

Open Innovation an SAP Co-Innovation Lab Viewpoint: Developing an Open Innovation Strategy



Applies to:

Open Innovation, Co-Innovation and Ecosystem Strategy. For more information, visit the [Organizational Change Management homepage](#).

Summary

This document offers insight and understanding for developing an effective strategy for developing a unified approach Open Innovation. This approach revolves around 4 pillars; Organizational Practices (Implementation), Alignment to business and intellectual property strategy, supporting the field sales organization and correctly communicating to both internal and external audiences as to how the firm engages in open innovation. These 4 pillars must be aligned in direction or scope to ensure effective implementation and value capture desired from applying tenets of open innovation.

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Introduction

This document offers guidance to firms with interest in forming a unified Open Innovation (OI) strategy. The insights and methods shared here originate from the author's ongoing research in strategic management, open innovation methodology and best practices as observed from the unique vantage point as Director of Strategy and Operations for the SAP Co-Innovation Lab.

A summary review of the concept of open innovation is provided as well as a description of its relevance and value to technology firms. Greater emphasis however is placed upon describing the value and importance of a few key elements essential to developing an OI strategy. Developing an OI strategy begins with deciding how it will best serve the firm's innovation goals relative to both its business and IP strategies. An OI strategy will not only guide the types of OI activities pursued but will help to organize a company to effectively apply OI methodology and be capable of extracting value from all OI programs and initiatives it executes.

Creating and managing a portfolio of OI programs can surely deliver discrete benefits relative to creating opportunity for collaboration with different entities external to the firm. For such programs, metrics like identifying the frequency of outside collaboration or quantifying the outcomes rendered are common measures. However, a comprehensive OI strategy considers more than just the individual measures telling managers whether or not a program has met its OI goals. The strategy should additionally ensure that firm benefits from how it becomes organized for OI where it can compare the results of its different OI programs as a way to identify redundancy and gaps between programs. It should equally attempt to help orchestrate greater exchanges of tacit knowledge between the different programs as a way to increase firm ability to absorb ideas sourced externally, hence further enriching its own innovations and innovation processes.

An effective OI strategy serves to orchestrate and manage the often informal structures that exist at the edges of the company where outside in innovation collaboration will occur. Whether the scope for how open innovation as strategy is to be applied, broad or narrow, is of little concern provided that the objectives of open innovation meet the overall strategic goals of the organization.

This document points to a number of different innovation programs delivered by SAP to characterize some of the forms in which OI can occur and to illustrate the necessity for a firm becoming organized in ways to make open innovation possible. The breadth of open innovation activity spanning multiple programs and initiatives can contribute to a firm increasing or enhancing its absorptive capacity; to essentially improve its ability to detect, capture and internalize ideas coming from the outside and to leverage the tacit knowledge exchanged through rich collaboration. Absorptive capacity is defined as its ability to recognize the value of new external information and apply it to commercial ends" (Cohen and Levinthal, 1990). Formation of one or more specific programs puts structures in place allowing a firm to become organized to enable open innovation as it leads to the creation of discrete goals and objectives actively supported by relevant subject matter expertise.

It is important to understand the scope and intent of the firm's open innovation in developing an OI strategy as it requires thoughtful examination for how open innovation activities and its results, relative to the formation of intellectual property (IP), will call for basic alignment between the OI strategy and the firm's existing methods it implements for managing and protecting its IP. There are forms of OI that focus entirely upon idea gathering as a way to understand customer and market need; popularly described today as crowd sourcing. This externally harvested information can influence firm innovation and must therefore be subsequently managed with adequate legal governance.

It is crucial for the OI strategy to be clearly communicated once executive leadership is in agreement with how OI is to be aligned with the business. It must be clear how the firm intends to pursue and apply open innovation. It can choose to extensively apply a full range of OI methods, such as fitting firm IP to another company's business model or to bilaterally create and jointly own new IP with one or more partners. Alternatively the firm can decide that the scope of OI will be more limited. Communicating how the firm approaches OI and the benefits derived from doing so can reflect positively upon employees, partners and customers assuming care is taken to accurately describe the firm's open innovation activities and results and avoiding undue embellishment.

An open innovation strategy carefully considers the value such a strategy delivers to the sales organization of the technology firm. How can open innovation results contribute to the needs of the field to sell more products and services? Field facing organizations expects its quivers to be filled with innovation and it is

therefore of benefit to draw from as many sources as possible including that which originates from a firm's ecosystem. An effective OI strategy will look to optimize formal and informal network structures between OI collaborators and the field as a way to increase inflows of new ideas and to ensure an acceleration of innovation outflows

Lastly, this document assembles a collection of observations and best practices of value to open innovation strategy development based upon the core dimensions of organization and structure, aligning with the firm's existing IP strategy, how to internally and externally communicate open innovation initiatives and value being delivered and to understand how open innovation can contribute to a field sales organization.

Relevance and Value of Open Innovation

Many executive business and IT leaders use Dr. Henry Chesbrough 2003 claim that "firms must innovate or die" in support of Open Innovation. Firm innovation has classically been drawn from internal resources (e.g., research and development departments) but in the past fifteen plus years and at an ever increasing pace, firms must now draw knowledge from outside the organization and become very open to using and applying external ideas.

An injection of new ideas, intellectual property and even new business models creates the necessity to capture a return from the effort made to draw from these sources. By way of review, the following passage represents a formal and accepted definition of Open Innovation:

"the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively. Open Innovation is a paradigm that assumes that firms can and should use external ideas as well as internal ideas, and internal and external paths to market, as the firms look to advance their technology". (Chesbrough, 2006).

Researchers and practitioners alike view OI's application extending beyond what Chesbrough first proposed. What now emerges is an evolved appreciation for how important it is for OI to be viewed within the context of firm strategies relative to its business, intellectual property, alliance formation and how it fits among all of the different types of innovation prioritized and pursued by the company.

Business and technology leaders should view open innovation as a new discipline of management where together with the firm's ecosystem of partners and customers, the firm can collaborate both broadly and deeply to create new product and service innovations and to equally benefit from the rich exchange of tacit knowledge and the strengthening of trust relationships. Executive leadership must view this through an organizational management lens for this to develop as a discipline of management. Open innovation in this view can more consistently contribute to the firm's innovation goals through global and strategic application.

What we can observe among firms exhibiting a mature ecosystem growth strategy is active application of many of the fundamental tenets of open innovation across a spectrum of programs and initiatives. To use SAP as an example, it pursues a variety of OI activities through its Software Developer Network (SDN)-

Code Exchange

In-memory and Mobility Innojams

Innocentive

Idea Place

Through a variety of its partnering programs and through the SAP Research Co-Innovation Lab SAP not only demonstrates how openness serves to expand innovation opportunities for both SAP and its ecosystem. It further indicates that SAP has invested in a commitment to structure the organization and to direct resources towards how to innovate through openness and discovering the underlying processes it requires.

Many firms today still largely focus upon innovation as an issue:

Is the firm succeeding at innovation?

Is the firm innovating quickly enough?

Are its innovations relevant to customers?

Answering these questions too quickly may inappropriately focus the discussion on how a firm has traditionally pursued innovation. For many, this is a closed and internal process where all the answers depend upon what takes place inside the organization.

As Chesbrough rightly points out in *Open Innovation Services*, “focusing on core competence often tempts managers to keep continuing what succeeded in the past”.

Revenue-based key performance indicators are increasingly aggressive. This contributes to an insular and overly revenue-focused approach. Instead, firms should equally embrace external ideas and business models capable of contributing to firm growth. Taking greater advantage of partnering and putting more energy into building valuable trust relationships that facilitate a rich exchange of knowledge among trusted partners can increase the rate of innovation and to accelerate getting new innovations into the market.

Increasing the rate of innovation serves to increase the number of ideas needed to fuel innovation and to drive growth. The authors of *Fast Innovation* (George, Works, Watson-Hemphill, 2005), multiple research and consultancy groups collectively agree that nearly 90% of companies worldwide cannot maintain adequate growth to sustain above-average shareholder return for more than a decade. Innovation initiatives originating from within firms do not have the track record expected despite the investments companies make to drive it. Seeking to expand efforts to drive innovation through inter-firm co-innovation seems like a logical step.

A firm will discover its ability to become more innovative when it moves some of its innovation momentum externally by becoming more open (Chesbrough, 2010). From SAP’s commitment to its ecosystem strategy, one can observe from both inside and outside the company that it has become organized for open innovation. Through such programs a firm can learn to refine how it organizes and manages the unstructured networks which underlie its open innovation activities. A quick scan of SAP’s various programs reveals robust ability to engage with collaborators outside of the organization. It is beyond the scope of this document to explore each program in richer detail or to identify how SAP defines the success of its individual programs. Clearly, participants in the aforementioned SAP programs can take advantage of the SDN platform and community to share knowledge and experience.

Through participation in multiple SAP programs, the opportunity for participants to share ideas with others also increases. Once sufficiently organized for OI, developing a more comprehensive OI strategy can help forge useful elements like more formal integration between the different programs or how shared knowledge developed in one program can be conferred to others. It is the ability for the firm as part of its OI strategy, to formally capture this shared knowledge in ways that benefit the participants and enrich the inflows of knowledge for the firm that strongly increases the value of OI and its outcomes for the firm.

Many alliances driven from different organizations within the firm continue to depend upon formal intra-firm networks and will maintain specialized organizations to drive innovation to market and social capital researchers have made big efforts in attempting to describe the network characteristics of such structures that facilitate innovation. As companies become increasingly untethered through implementation of mobility strategies, already becoming coupled to an explosive proliferation of web 2.0 and social media tools, the influence informal networks have upon the innovation process is becoming more measurable. Informal networks can play an important role in the success of some of these non-traditional alliance formations. An open innovation strategy seeks to not only support the success of individual programs but to develop methods for cross pollenization of ideas and more deliberate knowledge sharing across all open innovation teams.

Strategic Purpose of Open Innovation

The following bullet points are subjective and somewhat arbitrary unless viewed within the context of a firm’s specific business needs and goals as well as how it expects to realize benefits from open innovation. We can agree, for the sake of discussion, that one or more of the following could become building blocks to creating OI strategy goals.

- Reliably discover new ideas and increase speed to market
- Deliver more desirable and viable products and services
- Contribute to customers and/or partners success relative to co-development and co-innovation
- Sufficiently leverage outside-in innovation; from idea sourcing to value creation
- Strengthens the knowledge base of the organization

Chesbrough's work has depicted a variety of companies and numerous case studies demonstrating the benefits possible from adeptly applying open innovation practices. Open innovation-based programs like those offered by SAP serve as some examples of open innovation outside basic internal research and development. The aforementioned bullets might all represent plausible if not practical goals and certainly so for a single program embracing at least one dimension of what open innovation represents. The questions that remain with respect to developing an OI strategy is will a single program implementing very discrete or limited open innovation methods fulfill the firm's innovation goals or where multiple programs are in play, are they managed and harmonized in ways that optimize collective value?

Aside from an R&D group, there are other business units that often specify open innovation goals and objectives. In other words, an effort to innovate openly need not be contained to research and product development. All such efforts underscore firm interest to realize commercial success from innovations sourced from ideas originating outside of the firm. Outside-in and Inside-out are both relevant to the open innovation paradigm and as such can take a variety of forms. Research should harvest ideas and technology from outside or look for platforms outside of the company in which to inject its own internally developed intellectual property into an already established platform. Similarly, business managers can apply firm IP to a partner-created business model representing a much more viable path to monetization of the target IP. When a firm integrates its technologies and processes with a supplier, acquires new IP by buying another company or simply sets up a program to source ideas and wisdom from its partners and customers; these are all practical ways in which to cultivate an open innovation approach.

Industry executives and thought leaders often speak to the notions of open innovation and describe the programs they are responsible for or familiar with within their organizations exemplifying a best of breed approach to bringing innovation to market. Such remarks are made when there is motivation within the firm to extend beyond what it can do on its own to forge innovation or to innovate at a speed which keeps up with market need. When the firm elects to do this, there is further motivation to demonstrate to customers that by its embracing knowledge and expertise from outside the firm that such openness leads to the formation of more choice, less lock in and more complete solutions. When firms launch such programs that embrace the tenets of open innovation, it speaks to organizational design and where the firm more formally acknowledges the boundaries for where open innovation methods are applied.

Organizing for Open Innovation

Open innovation can take many forms; it could be all encompassing where it exclusively represents how a firm innovates, or it may simply represent a discrete method meant to augment a firm's current capacity and ability to innovate. Open innovation has produced valuable yields for a spectrum of companies over the past decade. In each instance, the firms adopting this approach decided how best to apply open innovation to meet specific goals as well as determining how the commercial success of such innovation would contribute to overall business strategy and growth.

One necessity of open innovation is to permit the firm to remain connected to networks of external knowledge. An important objective for any open innovation strategy is to ensure that the firm is sufficiently organized to make open innovation possible. Those responsible for such a strategy have an interest to formulate a comprehensive approach, where strategists not only need to know that each program's achieved goals contribute to the firm's open innovation strategy, but how each of the programs complement each other and how all might benefit from more thorough and rigorous knowledge exchange, more optimal integration and overall alignment of program goals meant to strengthen how open innovation will benefit the firm.

To use the SAP Co-Innovation Lab (COIL) as an example, its governance process examines the business and alliance goals of all its proposed projects. Through this process the lab business leads come to understand if a proposed project is a stand-alone co-innovation effort like a discrete proof of concept or if it is part of a larger strategic partnering initiative. There may be other partnering programs contributing to the effort where knowledge exchange between the different teams becomes of value such as sourcing specific subject matter expertise. The COIL can also readily identify when the technical requirements of one project compare to those of other projects in its portfolio being managed leading to opportunities to share both resources and technical knowledge of use to all project participants.

The COIL as an open innovation enablement platform, and delivered as an aggregate of complementary services, has a number of goals relevant to its mission which serve as the lab's key performance indicators.

As a hub of open innovation activity, it is fundamental for the lab to measure the number of projects it executes, to quantify the types of projects it approves, must decline or redirect. It assesses project outcomes and it compares the number of projects pursued with a single partner versus those with multiple partner participation. It also pays close attention to how broadly the data and information gets transmitted and shared in the form of technology demonstrations, videos, technical white papers, reports and other marketing collateral. Customer satisfaction among partners taking advantage of the lab's services and the rate of rescission are similar measures of importance. While important, they are of course measures unique to this lab. There are other measures of interest it has now started to collect which could ultimately become useful to other active OI programs at SAP.

Through its project management efforts the SAP Co-Innovation Lab leverages the use of SAP's Streamwork collaboration platform to easily enable the management of key documents and pertinent project artifacts and to communicate work outflow status across different sub teams participating on the project. Project participants use this platform along with a variety of other productivity tools to exchange knowledge and to problem solve. This knowledge exchange occurs between internal SAP employees as well as knowledge discovered and shared with participating partners. This information often gets captured in the form of short text reports, spreadsheets or presentation view graphs which can all be subsequently mined when the project outcome is complete and efforts are then directed towards the publication of white papers or other collateral.

COIL has often considered that the ability to mine similar data collections of other OI programs would be of value. For example, in some instances where a project team is developing a complex SAP landscape, there may be configuration or performance aspects investigated that might have equally been done between subject matter experts collaborating to build an SAP add-on through Code Exchange. The reverse could be true as well where things project teams have learned in COIL could be of benefit to those using Code Exchange or similar programs. To date there is no formal communication channels or tools in place to do so other than efforts made by interested individuals to explore more informal channels to investigate is needed subject matter expertise can be found through other programs.

This illustrates how a more concentrated effort to develop a comprehensive OI strategy can choose to emphasize the best ways to further integrate its widespread OI programs to optimize tacit knowledge capture and sharing through ways that are effective, scalable and extensible.

SAP has learned to reach beyond its boundaries by forming organizations and methods to integrate external ideas. While these are important pathways that can lead to benefiting from open innovation, a firm must work to ensure that all its open innovation efforts are well-coordinated and integrated in ways that optimize outside-in innovation in ways that drive higher degrees of integration and interoperability spanning several technologies originating from within and outside the firm. Open Innovation offers an opportunity for firms to deliver a degree of value that can significantly extend the value chain of its customers. The most compelling reward or benefit to every collaborator as well as end customers, is the tacit knowledge exchange gained from co-development and co-innovation. This is knowledge acquired only through experience and it can only be shared across the network of collaborators when rich interaction is well-enabled and sustained.

An effort to more formalize open innovation strategy strengthens firm ability to create and manage the more informal network structures formed within and throughout an ecosystem comprised of communities of innovation and to ensure that both internal and external messaging relevant to open innovation strategy and practice that is both consistent and accurate.

At SAP such structures are in place today and producing some noteworthy results. For any of SAP's public innovation programs the value propositions are sound and it seems apparent that such efforts are well-received by partners and customers. Each program or offering as viewed independently, suggests a level of commitment and interest to collaborate with the ecosystem. FLAs can be observed from casual review of content offered from each the programs via the company's website, there is obvious opportunity for SAP to develop stronger couplings between its OI-based programs beyond the potential connections formed among its SDN community members. FLAs it pursues such an effort, it will become important to correctly identify and assign the right metrics to measure OI success more collectively versus what how a given program or service is independently goaled and measured.

An effective OI strategy contributes to the firm establishing formal pathways to more easily migrate ideas and outputs between all of its innovation programs. It will equally seek to organize the firm in ways where to optimally collaborate with one or more customers or partners on a single initiative across all of its innovation programs. This will then contribute to easily sharing tacit knowledge exchanged in one instance of

collaboration to an unrelated project where the information can also be of value. The goal is to frame an open innovation strategy to fully address how a firm can derive the most benefit from the way it organizes itself for open innovation.

With profound interest in open innovation and how it might serve a firm's desire to innovate better or more frequently, it is easy enough to locate extensive analysis and successful examples of employing this innovation paradigm. Applying it to the specific needs and requirements unique to one company and its own inherent complexities is the more interesting challenge. Doing nothing more than performing a quick Google search of the terms *open innovation* and *failure*, can perhaps lead to a more balanced understanding of the implementation and execution challenges. Failure to understand the firm's own reasons for embracing open innovation versus emulating another, failing to gain good operational alignment across different key organizational units and simply not recognizing that to pursue open innovation for success will at least initially represent risk as the only thing it can be compared to at first is what has been done in the past. These few things are often cited by open innovation advocates as contributing to failed attempts to succeed with open innovation.

From an organizational perspective, we find collaboration occurring at the edge of the firm. While some may view open innovation as something that a firm does through a bottom up approach; but there is more to it. OI requires a top down approach that can then be supplemented with opportunity for bottom up emergence. Clearly with respect to how or when such collaboration occurs, this view makes sense because this is where the firm's hands on innovators are closest to innovators external to the firm. Such collaborations will indeed form up from informal network structures located at the outer edges of the company but at some point, relevant projects spawning from such effort will get traction with business stakeholders and hence must then migrate towards more structured programs governed by contracts and various operational processes. The exception perhaps being whatever community-based open innovation emerges and evolves that is meant to augment existing products and services where interactions among the core collaborators remain operationally external to the firm.

To initiate a more formalized open innovation strategy means to also develop a top down understanding of the goals and objectives of each open innovation program or initiative to identify what is common to some or to all. There may be some degree of overlap found but this is not necessarily counter-productive. Interest lies in effective resource allocation and management as well as to ensure scalability, so it is therefore vital to find the synergies spanning all of the firm's open innovation activities allowing crowd wisdom to drive the best ideas and to enrich valuable tacit knowledge exchange and capture.

There is no question that a firm can apply open innovation techniques to programs originating from various research, product, IT, partnering and sales sub teams. Each can be measured and managed in ways that lead to some level of success. Some might in fact enjoy considerable success as stand-alone programs. The firm as a whole however, is unlikely to unleash the true power of what open innovation is capable of producing until it is driven by an open innovation strategy that becomes more fully integrated with or coupled to its complementary intellectual property, ecosystem and alliance strategies.

Characterizing Open Innovation

As described previously, there are clearly many open innovation fronts that can emphasize both outside in and inside out innovation. Continuing to use SAP as an example of a firm seeking to embrace open innovation methods, the following table lists some of its more recognized programs and initiatives:

Open Innovation at SAP	Description	Open Innovation Category
SAP Code Exchange	SAP Community Network- based program focusing upon individual developers creating "add-ons"	Crowd sourcing, External idea sourcing, Platform for community collaboration to drive individual developer innovation augmenting SAP
Idea Place	Web-based initiative to capture ideas influencing future SAP	Crowd sourcing, External idea sourcing

	products	
Idea Management Portal	Internal facing portal for an idea management system to capture new ideas of value to SAP	Crowd sourcing, Internal idea sourcing that awards points via community based voting
SAP Innojams	Event driven format with an approach to provide the SAP community with hands-on experience to the newest and best technologies, accelerating co-innovation and collaboration between SAP and its ecosystem partners	External idea sourcing, Program to drive new ideas and innovations developed internally and externally leveraging SAP platform technologies
Innocentive	Mediated crowd sourcing to harvest/cultivate external ideas for SAP. Innocentive hosts the SAP Innovation and Technology Pavilion	Crowd sourcing, External idea sourcing with monetary incentives
SAP Co-Innovation Lab	An enablement platform comprised of an aggregation of resources delivered as services to SAP teams, partners and customers to pursue co-innovation projects	Enables co-innovation projects between SAP and its ecosystem of partners and customers, featuring complementary IT assets, IP framework, Project management and knowledge brokering

The table depicts a number of programs each harboring a value proposition of openness and structured for the purposes of the business unit hosting the program to illicit ideas and knowledge sharing outside of the group or outside of SAP. The Idea management Portal is the only one listed that is geared towards an internal organization seeking to crowd source new ideas from across the company. The remaining programs all share similar traits in the effort to generate idea flows into SAP from the outside. Some are more exclusively targeting this activity while others like the SAP Co-Innovation Lab work to enable co-innovation projects where the initial ideas behind the lab's numerous project requests come from multiple vectors from internal teams and SAP ecosystem partners.

There are many themes easily associated with open innovation. As denoted in the table, a variety of themes is present in SAP ecosystem strategy and its multiple programs sharing the common goal of extracting knowledge and ideas from outside of SAP that can then be channeled towards capturing value from greater volumes of innovation.

Augmenting the aforementioned table, it should be pointed out that SAP, as a proclaimed and successful ecosystem growth company, additionally pursues open and co-innovation initiatives through business development and its strategic alliance partnerships. It offers a partner portal offering a wide range of partner resources, knowledge sharing and programs such as SAP PartnerEdge™ and its highly regarded SAP EcoHub™ marketplace designed to showcase numerous SAP and partner solutions for many industries. The extent of its openness among partners in the knowledge shared, for IP co-created or development of new business models is beyond the scope of this document but the existence of these programs again speaks to the relevance and importance for a firm interested open innovation to put energy and resources into its ability to engage with its ecosystem.

Open Innovation and IP Strategy

For a technology firm, its development strategy has IP consequences where the outcome correlates to things like dependency upon the firm's product and its corresponding business model(s). What gets protected and how will differ between a firm graced with significant market opportunity comprised of volume sales transactions versus one where growth and success depends more upon exclusivity.

A tech firm delivering software or services value at the application layer will approach open innovation differently than the firm that provides the technology platform where applications will run. The platform technology provider is likely to favor and encourage openness that stimulates platform adoption and yet opt to be more closed to open innovation that would thwart ownership of platform IP or limit its freedom of operation with its platform technology in the future. An OI strategy seeks to properly align with the firm's IP strategy and equally to the firm's business goals and business model in order to define the degrees of freedom available to exercise open innovation without increasing IP risk.

An earnest attempt to implement a comprehensive open innovation strategy has to reconcile such effort with how it coincides with the intellectual property strategy and matters of appropriability. Simply defined, appropriability refers to how a firm comes to own and control the right of its intellectual properties. To use a well-known example, a company can file for a patent with the local government as a means to protect the fixed costs it experienced to create the IP it wishes to profit from.

There are of course different appropriability strategies used by firms (Levin, 1987) to develop and manage intellectual property rights (IPR) where some emphasize sharing rather than appropriating knowledge and this can be of usefulness and interest in trying to align open innovation activities to the firm's existing IP strategy. If the open innovation effort is to produce results that will evade conflict between how the firm pursues its openness with partners and customers and what it expects to own and control with respect to its IP, then it will become easier to correctly communicate the firm's open innovation strategy. There are of course higher degrees of open innovation striving to achieve tighter levels of technology integration meant to improve market reach.

From an IP perspective, this is rendered possible with sufficient technical orchestration between two or more technologies viewed as "background" IP where all parties are very clear upon IP ownership and how to license use. In essence, the open innovation is largely contained to cross licensing and through external collaboration, optimizing the interoperability between and among complementary technologies with the goal of helping to reach more industries, markets and customers. In some cases with select partners, in effort to address specific market opportunity, there will also be instances of light integration where the robustness of existing IP licensing provisions implemented through template-based contracts fully address the intellectual property rights associated with the background IP of each co-innovation participant.

It is the open innovation exercises between 3rd parties producing "foreground" IP; something originating through collaboration and co-development that can easily muddy the open innovation waters. Becoming distracted over matters of appropriability, even when justified, can disrupt the chance to innovate in ways that may only be made possible through collaboration with a partner.

While many open innovation researchers and practitioners seem to agree that a firm can derive significant benefit through open innovation, the success of such effort can become derailed or altogether undermined from a strategy perspective, unless the scope of open innovation is agreeable among key stakeholders and will coincide with the firm's stance on appropriability of IP.

As early as 1986, alliance research has described the issue of "appropriability" as problematic for firms seeking to ensure control over newly developed IP (Katz 1986). With respect to co-innovation, where the value derived from getting to market first and then monetizing the opportunity is a factor, co-innovation participants should prepare to quantify the benefits of getting to market with co-innovation quickly where the risk of losing such benefits will occur from taking too much time to negotiate and secure appropriate ownership and control of the IP underlying the innovation. A strong business case is required to convince senior management of the firm that an alternative appropriability strategy that includes shared knowledge is required, as the default appropriability strategy is ownership and exclusivity meant to protect firm IP and gives it future freedom of use.

Open innovation strategists are generally interested to discover useful and compelling ways in which to cultivate innovation stemming from ideas and IP originating outside the firm. What they must keep at the forefront of such considerations is to understand what the degrees of freedom are for the firm to pursue open innovation in instances that challenge the strategy of the business relative to IP it expects to own and control. The reality for the technology firm is that not only does it need to aggressively pursue ownership of IP to improve its position with competitors but it must also prevent the IP from one day being used against it.

Much gets written in the open innovation space about controlling rights and ownership and that if two parties are truly interested in co-innovation that it should produce work that is jointly-owned. In theory or as described in an essay or blog it sounds straightforward, but the reality is that joint ownership can become very complicated in that it typically raises questions about litigation and royalties. While there is sure to be public evidence of successful joint ownership of IP between technology firms, it is not necessarily a pervasive behavior. Such arrangements can certainly result in success but the outlying risk still exists. Nonetheless, research continues on the subject as evident in the open software systems and in the realm of developing software standards. The open innovation strategist will benefit from wise interpretation of how the firm views appropriability with respect to its business goals and to understand how it serves to create the correct contractual framework to support open innovation.

Before suggesting an approach for how open innovation and IP strategies can look to become better aligned, it is useful to understand what might constitute an IP strategy where open innovation is not a formal consideration. The following items listed are not individual strategies but what may commonly comprise or likely to be part of a firm's IP strategy:

- 1.) How Intellectual Property Rights (IPR) influences overall portfolio development
- 2.) The type of business and legal transactions underscoring what the firm does
- 3.) The firm's IP licensing provisions
- 4.) How the firm addresses IP litigation
- 5.) Synchronizing to the firm's government, risk and compliance framework

IP strategies across companies do of course differ, as it something that must be highly correlated to the firm's business strategy. However, each of these elements will certainly become a concern to developing an OI strategy. The IP strategy therefore serves as a framework to further understand how management can align open innovation to it.

1 and 3 are the two items that are perhaps where an open innovation strategy team would first focus. Number one gets back the earlier question of how the firm expects to innovate in the development of its portfolio. Is the portfolio based entirely upon innovations sourced exclusively from within the firm? Or will only some portion of portfolio be represented by solutions stemming from ideas and technology sourced externally? If so, does the current IPR strategy suffice to support the firm's ability to reap profits from sharing knowledge and IP?

For item number three, it is important to know if the IP provisioning language contained within the various contracts employed to represent collaboration, co-creation and co-development possesses the right degree of flexibility to support co-innovation between the firm and partners where such activity renders new foreground intellectual property.

Senior business stakeholders working with IP attorneys should be able to articulate the desired goals and identify how open innovation activities dependent upon the sharing of intellectual property and tacit knowledge exchange with outside agents fits to current IP provisions and if any gaps exist. There may be some open innovation goals that will result in complexities not fully supported by existing IP provisions. In some instances, there may be desire to affix internal IP to external business models and this too will need suitable contractual language that may not exist or can be crafted from existing provisions or prior experience. In such instances it may even become preferable to consult with an IP economist specifically trained to articulate new rights or the division of the rights needed to support discrete forms of open innovation with outside parties, that the firm's legal organization can then implement and enforce.

The lead guidance to those tasked with managing OI initiatives is to fully understand the business strategy and the business model and how IP ownership and freedom of action supports it as this will facilitate how to correctly form the firm's OI strategy. Doing so will also equip the OI manager to bring attention to any

disconnect between openly stated OI objectives deemed important to the board and limitations related to matters of appropriability.

Open Innovation Strategy Communication

What a firm's executives say both inside the company and publically about how it pursues open innovation is important. There tends to be a lot of innovation communication today. So much communication in fact, that a firm constantly needs to tune its signal to noise ratio if it expects to be heard in an attention economy. It therefore becomes natural for executives, product and solution managers to want to appear connected to the buzz streams in the market fueled by words like, innovation, collaboration, cloud, mobile, and so forth. A common oversight in the use of the term innovation is that few take the time to describe the type of innovation they are referring to. The definition is refined from categorizing innovation as being disruptive or sustaining and these two categories can be subdivided too. When used more ambiguously, non-lay persons can easily think that the speaker is referring to a new invention where in reality they are representing incremental improvement to some existing innovation.

Too often, just because a firm collaborates with partners or customers, does not necessarily mean that such collaboration fits to the definition of open innovation as scholars and industry has come to define or understand it. The firm's OI thought leaders should not describe the strategy or portend benefits beyond what the strategy is meant to support simply because the executive discussing the topic publically perceives added benefit from casting the firm in a stronger light of openness than what actually exists. Credibility is important and is better upheld when what gets communicated is correct and easily understood. An open innovation strategy will include an effort to ensure that what is communicated pairs well to what degree of open innovation the firm engages in most.

Internal Communication

Internal communications relevant to a firm's open innovation begins with how to demonstrate the results of open innovation initiatives. Additionally it is useful to describe the subsequent output from the effort by pointing to a valid metric that describes contribution to revenue and growth benefits derived from and injected into the firm's ecosystem. Internal communications can also serve as a means for the sharing of tacit knowledge and how this new knowledge becomes of value to the firm.

Chesbrough rightly pointed out years ago that firms can suffer from a Not Invented Here (NIH) syndrome. This author has definitely witnessed this in many large firms but has seen it in smaller firms too. NIH cannot not only contribute to the rejection of some very compelling ideas or technologies for no other reason, but even if a firm agrees to collaborate with a partner out of pure business necessity, managers afflicted with a legacy mindset harboring complete bias for their firm's own competencies can dramatically impede an ability to negotiate contracts and developing strong sales and marketing that must also benefit from collaboration.

Internal communications should strive to position OI as a positive strategy for the firm and emphasize not only how augmenting the firm's own innovations will drive market success and growth but that a sustained level of knowledge exchange with partners and customers contributes to the firm's ability to more nimbly respond to the needs of its customers and to increase its resilience to the impact of globalization upon its business.

External Communication

The firm can quickly realize benefits from communicating how a firm applies open innovation; particularly for the firm with an ecosystem growth strategy. Some external communication goals should include:

- 1.) Deliver meaningful thought leadership in the industry for open innovation
- 2.) Become known for it
- 3.) Communicate with clarity; speak from the same lexicon of OI terms
- 4.) Publically use OI terms and concepts accurately and consistently

Externally it is critical to communicate correctly how the firm engages in open innovation. It only erodes credibility to broadly describe open innovation activities suggesting that the firm embraces dimensions of open innovation such as affixing its IP to the external business models of partners when the reality is that the firm and its partners simply pursue common go to market activities through traditional reseller channels.

When there is measurable benefit obtainable through a strategy of more openness, then this open innovation achievement should be communicated. When an ecosystem strategy drives rich open innovations it becomes of value to the firm when widely and often communicated as customers benefit from an accelerated flow of innovations coming from vendors common to the customer. Successful collaborations with both partners and customers signify ways to reduce cost for the customer through increased levels of integration and interoperability between complementary and even disparate components deployed as IT solutions to the business.

Supporting Sales with Open Innovation

Review of the literature for open innovation uncovers many discussions which focus directly upon the process of innovation and comparison of OI to the traditional closed innovation paradigm where innovation originates and is driven exclusively from the inside of an organization. As we come to know and appreciate Dr. Chesbrough's research we can see where the interest in comparing closed and open innovation originates. There is value in this simply because it is useful to know where you came from before heading down a path that takes you where you wish go. Equally of interest is the idea that open innovation is useful to accelerate innovation and in a way that should reduce cost and risk associated with a firm going alone each time. We find from so many of the scholarly articles and blog posts on the subject that most seem to be in agreement on these key dimensions.

What is perhaps more compelling about the open innovation approach is the emphasis placed upon the importance of the business model and this is again reinforced in Chesbrough's latest work where he describes the Platform Business Model (Chesbrough, 2010) in that it can lead to quality differentiation and developing long term value when a firm can attract outside companies to adopt the platform and invest in its use in ways that will increase its value.

When the business model becomes more central to developing an OI strategy, it should encourage those charged with its implementation to locate and build working relationships with those in the field who work directly with partners and who are talking to customers looking for innovation. A field organization is ideally situated to identify and map how a technology product might become well matched to business models external to the firm's own that can lead to further economic growth opportunity.

A firm today can engage in co-innovation with its leading technology and channel partners to discover new ways in which to augment one another's products and technologies through simple discovery and validation of key performance capabilities derived through certification and benchmarking exercises, reference architectures or from light integration effort coding to a published application program interface (API). Such efforts support field interest and desire to sell solutions over point products.

From the author's own experience, Co-innovation projects that can deliver proof points useful to satisfy customer requirements or to win new net business; especially if such projects can be requested and deliver results quarterly garner fast attention. There are a number of good questions to ask in which to properly understand how the open innovation strategy of a technology firm can become of value to its field organization:

- *Can such a strategy introduce more opportunity for its field to drive revenue and growth?*
- *Is it enough for open innovation efforts to enable innovators to work with external collaborators where there is no certainty that the results will reach the field?*
- *Can the success of an open innovation program be considered valuable and relevant without knowing if it directly contributes to reducing costs or growing revenue?*

The answer to these questions may all be yes, and if so, the measures of open innovation success become different than those used to evaluate sharing and advancing knowledge or to measure time required to transform an idea into a useful innovation. Outcomes from open innovation activities that are not measured for their impact to direct revenue generation still secure value for the firm, like determining how knowledge gleaned from collaborating with the outside world drives innovation. Nonetheless it is a combination of these

benefits that matters most. An open innovation strategy should devise ways to tap into larger potential than what one off instances can hope to obtain.

Sellers like to sell innovation. When it's the right innovation that meets the needs of the customer and can be communicated in terms the customer understands and can be positioned to meet their needs; even better, How can open innovation contribute? Clearly, if a firm innovates resulting in a new product that can be given a part number and pricing, that's one way and this happens regularly. The downside is that such innovation is embedded within a product life cycle where the timing is not always ideal. The market says now but the product lifecycle says six months from now. Large technology firms grapple with this matter in a variety of ways and it certainly influences interest in taking an ecosystem approach to solving problems, forging solutions and looking for ways to innovate faster.

The SAP Co-Innovation Lab has culled its own insights into how open innovation can be applied to the benefit of those who sell innovation. This lab provides an innovation platform comprised of a robust IT infrastructure comprised of technology partner sponsored complementary assets, an IP framework crafted to meet the needs of co-innovation, subject matter expertise driven through rich knowledge brokering, project and operations management all delivered as services. These services are then consumed by project requestors from both inside and outside of SAP in pursuit of project work meant to render commercially successful co-innovation results. Much success has resulted and it has driven the lab's steady, global growth. Through observation, we can see that the interest and arguments for wanting to pursue a given open innovation project are many. Despite this genuine interest and need, some project proposals can oftentimes become derailed if delivery of the expected results do not line up with the business stakeholder requirements to take advantage of the project's outcome within a given window of selling opportunity. Timing that is often quarterly since this is the clock sellers must work to.

Account managers and partner managers alike, especially for large initiatives or big deals, will expect to invest in activities over one or two quarters if there is some level of assurance that the investment will bear fruit in the form of a closed deal in the second half of the year but for perhaps every instance that this occurs, there are three other deals that will only consider open innovation project work supporting a 90 day window of opportunity.

Scholars who study strategic management and innovation often talk about the dynamic capabilities of the firm (Teece, 2009), one of which is how well it can balance exploitation and exploration. Exploitation is to take immediate and exhaustive advantage of existing sustaining innovation, selling it directly or through a myriad of channels. This would also include cross licensing and OEM agreements bundling technologies and services into solution portfolios. This generally meets real demand and drives growth for all participants. Partners work together to take full advantage of this exploitation and it's a strategy proven to work. The question becomes how much growth can be fueled this way if the ecosystem of participating partners does not grow as fast or faster?

This is where the notion of exploration may be able to fill in the potential gap. Exploration would be what the firm does with its ecosystem partners to discover new innovations; both sustaining and disruptive with the effort focused upon pre-release technology as well as to discover novel ways in which to re-use or repurpose existing technologies either through new integrations or net new innovation built upon previous work through collaboration or co-development. The successful orchestration of exploitation and exploration is viewed as a dynamic capability and one that an open innovation strategy can serve to optimize being able to get more innovation to the field more often and at a faster pace than what is traditional.

For a field organization to begin seeing open innovation as something of value, its benefits must be easily discovered, one approach is to look for the edge opportunities that represent where innovation is pursued through projects that can yield a useful result in 90 days. This may take 2 forms:

- 1.) Formulate a solution with a partner from existing products/technologies against an environment in the COIL lab which can replicate the target environment where the solution is to be deployed. The innovation emphasis is to identify improvements in performance, to lower cost, or reduce complexity through optimizing interoperability. The resulting proof points from such an exercise then contribute directly to closing deals
- 2.) The second is to pursue larger or more complex projects with partners of taking 3 to 6 months where the field invests in the effort over one to two quarters with the understanding that it will increase

selling opportunity in the following quarters. This could take the form of new process innovations, both interoperability and integration between different components and/or other elements in the stack

With successful project execution, this second form contributes to forming a trust relationship with the field strong enough that it encourages field teams to discover how an open innovation approach can work to their benefit (and their customers). This newly forged trust then contributes to the firm being able to refine its dynamic capability of balancing exploitation and exploration made possible through open innovation. With support from the field it becomes possible to develop a new metric for measuring success of an open innovation strategy from its ability to directly contribute to revenue growth.

Executives in pursuit of an ecosystem growth strategy are interested to know how open innovation projects can drive firm success beyond its more traditional go to market strategies with partners.

The concepts of exploitation and exploration are of equal value to their ability to contribute vibrancy and vigor into the ecosystem. A firm and its partners can draw significant benefit from including exploration into its co-innovation activities. This in turn can lead to discovery of new technologies, business models, market opportunities which contribute to healthy growth of revenue and market share. There is also great value to be derived from sustaining a tacit knowledge exchange and building greater degrees of trust that strengthen strategic alliances. It is well understood by anyone that carries a bag that more deals are won when a vendor can align what it does to a customer's long term goals. Open Innovation projects represent an extraordinary opportunity for a vendor and its partners to collaborate on innovation projects that demonstrate a drive to delivery of solutions aligned with long term customer goals.

Open Innovation Strategy Development

What does the firm want from its open innovation? What is the scope? Is it desirable or even practical to forge a cross functional team with a hybrid view that will both influence and direct legal and business decisions for intellectual property a firm considers shareable, sellable, and changeable? What areas of the market or industries it is interested to apply an open innovation approach to accelerate its growth?

Recognizing the core dimensions of an OI strategy as described in this document is important to executive leaders and their teams as they look to optimize firm innovation efforts. Becoming organized and structured to engage in OI outside of the firm is fundamental. Aligning this strategy to the firm's existing IP strategy is of equal importance.

Effectively communicating about open innovation activities inside and outside the firm contributes to both audiences understanding the value being delivered from it. Ensuring that open innovation can contribute to a field sales organization leads to not only being able to provide a significant measure of OI success but it equally serves firm desire to develop the dynamic capability of orchestrating and managing the exploration and exploitation of innovation it co-develops and creates with its partners and customers . As a way to summarize the discussion up to now, here are some key observations, questions and best practices offering some guidance in developing an OI strategy:

Organizational Management-

- Determine what the firm will target as open innovation driven approaches. It may prefer not to take an "all in" approach choosing instead to target areas where its interests are clear in instances where it can capture a portion of a market it cannot be in otherwise, without open innovation performed through various partnerships.
- Understand the types of Innovation (sustaining/disruptive and business model innovation) and be capable of evaluating the approaches possible to achieving it.
- An open innovation strategy serves to develop the organizational structure required for connecting the firm to the outside, making external collaboration possible.

IP and Business Strategy Alignment-

- How does appropriability support/hinder the outside-in innovation deemed strategically valuable to the firm?

- Is there risk associated with only applying open innovation across pre-qualified domains? Does this lead the firm to appearing too tactical in its approach to open innovation and undermining any effort in which to execute against an open source strategy?

Alliance Formation and Strategy-

- What are the expectations of the firm's alliance partners? How do they perceive the firm's open innovation strategy? Do the firms already established as strategic alliance partners expect to do more co-innovation?
- Seek to align the primary open innovation goals with the intellectual property strategy if the open innovation activities are directed towards co-innovation and co-collaboration meant to leverage ideas and intellectual property originating outside the firm.
- Among all of the programs created to engage in open innovation activity, identify shared goals and processes to enable robust and persistent knowledge capture and knowledge sharing.
- Form both direct and virtual management to aid this effort guided by some common open innovation goals and objectives of the firm.

Knowledge Absorption and Knowledge Exchange-

- An open innovation strategy strives to orchestrate and coordinate all of its open innovation programs and initiatives spanning all the business units leading such efforts. Some firms like General Mills form "Innovation Squads" comprised of cross-functional representatives to explore new ideas originating internally and externally. A similar approach could be used to drive better knowledge exchange and integration among different open innovation enabled programs.
- An open innovation strategy can help cull benefit from determining how the outcome from open innovation activities can equip the firm's field sales organization and alliance partner managers with proof points useful to secure present and future business with the firm's installed base and to win net new business.

Communications-

- Be capable of clearly communicating the firm's open innovation strategy internally and externally.
- Understand and use the lexicon of open innovation terms correctly to set the right expectations.
- Seek opportunities to bring open innovation thought leadership to a wide body of business and academic communities. Tell your customers. They value the ecosystem strategy most that demonstrates willingness to extend solutions beyond the cross licensing, selling and integration of complementary products; seeing evidence that its primary vendors collaborate to deliver even stronger innovations of value.

Summary

The physicist Niels Bohr once said that *"an expert is a man who has made all the mistakes which can be made in a narrow field"*. This quote relates to a management team's desire to execute against its open innovation strategy without error. We can vigorously examine case studies of those who have succeeded with open innovation and read ample testimony to good results from those who have applied the methodology. It is still however a relatively new paradigm for innovation where expertise is relatively thin compared to more traditional and proven approaches. When we pull the trigger on an open innovation strategy, we want to do so with the confidence that it can be done with the requisite expertise or modeled successfully from what other experts have proven possible.

One way to interpret Bohr's remark is that achieving expert status simply won't happen for anyone until they make the mistakes expected through developing expertise firsthand. To pursue open innovation that is more deeply integrated into the firm's core business and IP strategy depends upon a methodology of leadership confident that an increased rate of failure will positively correlate to more successful innovation.

Reaching a future state where the firm derives economic benefits from outside idea streams and where tacit knowledge improves absorptive capacity, will mean identifying new measures to manage the risk associated

with open innovation activity. There is little use applying the traditional measures of classic project management to predict project success, largely because there is often little historical data to examine that will serve as a suitable predictor to open innovation success.

An OI strategy will need to develop metrics beyond those suited to measure individual OI programs. To pull greater benefit from OI is to become capable of measuring how all OI programs that are in play contribute to the firm's ability to innovate. The right measures will recognize how each program's goals can be further from increasing knowledge shared between them.

The pursuit of open innovation will be unique to nearly every firm that chooses to employ it from the most discrete and targeted effort, to one that touches every dimension of innovation possible. As such, how it gets implemented and what results will occur will largely become a reflection of what leaders of a firm exhibit as courage to make it work to the firm's advantage. As we observe the impact of globalization and the state of innovation across high tech, another quote from Charles Darwin seems equally fitting: *"in the long history of humankind, those who learned to collaborate and improvise most effectively have prevailed."* To become bolder with OI in terms of how the firm engages with its partners will mean to rethink IP appropriability in the context of sharing instead of only exclusivity. The firm will again need to consider more relevant measures as to what constitutes optimal economic benefit from bringing more sophisticated innovations to market through partnerships and shared intellectual property or to consider how to apply a firm's IP to a more suitable business model provided through a partnership where both firms will claim acceptable new revenue.

Firms can and will continue apace to innovate on a stable core and should look for every available opportunity to tap its ecosystem to extend its innovations as part of a larger portfolio of solutions. Through proper alignment with the firm's business and IP strategies, it can surely cultivate improved ways to innovate by embracing ideas originating outside of the firm. With the right framework in place it can use OI to increase the benefits of continuous tacit knowledge exchange. Finally, if a firm is willing to do as much innovation exploration as innovation exploitation with its partners, it may unleash entirely new disruptive growth opportunities that only become possible through open innovation.

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