
Analysing the influence of planning-parameters on Open Innovation performance

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Abstract: Outside-in Open Innovation (OI) allows to use the experience and expertise of external partners to develop new or improved products. In contrast to traditional cooperation approaches, it particularly focuses on the involvement of large number of different partners, so called crowds. An established crowdsourcing method is an ideation contest. However, when applied for the first time, companies tend to commission external service providers or to use a trial-and-error approach that often does not lead to insufficient results, for instance, in terms of ideas quality, cost-benefit ratio or success of incentives. Methodical support is limited so far. Thus, this paper analyses two series of community-based ideation contests concerning the effect of different planning activities and parameters. This lays the basis for further analyses and the development of a methodical planning approach enabling effective and efficient ideation contests.

Keywords: Community; Ideation contest; Open Innovation; project planning, decision making.

1 Introduction

By Open Innovation (OI) companies open their innovation process to enable collaboration with external partners, such as suppliers, customers or users (Chesbrough and Bogers, 2014). The utilisation of external knowledge and expertise may bring advantages such as more innovative solutions, a better market fit and a better customer retention (Enkel *et al.*, 2005).

However, these advantages and the performance of the OI-project depend on a sufficient project planning as a basis of an effective and efficient OI-project. Failures in this phase might lead to insufficient results or even risk the reputation of the organising company as the example of Henkel’s chicken detergent shows (Lauritzen, 2015). Besides major issues like the selection of suitable OI-partners and OI collaboration methods, this also includes a multitude of other planning parameters such as the duration of the OI-method or incentives (Ebner *et al.*, 2009). Even if the project does not fail, a wrong setting of these parameters results in a bad cost-benefit ratio, i.e. a waste of resources or missed opportunities. So far, companies often plan their OI-projects by a trial-and-error approach or by using the experience and expertise of OI-intermediaries. Methodical operative support for planning OI is still limited.

Focussing on community-based ideation contests, this paper analyses two ideation contest series with ca. five contests each. It qualitatively evaluates the effect of different planning parameters, such as duration of the contest, incentives, additional information and tools.

1.1 Current understanding

Though OI in general and ideation contests in particular have been applied and explored in industry and academia for over a decade, methodical support for planning OI-projects and even the understanding of dependencies between planning parameters and project’s performance are still limited. There exist approaches for planning ideation contests such as (Ebner *et al.*, 2009; Piller and Ihl, 2010), which present a rough guideline and an overview of different planning parameters like duration or incentives. Gassmann (2013) present a more detailed overview what to consider when planning a crowdsourcing project. However, these guidelines are usually too abstract for an operative utilisation in industry as they mainly describe what to do but not how. In this respect, the influence of different planning parameters onto the performance of the ideation contest or OI-project in general are not completely understood. While some parameters like incentives are well regarded in literature (Wenger, 2013), other parameters are not sufficiently considered. To gain a holistic understanding of the influence factors of an ideation contest and

OI in general, it is necessary to analyse ideation contests in different contexts and varying planning parameters. This sets the basis of an effective and efficient planning process that spends only necessary resources but for the most effective activities. In addition, at a process level, different planning activities and their order need to be evaluated too.

1.2 Research questions and design

The resulting research question of this paper is: How do different influence factors (planning parameters) affect the performance of an ideation contest?

To answer these questions, our research is based on two ideation contests series in an online mountain-bike community (<http://www.mtb-news.de/forum>), each organized in cooperation with an industry partner. The community has ca. 280,000 registered users and represents the largest German-speaking mountain-bike online community. Figure 1 characterises the community based on the categorisation framework of Blohm (2013). The online community is controlled by the community team and addresses specific users with interests in bikes. The tasks of the ideation contests are defined and focuses on ideas, sketches and comments of users, who are mainly motivated by non-monetary incentives. The evaluation of posts is conducted by the community and the community team.

Characteristic	Specifications				
Medium	online		offline	mixed	
Control	members	intermediary		company	
Orientation	internal			external	
Focus group	unspecified (all)			specified	
Focus of task	low (open task)		defined	highly specified task	
Level of maturity	idea	sketch	concept	prototype	solution
Collaboration	comments	wikis	team rooms	mixed	none
Incentives	monetary		non-monetary		mixed
Evaluation of posts	experts	community	individual	mixed	

Figure 1: Categorisation of ICB community (based on: Blohm, 2013)

First, we retrospectively analysed an OI-project within this community including a series of five ideation contests - ranging from developing a new frame design up to kinematics. We analysed the underlying trial-and-error planning approach and variations of planning parameters. By comparing the planning approach to approaches in literature, we developed an enhanced planning approach for ideation contests.

It was evaluated by a case study of a second OI-project within the bike community containing a series of four ideation contests, which allowed the variation of planning parameters. Besides the evaluation of positive and negative users’ comments, we also conducted a small survey evaluating the motives and best incentives from a user’s perspective.

2 State of the art of planning ideation contests

Walcher (2007, p. 39) defines an ideation contest as invitation of a private or public organiser to the public or specific groups to hand in topic-specific submissions within a particular time frame. In addition, idea providers have the chance to evaluate other submissions, provide feedback and further enhance them to new ideas. Often ideation contests are based within communities, which are an informal group of individuals with a common interest, such as biking and climbing (Blohm, 2013). They can be autonomous or setup and managed by a company. Ebner *et al.* (2009) present a guideline for building such a community but do not address ideation contests in particular. Piller and Ihl (2010) develop a categorisation for structuring different crowdsourcing methods and describe necessary competences of users and companies.

Gassmann (2013) provides an overview and abstract guideline of a crowdsourcing process, as shown in Figure 2. For each step, he describes relevant activities and stresses the most central aspects by providing control questions. Although users are supported in identifying important planning tasks, they are not provided with operative support.

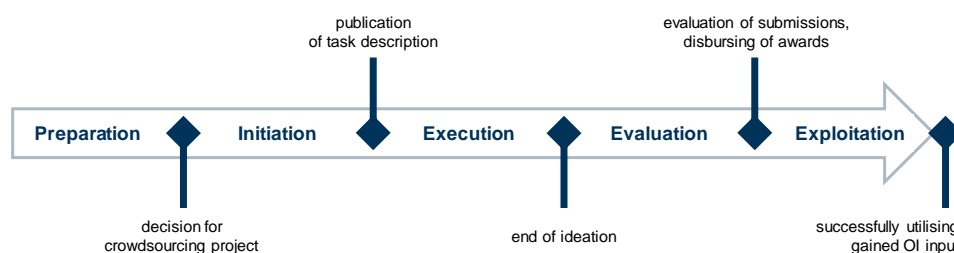


Figure 2: Five steps of a crowdsourcing process (based on: Gassmann, 2013, p. 27)

Bretschneider *et al.* (2007) present a rough structure of the planning phase of ideation contests that comprises five phases: (1) definition of the contest’s goal and duration, (2) analysis of social, economic and technical boundary conditions and need for communication of users, (3) development of online platform including concept, user interface and functionalities, (4) acquisition of participants by suitable incentives, and (5) planning of the assessment of ideas including the definition of assessment criteria.

Zhu *et al.* (2014) specifically analyse company-internal crowdsourcing concerning the users' performance depending on four personality classes. However, they do not address the planning of crowdsourcing projects and a manipulation of these classes.

Kain (2014) provides methodical support but particularly focuses on the evaluation and operationalisation, and does not address the planning phase of an ideation contest.

3 Overview of both ideation contest series

Figure 3 gives an overview of the two ideation contest series and the specific contests. The first contest series of the "Internet Community Bike" project (ICB 1.0) was conducted from April to October 2012 in cooperation with an industry partner, and comprised five ideation contests. The development of concepts took four weeks, and the subsequent development of the final engineering design nine further weeks. In total, the first prototype was finished after five months and could almost directly be used for serial production.

	No.	Topic	Duration [days]	Topic scope	Toolkit	# ideas	Incentiv.	Innovation (jury)
ICB 1.0	1	Chainstay kinematics	20	broad	no	54	T-shirts	no
	2	Range of spring adjustment	7	broad	no	15	-	yes
	3	Cable duct	10	narrow	no	8	-	yes
	4	Chainstay	11	broad	no	9	-	yes
	5	Frame design	50	broad	yes	89	-	no
ICB 2.0	1	Chainstay kinematics	14	broad	yes	122	T-shirts	yes
	2	"Linkage challenge"	21	narrow	yes	45	-	no
	3	Cable duct	7	broad	yes	22	-	no
	4	Seatclamp	7	narrow	no	28	T-shirts	yes

Figure 3: Overview of ICB 1.0 and ICB 2.0 ideation contests

The second ideation contest series (ICB 2.0) took place from May to October 2014, again in cooperation with another industry partner. It comprised four contests. Figure 4 gives an overview of submitted ideas and comments as well as the reached media penetration. Except references within the community, no specific advertisement measures were taken.

ICB 2.0	Quantity of ideas					Media penetration				
	# comments	# ideas	# participants	idea rate	ideas per particip.	# visits of MTB-news.de	# likes on Facebook	# shares on Facebook	# tweets (Twitter)	# google+
Chainstay kinematics	957	122	89	12 %	1.4	86,175	215	24	0	1
„Linkage challenge“	169	45	16	27 %	2.8	29,653	62	8	1	1
Cable duct	325	22	19	7 %	1.2	26,433	98	3	1	3
Seatclamp	225	28	25	12 %	1.1	27,291	-	-	2	2

Figure 4: ICB 2.0 – quantity of ideas and media penetration

4 Discussion of findings

4.1 Temporal progress of idea submissions

Due to the lack of experience during the first ideation contest series, a specific deadline was not announced. Instead the community team observed the submissions and discussions. When no new ideas were posted or derived from discussions, the specific contest was ended. Therefore, the durations varied from 7 to 50 days. Figure 5 shows the exemplary progress of submissions for the ideation contest for innovating the chain-stay kinematics and the range of spring adjustment. Along with a general trend of a decreasing number of submissions over time, there are local maxima on Tuesday, Wednesdays and Thursdays. Weekends are less beneficial for gaining new ideas.

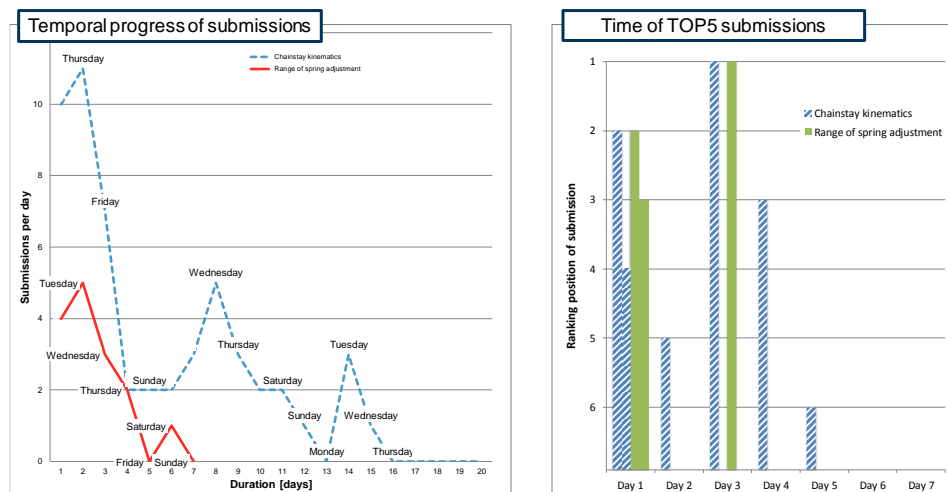


Figure 5: Temporal progress of all submissions and TOP5 submissions of ICB 1.0

This correlates with the number of visits of the specific ICB sub-forum of the ideation contests, as shown in Figure 6. In addition, analysing the dates

of the fifth best submissions shows that the best ideas were already submitted within the first week.

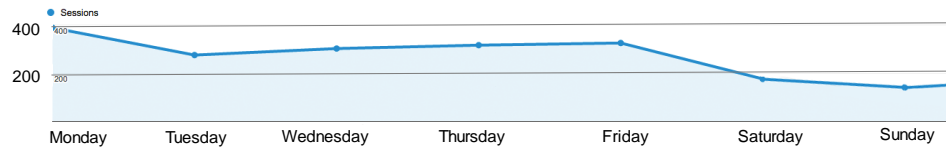


Figure 6: Number of visits of the specific sub-forum comprising the ideation contests

The previous results correlate with the temporal progress of the submissions of the second ideation contest series. The local maxima are similar but slightly shifted to Mondays and Fridays. The best five ideas were also submitted within the first week of the contests.

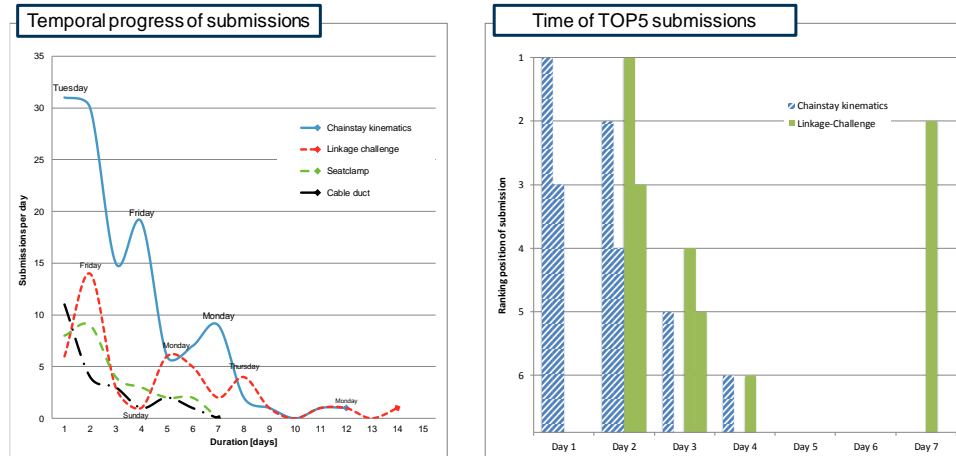


Figure 7: Temporal progress of all submissions and TOP5 submissions of ICB 2.0

Table 1 summarises the specific duration setting of each contest. The announcement of a specific deadline did not show an originally expected peak in the end (“last minute panic”). The submissions seem to be more dependent on the distance from the start date and the weekday.

Table 1: Duration of ICB 2.0 ideation contests

<i>Ideation contest</i>	<i>Specification of duration</i>	<i>Actual duration [days]</i>
Chain stay kinematics	Closure when no new ideas	14
“Linkage challenge“	Closure when no new ideas	21
Cable duct	pre-defined duration	7
Seat clamp	pre-defined duration	7

Source: own data.

4.2 Selected incentives and analysis of participants’ motives

The central consideration of the community team was, how to reward creative and motivated users but prevent potential negative effects. Due to the long-term perspective of the community, using high prizes (e.g. money or products) bear the risk of destroying the intrinsic motivation of users as they then might always expect a prize. Subsequent ideation contests without prizes might result in a low level of participation and motivation. Therefore, the community team chose (a) small material prizes (i.e. T-shirts) only for contests with a perceived high effort, (b) stating the name of its creator when realising ideas, (c) using a user-status system, and (d) providing the possibility to individualise the final product concerning its optic features.

This approach was supported by the results of a small survey within the community after the first ideation contest of the second series. While rewards seemed to be quite irrelevant, the main motives of participants were interest in the specific topic and fun of developing own solutions. Specifically asked to state their most favoured incentive, only a third stated a potential discount, while the rest preferred immaterial incentives, i.e. getting the product before the majority of users and being able to individualise the optic of their products.

In addition, within the first contest series, an extra prize was announced for ensuring a high motivation through the entire series. Among the 20 most active users (ideas and comments) one of the developed frames was drawn by lot. Although this was not repeated for the second contest series, it did not negatively affect the number of submitted ideas (cf. Figure 3).

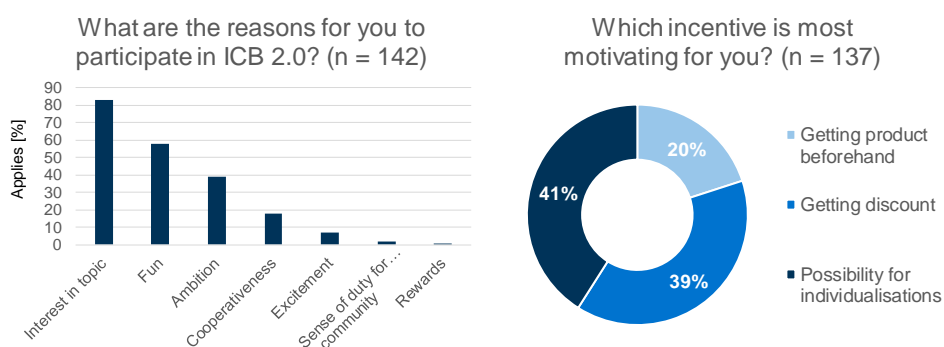


Figure 8: Motives for participation and favoured incentives

4.3 Decision for public or private submission of ideas

The community team also intensively discussed the aspect of a public and a private submission of ideas. The advantages of a private submission, i.e. only the idea provider and the community team can see the submission, are the possibility of patenting the submission, the prevention of

knowledge drain and being ahead of competitors. Profit participation of idea providers might enhance their motivation. However, public submissions allow the use of the full innovative potential of the community by enabling discussions, and the evolution and recombination of ideas.

In addition, a private submission could make the impression of just “milking” the community without giving appropriate compensation. During ICB 2.0, some users already posted criticism like this: “*This looks suspicious. Is someone looking for potential patents? When really good ideas are posted, a T-shirt is quite insufficient (as you know, there are enough companies investing their brainpower)*”. At least this accusation could be solved easily as other users pointed to the public submission process. In general, a private submission contradicts the idea of a community project. Since the community is quite active and has a communal spirit, the chance is high that they might boycott potential illegal imitators of the developed bikes, as social norm studies from other industries show (cf. van Horen and Pieters, 2012).

4.4 Additional information

Within the first contest series, the potential problem solvers were supplied with additional background information and existing solution concepts as inspiration for the contests of *Range of spring adjustment*, *Chain stay* and *Frame design*. Based on the jury evaluation, this additional information had no effect on the quality of ideas. Along with a general assessment, the jury evaluated the existence of a potential innovation for each contest. As Figure 3 shows, they identified more potential innovations in contests without additional information.

5 Conclusion

From an academic point of view, on a process level, this paper compares and evaluates planning approaches from literature with the experience of a trial-and-error-based approach from industry. On a parameter level, this paper increases the understanding of success factors and barriers for the performance of ideation contests and of OI in general. The identified effects of single parameters can be used and further analysed by other researchers.

From an industry perspective, our paper provides insights into success factors and barriers of planning community-based ideation contests, which can be used to enhance own planning approaches of OI-experienced companies. The insights can improve the cost-benefit ratio of ideation contests by deriving suitable durations, incentives and supporting tools. In

particular incentives are a sensitive issue for long-lasting communities as the use of monetary and material prizes might destroy the intrinsic motivation of users. In the medium-term, our planning approach for ideation contests also supports OI-unexperienced companies planning ideation contests or at least enables them to better understand and evaluate service offers by OI-intermediaries.

Nevertheless, this paper bears some major limitations, which stresses the preliminary character of our work. So far, we only analysed a low number of ideation contests that are based within a highly specific and motivated bike community. This limits the generalisability of our results. In future research projects, we need to evaluate the planning approach and analyse the mentioned planning parameters in the context of further ideation contests in the same community and in communities with differing topics as well as community-independent contests. In addition, the effect of further planning parameters needs to be evaluated as well, e.g. NDA and property usage settings.

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7 Feedback

We would be glad to receive feedback to the following topics: What is the plenum's experience regarding relevant influence factors of the performance of an ideation contest? What is especially their experience with not community-based ideation contests – are there commonalities or differences to our results?