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UNLOCKING THE INNOVATION POTENTIAL IN LARGE FIRMS THROUGH TIMELY AND MEANINGFUL INTERACTIONS WITH YOUNG VENTURES

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Since the introduction of open innovation (OI), both firms and academics have widely acknowledged the potential of unlocking large firms' innovation potential through interactions with external parties, such as young ventures. These asymmetric partnerships are prone to several problems related to communication, roles and responsibilities, cultural differences, and operational issues, for which solutions and best practices have been proposed. However, all these solutions focus on the partnership itself; hence, on the "Get & Manage (GM)" stages. Unfortunately, the processes leading to a partnership; i.e., the "Want & Find (WF)" stages *before* the partnership, have largely been overlooked. The central thesis of this manuscript is that solutions that are implemented in the early "WF" stages have a positive impact on the outcomes of an asymmetric large firm — young venture partnership. We will show that attention to set-up and communication efforts in these early stages is needed, and discuss how our detailed explanations of such fruitful solutions contribute to the extant literature on asymmetric OI collaborations.

Keywords: Open innovation; asymmetric partnerships; young ventures; collaboration.

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Introduction

Today's competitive environment requires firms to continuously innovate in order to uphold a strong and competitive position in the marketplace. Therefore, firms have widely adopted open innovation (OI); i.e., the use of purposive inflows and outflows of knowledge to accelerate innovation, and expand the markets for external use of innovation, respectively (Chesbrough, 2006) as a means to improve their innovation potential. Among the possible external innovation partners for large firms are young ventures.

Young ventures, including both start-ups and scale-up companies with often less than 50 employees, are known to be innovative, have specialist expertise, and are often more agile than large firms to quickly explore new technologies. These traits of young ventures make them interesting parties for large firms to interact with as outsourcing responsibilities to young ventures may help large firms to accelerate their innovation potential and innovation outcomes significantly (Marion and Friar, 2012). As large firms have a scale advantage, they are more likely to be the leading partner in asymmetric partnerships (Oughton *et al.*, 2013). Therefore, this manuscript focuses on what large firms should do to improve the effectiveness of asymmetric partnerships with young ventures.

Some authors explored asymmetric partnerships between large firms and young ventures and proposed guidelines for improving them (Kalaignanam *et al.*, 2007; Minshall *et al.*, 2010; Sawers *et al.*, 2008). For example, Oughton *et al.* (2013) outlined guidelines for both large firms and young ventures. They mainly focused on the managerial implications *during* the partnership; hence, on the management of partnerships that have commenced. We value these guidelines as they can have a positive effect on the success of asymmetric OI efforts, and on a large firm's innovation potential.

However, insights in the stages leading up to a partnership are scarce and general (i.e., they do not take specificities of asymmetric relationships into account, and do not offer actionable recommendations on how to implement them). For example, Slowinski and Sagal (2010) recommend a solid process in stages before the partnership. Building on this seminal article, the central thesis of the present manuscript is that a solid process includes a timely set-up of meaningful interactions with young ventures. The present manuscript contributes to the extant literature by focusing on what constitutes a solid and timely process; i.e., what OI efforts of large firms in the preparation towards asymmetric OI partnerships solve problems occurring (later) in these partnerships. We provide several practical examples to illustrate how some exemplar firms found ways to focus their OI efforts timely to address issues that occur in later stages during asymmetric partnerships.

This manuscript is organised as follows. First, we present a synthesis of the academic literature on problems and suggested solutions in OI partnerships in general, and on asymmetric partnerships between large firms and young ventures in particular. Then, we present our qualitative research method and the findings. This manuscript concludes with a discussion of our findings, and how our multiple implications for managers in large firms aiming to innovate effectively with young ventures contribute to the extant literature on asymmetric OI collaborations.

Literature Synthesis

Want & Find, and Get & Manage OI problems and solutions

While managers started to implement OI and it became a mainstream organisational process, academics jumped in to identify implementation struggles and to propose approaches towards addressing them. For instance, Slowinski (2005) proposed a four-phase lifecycle for pursuing OI efforts, coined the "Want, Find, Get, Manage" model. This WFGM-model has been widely adopted by managers to structure OI practices in various industries. The model describes what stages an OI process should go through to fully exploit the opportunities that OI potentially offers to a firm's innovation potential. We will use the WFGM-model to structure problems and possible solutions during the different stages of OI efforts. The four stages can be categorised into two main phases: before the partnership (Want & Find (WF) stages), and during the partnership (Get & Manage (GM) stages).

Before the partnership

(1) Want - In this stage, firms should define what they want in order to meet their growth objectives. Therefore, firms should identify and prioritise their growth objectives, and define their specific areas of interest and the accompanying wants.

Slowinski and Sagal (2010) stress that communicating these wants is important to ensure that partners will be able to offer significant contributions. Other authors suggest the use of roadmaps to communicate the firm's wants to potential partners (Giannopoulou *et al.*, 2011; Minshall *et al.*, 2008; Oughton *et al.*, 2013; Slowinski and Sagal, 2010). Furthermore, Minshall *et al.* (2008) propose that firms use examples of their success stories from previous partnerships to illustrate what they are looking for.

(2) Find - Once the wants are identified and prioritised, firms should dedicate resources to find the necessary assets, such as a new emerging technology, to

fulfil a specific want. If the asset is not available internally, the firm should allocate resources to find the asset in the outside world.

The activity dedicated to finding new assets is often called scouting. For effective scouting to occur, firms need to decide in which market or industry they should start searching, which is not always evident (Brunswicker and Hutschek, 2010). If young ventures take up the search, the Find stage also offers challenges: when approaching large firms, young ventures often have trouble to find out how to initiate contact, or how to engage with the right people within the firm (Minshall *et al.*, 2008; Oughton *et al.*, 2013).

During the partnership

(3) Get - Once the desired asset is identified outside the firm, firms should take steps to obtain it through interactions with external partners in collaborative relationships. This get stage focuses on deal making and is important, as it is determinative in setting the boundaries for the future of the relationship. In this stage, it is important to manage expectations inside the firm, and between both partners to reach an agreement on these expectations (Slowinski, 2005).

In order to establish a successful partnership, it is essential for both partners to build a mutually trusting relationship through high quality and frequent communication (Kelly *et al.*, 2002). This mutual trust will allow both partners to share necessary information freely, which will benefit the partnership (Ring and Van de Ven, 1994). However, initial cautiousness and a lack of trust often drive firms to rely on strict contractual agreements to protect their intellectual property (IP) and competitive position. These strict contractual agreements often cause problems for young ventures in asymmetric partnerships. Although an overprotective IP approach of large firms can 'cripple' the OI strategy and partnership success (Alexy *et al.*, 2009), many large firms are still strict in their IP management, making it difficult for young ventures to maintain their independence, or to pursue opportunities outside the partnership (Oughton *et al.*, 2013). Furthermore, the dynamic nature of partnerships often makes it difficult for firms to anticipate changes in ownership, strategy and key personnel. Therefore, firms often find it challenging to manage IP in OI partnerships (Luoma *et al.*, 2010).

As a solution, Slowinski and Sagal (2010) and Giannopoulou *et al.* (2011) propose that firms need to follow a disciplined and structured approach and establish internal alignment first, and subsequently align with its projected partner aiming to create a win-win relationship. Other authors have suggested a more enabling approach with respect to IP (Alexy *et al.*, 2009), or first agreeing on overarching principles (Minshall *et al.*, 2008; Oughton *et al.*, 2013) to improve the deal-making process.

(4) Manage - Finally, the firm must manage the established alliance towards a successful relationship. In this manage stage, it is essential to make sure that the implementation of the collaboration and agreements made in previous stages receive sufficient attention.

A challenge shared in many firms is ensuring that team members of both partners understand who does what, what types of information should be exchanged, and how the exchange of information should be managed. Poorly defined roles and responsibilities cause confusion and misunderstandings. This confusion can result in power conflicts between partners as they may jump in to take charge; or both partners may refrain from taking charge paralysing the partnership due to a lack of leadership and ownership. Furthermore, a power imbalance affects trust in a partnership (Hancké, 1998; Oughton *et al.*, 2013). This power imbalance is often a direct result of the size difference between both partners, and the role selection that happens accordingly; the large firm often takes a leading role over the young venture (Hancké, 1998).

Regularly changing points of contact within a firm can also have a negative influence on partnership success. As employees frequently change jobs and different people are involved in different stages of a project, the points of contact within the large firm often change. This makes it difficult for young ventures to understand who to connect with, and how to engage with large firms throughout the partnership (Oughton *et al.*, 2013).

Speed is another frequently mentioned problem in this stage of asymmetric OI partnerships. Differences in company cultures may cause frustration within young ventures about the slow decision cycles in large firms (Oughton *et al.*, 2013). Furthermore, there are several operational problems that can occur in this stage of a partnership; for instance, problems related to the financial stability of young ventures (Oughton *et al.*, 2013), capacity, quality, limited knowledge, and scheduling changes (Kelly *et al.*, 2002).

Slowinski and Sagal (2010) propose to use a kick-off session to enable a constructive integration of management systems and a successful implementation of agreements made in the get stage. This kick-off session could also validate alignment between both partners and provide clarity about role distributions. Other authors propose to assign OI champions as a first point of contact within the firm to facilitate communications between the young venture and the large firm (Minshall *et al.*, 2008; Oughton *et al.*, 2013). Finally, Minshall *et al.* (2008) propose to focus on short-term revenue generation to address potential cash-flow problems of young ventures.

Our literature synthesis shows that most problems occur in the GM stages of OI efforts. Despite the fact that (Slowinski and Sagal, 2010) stress the importance of preparing for the partnership in the WF stages of OI, the extant literature mainly proposes solutions for the GM stages. We therefore need to obtain further insights into the OI efforts of large firms in the WF stages of OI, especially for asymmetric partnerships with young ventures. The present manuscript seeks to uncover large firms' OI efforts in these early stages to identify the "solid process" that Slowinski and Sagal (2010) refer to. We will show how these early solid efforts contribute to solving problems throughout all stages of OI asymmetric partnerships, thereby improving the likelihood of successfully unlocking a large firm's innovation potential.

Methodology

The present research aimed to obtain new insights into what problems large firms and young ventures encounter in their asymmetric collaborations. The main focus was on identifying successful approaches that large firms follow to address these problems. We used a grounded theory approach (Charmaz, 2014) in order to gain rich and qualitative insights. Multiple cases in different industries were studied in combination with additional firm documents, websites, and online portals to triangulate our findings, increasing the validity of our insights.

Sample

The unit of analysis for our study was the asymmetric partnership between a large firm and a young venture. This unit of analysis provided insights into the experiences within these partnerships, the problems that occurred, and the actions that were taken to address these problems. To obtain insights into these asymmetric partnerships, we investigated over 20 collaborative innovation projects between large firms and young ventures. The projects covered process, service and product innovations in various industries (i.e., fast moving consumer goods (FMCG), energy, and consumer electronics). Six large firms from The Netherlands and the United Kingdom (UK) participated in this study, varying in size between 4000 and 180,000 employees. All firms have strong global presence. Selection of the large firms depended on their apparent OI commitment (for example, through workshop participation and cases sharing at conferences) and their recent experiences with asymmetric collaborative innovation projects with young ventures. Large firm's experience with OI varied between 5–14 years, and experience

Table 1. Sample characteristics of the large firms.

Large firm	Industry	Country	Implemented OI around	OI online portal introduced around
Firm A	FMCG	UK/NL	2002	2012
Firm B	FMCG	NL	2012	2014
Firm C	Energy	NL	2001	2010
Firm D	FMCG	UK	2010	2013
Firm E	Consumer Electronics	NL	2003	2011
Firm F	FMCG	NL	2005	2013

Table 2. Sample characteristics of the young ventures.

Young venture	Industry	Country	Implemented OI around
YV A	Energy	NL	2013
YV B	IT	NL	2012
YV C	Durable Energy	NL	2014
YV D	Health	NL	2010

with OI online portals varied between one and four years. Table 1 presents the sample characteristics of the six large firms.

The four young ventures that participated in this research were active in the fields of energy, health, or information technology (IT) with applications in other industries such as the FMCG industry. Table 2 presents the sample characteristics of the four young ventures. The young venture perspective provided a comparative set of projects to analyse the asymmetric partnerships.

Data collection

We collected our data through interviews with 15 representatives from large firms ($N = 10$) and young ventures ($N = 5$). Furthermore, we studied company documents provided by the firms (such as internal guidelines for successful implementation of asymmetric collaborations), and analysed the firms' websites and online portals that were publicly available.

The semi-structured one-hour interviews explored 20 collaborative asymmetric innovation projects. The interviewees from the large firms were lead scouts and managers in the field of OI, research and development, marketing, or supply chain management. The interviewees from the young ventures were chief executive officers (CEOs) and founders. We deliberately chose the management level of the interviewees, as they were actively involved in the collaboration on a strategic and organisational level.

The topics covered in the semi-structured interview guide built on insights from previous studies, and focused on the firm's experiences and activities in the Want, Find, Get, and Manage stages of OI. Leading questions were avoided in order to minimise bias. Interviewing both large firms and young ventures generated insights in the efforts and experiences from both perspectives. All interviews were recorded digitally and transcribed.

Data analysis

We analysed all interviews using a two-step coding process following the grounded theory approach (Charmaz, 2014). First, we coded all interview transcripts using incident-by-incident coding. Next, we approached three interviewees for clarifications, and interviewed two additional persons. Hereafter, we used focused coding to code all transcripts. After a significant level of saturation in codes emerged, insights were drawn from these codes.

The insights from the interviews with the large firms were further triangulated with the websites of the large firms in our sample and shared company files. This procedure helped us to validate problems in asymmetric partnerships, and to identify the approaches that large firms undertake to address such problems. After triangulation, we externally validated these findings against the insights from the interviews with the representatives from the four young ventures.

Results

We used the insights that emerged from the analyses to outline problems typically emerging in asymmetric partnerships between large firms and young ventures, against the approaches undertaken by large firms to address them. Our analysis showed seven frequently occurring problems. Related to our central thesis, we will show how some "exemplary" large firms found ways to address these problems in their early OI efforts in the WF stages. Thus, we found that some large firms timely implemented solutions to problems that typically manifest in the GM stages. Next, we deepen our "exemplary" classification of the large firms in our sample, and discuss how their OI efforts towards asymmetric partnerships with young ventures provided solutions for the problems occurring during these partnerships.

Timing of solutions to frequently occurring problems

The seven frequent problems in this study occurred throughout the four stages of OI efforts. Three problems occurred *before* the partnership (WF stages) and four

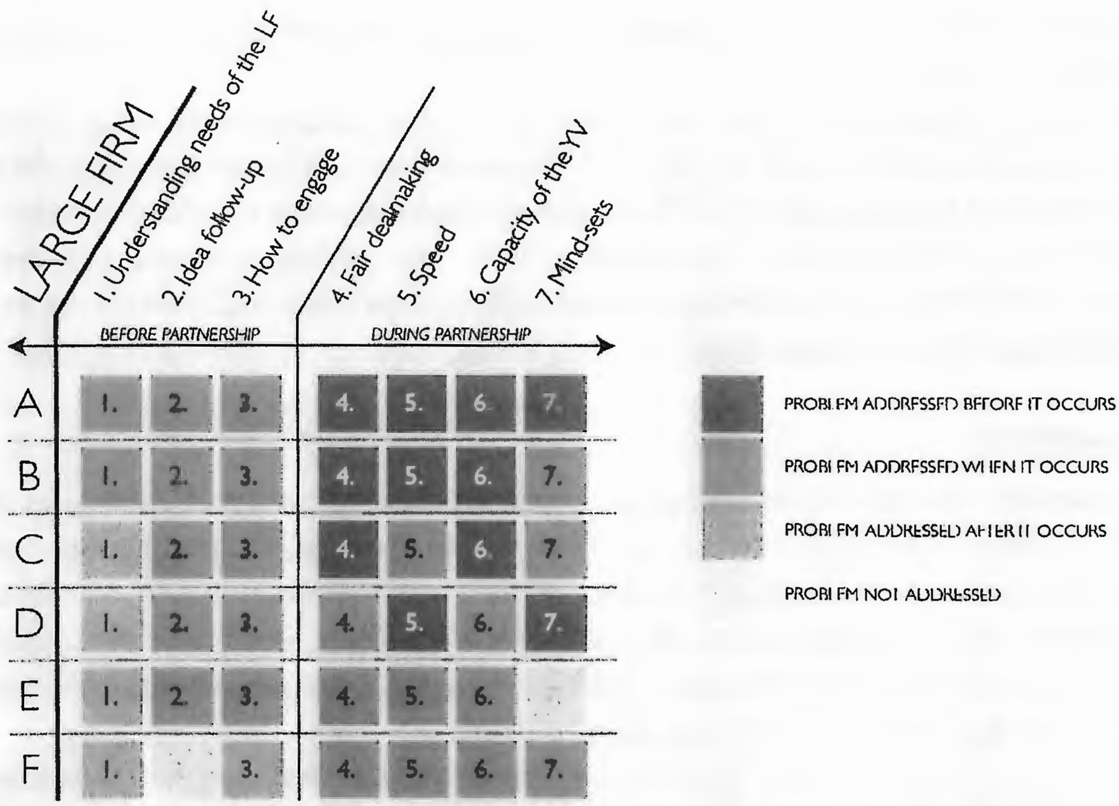

Fig. 1. Timing of solutions to the seven collaboration problems.

problems occurred *during* the partnership (GM stages). We will discuss how the large firms in our sample approached these problems, and what actions they took to solve them.

Not every partnership problem was solved at the moment that it occurred: some firms addressed them before the partnership had commenced (in other words, these firms anticipated on the problem). To understand the timing of the efforts undertaken to solve frequently occurring problems, see Fig. 1. This figure summarises the problems encountered, and shows whether the six large firms addressed a problem before it occurs, when it occurs, after it occurs, or whether they did not address the problem at all.

Solutions to problems occurring before the partnership commenced (WF stages)

Table 3 presents an overview of the three main problems that large firms and young ventures experienced in the stages before the partnership commenced, and the efforts undertaken to solve these three problems. Proof quotes from the interviews illustrate replications of problems and solutions acknowledged in the literature, which validate our results. Table 3 also highlights how our findings

Table 3. Problems occurring before the partnership (WF stages) and solutions.

PROBLEM	(1) Understanding the needs of the large firm	(2) Idea follow-up	(3) How to engage
Category	Communication	Operational	Communication
Definition	Many large firms communicate their needs poorly, making it difficult for young ventures to understand how they can contribute to large firms.	Not all firms are proficient in following up on ideas and proposals submitted by young ventures.	It is unclear to young ventures how they can engage with large firms and with whom they should engage. Even for employees who are responsible for OI it is unclear with whom an interesting young venture should engage.
Proof	*We tried multiple times to offer proposals to the large firm. And in our opinion they were really good and really fitted the company. But we never received a reply. So I have been thinking: Why is that? Well apparently that means that we do not really understand how people within that firm think. — CEO of a young venture*	*If someone approaches us with an idea we usually kill it immediately. That's a waste, right? We shouldn't do that. We don't kill the ideas intentionally, but we just don't have any room in our business focus, in our budgets to follow-up on such ideas. — OI manager in large firm F*	*I often find really nice things that I want to introduce to the large firm, but I really don't know whom I should contact and where I should go. — OI supply chain manager A in a large firm*
Link to existing literature	Communicating wants is important (Slowinski and Sagal, 2010)	—	How to engage (Oughton *et al.*, 2013); How to get in (Minshall *et al.*, 2008)
Differentiation from literature	The existence of a problem is only implicitly acknowledged in literature, as it mentions only the solution (i.e., the need to communicate wants). We underline that some firms still	Although many firms show ambitions in engaging in OI through asymmetric partnerships, not all are following up on the proposals that are submitted to them. This	Our data replicate and simultaneously extend current findings in the literature: not only do young ventures not know who to contact in the large firm, employees within the

Table 3. (*Continued*)

	poorly execute their communication of the wants, making it difficult for young ventures to understand what a firm needs.	'idea-box syndrome' shows a lack of proper commitment.	large firm are sometimes lost as well.
Category	Communication	Communication & operational	Communication & operational
Definition	In order to make young ventures understand the needs of large firms, large firms should provide clear communication on what their needs are. Ways to do this are by using roadmaps, success stories as examples and an overview of the wants. These wants should be communicated in detailed wants briefs, providing all available relevant information in order to properly inform the young venture.	Using an 'OI champion' as a first point of contact can help improve the follow-up because the OI champion can speak on behalf of the young venture internally. However, the most important solution is to organise and formalise follow-up processes in the large firms. In addition to this, firms can clarify this process and the related timelines by communicating through their websites.	By offering young ventures the opportunity to connect to specific employees instead of a general email-address, young ventures ca[n] easily find the right people to connect with for their proposal o[r] question.
Proof	*Our wants brief is very detailed. We often have two or three versions that vary in the level of detailed and confidential information that we can communicate responsible to other parties. — Lead Scout A in a large firm*	*Websites of large firms A, B and E provide clear communication about timelines and decision-making processes. Websites of firms A and B even clearly show who is involved in the process.*	*The website of large firm A offers the opportunity to engage with employees from the firm in order to receive coaching.*

Table 3. (*Continued*)

Link to existing literature	Create a roadmap/overview of wants within the company (Minshall *et al.*, 2008; Oughton *et al.*, 2013; Slowinski and Sagal, 2010); Use examples as success stories (Minshall *et al.*, 2010)	Use OI champion as first point of contact to communicate firms's needs, processes and culture (Minshall *et al.*, 2008; Oughton *et al.*, 2013)	
Differentiation from literature	The wants briefs should be as detailed as possible. Providing more detailed information about the wants helps young ventures to understand the scope of the project, what is required of them, and helps them to direct their efforts into making valuable contributions.	In addition to assigning 'OI champions' to mediate between large firms and young ventures and improving internal communication, large firms should organise and formalise their internal processes more elaborately and should organise commitment by allocating a yearly budget to follow up on viable proposals. Furthermore, communicating their processes externally helps young ventures to gain insight into the follow-up process and helps to improve understanding.	Providing a clear entrance on the large firm's online portal makes it easier for young ventures to connect. However, this only works if proper feedback is given in due time. Making it more personal by allowing young ventures to connect to a large firm's specific employees with specific expertise makes it even more appealing to engage. It furthermore improves commitment between both parties, increasing the chances of setting up successful partnerships.

contribute to the existing literature. We will describe these contributions to the literature in more detail together with additional proof quotes from the interviews.

Understanding the needs of the large firm

An unclear description of the large firm's needs drove misinterpretation problems. In order to successfully engage in an asymmetric partnership, young ventures needed to clearly understand the needs of large firms. Such understanding of the exact needs of large firms helped young ventures to offer the right propositions and focus their activities on addressing these needs. A lack of understanding of those needs made young ventures reluctant to invest time and resources into developing proposals for large firms that address their needs correctly.

Most large firms communicated their needs externally to some extent. However, differences were large. Some large firms limited their efforts to mentioning areas of interest, whereas more "exemplary" firms provided detailed briefs on specific projects or challenges. More detailed communication helped young ventures to offer valuable contributions to large firms. Furthermore, some large firms chose to only send out detailed information via so-called intermediaries or OI-connectors. In that case, these intermediaries chose whom to connect to, and whom to share their needs with. Other firms provided this detailed information on their company websites or on dedicated OI portals, free to access for anyone. These initiatives aimed to allow young ventures to take initiative in developing valuable and suitable propositions.

> *"The first thing I'd say you need to do is defining what you are looking for and be really clear about that." — OI manager A in a large firm.*

Idea follow-up

A frequent problem that emerged from our data was the internal follow-up on ideas within large firms. Many large firms offer a way for external parties, such as young ventures, to submit their ideas or proposals for collaboration. However, not all firms were equally proficient in following up on these submitted ideas. Some large firms had an internal process for evaluating and processing ideas, and for providing feedback to the submitter. Others admitted that they had no process for evaluating the ideas and that few of the submitted ideas were ever picked up.

> *"Well, we just did not get any reaction, or barely. They said: "It's interesting; we will get back to you." And then we never heard from them again." — CEO A of a young venture.*

Large firms that communicated their eagerness to collaborate but did not follow up on submitted ideas sent out contradicting messages. It was discouraging and unrewarding for young ventures to put their — often limited — assets towards developing proposals only to find out that their proposals were not properly reviewed.

Large firms showed different approaches towards addressing this problem. Apart from organising the follow-up processes internally, some firms also communicated their follow-up process externally. These "exemplary" firms communicated a timeline that ensured young ventures that they would receive feedback within a certain period of time, and provided more clarity by explaining the internal follow-up and evaluation process to inform young ventures of the next steps. For example, the website from large firm B showed a visual and textual explanation of its review process and expected feedback timeline. This information helped young ventures to trust the process and ensured them that the large firm would follow up on their proposals.

> *"It is key to get that process right so that young ventures are not just waiting and are clear about what your response is and how you are managing things. Because then they will want to come back and work with you again." — OI manager A in a large firm.*

How to engage

Most firms offered means for external parties to submit ideas or proposals for collaboration. This was usually done through the company website. However, it was often unclear for young ventures with whom to engage, or if they actually engaged with someone due to a lack of communication and information. This uncertainty made young ventures reluctant to contact large firms, as they did not know whom they were talking to and whether they were taken seriously. Moreover, this uncertainty made it difficult for them to pitch their ideas to the right people or department in the large firm.

Some large firms addressed this problem by "putting a face" on their OI efforts. The extent to which this was done varied. Some firms used one or two personal profiles to illustrate their internal OI support structure: the OI champions (as mentioned in Table 3). "Exemplary" firms, however, demonstrated a new approach and offered a wide variety of people that young ventures could contact for mentoring, coaching, information, or to submit ideas to. By showing what their expertise and responsibilities within the large firm are, it became easier for young ventures to evaluate whom to contact in order to achieve their goals.

> *"At some point we had about 30 people engaged in mentoring start-ups and that worked really well. And then those*

relationships naturally evolved in doing pilot projects together. And that worked very, very well. So we are changing the way we do innovation; innovation through collaboration." — Marketing strategy director A in a large firm.

Solutions to problems occurring during the partnership (GM stages)

Several problems occurred during the partnerships between large firms and young ventures. Hierarchy was a commonly known problem in such asymmetric partnerships. Differences in size, experience and resources often resulted in unequal relationships between large firms and young ventures. Large firms often assumed a power-differentiating role over the young venture, and acted accordingly. It frequently was tempting for large firms to take charge of the entire partnership, and prioritise their own needs over the needs of the young venture.

"The one thing that young ventures really don't want is to be dragged along. When they work with a larger company, they need to know that they can trust what's happening and that there is a credible process happening and that you're not just trying to ... I guess ... string them along or that you're not going to waste their time." — OI manager A in a large firm.

Although the large firms mentioned that they were willing to compromise in asymmetric partnerships with young ventures, none of them actually did so. They felt that creating more equal partnerships resulted only in a risk increase for the large firm, which was difficult to justify internally. From our analysis, we conclude that none of the large firms in our sample found a way to address this problem properly. The willingness is so far an 'empty gesture' and was not followed through in the large firms' OI efforts.

Four other frequently occurring problems that occurred during the partnership (i.e., in the GM stages), however, were adressed by large firms. Firms sometimes addressed these problems before they occurred (see Fig. 1). Table 4 presents an overview of these four problems and several useful solutions.

Fair deal making

Negotiating a fair deal between a large firm and a young venture was a challenge as young ventures often relied on one type of knowledge or product. This knowledge or product often became the core of the partnership, and in many cases, the large firm negotiated that the young venture was not allowed to use or exploit it outside the partnership. As a result, the young venture became fully dependent on

Table 4. Problems occurring during the partnership (GM stages) and solutions.

PROBLEM	(4) Fair deal making	(5) Speed	(6) Capacity young venture	(7) Mind-sets
Category	Culture	Culture	Operational	Culture
Definition	Large firms often negotiate strict deals regarding IP, exclusive use of the young venture's technology. Furthermore, deals are often not designed to freely follow the course of the alliance.	The differences in size and culture are clearly visible in the differences in decision-making time that young ventures and large firms need. The slow decision-making processes in large firms often slow the young venture down.	Young ventures have limited means (cash flow, team, knowledge). This limits the ways in which young ventures can contribute to the partnership.	Large firms often do not grasp the limitations of asymmetric partnerships with young ventures and are opportunistic in their engagement with young ventures.
Proof	*It always starts with a legal agreement. And we have a bunch of lawyers who make sure that the agreement offers us a significant benefit. We try to cover exclusivity rights and IP rights as much as possible. We are really good at that and of course that makes sense, but the things that make the agreement beneficial for us can scare off young ventures.— Project manager B in a large firm.*	*I've noticed things take longer now. The slow decision-cycles in the large firm definitely have an impact on our own speed. — CEO B of a young venture*	*In general young ventures do not have the capacity to supply large series after development. They have no factory, no capital, no quality control department; they just don't have the means to do large-scale manufacturing. — Project manager A in a large firm*	*We sometimes make the mistake of sticking with these young ventures for too long; we ask them: 'Build a demonstrator for us' and when that is successful and we do not yet have a supplier we ask them: 'build a 1000'. Instead we should say; 'you are really good in the early stages of NPD, in making a demonstrator', but we have to find another partner for the scale-up and manufacturing stages. For*

Table 4. (*Continued*)

				that we need a partner that is not innovative b just delivers quality, produces efficiently and reliable. — Project manager A in a large f
ink to existing literature	Managing IP (Oughton *et al.*, 2013); IP Paranoia (Minshall *et al.*, 2008); Volatility in partnership (Luoma *et al.*, 2010).	Slow decision cycles (Minshall *et al.*, 2008; Oughton *et al.*, 2013).	Size differences (Kelly *et al.*, 2002); Absorptive capacity (Oughton *et al.*, 2013).	Not understanding start-up (Minshall *et al.*, 2008) Technology readiness; Ignorance of start-ups (Oughton *et al.*, 2013)
ifferentiation from literature	Our findings highlight the need for flexibility in the deal-making process and following partnership in order to fit the flexible and volatile nature of the partnership, which is often subject to pivots.	Our data validate findings in existing literature and offers no differentiation.	Our data validate findings in existing literature and offers no differentiation.	Our data validate findings the existing literature a offers no differentiatio
ategory	Communication & operational	Operational	Operational	Operational
efinition	Using a structured and predefined partnership format, "exemplary" firms have simplified the deal making process, providing	By putting a fixed time on the partnership and agreeing on a predefined strict timeline, both parties are pressured to maintain speed. Furthermore, OI	By predefining the scope of partnerships with young ventures and providing additional capacity by means of knowledge and funds, large firms protect	By predefining the scope partnerships with youn ventures, large firms protect themselves fro partnering with young

Table 4. (*Continued*)

	more clarity and clear benefits for both parties.	champions are often employed by large firms to represent the young ventures internally and to stimulate and accelerate internal processes within large firms.	themselves against problems related to the limited means of young ventures.	ventures in the later stages of NPD.
Proof	Large firms A and B offer a 'pitch to pilot' program as a way of partnering with young ventures specifically, which provides clear boundaries to the scope of the collaboration. By using this format, the large firms create a transparent format for collaboration beforehand, which allows the young ventures to be fully aware of the scope, opportunities and risks regarding the deal they make.	*"Part of my job is to make sure that any internal decision making that's needed to capture a decision to partner happens as quickly as it can, and you don't end up going through a long period of internal decision making and more and more questions and more and more issues you have to resolve until eventually, you know, you just take too long so that the other side has just lost interest." OI manager A in a large firm*	Large firms A and B offer a 'pitch to pilot' program as a way of partnering with young ventures specifically. This program compensates for the capacities that young ventures might lack such as funds or people. Furthermore, the scope of the partnership is fixed and does not go beyond a pilot. Many issues related to the young venture's capacity only occur in stages after the pilot and are therefore prevented.	Large firm A and B offer a 'pitch to pilot' program as a way of partnering with young ventures specifically. This program commits to a pilot project but does not make any commitments beyond this stage. Hereby, the large firms protect themselves poor judgement and from engaging in more advanced stages of partnering for which the young venture might not be suitable.

Table 4. (*Continued*)

ink to existing literature	Agree on overarching principles first (Minshall *et al.*, 2008; Oughton *et al.*, 2013); Follow a disciplined and structured approach (Giannopoulou *et al.*, 2011; Slowinski and Sagal, 2010).	Use OI champion as first point of contact to communicate firm's needs, processes and culture (Minshall *et al.*, 2008; Oughton *et al.*, 2013).	Focus on short-term revenue generation to tackle cash flow problem (Minshall *et al.*, 2008).	Use OI champion as first point of contact to communicate firm's ne processes and culture (Minshall *et al.*, 2008; Oughton *et al.*, 2013).
ifferentiation from literature	The key difference with extant literature is the fact that the "exemplary" firms have predefined their approach and partnership format. This allows them to communicate it beforehand, thus providing more clarity towards young ventures. This transforms the solutions from a managerial solution into a communication solution.	In addition to assigning OI champions, some firms offer a predefined setup for partnerships with young ventures, following a strict timeline to ensure speed and results.	Solutions offered by the "exemplary" firms in our sample include providing the means (such as a budget) to compensate the limited capacity of young ventures within the partnership.	In addition to employing champions to protect t firms from opportunist behaviour in their partnerships, "exempla firms such as firms A a B have found a way to protect themselves fro this by not committing anything beyond a pilo project.

the partnership and its success. This was a major problem for many young ventures as engaging in these types of partnerships could make or break them.

In addition, asymmetric partnerships between large firms and young ventures often focused on developing radically new products or technologies, which are subject to trial and error, changes and pivots. These pivots could be so radical that initial agreements did no longer cover the scope of the project and needed to be revised. Some large firms were not open to discussing and adapting the initial agreements. This lack of flexibility put the young venture's efforts and IP rights at risk.

It was difficult for large firms to be more flexible in negotiating more 'open' agreements. Although this would allow the young venture to operate more freely inside and outside the partnership, it would put the IP and competitive advantage of the large firm at risk. Large firms were therefore reluctant to negotiate more open agreements.

> *An advantage of partnering with young ventures is that they are more likely to accept our terms. Because we can simply say: 'Well, we are this big and you are this small...' — Project manager A in a large firm.*

Large firms in our sample found different ways to deal with these problems. Some firms chose to stick to familiar approaches and negotiated strict agreements. However, they were sometimes willing to revise agreements once major changes occurred. Sometimes they also opened up some agreements once partnerships were discontinued or were finalised, to facilitate the continuation of the young venture's business.

Other "exemplary" firms were more assertive in their approach. They predefined a clear format for the setup of the partnership, including possible exit scenarios. This clear setup considered the needs of both the large firm and the young venture. For example, large firms A and B shaped their initial partnerships with young ventures into a pitch-to-pilot project.

Speed

Young ventures were agile to adapt to new developments, changes in the project, or to pursue new opportunities. Their opportunity-driven way of working made them quick to act upon important changes and developments. Large firms, on the other hand, were often slow in adapting to these changes. Because large firms were often driven by strategy, changes in the project often needed lengthy decision-making processes. These slow processes often meant that the young venture had to wait for approval of the large firm, delaying the initial speed of the project.

> *"I have noticed that in young ventures the speed is much higher, but I prefer that too. If people start talking about months, or years even, I get itchy. But in my environment that is totally normal." — OI manager B in a large firm.*

Some large firms addressed this problem by putting a predefined fixed timeline on the partnership. This timeline puts pressure on both ends of the partnership and helped to stimulate and accelerate internal decision-making processes in the large firm. Other firms chose to use 'OI ambassadors' to monitor and enforce timelines on both ends of the partnership in order to maintain a high speed. Large firm F, for example, assigned an OI manager who was strict in including the right parties at the right time in order to ensure a speedy process.

> *"I included all stakeholders from the beginning and told them when they had to make a decision beforehand. I literally said: first week of June you can decide on this; Monday this, Wednesday this, Friday that ... go! So, if you know who should be involved and when they should be involved, you can facilitate speed." — OI manager B in a large firm.*

Capacity of young venture

Young ventures are known for their inventiveness, creativity, and knowledge of radically new technologies. They are often specialised in a niche, which makes them an interesting collaboration partner for large firms.

However, young ventures often had limited resources. They had a small team, limited cash, and little knowledge beyond their niche expertise. Especially their limited cash and capacity caused problems in the partnership. Due to limited cash, the young venture was not able to (pre-)invest, while this was often necessary for the project. In addition, due to limited manpower, project expansion inevitably lead to delays as the young venture was not able to increase capacity for the project.

> *"When we are about to invest in large-scale manufacturing of equipment, for example, we review whether the partner is financially healthy, is able to supply the equipment and, preferably, whether the partner has a service network in place. It is an illusion to think that young ventures can compete with established companies in that sense." — Project manager A in a large firm.*

To address problems related to young ventures' size, capacity, funds and other resources, some large firms incorporated these issues in predefined partnership set-ups. These large firms provided funds and expertise to complement the young venture's assets in order to create a viable partnership. For instance, one "exemplary" firm implemented a format in which they provided funds during the partnership in order to support its further development.

Mind-sets

Many of the problems mentioned above could be attributed to a lack of experience, capacity and funds of the young venture, and by its eagerness to contribute. However, another problem was the mind-set of both parties.

First, young ventures were proud. They were eager to show what they know and what they are capable of. The downfall of this is that young ventures were often so proud that they did not admit that they were overloaded and needed help. They made promises that they could not keep and engaged in projects that they did not have the right skills for. This was a problem for large firms as they only realised the problem once the young venture started missing deadlines or delivered poor results.

> *"The young venture was too proud to admit that things weren't going so well and that they needed more time." — Project manager C in a large firm.*

Second, some large firms were sometimes opportunistic, and unwilling to grasp the limitations of asymmetric partnerships with young ventures. Large firms acknowledged the possible value in collaborating with young ventures but few of them considered potential pitfalls, as they tended to overestimate the young venture's ability to contribute to all aspects of OI projects.

> *"At first we thought that we could buy the first machines from the young venture that had developed it. And technically they could. But they did not have the means. So we might have been too optimistic, thinking that they could take on such responsibilities. We hoped they could, but that was a little opportunistic. So in fact, if we would have properly reviewed the situation we would have known from the start that we could not ask them to develop and supply the machines." — Project manager A in a large firm.*

Few firms were aware of their own opportunism. It was only by experience that some firms started to see what they were doing wrong. However, by using a predefined format for collaboration, the "exemplary" firms found ways to protect themselves from their own opportunism. Putting limitations on the scope of the partnership forced the large firm to re-evaluate the project, partnership, and next steps more formally, which helped them to consider how to engage and to collaborate with the young venture.

Large firm profiles

Our analyses showed that the large firms in our sample take different approaches towards addressing the problems that occur in asymmetric partnerships with young ventures. The most straightforward way to address them was to tackle a problem when it occurs. However, some "exemplary" firms took efforts to address these problems before they occur. These firms put significant thought into the possible problems related to asymmetric partnerships with young ventures, and were serious to make these partnerships work. We profiled the six large firms in our sample to illustrate the differences in their approaches.

We distinguish between three types of firms (see Fig. 1). Firms that addressed three or more problems beforehand can be considered "exemplary" firms. Firms that addressed one or two problems beforehand are "somewhat exemplary", and firms that did not address problems beforehand or failed to address problems were considered "non-exemplary" firms.

Exemplary large firms regarding young venture OI

Large firm A. Firm A sets the example and is most advanced in its OI efforts towards young ventures. This firm acknowledges that collaborations with young ventures require a tailored approach. Typical problems such as a lack of experience, funds or expertise are addressed beforehand by offering young ventures a predefined format for collaboration, in which the large firm provides budget, coaching and a clear goal to the young venture: a pilot project. Large-scale manufacturing is out of scope for initial collaborations, and so are problems related to a lack of knowledge on quality standards, or the capacity to manage and invest in large-scale manufacturing.

What is interesting to highlight is that most issues are addressed by clear and elaborate communications via a central portal. The portal differentiates among individual innovators, developers, and established technology companies; different types of young ventures that need tailored set-ups. Furthermore, this large firm offers mentorship in the areas of creativity, marketing and branding to support young ventures in growing their business beyond the initial partnership. We consider firm A "exemplary".

Large firm B. Firm B is relatively new to OI and follows best practices set by other firms. This firm shows dedicated OI efforts towards young ventures by offering a pitch to pilot program. The firm's efforts illustrate that they are serious about creating meaningful interactions with young ventures; hence, we consider this firm to be "exemplary" as well. Firm B analyses how other firms design their interactions with young ventures and aims to learn from these firms.

However, Firm B's pitch to pilot program is so far only a one-off initiative, whereas firm A has developed it into a continuous portal. Furthermore, communication about firm B's OI efforts are now spread over three different portals, which makes it difficult to find the right information. Overall, the efforts of firm B to address the needs of young ventures are clear, and we consider this firm "exemplary".

Somewhat exemplary large firms regarding young venture OI

Large firm C. Firm C focuses on venturing. The communication about OI is rather poor and the firm's needs are not communicated well. However, the venturing proposition addresses several issues related to asymmetric OI partnerships and caters to young ventures' needs. The firm strives to collaborate with young ventures while ensuring that the young venture remains independent. In addition, the venturing proposition offers a budget. Firm C has much experience with OI and venturing, and uses their experiences to improve the OI process, both in general and towards young ventures. They address some problems before they occur but could still improve significantly. We therefore consider this firm "somewhat exemplary".

Large firm D. Firm D offers one central portal to communicate its OI efforts. Although they do not communicate predefined set-ups for collaborations with young ventures, their internal efforts show that they are serious about making asymmetric collaborations work. Internal 'OI ambassadors' are assigned to mediate between the young venture and the firm to ensure a smooth and speedy process, while maintaining independence for the young venture. This firm addresses some problems beforehand, but could improve their timely communication towards young ventures significantly. Therefore, this firm is considered "somewhat exemplary".

Non-exemplary large firms regarding young venture OI

Large firm E. In general, Firm E can be considered a front-runner when it comes to OI practices. However, when specifically looking at OI efforts towards young ventures, this firm falls behind. It does not have a tailored process, nor does it clearly communicate its needs. Furthermore, only the R&D department collaborates with young ventures and fails to engage other functional departments, which causes many collaborations to fail despite all efforts and commitment. Therefore, young ventures are cautious to collaborate with firm E. The lack of engagement within the firm is the main problem for collaborations as it reduces progress in the project. Therefore, regarding OI with young ventures, we consider this firm to be "non-exemplary".

Large firm F. Large firm F has the ambition to engage in OI in general, and in asymmetric partnerships with young ventures, specifically. However, its OI efforts are currently limited to self-initiated searches for collaboration partners. Firm F puts little effort into communicating its OI efforts and ambitions to the outside world. They offer an email-address that can be used to contact the firm with ideas or proposals, but the firm lacks an internal structure and sufficient budgets to follow-up on these ideas or proposals. For young ventures, it is therefore difficult to initiate collaborations with this firm as they do not know the firm's needs and there is no clear point of entry. Firm F has a lot to improve and needs to translate its ambitions into action to become an appealing partner for young ventures. Therefore, we consider this firm and its current approach towards OI interactions with young ventures to be "non-exemplary".

Discussion

Our study contributes to the extant literature by investigating interactions between large firms and young ventures and through identifying how such interactions need to be timely and meaningful. Hence, it demonstrated the importance of a "solid process" (Slowinski and Sagal, 2010) and proficient homework before the collaboration truly commences. We further highlighted the importance of clear internal and external communication and information sharing (Enkel *et al.*, 2011; Kauser and Shaw, 2004). For instance, we showed how some "exemplary" large firms provide portals for young ventures with clear directions. Our main contribution is that we found that some firms have found solutions to common asymmetric collaboration problems before they may actually occur. These timely solutions are highly actionable and useful for any large firm aiming to collaborate with young ventures.

We showed that most large firms addressed OI problems when they occur, confirming findings in the extant literature on managerial solutions for OI problems during the GM stages. This approach makes sense as it enables large firms to estimate the scope of the problem, and to act upon it accordingly. Most of these problems were related to poor communication, and to differences in culture and size between both parties. In line with our central thesis, some large firms realised that in order to successfully collaborate with young ventures, they need to find new ways to overcome, or even prevent these problems. In short; they put more emphasis on the WF stages of their OI efforts; the stages *before* the partnership commenced.

These "exemplary" firms stood out because of their *partnership set-up*. They considered the limitations of asymmetric partnerships with young ventures, and addressed these limitations by (1) offering mentorships, (2) offering start-up funds, and (3) using pitch-to-pilot projects.

(1) Mentorship: "exemplary" firms made their employees available for mentorship and coaching to support the young venture in setting up the project and building their future, thereby compensating for the possible lack of expertise in the young venture;
(2) Funds: "exemplary" firms offer financial means that are needed for the collaborative project, thereby limiting the risk of financially paralysing the young venture; and
(3) Pitch-to-pilot projects: "exemplary" firms refrain from making commitments beyond the pilot stage, thereby protecting themselves from opportunistic behaviour and protecting the young venture from engaging in large-scale manufacturing processes beyond their grasp.

"Exemplary" firms differed from other large firms in terms of *communication*. These "exemplary" firms are more elaborate in their communication, and communicate more clearly what they seek in a partner, what kind of knowledge they are looking for, what kind of commitment they are willing to make, and who should be involved. This clear communication facilitates young ventures' understanding about the process they will be involved in, and the people they will be engaging with.

Using a predefined partnership set-up and elaborate communication are the result of serious efforts in the stages *before* partnerships commence. Yet, these

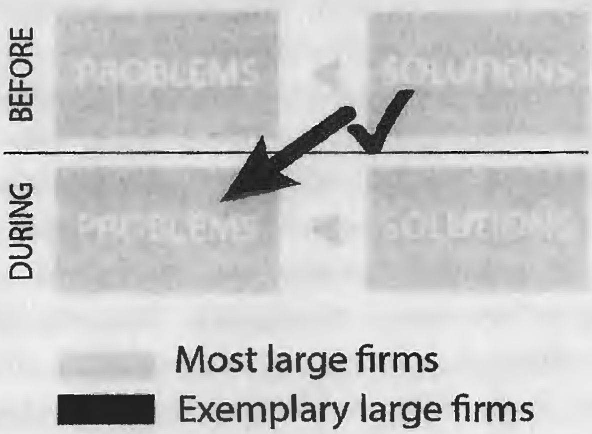

Fig. 2. Using OI efforts before the partnership to address problems during the partnership.

efforts address possible problems *during* partnerships. Our study clearly showed how "exemplary" firms implemented strategies early to prevent problems later from occurring. Hence, more elaborate and thoughtful OI efforts in the early stages of OI (WF stages) clearly improve the success chances of asymmetric partnerships with young ventures throughout the partnership (see Fig. 2).

Conclusion

Asymmetric partnerships between large firms and young ventures are subject to many problems. Differences in size, culture, resources and power make it difficult for both parties to interact successfully. Our study contributed to the literature by addressing calls for concrete solutions to problems in asymmetric partnerships, and by identifying opportunities upfront in the early stages leading up to these partnerships (WF stages). We identified "exemplary" large firms that addressed problems occurring both before and during the partnership by putting more effort on the early stages of OI efforts. Upfront homework and clear communication of goals and means were key instruments to build successful asymmetric relationships with young ventures.

Limitations and avenues for future research

Our research has several limitations that open up interesting avenues for future research. For instance, we only interviewed managers even though partnerships between large firms and young ventures also involve other stakeholders. Involving more stakeholders in future research may increase the validity of our findings, even though we deliberately chose the management level of the interviewees, as they are usually actively involved in the collaboration on a strategic and organisational level.

Another limitation may be that we only interviewed young ventures about their experiences with finished projects. As the solutions that we provide of large firms are still relatively "fresh" (evident from year of online OI portal implementation — see last column of Table 1), the experiences of the young firms with such solutions in the form of finished projects are not available yet. In addition, we only included a few industries in our sample. Although we did not identify clear industry differences in our results, we cannot generalise our findings to all industries.

Finally, our results show how some "exemplary" firms dedicated more attention to the WF stages of OI efforts in order to prevent problems from occurring in the GM stages. We coined these firms as "exemplary" because they support the contention of Slowinski and Sagal (2010) that good preparation helps to improve partnership success, and thus, the innovation success of large firms. However, this study was exploratory in nature and the size of the effects of OI efforts by "exemplary" firms on partnership success still needs to be tested through large-scale surveys. Therefore, further research is necessary to determine the effect of OI efforts in the WF stages on partnership success, and on preventing problems in the GM stages of OI asymmetric partnerships.

Implications for managers in large firms

An important implication of our findings is that solutions to problems are often not from the same category as the initial problem. For example, an operational problem can be anticipated on by more thorough and clear communication beforehand. In this case, the solution category is "communication", which does not correspond to the category of the initial problem, which was "operational". Often, the change in category is because the solution is offered in a different stage of the collaboration than the problem. Indeed, anticipating problems seems to be an important managerial implication of our study.

Further, managers in large firms can learn from the approaches of the "exemplary" firms in our study in two ways:

(1) Making asymmetric partnerships with young ventures work requires a complete understanding of the limitations of young ventures, and thus, of the partnership. Young ventures can be excellent partners for conceptual development and for bringing in new technologies, but their lack of financial means, knowledge and capacity can cause problems in the partnership if not anticipated properly.

(2) Clear and elaborate communication is essential. Although the set-up of the collaboration may be clear to the large firm (e.g., what input they are looking for and what the process will look like), young ventures often struggle to figure out these expectations. Providing clear and elaborate information throughout the OI efforts; thus, before and during the partnership, will help young ventures to anticipate important processes and decisions, thereby increasing their understanding and trust.

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