives to create awareness among existing and potential customers. Newsletters and flyers were sent to all of ElectriCo's existing customers, and sales and customer service

representatives promoted the online open innovation community during conversations with customers. The company also implemented links to the online open innovation community on its homepage and online shop to tell potential customers how to contact ElectriCo's product development teams if they felt the current product portfolio did not satisfy their needs. ElectriCo also promoted the online open innovation community at a major international trade show, emphasizing the opportunity to contribute to and obtain customized solutions for individual problems as a main incentive for participation. ElectriCo would also provide financial rewards if an idea made it into the product development process and again when an idea led to the launch of a product.

Initially, the online open innovation community attracted a reasonable number of contributors and generated a few ideas, although none of them were technically or financially feasible. For example, one contributor suggested that ElectriCo should use superconductors, which have no electrical resistance, in its products. While the idea sounded interesting at first sight, superconductors require high amounts of energy for cooling, making them inefficient and inapplicable for use in ElectriCo's products.

After the initial surge of contributions resulting from the marketing initiatives, user participation in the online open innovation community dropped rapidly, and about a year after its launch the community was basically defunct. The goal of generating one valuable idea per year had not been achieved, and there was no prospect of meeting this goal in the future Top management therefore decided to shut the community down.

Why the Online Open Innovation Community Failed

As is often the case with such failures, there were multiple factors that contributed to the failure of ElectriCo's online open innovation community.

Legal and Regulatory Constraints

Legal and regulatory constraints limited the number of contributors. ElectriCo's highest growth rates were in the African and Asian markets, and customers in these markets often had different requirements and a higher online affinity than did customers in its traditional and more conservative home market. For these reasons, ElectriCo developed its online open innovation community to be multilingual and established the technical infrastructure required for an international rollout. However, the international rollout had to be put on hold because the regulatory framework in ElectriCo's home country imposed high barriers to transnational operation of the community. In particular, the transfer of personal data between countries that was required to process suggestions on a central platform was subject to strong data-protection regulations.[13] For example, if ElectriCo received an idea with only local relevance from another country, it would have needed to transfer the idea, including the idea-generator's personal data, to its respective local subsidiary for processing. However, ElectriCo would have needed to implement special data-protection safeguards, such as audits, training and complaint-handling systems,[14] to permit legal transfer of personal data to third countries, such as those in Africa and Asia.

Moreover, ElectriCo's corporate structure, with its independent and legally distinct subsidiaries, prohibited the online open innovation community from being used internally as a worldwide employee suggestion scheme. Regulatory frameworks would require ElectriCo to sign individual agreements with each of its subsidiaries to integrate the subsidiaries' employees into such a program. However, ElectriCo did not have an organization-wide council that could facilitate the signing of such agreements centrally.

ElectriCo's top management recognized that excluding both international customers and employees from subsidiaries from the online open innovation community would restrict the number of contributors significantly. However, the costs associated with the required legal consultations were significant and were a major factor in the project exceeding its initial budget. ElectriCo's top management therefore decided to

13 The Data Protection Directive of the European Union restricts the transfer of personal data to countries outside the European Union.

14 See *Overview on Binding Corporate Rules*, European Commission, http://ec.europa.eu/justice/data-protection/international-transfers/binding-corporate-rules/index_en.htm.

make no further investment in trying to overcome these hurdles.

Lack of a Critical Mass of Contributors

As a result of the legal and regulatory constraints, the online open innovation community was launched only in ElectriCo's home market and made available only to external contributors. This decision not only greatly limited the number of contributors but also removed the opportunity to empower employees throughout the organization and to leverage internal ideas. Excluding so many employees from the community was a significant factor in the failure of the project, as many innovation initiatives typically stumble because organizations lack the ability to identify and execute ideas, not because they lack ideas.[15]

These restrictions meant that ElectriCo could not attract the critical mass of contributors and user activity required for the community to be self-sustaining.[16] The implementation did attract some contributors, and ElectriCo did receive some suggestions directly after the launch, but management did not set up processes and guidelines on how to handle suggestions or stimulate further contributions. One main reason was that formalized routines were not deemed necessary, given the low volume of platform activity, even though actively responding to suggestions and submitting suggestions is known to be important in early stages of a community to create an ongoing level of activity.[17] As an ElectriCo product manager pointed out, *"We try to provide fast feedback. […] However, currently there is no need to respond immediately to suggestions on the platform; there is too little going on as that we could not process all the suggestions anymore if we would wait [meaning that he and his colleagues could still easily process all the suggestions even if they let them accumulate over time]."*

Hence, even after successfully practicing a reactive approach to product innovation for decades, ElectriCo was imprisoned by its mental models, confident that its only issue would be how to process all the contributions, not how to solicit them.

As a result, interactions between ElectriCo and contributors were sluggish, with initial responses often coming only after several days or weeks and evaluation of ideas taking place only quarterly. Furthermore, moderators frequently replied to suggestions via private messages, which created the impression among other participants that ElectriCo was not paying attention to what was going on in the community.

In addition, afraid that competitors might gain and exploit insights, ElectriCo's management was not willing to submit its own suggestions or ask questions in the community, which could have attracted more contributors. As one product manager explained, *"It is difficult to differentiate [us] from the competition, so it is important not to disclose your crown jewels."* This fear was strengthened when one of ElectriCo's competitors responded to a suggestion on its own homepage shortly after it was posted in the ElectriCo community.

As a result of the lack of activity in the community, ElectriCo was not able to extend or even sustain the initial engagement level, which dropped soon after the launch and never recovered.

Unwillingness of Home-Market Customers to Participate in the Community

A third reason for the failure was that ElectriCo's home-market customers are conservative and not very open to participating in an online open innovation community. The survey carried out before initiating the project had shown that managers in home market customers (and potential customers) considered an online open innovation community as a useful channel for obtaining customer feedback. ElectriCo's management took this finding as an indicator that its customers' would be willing to participate in a B2B online open innovation community. However, although the survey asked whether respondents

15 Kastelle, T. "Why Your Innovation Contest Won't Work," *Harvard Business Review*, 2013, https://hbr.org/2013/11/why-your-innovation-contest-wont-work/. For a more detailed analysis of the success factors of employee suggestion schemes, see Recker, J., Malsbender, A. and Kohlborn, T. "Learning how to Effectively Use Enterprise Social Networks as Innovation Platforms," *IT Professional* (18:2), 2016, pp 2-9.

16 Raban, D. R., Moldovan, M. and Jones, Q. "An Empirical Study of Critical Mass and Online Community Survival," *Proceedings of the ACM 2010 Conference on Computer Supported Cooperative Work*, Association for Computing Machinery, 2010, pp. 71-80.

17 Dahlander, L. and Piezunka, H. "Open to suggestions: How organizations elicit suggestions through proactive and reactive attention," *Research Policy* (43:5), 2014, pp. 812-827.

considered open innovation communities to be useful, it did not ask if they would participate in another organization's community. In other words, ElectriCo asked the wrong question.

For strategic reasons, top management also decided not to tell anyone outside of ElectriCo's employees about the community before its official launch, so ElectriCo's customers were never asked about their willingness to participate in an online open innovation community.

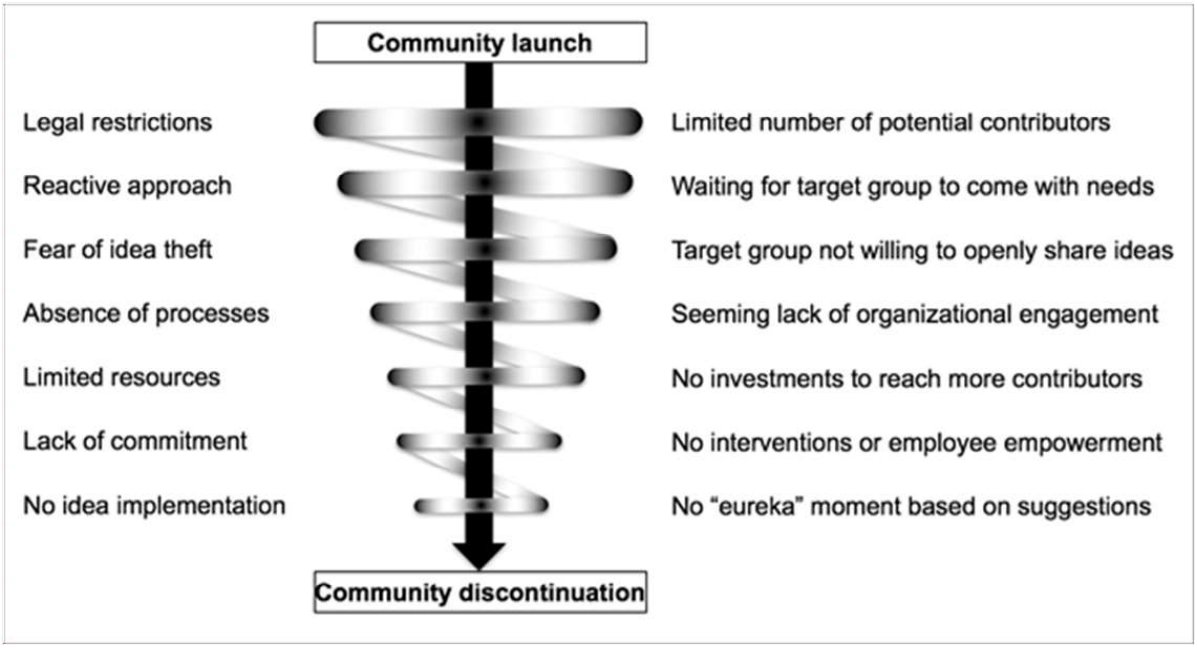
ElectriCo also assumed that it could continue pursuing its reactive approach to product innovation, with customers delivering ideas and ElectriCo implementing them. Although the reactive approach works well for the small percentage of customers with which ElectriCo's sales representatives have personal relationships, it did not work for customers who lacked this personal relationship.

Many customers in ElectriCo's home market are small and medium-sized electronics and machinery manufacturers that develop specific and customized products. These customers are reluctant to reveal their needs, as doing so could play into their competitors' hands. ElectriCo's management anticipated that not all customers would be willing to share ideas openly in the community and had provided the ability to mark suggestions as confidential—that is, not visible to the community at large but visible only to ElectriCo's moderators. However, even with this feature, few of ElectriCo's customers were willing to use the community to share ideas or ask for help. Also, customers tended to mark all of their suggestions as confidential, which contributed to the perceived lack of activity in the community. Ironically, ElectriCo had created a community that allowed it to react to customer ideas—but for customers who were unwilling to proactively share their ideas.

The Vicious Circle that Doomed the Online Open Innovation Community

Taken together, the multiple factors contributing to the failure of the project created a vicious circle that doomed the implementation (see Figure 1). After a few initial suggestions driven primarily by a marketing campaign, little was happening in the online open innovation community, and top management did not intervene or empower employees to foster interaction and increase participation. Moreover, excluding international customers and employees from the community significantly reduced the

Figure 1: Simplified Vicious Circle Leading to the Failure of the Online Open Innovation Community Implementation



number of contributors from the beginning. As a result, the critical mass of contributors and suggestions that would have been required to create momentum and make the community self-sustaining was never reached. Furthermore, as there were no "eureka" moments resulting from suggestions that could demonstrate the value of the community,[18] there was no interest in making the investment needed to roll out the community implementation to international customers and employees. This restricted the community to customers in ElectriCo's home market, which is comprised primarily of industries that feared theft of their ideas and were thus unwilling to share ideas openly.

Lessons Learned

The overarching message from the ElectriCo case is that even if you have an innovation-fostering culture, implementation of an online open innovation community may not work. It certainly is not the panacea that its reputation and much research make it out to be.

From our analysis of this case, we have identified the following six primary lessons for managers seeking to successfully establish an online open innovation community in their organization.

1. Acknowledge the Industry Context

Depending on the industry, intellectual property (IP) might be a major challenge for implementing an online open innovation community. Managers should consider whether a culture of secrecy among potential innovation partners or in their own organization, or fear of giving away ideas, would prohibit the implementation. All parties involved in an open innovation initiative will have to reveal detailed information about themselves to make the initiative successful, and reluctance of any party to do so may potentially jeopardize the entire initiative. For instance, an organization might need to reveal information about its challenges before other parties can contribute potential solutions.

2. Consider the Legal and Regulatory Environment

Managers considering implementing online communities as a way of opening up their innovation processes should evaluate carefully the legal and regulatory frameworks in which their organizations operate. Regulations, known and unknown, could influence the successful implementation of such a community. For example, employees from some organizational units might legally be considered external to other units, thereby preventing their involvement in the community, while the transfer of data across national boundaries might be prohibited by international laws, preventing the international rollout of the community.

3. Establish Support Processes Early

While having less formalized processes can be an advantage, because the absence of rigid processes makes an organization more flexible and responsive to change, the total absence of support processes can cause more harm than good. In implementing an online open innovation platform, managers must establish implementation and operational support processes early on, especially for processing feedback and ideas, to ensure timely engagement with contributors and timely implementation of valuable ideas. Developing an online open innovation community is an engagement-intensive process, and successful implementations demonstrate the community's value both to members of the organization and participants.

4. Prepare to Shift the Organizational Mindset

Managers might assume that providing a platform for their organization's customers and then listening to their conversations is sufficient. However, to obtain valuable contributions (or any contributions at all) and to benefit from them, organizations must ask questions themselves in the community and be willing to act on resulting contributions. A successful implementation of an online open innovation community therefore requires a shift in organizational mindset and careful training of employees in both engagement and information disclosure. This shift in mindset

18 For an illustration of the importance of "eureka" moments for open innovation implementations, see Nakagaki, P., Aber, J. and Fetterhoff, T. "The Challenges in Implementing Open Innovation in a Global Innovation-Driven Corporation," *Research-Technology Management* (55:4), 2012, pp. 32-38.

will ensure the organization appears active in, and attentive to, the community.

5. Get Ready to Adapt Your Current Innovation Approach

Making an online open innovation community work requires being prepared to change the organization's approach to innovation. It is tempting to assume that currently successful approaches to innovation will also work in an online community context, particularly if the organization already practices some form of open innovation. However, there is a difference between soliciting ideas through established relationships and soliciting them through anonymous online communities. The former may be working well, but the latter could require a shift from reactive innovation approaches, where customers come to the organization with their needs, to more proactive approaches, where the organization must first build relationships as the foundation for customer collaboration. This preparation is particularly important in the context of B2B platforms and highly secretive industries, as in the ElectriCo case.

6. Know Your Contributors

Contributors are key to the success of any online open innovation community, but the organization must know who they are and how they can be motivated. Actors, such as customers, who should be intrinsically motivated to participate in the community, might have reasons for not contributing. There might also be other, less obvious but still highly valuable contributors, such as retired engineers and young students, whose motivations may be completely different from those of the organization's customers.

Barriers to Successful Implementation of Online Innovation Communities in SMEs

While many findings on online open innovation communities appear to be applicable to both large and small organizations, the ElectriCo case suggests that some challenges may be unique to not-so-large organizations. Specifically, we found that IP protection is a major challenge for open innovation implementations in small and medium-sized enterprises (SMEs), because it influences the behavior both of the initiating organization and of potential partners. Formal IP protection mechanisms such as patents are costly and many SMEs switch to alternative mechanisms such as secrecy. In the case of ElectriCo, the fear of IP loss prevented management from actively engaging with contributors in the community by submitting their own suggestions or asking for solutions. Similarly, the fear of IP loss increased ElectriCo's SME customers' fears about contributing ideas or asking questions that could threaten their own IP. The fear of IP loss may not necessarily be a showstopper, but it may be a significant bottleneck when organizations rely on informal IP protection mechanisms and dedicate limited resources to IP enforcement.[19]

A second particularly challenging barrier for SMEs is sustained resource commitment. Creating and maintaining an active online community and dealing with downstream effects of these activities (e.g., legal aspects of submitted ideas) requires significant investment of resources. For ElectriCo, the investment that would have been needed to resolve a host of legal and regulatory issues posed too significant a barrier for management to sustain or extend its commitment to the online open innovation community. Although overcoming internal resource-related restrictions might be a major reason for organizations to implement online open innovation communities in the first place, resource restrictions can also constrain the implementation. This is particularly the case in SMEs, whose resource base is often constrained compared to large organizations.

A Framework for Assessing the Likely Success of an Online Open Innovation Community

Table 1 summarizes the challenges made apparent in the ElectriCo case and suggests checkpoints for managers who are considering implementing an online open innovation community. This table provides a framework that will help managers decide whether such a community will likely succeed or fail.

19 For an analysis of the effect of organizational size on open innovation-related IP protection, see Spithoven, A., Vanhaverbeke, W. and Roijakkers, N. "Open innovation practices in SMEs and large enterprises," *Small Business Economics* (41:3), 2012, pp. 537-562.

Table 1: Online Open Innovation Community Implementation Challenges and Checkpoints

Open Innovation Barrier	Potential Challenge	Checkpoint
Industry Context	Highly secretive customer processes	Are your customers open to sharing their knowledge in your community?
	Fear of idea theft	How intellectual property (IP)-focused is your industry sector?
	Customer perspective	Can you ask your customers for feedback so you can address their actual needs?
Legal Environment	Data protection regulations	Do data protection regulations allow you to store, transfer and process innovation information from both within and outside your organization?
	Corporate structure	Do your corporate structures provide a governance model for open innovation?
	Financial regulations	How can you provide incentives for participating in open innovation and for providing innovation ideas from outside the organization? Who will benefit financially from open innovation ideas?
Supportive Processes	Cycle times	Do you have defined response times to provide feedback to open innovation ideas from the online community?
	Idea management	Does your community implementation include processes to filter, evaluate, select and progress generated ideas?
	Proactive approach	Does the community allow for processes to encourage, foster and facilitate idea generation and participation in open innovation?
Innovation Mindset	Not-invented-here syndrome	Are you willing to accept ideas from the outside and work with them?
	Problem framing	Loosely or undefined problems might yield disruptive ideas. Are you ready to realize potentially disruptive ideas that might be difficult to implement?
	Information engagement	Are you willing to reveal your own information in the community to engage and retain contributors?
Commitment	Senior management involvement	Is senior management fully committed and visibly involved in the implementation of the community?
	Existing systems	Are you willing to alter existing organizational practices and technologies to support the implementation?
	Resources	Are sufficient people, money and time available to sustain implementation efforts over longer periods?
Participant Community	Selection of contributors	Do you know who you would like to have participating in your community? Could the community be tailored to different communities?
	Motivation of contributors	Do you know how you can motivate your target group to become active contributors?
	Community building	Will you be able to build a community by yourself or might it be better to use a specialized external service provider?

Concluding Comments

The lessons from the failure of ElectriCo to successfully implement an online open innovation community provide managers with a framework for evaluating whether such a community is an appropriate innovation strategy for their organizations and for identifying potential challenges before they arise. The lessons also, at least to some extent, apply to the implementation and execution of other approaches to innovation. Thus, our analysis and framework provide managers with the tools for assessing the challenges and checkpoints that relate to developing their organizations' innovation capabilities.

Appendix: Research Methodology

We followed an explorative and qualitative case study design. We conducted nine formal interviews with six informants from ElectriCo and enriched this data through review of 16 internal documents and 38 pages of publicly available information (such as background information about ElectriCo and its open innovation initiatives on its website and in public news sources). We also had several informal conversations with other informants.

All formal interviews took place with informants who were directly involved in ElectriCo's innovation initiatives and who spanned all levels of the organizational hierarchy. Interviewees included the chief innovation officer, two product managers, one innovation management advisor and two communication managers responsible for the technical implementation and marketing of the online open innovation community. Following extant case study guidelines,[20] we considered the interview data to be our primary source, which we triangulated[21] with data from documents and public information to obtain a rich understanding of the environment and unearth the factors that led to the failed implementation.

20 These guidelines are described in Myers, M. D. *Qualitative Research in Business and Management*, Sage Publications, 2008. For scientific articles regarding these guidelines, see Eisenhardt, K. M. "Building Theories from Case Study Research," *Academy of Management Review* (14:4), 1989, pp. 532-550; and Eisenhardt, K. M. and Graebner, M. E. "Theory Building from Cases: Opportunities and Challenges," *Academy of Management Journal* (50:1), 2007, pp. 25-32.

21 Triangulation is a technique that facilitates validation of data through cross verification from two or more sources.

About the Authors

Frederik von Briel

Frederik von Briel (frederik.vonbriel@qut.edu.au) is a Postdoctoral Research Fellow in the Queensland University of Technology (QUT) Business School. Most of his current research focuses on social aspects of digital innovation and entrepreneurship. Frederik has conducted research with both large and small organizations. Currently, he is responsible for the collaborative research program between QUT and Woolworths. He earned his Ph.D. from City University of Hong Kong. Prior to his academic career, he worked as a business intelligence consultant at Hewlett-Packard and as a customer relationship management specialist at IBM.

Jan Recker

Jan Recker (j.recker@qut.edu.au) is a Professor in the QUT Business School. His research focuses on digital innovation, process-oriented systems analysis and environmental sustainability. His research has been funded by Woolworths, SAP, Suncorp and Australian State and Federal Governments, among others. He has worked with several of Australia's largest organizations, including Woolworths, Australia Post, Inspirations Paint, IP Australia, Australian Federal Police, Suncorp and Ergon. His research has been published in *MIS Quarterly*, *Academy of Management Discoveries*, *Journal of the Association for Information Systems*, *Information Systems Journal* and others.