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## Innovation platforms: A new forms of collaborations

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**Abstract:** In recent years academic literature has shown how firms' innovation activities are not exclusively internal processes. Firms are not able to go alone in supporting innovation investments and many scholars have noted the importance of external collaborations. Despite previous literature has analysed strategies, design elements, and processes of corporate entrepreneurship mechanisms, only few academic studies have analysed the elements that such models have in common and whether corporate start-up engagement models used today by corporations still fit in classification given commonly accepted in the literature. To address this gap, we conduct an in-depth analysis of the literature on collaboration between corporate and startups and examine the most relevant elements that the three existing forms of collaboration (i.e., Corporate Incubator, Corporate Accelerator and Corporate Venture) have in common. Finally we proposed three case study which do not fit in the traditional categories highlighting the emergence of innovation platforms.

**Keywords:** Corporate entrepreneurship; Startups; corporations; innovation platform

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## 1 Introduction

In recent years academic literature has shown how firms' innovation activities are not exclusively internal processes (Chesbrough, 2003). In fact, firms are not always able to go alone in supporting innovation investments (Huizingh, 2011) and many scholars have noted the importance of external collaboration in supporting firms' innovative performance (Frenz and Ietto-Gillies, 2009; Laursen and Salter, 2006). The importance of external knowledge for innovation is twofold: first, since innovation is the result of a novel combination of existing knowledge, expanding the firms' knowledge base may increase the number of possible knowledge configurations (Kogut and Zander, 1992). Second, the exposure to new technologies and practices may augment knowledge absorptive capacity of firms (Cohen and Levinthal, 1990; Crescenzi and Gagliardi, 2018).

Since entrepreneurial startups are a valuable source of knowledge (Dushnitsky and Lenox, 2005), the literature has tried to understand how firms' strategies tap in the knowledge of startups. More specifically, Weiblen and Chesbrough (2015) conceptualised a framework of open innovation (OI) strategies adopted by established firms and identified three outside-in strategies that lead established firms to tap in the knowledge of startups: 1) Corporate Incubator; 2) Corporate Accelerator; and 3) Corporate Venture.

Despite previous literature has analysed strategies, design elements, and processes of corporate entrepreneurship mechanisms (Ahuja and Lampert, 2001; Birkishaw, 1997; Dess et al., 2003), only few academic studies have analysed the elements that such models have in common and whether corporate start-up engagement models used today by corporations still fit in classification given commonly accepted in the literature.

We attempt to fill this gap by exploring the following research questions: Does corporate startups' engagement model used by corporations still fit with classification provided by the literature? Is there any new model of corporate startup engagement rising?

To address these research questions, we conduct an in-depth analysis of the literature on collaboration between corporate and startups and examine the most relevant elements that the three existing forms of collaboration (i.e., Corporate Incubator, Corporate Accelerator and Corporate Venture) have in common. In doing so, we propose a table that points to the importance of five key dimensions: 1) DNA (Prexl et al., 20; van Weele et al., 2017; Wallmeroth et al., 2018); 2) Venture Selection (Bergek and Norrman, 2008; Bruneel et al., 2012); 3) Investment (Block et al., 2018; Richter et al., 2018); 4) Added-Value Contribution (Becker and Gassman, 2006; Kohler, 2016); and 5) Network (Di Pietro et al., 2018; Weiblen and Chesbrough, 2015). These five dimensions are then divided into variables that we have defined for the three forms of collaboration, also indicating the studies that have allowed us to identify them.

After, we try to validate this matrix empirically, considering three representative cases of companies that use the three forms of collaboration with startups: 1) Plug and Play Tech

Center (an early stage investor, accelerator and corporate innovation platform with global headquarters in Sunnyvale); 2) Mind The bridge (a global organization that provides Innovation advisory services for corporates and startups and headquartered in San Francisco); and 3) Gellify (a B2B innovation platform which invests in B2B digital startups and SMEs and support corporates in innovation execution and headquartered in Bologna). After collecting a satisfactory panel of 30 interviews on the three cases, we validate the characteristics of these three forms of collaboration within our matrix.

We find that the three forms of collaboration identified in the literature - i.e. corporate incubators; corporate accelerators; and corporate venture capital - are no longer suitable to represent how corporates engage the knowledge of startups today. In fact, it is evident that all three cases studied have peculiar characteristics that do not match those identified in the literature. Furthermore, the three cases show that today it is increasingly necessary for firms to rely on a new form of collaboration to engage startups' knowledge. Following the payoff of these companies, this form of collaboration takes the definition of "innovation platform" and in this paper we outline the main objectives and key features that distinguish it from the other three forms of collaboration.

Drawing on these findings, we offer three theoretical contributions. First, we contribute to the corporate entrepreneurship literature by showing that the three traditional forms of startup engagement (Weible and Chesbrough, 2015) (i.e. Corporate Incubation, Corporate Accelerator, and Corporate Venturing) are no longer suitable to represent how established firms use the knowledge of startups today. Innovation platforms emerged as a new model to help established organizations to tap more effectively into startups' knowledge. Moreover, we highlighted the emergence of the phenomenon of servitization (Vargo and Lusch, 2004) in corporate entrepreneurship, due to the fact that big corporations tend to use the service of corporate entrepreneurship provided by Innovation platforms.

Second, we contribute to platform economy literature by transposing the concept of platform into the corporate entrepreneurship field, thus following Gawer and Cusumano's claim of "looking across academic silos" (Gawer and Cusumano, 2002: 429) to investigate the phenomenon of platforms in wide range of economic disciplines (Kenney and Zysman, 2016; Ozalp, Cennamo, & Gawer, 2018). We contribute to this literature by highlighting the main objectives (i.e. facilitate network access, enable knowledge exchange, and foster innovation processes) and key features (i.e. program, actors and innovation mode) of the emerging phenomenon of innovation platforms.

Third, we contribute to the literature of entrepreneurial organization by pointing out that established corporations may experiment new practices to acquire knowledge from startups through innovation platforms. A recent bibliometric analysis (Lampe et al., 2020), in fact, shows that technological change triggers entrepreneurial organizations to "increasingly use corporate venturing and learn from knowledge sources beyond the boundaries of the firm" (Schildt, Maula, & Keil, 2005, p. 493).

We organize this paper as follows. In section 2 we review the literature by identifying the forms of innovation of collaborations that firms use to engage with startups - i.e.; 1) corporate incubators; 2) corporate accelerators and 3) corporate venture capital. In section 3 we develop a matrix that points out the common elements arising from a comparison

among these forms of collaboration. In section 4 we introduce our case studies (Play and Play Tech Center, Mind the Bridge, Gellify) and present the data collected. In section 5 we analyze the data collected and introduce a new form of collaboration (i.e. innovation platform) that emerges from our case studies. We also provide a definition of this concept and its main objectives and key features. In section 6 we conclude the paper by providing our theoretical and managerial contributions.

## **2 Theoretical background: OI forms of collaborations for corporate entrepreneurship**

### *Corporate incubators*

The first form of collaboration we identify in corporate entrepreneurship literature is represented by corporate incubators (Becker and Gassmann, 2006). It is well known that corporations struggle to market breakthrough innovation (Freeman and Engel, 2007) and they set corporate incubators as one viable strategy to enhance innovation opportunities that are underdeveloped or unexploited inside the firm (Hausberg and Korreck, 2018; Weiblen and Chesbrough, 2015). Early adoptions of this form of collaboration with startups occurred in the late 1990s and early 2000s. Corporates, such as Philips (Hausberg and Korreck, 2018) and Ford (Kohler, 2016), implemented corporate incubators to speed up the development of new (internet-related) markets, new technologies and new ways of leveraging their assets. A corporate incubator can be defined as a formal organization (or unit) with a parent company sponsor whose strategic objective is to explore and exploit breakthrough opportunities conceived internally in the corporation, providing a path to market for non core innovations through self-sustaining spin-off companies (Hausberg and Korreck, 2018; Kohler, 2016; Wolcott and Lippitz, 2007). Following this definition, it is clear that this form of collaboration entails more the inside-out mode of open innovation (Weiblen and Chesbrough, 2015). Through this form of collaboration, an incorporated incubatee can develop both tangible (financial, human, physical and infrastructural) and intangible (know-how, network) resources that the corporate can assign (Markovitch et al., 2017). These resources would rather be distinctive for each sponsor company instead of the general aid of independent incubators. Ideally, corporate incubators follow a process of value-adding support activities such as coaching and managerial assistance that adapts over time to the tenant maturity stage and needs (Yusubova et al., 2019).

### *Corporate Accelerators*

The second form of collaboration we identify in corporate entrepreneurship literature refers to corporate accelerators (Prexl et al., 2020). Corporate accelerators have recently emerged as a quite popular strategy for large incumbents to pursue radical growth initiatives by engaging with external sources of innovation, residing in disruptive startups as well as other innovative players (Kohler, 2016). Extant literature has pointed to the importance of corporate accelerators as a powerful tool to bridge the innovation gap between startups and large firms, thus enabling open innovation (Kanbach and Stubner,

2016). According to Dempwolf et al., (2014), corporate accelerators are open innovation interventions used to grow and manage portfolios of complementary startups to accelerate innovation and gain a competitive advantage. A corporate accelerator can be defined as an outside-in innovation corporate program which selects cohorts of startups in specific areas of interest and offers them a limited period of business support. The offered aid consists of a set of company-specific assets (co-location and services, know-how, etc.), coaching, educational training and optionally also (non equity) funding (Shankar and Shepherd, 2019). Corporate accelerators distinguish themselves from their corporate incubator counterparts by mimicking in part the model of commercial accelerators: the fixed-term program is run in cohorts with a final demo day, after which usually winners receive a seed investment though rarely by equity stakes (Cohen et al., 2019). The cohort approach has the advantage of engaging and following a greater number of startups at the same time because of the more standardized support activities rather than ad-hoc engagements with adaptive support (Moschner et al., 2019).

### *Corporate Venture Capital*

The third form of collaboration we identify in corporate entrepreneurship literature relates to corporate venture capital. Corporates have traditionally engaged with startups by directly financing them through equity investments (Weiblen and Chesbrough, 2015). A Corporate Venture Capital (CVC) is a quasi-independent unit of the company whose role is to administrate a corporate fund to be invested in stakes of promising ventures. These investments must not only pursue financial returns but also reflect the sponsoring corporation's goals, which can extend from monitoring emerging competition or complementary industries as well as non-core markets and technologies (Ernst et al., 2005). Given the emergence of CVC, several scholars argue that CVC strongly influences the innovation outcome and performance of both the invested ventures and the 'parent' firms, especially if belonging to the same sectors (Drover et al., 2017). Corporations that use CVCs to engage with startups achieve higher innovation outputs than their counterparts without a CVC division (Dushnitsky and Lenox, 2006). CVCs also have a non-trivial financial impact on the sponsoring company: counterintuitively, corporates obtain higher financial returns if they pursue strategic (OI) objectives rather than only seek VC-like financial returns (Dushnitsky and Lenox, 2005). Nevertheless, the degree of effectiveness of a CVC strategy is found to depend on how close the CVC division and the whole corporation interact with each venture (Rohm, 2018). Besides the advantages for the corporate, there is less clear evidence on the performance impact on CVC-backed startups. In this vein, Drover et al. (2017) argue that CVCs should similarly perform to their VC-backed counterparts. On one hand, CVC tenants bear the risk to be imitated or 'limited' by their corporate sponsor, e.g. when a corporation has the interest to absorb the future disruptor of its industry (Dushnitsky and Shaver, 2009). Consequently, a startup backed by a CVC might risk underperforming respect to its counterparts backed by an independent VC. On the other hand, CVC tenants can exploit the specialized complementary assets (Park and Steensma, 2012) that only a corporate investor can offer in order to scale faster than other investors-backed peers (Drover et al., 2017).

### *Looking for an interpretative framework*

The phenomenon of corporate entrepreneurship does not seem to consolidate but rather to constantly evolve over time. Many scholars researched the canonical features of different venture investment models (Block et al., 2018; Dempwolf et al., 2014; Wallmeroth et al., 2018; Weiblen & Chesbrough, 2015; van Weele et al., 2017), however empirical support is scarce thus calling for further research. Besides, some scholars (Brunet, Grof, and Izquierdo, 2016; Hausberg and Korreck, 2018) claim that it is difficult to precisely frame corporate entrepreneurship into defined categories. Moreover, scholars investigating the phenomenon have considered different corporate entrepreneurship strategies as silos, without considering them into comprehensive analysis.

To the best of our knowledge, only few studies have tried to provide a framework that embraces each corporate entrepreneurship strategy (Bruneel et al., 2012; Dempwolf et al., 2014; Grimaldi and Grandi, 2005; Pauwels et al., 2016; Weiblen and Chesbrough, 2015), neglecting to furnish a comprehensive comparative framework between the principal models of investment and support in startups.

In this paper, we propose an interpretative framework about startup support models. To our understanding, scholars were interested in (at least) five key areas that can make distinction between each model. The labels we assigned to these five areas are the following: (1) DNA, (2) Venture Selection, (3) Investment, (4) Added-value Contribution, and (5) Network. Naturally, these are terms that unify multiple terminologies used by scholars to express the same concept. These clusters are expanded into sub-areas that synthesize all the elements and features that scholars reported, again clustering different terminology where different terms were used to express the same object. The outcome of this analysis resulted in 29 different key features, which are reported and described in Table 1. Although this list is not short, it is far from being exhaustive because some features that were not considered relevant to discriminate between models have not been included for conciseness.

**Table 1**

Cluster	Variable	Description	Reference	Corporate Incubators	Corporate Accelerators	Corporate Venture Capital
DNA	Funding source	The type of organization that is financially sponsoring a model	<i>Wallmeroth et al., 2018; Grimaldi and Grandi, 2005; von Zedtwitz, 2003.</i>	Private (Corporate)	Private (Corporate)	Private (Corporate)
	Target Stage	The life-cycle stage(s) of a startup that are typically targeted by a model	<i>Wallmeroth et al., 2018; van Weele et al., 2017; Block et al., 2018; Richter et al., 2018; von Zedtwitz, 2003.</i>	Pre-seed (internal projects)	Seed	Round A +
	Industry focus	The industrial verticals that are typically targeted by a model	<i>Wallmeroth et al., 2018; van Weele et al., 2017; Prexl et al., 2019; von Zedtwitz, 2003.</i>	Core industry or General	Core industry or General	Core industry or General
	Geographic focus	The geographic areas (local, nation, region) that are typically targeted by a model	<i>Wallmeroth et al., 2018; Dempwolf et al., 2014; von Zedtwitz, 2003.</i>	Internal to corporate	Local / Global	Global
	Scale	The number of startups that the model is capable to accommodate simultaneously.	<i>Weiblen and Chesbrough, 2015.</i>	Low	Medium	Low to Medium
Venture Selection	Source of deals	The modes through which potential ventures enter into the selection process	<i>Wallmeroth et al., 2018; Weiblen and Chesbrough, 2015.</i>	Internal application	scouting, application	scouting, other investors
	Selection Process	The type and characteristics of the selection mechanisms	<i>Bruneel et al., 2012; Bergek and Norrman, 2008; Pauwels et al., 2016; Richter et al., 2018;</i>	Variable	competitive open selection in cohorts	Deep-dive, due diligence, evaluation

	Type of Due diligence	The type of a venture analysis and investment evaluation	<i>Wallmeroth et al., 2018.</i>	Minimal	Extensive	Extensive, analytical
	Selection Criteria	The set of criteria used for decision making	<i>Tyebjee and Bruno, 1984; Wallmeroth et al., 2018; Monika and Sharma, 2015; Bruneel et al., 2012; Bergek and Norrman, 2008.</i>	innovative idea / Strategic goals	innovative idea / Strategic goals	Strategic goal / expected ROI
	Decision maker	Who is in charge to decide the selection of ventures, their competence and experience	<i>Wallmeroth et al., 2018; Cohen et al., 2019; Monika and Sharma, 2015; Wise and Valliere, 2014.</i>	R&D managers	OI managers	Corporate/ Autonomous CVC managers
<b>Investment</b>	Average Holding Period	The holding period is the time a venture is included in the programme or in the portfolio. For financial investors, it corresponds to the investment horizon.	<i>Weiblen and Chesbrough, 2015; Wallmeroth et al., 2018; Dempwolf et al., 2014.</i>	Long term	Short term	Long term (3 to 10 years)
	Average Ticket	The average financing amount in each venture	<i>Wallmeroth et al., 2018.</i>	Variable	None/ Variable	Variable, up to few millions
	Investment Goal	The underlying purpose(s) for which the model invests and support ventures	<i>Block et al., 2018.</i>	Strategic, Technological, Financial	Strategic, Technological, Financial	Strategic, Technological, Financial
	Investment Mode	Investment in ventures can be made in different forms (equity, loan or convertible debt)	<i>Weiblen and Chesbrough, 2015; Dempwolf et al., 2014; Richter et al., 2018; Kohler, 2016.</i>	loan / equity	Loan / Convertible debt	Equity only Equity (rare)
	Exit Strategy	The strategy to monetize the return on the investment	<i>Wallmeroth et al., 2018.</i>	None / M&A	None / M&A	IPO or M&A
	ROI target	The targeted amount of return on investment (ROI)	<i>Wallmeroth et al., 2018.</i>	None / Non-financial ROI	None / Non-financial ROI	Variable
<b>Value-added Contribution</b>	Involvement	The type of active intervention from the investor besides the financing	<i>Wallmeroth et al., 2018.</i>	Strategic	Strategic	Strategic, Cap table
	Type of Intervention	The contribution may vary in the degree of standardization, intensity and frequency	<i>Bergek and Norrman, 2008; van Weele et al., 2017; Prexl et al., 2020; Becker and Gassman, 2006; Kohler, 2016.</i>	None/ Tailored Reactive Episodic	Standard Proactive Episodic	None/ Tailored Reactive Episodic
	Structured Programme	The intervention can be articulated in a replicable programme	<i>Dempwolf et al., 2014.</i>	No	Yes, in cohorts	No
	Intervention delivery	The persons in charge of delivering the intervention	<i>Dempwolf et al., 2014; Di Pietro et al., 2018.</i>	Mentors, corporate units (R&D, legal, marketing)	Mentors, corporate units (R&D, legal, marketing)	TBD
<b>Value-added Contribution</b>	Knowledge Inputs	The type of know-how that the investor can transfer onto the venture	<i>Di Pietro et al., 2018; Grimaldi and Grandi, 2005.</i>	Strategy Market knowledge Management Skills	Strategy Market knowledge Management Skills	Strategy Market knowledge Management Skills
	Business Support	If provided, the set basic assets and complementary services for running a business	<i>Bruneel et al., 2012; Di Pietro et al., 2018; van Weele et al., 2017; Block et al., 2018.</i>	Complementary (corporate) assets Business services	Complementary (corporate) assets Business services	Complementary (corporate) assets Business services
	Business Development	If provided, the set of specialized advisory services to support the development of a business strategy, from marketing to sales and finance.	<i>Bruneel et al., 2012; Block et al., 2018; Richter et al., 2018.</i>	Pitch Go-to-market strategy Marketing	Pitch Go-to-market strategy Marketing	None / Strategy review
	Product Development	If provided, the set of assets and services to support the venture in the development of its products, from prototyping to commercialization	<i>Di Pietro et al., 2018; Block et al., 2018</i>	Technology support	Technology support	Technology support
	Post-programme support	If provided, a set of support services once the venture has graduated or exited from the portfolio	<i>Dempwolf et al., 2014; Pauwels et al., 2016; Becker and Gassman, 2006;</i>	None Pilot Supplier relationship M&A	None Pilot Supplier relationship M&A	None Pilot Supplier relationship M&A

<b>Network</b>	Network composition	The type of active players connected by the model	<i>Di Pietro et al., 2018;</i>	Suppliers Customers Peer tenants	Suppliers Customers Peer tenants	Suppliers Customers Investors (TBC) Portfolio ventures
	Network access	How the connection between players is run and maintained by the model	<i>Weiblen and Chesbrough, 2015;</i>	Open / Driven by the corporate	Open / Driven by the corporate	Driven by the VC
	Enabling open innovation	The model acts as enabler of open innovation between players in the network	<i>Weiblen and Chesbrough, 2015;</i>	Internally	Internally	Internally
	Open innovation Direction Flow	The type of open innovation mode that the model can enable	<i>Weiblen and Chesbrough, 2015;</i>	Inside-Out (some) Outside-in	Outside-in	Outside-in

First, DNA clusters the main typical traits that not only distinguish a model but also the type of organizations within the same model: players can be set by different funding sources, targeting (or not targeting, i.e. generalist) different startups, in terms of maturity, industry or geographical origin and, as they are configured, can hold a certain scale of ventures at time.

Second, Venture Selection refers to the process, criteria and roles in place to identify the best deals and evaluate investments in them. Third, the Investment section groups the range of modes, size and goals that can be established for investing in ventures. Fourth, the Value-added Contribution refers to the type and extent of the supporting services that the investor can offer to support its tenant ventures. Fifth, the Network clusters the type of community and the mediation structure used by the models to connect diversified players in one network.

## **Theoretical background: OI forms of collaborations for corporate entrepreneurship**

### *Illustrative examples of startup support programs*

Our theoretical development is complemented with examples of three startup support programs presenting peculiar characteristics. We chose these programs because they seem to not fit with none of the identified forms of collaborations for corporate entrepreneurship, highlighting the need or a new classification of startup collaboration programs. Thus, following previous studies (De Massis et al., 2016; Siggelkow, 2007), these “exceptional” cases seem to be a proper choice for discussing and analyzing the phenomenon investigated in our study. The goal of this study, indeed, is to use such illustrative examples to clarify theoretical arguments and relationships showing how conceptual reasoning reported in the interpretative framework are actually applied (Siggelkow, 2007) instead of relating to an inductive case study. According to Glaser & Strauss (1967) such an approach allows for a close accordance between data and theory. Moreover, by combining our theoretical arguments with real examples we are able to provide avenues for future research that can verify the applicability of our conceptual framework beyond startup support programs.

In developing our cases we drew on multiple sources of information. In particular, we conducted 30 interviews (Table 2) with managers of the three companies from July 2019 to March 2020. Moreover, we completed our information through secondary data collected from company websites and other secondary sources of data, such as financial and business reports, presentations, press releases, magazine articles, and books.



**TABLE 2: LIST OF INTERVIEWS**

<b>ID</b>	<b>Date of Interview</b>	<b>Program</b>	<b>Position</b>	<b>Duration of Interview</b>
1	3/07/2019	Gellify	Chief Executive Officer	45'
2	26/08/2019	Gellify	Managing Partner, Chief Marketing Officer	50'
3	30/08/2019	Gellify	Managing Partner, Chief Operation Officer	40'
4	18/10/2019	Gellify	Managing Partner, Head of Interactive & Innovation Advisory	25'
5	28/10/2019	Gellify	Managing Partner, Head of Community	20'
6	10/06/2019	Gellify	Managing Partner, Head of Industry 4.0 & Open Innovation	45'
7	20/12/2019	Gellify	Industry 4.0 Consultant, Industry 4.0 & Open Innovation	30'
8	20/12/2019	Gellify	Industry 4.0 Consultant, Industry 4.0 & Open Innovation	50'
9	20/12/2019	Mind the Bridge	Founder & CEO	50'
10	16/01/2020	Mind the Bridge	Chairman & President	27'
11	21/01/2020	Mind the Bridge	Innovation Advisor & Account Manager	20'
12	23/01/2020	Mind the Bridge	Director of Innovation & Spain Office	25'
13	27/01/2020	Mind the Bridge	Area Manager Asia	20'
14	31/01/2020	Mind the Bridge	General Manager	20'
15	31/01/2020	Mind the Bridge	Innovation Advisor	25'
16	26/02/2020	Mind the Bridge	Digital Media Project Manager	20'
17	18/02/2020	Mind the Bridge	Product Manager & Innovation Advisor	30'
18	27/02/2020	Mind the Bridge	Business Development Specialist	20'
19	20/02/2020	Mind the Bridge	Senior Innovation Advisor & Account Manager	25'
20	17/01/2020	Plug & Play	Managing Partner Italy	40'
21	17/01/2020	Plug & Play	Program Manager Mobility/IoT	30'
22	17/01/2020	Plug & Play	Corporate Innovation Manager & Business Developer	25'
23	21/01/2020	Plug & Play	Director of Corporate Partnerships Africa	25'
24	24/01/2020	Plug & Play	Marketing Department, Inhouse Designer	30'
25	24/01/2020	Plug & Play	Corporate Partnership & Program Manager	20'
26	27/01/2020	Plug & Play	Director of Corporate Partnerships	20'
27	13/02/2020	Plug & Play	Director of Marketing	25'
28	13/02/2020	Plug & Play	Content Marketing Manager	25'
29	19/02/2020	Plug & Play	Venture Associate	25'
30	09/03/2020	Plug & Play	Open innovation Manager, IoT & Mobility	20'

Data has been analyzed using an iterative process, moving from data to theory and vice versa (Strauss and Corbin, 1998), which enabled us to refine our framework, better clarify its theoretical foundations, and illustrate how theoretical concepts work in practice. Finally, to ensure the integrity of our data, we triangulated the multiple sources, independently read the data and information, and discussed our interpretations in face-to-face meetings to resolve potential misunderstandings and divergent views.

### *GELLIFY*

Founded in 2017, GELLIFY is the first innovation platform dedicated to the B2B market that aims to connect startups, established companies and investors addressing them with dedicated business models. First, GELLIFY invests in B2B digital startups targeting specific stages of development (Seed, Early-stage, Round A) and technological clusters, with the goal to grow the future value of their equity. Therefore, besides providing capital, GELLIFY offers them a growth programme (called the Gellification) and access to privileged market channels. Second, GELLIFY offers specific and distinctive innovation consulting services to consolidated enterprises to innovate and grow their existing businesses, create new ones and build strategic resources, by driving and leveraging open innovation. Third, GELLIFY interacts with a network of trusted investors to share and co-invest in ventures as well as to achieve the exit of ‘gellified’ companies.

Focusing on the startup side of the platform, GELLIFY has designed a unique model that combines a ‘smart’ first-stage finance with a 6-24 months programme which is tailored to each startup based on its organizational, product and commercial gaps. This aid is coupled with structured OI mechanisms that allow startups to collaborate with large enterprises and scale their solutions thanks to GELLIFY which, besides acting as an OI broker, takes the governance and operatively supports the startup’s team, guaranteeing the success of OI initiatives. With this model, GELLIFY leads its portfolio startups to scale, letting them reach high levels of profitability and organizational maturity, to eventually monetize profitable exits.

To sum up, GELLIFY seems to propose an added-value investment model that significantly differs from the typical one offered by traditional (corporate) accelerators, incubators and VCs.

### *Plug&Play*

Plug & Play Tech Center defines itself as an early stage investor and an open innovation platform in which it connects and brings together startups, corporates and various types of investors. Founded by Saeed Amidi in 2006, it is headquartered in Sunnyvale in California at the heart of Silicon Valley and with an office of 180,000 square feet. Plug & Play has now established its position worldwide reaching 30 different countries in less than 15 years. Its mission is clear: “To make innovation open to anyone, anywhere” and is reflected in its general approach that can be easily described as “international-oriented”, as “aggregative” because it fosters the creation of relationships by working as an ecosystem platform manager. The innovation activities organized by Plug and Play can be divided into 3 areas: Accelerator Programs, Corporate Innovation, and Venture Capital. For what concerns the Accelerator Programs, Plug and Play is capable of running over 50 industry-specific acceleration programs a year across the entire World. These programs are set to last 12-weeks and there are intensive training for startups in which every aspect (from funding to marketing) is deeply analysed and exposed to the ecosystem of corporates and investors. For what concerns corporate innovation, Plug & Play has developed through years a world-class network of serial entrepreneurs, strategic investors, and industry leaders who actively assist its clients with its successful and growing investment portfolio. Lastly, regarding venture capital, The centrality of the early stage investing role of Plug & Play is reflected in the words of the CEO Saeed Amidi when he argues that “The fund has been investing in technology companies for over 15 years and holds successful investments in over 1,000 technology companies, some of which are: PayPal, Powerset, Danger, Bix, Powerset, DropBox, Lending Club, Zoosk, etc.” This fund is tightly connected to Plug & Play and the investments made at the beginning were the main reason of success of the company in terms of monetary returns and branding. Plug and Play participates in Seed, Angel and Series A funding where they often co-invest with their strategic partners.

### *Mind the bridge*

Mind the Bridge is an innovation advisory organization working at the intersection between corporates and startups. Headquartered in San Francisco, at the heart of Silicon Valley, it also has offices in Italy, Spain and the UK. Since its foundation in 2007, Mind the Bridge has been working globally, as an international bridge both for corporates and startups. MTB was established by the Googler, Marco Marinucci. Marco now serves as

the company’s CEO with Italian university Professor Alberto Onetti as its chairman. The final goal of Mind the Bridge is to foster a sustainable and global entrepreneurial ecosystem by providing activities focused on bringing corporates and startups together to enhance their reciprocal growth and to create new value especially for corporates through innovation. The value of “bridging” pervades deeply the company’s culture. They act as a connector between corporates and startups by providing to the former innovation advisory services, tech scouting and corporate innovation education and to the latter startup programs, mentoring and a preferential access to the Silicon Valley ecosystem. The different geographies are today at the core of what they do, but also what they think that could be the only way to approach an issue of innovation is really to look and scale at a global level. At the macro-level, their innovation activities can be summarized in advisory, scouting, research and education. Mind the Bridge is one of the leaders worldwide in innovation advisory for 13 years. Among all, Mind the Bridge supports large corporations in the definition of what is an innovation process and what is an innovation department with a dedicated research team. Moreover, it provides technology scouting in any market-related research when innovation is at the core and works as an innovation antenna of what happens in the most advanced ecosystem of innovation. Finally, Mind the Bridge runs the so-called Startup School, an entrepreneurship education program that immerses founders in Silicon Valley for up to 3 weeks and also organizes and hosts events in the Mind the Bridge Innovation Centre with key-actors of innovation at the heart of Silicon Valley.

### **The rise of innovation platform as a new corporate entrepreneurship model**

The analysis reported in the previous section allows us to identify the main differences between traditional models of corporate entrepreneurship analyzed and the illustrative cases. As shown in Table 3, the three illustrative cases present differences in each cluster derived from quotes of managers of the three analyzed innovation platforms. For this reason, we can conclude that the analytical framework derived from the literature on corporate accelerators, corporate incubators and corporate venture capital is no longer suitable for describing the startup engagement programs adopted today by corporations. These allow us to formulate a new definition of corporate entrepreneurship model, namely the innovation platform.

**Table 3:** Differences among illustrative cases and the interpretative framework

Cluster	Variable	Gellify	Plug and Play	Mind the bridge
DNA	Funding source		“Multiple levels of membership fees from corporates and co-investments in startups with VCs are adopted” (ID22)	
	Target Stage			
	Industry focus			

	<b>Geographic focus</b>			
	<b>Scale</b>		“We have over 50 industry-specific acceleration programs a year across the entire World” (ID25)	
<b>Venture Selection</b>	<b>Source of deals</b>			
	<b>Selection Process</b>			
	<b>Type of Due diligence</b>	“We map each venture’s gaps to evaluate the intervention effort” (ID7)		
	<b>Selection Criteria</b>		“We use Cherry and Picking” strategy.. select for investment only one or few startups per batch”(ID20)	
	<b>Decision maker(s)</b>		“Corporate partners choose startups for the acceleration program” (ID30)	
<b>Investment</b>	<b>Average Holding Period</b>	“The average holding period range from 1 to 3 years, much shorter than VCs average (for startups)” (ID3)	“Our investments are up to 12 weeks, on-site for the programs” (ID28)	“Mind the Bridge has very short and focused programs which lasts up to four weeks, on-site in Silicon Valley” (ID18)
	<b>Average Ticket</b>			
	<b>Investment Goal</b>			
	<b>Investment Mode</b>			
	<b>Exit Strategy</b>			
	<b>ROI target</b>	“Our target is modest multipliers for every deal, zero bad deals thanks to the Gellification (i.e. opposite to unicorn strategy)” (ID5)		
<b>Value-added Contribution</b>	<b>Involvement</b>			

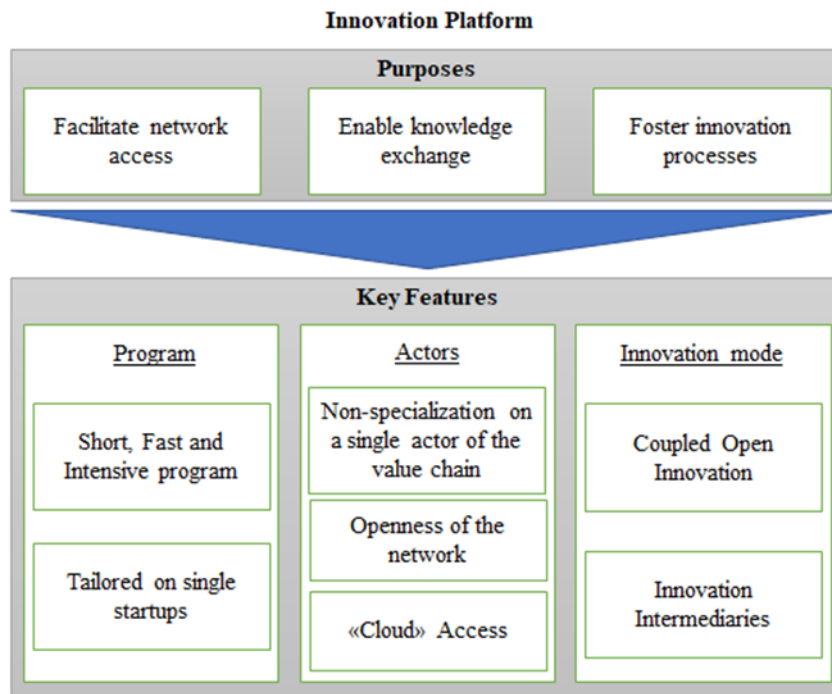
<b>Type of Intervention</b>	“We seek for proprietary intervention mode: tailored roadmap with HR and SW support to product and business development” (ID8)	“We offer specialized mentorship support to the development of all company areas, including product and technology development” (ID23)	“Education activities are provided by Silicon Valley entrepreneurs”(ID14)
<b>Structured Programme</b>			
<b>Intervention delivery (who)</b>	“GELLIFY owns internal divisions of Software R&D and Marketing, which dedicate (part of) their activity to support startups. Some of them may temporarily take managerial roles where they are lacking” (ID1)		
<b>Knowledge Inputs</b>			
<b>Business Assistance / Support</b>			
<b>Business Development</b>	“We create a tailored roadmap and dedicated HR support to marketing and sales areas. Business opportunities are also created through open innovation advisory projects with corporates” (ID4)	“The main benefit of the program is business development is introducing the startups to relevant partners. Business development activities would be not at the core of the program but have become indirectly significant over time. Startups participating in such programmes easily find and meet potential clients and investors” (ID29)	
<b>Product Development</b>	“Our goal is the creation of a tailored roadmap, transfer of methodologies and dedicated HR support to the developing team” (ID1)		
<b>Post-programme support</b>	“GELLIFY channels its B2B customers and their OI projects to fitting graduated (‘gellified’) startups” (ID6)	“Plug and Play has a strong alumni network which may invest in accelerated startups” (ID21)	

Network	Network composition			
	<b>Network access</b>	“GELLIFY offers multiple formats to network with international B2B players and specialized investors. Among them, an innovative database of GELLIFY’S validated startups and SMEs that offer corporates access and independent scouting of advanced innovative solutions” (ID2)	“Plug & Play has developed over time a deep connection with various actors in multiple ecosystems and thanks to these levels of partnerships, the corporates joining the platform have access to this network as well. They had indeed access to the startup ecosystem in the sector of interest and in the geographical area of interest, getting startup deal flows and also, gaining a considerable decision-making power over the structures and the verticals of the accelerator programs”. (ID26)	“The access to Mind the Bridge network is facilitated by the participation to the Startup School held in Silicon Valley. Moreover, Mind the Bridge organizes and hosts events such as “Policy Hackathon 2019 Challenges” in the Mind the Bridge Innovation Centre with key actors of innovation at the heart of Silicon Valley. Corporate clients signing a membership with Mind the Bridge will get services such as tech scouting, research and innovation consulting but also exposure to different ecosystems where Mind the Bridge works like the Silicon Valley” (ID 16)
	<b>Enabling Open Innovation</b>	“GELLIFY has added the core business of OI intermediaries to an added-value investment model.” (ID8)	“Plug & Play acts as open innovation platform in which it connects and brings together startups, corporates and various types of investors by exploiting its worldwide presence and top connections with industries and actors”. (ID24)	“Mind the Bridge facilitates the connection between different actors, acting as an innovation platform in which startup, investors and corporations meet and understand different innovation ecosystems. Mind the Bridge answers specific business pains that the client has and goes along with them in defining a particular solution through technology scouting. This is done by using the internal, well-organized database (it is based on business tags) and other external databases.”(ID11)
	<b>Open Innovation Direction Flow</b>	“GELLIFY not only offers consulting and execution of outbound OI, but it also drives inbound OI initiatives by launching startups for customers.” (ID7)	“Plug & Play facilitates both open innovation activity, inside-out and outside-in. Within the program different actors may pursue different strategies” (ID30)	“Within the Mind the Bridge program involved actors may follow different open innovation strategies favouring inside-out and outside-in innovation direction flow”(ID17)

## Findings

We have learned from our case studies that the three traditional models of corporate entrepreneurship (i.e. corporate incubation, corporate accelerator and corporate venturing) are no longer suitable to represent how established firms use the knowledge of startups today. However, the evidence also suggests that a new form of collaboration can be established by big corporations to engage with startups. We define it with the term “innovation platforms”. In this section, we derive from a comparison of our case studies a conceptual framework (see Figure 1) that brings out purposes (i.e., facilitate network

access, enable knowledge exchange, and foster innovation processes) and key features (i.e., program, actors and innovation mode) of innovation platforms. Both purposes and key features epitomize this new form of corporate entrepreneurship that established companies can use to engage with startups.



**Figure 1. Purposes and key features of innovation platforms**

### *Purposes*

As shown in Figure 1, there are three main purposes that may guide innovation platforms. The first one refers to the purpose of facilitating network access. Innovation platform, in fact, facilitates the access to its network of actors which participate in the platforms, thus allowing them to increase the number of actors they may interact with, and reducing the transaction cost of searching for those actors. The connection between players is run and maintained by the innovation platform and is essential for its success. The more actors are engaged in the platform, the more beneficial is the network effect. The second purpose is enabling the conditions that are needed to overcome the institutional barriers inhibiting knowledge exchange among big corporations and startups. Specifically, it is quite evident the need for a culture whereby knowledge exchange activities are legitimised as core business and recognised and rewarded appropriately. Thus, the barriers inhibiting knowledge exchange can be reduced through innovation platforms, allowing for improved exchange of knowledge. The third purpose is to foster innovation processes acting as knowledge intermediaries (Benassi and Di Minin, 2009). This activity takes place not only mediating and facilitating the encounter between diversified actors

but also actively supporting corporates and startups in the collaboration, transferring and implementation of solutions, thus favouring the integration of knowledge.

### *Key features*

To achieve its purposes, the innovation platform presents some key features that we identified in Figure 1. Such key features are grouped into three macro features namely program, actors, innovation mode.

The first program-related feature of an innovation platform is the relatively short, fast and intensive program duration. This is rather evident in respect to CVCs and corporate incubators, which generally need to ‘hold’ portfolio startups (or spin-off) through several years to achieve investment returns, while it is less dissimilar to corporate accelerators. The short duration of the program allows the innovation platform to engage with several startups, thus creating an ecosystem of startups which may interact with the unstructured network of the platform. The second program-related feature refers to the ‘tailorization’ of the added-value contribution. For traditional corporate accelerators and incubators, training courses and support services are offered as rather standardised to cohorts of heterogeneous startups, thus not taking much into account the specific needs of each venture. On the contrary, we find that an innovation platform designs a tailored programme roadmap for each startup depending on its life stage, business model and gaps, as the program goal is defining the precise series of activities needed for an organization to achieve the solid ‘state’.

The second feature that characterizes innovation platforms is related to the actors involved. The first actors-related feature refers to the fact that the innovation platform is not specialized on specific actors of the innovation chain. For this reason the platform tends to involve investors, customers, big corporations, governments, institutions and startups within the platform. This, in turn, allows the platform to achieve the mentioned network effect which is crucial for the success of the platform itself. The second actors-related feature is the fact that the network of an innovation platform is completely open to all the actors interested in accessing it. To participate in the platform there is not a specific selection of actors, and this feature, in turn, significantly increases the capacity of the networks and the expertise that each actor may bring into the network. The last actors-related feature is the “cloud” access to the platform. Actors involved in the platform can easily access the resources of the partners because the services are provided by the innovation platform through the internet (such as archiving, processing or data transmission), starting from a set of pre-existing resources, configurable and available remotely under the form of distributed architecture.

The third feature that emerges from our framework refers to the innovation mode. The first innovation mode related feature refers to the fact that it acts as an innovation matchmaker. By acting as matchmaker the innovation platform supports innovation by bridging gaps in the flow of information between different groups of actors and facilitating the transfer of complex knowledge between actors participating in the platform. The second innovation mode related feature is that both innovation modes of open innovation, outside-in and inside-out (or inbound or outbound, respectively) are provided by the innovation platform. On one hand, the innovation platform perform outside-in open innovation by hosting innovation and ideas of all the actors involved in the platform by opening some R&D process boundaries towards diversified inputs (e.g. ideas, know-how, technology, etc.); on the other hand, inside-out is performed by the



innovation platform building and launching startups from customers' inbound OI projects thus implying unexploited internal innovation to be exported and commercialised outside the funnel boundaries.

### *The servitization of corporate entrepreneurship*

The rise of innovation platforms as a new model of corporate/startup collaboration points out an interesting evolution in the way corporations pursue their corporate innovation strategies. The traditional models of corporate entrepreneurship (e.g. Corporate Incubators, Corporate Accelerators and Corporate Venture) are run internally to the firms (Ahuja and Lampert, 2001). In recent years, firms are changing their approach to corporate entrepreneurship, shifting from the "make" to the "buy" decision (Tadelis, 2002). In this vein, innovation platforms allow the outsourcing of corporate entrepreneurship, thus leading to the servitization of such activity.

The term servitization (Vandermerwe and Rada, 1998), in fact, refers to the transformation in which firms increasingly offer services instead of products to satisfy customers needs (Coreynen et al., 2017). According to the service dominant logic, customers seek solutions to their problems, instead of products which may help them to solve those problems (Vargo and Lusch, 2004). For this reason, the innovation platform sells the service "corporate entrepreneurship" to big corporations whose aim is solving the problem of remaining innovative. The servitization process has involved various sectors since the 80' (Chesbrough and Spohrer, 2006) and has now spread to corporate entrepreneurship activity through an innovation platform model.

## **Conclusions**

Our study offers contributions to the academic literature as well as to managers. First, an abundant literature has analyzed three forms of Open innovation collaborations for corporate entrepreneurship that lead established firms to tap into the knowledge produced by startups: 1) Corporate Incubation; 2) Corporate Accelerator; and 3) Corporate Venturing. Our paper shows that these three traditional models of corporate entrepreneurship are no longer suitable to represent how established firms use the knowledge of startups today. In fact, traditional models of corporate entrepreneurship often lead to the failure of acquisition operations and organizations fail to renew themselves sufficiently (Behrens and Patzelt, 2016). In this regard, Hunt et al., (2019) tried to explore a new model of corporate entrepreneurship - i.e., spin-inn - and examined whether it was more functional than traditional models of corporate entrepreneurship. Their analysis shows that spin-ins generate superior outcomes than traditional models of corporate entrepreneurship. Our paper aims at contributing to this article by showing that innovation platforms are an additional tool through which established companies can overcome the problems of traditional models of corporate entrepreneurship. Moreover, our paper contributes to the literature on corporate entrepreneurship by showing that corporations are shifting from a make to buy decision (Tadelis, 2002) of corporate entrepreneurship. Thus, we pointed out the phenomenon of the servitization (Vargo and Lusch, 2004) of corporate entrepreneurship as corporations are not running internally their own corporate entrepreneurship models but they acquire the services addressing the innovation platforms.

Second, we show that innovation platforms are a new form of collaboration that firms might use to engage with startups. The term “platform” has become nearly ubiquitous, appearing in the new product development and operations management field (Meyer and Lehnerd, 1997); in technology strategy (Cusumano and Gawer, 2002; Eisenmann, Parker, and Van Alstyne, 2006; Gawer and Cusumano, 2002, 2008); and in industrial economics (Armstrong, 2006; Evans, 2003; Rochet and Tirole, 2003). In this regard, Gawer and Cusumano (2002) claim that “scholars need to look across their own academic silos” (Gawer and Cusumano 2002: 429). In our article, we use the concept of platform to offer nuances of a new model of corporate entrepreneurship in which an entrepreneurial organization acts as a platform that puts two different segments in contact, represented by big corporations that want to renew themselves and by startups that need resources (Weiblen and Chesbrough, 2015). Interestingly, this new form of collaboration represents an advancement of the existing literature as it brings together the core elements of the other three forms of collaboration while also maintaining some peculiar characteristics and areas of application that make it firms can develop innovation platforms. Interestingly, our study shows that nowadays firms need to develop this new form of collaboration to engage with startups.

Third, our qualitative analysis provides interesting insights for our current understanding of technological change and entrepreneurial organizations. More specifically, Lampe et al. (2020) provide a synthesis of entrepreneurial organizations conceptualizations and how they are reflected in the literature through a bibliometric analysis. “Companies are increasingly using corporate venturing to learn from knowledge sources beyond the boundaries of the firm” (Schildt, Maula, & Keil, 2005, p. 493) as learning benefits are central to corporate ventures (Covin, Garrett, Gupta, Kuratko, & Shepherd, 2018; Narayanan et al., 2009). For this reason, our study contributes to this article as it identifies a new mode through which entrepreneurial organizations can acquire knowledge beyond the boundaries of the firm. This mode is indeed caused by technological change which has led entrepreneurial organizations to experiment new practices to acquire knowledge from external venturing.

Our study also has a number of interesting managerial implications. First, the results of this study suggest that managers should be aware of the opportunities and flexibility provided by an innovation platform, thus shifting their corporate entrepreneurship models from make to buy decisions. Second, we offer managers some preliminary insights into the purposes and features of innovation platforms. Future research will have to systematically identify the managerial decisions underlying the operational modes of this new form of corporate entrepreneurship, but it is possible to argue here that some practices and routines can be used to foster the tacit knowledge that can be interiorized and reinterpreted by big corporations. This can be done by permeating the culture of the learning organization and allowing those individuals involved in the innovation process of big corporations to understand the strategic importance of the knowledge that can be accessed through an innovation platform.

## **Limitations and future research**

Nevertheless, our study has some limitations, some of which also represent opportunities for future research. First, other studies may complement and build upon our conceptualization of innovation platforms. In this paper, we identified purposes and some key features (programme, actors and innovation mode) that epitomize innovation

platforms. However, the examination of innovation platforms is far from being conclusive. We invite scholars to investigate other characteristics that might be relevant for a better understanding of how innovation platforms operate in practice.

Second, generalizability of our findings is limited. We call for papers that confirm our findings through quantitative studies that examine the awareness of innovation platforms in a representative sample of entrepreneurs. In this regard, we have reason to believe that the conclusions we derive from this study can be supported in industrial contexts characterized by technological change. Conversely, it might be that traditional modes of corporate entrepreneurship are still valid. We thus invite scholars to explore this issue.

Third, we did not examine the impact of innovation platforms on startups. In fact, in this article we analyzed how established companies might use innovation platforms to tap into the knowledge of startups. It might be interesting to explore the other side of the innovation platforms.

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