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How Online Intermediaries Facilitate Open Innovation: The Role of Service Co-creation Capabilities in Client Engagement

Krithika Randhawa  
University of Technology Sydney  
UTS Business School  
krithika.randhawa@gmail.com

Ralf Wilden  
University of Newcastle  
Newcastle Business School  
ralf.wilden@newcastle.edu.au

Abstract
Through an exploratory case study of an open innovation (OI) intermediary and its client organizations, we investigate how digital intermediaries engage with clients to enable the implementation of online community-based OI. We develop a theoretical framework of the capability portfolio that intermediaries deploy to facilitate their clients in overcoming barriers to community-based OI. We find that technological and marketing capabilities of intermediaries help clients address project team-level and organizational-level challenges respectively. Furthermore, our study identifies the complementary role played by co-creation capabilities in this process. As a higher-order capability made of product- and market-oriented service capabilities, co-creation capabilities form the key for intermediaries to co-develop both the product and market for online community-based OI via client-centric practices, in turn reinforcing their technological and marketing capabilities. These insights have practical implications for managers of intermediaries to develop and deploy client engagement capabilities for facilitating OI.

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Keywords: Open Innovation, Intermediaries, Co-creation, Capabilities, Service-dominant logic
1. Introduction

Intermediaries play a crucial role in facilitating open innovation (OI) (Chesbrough, 2003; Colombo et al., 2015; Howells, 2006). The digital age has enabled a new type of innovation intermediaries, providing digital platforms and web-based tools to allow the integration of a large number of external participants into OI initiatives of their client organizations (Colombo et al., 2013; Sawhney et al., 2003; Verona et al., 2006). These web-based intermediaries are critical to the implementation of crowdsourcing, a mechanism by which organizations engage an external voluntary “crowd” in the form of an “open call”, seeking innovative ideas and solutions via online platforms (Afuah & Tucci, 2012; Boudreau & Lakhani, 2009; Howe, 2006, 2008). In this way, they help firms overcome the “local search bias” to tap into new and previously disconnected sources of innovation (Howells, 2006; Jeppesen & Lakhani, 2010; Lüthje et al., 2005). Studies have demonstrated the effectiveness of online intermediaries in solving technical problems for firms by engaging crowds (e.g., Afuah & Tucci, 2012; Jeppesen & Lakhani, 2010).

Yet, our current knowledge is limited in two aspects. First, the majority of previous work has investigated innovation contests (Boudreau & Lakhani, 2009; Terwiesch & Xu, 2008) and tournament-based crowdsourcing (Afuah & Tucci, 2012; Lüttgens et al., 2014) as intermediation modes. Here, intermediaries broadcast their clients’ (seekers’) R&D problems to a group of independent individuals (solvers) via online platforms, offering prizes. Alternatively, seekers may engage in OI through communities (Boudreau & Lakhani, 2009), possibly through “innomediaries” (Prandelli et al., 2008; Sawhney et al., 2003), which implement crowdsourcing by hosting digital platforms through which seekers can co-ideate and/or co-design with virtual communities of customers or users. Despite differences in collaboration and knowledge brokerage involved in engaging with communities for innovation (Boudreau & Lakhani, 2009;
Diener & Piller, 2013; Lüttgens et al., 2014), we know little about the role of intermediaries in facilitating such community-based OI.

Second, even in research on tournament-based crowdsourcing focus has been on how intermediaries can manage solvers. Studies have investigated how factors such as size of the solver pool (Terwiesch & Xu, 2008) and solvers’ field of expertise (Jeppesen & Lakhani, 2010) affect solutions, and how intermediaries can optimally design awards (e.g., Boudreau et al., 2011; Terwiesch & Xu, 2008). Surprisingly, limited research has explored the seeker side of the crowdsourcing process, with the little work mainly focusing on aspects of seekers, such as their managerial challenges in dealing with intermediaries (Sieg et al., 2010), critical activities in problem formulation (von Krogh et al., 2012), and organizational processes to implement crowdsourcing (Lüttgens et al., 2014). Even less research has studied the seeker-intermediary relationship from the intermediary’s perspective (Alexander & Martin, 2013; Howells, 2006; Pittaway et al., 2004; Verona et al., 2006). Consequently, we know little about the capabilities intermediaries deploy to engage with seekers and enable successful outcomes, particularly in the context of community-based OI. Our study addresses this gap.

Specifically, we ask: How do OI intermediaries enable seekers to implement online community-based OI? We focus on investigating the capabilities intermediaries deploy to facilitate their clients to successfully engage in online community-based OI despite internal challenges. We answer this research question by incorporating co-creation literature (e.g., Normann & Ramirez, 1993; Prahalad & Ramaswamy, 2004) and service-dominant (S-D) logic of marketing (e.g., Vargo & Lusch, 2004, 2016) into the OI literature to improve our understanding of intermediaries’ necessary client engagement capabilities. A key insight of our study is that OI intermediaries need to deploy service co-creation, marketing and technological capabilities to
support their clients to overcome organizational and project-based challenges, which may otherwise hinder positive OI outcomes for seekers. We make a core contribution by developing a theoretical framework of the portfolio of intermediary capabilities required to support seekers.

We develop our theoretical framework based on an exploratory embedded case study (Eisenhardt, 1989; Yin, 1984; Yin, 2003) of an online OI intermediary providing software-as-a-service and 18 client organizations in the public sector. Although our choice of case was based on theoretical relevance (Eisenhardt & Graebner, 2007; Silverman, 2006), the insights derived also advance our understanding of OI capabilities when applied by public, not-for-profit organizations (Chesbrough & Bogers, 2014; Dahlander & Gann, 2010; West et al., 2014). In particular, our findings provide insights into “citizensourcing”, a crowdsourcing mechanism by which public sector organizations engage online with a community of citizens (customers) to co-create services, and co-design policies (Hilgers & Ihl, 2010; Nambisan, 2008).

We contribute to the OI literature by moving away from focusing on innovation contests and tournaments, to address the role of online “innomediaries” (Prandelli et al., 2008; Sawhney et al., 2003) - mediators that are specialized in facilitating knowledge absorption from virtual customer communities for innovation. Finally, the insights derived are useful for managers of intermediaries in developing and deploying capabilities to build client capacity in community-based OI.

2. Theoretical background
Although the role of intermediaries has long been a topic of discussion in innovation research (e.g., Bessant & Rush, 1995; Hargadon & Sutton, 1997; Howells, 2006), the rise of the digital era has seen a significant change in the intermediaries’ role. Advancements in information and communication technologies have considerably reduced the transaction costs of brokering
distributed knowledge (Chesbrough, 2006; Sawhney et al., 2005). This has provided new modes for intermediaries to facilitate OI with external entities (Chesbrough & Bogers, 2014; West et al., 2014). Crowdsourcing has emerged as such a mechanism through which intermediaries, using their online platforms, enable organizations to outsource innovation activities that were originally performed internally or in collaboration with a few firms to a large crowd of individuals (Afuah & Tucci, 2012; Howe, 2006, 2008; Piller & West, 2014).

Boudreau and Lakhani (2009) identify two distinct ways for firms to engage in crowdsourcing: contests and communities. In contests, contributors compete with each other in developing the innovative output. On the other hand, communities are based on collaboration: contributors interact with each other and work together to produce the innovative output. Of these two modes, the existing literature has focused predominantly on intermediaries launching innovation contests (Boudreau et al., 2011; Terweisch & Xu, 2008) and tournaments (Afuah & Tucci, 2012; Luttgens et al., 2014) for crowdsourcing. Through digital platforms, they link seekers (clients) with an external pool of solvers (individuals), who provide technical solutions to their R&D problems, and in turn contend for an award. These intermediaries function as innovation marketplaces (Lichtenthaler & Ernst, 2008), trading technology-based knowledge – typically intellectual property or technical expertise of the solvers (Sawhney et al., 2003).

Research has predominantly focused on establishing the effectiveness of contests and tournaments in technical problem-solving (Afuah & Tucci, 2012; Jeppesen & Lakhani, 2010), and studying how intermediaries manage outcomes via the solver pool through, for example, optimal award structure (Boudreau et al., 2011). Other work has looked at the solver side of this process. For instance, Boudreau et al. (2011) and Terwiesch and Xu (2008) show that increasing the number of solvers is positively associated with problem-solving outcomes, while Jeppesen and Lakhani (2010) attribute these outcomes to solvers’ technical marginality, that is, the
distance between the solver’s field of expertise and the problem domain. Relatively less research has dealt with the seeker (client) end of the process. Sieg et al. (2010) and von Krogh et al. (2012) uncover the managerial challenges seekers face while working with intermediaries. Luttgens et al. (2014) investigate critical issues faced by clients and related interventions to effectively implement tournament-based crowdsourcing projects.

Although these studies have significantly advanced this relatively young research field, they focus almost exclusively on intermediaries facilitating tournament-based crowdsourcing for solving technical problems, ignoring other modes of intermediation (Colombo et al., 2013). In particular, engaging with communities as a way to implement intermediary-mediated OI (Boudreau & Lakhani, 2009) is largely ignored. The role of online communities as an external source of innovation has, however, been well-established across diverse research streams, for example, user innovation (e.g., Füller et al., 2008), co-creation (e.g., Sawhney et al., 2005) and OI (e.g., Dahlander & Wallin, 2006). Furthermore, a strand of research on innovation intermediaries introduces “virtual knowledge brokers” (Verona et al., 2006) or “customer community operators” (Prandelli et al., 2008; Sawhney et al., 2003) as intermediaries that enable client organizations to co-ideate and/or co-design with customers via online communities.

In such community-based crowdsourcing, intermediaries help clients integrate market-based or customer knowledge emerging from the virtual community into their innovation process. To do so, they provide clients with infrastructure in the form of digital platforms, tools and access to the community, and help them in building competences to run their own community-based OI projects, and thus directly collaborate and integrate knowledge from external entities (Diener & Piller, 2013). Despite the differences between the two intermediation modes, there is limited research on the role of intermediaries in community-based OI. Furthermore, in line with other scholars (e.g., Pittaway et al., 2004; Howells, 2006; Verona et al.,
2006; Sieg et al., 2010), we find that studies analyzing how intermediaries engage with clients to facilitate OI are also limited. Yet, this is important because, to achieve access and transfer of knowledge between the client organization and the crowd efficiently and effectively (Verona et al., 2006; Sawhney et al., 2003, 2005; Colombo et al., 2015), intermediaries need to help clients overcome internal barriers, and intervene as required to help enhance their capacity in OI. To address these gaps, our aim is to investigate the capabilities intermediaries deploy in engaging with clients, so as to support and build client capacity in community-based OI.

3. Methodology
To investigate our research question, we conducted an exploratory, embedded case study. This approach allows us to: (1) build theory through a deeper understanding of a contemporary and underexplored phenomena (Eisenhardt & Graebner, 2007; Siggelkow, 2007); and (2) study the phenomenon in its natural setting (Yin, 1994). We selected our case for theoretical reasons (Eisenhardt & Graebner, 2007; Silverman, 2006): Nexus is an OI intermediary that enables its clients – organizations in the public sector – to implement “citizensourcing”, a crowdsourcing mechanism by which public sector seekers engage online with a community of citizens (customers) to co-create services, and co-design policies (Hilgers & Ihl, 2010; Nambisan, 2008). Citizensourcing represents a transformation in the way public sector organizations implement innovation. These organizations have to overcome internal barriers and core rigidities (Leonard-Barton, 1992) in shifting from traditional bureaucratic innovation practices to open collaborative community co-creation (Dixon, 2010; Lee et al., 2012). This accentuates the role of Nexus’ capabilities in enabling clients to overcome these barriers and implement OI successfully, making this setting pertinent to address our research question (Eisenhardt, 1989; Yin, 2003). The inclusion of multiple levels of analysis by interviewing informants from the intermediary and clients, and the use of secondary supplementary data, helped include different perspectives to
uncover relationships between challenges faced by clients and Nexus’s capabilities in overcoming those challenges to facilitate community-based OI. This was particularly useful to increase the validity of our findings (Yin, 1984).

**Data sources:** Data was gathered over a nine month period from a variety of sources (Miles & Huberman, 1994; Yin, 1994): (1) semi-structured interviews with representatives of the intermediary and client organizations; (2) observation of past and ongoing online community innovation projects; (3) archival data including corporate documents and press releases; and (4) follow-up e-mails and informal conversations to track ongoing client-intermediary interactions in real-time and to fill gaps in reports (Table 1). We collected data from two types of informants to gather complementary information on the same events: Nexus executives and client managers. We started with 60 to 90-minute, semi-structured interviews with 8 Nexus executives belonging to a variety of functions. The aim was to gain an understanding of their role and their involvement in strategies and practices of client engagement. In parallel, we read best practice case studies of client projects shared by Nexus, and observed online community innovation projects related to these. This phase helped us to select the ideal client sample for interviews.

Subsequently, we had follow-up conversations with these Nexus executives, conducting an additional 11 interviews. Furthermore, following an embedded case study design, we interviewed Community Engagement managers of 18 clients. To ensure our sampling strategy minimizes variation (Guba and Lincoln, 1989), we chose clients belonging to the same sector (local government councils/city halls). At the same time, we maximize variation (Guba and Lincoln, 1989) along two dimensions: the year when they commenced online community projects and their quality of online community engagement (Excellent, Average or Poor - as evaluated by Nexus’ algorithm). The sample of 18 was deemed sufficient once the themes began to converge and reach theoretical saturation (Yin, 2003). We followed embedded multiple-case
study replication logic, with each case confirming or disconfirming the inferences drawn from the others (Yin, 1994). The final interview sample is presented in Table 1.

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Insert Table 1 here
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We supplemented client interviews by reviewing past and current online community innovation projects of the interviewed clients, corporate documents (e.g., client ‘scoring sheet’ from Nexus, community engagement policies from clients), publicly available data (Nexus and client websites, Nexus blog, press releases) and informal e-mail and conversations. Triangulating interview data with observations and archival data helped served to increase the construct validity (Yin, 1984). We conducted a total of 37 interviews with Nexus and its clients. We gathered information on OI-related processes by: (1) requesting in an open-ended, nondirective manner to describe online innovation activities of client organizations in general and how Nexus enabled such activities; and (2) in response to our wrap-up questions where we directly asked about critical success factors in the OI journeys of client organizations, challenges they faced in implementing community-based OI and how Nexus helped clients deal with these internal challenges. Interviews lasted an average of 1 hour, and were recorded and transcribed.

**Data analysis:** Our analysis followed multiple-case analysis logic (Eisenhardt, 1989) synthesizing each client’s data into an individual case history. We tracked challenges to implementing successful online community-based OI and how the intermediary helped overcoming these. Based on the individual case histories, we conducted within-case and cross-case analyses. After developing an understanding of each client organization’s interactions with Nexus, we compared cases with each other to identify similar themes (Eisenhardt, 1989). From these emerging patterns, we formed tentative theoretical constructs. We considered clients’ barriers to OI and Nexus’s capabilities to be relevant when two or more client organizations
independently described the same barriers and capabilities. The fact that multiple informants indicated the same capabilities deployed by the intermediary to overcome internal client barriers reflects a collective relevance independent of a specific individual client organization interaction.

A structured analysis of the textual data was supported by using the text mining tool Leximancer qualitative analysis software (Mathies & Burford, 2011; Rooney, 2005). The use of this tool complements manual analysis of the data, as it automatically learns patterns based on the idea that words form a sentence; and predicts emerging concepts, tags the data, and derives relevant concepts and themes based on a Bayesian learning algorithm (Smith & Humphreys, 2006). Although the software uses an unsupervised learning algorithm, the research team still has control over the process and input is required during specific analysis tasks. Leximancer has been found to deliver high reliability and reproducibility of concept extractions and thematic clustering (Smith & Humphreys, 2006). For a detailed description of Leximancer, see Grech et al., (2002) and Smith and Humphreys (2006).

We structured our analysis in two parts. First, we focused on understanding the critical factors that hinder clients to successfully implement community-based OI. To do so, we started with focusing on the part of the data relating to challenges to successful OI activities in client organizations. We used Leximancer to support our analysis and provided all text excerpts from interviews with Nexus executives and clients in which this topic was discussed as input into the text mining process. Second, we investigated how the intermediary Nexus supports client organizations to overcome such barriers. Accordingly, we sought to understand Nexus’s client engagement capabilities in enabling clients implement community-based OI. To do so, we used excerpts of client and Nexus interviews where this topic was mentioned by interviewees.

The output of each analysis represented by maps of meaning, shows semantically closely related concepts and themes. This output provided an overview of important concepts and their
perceived relationships based on how often interviewees mention concepts (and in combination) within interviews. Then, to understand the context in which the concepts are mentioned, we read contextual text samples from the interview transcripts. Thus, we interpreted the semantically closely related themes (and concepts) to uncover: (1) key client barriers, then aggregated into broader categories based on the level at which they operate in client organizations; and (2) and relevant client-oriented capabilities deployed by Nexus. We triangulated our findings with other data sources (e.g., documents, websites) during this analysis, looking for emergent patterns in the data (Miles & Huberman, 1984). Finally, we “enfolded” our findings, grounding emergent themes in existing literature (Eisenhardt, 1989), to consolidate the intermediary’s client engagement capabilities, and the role they play in overcoming client barriers to community-based OI. Taken together, this analysis process enabled us to produce our theoretical framework.

4. How intermediaries deploy capabilities to enable client’s online community-based OI

To identify the capability portfolio intermediaries need to support their clients, we first focused on what challenges clients faced in implementing online community-based OI. Results show that clients face internal challenges at two levels: organizational and project level (Figure 1).

4.1 Organizational barriers to community-based OI in client organizations

Lack of buy-in from senior executives for online community engagement

A major organizational challenge is the lack of buy-in for online community engagement by senior executive teams of client organizations (Figure 1 Area A - the concepts ‘lack’, ‘buy-in’, ‘senior’, ‘executive’ and ‘team’ belonging to the organizational theme is closely connected to the engagement theme comprising the concepts ‘online’ and ‘community’). There is resistance to change and a mentality that ignores the possibility that outsiders may come up with better ideas
than insiders. This cultural barrier is attributed to low levels of organizational tolerance for risk and the concern of senior executives that giving away control over decision-making may be risky (the theme risk is closely linked with ‘buy-in’, ‘senior’, ‘executive’, ‘team’ in the organizational theme), leading to significant ‘not-invented-here’ thinking in organizations.

Clients widely acknowledge the role of the senior executive team in building a ‘culture of community engagement’. For example, organization G that has successfully implemented several online community-based innovation projects remarked:

“Our CEO is very supportive of community engagement as a philosophy. [We] see community engagement as a core activity while other councils view it as a discretionary activity” (Community Engagement Coordinator, Client G).

Lack of strategic framework for online community engagement

Another barrier is the lack of a comprehensive internal strategic policy framework to community engagement (Part B – the theme framework is closely related to ‘community’, ‘strategic’, ‘public’ and ‘policy’ within the engagement theme), leading to limited organization-wide understanding of the value of online community engagement. As a result, seekers often adopt a compliance-driven approach, practicing online community-based OI in a transactional rather than a proactive manner (‘understand’, ‘value’ and ‘compliance’ are key concepts within the framework theme that is closely linked with ‘lack’, ‘senior’, ‘executive’ and ‘team’ in the organizational theme).

Often the focus is merely on meeting statutory requirements, leading to a lack of emphasis on online community innovation projects. For example, in client organization M,
“There is often a culture that community engagement is not core to everybody’s role, [so] people tend to view community engagement as a secondary job” (Manager Community Services & Development, Client M)

On the contrary, client organization H has adopted a holistic engagement framework that goes beyond policy requirements to be built on core values of the International Association of Public Participation – a global industry body guiding the development, implementation and evaluation of community engagement. This strategic approach has translated into successful online project practices and outcomes, earning a high performance rating against Nexus’ client scoring criteria. This implies that, to enable a more consistent and strategic framework for community-based OI, it needs to be embraced as a wider organizational initiative.

4.2 Project-level barriers to community-based OI in client organizations

Competency gap in online community engagement

Limitations in competences in online community engagement among client staff pose a major challenge at the project level. This relates to a lack of technical expertise on the functionalities of the online platform (Part C – the tools theme with the concept ‘platform’ is closely connected with the staff and engagement themes). More importantly, there is also a lack of appreciation of the broader engagement methodology - both online and face-to-face – and how they can be integrated. As a result, staff has inadequate knowledge on planning and implementing online community innovation projects through a variety of platform tools such as survey and discussion forums, and how they impact community participation outcomes (the theme tools with concepts ‘platform’, ‘variety’, ‘survey’, ‘discussion’, ‘forum’ and ‘impact’ is closely connected with the participation and engagement themes comprising ‘knowledge’, ‘methodology’, ‘online’, ‘face-to-face’ and ‘community’ as concepts).
Linked to the lack of organizational buy-in for online community engagement, project team members are often not motivated to build skills for leveraging the platform in a proactive way. People tend to be reluctant to learn and deploy all functionalities, or operate across a variety of projects due to an “attitudinal reluctance and resistance to the use of online engagement” (Program Leader, Client K). Confirming this, client K’s platform reveals that community projects revolve more around operational areas such as parks and recreation, rather than strategic policy and planning initiatives such as local environment and disability planning. There is a tendency to use only surveys rather than discussion forums and other such interactive, sophisticated platform tools. The online community projects of Client O, P, Q and R, which fared poorly against Nexus’ client scoring criteria, also reflect a similar pattern.

Staff capacity issues for online community engagement

Another challenge staff face is the lack of capacity to implement online community engagement projects (Part D – note the theme staff with the concepts ‘people’, ‘capacity’ and ‘issues’ is closely associated with the engagement theme with ‘online’, ‘community’, ‘project’ as concepts). This stems from inadequate resource and workforce allocation by senior executives, which in turn links back to the lack of buy-in and strategic direction for online engagement (note that the ‘capacity’ concept within the staff theme is closely connected with ‘resources’, ‘lack’, ‘senior’, ‘executive’, ‘team’ and ‘buy-in’ in the organizational theme). The community engagement role is often clubbed with other roles such as marketing & communication, leading to little attention to community engagement. It appears that this workforce constraint is something that even clients with high levels of online engagement face, accentuating the lack of staff motivation to practice good online engagement, as evident from what one high-performing client shared,

“Most people are not interested in getting trained on it as they don’t have the time and don’t see it as a priority.” (Stakeholder Engagement Co-ordinator, Client D)
Together these organizational and project-level barriers pose a challenge for effective implementation of community-based OI in client organizations (see Table 2).

4.3 Intermediary capabilities and processes to help clients overcome internal barriers

To help clients deal with the identified internal barriers, we find that Nexus deploys three kinds of capabilities – technological, marketing and co-creation capabilities (Figure 2). Technological capabilities facilitate clients in overcoming project-level barriers, and marketing capabilities help overcome barriers at the organizational-level. We find that co-creation capabilities lie at the core of technological and marketing capabilities and are hence the key to implementing both product and market development. Furthermore, we find that co-creation capabilities comprise product-oriented and market-oriented service capabilities, which are complex both in terms of their internal composition, their relationship with technological and marketing capabilities, and in turn, their effect on clients’ internal barriers to community-based OI (Table 3).

Technological capabilities

Technological capabilities are critical for Nexus to develop their core product – the digital platform – fundamental to implement online community innovation. The sophisticated platform has been engineered to provide a diverse range of technical tools tailored to client needs, enabling them to engage with their community (Figure 1 Part A – the theme platform is closely linked with clients and project themes, with ‘product’, ‘technical’ and ‘tools’ as concepts).

Nexus provides software-as-a-service (or SaaS) which forms a strategic aspect of its client-centric business model (‘service’, ‘software’, ‘strategic’ and ‘business’ are key concepts in the platform theme, which is closely connected to the clients theme). SaaS is a way of delivering
digital platform applications over the Internet wherein instead of installing and maintaining software, clients can simply access it via the Internet, freeing them from complex and cumbersome software and hardware management. As Nexus’ CTO revealed,

“We are a B2B SaaS company....and if you want to dig deeper, we are a B2G company because we are predominantly focused on government agencies - that’s the way we have designed things for the client. […] The idea is if we make [the platform] easy and inviting for clients, they will start to use it more” (CTO, Nexus)

Continuous strategic effort has gone into increasing the back-end functionality, making the platform more user-friendly for clients, and the reporting and data analytics very customized to client needs. Nexus’ technological capabilities have been effective in helping clients overcome project-level barriers to online engagement in two ways: first, project team members find it easier and are increasingly motivated get skilled on the platform, and second, the efficiency of the platform enhances staff capacity easing the burden on workforce resources. As one client remarked,

“Everyone loves it...very simple to use, intuitive, fun and engaging software – this is a critical success factor for Nexus” (Community Engagement Co-ordinator, Client G)

**Marketing capabilities**

As a pioneer in its field, Nexus was the first to sense the opportunity for online community engagement in the country’s public sector. In this regard, its capability to create an awareness for online community engagement, and develop a market among government and public sector organizations has been paramount to its success as an intermediary (Part B – the themes awareness, online and engagement comprise the closely linked concepts ‘government’, ‘public’, ‘market’, ‘space and ‘opportunity’). Nexus has positioned itself as “an advocacy business, trying to build a movement for online community engagement” (Sales Manager, Nexus). This,
however, has not been easy as the organizational barriers within clients pose a significant
challenge of having to convince them of its need. To achieve this, Nexus executives are involved
in regular conversations with people at the senior level in client organizations to build awareness
on the value of online community engagement (‘conversation’, ‘level’, ‘people’, ‘councils’ are
key concepts within the engagement theme, closely connected to the awareness theme). Thus,
Nexus’s marketing capabilities have helped them leverage their market positioning to establish a
competitive advantage in the public sector:

“Community engagement forms the core value and ideals for the company, and [Nexus’s]
brand and positioning as an advocate for online community engagement places us in a
unique spot for clients who are interested in this space” (Operations Manager, Nexus).

Marketing capabilities are critical to help clients overcome the organizational barriers of
lack of buy-in and strategic outlook to community engagement. They have been the key to:

“...educate executives that community engagement allows [them] to obtain feedback,
ideas and solutions that were not considered before, and [thereby] make more informed
decisions about future public services, policy and planning” (Sales Manager, Nexus).

Co-creation capabilities
Our discussion so far indicates that Nexus engages closely with clients as a strategic approach to
develop both its product and market for online community engagement. Engaging with clients at
the project team level is important to deploy technological capabilities in building the technical
platform tools and functionalities. Involving clients at the organizational level is the key to
deploy marketing capabilities, for example, through conversations with senior leaders. These
client-centric processes are underpinned by co-creation capabilities (Part C – the themes clients,
develop, strategy, project, organizational and engagement are closely linked, and comprise
indicate that Nexus deploys two kinds of co-creation capabilities in client service exchanges to co-create product and market value respectively as the basis of its strategic advantage: product-oriented service capabilities and market-oriented service capabilities (Part C1 & C2).

**Product-oriented service capabilities:** Nexus deploys these capabilities at the project team level through four client-centric processes: personalizing client services, building client peer networks, fostering client skills and expertise, and co-developing product with clients. Together, these processes help improve the offering for the client or enhance the utilization of the product by the client. In this way, product-oriented service capabilities of Nexus reinforce the effect of technological capabilities, thereby aiding clients in overcoming project-level barriers (Part C1 – the client theme with the concept ‘product’ is closely connected with the theme project).

A key focus for Nexus has been on personalizing client services by “building relationships with clients to understand individual client needs and individual client capacities” (Sales Manager, Nexus). The Client Experience team provides personalized support on technical and project planning aspects to help ‘site admins’ improve the quality of online community innovation projects (the client theme with ‘experience’, ‘team’, ‘technical’ as key concepts is closely tied to project and site themes comprising the concept ‘admin’). The team generates an individuated client ‘score’ evaluating every online project site, and sends customized emails to ‘site admins’ with feedback and advice on improving their online engagement (the client theme with ‘experience’, ‘team’ and ‘feedback’ as key concepts is closely tied to project and site themes comprising the concept ‘admin’). Clients particularly stress that Nexus is “…very proactive in handling issues and barriers to using the platform” (Program Leader, Client K).

Furthermore, Nexus organizes client roundtables every quarter across the country. These are used as a forum to keep clients abreast on platform features, showcase best practices, and capture feedback on the product. More significantly, these roundtables have been instrumental in
building client peer networks as they help develop social relations among clients (the client theme with ‘technical’, ‘product’, ‘feedback’ as key concepts is closely linked with project comprising the concept ‘practice’). These serve as a great avenue for clients to network, share and learn from others, create new business relationships, and build face-to-face associations with Nexus. Additionally, Nexus provides an online engagement portal where clients from around the world can come together “to ask questions, have conversations, interact and learn from one another and build connections and alliances with one another as well” (Sales Manager, Nexus).

Besides fostering peer relations, the client roundtables and online client engagement portal act as forums for developing client skills and expertise on the platform:

“Quarterly roundtables are great for idea sharing, sharing best practice and to remain updated on developments on the platform” (Corporate Strategic Planner, Client F)

Another strategic initiative has been to invest in a dedicated resource for onboarding and training new clients, and provide regular masterclasses to existing clients. The idea is to develop client skills and expertise in using the platform, as a way of enhancing staff capacity in projects (clients, develop, strategy, project and site themes with ‘staff’ and ‘capacity’ as key concepts are linked with platform and training themes). At the same time, the focus is also on enhancing clients’ holistic knowledge on community-based innovation:

“[The Learning & Practice Manager] is not only responsible for showing clients how to use [the platform], but also to help them to plan community engagement strategies and methodologies” (Operations Manager, Nexus).

Furthermore, newsletters, webinars and the company blog are also used to share best practice case studies with clients, aimed at educating and motivating clients to use the platform better. In addition, the website provides primers including frameworks and tips for practicing online engagement. In enhancing client experience, Nexus is very responsive in product
development and platform upgrades. The emphasis here is on co-developing product with clients by involving clients to inform the back-end product development. A Nexus executive shared,

“We are having conversations with clients to understand what aspects of the product can be developed further, and also involving clients in user testing for some new products” (Chief Practice Officer, Nexus).

In this way, Nexus gathers ideas for new product tools and software upgrades through client feedback, and then co-tests and validates these with clients as they are being built (the client theme comprises ‘product’ and ‘feedback’ as concepts is closely connected with the themes develop and project that contain ‘ideas’ and ‘tools’ as concepts). Further, Nexus also employs consultants to get input from clients on improving the front-end user experience on the platform (the client theme has ‘product’, ‘feedback’, ‘user’ and ‘experience’ as key concepts).

**Market-oriented service capabilities**: These capabilities are deployed by Nexus at the organizational level through two client-centric practices: advocacy-based selling and driving collaborative value creation, with an overarching aim of developing and expanding the market for online community engagement by directly reaching out to senior-level executives in client organizations. These, in turn, help reinforce the effect of Nexus’ marketing capabilities, to help overcome client organizational-level barriers (Part C2 – the theme engagement with concepts ‘people’ and ‘level’ is connected to the organization theme).

As part of advocacy-based selling, Nexus executives are involved in regular conversations with senior leaders to inform them of the rationale behind online community engagement. Besides, Nexus’ executives talk at several public sector conferences to build awareness on the potential of community engagement (note ‘involved’, ‘conversation’, ‘level’, ‘people’, ‘councils’, ‘talk’ are key concepts within the engagement theme, closely connected to the awareness theme containing ‘informed’ as a concept). The focus in these talks is on
advocacy for broader online engagement practice rather than Nexus’ technological offering (the engagement theme contains ‘talk’ and ‘practice’ as key concepts):

“[Nexus founders] not just talk [about the product] but about community engagement in general... this gives exposure to managers and senior staff to the benefits and value of engagement” (Senior Community Engagement Officer, Client H)

Nexus’ positioning as an advocate for community engagement is also evident on their website which predominantly features information on generic online engagement practice through articles, opinions and primers, as opposed to selling their products. Nexus also facilitates events for industry professionals with a focus on improving the practice of online engagement across the industry. Besides, the fact that the company is a certified B-Corp – a new type of corporation that uses business as a means of solving social problem – is reflective of its strategic commitment to community engagement. In this regard, Nexus is driven by a mission to:

“....improve the level of community involvement [...] by voluntarily meeting higher standards of transparency, accountability and performance, [and assessing] how our practices impact our employees, our community, the environment, and our customers”

(Nexus company website)

Moreover, Nexus’ Sales Managers see aligning value with clients as their main role, and focus on driving collaborative value creation over the long-term. They work with clients only after having a conversation with senior level staff about the value-creating opportunity in online community engagement (concepts ‘conversation’, ‘people’ and ‘level’, ‘councils’ in the engagement theme is closely linked with the online theme comprising ‘opportunity’):

“Within the organization, our aim is not to sell but to find that value alignment first - to make sure that they are the clients we want to be working with and they want to be working with us - that’s where the magic happens” (Client Engagement Manager, Nexus)
To achieve this, the sales process is geared to talk to potential clients about the opportunities for Nexus’ platform to add value in not just driving operational efficiency but also in building relationship and trust with the community (the engagement theme with concept ‘talk’ is closely connected to the concepts ‘opportunity’ in the online theme). Value is thus created for all parties:

“Nexus needs to ensure that clients use the platform well – that will allow them to get more value out of it, and thus Nexus will get better commercial outcomes. On the other side, Nexus wants them to engage better, because it is better for the community too.” (Operations Manager, Nexus)

Effect of co-creation capabilities: Our results till now show that co-creation capabilities are at the core of both technological and marketing capabilities, and form the link between the two (Part C connects Part A with Part B). Specifically, it becomes evident that product-oriented service co-creation capabilities directly enable the implementation of Nexus’ technological capabilities, and helps lower project-level barriers to effective utilization of its product by addressing the competency gap and workforce constraints among clients. On the other hand, market-oriented service co-creation capabilities help reinforce Nexus’ marketing capabilities, and are the key to enabling clients overcome organizational barriers driven by the lack of organizational buy-in and a strategic framework for online community engagement.

Further analysis reveals an additional effect of co-creation capabilities. Through its influence on technological capabilities (and project-level barriers), product-oriented service capabilities deployed at the project level also facilitate the implementation of marketing capabilities, thus playing an additional role in overcoming organizational barriers to community-based OI. We earlier discussed the role of Nexus’ marketing capabilities in advocating the value of online community engagement to senior leaders in client organizations.
Adding to this, Nexus has been able to leverage its product-oriented service capabilities, to also enhance its marketing capabilities. They achieve this by accessing and influencing senior-level executives through the project staff (Part C2 – concepts ‘council’, ‘level’, ‘people’ in the engagement theme is closely connected to project and site themes with ‘staff’ as a key concept).

Nexus takes advantage of its multiple client service touchpoints at the project team level as an avenue to serve this end. For example, it uses client roundtables and masterclasses as forums to advocate the need for online community engagement to be viewed as a strategic function. The company website and blog also provide access to a whole range of research and media articles, opinions and primers to not only increase the awareness and expertise of project staff and site administrators on the platform, but also to inspire and motivate them through information on best practices (Part C2 – the ‘practice’ concept in engagement theme is closely linked with the awareness, project and site themes with ‘admins’, ‘staff’ and ‘capacity’ as key concepts). As a result, in many cases, project staff grows passionate about online community engagement, and more often than not, sells it to their organization, as this client confirmed:

“We share the best practice shared by Nexus to other areas in the council – to spread awareness and the value of online engagement” (Corporate Strategic Planner, Client F)

In this way, Nexus leverages its product-oriented service capabilities deployed at the project level, and the positive impact this has on technological capabilities (and project-level barriers) to overcome organizational barriers to online community engagement among clients:

“We adopt a bottom-up approach to reach out to senior executives by educating and convincing the managers and administrators of the value of good online engagement….so they can take it up with their seniors” (Operations Manager, Nexus).
5. Intermediary capability-portfolio framework for client engagement

In this section we ‘enfold’ our induced findings with existing literature (Eisenhardt, 1989). Drawing on co-creation literature and S-D logic of marketing, we develop an intermediary capability-portfolio framework for client engagement to enable community-based OI (Figure 3). The model depicts the set of client engagement capabilities of intermediaries, and the process through which they deploy these to build client capacity in community-based OI.

We find that three intermediary capabilities - technological, marketing and co-creation capabilities are deployed to facilitate clients in overcoming barriers to community-based OI. Strategy literature posits that technological capabilities reflect the organizational capacity to employ technologies to create value (e.g., Afuah, 2002) and develop a competitive advantage (e.g., Song et al., 2005). Technological capabilities are the key for intermediaries to develop the digital platform tools and functionalities in order to host and engage online communities for OI. In intermediaries providing software-as-a-service (SaaS), the ease of access and customizability of the platform, along with the convenience of not having to maintain traditional business hardware and software, offers a superior value proposition for clients from a technology perspective. This makes the development, maintenance and customization of online community projects particularly efficient and effective for clients, enabling them to overcome project-level barriers such as the lack of skills and workforce capacity for digital engagement.

Marketing capabilities of intermediaries are also important in facilitating community-based OI. They are the organizational capacity to serve particular customer groups (Day, 1994), allowing organizations to create relationships and use market knowledge in a beneficial way (Spanos & Lioukas, 2001) to develop a strategic advantage in the market (Wilden & Gudergan,
In OI intermediaries, this represents the ability to build awareness of the value and potential of digital engagement as a strategic, organization-wide undertaking among (potential) clients, so as to create the market for online community-based innovation. Marketing capabilities are critical to help clients overcome organizational barriers driven by the lack of buy-in from senior executives, and the absence of a strategic framework for online community-based OI.

It is co-creation capabilities, however, that form the core of both technological and marketing capabilities of intermediaries, by deploying client-centric services to integrate the two. Co-creation capabilities are strategic capabilities that enable an organization to co-create value in service exchanges, forming the basis for sustaining a competitive advantage (Lusch et al., 2007; Madhavaram & Hunt, 2008). This notion of co-creation is grounded in the service-dominant (S-D) logic of marketing (Vargo & Lusch, 2004, 2016) and the strategic marketing literature discussing how firms can leverage input from external value chain entities to co-create value (Prahalad & Ramaswamy, 2004; Normann & Ramirez, 1993). Co-creation capability accentuates commitment for collaboration between all parties in co-creating value via service-oriented processes (Beverland et al., 2007; Payne et al., 2008; Svensson & Grönroos, 2008).

Our results indicate that OI intermediaries need to deploy co-creation capabilities to involve clients in strategically co-developing both the product and market for online community engagement. Co-creation capability as such is complex both in its internal composition, and its relationship with technological and marketing capabilities. In terms of composition, co-creation capability is made of two kinds of service-centric capabilities: product-oriented service capabilities and market-oriented service capabilities, which the intermediary deploys through client service processes, in order to co-create product and market value respectively as the basis of its strategic advantage. In sync with the S-D logic literature, we conceive co-creation capability as a higher-order capability comprising of a portfolio of strategic capabilities (Karpen
et al., 2011). Specifically, the four underpinning client-centric processes that we identified in the earlier section - personalizing client services, building client peer networks, fostering client skills and expertise, and co-developing product with clients - can be viewed as microfoundations of product-oriented service capabilities. This indicates that product-oriented service capabilities can be seen as a portfolio of four capabilities – individuated, relational, developmental, and empowered service capability. In a similar vein, based on the client-centric microfoundations of advocacy-based selling and driving collaborative value creation, market-oriented service capabilities can be said to comprise two capabilities - ethical and concerted service capabilities.

In relation to product-oriented service capabilities, the microfoundation of personalizing client services with a focus on understanding and acting based on individual client needs and capacities underpins individuated service capability (Lusch et al., 2007; Payne et al., 2008). As value is subjectively perceived and individually determined (Holbrook, 2006), there is a need to move toward an “experience of one” (Prahalad, 2004, p. 175) as the basis of value co-creation with clients. Relational service capabilities is an organization’s ability to deliver enhanced service by building psycho-social relationships with customers (Schneider & Bowen, 2010) to result in the co-creation of value for all stakeholders (Kowalkowski, 2011). This is manifested in the intermediary’s client-centric process of building client peer networks that facilitates an environment conducive to collaborative relations and meaningful dialogue (Ballantyne & Varey, 2006; Lusch et al., 2006). The resulting social and emotional connections help clients bond and identify with peers and the intermediary (Karpen et al., 2011; Varey, 2008).

Fostering client skills and expertise is a microfoundation of the intermediary’s developmental service capability – the ability to assist its customers’ competence development (Beverland et al., 2007; Payne et al., 2008), by sharing knowledge and experience (Frow & Payne, 2011). Through these processes, intermediaries support value co-creation with a focus to
“[…] make not only their offerings more intelligent but their customers more intelligent as well” (Normann & Ramirez, 1993, p. 69). Finally, by co-developing product with clients, the intermediary is able to leverage client inputs to co-produce offerings that offer reciprocal benefits and mutual betterment (Lusch et al., 2007; Normann & Ramirez, 1993). This microfoundation underpins the intermediary’s empowered service capability, which is the ability to enable customers to shape the nature and content of the offering (Ordanini & Parasuraman, 2010; Svensson & Grönroos, 2008) and have control over value co-creation (Vargo et al., 2008).

In terms of market-oriented service capabilities, the practice of advocacy-based selling with its focus on building awareness on the holistic value-creating potential of online community engagement, offered as a service not only to existing clients but across the whole industry is a microfoundation of ethical service capability (Abela & Murphy, 2008; Karpen et al., 2011). When intermediaries incorporate social and sustainable dimensions of its product offering into its marketing conversations, it helps build long-term, trust-based partnerships with clients (Gounaris, 2005; Laczniaik, 2006). Finally, concerted service capability is critical to facilitating coordinated marketing and service activities to help value network partners achieve a well-aligned co-creation process (Beverland et al., 2007; Flint & Mentzer, 2006). This is evident in the microfoundation driving collaborative value creation, through which the intermediary acts as a nodal firm to orchestrate systemic value co-creation between clients and their online customer communities forming an “experience network” (Prahalad & Ramaswamy, 2004). The role of sales and marketing shifts from persuasion-based to relationship-based selling with a focus on achieving value alignment between all parties involved (Sheth & Sharma, 2008).

Besides being a complex, higher-order capability with a portfolio of constituent capabilities, co-creation capability also reinforces the intermediary’s technological and marketing capabilities (and project- and organization-level client barriers) in complex ways. In
particular, product-oriented service capabilities, deployed at the project level, allow the OI intermediary to better implement its technological capabilities to not only co-produce a more innovative technological product for clients, but also build their capacity in utilizing the technological product more effectively and efficiently (Payne et al., 2008). Thus, product-oriented service capabilities help clients overcome project-level barriers to community-based OI. Further, by viewing clients as co-creators of value (Madhavaram & Hunt, 2008), and promoting at the organizational level how sustainable value can be co-created through online community engagement, market-oriented service capabilities also help advance market-oriented thinking (Kohli & Jaworski, 1990). In this way, this co-creation capability reinforces the intermediary’s marketing capabilities and enables overcoming organizational barriers to community-based OI.

Moreover, we uncover that intermediaries can also leverage product-oriented service capabilities and their positive effect on technological capabilities (and project-level barriers) to further reinforce its marketing capabilities. By involving clients in the technology development process, making the technological platform easy and efficient to use, fostering skills for optimal utilization of the platform, and developing social relations among and with clients, intermediaries can motivate clients to genuinely embrace online community engagement. When intermediaries are able to facilitate clients’ own value creation processes (Normann & Ramirez, 1993), add to their pool of resources and competences, and/or allow them to utilize resources and competences more efficiently and effectively (Payne et al., 2008), the positive impact this has on project-level staff can trigger a “bottom-up” influence on senior-level people at client organizations. Thus, besides directly influencing technological capabilities (and project-level barriers), product-oriented service capability also has a reinforcing effect on marketing capabilities, thereby playing an additional role in overcoming organizational barriers to community-based OI.
6. Discussion and conclusion

Using an exploratory case study, we uncover the capabilities online intermediaries deploy when engaging with clients, and how these help overcome challenges to community-based OI. In doing so, we add to the OI literature by moving away from contests and tournaments for technical problem-solving that have been the focus of prior work, to address the role of intermediaries as “customer community operators” (Prandelli et al., 2008; Sawhney et al., 2005). We advance OI literature by integrating the research on co-creation, S-D logic of marketing and the resource-based view of the firm to investigate how OI intermediaries can enable clients to implement community-based OI. Our main contribution is an emergent theoretical framework of the intermediary capability-portfolio required to support clients in overcoming the identified organizational and project-team level barriers to conducting online community-based OI.

We find that intermediaries deploy crucial technological, marketing and co-creation capabilities to provide quality engagement with seekers. By helping clients deal with internal barriers to online community engagement both at the organizational and project level, these capabilities play a key role in overcoming core rigidities (Leonard-Barton, 1992). These findings support the proposition that processes supporting capacity building for community-based OI often lie at the inter-organizational level (Verona et al., 2006). We reveal that marketing and technological capabilities are important for intermediaries to help clients overcome project-level and organizational barriers. Technological capabilities are the key for the development of a sophisticated virtual platform to host the community, and marketing capabilities are required for creating and expanding the market for online community-based OI. However, co-creation capabilities play an even more critical role by acting as a higher-order capability comprising a portfolio of product- and market-oriented service capabilities, which further reinforce the intermediary’s technological and marketing capabilities in complex ways.
We find that these co-creation capabilities are central to implementing client-centric services through which intermediaries can more effectively co-develop both the product and market for online community engagement. The focus of these services go beyond offering mere technology-focused inputs to providing customized support, building strong relationships and sharing knowledge and expertise with clients. A key implication is that, despite the importance of technological capabilities, online intermediaries are more than just “virtual” technology platform providers (Verona et al., 2006). Their co-creation capabilities in “face-to-face” client service provision are just as, if not more, crucial in the strategic implementation of community-based OI.

This emphasis on the role of co-creation and service-oriented capabilities is in line with Howell’s (2006) view that innovation intermediaries not only provide immediate one-off services to clients, but can also build long term ‘relational’ innovation capabilities. Thus, intermediaries can play a more involved, proactive role beyond technology or knowledge transfer as originally conceived in the literature (e.g., Hargadon & Sutton, 1997). This insight stresses the role of “social integration mechanisms” as the key to how “virtual knowledge brokers” facilitate clients’ absorptive capacity (Verona et al., 2006; Zahra & George, 2002). In this way, co-creation capabilities are core to the evolution of intermediaries from technology platform providers into knowledge intensive business services (Diener & Piller, 2013).

This also echoes the notion of ‘open service innovation’ (Chesbrough, 2011a, 2011b), which reinforces the need to apply a service-oriented co-creation logic by collaborating with customers throughout the innovation process. In this context, we have shown the potential of the concept of co-creation and the emerging S-D logic to contribute to a better understanding of how co-creation capabilities of intermediaries can help clients overcome internal challenges and build more capacity for community-based OI. In doing so, we respond to previous calls to integrate these service marketing theories to examine service-related aspects of OI (e.g., Randhawa et al.,
2016), and also align with early attempts to investigate service innovation from a S-D logic perspective (e.g., Ordanini & Parasuraman, 2010; Verma et al., 2012). Future research can further draw on the concepts derived from co-creation and S-D logic, to investigate the role of co-creation capabilities of intermediaries in enabling community-based OI for their clients.

From a managerial perspective, our insights are useful for intermediaries in developing and deploying capabilities and client engagement practices, so as to build client capacity in community-based OI. Focusing on co-creation capabilities is crucial to get to know clients better and deploy service-oriented practices that enable holistic value co-creation. Along with technological and marketing capabilities, co-creation capabilities are critical to help clients overcome internal challenges and achieve knowledge integration both efficiently and effectively (Colombo et al., 2015; Sawhney et al., 2003; Sawhney et al., 2005; Verona et al., 2006). In today’s networked and service-led environment (Randhawa & Scerri, 2015), honing capabilities in “face-to-face” customer co-creation is as pertinent as “virtual” technology platform development for intermediaries to support clients in implementing community-based OI.
Note: The concepts (dots) and themes (circles) comprise words that represent challenges faced by clients. The distance between themes and concepts denote how closely they are related. Semantically closely related themes (and concepts) were interpreted and aggregated into broader categories to form barriers to community-based OI (Part A,B,C,D).

**Figure 1: Clients’ internal barriers to community-based OI**

A. Lack of buy-in from senior executives for online community engagement
B. Lack of strategic framework for online community engagement
C. Competency gap in online community engagement
D. Staff capacity issues for online community engagement

Note: The concepts (dots) and themes (circles) comprise words that represent processes that underpin intermediary capabilities. Semantically closely related themes (and concepts) were interpreted and aggregated into broader categories to form relevant capabilities [Part A, B and C (C1 & C2)].

**Figure 2: Client-oriented capabilities of the OI intermediary**

A. Technological capabilities
   - Product-oriented service capabilities
   - Market-oriented service capabilities
B. Marketing capabilities
C. Co-creation capabilities
   - C1 Product-oriented service capabilities
   - C2 Market-oriented service capabilities
Figure 3: Conceptual framework - Intermediary capability-portfolio for client engagement for community-based OI
### Table 1: Data inventory table

<table>
<thead>
<tr>
<th>Data sources</th>
<th>Nexus</th>
<th>Client organizations</th>
</tr>
</thead>
</table>
| **Interviews** | 19 Nexus interviews  
(8 initial interviews + 11 follow-up interviews) | 18 client interviews |
| List of people interviewed at Nexus | List of people interviewed | Year of commencing online community innovation projects | Level of engagement in online community innovation (As evaluated by Nexus's client scoring criteria) |
| Number of times interviewed | Client organization |  |
| Chief Practice Officer / Founder | 4 | Client A  
Community Engagement Coordinator | Sep-10 | Excellent |
| Chief Technology Officer / Founder | 3 | Client B  
Stakeholder Engagement Coordinator | Mar-13 | Excellent |
| Sales Manager | 2 | Client C  
Communications & Marketing Coordinator | Feb-10 | Excellent |
| Client Engagement Manager | 2 | Client D  
Stakeholder Engagement Coordinator | Jul-15 | Excellent |
| Learning & Practice Manager | 3 | Client E  
Community and Corporate Planner | Mar-16 | Excellent |
| Client Experience Manager | 2 | Client F  
Corporate Strategic Planner | Jul-10 | Excellent |
| Head - Product Development | 1 | Client G  
Community Engagement Coordinator | Feb-16 | Excellent |
| Operations Manager | 2 | Client H  
Senior Community Engagement Officer | Jul-11 | Excellent |
| Client J  
Community Engagement Officer | | Client I  
Media & Communication Coordinator | Apr-15 | Average |
| Client K  
gram Leader Corporate Communications & Marketing | Apr-10 | Client L  
Community Engagement Officer | Apr-11 | Average |
| Client M  
Manager Community Services & Development | Jun-12 | Client N  
Economic & Tourism Development Leader | Jun-14 | Average |
| Client O  
Strategic Planning Coordinator | Jul-13 | Client P  
Community Engagement Coordinator | Dec-14 | Poor |
| Client Q  
Media & Communication Officer | Sep-11 | Client R  
Media & Communication Coordinator | Jul-12 | Poor |

#### Example observational data
- Past and ongoing online community innovation projects

#### Example archival data
- Best practice client case studies
- Client ‘scoring sheet’
- Nexus website, blog and press releases
- Client interview videos
- Community engagement policy documents
- Client websites

#### Other data
- Follow-up emails
- Informal conversations
<table>
<thead>
<tr>
<th>Type of barrier</th>
<th>Client barriers</th>
<th>Example quotes</th>
</tr>
</thead>
</table>
| 1 Organizational barriers | Lack of buy-in from senior executives for online community engagement | “Technical people in the council see themselves as experts and don’t see the need to invite ideas from outsiders” (Senior Community Engagement Officer, Client H)  
“Our senior executives are open to using it, they are not fearful of engaging with the community, but some council leaders are very skeptical of online community engagement” (Corporate Strategic Planner, Client F).  
“Our CEO is very supportive of community engagement as a philosophy. [We] see community engagement as a core activity while other councils view it as a discretionary activity” (Community Engagement Coordinator, Client G). |
| | Lack of strategic framework for online community engagement | “The focus tends to be on involving the community and not as much on empowering the community” [emphasis added] (Media & Communication Officer, Client Q).  
“There is often a culture that community engagement is not core to everybody’s role, [so] people tend to view community engagement as a secondary job” (Manager Community Services & Development, Client M)  
“There is no agreed strategic framework to do community engagement […] leading to inconsistency in project approach - some do what the minimum requirement is, while others go above and beyond”(Economic & Tourism Development Leader, Client N).  
“To undertake better community engagement, councils need to engage in a strategic planning exercise on what the council needs to engage with their community for, and link this to their annual budget and delivery exercise.”(Sales Manager, Nexus) |
| 2 Project-level barriers | Comptency gap in online community engagement | “People sometimes do not have the skills to use or access the platform; not all of them are as computer literate” (Corporate Strategic Planner, Client F)  
“There is lack of skills among project team staff to use [the platform], although it is a simple system to use, due to which the load falls on the core engagement team”(Stakeholder Engagement Co-ordinator, Client D)  
“There is a gap in [the staff’s] higher-level understanding of online community engagement methodology and practices”(Sales Manager, Nexus).  
“Staff has a lot of demands on their time and resources, and other teething priorities often distract from community engagement” (Manager Community Services & Development, Client M).  
“Staff tends to use the platform in a minimalist way due to lack of resources to dedicate to online engagement.” (Program Leader Corporate Communications & Marketing, Client K)  
“Not everybody see the value in engagement; engagement is perceived to take too much time and is seen as problematic”. (Senior Community Engagement Officer, Client H)  
“Most people are not interested in getting trained on it as they don’t have the time and don’t see it as a priority.” (Stakeholder Engagement Co-ordinator, Client D) |
| | Staff capacity issues for online community engagement | |
Nexus has been constantly improving their product, and are very well aware of the public market-oriented service.

> Bridging skill & competency gap / Building holistic Co-creation capability

We are a major voice for the philosophy, methodology and best practice in online Product-oriented service.

> Winning the buy-in of senior executives in client organizations

[We] provide more functionality in our product than most competitors do” (Operations Winning the buy-in of senior executives in client organizations.

> Convincing senior leaders in client organizations of the value of online community engagement

> Engaging in conversations with senior executives in client organizations

Intermediary’s capabilities and processes in helping clients overcome barriers to community-based OI

<table>
<thead>
<tr>
<th>Intermediary capability</th>
<th>Underlying processes/microfoundations</th>
<th>Effect of capability</th>
<th>Example quotes</th>
</tr>
</thead>
</table>
| 1. Technological capability | > Developing a sophisticated digital platform | Helps clients overcome project-level barriers by: | “Nexus has been constantly improving their product, and are very well aware of the public sector client needs” (Program Leader, Client K)
> Providing software-as-a-service | > Addressing skill & competency gap | “[We] provide more functionality in our product than most competitors do” (Operations Manager, Nexus)
> Improving back-end functionality | > Addressing workforce constraints / Improving staff capacity | “Everyone loves it…very simple to use, intuitive, fun and engaging software – this is a critical success factor for Nexus” (Community Engagement Co-ordinator, Client G)
> Customising tools, reports & data analytics | > Enhancing motivation to learn and utilize tools & functionalities | “We are a SaaS company in the purest sense of the term…we are a B2B SaaS company which means fundamentally you can take our business model and use it in any B2B SaaS environment. And if you want to dig deeper, we are a B2B company because we are predominantly focused on government agencies - that’s the way we have designed things for the client. […]The idea is if we make [the platform] easy and inviting for clients, they will start to use it more” (CTO, Nexus)
> Building an intuitive & user-friendly platform |
| 2. Marketing capability | > Market positioning as an advocate for online community engagement | Helps clients overcome organizational barriers by: | “We are a major voice for the philosophy, methodology and best practice in online community engagement” (Sales Manager, Nexus)
> Creating awareness of the need for online community engagement among (potential) client organizations | > Winning the buy-in of senior executives in client organizations | “Community engagement forms the core value and ideal for the company, and [Nexus’s] brand and positioning as an advocate for online community engagement places them in a unique spot for clients who are interested in this space” (Operations Manager, Nexus).
> Convincing senior leaders in client organizations of the value of online community engagement | > Lowering resistance to change & openness among senior leaders |
> Engaging in conversations with senior executives in client organizations | > Promoting a strategic outlook to online community engagement | “We have had to convince clients of the need for online community engagement” (Operations Manager, Nexus) |
| 3. Coordination capability | (i) Product-oriented service capabilities | Reinforces intermediary’s technological capabilities (and helps clients overcome project-level barriers) by: | “[The roundtable] develops a peer group where [we] are exchanging ideas and starting to work together” (Stakeholder Engagement Co-ordinator, Client B)
> Individuated service capability | > Personalizing client services | “The Learning & Practice Manager] is not only responsible for showing clients how to use [the platform], but also to help them to plan community engagement strategies and methodologies” (Operations Manager, Nexus).
> Relational service capability | > Building client peer networks | “We have conversations with clients to understand what aspects of the product can be developed further, and also involving clients in user testing for some new products” (Chief Practice Officer, Nexus).
| (ii) Developmental service capability | > Fostering client skills and expertise | Also enables intermediary’s marketing capabilities (and indirectly helps clients overcome organisational barriers) by: | “We adopt a bottom-up approach to reach out to senior executives by educating and convincing the managers and administrators of the value of good online engagement…so they can take it up with their seniors” (Operations Manager, Nexus).
> Empowered service capability | > Co-developing product with clients | “We share the best practice shared by Nexus to other areas in the council – to spread awareness and the value of online engagement” (Corporate Strategic Planner, Client F)
> Convincing senior leaders in client organizations of the value of online community engagement |
| 4. Market-oriented service capabilities | (i) Ethical service capabilities | Reinforces intermediary’s marketing capabilities (and helps clients overcome organizational barriers) by: | “I love the fact that Nexus actually understands community engagement and have experience in the area. I have listened a lot to what [Nexus founder] and others have to say” (Senior Community Engagement Officer, Client H)
> Advocacy-based selling | > Wining the buy-in of senior executives in client organizations | “We are having conversations with clients to understand what aspects of the product can be developed further, and also involving clients in user testing for some new products” (Chief Practice Officer, Nexus).
> Concerted service capabilities | > Driving collaborative value creation | “They are always open to receive calls and emails to provide ideas and share best practice” (Community & Corporate Planner, Client E)
> Co-developing product with clients | > Leveraging client relationships to create “bottom-up” marketing for online community engagement | “We are a SaaS company in the purest sense of the term…we are a B2B SaaS company which means fundamentally you can take our business model and use it in any B2B SaaS environment. And if you want to dig deeper, we are a B2B company because we are predominantly focused on government agencies - that’s the way we have designed things for the client. […]The idea is if we make [the platform] easy and inviting for clients, they will start to use it more” (CTO, Nexus) |
> Community Engagement Co-ordinator, Client G | > Lowering resistance to change & openness among senior leaders |
> Promoting a strategic outlook to online community engagement |

Table 3: Intermediary’s capabilities and processes in helping clients overcome barriers to community-based OI

We aim to get [the senior executives’] buy-in and hope that they would then trickle it down as a strategic initiative.” (Learning & Practice Manager, Nexus)

“[The Learning & Practice Manager] is not only responsible for showing clients how to use [the platform], but also to help them to plan community engagement strategies and methodologies” (Operations Manager, Nexus).

“Very often we see that the administrator grows passionate about it, and then more often than not, sells it to her organization” (Chief Technology Officer, Nexus)
References


