Abstract

Much is already known about why and what firms can gain from external crowdsourcing of ideation activities, whereas internal crowdsourcing where firms seek ideas for innovation among its employees has so far received less attention. The rationale for using external and internal crowds has thus been assumed to be the same, to collect a diversity and large number of ideas. This article pinpoints that the design principles known from the external crowdsourcing literature cannot simply be used for internal crowds. In fact, an attempt to do so entails a need for considering several trade-offs. Drawing on the extant theory and the knowledge that we have accumulated over the years from researching large firm’s use of IT-based ideation systems, we identify these trade-offs, propose several design decisions to consider, which are linked to the innovation ambition of a firm, and develop a model of employee engagement in internal crowdsourcing.
Unleashing the Power of Internal Crowds

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Abstract
Much is already known about why and what firms can gain from external crowdsourcing of ideation activities, whereas internal crowdsourcing where firms seek ideas for innovation among its employees has so far received less attention. The rationale for using external and internal crowds has thus been assumed to be the same, to collect a diversity and large number of ideas. This article pinpoints that the design principles known from the external crowdsourcing literature cannot simply be used for internal crowds. In fact, an attempt to do so entails a need for considering several trade-offs. Drawing on the extant theory and the knowledge that we have accumulated over the years from researching large firm’s use of IT-based ideation systems, we identify these trade-offs, propose several design decisions to consider, which are linked to the innovation ambition of a firm, and develop a model of employee engagement in internal crowdsourcing.

Keywords
Crowdsourcing, internal crowds, communities, innovation contests
1. INTRODUCTION

The firms that do best in managing new product development (NPD) activities towards successful innovation tend to communicate their innovation strategy across all the levels of the firm and seem more willing to continually experimenting with, e.g., new tools and techniques to support NPD (Barczak et al., 2009). The last decades, we have witnessed a number of examples of how firms are using external crowds in their innovation work in order to source knowledge and information from outside the organization (Howe, 2006). The rationale is to tap into brains outside of the own organization to contribute with for example ideas, insights and problems that can be potentially valuable for the organization. While we have learned a lot of how we can design and manage these external crowds in different ways for our innovation work (Kohler, 2015) and how we this way bring in input from external sources, we still have much to learn when it comes to how we utilize the very interesting potential in organizations’ own internal resources as crowds. The logic behind using internal or external crowds are the same, it stems from the potential to use the creativity from many (and often broad set of) sources for innovation. It is somewhat surprising that we extensively have focused on external crowds and left the internal crowds with far less attention. Not the least when we know that many ideas that are realized in innovations in organizations comes from the employees (Terwiesch and Ulrich, 2009), and that this is an available and own resource and that employees to a greater extent today would assume that they could contribute in this way if they would like to. In addition, while we tend to separate in external and internal activities and sources, many ideas also with external origins are transferred and further developed, embodied and communicated by employees in the organization.

There are a number of differences between internal and external crowds. One critical aspect that separates internal from external crowds is that internal crowds can be expected to know much more about the organization’s offering, line of business and strategy than external crowds may do (Malhotra et. al. 2017). Moreover, they are employed at the organization and are directly affected by changes and also by the organizations ability to survive. Consequently, (1) the internal crowd ought to have some insights for coming up with ideas due to their deep understanding of the context of the organization and their localized knowledge than those in an external crowd do not necessarily possess; and (2) the internal crowd ought to be motivated in a different way e.g. as they are part of developing the workplace, etc. Hence, the internal crowds have different characteristics and can potentially contribute in different ways than external crowds. Therefore, it is surprising that the design of internal crowdsourcing mechanisms primarily relies on principles used for designing external crowdsourcing like open software, idea contests etc (Schepers et al., 1999; Piller and Walcher, 2006; Terwiesch and Ulrich, 2009). The main tenant of this paper is that uncritical adoption of the design principles for external crowdsourcing on internal crowds does not ensure
well-functioning systems. This paper proposes that this adoption of design principles for external crowds leads to several inherent trade-offs once they are applied to internal crowdsourcing. The aim of the article is therefore to identify the main trade-offs relating to the design principles, to propose a number of design decisions, and to link these to the innovation ambition of a firm. In this way, the article provides a critical view on the simple adoption of design principles used for external crowdsourcing hampering the utilization of the full potential of internal crowdsourcing. We identify a set of fundamental design questions that guide the internal crowdsourcing efforts and their managerial implications, and finally, we develop a model of employee engagement in internal crowdsourcing.

The paper is primarily a theoretical essay, which uses the extant theory on crowdsourcing, open innovation, and management of these mechanisms for innovation to present the main findings. The authors have extensive experience in collaborating with a range of large companies relating to their implementation and management of platform-based ideation systems, however these are not presented as empirical evidence per se.

2. DEFINING INTERNAL CROWDSOURCING

The concept of open innovation has been extensively researched and discussed by innovation management practitioners. Crowdsourcing is one popular open innovation mechanism by which a firm can broadcast problems to a large, unknown group of people (“the crowd”). A recent review highlights the need for clear conceptualization as well as theorizing on crowdsourcing (Ghezzi et al., 2018; forthcoming). When using crowdsourcing, the expectation is that the firm will receive a set of creative solutions and innovative ideas promising high commercial attractiveness (Howe, 2006). The potential of crowdsourcing has been confirmed by numerous successful examples from practice, for instance the story of LEGO’s crowdsourcing. The Danish toy manufacturer has increased the number of product ideas and at the same time improved customer engagement by urging users to design a new product using the LEGO bricks, submit is, and then let other users vote. The idea getting the highest number of votes gets moved to production, and the idea creator is rewarded a 1% royalty on the net revenue1.

This example as well as others serve as inspiration to utilize the potential benefits by implanting a crowdsourcing model based on external crowds into large firms by utilizing the potential of the employee group at large for internal crowdsourcing. In this way, internal crowdsourcing seeks to channel the ideas and expertise of the company’s own employees based on a platform into the innovation funnel (Malhotra et. al. 2017: 73).

The fundamental rationale is that large organisations can envision and engage their group of employees as a crowd with its own right and benefits. At the surface, it is therefore reasonable to assume that the principles of external crowdsourcing can be used to design an internal

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1 [http://tweakyourbiz.com/marketing/2015/07/10/9-great-examples-crowdsourcing-age-empowered-consumers/]
crowdsourcing platform for ideas. The platform, i.e., the web-based idea management system, serves as technical and organizational infrastructure for managing and maintaining an emerging community of contributors (Blohm et. al., 2018:123). However, as this research will demonstrate, the adoption of the design principles for external crowdsourcing into internal crowdsourcing implies a number of hitherto unidentified managerial considerations and challenges.

A crowd can be organized in several ways. Most often the crowd is connected to the seeker (a firm issuing a call for proposals) through an IT-based platform owned by an intermediary (e.g. Atizo (CH), NineSigma (US), Innocentive (US) and similar platforms). The intermediary therefore facilitates a connection between a seeker firm and a crowd. The crowd may be entirely open so that everyone can sign up to solve problems or present ideas to open calls. In this way, the firm attempts at utilizing the law of large numbers as more people are expected to bring more ideas of a higher average value. More ideas are expected to also bring high quality ideas about (Fleming, 2007: 73). In this form, all individuals are welcome. But the crowd may also be selected by merits and form an expert crowd that can be used for more challenging tasks like research challenges or non-routine complex tasks (Ghezzi et. al., 2018).

Figure 1: Organizational mechanisms for involvement of actors towards innovation
Another fundamental aspect of a crowd is its search focus, which can be more or less bounded. With a completely open search focus, no boundaries are set up for the generation of ideas. This allows for the identification of ideas that are not related to present activities, and arguably includes also more radical and disruptive ideas. On the negative side, open search leads to the generation of many ideas of limited value, thereby also bringing about substantial costs for idea evaluation and selection. A more focused approach can limit these costs, but at the same time risks missing innovation opportunities that are not within the defined search focus. Taking both these aspects into consideration it is clear that different types of crowds can be distinguished (see Simula and Ahola, 2014). Apart from the overall distinction between internal and external crowdsourcing, one key difference is related to the direction of communication. Typically, members of a crowd contribute their ideas to a centralised hub. However, we can also see crowdsourcing approaches that include substantial direct communication between crowd members, resembling a community, as defined by Wenger (2001), in that members have shared objectives, are mutually engaged, and have a shared repertoire. Hence, there are different types of internal crowds and they arguably need to be designed and managed differently.

If we bring together the choice options of the two questions, we can outline a set of different combinations (see Figure 1). This article is concerned with the mechanisms in the grey shaded area – open ideation, campaigns and contests, and communities. These show e.g. that if the firm decides to include all employees and formulate an open call, then this is open ideation.

Important to remember is that an external crowd is organized through a digital platform where the crowd members can log on to get involved in the challenges, competition or open calls. But for the organization, an offline innovation process is already available, so when implementing an internal ideation system or crowdsourcing initiative the digital platform complements the existing processes. It is clear from the experiences of failed efforts from crowdsourcing that the lack of attention to the interaction between the systems and the employees’ choices between the offline and online systems may be partly responsible for lack of success.

What is further important to highlight from the figure is that the potential outcomes to be achieved matching the ambition are closely related to the design decisions. So, the more open the call and the more employees that are involved, the more likely it is that the outcomes of the processes can be characterized as improvements or more incremental innovation even though many are involved. These relationships between the mechanisms and the innovation ambition are developed further below.

3. DESIGN PRINCIPLES FOR CROWDSOURCING

Compared to using internal resources alone for ideation, the benefits of using external crowdsourcing is frequently argued to lead to many and more novel ideas (Pisano, 2015) and to provide cost advantages (Afuah and Tucci, 2012; Boudreau and Lakhani, 2013); primarily because
crowdsourcing draws on external resources that are available at low cost or for free. However, having a large number of ideas easily encumbers the organization as they must be sorted and evaluated before further development can take place (ibid.). Verganti (2016) forcefully argues that the world is overcrowded with ideas, and that we should refocus on meaning as an innovation outcome.

A wide range of considerations and elements describe the decisions for designing an external crowdsourcing solution. Levine & Prietula (2014: table 1, p. 1416) have most prominently presented four design elements:

1. Create goods of economic value.
2. Open access to contribute and consume.
3. Interaction and exchange is central.
4. Participants’ labor purposefully yet loosely coordinated.

The main premise for any crowdsourcing initiative is to innovate by creating processes and goods of economic value. By including the voice of the customer (Griffin & Hauser, 1993), engage with external knowledge sources (Laursen & Salter, 2006; Knudsen, 2007), and here crowds, the firm can collect valuable input for future products, which may substantiate economic performance. Second, in crowdsourcing anyone can contribute and everyone is invited to contribute, but with transparency on the platform, anyone in the crowd is also able to consume that is enjoy the ideas and contributions of other crowd members irrespectively of their own contributions. This leads to the third and fundamental principle of collaboration underlying the rationale for building a platform and engaging, namely that participants interact and exchange ideas, comments and through this interaction improve the contributions. Finally, the participants of an external crowd all have their own goals and motivations (Blohm et. al., 2018), and any coordination of actions and implicit hierarchy is emerging from the behavior of the crowd. Although the behavior of a crowd is generally associated with positive expectations of collaboration, Faullant and Dolfus (2017) identify the potential dark sides of the participants motivations to engage as destructive social interactions ranging from negative feedback, over having ideas “bashed” to actual bullying.

Although the principles of Levine and Prietula (2014) are clearly presented, the single principle in some cases capture more than one design option, e.g. interaction and exchange (op cit., 3). By adding literature primarily Malhotra et. al. (2017), Simula and Ahola (2014), and Blohm et. al. (2018), we unfold the design principles and discuss how these relate to internal crowdsourcing (see table 1 for the translation of the principles). These are not presented further at this stage, but are discussed in section 5.
Table 1: Explication of the design principles and their “twin” in internal crowdsourcing

<table>
<thead>
<tr>
<th>Design principle</th>
<th>External Crowdsourcing</th>
<th>Internal Crowdsourcing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusiveness</strong></td>
<td>1. Everyone is invited - barriers to participation is low</td>
<td>Managers may choose to involve everyone – or only some employee groups.</td>
</tr>
<tr>
<td></td>
<td>2. Resources are freely available</td>
<td>Resources are not for free – there are direct costs of using employee time for crowd efforts.</td>
</tr>
<tr>
<td><strong>Interaction &amp; Involvement</strong></td>
<td>1. Participants have access to, can use knowledge, and put ideas in the crowd – interaction can take place</td>
<td>Organizations want to facilitate interaction and collaboration – and this may be a useful tool to accomplish this.</td>
</tr>
<tr>
<td></td>
<td>2. No explicit expectations of involvement, but welcomed. Voluntary participation – maybe even accidental.</td>
<td>Investment in system is a signal by management that there is focus on ideation and innovation by the firm.</td>
</tr>
<tr>
<td></td>
<td>3. Only online involvement possible, offered only via digital platform.</td>
<td>Online as well as offline involvement possible. These activities are not necessarily connected. Constitutes a hybrid form with co-existing processes.</td>
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<tr>
<td></td>
<td>4. In OSS, the crowd can see everything, in other CS activities there is normally no or limited transparency</td>
<td>Transparency is the rule, and allows for improvement of ideas through collaboration.</td>
</tr>
<tr>
<td><strong>Informality</strong></td>
<td>1. Self-organising as the primary means of coordination</td>
<td>The hierarchy is explicitly visible: certain roles are assigned often to experts or managers e.g. ideation manager and the resources follow the hierarchical structure.</td>
</tr>
<tr>
<td></td>
<td>2. No specific requirements to enter the crowd</td>
<td>The employees are selected for their job based on competence and merits. We are all professionals.</td>
</tr>
<tr>
<td></td>
<td>3. Individual profile is needed, no formal governance in the crowd. Moderator may be available.</td>
<td>The hierarchy is recognizable in the system: recognition of people through their job description and their role in the organization</td>
</tr>
<tr>
<td><strong>Intention</strong></td>
<td>Scope is defined ex ante as either focused or open.</td>
<td>The same: the scope can be focused or open.</td>
</tr>
<tr>
<td><strong>Intensity</strong></td>
<td>The innovative opportunity is offered for a fixed period</td>
<td>The innovative opportunity will either be for a fixed term or open-ended effort.</td>
</tr>
<tr>
<td><strong>“Intelligence”/Competence</strong></td>
<td>All members are “experts” – high competence expected.</td>
<td>If all employees are invited – it can be assumed that there is a large diversity of competencies (from secretaries to highly skilled engineers) – all the way to subject matter experts.</td>
</tr>
<tr>
<td><strong>Incentives</strong></td>
<td>1. Creating attention and reputation based on individual contribution</td>
<td>The pre-established team (offline) efforts co-exist with new online opportunities. The recognition of teams may collide with individual focused recognition (winning a competition).</td>
</tr>
<tr>
<td></td>
<td>2. Monetary rewards</td>
<td>As the individual is already employed by the organization, a monetary reward may create unintended negative dynamics. Only small rewards. The management must design rewards that ensure a balanced contribution between existing and new tasks.</td>
</tr>
</tbody>
</table>

4. KEY MANAGERIAL QUESTIONS

Unfortunately, many firms adopt new innovation tools and approaches without considering the deeper consequences of integrating them into their existing processes or how well they fit the
specific innovation needs of the firm (Pisano, 2015). Therefore, before implementing and using internal crowdsourcing or any other means aimed at boosting innovation, we should first ask ourselves what innovation needs and ambitions our organization has. Clearly, firms have different innovation needs and, since innovation does not come for free, it obviously conditions what innovation efforts can be pursued. Therefore, firms should consider what kind of innovation efforts will be more likely to deliver the innovation it is looking for.

What are the Innovation Needs?
Factors such as industry characteristics and threats and opportunities in the macro environment (Pisano, 2015), but also the development stage of the firm or the firm’s desire to concentrate on a core competency (Chiu et al., 2014) may influence the choices regarding what level and type of innovation to pursue. Thus, firms have different innovation needs, but when implementing an internal ideation system, it is important not to see it as a comprehensive solution that should resolve all the firm’s innovation needs. Rather, the key is to understand for what innovation needs it can be fruitfully used, and how it should be combined with other parts of the organization’s innovation activities. An important aspect of this is how to combine online and offline innovation spaces, which are not necessarily integrated or coordinated.

The preference for the internal approach over external crowdsourcing is understandable. Apart from avoiding apparent issues related to intellectual property, we see that internal ideation systems do much more. On the one hand, the immediate expectation is that new ideas potentially can lead to innovation. So, with more ideas, we can also get more innovation out of corporate efforts. One may think that this would speak in favor of external crowdsourcing, as this can generate even more ideas. What is forgotten here is that firms do not really need many ideas. Actually, many firms are overcrowded with ideas (Verganti, 2016), and most of these ideas cannot and should not be realized. What firms really need is a sufficient number of really good ideas, and extant research has shown that ideas from employees in many ways are superior to ideas from external sources as they tend to be more relevant and easier to implement (Menon, 2003). This may be seen as positive, but if a firm is looking for radically new and different ideas it may instead be better to rely on externally derived ideas (Boudreau and Lakhani, 2013; Poetz and Schreier, 2012). However, since the vast majority of profits are in fact created based on incrementally new ideas (Pisano, 2015), going for radically new ideas may not be needed. Hence, an important aspect of defining the innovation need is to decide what level of innovation is desired. Depending on industry and strategic focus, firms have different needs in terms of the degree or amplitude of innovation, for instance in terms of core- adjacent-, and transformational innovation (Nagji and Tuff, 2012), and these pose different organizational requirements. Another consideration is what type of innovation is sought after, in terms of, e.g., product innovation, process innovation, service innovation, business model innovation, etc. (Doblin, 2015).

What is the Innovation Ambition?
Pointing out the overall innovation ambition is normally useful in order both to safeguard sufficient resources for innovation and to direct innovation activities towards specific long-term and short-
term needs (Pisano, 2015). The process of defining the innovation strategy enables the firm to consider potential trade-offs and choose the elements of its innovation system (ibid.). And this process includes considerations of what level and types of innovation to pursue and what resources each of these should receive. When a firm has a clear picture of what their innovation ambition actually is, it is possible to understand what use they can make of an internal ideation system, allowing them, e.g., to deploy internal crowdsourcing and what other innovation activities are needed.

Depending on the innovation ambition, a firm can strive after either direct or indirect effects of implementing an internal crowdsourcing system. The firm can seek to get a lot of ideas to choose from by tapping into its employees’ creative heads, or it can pursue a more indirect effect such as an improved innovation culture within the firm (Simula and Vuori, 2012). In order to get as much as possible out of internal crowdsourcing, it is important not to focus too narrowly on the innovation output, but to consider other important effects of innovation activities. An indirect ambition of the firm may therefore be to engage more employees and potentially motivate them to contribute to the innovation goals. This may contribute to improved innovation results, but also to increased motivation and employee satisfaction (Amabile, 1997). By implementing an internal ideation system, management can invite more employees to engage than in the traditional innovation processes, and at the same time refrain from handing out stimulating innovation tasks to people outside the company and thereby leave employees with less exciting and less challenging tasks.

**Deciding the Set-up of the Internal Crowdsourcing System**

Despite the potential benefits that can be reaped by internal crowdsourcing, we can at the same time conclude that many firms do not get the desired results and instead reduce or abandon their crowdsourcing efforts over time. This may be due to unrealistic expectations, but more frequently this is likely to be the result of improper utilization based on a flawed understanding of how such an innovation tool can be purposefully used.

In the following, the key questions that we propose to guide management in setting up an internal crowdsourcing system are outlined. As will be clear, the management decisions also have implications for the employees’ behavior. Therefore, these behavioral considerations of the employees are also outlined. Table 2 illustrates three key design questions, and four employee-related considerations. These are discussed in detail in the following section.
Table 2: Decisive questions for setting up an internal crowdsourcing system

<table>
<thead>
<tr>
<th>Questions</th>
<th>Formulation</th>
<th>Dimensions</th>
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<tbody>
<tr>
<td>Management decisions</td>
<td></td>
<td></td>
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<tr>
<td>Question 1</td>
<td>Do I ask for it – focus areas or anything goes including going to the moon?</td>
<td>Open or bounded</td>
</tr>
<tr>
<td>Question 2</td>
<td>Who should be engaged – everyone or a select (few)?</td>
<td>All or some employees</td>
</tr>
<tr>
<td>Question 3</td>
<td>How should it be organized – self-organizing or with managerial support?</td>
<td>Self-organizing or management</td>
</tr>
<tr>
<td>Employee behavioral considerations – on decision to implement internal crowdsourcing solution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question 4</td>
<td>Can you see me?</td>
<td>Public profile or anonymity</td>
</tr>
<tr>
<td>Question 5</td>
<td>Do I get paid?</td>
<td>Part of daily duties or monetary (substantial) rewards</td>
</tr>
<tr>
<td>Question 6</td>
<td>How long is it going to take?</td>
<td>Campaign with fixed deadline or continuous effort</td>
</tr>
<tr>
<td>Question 7</td>
<td>How do I ensure time for creativity?</td>
<td>Extra tasks or organizational slack</td>
</tr>
</tbody>
</table>

**Question 1: Do I ask for it – focus areas or anything goes including going to the moon?**

A key question in the use of internal crowdsourcing is what contributions from the crowd, the company is actually looking for; problems, solutions, or ideas? An instrumental way of approaching ideas is that they fundamentally consist of a problem and a possible solution to this problem.

Open and unbounded ideation allows for a wide variety of ideas with different foci and potentially different perceived values. The systems focus on collecting ideas, which implies that they handle an uncontrolled mix of problems and solutions, or perhaps just vague conceptions. It may easily be assumed that these are of low (if any) value as they often have limited if any practical application. Further, a lack of focus in the search for new ideas may lead to high costs for evaluating and selecting ideas, as there is no filter blocking the submission of ideas, and the vast majority of these numerous ideas may actually be found to be of little or no value. The single idea may lack feasibility and viability and “drowns” among the many other contributions. Hence, a simple stacking of ideas will lead to overload of the organization, require extensive processes to handle the ideas, and most likely result in limited attention towards the single idea. For the idea creator, this will have the consequence that he becomes less motivated to continue contributing with new submissions.

Although a completely open search space creates room for very diverse ideas, there is a risk that employees implicitly constrain their search space towards minor daily issues such as experienced problematic processes and procedures of low innovative value. In sum, there is a potential trade-off between openness of the search space and full autonomy to explore and the outcomes becoming of insignificant importance to the organization. To benefit from open search spaces, the organization...
must find alternative paths to motivate the employees to search for more radical ideas and potential disruptions. The employees may be positively motivated by the fact that they are encouraged and supported in pursuing open ideation. Especially, the more creative employees may flourish in such an environment. For the less engaged and innovative employees, the lack of recognition and direction may be demotivating and restrain them from participating.

Instead of using open ideation to ask for ideas, it can be more suitable for management to ask only for solutions to clearly defined problems, i.e. by setting a strategic focus. Broadcast search represents the situation where the firm calls for specific solutions based on a problem formulation or by formulating a specific focus (Blohm et al. 2018). This approach is often used in external crowdsourcing, where companies like Innocentive and NineSigma are successful examples of this approach. In internal crowdsourcing, the focused problem-based ideation is used more frequently in innovation contests, campaigns, and jams. The risk of this approach is that its success depends on the management’s ability to formulate the correct problems. Very specific problems may lead to overly narrow search, risking that the results become less radical or disruptive. Relying on employees to define the problems to address does not necessarily bring about radical innovative outcomes either, as these also tend to be biased towards the incremental side. Another issue when having employees provide and comment upon ideas is that this commenting may lead to a continuous reformulation of the problems that are addressed, in this way creating a moving target. In the end, this leads to long lead times, if the iterations of problems and solutions ever converge in a final idea. An apparent risk of targeting only explicit focus areas is that the organization misses out on innovation opportunities that could have been identified based on the vast knowledge base of all employees, and then in particular ideas for disruptive- and breakthrough innovation.

Although the concept of idea search without boundaries (open ideation) may appear to be appealing at a first glance, previous research has shown that constraint-driven creativity is better than unbounded search for ideas. Research has shown that it typically requires a decade of experience for an individual to become valuable creative within a field (Weisberg, 1999). In this way, even though Malhotra et. al. (2017) stress the value of employees knowing the context, when arguing for internal crowdsourcing over external crowdsourcing, it takes time to know the search space, to be able to identify and unleash the relevant knowledge and thereby provide better ideas. This is also one of the reasons why firm-internal ideas have been found to be more valuable and easier to implement than ideas from external sources (Poetz and Schreier, 2012).

With explicit focus areas for ideas it is easier to identify and appoint suitable idea receivers in the organization that will give the ideas the necessary attention – and it is easier to ensure that resources invested in ideation really support the innovation strategy. Hence, care needs to be taken in framing the idea needs or the “demand for ideas”, so that ideas provided have a higher probability of being relevant, being examined further, and turning out to be valuable. As the previous discussion has shown, there is no right answer to the question, rather it depends on the innovation ambition of the firm.
Question 2: Who should be engaged – everyone or a select (few)?

The principles of external crowdsourcing highlight the importance of inclusiveness. Everyone is invited and in most cases barriers to participation are low. This implies that individuals, interested in joining a crowd, can do so at low cost and almost immediately partake in problem solving and ideation processes offered. In the case of internal crowdsourcing, Simula & Ahola (2014: 402) argue that there is no selection mechanism and everyone is invited. We argue that managers do face a choice between inviting everyone and only involving some employees (groups or individuals). This decision is parallel to the offline decisions: do managers establish teams (a few participants) or do they involve a larger group in any given project? Returning to figure 1, inviting only a few and with an open ideation space allows for e.g. skunk work (Gwynne, 1997), but if everyone is invited, the model is open ideation.

The rationale for inviting everyone is mainly dominated by the law of big numbers. If management invites everyone, more ideas will be generated and potentially, breakthrough ideas can be identified in the “idea stack”. So, the law of big numbers supports the fundamental idea that “many brains are better than a few” resulting in more innovation ideas to choose from. This runs parallel to the argument for open innovation that more people are available outside and organization and that these potentially can substantiate and improve the innovation efforts of an organization (Chesbrough, 2003). According to Fleming (2007: 69, 70), all inventions constitute a highly skewed distribution with a long tail. This distribution shows that almost all inventions are useless, a few are of moderate value; and only very, very few are breakthroughs (p. 69). Hence, following the law of big numbers may ensure breakthrough ideas, but these will be increasingly difficult to identify because of the sheer number of ideas to go through. Over time, the system can even, if ideas are just “stacked”, flow over with useless ideas, and most likely hide the rare and valuable ones.

A second argument for involving everyone is that with an increased number of employees in the internal crowd, more are available to provide feedback and to comment on each other’s ideas. A benefit of a big crowd is therefore that contributors can directly build on the ideas of others as the contributions are visible to all members, which can create a lively and active cooperative collective stimulating multiple interactions. The argument for facilitating crowdsourcing on platforms is that with a high number of employees available to provide feedback, the employees will increasingly collaborate around ideation, and the feedback quality will increase. This argument rests on the conceptualization of network effects and is the additional value derived from being able to interact with others in the system. Liebowitz and Margolis (1995) labelled this the synchronization value. The potential gains from involving many in the crowd are therefore both direct interaction and collaboration, and the network effect.

While the possible network effects of a large crowd are attractive, the community paradox also informs us that there is an optimal size to a crowd (West and Gallagher, 2006). The optimal size is reached, where the community is large enough to bring variety and inspiration to all members, but also not larger than a size where the group members feel that the community is cohesive and is
working jointly towards common goals or visions. As a result, the good community size supports learning among the group members, as the group members are more prone to help others when they perceive themselves as being part of the same community, at the same time as they are exposed to requisite variety and comfort in the group. Where this optimal size of a community is found, when the community is settled in a context of an organization with a shared identity, cannot be precisely determined in advance, as it depends on the specific activities and knowledge sets. However, it is reasonable to assume in the context of large companies that inviting everyone in the organization is more likely to result in experiences of the community paradox.

Also, the mere cost of inviting everyone speaks in favor of a bounded solution. If all employees spend 5 or 10% of their time, this will for a large firm amount to significant resources. If the organization is characterized by having sufficient resources and has secured organizational slack, then these resources may benefit the innovative efforts substantially. Organizational slack consists of resources available to the firm above-and-beyond those necessary to meet immediate business requirements, fund ongoing programs, or meet explicit objectives (Herold et al., 2006: 373). Herold et al. (2006: 373) argue that slack resources will allow the organization to bear the cost of developing and implementing innovations, and explore ideas in advance of an actual need. The managerial decision to involve all or a few may therefore be moderated by the extent of slack resources.

One advantage of involving a limited set of employees is that they easily get well-connected and therefore potentially may learn faster and respond in a more agile fashion to new insights. A tight project team will over time tend to develop group think and may potentially also exhibit not invented here (Burcharth et. al., 2014) as the group becomes more reluctant to accept outside ideas or technologies. Equally, there are across all involved employees fewer possible collaborative ties and hence lower knowledge complementarity. Since knowledge complementarity or diversity stimulates more novel combinations, the organization may experience fewer breakthrough ideas (Fleming, 2007). Further, just as a large crowd may supply many ideas, a smaller group will most likely deliver fewer ideas – and the organization may miss out on the most diverse and (potentially) valuable ones. A final downside is the cognitive response of the excluded individuals, as they may perceive themselves or the rest of the organization may perceive them as less valuable to the organization. Such responses, potentially cause envy, can hamper their motivation to be creative in other settings, and may even negatively influence the innovative culture of the entire organization. So, the decision comes down to the question, is innovation the responsibility of everyone or just some? And if it is the result of everyone, how do we avoid that it turns into nobody’s responsibility.

Taken together, questions 1 and 2 jointly provide useful input for the design of internal crowdsourcing systems by highlighting two main trade-offs. On the one hand, managers must decide upon the inclusion or exclusion of employees, balancing the striving for maximum creative potential with the cohesion, reciprocity. On the other hand, the openness of the search for ideas needs to be framed in a suitable way, depending on the innovation ambition that is attempted. Reluctance to explicitly make these critical design decisions risks resulting in a system that is not
well-aligned with the specific ideation needs of the organization in question, and in the end leads to poor performance in terms of resulting innovation.

**Question 3: How should it be organized – self-organizing or with managerial support?**

A requirement for self-organizing as a model is that employees have shared objectives and goals as we otherwise impose risk, create redundancy in ideas, and leave opportunities for exploiting complementarities unidentified. Self-organizing can also have positive effects on motivation, as it allows employees to work on ideas that they find intriguing and stimulating. Moreover, self-organizing allows for greater experimentation and as a consequence holds a potential to generate single ideas of high value.

On the negative side of self-organizing we find a risk of redundant work, time-consuming inefficiencies as it may be difficult to establish and follow clear processes, but also a possible lack of alignment with the overall strategy. Consequently, self-organizing may actually be overly costly and may run larger risks of not resulting in valuable output.

A positive feature of using self-organizing for internal crowdsourcing is also that it offers opportunities for individuals who are not necessarily seen as central to innovation to contribute actively with their ideas. The implementation of a self-organized crowdsourcing system makes it possible to disregard geographical distances and hierarchical positions, allowing creative employees from the periphery to work closer towards the core, offering both an increased wealth of ideas and an opportunity for skilled employees to be seen and acknowledged for their contributions to innovation.

A fundamental prerequisite for self-organizing is autonomy (Nonaka, 1994). Hence, in order to rely on such an approach for internal crowdsourcing, individuals must have the possibility to freely allocate time to crowdsourcing activities. This is of valid also for external crowds, but is complicated in a firm-internal setting by the fact that individuals have other tasks competing for attention and time. In particular, if idea generation and development are seen as activities that are added on top of other tasks this may cause difficulties to find the necessary time to engage in creative efforts.

Another potential complication in the firm-internal setting is that there are already existing hierarchies that cannot be disregarded. In contrast to external crowds, there is both an explicit hierarchy in firms, as certain roles are assigned to e.g. formal experts and managers, and an implicit hierarchy, stemming from the recognition of people through their public profile and role in the online ideation efforts. These hierarchies cannot simply be disregarded, but need to be accounted for in the design of the system, as they are likely to condition how employees will behave also as members of a crowd. This does by no means reduce the potential value of using internal crowdsourcing, as there are often clear benefits from creating a space of less hierarchy for creative efforts. At the same time, it is apparent that there are also potential benefits to the hierarchy in
intervening on the system in terms of explicating search foci, stimulating interaction, ensuring legitimacy and involving people with power and resources to support the idea to ensure progress. At the same time, managerial intervention may reduce the creativity in the system and stifle efforts as managers intervene.

5. CREATING THE CONDITIONS FOR THE EMPLOYEES TO PARTICIPATE

The previous section has pointed to a set of necessary managerial questions to reflect upon when considering the implementation of an internal crowdsourcing system. But the discussion of the three first questions have also clearly highlighted the underlying maelstrom of employee considerations. Hence, the managerial decisions are important, but the main tenant and contribution of this paper is that if the employees are not given the suitable conditions, they will not contribute. This may seem contradictory to the fact that all employees are bounded by their employment contract and therefore assumed to follow the logic and decisions of management. This article argues that internal crowdsourcing is not composed, motivated, and selected in a similar way as the external crowd. We therefore need to reconsider the fundamental design principles of crowdsourcing (see Table 2) and reassess the design principles from the perspective of the employee. We question: how do the design choices underlying the system influence the employees – and how can the organization ensure the conditions that facilitate employee engagement?

Table 3 clearly highlight the challenge for the employee when facing an initiative like a crowdsourcing effort. For inclusiveness, as discussed with external crowds, everyone is invited, but as no one can decide for you as an individual, you decide if you want to take up the invitation and become member of a crowd. It is a simple decision; do I feel motivated and interested in this type of problems proposed and solved on this platform? However, for an internal crowdsourcing initiative, management can decide, and in principle the level of motivation for the employee may be very low. Similarly, as illustrated with the other design principles, there may be both pros and cons for the individual employee, which depends on his or her motivation, perceived competence, actual ability, and perception of individual risk (see Figure 2 later for a summary) to engage. These considerations are discussed in the following four questions (see table 2 for the overview of questions). We argue that these four questions of employees’ engagement in internal crowdsourcing have thus far not been realized in the literature, but constitute potential “make or break” for the management’s initiative.

In brief, we argue that three main conditions are necessary to consider:

- Empowering employees to engage.
- Creating incentives.
- Ensuring time for creativity (following Amabile, 1997).
### Table 3: From external crowds to internal crowds – the employee perspective

<table>
<thead>
<tr>
<th>Design principle</th>
<th>External Crowd</th>
<th>Management perspective</th>
<th>Internal Crowd</th>
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<tbody>
<tr>
<td><strong>Inclusiveness</strong></td>
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<tr>
<td>1. Everyone is invited - barriers to participation is low</td>
<td>Managers may choose to involve everyone – or only some employee groups.</td>
<td>As employees are bound by their work description – being included in a crowd effort may not be motivating for all employees.</td>
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<tr>
<td>2. Resources are freely available</td>
<td>Resources are not for free – there are direct cost of using employee time for crowd efforts.</td>
<td>There are alternative costs associated with becoming involved in crowd efforts – especially if innovation tasks were not part of the job description before - as other tasks may suffer from less attention and time.</td>
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<tr>
<td><strong>Interaction &amp; Involvement</strong></td>
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<tr>
<td>1. Participants have access to, can use knowledge, and put ideas in the crowd – interaction can take place</td>
<td>Organizations want to facilitate interaction and collaboration – and this may be a useful tool to accomplish this.</td>
<td>When employees bring comments or suggestions to the system – they may fear appearing incompetent, because the system is designed for transparency.</td>
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<td>2. No explicit expectations of involvement, but welcomed. Voluntary participation – maybe even accidental</td>
<td>Investment in system is a signal by management that there is focus on ideation and innovation by the firm.</td>
<td>Expectations: Employees have an implicit contract with the organization that they actively work on accomplishing company goals and strategies.</td>
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<td>3. Only online involvement possible</td>
<td>Online as well as offline involvement possible. These activities are not necessarily connected.</td>
<td>Employees get more options to engage with others, but these options may be navigated strategically by them.</td>
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<td>4. In OSS, the crowd can see everything, in other CS activities there is normally no transparency</td>
<td>Transparency is the rule, and allows for improvement of ideas through collaboration.</td>
<td>Increases the visibility of the individual’s innovation efforts and capabilities (or not). This has motivational implications – some employees will thrive while others will resist engagement.</td>
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<tr>
<td><strong>Informality</strong></td>
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<tr>
<td>1. Self-organising as the primary means of coordination</td>
<td>The hierarchy is explicitly visible: certain roles are assigned often to experts or managers e.g. box manager and the resources follow the hierarchical structure</td>
<td>Employees may decide to select into the system – and engage with other employees independently of organizational structures and processes.</td>
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<tr>
<td>2. No specific requirements to enter the crowd</td>
<td>The employees are selected for their job based on competence and merits. We are all professionals.</td>
<td>Not all employees will feel competent to take on the tasks of bringing innovative efforts and ideas forward. They may self-select out of the activities.</td>
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<tr>
<td>3. Individual profile is needed, no formal governance in the crowd</td>
<td>The hierarchy is implicitly recognizable: recognition of people through their job description and their role in the organization</td>
<td>Following from the previous – if the profile is visible: the feeling of competence or incompetence becomes important for motivation to engage. The manager can see the specific input – when moving from offline team efforts to individual online efforts.</td>
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<tr>
<td>Intention</td>
<td>Scope is defined ex ante as either focused or open.</td>
<td>The same: the scope can be focused or open</td>
<td>The employee will have to more proactive in the open call, whereas the focused call is more directed and the employee can wait and be more reactive in the engagement.</td>
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<td>Intensity</td>
<td>The innovative opportunity is offered for a fixed period</td>
<td>The innovative opportunity will either be for a fixed term or open-ended effort</td>
<td>In open-ended efforts, the employees may over time experience innovation fatigue and invest less time and effort into ideation. Employees can contribute when they have time or experience problems in the organization. Whereas in the fixed term efforts, more focus can be given – if the effort is announced clearly to the organization. However, the employee may be occupied by other tasks and therefore not contribute potentially decisive input to the call.</td>
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<td>Intelligence/Competence</td>
<td>All members are “experts” – high competence expected.</td>
<td>If all members are invited – it must be assumed that there is a large diversity of competencies (from secretaries to highly skilled engineers) – all the way to subject matter experts.</td>
<td>If all are invited, the low skilled or low experience employees may be less inclined to engage. The high skilled may feel it less stimulating to potentially work with low skilled employees. They may expect that input from other employee groups is of low value because of their lack of subject-matter expertise.</td>
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<tr>
<td>Incentives</td>
<td>1. Creating attention and reputation of individual contribution</td>
<td>The pre-established team offline efforts may collide with new individual focused recognition.</td>
<td>The innovative efforts are typically delivered as a team effort – now the individual stands to gain through own submissions.</td>
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<td></td>
<td>2. Monetary rewards</td>
<td>As the individual is already employed by the organization, a monetary reward may create unintended negative dynamics. Only small rewards. The management must design rewards that ensure a balanced contribution between existing and new tasks.</td>
<td>The individual may lose motivation for daily tasks if they are potentially rewarded for new tasks. The employee may limit knowledge sharing with others to protect his own contribution and potential reward from the creative effort.</td>
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**Question 4: Can you see me – public profile or anonymity?**

This question is related to the fear of appearing incompetent when each comment and contribution can be directly linked to the employee’s public profile. An employee may hold back on potential contributions because of lack of insight into the innovation needs of the organization and ability to assess the quality of one’s own ideas. Anonymity, on the other hand, allows individuals to interact with others without risk of appearing incompetent or uninformed, and may thus facilitate active engagement in innovation (Malhotra et al., 2017). The use of a public profile may allow other contributors to assess the quality of the comments or ideas based on the perceived competence of the originator. However, this may also be biased based on previous achievements (shadow of the past) rather than a real assessment of the quality of the idea itself, and may also lead to a reluctance to question ideas and comments put forward by perceived experts. Anonymity may thus be favorable in organizations that are characterized by strong experts acting as opinion makers across the organization, as their actions may diminish the motivation of other employee groups to engage.

If anonymity is preferred to public profiles this will ensure an unbiased approach to each idea – since no one can see the originator of the idea. On the other hand, anonymity opens up for troll behavior and unethical comments. It may also deter some employees from engaging since they can expect no personal benefits from engaging (and may therefore prefer to focus on other tasks). In fact, employees may be more careful in their engagement behavior since they impose self-restrictions in delivering good quality comments and ideas. Later, they may anticipate workplace benefits like recognition, promotion, and advancement, potentially increasing motivation. In geographically distributed organizations, activity in internal crowdsourcing also offers signaling opportunities for employees at the periphery. By providing valuable ideas and feedback in a transparent system they increase their possibilities to be observed by management and can thus benefit from this recognition.

**Question 5: Do I get paid – part of daily duties or offer (substantial) rewards?**

If innovation is part of daily duties, we can conclude that the innovation intention is to include everyone and it is everyone’s responsibility. Hence, as part of the daily duties, the organization expect the single employee to prioritize innovation and commit. At the organizational level, resource slack should be ensured to create room for creativity across all employee groups. Therefore, the single employee should – all things equal – be relieved of duties to avoid stress, loss of attention and overload to maintain creative abilities. As part of employees’ duties, innovation is also more likely to be included in performance measurement. KPIs for ideation has the positive effect of making the need for innovation explicit and thus easier to attend to, but may also have negative effects in terms of inducing employees to generate many ideas and comments for the mere sake of fulfilling their individual goals, potentially resulting in lower quality.

Providing rewards for specific creative efforts indicates that these efforts are NOT part of the work, but something extra. Rewards will – all things equal – increase the probability that the employee will pay attention to the tasks and it will substantiate
extrinsic motivation. At the organizational level, offering rewards will allow the decision makers to prioritize very specific directions of efforts. A parallel can be made to companies that offer rewards to blue collar workers for offering improvement suggestions and not to innovation workers (as they are already paid to do that specific type of work). Hence, we can imagine a substitution effect when introducing new tasks in the organization. The design of the reward program is important – as there are specific downsides to each form – e.g. a one-off campaign with a reward may stimulate much creative effort of very low value (if the campaign asks for specific solutions). There are also negative motivation aspects: for each campaign there will be winners, but many more whose ideas were discarded and as a result may be less interested in proposing ideas in the future. If campaigns are run several times, there may also be fatigue of innovation.

Moreover, it is important to consider what different creative behaviors are desired – do we reward only idea generation or also the implementation and development of these ideas? A second consideration is concerned with who can achieve rewards. In external crowds there is a tradition of rewarding individuals, and then in particular idea generators. If individuals are rewarded in internal crowdsourcing, at least two consequences may be observed, 1) there will be fewer winners, and 2) the organization will deviate from project- and team-oriented ways of working towards a more individualized mode, which may result in less collaboration, openness and knowledge sharing. The challenge in rewarding team efforts is to ensure that all reward winners have in fact contributed. One recently proposed means to handle this issue is to reward both idea providers and other types of important contributions, e.g. providing feedback and help to colleagues (Malhotra and Majchrzak, 2014; Blohm et al., 2018).

Clearly, there is a difference between small rewards of insignificant magnitude (like a medal or a cake coupon) and a significant reward (large monetary sum). In extreme cases, employees may even wait for appropriate campaigns to increase the likelihood of achieving a reward rather than engaging in collaboration and knowledge sharing, something which of course could stall idea development over time. With substantial rewards, employees would expectedly spend more time on ideation rather than other things, to increase the likelihood of achieving the award. Hence, the more the organization involves the employees, and the higher the prize, the costlier the endeavor as a whole becomes. But it is also related to employee (mental or realized) overload. Additional tasks may cause delays in daily operations as well as in realization of ideas.

**Question 6: How long is it going to take – campaigns with fixed deadline or continuous effort?**

Another key issue is whether ideation activities should be a continuous effort or time-limited actions with fixed deadlines. Both approaches have their advantages and disadvantages.
Campanelli of fixed duration impose attention on the specific task or priority, which has been shown to be positive for creative outcome. Since more employees are expected to be focusing on the specific campaign at the same time, it can also stimulate interaction and collaboration, leading to creative bursts. However, this approach requires that the campaign (the organization) allows time and space for employees to explore the possible collaborative ties — or that the employees know each other well before the campaign starts. Campaigns will increase visibility and clarity of the need for innovative effort, but the downside is that the efforts tend to be of a “one-off” type. The demand for innovation may push creative sparks of higher quality because of immediate urgency and need, triggering a desire to do good for the organization. Further, at the organizational level there is a risk that transparency will cause negative effects if no real innovations are generated from the campaign. Such outcomes may be interpreted as a joint failure and lead to a more negative view of the organization’s innovation capacity.

If ideation can take place any time the perception is often that the effort can wait — the opportunity will still be there tomorrow. Moreover, innovation is not on demand, indicating a lack of urgency. It is sufficient to hand in ideas when there is some time available to do so. When the general activity level of the organization is low, continuous efforts may be preferred to increase the general level and attention towards innovation. Furthermore, if it is perceived that ideation is limited, there is a risk that the innovative culture is stifled and difficult to push towards new trends and opportunities. The perception among employees may then be that nothing is happening anyhow, so there is no reason to contribute. A potential advantage of continuous efforts is that they may support the development of long-term collaborative ties across the organization for innovation — and in the long run these may stimulate and build innovation potential. This may even spread from online to offline relationships and in that way support the innovative culture.

**Question 7: How do I ensure time for creativity - extra tasks or organizational slack?**

The fundamental rationale for engaging employees, it to create engagement and motivation among the employees to contribute to the innovation ambition. If employees get space and time for creativity, they will have a higher workplace engagement and job satisfaction (Amabile, 1997). In this case, many ideas will be presented, because many get employees, unfortunately due to the cognitive capabilities of the organization, proportionally few ideas will be realized and many will be delayed in development and implementation. The resulting lack of timely feedback may be demotivating.

Time for creativity has been argued to have two different effects, first, sufficient resources including time is necessary for individuals to act creatively (Amabile, 1997), and second, a certain time pressure is needed for the individual to also get into flow mode.

The critical question is therefore, how can the organization ensure that employees can use a sufficient amount of time for ideation without having too much time? This aspect is sometimes overlooked in crowdsourcing, even though it is arguably a fundamental
prerequisite for any type of innovation. The reason for this lack of attention to what is easily seen as a fundamental necessity may be a result of the differences between internal and external crowdsourcing. In external crowdsourcing, participation is the result of individuals’ various motivations to contribute (see e.g. Bonaccorsi and Rossi, 2006), and is normally performed in free and unpaid time. This should be contrasted with the specific situation in internal crowdsourcing, where employees have other tasks to perform. An implication of this is that time spent on ideation equals time not spent on other tasks, and consequently an alternative cost. Hence, even if innovation tasks may be motivating in themselves, this must be put in relation to the urgency and perceived importance of the other tasks. Some organizations explicitly state that the ideation activities are seen as an extra task. If this is the situation, the engagement of employees can however not be taken for granted as this activity formally takes place outside working hours and needs to be seen as more motivating than other possible uses of free time.

If employees have dedicated time for innovation the situation changes substantially. In this situation, engaging in innovation can be expected and should arguably be followed up like other employee tasks. A drawback of this may be that also individuals who are not creative or motivated to innovate spend time on generating and developing ideas, and the outcome of these efforts ought to be quite limited in terms of idea quality and value, at least as compared to the efforts of employees who really enjoy engaging in creative tasks.

In this sense, the preceding four questions have highlighted a number of important design elements that need to be considered next to the decisions that are directly related to the design of the internal crowdsourcing system. Figure 2 highlights the three core framework considerations that we have identified in this article.

The first element relates to the importance of employee motivation. This is an element that has been researched extensively relating to innovation, but has achieved much less attention in relation to internal crowdsourcing. Although parallels may be drawn to the employee motivation in innovation (see e.g. Frederiksen et. al., 2014; Amabile, 1997), it is reasonable to assume that differences of extrinsic and intrinsic motivation when the innovation efforts are digitized differ (see e.g. Hendriks, 1999). More importantly, we have argued that ensuring time to contribute is crucial for the success of the system. In particular, our analysis pointed to organizational slack as an enabler for employee engagement in open ideation. It is also clear from our discussion that the decision to have no time limit versus pursuing innovation over a shorter period (“a sprint”) may seriously influence the employee perspective on open ideation and internal crowdsourcing. Finally, we argue that the most important element is in fact the single employee’s perception of individual risk. In the case, where the employee feels incompetent, because the “brilliant” ideas of co-workers makes the employee see the weaknesses in own contributions, where the comments made on the system appear to be overly critical, or the ideas that are uploaded do not get any feedback – especially from the nearest manager or co-workers – and the ideas are not winning any awards, it is our contention that these employees may end up showing troll behavior. This is clearly
negative for the dynamics and energy in the system, but may also influence the work behavior offline. We cannot say how often this appears, but we can argue that if profiles are open (Question 4), the rewards are substantial (and you are not winning) (Question 5), the system is ongoing – there is no end to it (Question 6) and the efforts are ongoing on top of all other daily tasks (Question 7) it is more likely that (some) employees will end up more demotivated to engage. Nevertheless, empirical research in organizations with internal crowdsourcing systems is needed that specifically emphasizes and investigates the role and motivation of the employees.

Figure 2: Individual perceptions and behaviour in internal crowdsourcing

6. CONCLUSION – GOING BACK TO THE AMBITION

The aim of the article was to identify the main trade-offs relating to the design principles of internal crowdsourcing systems, to propose a number of design decisions, and to link these to the innovation ambition of a firm. We have identified seven core questions to consider for unleashing the potential of internal crowdsourcing. The first contribution of the article is that we identify the differences between adopting the design principles of external crowdsourcing on internal crowdsourcing. It became clear that the key is less to design the system right (Question 1 through 3), but rather to unveil and face the importance of the employee perspective and design the system accordingly (Question 4 through 7). This is our second contribution. Employee engagement is a hidden benefit, but being unable to unleash the creative potential of the employees – whether all or a select few, holds a cost side that has so far not been discussed. As simple as it may sound, the understanding of adding additional tasks on top of daily duties is not per se a free resource, but rather carries an alternative cost, which ultimately requires prioritization. This third contribution that innovation cannot
be an extra task – and it cannot be everyone’s business unless other tasks are taken away or prioritized lower most clearly shows the difference between external and internal crowdsourcing.

At the organizational level, the benefit of adopting an internal crowdsourcing system may be substantial. By inviting all employees from non-experts to the specialists may support that the organization develops an innovation culture, more ideas emerge and are on the table, and may even contribute to develop valuable innovation outcomes. Therefore, our fourth contribution is related to the question of the innovation ambition. If the organization has a well-formulated and implemented innovation strategy, it may use the more focused approach where fewer are invited in and the specification is not fully open but focused. The final remarks are therefore touching upon the relation between the design of the system and the innovation ambition. We therefore argue that one system does not fit all; a focused innovation strategy may be better fulfilled by using innovation contests or building innovation communities, whereas the open ideation appears to be more relevant when the innovation culture needs substance, but where the ambition is less about radical new innovation outcomes.

This article was based on a theoretical presentation and discussion. It is obvious that we hope to stimulate further debate and empirical observations to substantiate our arguments. We encourage future research especially on the temporal dimension of our questions. Are there short term and long-term effects for each of the questions? Do our conjectures about the innovation outcomes hold true? We are further curious about the untapped potential of employee ideation. Can we imagine a serial approach and a system supporting that ideas are presented, then the problem and followed by a solution? Can we organize for this approach? And finally, how can management and employees align their perspectives; who wants the ideas and who realizes the ideas, and how do we ensure that these are aligned? Do we in fact see a hand-over trap? By focusing only on generating ideas without facing the difficulties of realizing them, the long-term innovation capability of the organization may suffer as it does not allow new employees to acquire intrapreneural skills. Although this article has contributed to our understanding of the design of internal crowdsourcing systems to unleash more of the potential, these closing questions clearly demonstrate that we are still far from understanding how to organize successfully for innovation.

REFERENCES


