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**Decoding Open Innovation
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Signals, Governance and Implementation Across
Corporate Case Studies**

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Abstract

Over the last 30 years, Open Innovation has established itself as a key strategy, with increasingly widespread adoption in business models. That is not limited to the integration of modern technologies but represents a profound change in organizational processes. Yet, as Open Innovation has spread, so have highly visible initiatives such as accelerators, challenges, and innovation labs; whose real contribution to deployed outcomes is often unclear. In some cases, firms adopt an embedded approach to Open Innovation, while other times they create Open Innovation programs that prioritize visibility to outside entities for different purposes than producing actual innovation. This creates a practical and research problem: the same “Open Innovation” label can describe either embedded initiatives that repeatedly convert external engagement into product launches and adoption, or symbolic efforts that primarily generate visibility without durable implementation.

This thesis employs a qualitative multiple-case desk research design, based on corporate disclosures and third-party sources. The findings are further corroborated with the direct contribution of corporate interviews, serving as a validation tool to compare results at different levels. This work develops an evidence-based way to distinguish *Innovation Theater* from *de facto* Open Innovation using observable, publicly traceable signals. The research is applied to a sample of Open Innovation programs from listed firms across multiple industries. Each case is coded through a cross-case matrix built from theoretically grounded variables and together analyzed to derive recurring cross-case configurations. Cases are positioned on a two-axis map contrasting communication intensity and implementation evidence. Other graphical visuals are proposed to underline the levels with which firms orient the promotion and development of concrete and deployed programs, and the one of marketing-oriented initiatives, with respect to the outcomes produced.

The results identify patterns that tend to co-occur with implemented outcomes and signals that correlate with theater risk. The contribution of the thesis is twofold. First, it proposes a distinction between symbolic and substantive Open Innovation

by translating abstract debates into a set of observable signals and a coding rationale. Second, it offers an interpretive lens: rather than treating OI as a monolithic best practice, it highlights the organizational features that make the difference between programs that remain performative and those that scale into the business.

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1. Introduction

Innovation has become a strategic capability for large firms operating in increasingly technology-driven environments. In this context, Open Innovation (OI) has evolved from a niche managerial concept into a mainstream corporate practice. Companies engage with external partners through different channels, accelerators, challenges, hackathons to cite few among them, in both inbound and outbound ways. However, the “open” label covers a variety of different realities. Some initiatives generate implemented outcomes, while others remain largely symbolic, with limited traceable integration into products or operations.

This thesis tackles the gap between innovation theater and concrete implementation in OI programs performed by firms. Corporate narratives often highlight launches and participation metrics, while evidence of scale-up in procurement adoption, or productization can be missing or hard to verify. To address this, the study proposes a replicable way to distinguish the nature of programs and assess the common factors that enable or disable their success in integration.

The thesis is structured as follows. After this brief introduction, the Literature Review chapter frames Open Innovation by consolidating definitions and core archetypes. It keeps discussing openness configuration, the nature and role of innovation intermediaries, and the main capabilities and implementation challenges that shape OI outcomes.

The third chapter constitutes an important appendix to the previous one, as it delves deeper into capabilities required to manage the paradigm and issues embodied in Open Innovation activity. It examines the core concept of innovation theater, reviews how outcomes and benefits are typically described, and concludes by formalizing the research gap and the research objectives.

The Methodology chapter presents the research design in detail. It explains how the analytical variables are derived from literature and operationalized into a cross-case matrix, how case studies are selected through inclusion criteria, and why these have been set in such a way. It also underlines how evidence is collected and triangulated across corporate and third-party sources, to strengthen the validity of the method.

The following paragraph describes the approach used to create cross-case comparability and the visualization outlook adopted. Further, it motivates the inclusion of a supplementary corporate interview as a validation tool and outlines its protocol along three blocks: strategy and governance, integration, and results versus marketing. To conclude, reliability and limitation boundaries of a desk-based design are scanned, to provide the readers with broader and neutral considerations about the imperfections that the model entails.

Empirically, the thesis develops a sample of 20 corporate case studies crossed with 7 theoretically grounded variables to form a dataset that lays the groundwork for qualitatively analyzing both single cases and identifying recurring combinations of elements that tend to co-occur with implemented outcomes, and patterns that systematically correlate with theater-risk profiles.

Second, each initiative is positioned along two key dimensions: (a) communication intensity (the extent and strength of externally visible narratives across multiple channels), and (ii) implementation evidence (publicly traceable indicators that outcomes have moved beyond pilot-level into adoption). Where appropriate, the work also uses paired and cross-sector comparisons to sharpen interpretation (e.g., initiatives that are similar in vehicle or consumers' target but diverge in outcomes).

The fifth chapter reports the empirical results of the study. It first presents the global picture of the dataset, mapping cases across the two key dimensions. It then identifies cross-case clusters and recurring patterns, distilling them into qualitative signals that characterize programs of 'de facto' Open Innovation versus theater risk initiatives. It summarizes the main takeaways emerging from the comparison with the direct-reported interview case.

The closing chapter concludes by discussing the implications of the findings for research and managerial practice. The study contributes to a practical tool for managers designing OI programs and a structured approach for researchers aiming to operationalize the difference between symbolic openness and scalable Open Innovation. It closes clarifying the limits of generalization given disclosure constraints and proposing directions for future work, especially around stronger measurement logic for implementation and richer longitudinal evidence.

2. Open Innovation. Literature review

In this first chapter, two main strands are addressed. The first defines the conceptual perimeter of the research: Open Innovation. Definitions, evolutions, different types, and core characteristics drawn from the literature are used as anchors to frame the topic and establish the analytical context in which this work operates. In addition, the chapter explores the role of intermediaries and maps the set of possible services that fall within the Open Innovation landscape. The focus then shifts to the applicability of these concepts in practice, analyzing the capabilities required to implement Open Innovation as well as the main barriers and the potential benefits that may arise from it.

From the review of the Open Innovation literature, four foundational dimensions emerge and will guide the case-study analysis further developed in this work: knowledge flows, openness configuration, intermediaries, and implementation issues.

2.1. Definition

Over most of the 20th century, the dominant approach to Innovation related to industrial and market purposes was seen in a “closed” paradigm view. Most R&D achievements had to be protected and constituted a sort of competition hedge. In such context, firms were expected to internally experiment with the key ideas and develop them through proprietary pipelines. Commercialization of the outputs, or integration in business processes, should have happened through controlled channels. This way, the whole chain remained almost completely internal (Chesbrough, 2003; Dahlander and Gann, 2010) .

Open Innovation (OI) is generally positioned as a paradigmatic shift away from the “closed” view of innovation. In the canonical formulation, OI reframes innovation as a process in which valuable ideas may originate both inside and outside the firm, and in which paths to market are not limited to internal routes (Chesbrough, 2003).

The author refined its own definition few years later, stating that Open Innovation is the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively (Chesbrough, 2006).

Open innovation has later been defined as “a distributed innovation process based on purposively managed knowledge flows across organizational boundaries” (Chesbrough and Bogers, 2013). A further definitional refinement presents OI as a research field that increasingly integrates firm-level practices with broader policy and ecosystem perspectives, implying that OI is not only a managerial technique but also a socio-economic phenomenon linked to institutions and the organization of knowledge production (Bogers, Chesbrough and Moedas, 2018).

From the standpoint of synthesis, the literature has progressively treated OI as a “distributed” innovation logic, assuming various kinds of interactions and knowledge flows between various kinds of development as well as commercialization actors, even before a particular value creating ecosystem architecture is established (Bogers *et al.*, 2017). The emphasis on distribution is important because it explicitly shifts attention from the internal R&D function to the firm’s boundary-crossing activity.

2.2. Types of open Innovation

A common and influential typology distinguishes Open Innovation by the direction of knowledge flows. Three different directions are coded: the “outside-in” mode focuses on importing external ideas and technologies; the “inside-out” mode focuses on externalizing internal knowledge; and the “coupled” mode combines inbound and outbound logics in collaborative arrangements. This typology is useful because it links abstract definitions to observable mechanisms (Gassmann and Enkel, 2004).

Concrete practices of outside-in Open Innovation are:

- External technology scouting and search (often supported by intermediaries) (Howells, 2006) .

- University–industry R&D collaboration and research partnerships to access scientific knowledge and infrastructure (Mortara and Minshall, 2011).
- Corporate–startup collaboration through pilots/PoCs to explore and validate external solutions (Weiblen and Chesbrough, 2015).
- Corporate accelerators as structured programs to source and test startup solutions (Kohler, 2016).

The key analytical point is that inbound OI is not identical to “having partners”: the firm must (4) collaborate with external inputs to convert them into internal outcomes through (1) obtainment, (2) integration and (3) commercialization processes (West and Bogers, 2013).

The outbound (inside-out) mode emphasizes that internal knowledge can create value even when it is not exploited through the firm’s own product-market channels. Profits can come by bringing ideas to market, selling IP and multiplying technology by transferring ideas to the outside environment.

The coupled mode highlights reciprocal co-creation: firms and partners jointly create and exploit knowledge and technologies. This mode is particularly relevant

when innovation requires complementary assets and coordinated development, making collaboration a core part of value creation rather than a peripheral activity.

In the following picture the three archetypes are presented in a funnel-type of outlook (Figure 1 - Three archetypes of open innovation processes. Source: (Gassmann & Enkel, 2004).) :

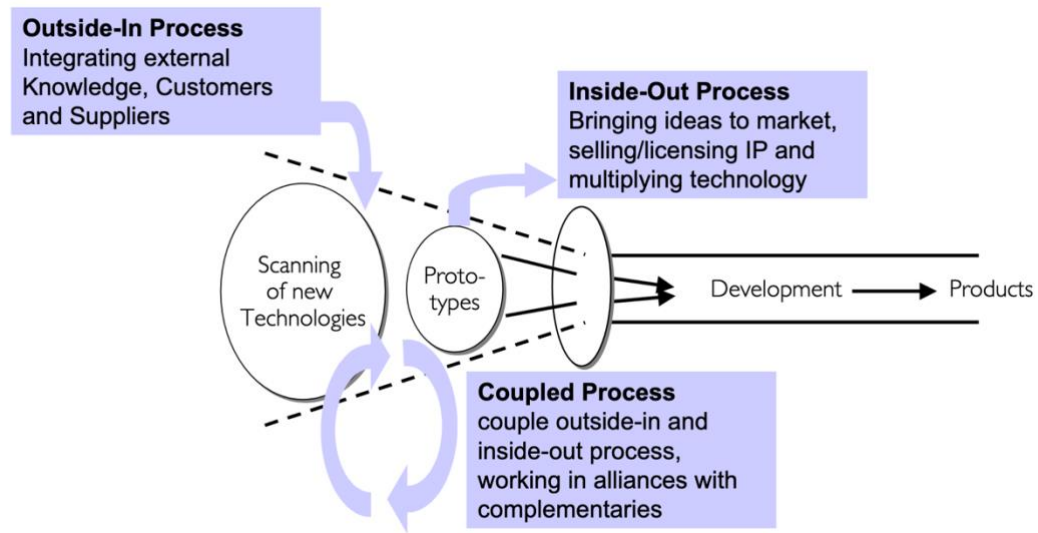


Figure 1 - Three archetypes of open innovation processes. Source: (Gassmann & Enkel, 2004).

Dahlander & Gann also propose an additional and widely used classification introducing the pecuniary vs. non-pecuniary dimension. This view takes into consideration four categories: sourcing, acquiring, revealing, and selling. This framework matters because it prevents conflating fundamentally different practices.

In practice, firms frequently combine multiple types simultaneously, which suggests that OI programs should be understood as portfolios of mechanisms rather than single-type initiatives. Corporate venturing is an example of this combination, as it can blend inbound information gathering with experimentation, and provide the outcomes with a market access via financial and governance arrangements (Vanhaverbeke, Van de Vrande and Chesbrough, 2008).

Finally, as OI practices expanded, the field increasingly emphasized the ecosystem dimension, where value creation may depend on networks of complementary players rather than on the dyadic interaction between two firms (West *et al.*, 2014).

This perspective is useful for interpreting multi-partner communities as forms of OI have their own distinct forms of governance (Nambisan and Sawhney, 2011).

2.3. Characteristics

As defined before, the main transversal characteristic of Open Innovation is the permeability of organizational boundaries: firms are not conceptualized as self-sufficient innovators, but as nodes in wider knowledge networks. This boundary permeability is not simply “more collaboration”; it involves deliberate choices about when, where, and how external knowledge is searched, integrated, and exploited (Dahlander and Gann, 2010).

A second characteristic is that openness is a multidimensional property rather than a binary state. In empirical work, this implies that comparing firms requires specifying *how* open they are, not merely whether they claim openness. A central contribution to this point is the distinction between two main openness configurations: **breadth** (variety of external sources) and openness **depth** (intensity of engagement). Firms who are more open tend to be more innovative (Laursen and Salter, 2006).

A third characteristic concerns the essential role of the business model in making openness economically meaningful. OI does not automatically translate into value; it creates options and access, but the firm must still design flexible mechanisms to capture value. The business model is a ‘cognitive device’ to convert technical aspects of a product or service into economic value (Van Der Meer, 2007). Without it, firms risk producing activity without impact.

A fourth characteristic is the presence of systematic trade-offs. Openness expands the search space and increases exposure to novel knowledge, but it also raises coordination costs, increases the complexity of decision-making, and introduces tensions around appropriation and control (Salter, Criscuolo and Ter Wal, 2014). Innovation decisions and external collaboration must be coordinated across business units. A wide variety of OI activities, which may involve numerous

potential partners, require governance models to avoid fragmentation. Scaling requires internal and external cultural alignment. (Mortara and Minshall, 2011).

Finally, OI is also declined as a contingent concept. Three topics are identified as intrinsic features. What (the content of open innovation), when (the context dependency) and how (the process). Whether and when it is beneficial depends on factors such as industry conditions, appropriability regimes, and the firm's internal capabilities (Huizingh, 2011). This contingency framing will be important within the thesis for the desk-research rigor, because it legitimizes comparative approaches that look for patterns and limited conditions rather than universal effects.

2.4. Innovation Intermediaries

“Intermediaries are public and private organizations that act as agents transferring technology between hosts and users” (Shohet and Prevezer, 2007).

A key role of intermediaries is supporting innovation search processes by structuring problem formulation, partner identification, and evaluation. This is particularly important in corporate settings where internal teams may struggle to translate strategic needs into technical problem statements that external actors can effectively respond to (Howells and Thomas, 2022).

Different literature sources refer to intermediaries as “brokers” or “technology brokers”. These are agents facilitating the diffusion of a social system of innovative ideas from outside the system. Both terms will be used in the document to discuss different actions that intermediaries carry on operating their functions. (Hargadon and Sutton, 1997) Identify the role of broker not just as a supporting linkage role but as a knowledge repository whose knowledge its workers use to provide solutions that are new combinations of existing ideas to their clients.

Intermediaries have a multitude of functions within the innovation landscape. While they are often associated with technology transfer, Howells (2006) argues that intermediation is broader, encompassing a range of activities that support

collaboration, reduce information asymmetries, and enable the development, validation, and diffusion of innovations. Drawing on a synthesis of prior literature and empirical insights. The author categorizes them into ten different functions of intermediating activities, listed in Table 1 - Innovation intermediation functions.

Source: Howells, 2006. below:

Table 1 - Innovation intermediation functions. Source: Howells, 2006.

-
1. Foresight and diagnostics
 2. Scanning and information processing
 3. Knowledge processing and combination/recombination
 4. Gatekeeping and brokering
 5. Testing and validation
 6. Accreditation
 7. Validation and regulation
 8. Protecting the results
 9. Commercialisation
 10. Evaluation of outcomes
-

To sum up the list, (Lopez and Vanhaverbeke, 2009)'s review suggests innovation intermediary functions might be grouped under three general headings: (1) connection, (2) collaboration and support and (3) provision of technological services.

The value of open innovation intermediaries highly depends on their ability to reduce search and transaction costs through effective matching and credible screening. (Hossain, 2012). In order to boost firms' access to information, intermediaries also perform activities such as support for networking, relationship brokering, and information diffusion (Caloffi *et al.*, 2023). For a subset of open innovation practice, innovation intermediaries can help transgress the boundaries between open and closed innovation markets. Moreover, less publicized forms of intermediation exist, representing consultants, incubators and science and technology parks that further complement innovative practice. Intermediaries can also act as facilitators of open innovation by enabling coordination among players that would otherwise struggle to collaborate due to institutional distance, capability gaps, or informational asymmetries. Physically, regarding the case of place-based

ecosystems, it is safe to conclude that intermediaries facilitate open innovation among enterprises through providing supportive conditions based on geographical proximity (Graf and Scholz, 2017).

Among recent contributions on open innovation intermediaries, (Riva, 2024) proposes a four-type classification built on two dimensions: the medium of intermediation (physical vs. virtual) and the role played on knowledge flows (brokers vs. contributors). Knowledge brokers primarily connect seekers and solvers, facilitating the transfer of existing knowledge without significantly modifying it, whereas knowledge contributors actively participate in generating knowledge for innovation projects. Physical intermediaries rely on tangible assets and proximity (science parks, digital innovation hubs, and incubators with laboratories) to support experimentation and the assimilation of tacit knowledge. Virtual intermediaries instead operate through online platforms and digital marketplaces that orchestrate distributed communities of solvers. In our variable-extraction perspective, these intermediaries can be treated under a unified umbrella that includes platforms, accelerators, and brokers.

2.4.1. Maps of services for open innovation and actors in the game

As open innovation is a very wide terminology, sometimes is difficult to give it a connection with real word entities. Within this concept, few particularly recurrent and relevant categories of actors can be distinguished: Startups, large corporations, consulting companies (acting as intermediaries), and the university–research system. Startups are the main vehicle of radical innovation: they are young, flexible, high-growth firms that develop recent technologies, products or business models and seek partnerships with more established organizations to access resources, markets, and capabilities. Large corporations act as the “demand side” of open innovation, launching collaboration programs with startups (corporate incubators and accelerators, calls for solutions, co-development projects) and corporate venturing initiatives to integrate externally developed solutions and speed up the transformation of their business models. CVCs provide risk capital and strategic support to young innovative firms, selecting the most promising projects and helping to reduce information asymmetries between startups and more mature

players. Finally, universities and research centers play a key role as producers of scientific and technological knowledge and as generators of academic spin-offs and startups, supported by technology transfer offices and entrepreneurship programs that foster the circulation of ideas and competencies towards the economic system.

To try and frame which set of activities and we consider when talking Open Innovation, a map (Figure 2 – Services' market for OI. Source: Open Innovation Lookout 2024.) is plot, providing an outlook over the many different services that fall within the term Open Innovation. The size of the bubbles represents the share of the services within the universe of viable solutions. Distinct colors help to cluster initiatives of the same kind. NB: data is referred to the Italian market for open innovation, updated as of end of 2024. The landscape could vary a little if other markets are considered, but overall, it is providing a sufficiently detailed map to give OI services concrete roots at a first glance.

Figura 11: Mappa Dei Player dell'Open Innovation

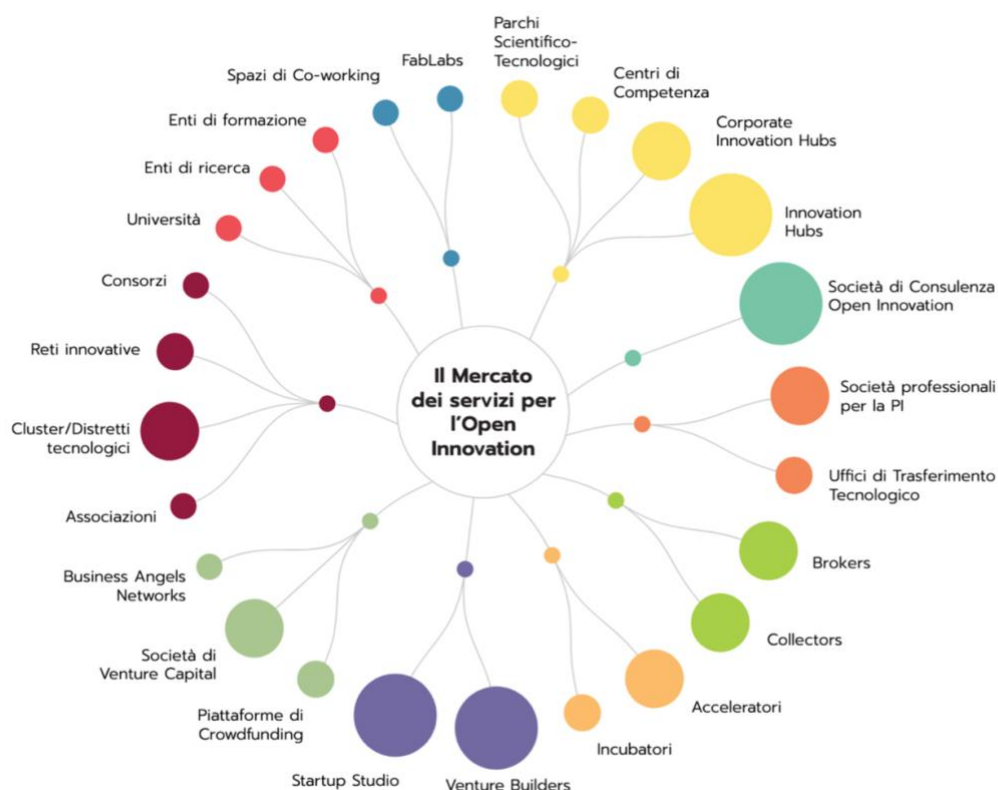


Figure 2 – Services' market for OI. Source: Open Innovation Lookout 2024.

From a governance perspective, external actors also connect to the role of internal organizational units responsible for orchestrating OI. Without such orchestration, external engagement tends to fragment across business units, increasing the risk that OI remains stuck at a pilot stage (Chiaroni, Chiesa and Frattini, 2011).

Moreover, mapping the players and services helps to distinguish recurrent paths that can bring to surface-level openness (high visibility) or operational openness (deeper engagements connected to implementation pathways). This distinction is analytically important for results' sections of the thesis, focused on measurement and evidence of implementation.

Still looking at the Italian lookout as of end of 2024, for large and super large enterprises, we can see how the vast majority of companies adopts Open Innovation actions within their business, and how inbound and coupled activities count for more than 90% of the whole portfolio, leaving a very tiny stake of activities that follow the outbound route (Figure 3 - OI adoption in large and very large companies. Source: Open Innovation in Italia e ruolo delle startup. Update 2025. PoliMi School of Management..

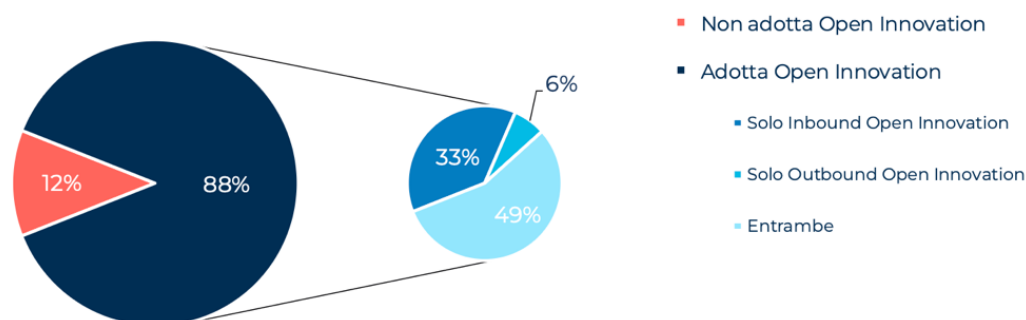


Figure 3 - OI adoption in large and very large companies. Source: Open Innovation in Italia e ruolo delle startup. Update 2025. PoliMi School of Management.

Although being not scientifically sound to directly translate this data to the global view, as conditions are country-specific and may differ due to a multitude of factors, it is acknowledged from literature that the same discrepancy between directions of knowledge flows is historically registered on a worldwide scale. Apart from that, it

is still significant to observe how impactful and widespread is the ecosystem as of today, making those who do not adopt it somewhat excluded from opportunities that most large companies are trying to explore and capture.

3. Capabilities & Implementation Issues

Open Innovation is not merely a set of external engagement practices; it is also an organizational capability requiring deliberate internal design. The literature emphasizes that OI implementation hinges on how firms structure internal interfaces. Defining roles, decision rights, routines, and incentive systems (Rodríguez and Lorenzo, 2011) is crucial for external knowledge to be systematically selected and integrated rather than simply observed.

A core micro-foundation of this conversion is absorptive capacity:

"Absorptive capacity can be defined as the ability of a firm to recognize the value of new, external information, assimilate it, and apply it to commercial ends" (Cohen and Levinthal, 1990).

In practical OI programs, this capability determines the nature and sustainability of its competitive advantage. Importantly, absorptive capacity is not a single metric: conceptualizations and measurement modes vary widely, which creates comparability problems across OI studies and can obscure the mechanisms linking openness to performance. Many empirical researchers use R&D intensity as an indicator for absorptive capacity, assuming that higher levels of R&D investments directly improves a firm's ability to exploit external knowledge, which is not always the case, especially in low technology industries or among small and medium-sized enterprises (Lewandowska, 2015). Absorptive capacity links to the concept of open innovation (OI) based on the idea that companies can leverage the knowledge generated externally to improve their innovation.

For example, recent years witnessed enormous interorganizational relationships for technology transfer. Absorptive capacity has represented the main obstacle for this snippet of innovation to evenly widespread, which is still challenging for most firms (Hossain, 2013). Other crucial elements that contribute to implementation issues for assorted reasons are short technology life cycles, emerging and innovative technologies, risk sharing in technology development, R&D globalization, growing

rivalry among firms, growing role of venture capital in financing technology to flourish, etc. (Vanhaverbeke, Vermeersch and Zutter, 2012).

Running an Open Innovation program requires setting up a dedicated organizational unit, processes and a budget, and ensuring adequate governance mechanisms. One main element consists in the definition of a strategic charter for OI, which must include a clear orientation in the weight to be given to ‘technology push’ and ‘demand pull’. The former will lead to OI activities that are quite independent of the firms’ business units, with a high propensity toward risk, and will try to produce innovative solutions that may be useful in a future perspective, but not necessarily be of immediate relevance. The latter will instead ensure that OI is carried out with a constant connection to BUs, trying to find solutions to explicit and immediate needs, and will be less risk prone. In this case, the risk is that OI will not deliver solutions capable of transformative change on the organization (Cantamessa and Montagna, 2023).

The process of turning ideas into profitable business models requires a level of leadership commitment that is often hard to get. When leaders are mostly focused on driving the success of their existing business, innovation can be relegated to the margins of the company. These margins might have cool names like “lab”, “accelerator” or “incubator”. But if no added value ever emerges from those places, their existence remains peddling (Viki, 2020).

From this perspective, capability proxies, are analytically important because they capture the firm’s “internal conversion engine” and help explain why similar levels of openness may lead to different implementation outcomes.

Beyond organizational structure, OI must be tightly integrated with organizational ambidexterity and dynamic capabilities too: firms require sensing–seizing–reconfiguring routines to convert openness into sustained competitive advantage (van Lieshout *et al.*, 2021). A key implementation barrier emerges when R&D units engage externally: the resulting frictions comprehending increased coordination costs (Greco, Grimaldi and Cricelli, 2019), decreasing returns to openness (Laursen and Salter, 2006) blurred value appropriation mechanisms, and conflicting strategic priorities can undermine integration efforts. Rather than treating these as anomalies, contemporary frameworks view them as structural challenges of openness that

organizations must actively manage through deliberate processes and behavioral change.

3.1. Innovation Theater

According to Forbes USA, the expression was first coined by entrepreneur-turned-academic Steve Blank, Professor at Stanford University, in a Harvard Business Review article: "Why Companies Do 'Innovation Theater' Instead of Actual Innovation" (Blank, 2019).

Innovation Theater refers to situations where organizations create highly visible innovation activities that signal ‘coolness’, while producing limited integration into core business processes. This is not “bad innovation,” but a specific mismatch between external communication and internal conversion mechanisms. (Blank, 2019). In other words, a lot of focus is on the visible part of the change (such as events or marketing), while limited attention is paid to the efforts to implement innovative solutions that can truly transform the business. A useful way to avoid treating the topic as a solely anecdotal label is to connect the symbolic actions to organizational logic: innovation initiatives can function as signals of legitimacy and progress even when they contribute weakly to the underlying process (Granados, Ayala and Ramos-Mejia, 2024).

The authors summarize the latter topic dividing into two main organizational drivers that lead to innovation theater scenarios (Figure 4 - Model of innovation theater. Source: Granados et al., 2024.). On one hand it is hard drivers influencing the idea selection phase. Among them, lack of a vision, objectives and KPIs -what the authors define Innovation Strategy- and limited allocation of resources and capabilities. On the other hand, Soft Drivers tend to impact more the innovation development and market diffusion phases. This cluster’s two main strands are reported to be the use of innovation as a mean to attract and keep talents; and the cultural discourage of experimentation and failure. That ultimately produces fear of making mistakes or not delivering results with technological innovation projects.

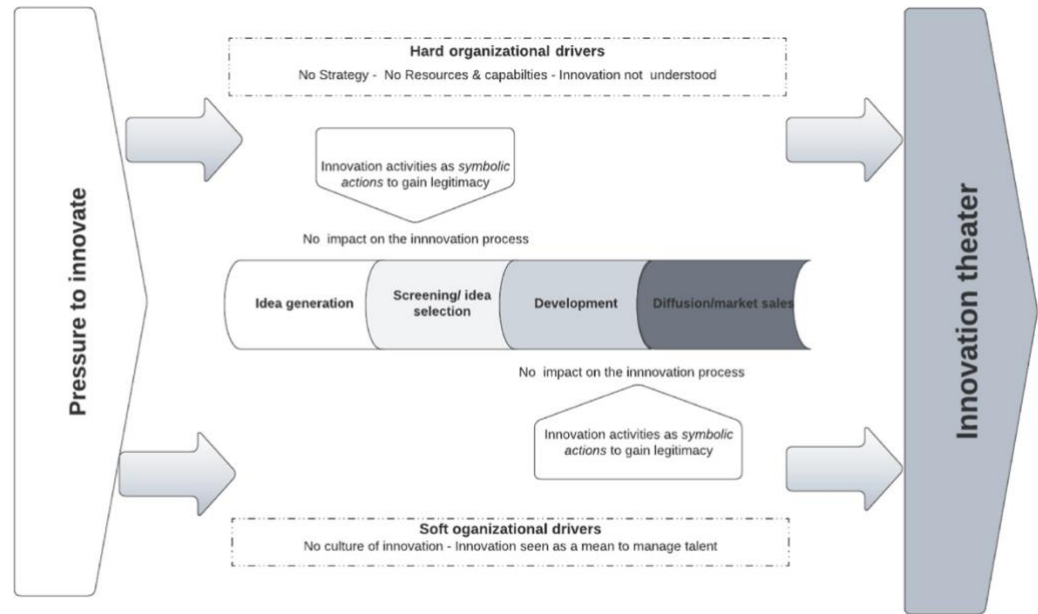


Figure 4 - Model of innovation theater. Source: Granados et al., 2024.

A third category of drivers exists in (Granados et al. 2024) model: when external pressure is added to the before mentioned drivers, theatricalization becomes a way to gain legitimacy. Firms deploy symbolic actions to improve individual positioning by creating a halo of professionalization (Abrahamson, 1996), and to be perceived as an innovative technology-based organization. This category is labelled as Legitimacy Drivers and consists of: (i) organizational reputation, (ii) individual positioning, and (iii) leadership.

(i) They need to respond to external market or non-market pressure like media or investors (Delmas and Burbano, 2011), or send messages to stakeholders. (ii) Managers need ‘low-hanging fruits’, ‘quick-wins’, or ‘cosmetic actions’ to get recognition or to be promoted. Employees also need to legitimize their work because they want to be seen at the forefront of the use of new and implementation of new technologies. (iii) When leaders (i.e. top executives or directors) want to innovate, they want it ‘quickly and with no risks.

Granados et al. present a two-dimensional classification matrix for innovation activities (Fig.4). The horizontal axis measures impact on the innovation process (non-impactful to impactful), while the vertical axis measures visibility (non-visible to visible).

Four quadrants emerge (Figure 5 - Symbolic vs. Substantive matrix. Source: Granados et al., 2024.):

- Innovation Theater (visible, non-impactful) encompasses the problematic activities previously described.
- Substantive Visible Activities represent the ideal state: impactful initiatives effectively communicated for organizational legitimacy. Some examples are external alliances for technological projects (universities, startups) with a clear impact on the innovation process such as innovative ideas in different fields or testing technologies; but such alliances are communicated in social media, internal communication, or annual reports. Other examples are hackathons and innovation weeks to rapidly develop and test first ideas regarding technological challenges which are strategic for the company, but such events are recorded to later be spread in different outlets.
- Substantive Activities are impactful but low visibility: innovation addressing concrete challenges, may remain silent for competition reasons. Some examples are innovation contests to look for promising novel ideas, specific training programs to boost innovation capabilities, and internal structures with clear innovation KPIs.
- Isolated Activities are neither impactful nor visible. These activities do not have an impact because collaborators do not have the means to do so and because the company is not pursuing any internal or external visibility. Some examples are isolated workshops or innovation contests with no media coverage to be communicated internally or externally.

Organizations prone to innovation theater concentrate in the first quadrant, misinterpreting visibility for genuine process change.

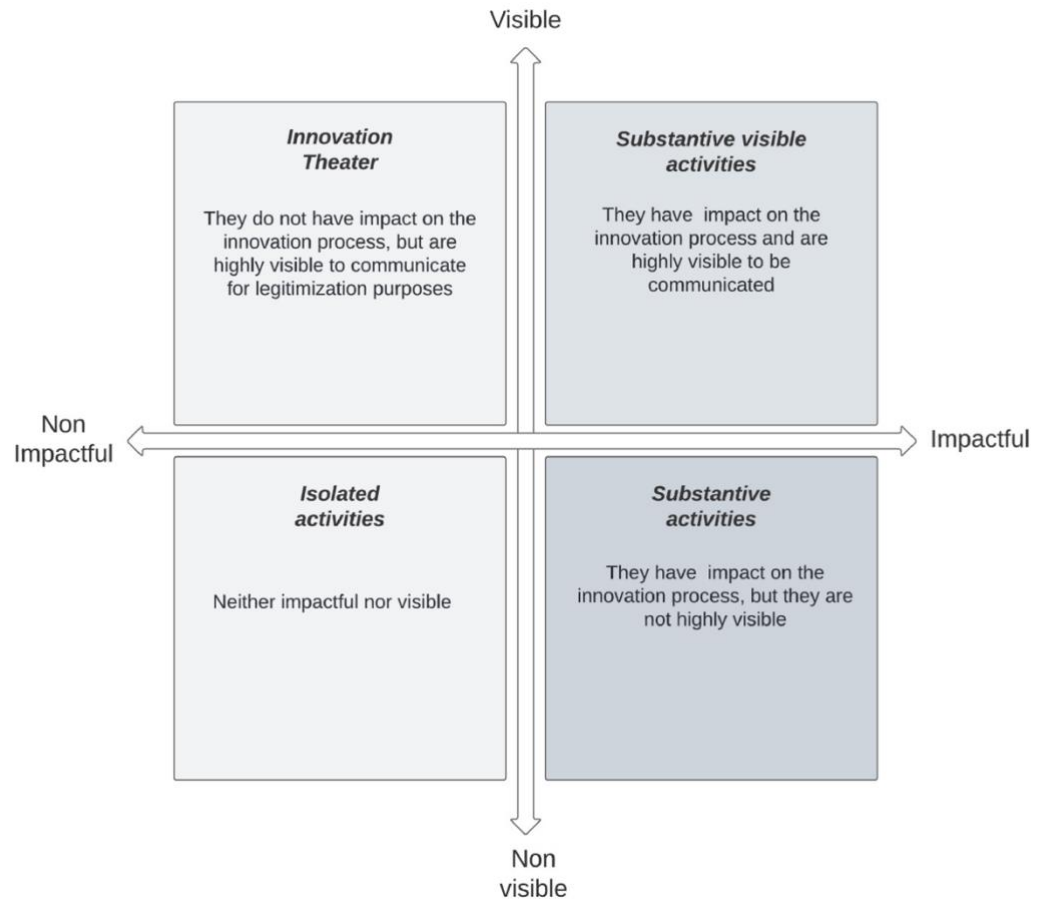


Figure 5 - Symbolic vs. Substantive matrix. Source: Granados et al., 2024.

3.2. Openness Benefits

Once analyzed the main obstacles that prevent Open Innovation to be widespread in every context, the focus shifts to the upsides of that practice. OI brings many performance enhancements together with its adoption. Following, we list the main ones from literature.

OI activities are highlighted as invigorating on innovation performance and absorptive capacity plays a mediating role in it. IT organizations with a higher inbound knowledge and absorptive capacity demonstrated better innovation performance (Grandhi, Chhetri and Molla, 2024).

Performing open innovation activities is significantly and positively related to four dimensions of innovation performance: new product/service innovativeness, new

product/service success, customer performance, and financial performance. The impact of open innovation positively affects a broad range of innovation performance indicators. Among others, impact on new service innovativeness and financial performance is relatively stronger. Entrepreneurial orientation strengthens the positive performance effects of open innovation significantly more than market orientation and resource orientation do. In general, it has been found that having a more explicit strategic orientation enhances the effectiveness of open innovation. (Cheng and Huizingh, 2014).

Speaking of ecosystem scale, OI outcomes may extend beyond firm-level innovation outputs. For instance, platform engagement becomes an important value as firms aim to understand how customers and users interact with their offerings. Similarly, since external parties are interacting and benefitting from interactions, an advantage is to track value generated by others because of participation in these strategies. (Altman and Tushman, 2017). Moreover, in risk prone activities such as corporate venturing, OI has the following advantages: (i) benefits from early involvement in new technologies or business opportunities; (ii) delayed financial commitment; (iii) early exits reducing the downward losses; and (iv) delayed exit in case it spins off a venture (Vanhaverbeke, Van de Vrande and Chesbrough, 2008).

3.3. Emerged Gaps and Research Objectives

“Open innovation has become a general catch-all term for any new model of innovation” (West *et al.*, 2014).

A consistent theme in more recent work is that what “counts” as OI can diverge between scholarly usage and companies’ reality. There partly exists a lack of an effect between the intensity of adoption of OI activities and a company’s self-perceived status in OI. Additionally, there is a difference between openness measured as self-perception and openness measured as the cumulative adoption of OI activities. (Teplov, Albats and Podmetina, 2019). Firms might underestimate their position as OI initiatives’ adopters, as well as consider themselves effective open innovation makers just based on the number of initiatives, regardless of their

results. This divergence matters for empirical research because it can generate false positives when classifying corporate initiatives: the label may be adopted even when the underlying mechanisms are weak or absent.

One methodological problem in studying OI is distinguishing activity evidence from implementation evidence. Without explicit indicators of conversion from external engagement to internal exploitation (Srisathan, Ketkaew and Naruetharadhol, 2023), OI risks being evaluated on visibility rather than organizational outcomes (Borglund and Rönnberg, 2021).

Another gap is the limited availability of robust, comparable measurement approaches that track the conversion from external engagement to implemented outcomes. One of the reasons why measuring Open Innovation initiatives is more difficult than other activities, is the involvement of external actors. Sometimes the impact that these activities have on a company's evolution and results are not measurable with the traditional indicators and it is necessary to establish new measures that consider both quantitative and qualitative results (Morandin and Corso, 2022). Some KPIs indicators include the number of new ideas, the number of successfully validated prototypes, and the number of new technology-based products launched to the market. However, the association between investment in these activities and increasing technology-based products is not always positive (Granados, Ayala and Ramos-Mejia, 2024), measurement therefore requires a logic linking inputs to outputs through triangulation of evidence.

A third gap relates to failure modes: OI research increasingly acknowledges limits, risks, and costs of openness, yet many corporate narratives remain biased toward success stories. Indeed, a recent study revealed an S-shaped relationship between open innovation and financial performance, implying that the benefits of open innovation will not always outweigh the costs (Schäper *et al.*, 2023).

A fourth gap concerns organizational mechanisms that prevent OI failures. Literature on the causes of failure of OI is still in its infancy, and results are scattered and fragmented (Cricelli, Mauriello and Strazzullo, 2023).

Against these gaps, the research objectives that this work tries to investigate are:

- (1) To define operational criteria for distinguishing Innovation Theater from de facto OI using implementation evidence.
- (2) To map how specific capabilities and governance mechanisms shape conversion and provide a measurement of substantive OI and “Innovation Theater” levels.
- (3) To interpret recurring cross-case patterns (culture mechanisms, industry, budgeting, size...) for initiatives to successfully implement OI projects or unsuccessfully fall into Innovation Theater.

The following chapter will include methodology through which the research is conducted. The variables of analysis that have been identified through literature research will later serve as variables for the matrix used to scan the case studies included in the desk research.

4. Methodology

In this second chapter of the work, the focus shifts on explaining the process, the why and how the analysis has been conducted with multiple case study desk research. Methodology explains which cases were selected, the reasons behind the sample building and the tools that have been used to scan the outlook. Rigorous methods combined with literature referments and direct contribution interview were adopted. At first, the research design will be discussed, in the topics of the logic behind the tool built for the analysis. Secondly, definition of criteria for case studies kicks in, followed by sources reporting and cross case rules for research conduction, with discussion of the score's logic attributed for visualization. After briefly listing the rationale of the interview and its structure, the chapter concludes with an overview about reliability and limitations of the approach chosen.

4.1. Research design

Following the individuation of research questions emerged from literature gaps and targeted few grey areas of the whole matter, a decisive step towards results collection was to build a research procedure both scientifically sound and tailored for investigating the phenomenon proposed.

A qualitative multiple-case study design based on structured desk research was adopted to investigate the phenomenon of Innovation Theater contraposing to de facto Open Innovation initiatives. This approach was selected because the research aim requires distinguishing these phenomena through comparable and publicly traceable evidence across heterogeneous contexts. Given that the phenomenon spans diverse implementation forms (e.g. platforms, accelerators, venture client models, corporate laboratories...) an in-depth qualitative approach is better suited than purely quantitative design, which would require standardized measurement across initiatives that entail different parameters of application and different structures. Moreover, firms rarely disclose outcomes consistently and in a standardized manner for this sort of initiatives. In this sense, where having different

objects with distinctive features complicates direct comparisons, a qualitative approach helps outlining measurements much better than purely quantitative tools (Yin, 2017).

As (Patton, 2002) articulates, "In qualitative research, purposeful sampling focuses on selecting information-rich cases whose study will illuminate questions under study." This principle emphasizes theoretical relevance over statistical representativeness, making it the appropriate foundation for this context. The study follows a theoretical sampling logic, combined with criteria related to evidence accessibility, with a pragmatic approach rooted in both (Eisenhardt, 1989) and (Yin, 2017). In line with Eisenhardt's seminal framework for building theories from case studies, the use of multiple cases strengthens the analysis through replication logic and systematic cross-case comparison, enabling the development of theory around recurring configurations that explain divergent outcomes (Eisenhardt, 1989).

The multiplicity of case studies has been reduced to $n = 20$ cases. This for sufficient accessibility on one hand, and for sufficient statistical relevance and heterogeneity on the other. This sample size is positioned within the intermediate-N range (10–50 cases), which is specifically cut for Qualitative Comparative Analysis (QCA) and pattern identification (Cragun *et al.*, 2015). According to the paper, this intermediate-N range fills a critical methodological gap: it overcomes in width the traditional small-n case study inference, yet it is too small for statistical methods. QCA logic, designed precisely for this range, permits identification of asymmetric relationships between conditions and outcomes. Hence recognizing that different combinations of variables can lead to the same result, and that the absence of a condition does not necessarily imply the presence of its opposite. This configurational lens is particularly appropriate for distinguishing Innovation Theater from de facto OI, as it avoids the assumption that outcomes follow from single causal factors and instead recognizes that they emerge from interactions among multiple conditions. The 20-case sample thus provides sufficient variation to detect recurring configurations while maintaining analytical depth through transversal case comparison.

To validate or refute the findings from the case study analysis, which - although detailed and as free from bias as possible - remains conclusions based on external

and publicly accessible data, it was decided to include a one-to-one interview with a company manager as a comparison tool. This interview, structured with questions aimed at configuring the company's activity within the same matrix, could provide direct input in terms of data, program configuration, and pipeline progress from start to finish.

For what concerns the process thorough which the analysis is carried out, the research design follows a structured workflow, starting from literature basis to get to: (1) extraction of analytical lenses from Open Innovation literature (inbound/outbound/coupled archetypes, breadth/depth of openness, intermediary roles, implementation pathways); (2) definition of sample size and inclusion criteria; (3) data collection on cases research; (4) filtering and selection; (5) translation of these conceptual lenses into a matrix of seven operationalized variables observed across cases; (6) results elaboration and pattern detection; (7) further analysis on outcomes plotting, and signals interpretation; (8) conclusions.

This workflow aligns with foundational framework for qualitative analysis (Miles and Huberman, 1994), which emphasizes that "data matrices and summary tables promote clarity, facilitate comparisons, and support development of nuanced insights" (p. 239). The cross-case matrix structure, with cases as rows and variables as columns, enables three complementary analytical operations: (a) data reduction through coding of evidence for each case-variable combination, (b) visual display that facilitates pattern recognition across the matrix, and (c) inference drawing based on displayed patterns. This matrix-centric approach operationalizes Eisenhardt's within-case and cross-case analysis sequence, wherein individual cases are first examined in depth and then summarized and plot in the matrix, before patterns are extracted across the full case set.

The analytical approach is fundamentally case-oriented rather than variable-oriented (Della Porta and Keating, 2008), meaning the goal is to achieve deep understanding of complex organizational units characterized by multiple interacting conditions rather than to isolate bivariate relationships. This orientation is particularly suited to the research questions, which seek to identify configurations of conditions, not individual factors, that distinguish Innovation Theater from actual OI. The case-oriented lens permits investigation of causal complexity: how

different combinations of strategic goals, governance structures, and implementation mechanisms can lead to related results (or divergent outcomes from similar starting configurations) (Flyvbjerg, 2006).

4.1.1. Identification of variables

Four variables were derived from the literature review and then extended to seven after case desk research. An eighth parameter was subsequently added to weight the relative contribution of each program to the company's innovation ecosystem. The reason is to try and capture not only the “form” of openness, but also the conditions that allow OI projects to produce, or not, implemented outcomes. That must be paired with the degree of communication exposure in terms of verifiable outcomes. The idea is to investigate the strategic reasons behind the launch of an initiative, what happens under the surface and what is communicated to the outside. Guiding assumption is that an Open Innovation program cannot be assessed solely by declared intent (e.g., “we collaborate with startups”) but must be examined through partners involved, intermediaries used, posture in official reporting, and whether integration mechanisms exist to move from experimentation to adoption.

One last and particularly important variable, not directly linked to literature anchors, was added to conduct the analysis in a fair manner. This is the “Innovation Portfolio Embeddedness”, a metric created to quantify the internal relevance of the program examined, relatively to the company’s whole portfolio of innovation activities and projects.

Following, a brief description and examples of every variable used to build the tool for analysis:

(A) Direction of Open Innovation initiative (Inbound / Outbound / Coupled).

This dimension captures the dominant direction of innovation exchange and the logic of value capture. Variables include the program’s primary orientation (e.g. inbound scouting, outbound spin-offs, coupled co-development, etc.).

(B) Open innovation mechanism.

Organizational form used to run the OI program (CVC, accelerator, portal, lab, etc.). It reflects both approach structure and the firm's role within the project, distinguishing between direct engagement, platform-mediated programs, clienting and so on. Typical 'depth' features on engagement intensity are recorded: open calls, pilots, co-development, equity investment, etc.

(C) Main partner targets.

This variable reflects particularly partner breadth (range and variety: startups, universities, customers, inventors, VCs) to which the program was open or directed to. At the same time provides information about the type of participants in the program and their expected behavior. It could also give a first insight to distinguish between "engage-all" activities aimed at visibility-maximizing and wide intake and fewer but deeper sniper-targeted relationships.

(D) Intermediation.

The variable categorizes whether the program relies on direct engagement versus platform or accelerator-mediated channels. The degree of 'internalization' of the initiative (presence of dedicated units) may provide information about the following intermediation variable and the chances of success of the program. Significant will be to analyze if communalities in the choice of intermediaries exist into projects that succeed. Same for theater cases.

(E) Implementation (publicly traceable).

"Integration capability" was translated into observable signals such as the presence of an explicit PoC-to-procurement pathway or repeated deployments over time. This dimension operationalizes the difference between "communication activities" and "implemented innovation." It measures the presence of disclosed information about the initiative's conversion from pilots to deployment. Information may include decision rights, budget continuity, integration pathways.

(F) Outcome evidence.

This evaluates public evidence of results (deployed cases, launched startup status, metrics vs pilot-only claims or reported closures). It distinguishes de facto OI from symbolic theater through verifiable performance/outcome signals. Consistently with the thesis gap, the literature offers limited tools to distinguish symbolic

innovation initiatives from embedded OI using observable evidence. Therefore, the variable is designed to make such distinctions empirically visible.

(G) Governance in official reporting.

This variable assesses reporting quality: formal disclosure of people, entities involved, budget, KPIs versus generic PR communication. It inspects if the project is cited in official reports, company website or established sources (and cited-back on partner media channels) or only non-accredited third-party cited. It often responds to the question: “does the company have a case study-like article or section for the initiative?”.

(H) Innovation Portfolio Embeddedness

This data was lastly added to measure how central the program is structurally to the company's other innovation activities. To do so, a scale was produced to consider the “weight” of the initiative and the consequent expectable commitment from the company. (Bishop and Herron, 2015).

Following, the logic behind the scores assigned:

- 1 = Peripheral: local/episodic initiative, high PR/event, non-core.
- 2 = Niche: limited scope (area/country), some pilots, customer-oriented, advertising.
- 3 = Material: recurring program with a dedicated team, "visible" but not dominant impact. Not at the basis of the corporate strategy for innovation, still significant.
- 4 = Core: structural element of the innovation model, multi-year, clear adoption channels.
- 5 = Keystone: strategic "pillar". Symbol of corporate innovation (very high influence and resources).

4.1.2. Cross-case matrix building

The cross-case matrix is the primary database and act as analytical tool extracted from the desk research. At a first step, the matrix was reproduced singularly for each case, to delve deeper into data, verifying accuracy and helping refine the full-length content into summaries. Second step was to structure the dataset with

programs as rows and variables as columns, enabling a global picture to operate systematic comparison across heterogeneous contexts. The unit of analysis is a single OI program per firm, selected on criteria that will later be explained. Selecting one program per firm increases comparability and reduces within-firm heterogeneity that could otherwise obscure patterns.

Matrix cells were coded using qualitative coding based on explicit evidence approach. Whenever possible, variables were recorded then translated as ordinal levels (low/medium/high), most frequently short annotations linked to the source type. The coding was intentionally conservative for “implementation evidence”: marketing claims were not treated as implementation unless supported by at least one credible traceable indicator (e.g., procurement adoption, product launch, recurring operational partnerships, or outcome metrics disclosed in corporate reporting and/or supported by third-party sources). The matrix format reduces narrative bias by forcing the same constructs onto each case. It also supports falsifiability: if a firm is highly visible but lacks traceable scale-up indicators, the matrix makes this discrepancy explicit.

A visual example of the matrix down below (Table 2- Cross-case matrix. Source: Author.

Table 2- Cross-case matrix. Source: Author.

<i>Variables of analysis</i>	<i>What it captures</i>	<i>Stream of literature</i>
<i>Direction of OI initiatives</i>	Knowledge flow orientation (in/out/coupled)	Archetypes (inbound/outbound/coupled)
<i>Open Innovation mechanism</i>	Organizational form used to run OI (CVC, accelerator, portal, lab, etc.)	Intermediaries + implementation
<i>Main partner targets</i>	Startups, universities, customers, inventors, VC/funds.	Breadth/depth

	How partners are engaged (open calls, pilots, co-dev, equity).	
<i>Intermediation</i>	Direct vs platform-/accelerator-mediated channels	Intermediaries
<i>Implementation (publicly traceable)</i>	How (and if) pilots scale into core business (procurement, product launch)	Absorptive capacity + implementation
<i>Outcome evidence</i>	Public evidence of results (deployed cases, metrics, pilots only)	Performance lens + “de facto vs Innovation Theater”
<i>Governance in official reporting</i>	Reporting of roles, budget, KPIs /vs generic PR communication.	De facto vs Theater + implementation

4.1.3. Interview as validation tool

Desk research provides breadth and comparability but is somehow constrained by disclosure quality. Some information may remain private; some others may be incompletely reported. For this reason, the work includes two supplementary semi-structured interviews. The interviews included external contributions from two companies with Italian base or branches, and intercontinental operations. The interviews were selected based on the possibility of establishing a direct contact channel and, therefore, did not follow strict pre-selection criteria; other than the interest and openness of company representatives to participate and share information about the projects.

Semi-structured interviews through Microsoft Teams were the primary source of information; each interview lasted about 1 hour. The interviews were divided into

four sections: Strategy, Integration, Governance, and Results. The responses from the interviewees were recorded and fully transcribed. The aim was to use these topics to let the interviewee expand the narrative and go deep into program details. Once the answers were collected, Tetra Pak and Eni cases were evaluated using the same parameters as the matrix used for the case studies. The two cases were then directly compared with programs in the sample that used similar open innovation vehicles, respectively Unilever-Sabici collaboration and Shell GameChanger.

The overall objective was not only to add additional, direct input regarding two additional companies in the sample, but rather to link the first-hand accounts to the analysis of factors that lead to concrete open innovation outcomes. For this reason, the interview is taken into consideration as a validation tool in the general context, as well as in cases directly comparable in terms of mechanism.

The scope of this ultimate stage was to use a direct disclosure of information and narrative as a validation tool to confirm, alleviate or disprove the results obtained through the primary data collection method.

The interview serves two methodological functions:

- clarifying mechanisms behind observed patterns (e.g., why certain programs systematically convert pilots into procurement);
- testing boundary conditions, particularly for similar cases where Open Innovation mechanisms follow comparable paths.

Positioning the interview after the cross-case analysis preserves the desk-research dataset's comparability while strengthening construct validity through triangulation (Yin, 2017).

The two interviews took place in February 2026. Each case has been analyzed by interviewing one or more figures dealing with Open Innovation within their respective companies. In particular, the Tetra Pak case was conducted through an interview with Leonardo Limongelli, Sustainability Transformation Deployment Director. The Eni Joule case was conducted through an interview with Domenica Surace and Alessandro Fazzone, respectively Head of Impact Assessment, Monitoring & Reporting and Startup Acceleration Programs Specialist at Joule.

4.2. Inclusion criteria and sample selection

Case selection follows a purposeful sampling approach with accessibility criteria typical of qualitative multiple-case research (Patton, 2002; Yin, 2017). In line with this logic, the aim is not statistical representativeness, but the selection of information-rich cases suitable for within- and cross-case comparisons (Eisenhardt, 1989). This selection strategy is explicitly aligned with the methodological rationale.

Three inclusion criteria were adopted:

1. Listed firms only.
2. Only public listed firms were included to ensure availability and consistency of reporting, improving data richness for governance, strategy, and outcomes.
3. Industry diversity.

The sample spans multiple industries to reduce sector-specific bias and allow the identification of patterns that may generalize across contexts. The dataset includes both cases with strong implementation signals and cases characterized by weak or absent implementation evidence, enabling contrastive analysis consistent with theory-building logic.

Cases classified as “innovation theater risk” were selected based on publicly observable indicators suggesting a gap between launch visibility and sustained outcomes. A program was included in this category when at least one of the following patterns applied (or multiple in combination):

- Documented instances where publicly visible outputs remained at the level of concepts or prototypes, with no credible signals of industrialization, operational integration, or go-to-market adoption.
- Evidence that the initiative was discontinued/paused (e.g., cohorts stopped, program sunset) without documented successful deployments or market launches attributable to the program during its active period.
- Information concentrated around the announcement window (launch articles, event pages) followed by scarce or absent updates in subsequent

years, limited mention in official reporting, and/or removal of program pages, consistent with low traceability of outcomes over time.

Minimum inclusion rule for “de facto OI” cases: two-sided (cross-referenced) evidence. Cases classified as “de facto open innovation” were selected using a minimum threshold of cross-referenced evidence (“two-sided verification”) regarding program outputs. To be included as de facto, each OI program had to satisfy both the following conditions:

- Firm-side evidence on corporate sources. The program must explicitly mention at least one named startup/project/partner associated with the initiative in official company communications, such as the corporate website, annual report, sustainability report, official press releases, or other institutional documents.
- Counterpart-side evidence (external corroboration). At least one of the entities named by the firm must provide a verifiable trace of the relationship with the company/program in the counterpart’s official channels (e.g., startup website, newsroom, investor/annual report, published case study, partnership page, or equivalent), consistent in content.

As chosen screening protocol, each program was screened using a standardized protocol based on multiple source categories: annual reports/10-K, sustainability/ESG reports, program pages, press releases, and reputable industry news reports.

Classification logic: Theater risk vs de facto.

Cases were coded on two dimensions: communication intensity, the extent of external visibility and branded storytelling; and implementation evidence, the presence of publicly traceable indicators of scale-up into core business (e.g., procurement adoption, recurring operational partnerships, outcome metrics, etc.).

A case was classified as Theater risk when high communication intensity was observed in at least two independent source types while implementation evidence was absent or limited to pilot-level claims; conversely, de facto cases showed at

least one verifiable scale-up indicator documented by corporate reporting and/or credible third-party sources.

Sample Selection

For the sake of completeness it is to be reported that the selection required multiple iteration of research across firms and websites that brought to the exclusion of some cases, at first considered like possible interesting pieces. Exclusion was sometimes due to lack of specific information to match the inclusion criteria, but, more often, to refine and preserve the heterogeneity of the sample. To cite a few notable exclusions: Toyota Ventures, Barclays Rise, Siemens' Next47, IBM Garage.

Following reported the sample selected for analysis in Table 3- Open Innovation Programs Sample:

Table 3- Open Innovation Programs Sample

<i>Firm</i>	<i>HQ</i>	<i>Industry</i>	<i>OI program</i>	<i>Status</i>
<i>Unilever</i>	UK / Netherlands	FMCG	Magnum ice cream tubs	De facto
<i>Procter & Gamble (P&G)</i>	USA	FMCG	Connect+Develop	De facto
<i>PepsiCo</i>	USA	FMCG	Greenhouse Accelerator	De facto
<i>Stellantis</i>	Italy	Automotive & Mobility	FIAT Mio (Brazil)	Theater risk
<i>Volkswagen Group</i>	Germany	Automotive & Mobility	People's Car Project (China)	Theater risk
<i>BMW</i>	Germany	Automotive & Mobility	BMW Startup Garage	De facto
<i>Shell</i>	UK	Energy	Shell GameChanger	De facto

<i>BP</i>	UK	Energy	Launchpad	Theatre risk
<i>Enel</i>	Italy	Utilities / Energy	Open Innovability	De facto
<i>Meta</i>	USA	Technology	Facebook Accelerator Singapore	Theater risk
<i>Alphabet</i>	USA	Technology	X (Moonshot Factory)	De facto
<i>Snap Inc.</i>	USA	Technology	Yellow Accelerator	Theater risk
<i>SAP</i>	Germany	Technology	SAP.iO / Startup Accelerator	De facto
<i>AT&T</i>	USA	Telecom	5G Innovation Studio	Theater risk
<i>Telefónica</i>	Spain	Telecom	Wayra / Open Future	De facto
<i>Zurich Insurance</i>	Switzerland	Insurance & Finance	Zurich Innovation Championship	De facto
<i>BBVA</i>	Spain	Banking & Finance	BBVA Open Platform / API Market	De facto
<i>Adidas</i>	Germany	Apparel	Platform A	Theater risk
<i>Airbus</i>	France	Aerospace / Industrial	Airbus BizLab	De facto
<i>Boeing</i>	USA	Aerospace / Industrial	Boeing NeXt	Theater risk

4.3. Data sources and triangulation

The thesis relies on secondary data by design, because the research question deals with observable differences between communication and implementation. Data sources were categorized and triangulated to reduce bias from corporate self-promotion. Annual reports, official program pages and portals, and press sources are particularly relevant for assessing governance embedment and enduring

commitment. Reputable business media, intermediary disclosures (e.g., accelerator cohorts), and partner-side confirmations (startup websites, case-study blogs) served as external sources and were especially important to corroborate adoption claims. This triangulation procedure functions as a minimum empirical validation gate: it reduces reliance on corporate self-narratives alone and strengthens baseline credibility by confirming that the collaboration is recognized by both parties, improving reliability. Implementation-related coding required counter confirm through at least one official or credible third-party source. This reduces the risk of conflating marketing visibility with operational integration.

4.4. Cross case analysis and visualization approach

To get to the definitive version of the matrix, an iterative approach was followed. A single identical matrix was filled for every case, one at a time, and was examined first with a multitude of data and narrative text. Iterations served to skim that construct and get to a final, clear view. Each refined view put together ultimately constituted the global matrix of cases.

After the matrix was completed, cross-case analysis was conducted, using a comparison logic to identify recurring patterns and configurations. The aim was to derive qualitative markers (“signals”) that systematically differentiate de facto OI from Theater risk initiatives, consistent with the “find patterns” and “derive signals” steps of the methodological workflow.

The matrix enables the identification of clusters based on shared combinations of variables. In addition to the de facto vs Theater risk distinction, cases were also compared by dominant mechanism archetype. This supports the interpretation of whether certain mechanisms correlate with stronger integration pathways or higher theater risk.

Visualization is used to make qualitative patterns legible. The two-axis mapping of programs along implementation evidence and communication intensity provides a synthetic representation of the classification logic and highlights borderline cases.

These two variables are built as composite indicators and produce a scatterplot where each program holds a bubble. Each axis aggregates multiple dimensions,

respectively: pathway, outcome, governance for the Implementation Evidence Index; and *posture*, *visibility*, *mismatch* for the Communication Intensity Index. Scores are first normalized onto a common range and then combined into a single 0–100 score. This procedure follows the standard logic of composite indicator construction: starting from a conceptual framework, selecting observable proxies, defining scaling and (if applicable) weighting rules, and aggregating dimensions into an index that supports ranking (Nardo *et al.*, 2005). In this study, both indices are built through aggregation of ex-ante defined sub-dimensions, making the scoring rubric transparent and replicable.

More broadly, the scoring approach is consistent with the principles of Multi-Criteria Decision Analysis (MCDA), where heterogeneous criteria that cannot be reduced to a single “natural” metric are assigned comparable scores and then combined to obtain a synthetic evaluation.

The dataset for the scoring system is derived from structured desk research and implemented through a coding scheme that links observables to categories (score levels). This step corresponds to content analysis, i.e., the systematic coding of textual and documentary evidence into replicable analytical variables. The adoption of explicit coding rules is motivated by the need to increase traceability of inferences drawn from qualitative sources (Krippendorff, 2019).

Importantly, the constructed indices should be interpreted as formative measures: the underlying dimensions (*e.g.*, *pathway/outcome/governance*) all concur to build the construct “implementation evidence. Consequently, internal consistency tests typically used for reflective psychometric scales (*e.g.*, Cronbach’s alpha) are not appropriate diagnostics in this setting. The relevant validity criterion is concepts’ coverage and robustness of the index construction procedure (Diamantopoulos and Winklhofer, 2001).

Following (Table 4 - X1: pathway, Table 5 - X2: outcome, Table 6 - X3: governance, Table 7 - Y1: posture, Table 8 - Y2: visibility signals, Table 9 - Y3: mismatch), the qualitative score categories on the x-axis construction briefly explained, in order:

Table 4 - X1: pathway

Score	Category	Rationale
40	PoC→Procurement / Rollout staged	Supply chain integration, PO, supplier #
35	Needs→Deal→Scale / PoC→Scale explicit	Complete structured funnel to scaling
30	Pilots→Scale (clear)	Clear pathway, scaling declared
20	Sandbox→Pilots / Cohort→Pilots	Experimentation without scale commitment
10	Testbed/Demos	Activity without clear adoption path
0	Unclear / Prototype / Concepts only	Symbolic output, no scale/production

Table 5 - X2: outcome

Score	Category	Rationale
36-40	Strong + quantitative	Volumes, named partnerships
30-35	Strong qualitative	Acquisitions, integrations, spinouts verified
20	Moderate	Partial evidence, limited cases
10	Weak generic	Activity documented, no adoption evidence
5	Weak + "only" / "no production"	Concept/demo/showcase, no follow-up
0	Weak + shutdown/closed	Program closed, paused, terminated

Table 6 - X3: governance

Score	Category	Rationale
16-20	Strong (management report, embedded, KPI)	Official reporting, declared owners, tracked KPIs
15	Strong generic / Moderate + reporting	Robust governance, no specific details
10	Moderate generic	Some structure signals, not fully embedded
5	Weak generic	PR pages, weak decision structure

0	Weak (PR/event, campaign, symbolic)	Communication campaign, event-driven, symbolic
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And then, the y-axis score categories:

Table 7 - Y1: posture

<i>Score</i>	<i>Category</i>	<i>Rationale</i>
50	PR-heavy	Communication dominates without substance
40	Symbolic	Communication as end, not means
30	Balanced	Balance between communication and substance
20	Reporting-led	Metrics-driven, evidence precedes communication

Table 8 - Y2: visibility signals

Score	Category	Rationale
30	Weak outcome + Weak governance	Max visibility, min substance → theater
25-29	Weak outcome + Moderate governance	High visibility with weak substance
20	Moderate outcome + Weak governance	Visibility without proportional governance
15	Moderate outcome + Moderate governance	Medium visibility with medium substance
10	Strong outcome + Weak governance	Strong results but weak governance (moonshot)
1-5	Strong outcome + Moderate governance	Strong results, moderate governance
0	Strong outcome + Strong governance	Min relative visibility, substance dominates

Table 9 - Y3: mismatch

Score	Category	Rationale
20	Weak governance + PR-heavy/Symbolic	Max mismatch: strong comms without governance
15	Weak governance + Balanced	High mismatch: weak governance, comms present
10	Moderate governance + PR-heavy/Symbolic	Medium mismatch: partial governance, intense comms
5	Moderate governance + Balanced	Low mismatch
0	Strong governance OR Reporting-led	No mismatch: governance legitimizes communication

For the sake of completeness, it is to be noted that for some metrics, intermediate scores were assigned, making the category a range, more than a single point shot. That to try and consider the multitude of peculiarity and shades that distinguishes one case from another when different mechanisms are compared. E.g., the cases of

BMW, Boeing, Telefónica, and Zurich Insurance. For these programs, a one-number choice would have put them in aggregation to a similar case with which they had slight, although relevant differences. For this reason, a range of choices were selected as the most accurate tool to make that difference perceivable, without overturning the whole scoring logic.

Finally, mapping cases on a two-axis scatterplot is aligned with a long-established tradition in strategy and management research of using positional maps. That to visualize clusters and make comparative relations interpretable when complex phenomena are summarized (Meilich, 2019). In this study, the map therefore functions as a device to highlight differences across programs in terms of implemented outcomes versus communicated innovation posture.

To ensure that this positioning is not overly driven by discretionary scoring choices, alternative scenarios were computed using stricter and looser weights and sensitivities. The resulting map remained structurally stable: extreme cases preserved their relative positioning, and the overall quadrant geometry was largely unchanged, with relative movements only limited to borderline cases near boundaries.

Additional visual summaries (e.g., signal prevalence across groups) are derived directly from the coded matrix to support transparent interpretation. The matrix lends itself to several open discussions and to further examination of direct comparisons between firms or across sectors, which will emerge in the results section. For readability and length reasons, not every case could be explored in full detail. Some are therefore addressed through a more concise analysis derived directly from the matrix, while others are better suited to narrative one-to-one comparison. Such comparative work may be conducted either intra-sectoral or inter-sectoral, depending on whether the patterns identified affect the case studies' industries vertically or horizontally, leading to distinct outcomes.

4.5. Interview protocol for the supplementary case

The interview protocol mirrors the analytical structure of the matrix, enabling a direct link between desk-based coding and practitioner explanations. It is organized

into three sections: Strategy and Governance; Integration; Results and Marketing. The project was chosen based on availability of direct contact and free interest in participating by the firm.

The firm selected for this purpose is Tetra Pak. This represents a case of a non-listed company, that still has worldwide operations and businesses, but operates with rules, budgets and strategies that could be slightly different from the already analyzed cases. Hence, potentially allowing for different approaches to investment, partnership, and risk within open innovation. This aspect guarantees a broader view on the OI landscape and, in addition to providing detailed insight about the complete funnel of an innovation project and the strategic and decision-making logic that governs it, it serves as a comparative tool compared to cases analyzed only from an external perspective. Following, the three sections of questions.

4.5.1. Strategy and Governance

This section investigates if the initiative is strategically governed beyond symbolic sponsorship. It examines how objectives are defined, who retains ownership, and how decision-making authority is distributed across organizational levels. Particular attention is given to budgeting logic, performance indicators, reporting lines, and the relationship between central innovation functions and business units. The aim is to verify whether the initiative operates as an integrated component of corporate strategy, with clear accountability, or as a more episodic and project-based activity.

4.5.2. Integration

This block focuses on the mechanisms that translate external collaboration into internal adoption. It asks about how projects are selected and funded, how proof-of-concepts are evaluated, and which actors are responsible for advancing or halting initiatives at dissimilar stages. The core objective is to determine whether a structured pathway exists from experimentation to implementation, and to understand the conditions under which pilots evolve into deployed solutions across the organization.

4.5.3. Results and Marketing

The final section distinguishes between indicators of activity and indicators of implementation. It considers how outcomes are tracked over time, whether results are measured through metrics, and how these outcomes are communicated internally and externally. By examining reporting practices and communication strategies, this block seeks to clarify the alignment between declared achievements and verifiable performance.

4.6. Reliability and limitations

To complete the methodology chapter of the work, it is fundamental to include one last section to deploy reliability foundations of the odd and to transparently present the limitations that this model holds. The intention of the study is to provide a detailed comparison that is not that present in literature. With that being said, the analysis conducted follows a qualitative approach that does not expect to track a scientifically unconfutable model for judging OI programs. The aim of the paper is to contribute to a lacking literature about the topic, in a mixed and complementary way.

Reliability was improved through theory-driven variable selection, a standardized screening protocol, transparent coding of data acquired, and triangulation across multiple source types. The cross-case matrix provides a traceable structure that increases transparency and reduces interpretive drift.

On limitations side, desk research is constrained by disclosure. A firm may implement OI without publicly documenting outcomes, while another may communicate extensively despite limited implementation. Second, classification involves interpretive judgment, especially for borderline cases with mixed signals, although conservative coding rules reduce overstatement. Third, findings are intended for analytical rather than statistical generalization: results should be interpreted as recurring configurations useful for explaining outcomes, consistent with qualitative case research principles (Patton, 2002; Yin, 2017; Eisenhardt, 1989).

A company may engage in open innovation without formally documenting its activities and may therefore not be included in the sample, resulting in a potential gap in the analysis. The study is highly dependent on data and public information, which may not fully represent the overall landscape of OI projects.

In addition, the analysis considers only one program for each company. This choice produces a highly specific sample in which the outcomes of individual initiatives may be shaped by temporary dynamics, cyclical factors, or managerial decisions that led to their creation or discontinuation. Such programs are deeply embedded in their contextual environment, including market conditions, budgetary constraints, strategic priorities, geographic positioning, and institutional or regulatory frameworks. Not all of these elements can be examined in depth, despite their noteworthy influence on how programs are structured and evolve. Considering only a single initiative per firm, rather than multiple programs, increases the relative weight of these external factors and distances the initiative from a purer, more theoretically grounded case of Open Innovation.

The total number of cases included in the study is meaningful but nonetheless limited. This decision was made to comply with overall readability constraints and still allow for a more in-depth analysis of some cases. From a conceptual standpoint, the larger the sample size, the more accurate the picture that can be drawn from the increased number of observations and generally increased the reliability of patterns identified. Plus, the geographic distribution of cases is limited to European and US companies, excluding from the sample other important markets such as Asia or Africa, where dynamics and approaches to OI may be different and therefore may provoke modifications the overall considerations. At the same time, implications of programs' operations worldwide are casted. Singapore with Meta project and Latin America with Greenhouse accelerator are examples of indirect, still relevant, representation.

Finally, there is no universally accepted statistical indicator capable of determining in a definitive and objective manner whether a given initiative should be classified as innovation theater. For this reason, the notion of "theater risk" employed in the study is grounded in qualitative assessment. It functions primarily as a comparative interpretive tool, intended to support discussion and pattern recognition, rather than

as the basis for assigning a formal statistical score. In this sense, the labels are based on a qualitative analysis that, however documented, remains based on a definitive judgment of a personal nature.

The methodological pipeline described in this chapter produces a structured dataset where each program is assessed through the same theoretically motivated variables, enabling direct comparability across firms and sectors. By mapping each case along communication intensity and implementation evidence, the study first establishes a global picture of how programs distribute across the “de facto” versus “theater-risk” space, highlighting both clear clusters and ambiguous outliers. Once positioned in the global map, cases are examined through the cross-case matrix to identify recurring configurations of governance, intermediation, and integration that systematically co-occur with implemented outcomes. These recurring configurations are then condensed into qualitative markers (“signals”) that operationalize the difference between symbolic Open Innovation activity and embedded initiatives that scale into the core business.

The Results chapter therefore reports not only descriptive case narratives, but also cross-case regularities derived from the matrix that support an evidence-based distinction between Innovation Theater and de facto Open Innovation.

5. Results Analysis

The chapter on results analysis includes the part where the model built at the methodological level is put into practice. It goes into a detailed examination of the most interesting points of the case studies and discusses all the commonalities that emerge from the various cross-comparisons within the sample. In addition to this, the point of view is also shifted outward in order to obtain confirmation through two direct interviews with companies that have adopted open innovation projects effectively in their operations.

The approach that the chapter intends to follow is a top-down vision. The logic is to always first show the overall picture of the results and then, in a programmatic way, to deepen the questions and reflections that clearly emerge from this first overview.

After a first paragraph in which the global picture of the cases is shown and discussed graphically, the chapter then proceeds with an identification of signals that transversely impact the whole sample and indicate to what extent a factor contributes or not to making an OI initiative effective. A detailed analysis follows, to verify the existence of patterns common to several programs, and a first clustering of the cases is carried out, based on the nature of the projects. From there, with a further level of detail, the analysis becomes targeted and focuses on the interrogatives that emerged from the matrix, in this case of an “ecosystemic” nature: it examines cases of companies operating in the same sector with remarkably similar programs and different outcomes. In addition to that, cases of sectors in which programs systematically tend to work versus cases in which the use of Open Innovation for purposes of brand legitimacy is instead very frequent. Still within the context of these analyses, it then goes into the reasons why some programs are discontinued and their relative weight within the company’s innovation strategy. Finally, it investigates the reasons for areas of the global graph that are substantially “empty”, and the relationship of this phenomenon with the sectors of the companies chosen in the sample. As a final appendix, there sit the two interviews with

representatives of Tetra Pak Italiana S.p.A. for ReAl case and Eni S.p.A. for Joule project, bringing direct-touch contributions and insights.

5.1. Global Picture

The figure below presents a graphical output of the results obtained from the matrix. The data collected in the matrix were converted into numerical scores, following the scheme defined in the methodology chapter. The outcome of this process is the scatterplot shown in (

Figure 6- Programs scatterplot. Implementation against communication. Source: Author

. A further refinement was then applied to the initial version to account for the level of “Innovation Portfolio Embeddedness”, which can justify, by mitigating or amplifying, the position of each program in the chart. Below the chart, program names are listed (Table 10 - List of sample programs. Source: Author.).

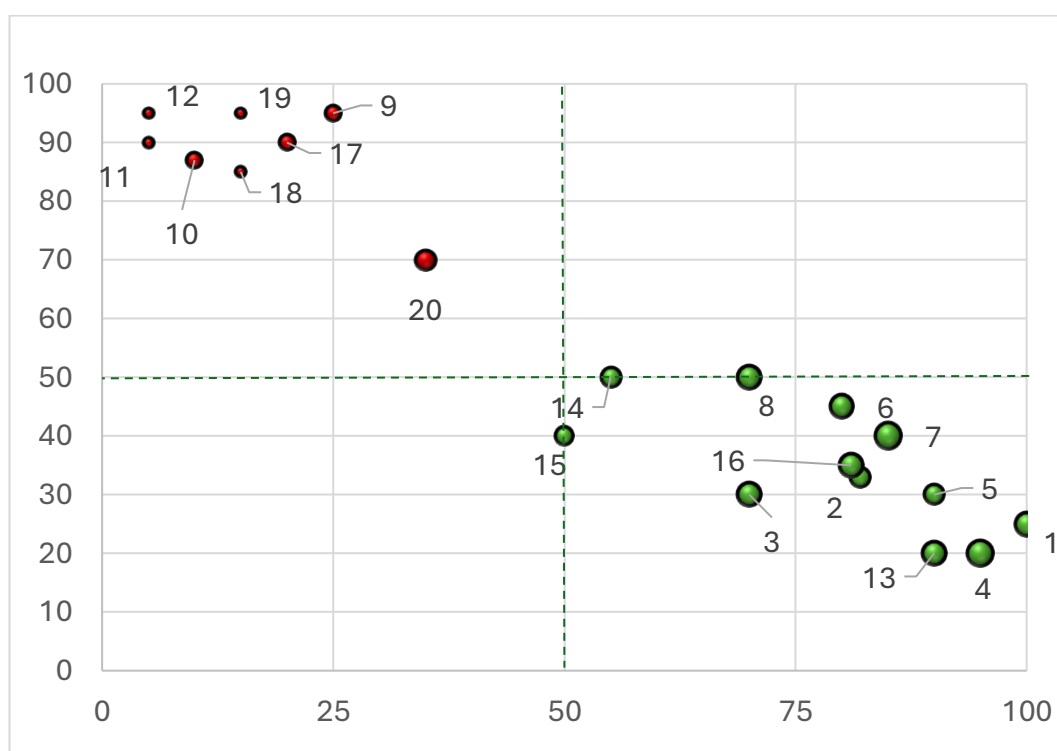


Figure 6- Programs scatterplot. Implementation against communication. Source: Author

Table 10 - List of sample programs. Source: Author.

1	Startup Garage	11	Fiat Mio
2	ZIC	12	People's Car
3	Open Platform	13	BizLab/UpNext
4	Connect + Develop	14	Greenhouse
5	Magnum (SABIC)	15	SAP.iO Foundries
6	GameChanger	16	Wayra
7	Alphabet X	17	Platform A
8	Open Innovability	18	Startup Station
9	5G Studio	19	Yellow
10	NeXt	20	Launchpad

From an initial inspection of the scatter plot, it is immediately apparent that the distribution of cases across the two variables is non-uniform, with a fairly clear-cut distinction observable within the overall population. In particular, the data points tend to cluster exclusively within the second and fourth quadrants. A first logical explanation for the absence of observations in the third quadrant is that such cases would be essentially "invisible": they would imply both low or non-existent external communication and equally negligible evidence of implementation. In practical terms, these are instances for which web sources, academic studies, patents, or media content of any kind are either unavailable or extremely difficult to retrieve. Similarly, the companies themselves have provided no indication that such projects have been introduced into any productive or commercial domain. Several reasons may underlie the (hardly demonstrable) existence of cases of this nature, including industrial secrecy, the development of prototypes intended

exclusively for internal use, or the stipulation of confidentiality agreements that preclude any form of public disclosure.

It is equally noteworthy that the first quadrant also exhibits a markedly low density of observations, suggesting that situations characterized by the simultaneous presence of high promotional and robust implementation evidence are relatively rare within the sample under analysis. Taken together, the overall reading of the chart reveals a pronounced polarization: on one hand, the cases falling in the second quadrant, distinguished by intense external communication against a backdrop of limited operational concretization, namely included into the sample as risky cases of *Innovation Theater* phenomenon; and on the other, the cases in the fourth quadrant, where implementation activity is substantial and largely absent from highly visible promotion, conforming to what the literature defines as *Substantive Activities*.

Following, an example of the matrix built on cases analysis is provided, with a value for each voice (Table 11 - Cross-case matrix. Source: Author

Table 11 - Cross-case matrix. Source: Author

<i>Direction</i>	<i>Inbound; Coupled</i>
<i>OI mechanism</i>	Early-stage incubator; hybrid
<i>Partner target</i>	Startups, SMEs
<i>Intermediation</i>	Mixed
<i>Implementation</i>	Tollgate funnel
<i>Outcome evidence</i>	Aduro Clean Tech; Advanced Ionics
<i>Governance</i>	Tollgate panels
<i>Comms posture</i>	Reporting-led

5.2. Signals, factors derived

This section aims to consolidate the observable signals that emerged from the cross-case matrix and summarize them into few features that recur across programs.

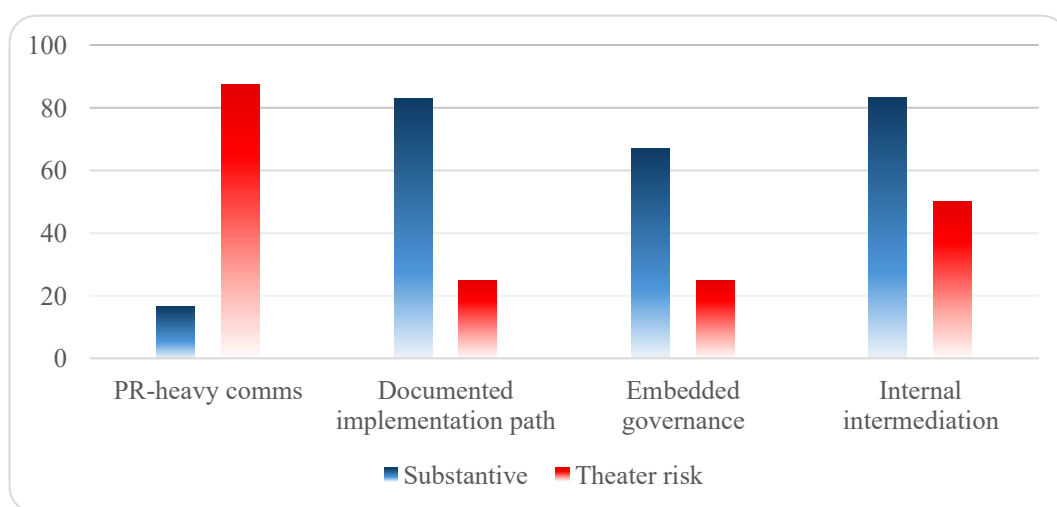
The goal is to find indicators that act as proxies to discriminate programs' possible output nature from their inherent planned structure. This contribute basically infer that exist a correlation between certain program characteristics, that come before its start, and its ultimate output. Empirically, the measurement was carried out on the sample of cases. For each one, common features were collected and compared to the project output in terms of implementation or promotional communication. Grouped by feature, fractions of the outputs were calculated over the 20 cases.

Here the transversal features: public relations-heavy communication, documented implementation path, embedded governance, internal intermediation.

The first indicator considers launch storytelling with thin follow-through, outputs in form of events and showcases, and intensive use of media to create interactions. The second one investigates the presence of a standard funnel from scouting to pilots to PoC, and its accessibility and transparency to the outside. Third verifies whether program governance is embedded into the firm's innovation system. Concretely, if roles, budget, KPIs are reported or if the project remains peripheral and therefore structurally fragile. The last one concerns intermediation and outliers if the program holds an internal unit dedicated to its proceedings or not.

The results are summarized in the table below (Table 12 - Indicator presence percentage. Source: Author. Table 12 - Indicator presence percentage. Source: Author.):

Table 12 - Indicator presence percentage. Source: Author.



The results clearly show how the empirical correlation between narrative communication and theater risk hits the highest percentage rates within the sample. On the opposite, if documented implementation path and embedded governance are present, good chances of producing concrete outcomes from the program are to be expected. Lastly, internal intermediation revealed as a debatable feature, making it the weakest indicator among the four. Most of projects with internal intermediation result to demonstrate real implementation, but a relevant stake of them still ends up with theater-like outcomes, suggesting a less robust correlation.

5.3. Identification of clusters

Following the design for analysis established in the methodology section, subsequent inferences drawn from the combined analysis of the scatter plot and the variables' matrix are presented in this paragraph, beginning with a clustering of the cases based on the Open Innovation mechanisms they involve. It becomes evident how different mechanisms tend, with varying degrees of recurrence, to yield either an implementation outcome or one of symbolic promotion.

5.3.1. Venture Clienting, Procurement-led OI

Particularly, starting from the clusters that produce concrete initiatives, the first one taken into account is that of Venture Clienting and procurement-led OI projects.

The Venture Client model differs fundamentally from Venture Capital: rather than acquiring a minority equity stake and becoming investor, the enterprise purchases the startup's product/technology directly, making it an incorporated supplier. The strategic value lies in deploying the solution within existing business units after a pilot project validates its fit for the specific context.

By contrast, the Venture Client model aligns incentives naturally: startups gain a paying customer and a stable order flow, while firms access vetted technologies with reduced collaboration cost. The model is particularly well-suited to late-stage

startups; ideally those that have already completed an acceleration program and secured professional VC funding. Since pilot projects are run directly within the relevant business units, these are better equipped to deliver a production-ready solution. The model scales significantly better than accelerators in terms of costs, where throughput is constrained by the number and availability of specialized resources -managers, mentors, project sponsors, steering committee, etc.- within the corporate innovation team (Richter, Jackson and Schildhauer, 2018).

The case of BMW startup garage defines the founding milestone of venture client model, as it represents the first practical concretization (Gimmy *et al.*, 2017; Gutmann *et al.*, 2020; Siota *et al.*, 2020). The unit has supported startups whose technologies are now embedded both in BMW vehicles and in core production processes, such as AirConsole's cloud-based in-car gaming platform, launching with the BMW 5 Series and rolled out as a feature to millions of BMW cars. On the production side, BMW's "Automated Driving In-Plant (AFW)" marks another hard e. The company launched a pilot in July 2022 in collaboration with Embotech and Seoul Robotics, enabling driverless vehicle movements inside the Dingolfing plant without relying on vehicle-mounted sensors. In November 2024, BMW announced that AFW achieved CE certification and began transitioning into series operation. Vehicles driving fully autonomously then expanded to Leipzig (and staged rollout across the production network). BMW explicitly notes that parts of the technology were provided by Embotech, which the company has been already working with "in the early stages" through Startup Garage. In the 10-year anniversary press release, BMW articulates the startup's AVM technology (automated vehicle marshalling) as "an integral part" of its state-of-the-art production logistics and notes BMW i Ventures has held a stake in Embotech since December 2024.

These implemented cases sit on top of concrete portfolio figures for a corporate OI unit. As of 2025, BMW reports 4,700 startups assessed, more than 220 joint projects with startups, and 30 startups now established as suppliers or service providers within the BMW network.

The Zurich Innovation Championship (ZIC) instead, illustrates how a large insurer can turn a generic startup call into a venture client engine. Zurich frames ZIC as a

global startup collaboration program that, since 2018, has launched more than 150 projects across several countries. It is organized around two streams: Venture Clienting (problem-driven adoption) and Hyper Challenges (rapid experimentation on emerging tech). The pipeline begins with internal leaders from business units defining concrete opportunities and needs. It then proceeds to scouting, partnering, and scaling the most tailored solutions presented by startups. For example, Zurich North America reports that Sixfold's, winner of the 2024 ZIC edition, generative-AI underwriting tool supported the initial rollout in which 80% of submissions handled by 16 underwriters were processed with Sixfold assistance, saving an estimated 60 minutes per submission. On the product side, Zurich Switzerland partnered with BOXX to launch a personal cyber protection solution for individuals and families in May 2024. The collaboration was later reinforced by Zurich's acquisition of BOXX in July 2025 to cover the cyber retail/SME segment. This pathway shows the existence of real chances to go from partnership to structural capability-building with the program.

As for the procurement-led side, supplier programs are outside-in instruments that enable firms to access innovations that increase product competitiveness or process productivity by engaging with startups, or established enterprises on the basis of supplier relationships (Kурpjuweit and Wagner, 2020). In the sample analyzed, the Unilever Magnum ice cream tubs case in collaboration with SABIC represents a perfect example. Unilever specifies the technical requirements, alignment with EU 2035 ESG objectives and a reduction of virgin plastic in the specific case, while SABIC acts on the raw material side, developing a certified polypropylene produced through recycling of mixed plastic waste. After an initial pilot launched in 2019 in Belgium, Spain and the Netherlands, the solution scaled to more than 7 million Magnum tubs rolled out across Europe, using an estimated 160,000 kg of certified recycled plastic by the end of 2020 and embedding the innovation into the brand's mass production. In this procurement-led model, SABIC benefits from securing the customer commitment on a large-scale purchase of their product, while Unilever shares operational data and process information with a supplier, thus keeping its risk profile lower than in equity-based partnerships. As a result, it gains in terms of green credits, technology testing and concrete brand legitimacy on sustainability issues in the eyes of the public.

5.3.2. Internal platforms

Another cluster emerged from the sample is the one of Internal Platforms. This cluster is treated as distinct when the pipeline functions as an infrastructure itself, rather than a repeated limited cohort or a one-off call. Concretely, cases belong here when they exhibit few recurring signals as always-on intake (a continuous channel such as a portal, API gateway) and standardized interaction via licensing or contracting workflows.

The BBVA's Open Platform case is a successful illustration of the "internal platform infrastructure" cluster, because its open-API strategy evolved from a facing API layer into a full Banking-as-a-Service stack. In Europe, the bank launched its API Market in May 2017, commercially releasing eight APIs and depicting the initiative as a customer opportunity. In the U.S., the company escalated the same platform-banking logic into BBVA Open Platform. In October 2018, after six months of a beta development, it offered third parties a modular suite of banking capabilities via APIs, supported by a sandbox environment. Move Money, Identity Verification, Account Origination, Card Issuance were some of the functions allowed. Crucially, BBVA stated that the technology was already powering externally facing products such as Simple and Digit. Evidence of actual integration also appears in use cases: BBVA publicly positioned its collaboration with Catch, in 2019, as a core banking and payments component of the gig-worker platform.

The parallel in consumer goods industry is represented by P&G's milestone program Connect + Develop. C+D operates through technology briefs and structured evaluation systems: ideas are coded and internally spread via a digital catalog with standard templates. The model relies on a network of 70 "technology entrepreneurs" connected to the business units and distributed in regional hubs, that are responsible for defining the need lists and writing the briefs. C+D is supported by a secure IT system for sharing technology briefs; and open networks such as NineSigma where P&G reports distributing briefs to over 700,000 people and completing more than 100 projects. The platform proves to rest on an engineered set of interfaces and standardize contracting routines.

A flagship example of Connect + Develop's effectiveness is the Mr. Clean Magic Eraser, spotlighted in the seminal 2006 Harvard Business Review article on P&G's open innovation shift (Huston and Sakkab, 2011). In 2001, a P&G technology entrepreneur identified a stain-removing sponge in an Osaka market, leveraging BASF's Basotect® melamine resin foam as its active ingredient. The material was originally developed for soundproofing and thermal insulation. Following a rapid evaluation in 2002, P&G launched the product domestically in the US in 2003 and shortly after in Europe, with collaborative iterations that followed with next-generation variants, such as the Magic Eraser Duo and Wheel & Tire. By 2004, the franchise ultimately doubled its projected revenues.

In other words, the platform proves to rest on an engineered set of interfaces and standardize contracting routines. As of today, P&G R&D provides an online hub for submission and a process roadmap. Public portal exposes a "Current Needs" list and invites to present solutions in specific areas. These are all proofs of an "always-on" digital infrastructure, coherent with the nature of the cluster.

5.3.3. Accelerators

In the accelerator cluster, programs often share a recurring and recognizable format. Batches of startups are selected within a deadline, join a mentorship program, and often receive initial funding. They gain access to the parent company's partner network and finally attend a pitch day where they present a demo of their project, hoping to subsequently progress to a Proof of Concept (PoC). This set of events entails that the funnel is generally visible and easy to communicate externally, placing the programs in a framework where the line between concrete results and promotion is blurred. The main differentiator, as clarified in the previous cases, is not the cohort mechanism itself, but rather the conversion logic after the acceleration process.

Speaking of substantial programs, Telefónica Wayra is a representative case within the wider OI arm of the company Open Future, a real pillar of open innovation ecosystem's substantial deployment. The Wayra program was born in 2011 as a

startup accelerator and later evolved to a broader internal innovation intermediary for the company. From 2018 it shifted to a venture capital fund, applying venture clienting policies to selected startups. Focusing on the initial, successful, acceleration activity, Wayra's Academies represented a standard in acceleration journey.

A particularly structured example is the GCHQ Cyber Accelerator, announced in 2016 as a partnership between Department for Culture, Media and Sport, Government Communications Headquarters, one of the three UK Intelligence and Security Agencies, and Wayra UK. The pathway entailed a public call and open applications, selection of a cohort, onboarding within the Cheltenham Innovation Centre's working spaces, a grant emission from the company and the start of the acceleration program. Throughout the 3-month program, 7 selected startups gained access to government personnel and expertise, support for accreditations like Cyber Essentials, and highly practical modules on government procurement, IP management, and information assurance. After that, an assessment to public stakeholders occurred, including MoD. The targeted result is the graduation of the whole cohort, and their access to the sector's commercial partner contracts. A sign of post-program success is CyberOwl, member of 2017's cohort, which later announced that it had won a related contract from the UK Ministry of Defence through the Defence and Security Accelerator (DASA) to develop predictive cybersecurity capabilities. In September 2024, CyberOwl was acquired by Norwegian firm DNV. Prior to the acquisition, the startup had raised £12.2m in equity funding, including a £4.49m round in February 2022.

At the opposite pole, Snap Yellow it's the illustration of how an accelerator can remain compatible with theater dynamics even when it provides funding. On 2018 launch, Yellow specifies a standardized ticket of \$150,000 per startup for equity, with access to the company's mentorship and network over a 3-month residency in Los Angeles. The idea was to create an access point to creators and formats that can live on Snapchat. It also notes a crucial design choice: cohort participation does not require startups to integrate with Snap's services. This structure rationale is the exemplification of choices that weaken the implementation pathway and move the activity towards a partnership factory logic. The program may succeed as and as brand adjacency to innovation, with venture-like dynamics, without necessarily

producing adoption in Snap's core products or operations. This fragility was reinforced by its lifecycle evidence. Snap later confirmed it was pausing Yellow as part of broader restructuring and layoffs in 2022, confirming the interpretation of their accelerator as a side explorative initiative under tight resource constraints.

The remaining cases included in the cluster position more generally between these poles. Airbus BizLab exhibits stronger substantive signals than typical cohort programs as the company reported operational outputs repeatedly over the years. Airbus described a record of accomplishment of nearly 70 internal projects from startups, and seven spinouts. PepsiCo Greenhouse still provides concrete outputs in the form of standardized grants e.g., \$20,000 to each finalist at program start, with an additional \$100,000 grant to the winner. By contrast, Adidas Platform A and Meta Startup Station are communicated primarily as ecosystem-facing accelerators: adidas launched Platform A at Station F with 13 startups and stated a total program investment of €1 million, but no reporting adoption into core operations; similarly, Facebook/Meta's Startup Station Singapore with IMDA was announced as an accelerator set to kick off in February 2019, but no news were retrievable after 2021. Overall, the accelerator cluster reinforces the chapter's main empirical pattern: high communication intensity is embedded for cohort programs, because the cohort format itself produces regular visibility moments. Therefore, classification on implementation evidence hinges on whether the program effectively demonstrates conversion mechanisms and durable commercial outcomes.

5.3.4 Hybrid projects

Sitting between a classic accelerator and an internal innovation platform, Shell's GameChanger represents a case of hybrid cluster program. Launched in 1996 as an autonomous team inside Shell's R&D division, GameChanger was initially designed as an incubator of radical ideas from Shell scientists with own budget. Over time the model evolved toward option building, which goal is to test many hypotheses at a low relative cost and scale the best ones. An interesting divergence of the program from pure accelerators is that its success is measured by the fraction of Shell's R&D options that can be traced back to GameChanger-originated

projects. The program gravitates around technologies, not the startups themselves; and its hybrid nature comes from the fact that the program invests in knowledge and validation in the form of PoCs more than equity stakes.

The process is described as a tollgate funnel with panels, in which a typical project lasts 12 to 18 months. The funnel entails 2-3 phases, culminating with a final review and graduation. Shell allocated a team of around 10 experts, investing between 5 and 10 percent of R&D budget. Shell GameChanger Accelerator powered by NREL, GCxN, provides evidence of measurable outcomes. Selected ventures for the program can receive up to \$250,000 in non-dilutive support. By September 2025, the accelerator counted 28 startups in its portfolio, which collectively had raised more than \$940 million. Typical evolution brings projects from around TRL4 to TRL6 at graduation.

Shell itself links early initiative's funding to the concepts that later materialized in operational deployment. Some examples are Prelude FLNG project, Production Universe, a data-modelling approach to optimize field production, and the Connex reactive liner technology (developed with QinetiQ), commercialized through the venture GeoDynamics. Together, these outputs and figures position the program as a vehicle for de-risking and testing emerging technologies toward prototypes and pilot readiness. On the external technology side, there are documented examples of Shell-sponsored pilots initiated through GameChanger, such as the Advanced Ionics pilot in low-cost green hydrogen production. In addition, ventures like Aduro Clean Technologies report on multi-year validation cycles culminating in graduation, which demonstrates its engagement with the program. Sustained technical progress toward pilot scale and subsequent fundraising revealed to be the key points for the program to work effectively.

On aggregate, these elements show GameChanger operating as a hybrid OI mechanism: accelerator-like intake coupled with structured paths into internal channels.

5.3.5. Crowdsourcing, demos, moonshots

This cluster groups Open Innovation initiatives in form of crowdsourcing campaigns, “innovation studios” built around demonstrations, and moonshot-style programs that narrate. Because these mechanisms are inherently exposed to outside communication, the distinction between substantive Open Innovation and theater-risk relies on whether the initiative produces promotion mainly, remaining confined to showcases events, or demonstrates measurable outcomes.

A concrete indicative case is Alphabet X, the Moonshot Factory. X reports that the Self-Driving Car project graduated in December 2016 to become Waymo, explicitly casted as a transition from an internal moonshot into an Alphabet company. Waymo subsequently launched Waymo One as a commercial self-driving ride-hailing service in the Phoenix area in December 2018, evidence that implementation goes deep, with clear outcomes on the market. Even when projects fail, the company tends to disclose the discontinuation as part of the portfolio logic (e.g., Loon ending in 2021 after an extended commercialization attempt), which strengthens the interpretation of the program as an established pipeline.

On the other hand, a representative theater-risk case is the Volkswagen “People’s Car Project” in China. The program was born as a digital co-creation online platform. VW invites people to propose and discuss ideas on future autos and mobility through a dedicated website and social/microblog channels. At the base of this model stand creative tools, interactions, and contents. This mechanism maximized participation and virality, making the project a landmark crowdsourcing initiative, which it is, but on the *theater* side only. The program’s own communications are dominated by engagement metrics, consistent with its brand-legitimacy objectives. E.g. 33 million website visitors, 495,000 microblog followers and more than 119,000 ideas submitted. In this case, evidence show a clear focus on symbolic outputs that feel close to marketing. Moreover, no mass-production plan nor integration has been demonstrated ever since. The project culminated in concept vehicles presented at Auto China in Beijing, in May 2012. Three concept cars were shown: Music Car, Hover Car and Smart Key. They served as ultimate demonstrators that materialized some wishes emerged from the community.

The other programs in the cluster largely fall between this range and can be interpreted through the same lens. Enel Open Innovability combines crowdsourcing with collaboration: Enel publicly outlines its startup ecosystem in terms of pilots and scaling and reports an estimated €280M in supply contracts associated with collaborations.

Instead, initiatives such as AT&T's 5G Innovation Studio and Boeing NeXt are structurally closer to demonstrations and innovation storytelling: AT&T positions its studio as a lab to accelerate the path to market for 5G initiatives, with strong partner signaling. Boeing NeXt, created as an innovation unit, was later reported as being closed only a couple of years after launch. Heavy initial communication and strong branding proved not coherent with corporate strategy under cost pressure. Finally, another crowdsourcing concept-car case like FIAT MIO resembled the VW pattern. They showed how the final product may strategically not be the real outcome, whilst collecting mass feedback can give the companies new perspectives on problems and let them rethink some of their paradigms.

Note: bp Launchpad does not appear in this cluster division, as it exploits a different underlying mechanism that is not comparable with other programs in the sample. Clustered programs are based on repeatable logics, Launchpad is a corporate venture builder, or venture studio. It creates and scales new ventures as stand-alone companies, deploying dedicated teams and capital under an equity and portfolio rationale (including majority stakes and acquisitions), with success measured primarily through venture growth and financial outcomes. For this reason, Launchpad is treated as a distinct mechanism and discussed afterwards in a detailed comparison.

5.4. Direct comparisons

In this section, the focus shifts down from the first global analysis conducted across the entire sample. The approach delves into more detail, starting with a visual analysis of the scatterplot. Several questions emerge, which the first analysis involves an intra-industry comparison of companies with similar objectives, discussed within the same sector. The questions that emerge are several. Why some

programs by competing companies have quite different outcomes; what are the factors that enable a company to manage its program in a way that provides concrete results; and what are the reasons that lead other similar companies to adopt programmatically oriented marketing strategies.

The second contribution, similarly, extends the first comparison between companies to entire sectors. The question arises whether there are sectors that structurally lead companies to make strategic choices toward a truly open innovation model, or whether industry characteristics require companies to design their innovation divisions for brand promotion and fast-moving consumer goods (FMCG). Specifically, the relevant sectors for the analysis were identified as automotive and FMCG.

The third contribution, which is an appendix to the other two, also comes from a visual analysis of the scatterplot. In this case, the question that arises spontaneously is why, in the arrangement of OI programs along the two chosen axes, the first quadrant (top right) remains essentially unpopulated. The factors influencing this situation are once again endogenous to the type of sector in which the company operates and its market position. Here too, we will examine how contextual factors can drive companies toward solutions of varying effectiveness, and the reasons behind this.

A final, detailed focus is placed on programs that have ceased operations, again analyzing both internal corporate governance factors and external factors dictated by market needs, with contributions to the literature on the topic.

5.4.1. Intra-sectoral comparison

The first analysis begins with a comparison between two oil and gas companies that can be considered competitors: Shell and BP. Both are headquartered in London, UK, and approach open innovation through different arms. For the programs selected for our sample, GameChanger and Launchpad were considered, respectively. As previously noted, the former belongs to the hybrid cluster, representing the combination of a traditional accelerator and an internal "always-

on" platform. The latter is a venture-builder that uses versatile mechanisms to adapt its operations to financial objectives for the corporate parent primarily.

Operationally, the two initiatives are comparable in sectoral scope but not in investment framework. GameChanger is an early-stage incubator designed for technological search and technical validation under controlled conditions. Crucially, projects are expected to be graduated into Shell's R&D or business ownership, signaling that design presupposes an internal absorption route. It has operated since 1996, with an indicative annual budget of about \$17.5M, and a typical commitment of \$0.5M over a 2-year span to reach a PoC. Its portfolio is intentionally broad, 200 projects are reported in the program's historical funnel. This is consistent with a diversification strategy based on many small bets. This architecture yields a capital-efficient profile when expressed per implemented outcome. It is indeed reported as an order-of-magnitude of around \$5M. Launchpad, instead, operationalizes a substantially different theory of value. Created in 2019 as a venture builder and scale-up factory, its organizational separation enables entrepreneurial speed but simultaneously weakens the default coupling with BP's core operating system. Integration is no longer the natural end-state, but one possible outcome among others, such as external commercialization or portfolio rotation. In fact, it anchors to concentrated capital deployment: public descriptions indicate almost \$100M per year with a portfolio of 7 ventures and typical range between \$10M and \$30M acquisition tickets plus growth expenditures. Its success criterion is framed at portfolio level as \$5B enterprise value by 2025, a target that is difficult to verify externally due to limited public breakdown of venture-level value creation.

Coherently, the strategic alignment differs: GameChanger is presented as stable and compatible with Shell's long-term planning, whereas Launchpad's trajectory is more contingent on bp's corporate priorities, which have recently been described as shifting back toward core oil & gas, increasing the risk of misalignment for the unit. Hence, the intra-sectoral divergence of results observed between Shell and BP is consistent with the different governance design of the initiatives. GameChanger embeds absorptive capacity into the program architecture by privileging internal handover, whereas Launchpad externalizes a significant portion of the innovation

process and requires BP to re-absorb outcomes later under conditions that are strategically more volatile.

A similar divergence is observable within the automotive sub-sample, where BMW Startup Garage represent an implementation landmark, in contrast with what Volkswagen and Stellantis planned to do with their own programs. Again, the difference does not lie in the sector characteristic only, but on architecture choices and firm characteristics too. A useful lens is competitive strategy under different market economics. In Porter's terms, firms operating in premium segments tend to compete more on differentiation, whereas high-volume brands face stronger pressure toward cost discipline and scale efficiency. For the latter ones, low-cost demand-generation and customer-intimacy mechanisms appear relatively more attractive.

BMW is explicitly positioned as a premium player, in that context, the value of Open Innovation is more naturally captured through defensible product advantages like new components or software improvements. That can be absorbed into the operating system and translated into willingness-to-pay. A venture client designed program fits this structural incentive as its structure is optimized for concrete integration. By contrast, VW's brand-portfolio logic is explicitly articulated around efficiency, and market saturation, typical of a multi-brand, volume-optimization model. For Fiat, the economic center of gravity is similarly tied to high-volume markets positioning, with a particular sensitivity to price. Under these conditions, crowdsourcing initiatives can be welcomed by the companies as low-cost market development. They simultaneously create visibility and generate localized preference data about what Chinese or Brazilian communities want, for example. These are ultimately cheap information for future portfolio choices. This intent is explicit in the People's Car Project framing a "national dialogue" to understand Chinese customer needs. Fiat Mio as well, documented thousands of ideas for a concept vehicle showcased publicly.

So, BMW narrower premium battlefield reduces the marginal value of mass-participation marketing and increases the marginal value of technological differentiation, making a robust OI mechanism like Startup Garage more structurally coherent. Conversely, VW and Fiat is broader, more price-elastic

battlefield increases the payoff to preference sensing, making campaign logic strategically functional to engage new customers with the brand.

5.4.2. Inter-sectoral comparison

For the inter-sectoral comparison, two statistically relevant industries have been chosen within the sample. Fast moving consumer goods (FMCG) and automotive. They represent a polar discrepancy in terms of programs' outcome. In particular, the inter-sectoral comparison ultimately shows that sector-specific structural conditions strongly shape how open innovation can move from ideas to implementation. In fast moving consumer goods, firms operate on modular supply chains where modern technologies or formats can be grafted onto distribution networks with limited re-engineering. Real examples of this are new packaging materials or a refill system. Product renovation cycles are typically measured in months, typically from 6 to 18, rather than 5 to 7 years for cars. Regulatory requirements, while strict, are rarely as system-constraining as safety and homologation regimes in the automotive industry. This configuration makes it feasible to design open innovation programs around explicit industrial pathways. External solutions pass through defined stages and success can be reported through operational KPIs such as units sold or tons of material saved. The Unilever, P&G and PepsiCo cases all reflect this pattern: they combine a clear funnel from brief to business. Programs' governance is eradicated in line functions and regular reporting on volumes, savings or growth guarantees evidence for the projects.

Automotive firms face almost the opposite configuration. Vehicles are tightly integrated systems in which any change that touches the architecture must traverse long development cycles and regulatory approval. Under these conditions, B2C crowdsourcing, especially proposed to unqualified users, as in Fiat Mio or the People's Car Project, is structurally misaligned with the type of technical requirements to bring new features into car production. Consumer ideas cannot be translated into engineering feasibility without massive filtering. It is therefore not surprising that these initiatives optimize for brand legitimization. Such programs are expected by design to stall at the stage of concepts or visual prototypes. The BMW Startup Garage case shows that automotive open innovation can escape this

theatre trap only when it borrows governance choices that are closer to FMCG practice. Measurements to be taken for creating favorable conditions are embeddedness of the project in procurement, targeting of already de-risked start-ups or partners, and definition of success in terms of conversion vehicles or products. In other words, the inter-sector comparison suggests that the decisive variable is the degree to which programs are structurally coupled to the existing industrial system through supply chain design and concentration of resources over a limited number of options, regulatorily checked. Where this coupling is strong, as in FMCG and in Startup Garage model, open innovation tends to produce durable operational change; where it is weak, as in automotive crowdsourcing campaigns, it tends to remain confined to innovation theatre.

5.4.3. 1st quadrant absence

In interpreting the first quadrant, on the top right of the scatterplot, the apparent absence of substantive and visible open innovation activities cannot be read as evidence that such activities do not exist. More likely, that absence is to be attributed to disclosure constraints for competitive dynamics. Firms that operate close to the technological frontier often have incentives to keep exploration projects and external collaborations outside the public domain. In addition, many in high-security initiatives are governed by strict contractual arrangements such as non-disclosure agreements, joint development contracts and confidentiality clauses in supplier deals. Regulatory compliance becomes a structural reason for limited transparency. For example, Airbus publicly describes export-control obligations and the existence of an export compliance directive intended to comply with regulations.

5.4.4. Program dismissal

Corporate venturing has contracted measurably in recent years, with CB Insights reporting 3,545 CVC deals in 2023, the lowest since 2019 and down 32% year-over-year as liquidity tightened and risk aversion grew. In such conditions,

firms scale back innovation initiatives like standalone accelerators, labs and CVC arms, and reintegrating activities into business units. This reflects March's exploration-exploitation tension (March, 1991), which states how distant-payoff exploration is cut first in pressure periods, while designs embedding it in exploitation prove more resilient. (O'Reilly & Tushman).

Innovation labs often fail due to strategic misalignment or unstructured adoption paths. The Wall Street Journal notes that some firms reintegrate labs for accountability, while Forbes calls 2024 a year of cost reevaluation, with labs facing investments and disinvestments cyclically. TUM survival analysis quantifies termination risks, particularly for corporate accelerators, from program-level and contextual factors. It finds that accelerators are less likely to be discontinued when they target non-overlapping technologies, are embedded in firms with active CVC investing, and operate in research-intensive sectors.

5.5. Interviews validation takeaways

5.5.1. Procurement led: Tetra Pak and CBA ReAl Brazil

The first interview to take place has been Tetra Pak's contribution on their procurement-led and supplier co-innovation project, conducted alongside their Brazilian established supplier company CBA (Companhia Brasileira de Alumínio).

The Tetra Pak–CBA ReAl case provides a clear procurement-led open innovation example that is highly comparable with the Unilever–SABIC collaboration on Magnum ice-cream tubs and was therefore selected as a validation case for the procurement-led cluster identified in the desk research.

Strategically, Tetra Pak faces the same sustainability pressure as Unilever: it must close a material loop in order to meet ambitious ESG and EU PPWR targets. The specific challenge is the PolyAlu fraction (mixed plastic and aluminum) remaining after fiber recovery from aseptic cartons. As the interviewee notes, PolyAlu is “the big challenge... this sort of plastic and aluminum mixture is the most difficult thing

to recycle”. EU regulation requires roughly a fourfold increase in PolyAlu recycling volumes by 2035, turning this waste stream into a bottleneck issue to be addressed.

The open innovation solution emerged not from an internal R&D program, but from scouting an external supplier with an unusually integrated industrial footprint. CBA, a Brazilian aluminum producer, controls “huge hydroelectric power plants, bauxite mines, refineries... and rolling mills... all proprietary assets and fully integrated in southern Brazil,” a configuration the interviewee describes as “substantially unique”. CBA’s proprietary ReAl process applies the Bayer chemical route, normally used on bauxite, to cleaned PolyAlu: the mixed laminate is dissolved in a caustic soda bath, yielding a sodium-aluminate liquor that is “identical in every feature to that obtained from bauxite... there is no mass spectrometer that can distinguish them”, while the polyethylene precipitates “as it is, with no chemical alteration” and is sold as recycled to a large polymer producer, Braskem. This dual output of primary-grade aluminum plus a marketable secondary polymer, turns a problematic residue into two feedstocks that fit existing industrial value chains, in the same way SABIC’s certified recycled polypropylene was engineered to fit Unilever’s Magnum tub specifications.

From a governance perspective, the project is explicitly buyerled and procurementanchored rather than technologyled from within Tetra Pak. The interviewee stresses that “the Open Innovation contribution totally relies on supplier”, meaning CBA owns and operates the technology and assets, while “Tetra Pak came across this technology, found it extremely interesting and secured it by purchasing all the aluminum they produce...from an operational point of view, the company didn't invest a single euro for the research up-front”. CBA carries the capital expenditure and process risk; Tetra Pak contributes market risk reduction through an offtake agreement for “all the aluminum they manage to recover from this process” and integrates the recycled aluminum into its global supply chain via a massbalance allocation model. As in the Unilever–SABIC case, success hinges on buyerdefined acceptance criteria. For this case, aluminum truly indistinguishable from virgin foil, polymer accepted by a tierone converter, and on the deliberate design of pilots to end in operational adoption.

Finally, the case is analytically valuable because it confirms, through first-hand testimony, both the potential and the limits of this procurement-led open innovation mechanism. On the one hand, it shows strong “de facto” implementation: a full-scale industrial reactor, integrated into one of the world’s largest aluminum refineries, with Tetra Pak already purchasing all available recycled end product and stating that it “would buy more if available.” On the other hand, the interview highlights structural constraints that mirror those observed in the Unilever–SABIC study: economic dependence on the recycled polymer market “the aluminum side only... is not sufficient to bear the business case, it is essential to sell the polymer part to make it economically sustainable”. Limited geographical replicability is to be registered, due to the unique vertical integration of CBA and the dispersed nature of European PolyAlu streams. Precisely because it combines a clear buyer-need, a supplier-owned technological solution, and documented large-scale adoption with context-dependent limits. The Tetra Pak - CBA ReAl collaboration serves as a robust validation of the procurement-led open innovation pattern derived from the desk research and of its transferability to analogous material-circularity projects such as Unilever–SABIC.

5.5.2. Acceleration Ecosystem: Eni Joule

The second interview-based validation case concerns Joule, Eni School of entrepreneurship which was selected because it sits at the intersection of two clusters emerging from the desk research. One is internal platforms for startup partnering and the other is accelerators through cohorts. Joule is part of a much larger ecosystem comprising five business lines, of which some are fully-fledged companies and others corporate functions. Eni seeks to cover both inbound and outbound directions with various internal Open Innovation players.

Joule is a corporate function of Eni. It has two main divisions: an early-stage accelerator and intrapreneurship for internal Eni employees. It reports directly to the HR Director, underlining its main function of spreading entrepreneurial and innovative culture among the personnel. It has a team of approximately 15 people, equally distributed across the two divisions. Joule's role is to support Eni's value

chain, but also to develop startups that can become part of a localized supply chain. Especially important is to try and innovate the supply chain in areas where Eni has interests that are not strictly financial, but where it wants to strengthen local businesses by promoting local content (mainly in Italy and in Africa). Engine is the company's venture client division, targeting scale-up startups with high-TRL projects. It has bigger ticket sizes per PoC and reports to the Tech Director. EniNext is Eni's VC company, founded in 2017 in Boston to invest in an MIT spinout named Commonwealth Fusion Systems (CFS). Eniverse, along with the unit that manages IP, patents, and internal assets for spinoffs/company creation or licensing, serves as Venture Builder and seeks to find external partners willing to work with Eni to create projects based on internal technologies, such as Enivibes (e-vpms® technology).

Joule is a support function in Eni's financial statements, with reporting to the CFO. The company looks to the program as an investment asset to expand their capabilities in terms of spreading an entrepreneurship mentality across members of its divisions and exploring most recent technologies that can either be integrated into the main business or evolve themselves to contribute to raise ecosystems. On its behalf, Joule adopts a KPI system to demonstrate how the project generates yield, both in financial and aggregate value-generated perspectives. Qualitative KPIs are used for that goal (e.g., #startups involved, #POCs, #POCs scaling up to other plants, % engineering efficiency, etc.). In addition, the SROI indicator (Social Return on Investment) is used to assign financial proxies to projects, where an immediate return index is not possible to materially be estimated. Examples include relationships with stakeholders, governments, social benefits, % emissions reduction with a given technology, etc.

Describing the decisional gate structure that the program holds, the interviewees start providing many detailed numbers. Applications intake ranges from 10 to 1,000 startups. The initial screening is often carried out by the partner entity managing the acceleration program, which involves multiple companies. Examples are CrossConnect Infratech Accelerator, MEAL Accelerator, or Zero Cleantech Accelerator, program of the CDP Venture Capital National Accelerator Network, with partners such as Ferrovie dello Stato, Eni, Acea, ESA, Saipem, Vodafone, etc. The platform launches a call for startups on a common vertical sector. Eni's R&D

department draws up a technological master plan every three years, defining topics of interest for innovation. Then Joule contacts technicians from Eni's BUs to discuss the most interesting proposals within the accelerator's portfolio. A technical evaluation is conducted, and the business unit decides whether there are any compelling proposals. A list of startups is selected and integrated into the program. At this point, the acceleration program launches, and it lasts on average between 2 and 4 months. Biweekly checkpoints involving Joule staff and business units' technicians are carried out. At the end of the program, the business unit decides whether to pursue a POC or reject it. If the POC is successful, a range of possibilities opens. If Joule finds the startup of potential interest, the partnership continues, often through a joint agreement or other types of contracts. The partnership might end at PoC level whether the startup is considered not interesting for implementing an ultimate solution or if the potential product or technology remains difficult to bring to operations stage. Moreover, startups that complete the acceleration program are presented to Engine and Eni Next, and only if they have scaling potential and are already structured, investment discussions may proceed. Engine's tickets typically range from €200 to €300,000. In few exceptional cases, the CVC fund Eninext takes part in the investment, with no M&A engagement. One remarkable case is the one of EXE Engineering, developer of integrated software-hardware systems that automates the management of biogas produced in landfills, increasing its collection by up to 70% compared to traditional systems. In 2025 it closed a seed round of €550,000 lead by Zero Cleantech Accelerator. Joule acted as technical partner, and Eni Next contributed the funding side, accounting for a global €0,8 million collected from the startup over the year, with cooperation agreements in Africa and a roadmap for international expansion.

In terms of factors influencing results, the interviewees suggested that the team often makes the difference, that is to say, people. Essential requirements are high flexibility, information sharing, and agile disclosure. Sometimes external entities like universities block startups' freedom. They recognize that it is generally easy to slightly modify the technology to pivot it toward objectives of interest for Eni, if the foundation is solid. Beyond a successful idea, human resources and openness to collaboration and mentoring by Eni experts are crucial. Plus, as expected, high

levels of maturity unlock access to investment, scilicet having customers, a prototype, or registered patents.

Few success factors in common with Shell GameChanger initiative and the global trend registered from the desk-research arise, which make the contribution an effective comparison tool. Both programs are focused on technology and solutions before startups themselves. They bear phases and gates logic, which allow the funnel to standardize and be repeatable. Importantly, they do not stop at generic mentorship, but disclose corporate capabilities to significantly impact the startup or program they invest in.

Finally, Joule is analytically valuable because the interview provides both positive outcome signals and credible limits consistent with an early-stage acceleration ecosystem. On the evidence side, the interview names concrete “success cases” as FOURGREEN or Exe Engineering. On the constraints side, the same funnel logic makes failure visible. Initiatives may stall because startups run out of money, disappear, or encounter institutional blockers. Together, these elements support the interpretation of Joule as a hybrid, governance-embedded OI mechanism as it combines accelerator-style cohorts with “always on” internal brokering and a structured handoff into venture clienting and investment channels.

6. Conclusions

6.1. Theoretical and Practical Implications

The research arose from the need to fill a gray area in the literature on open innovation. The overarching theme that emerged, to the extent that open innovation has become a catch-all term for any innovation model, is the use of open innovation practices within innovation theater approaches, and how companies disguise them under an umbrella term, adopted even when the underlying mechanisms are weak or absent. Another gap is the limited availability of comparable measurement approaches that track the conversion from external engagement to implemented outcomes. Third, causes of failure are explored infrequently and sparsely, and the general tendency in the literature is to more readily report success stories rather than abandoned programs or those with uncertain outcomes.

This thesis aimed to investigate open innovation approaches adopted by companies and how they exploit these activities according to strategic goals, either to promote and legitimize their position or to find and deploy concrete solutions to create an edge towards competitors. To do this, using key literature themes as lenses, a heterogeneous sample of programs was screened. From these characteristics, a variable matrix was then constructed to provide a uniform and cross-comparable interpretation of each program.

The research aimed to address three objectives defined during the methodological design phase. Specifically, it defined criteria for distinguishing the nature of an initiative; it proposed a qualitative measure of the degree of implementation or *theater* of open innovation programs; and, finally, it identified common factors and mechanisms indicate a program's conversion to one outcome or another.

The results showed that the programs studied, with on average alternating outcomes, indeed exhibit recurring structural patterns that provide ex ante indications of the program's potential outcome. The initiatives were divided into clusters and found that certain mechanisms, particularly venture clienting, co-development projects with suppliers, and internal platforms, are on average more likely to complete projects that are then implemented within the company. This

results in products reaching the market or successful spinouts. Similarly, it was noted that cohort accelerators are a complex mechanism, serving as a good vehicle for integrating external technologies and conducting targeted exploration, but also producing significant marketing material if the initiative's management has strong indirect objectives. Crowdsourcing and laboratories, on the other hand, proved to be mechanisms much more suited to one-off events and media showcases than to producing exploitable innovation.

Among the success and failure factors, it was clear that a clearly defined and documented implementation path, combined with governance integrated into the company's business, are the main factors leading open innovation projects to materialized solutions. On the other hand, the presence of communication heavily oriented towards public relations and narrative presentation of projects is a strong indicator of the strategic nature of the project and the likely lack of a structure ready to integrate the solutions explored.

Additional comparisons have highlighted that the approach to innovation projects is influenced by the type of sector in which the company operates, with determinants such as the product life cycle or the skills gap between the requirements and the external audience. Likewise, the market segment and the size of the company within the same sector also impact the mechanisms of implemented innovation. Companies that play at differentiation or have a hybrid approach seek to implement substantial innovation to gain an advantage over competitors, while those competing on large volumes and economies of scale seek to exploit the litmus test of open innovation as a tool for engagement and brand promotion.

The implications that emerge from this work are useful from a managerial point of view to identify the fundamental mechanisms and features that make innovation projects solid, while at the same time contributing to the scientific literature by providing a key to systematically distinguish between projects of a different nature that fall under the definition of Open Innovation.

6.2. Limitations and Future Research

Several limitations can be identified in the application of the methodology. The data collection process involved a limited number of sources, chosen to be sufficiently reliable; most importantly, the sample size chosen for case study desk-research is limited to 20 cases, sufficient but not exhaustively representative of the global picture. Additionally, the desk-research design relies on publicly disclosed information, meaning that companies engaging in Open Innovation without fully documenting their initiatives may be excluded or imperfectly represented, and the analysis includes only one program per company, whose outcomes may be strongly shaped by firm-specific and contextual elements that cannot be fully examined.

An additional limitation relates to the temporal incompleteness of the observation. Several of the programs included in the sample are still ongoing, and the assessment therefore relies on the outcomes and evidence available at the time of analysis. Subsequent developments may modify the measured position of a given initiative within the framework. Nonetheless, while such evolutions may affect the magnitude of the scores, they are unlikely to fundamentally alter the underlying nature of the initiatives as interpreted in this thesis, since the classification is primarily driven by structural program characteristics.

The protocol of examination for the cases was based on a qualitative matrix, which provided robust information for comparisons despite limited numeric data; however, the assessment of *Innovation Theater* risk relies on qualitative interpretation instead of a universally accepted statistical metric, meaning classifications rest on informed but subjective judgment. These constraints limit the generalizability of findings, particularly cut for analytical rather than statistical purposes. Future research could expand the number of cases analyzed across more industries and geographies and assess non-listed firms as well for broadening the base. Also, including multiple programs per firm would homogenize the single contributions, allowing the analysis to disentangle program effects from context-specific constraints. Finally, collecting certified numeric data for rigorous statistical comparisons would provide the analysis with stronger measurement validity and replicability.

REFERENCES

BIBLIOGRAPHY

Abrahamson, E. (1996) 'Management Fashion', *The Academy of Management Review*, 21(1), p. 254. Available at: <https://doi.org/10.2307/258636>.

Altman, E.J. and Tushman, M.L. (2017) 'Platforms, Open/User Innovation, and Ecosystems: A Strategic Leadership Perspective'.

Bishop, P.A. and Herron, R.L. (2015) 'Use and Misuse of the Likert Item Responses and Other Ordinal Measures', *International Journal of Exercise Science*, 8(3), pp. 297–302. Available at: <https://doi.org/10.70252/LANZ1453>.

Blank, S. (2019) 'Why Companies Do "Innovation Theater" Instead of Actual Innovation', *Harvard Business Review*, 7 October. Available at: <https://hbr.org/2019/10/why-companies-do-innovation-theater-instead-of-actual-innovation> (Accessed: 3 February 2026).

Bogers, M. *et al.* (2017) 'The open innovation research landscape: established perspectives and emerging themes across different levels of analysis', *Industry and Innovation*, 24(1), pp. 8–40. Available at: <https://doi.org/10.1080/13662716.2016.1240068>.

Bogers, M., Chesbrough, H. and Moedas, C. (2018) 'Open Innovation: Research, Practices, and Policies', *California Management Review*, 60(2), pp. 5–16. Available at: <https://doi.org/10.1177/0008125617745086>.

Borglund, R. and Rönnerberg, C. (2021) *Scaling Innovation : A framework for large corporations based on practical and theoretical insights*. Available at: <https://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-299453> (Accessed: 20 November 2025).

Caloffi, A. *et al.* (2023) 'Innovation intermediaries' types and functions: A computational analysis of the literature', *Technological Forecasting and Social*

Change, 189, p. 122351. Available at:
<https://doi.org/10.1016/j.techfore.2023.122351>.

Cantamessa, M. and Montagna, F. (2023) 'Innovation Strategy as the Management of Competencies', in M. Cantamessa and F. Montagna (eds) *Management of Innovation and Product Development: Integrating Business and Technological Perspectives*. London: Springer, pp. 179–209. Available at:
https://doi.org/10.1007/978-1-4471-7531-5_8.

Cheng, C.C.J. and Huizingh, E.K.R.E. (2014) 'When Is Open Innovation Beneficial? The Role of Strategic Orientation', *Journal of Product Innovation Management*, 31(6), pp. 1235–1253. Available at:
<https://doi.org/10.1111/jpim.12148>.

Chesbrough, H. (2006) 'Open Innovation: A New Paradigm for Understanding Industrial Innovation', in H. Chesbrough, Vanhaverbeke Wim, and J. West (eds) *Open Innovation: Researching a New Paradigm*. Oxford University Press, p. 0. Available at: <https://doi.org/10.1093/oso/9780199290727.003.0001>.

Chesbrough, H. and Bogers, M. (2013) 'Explicating Open Innovation: Clarifying an Emerging Paradigm for Understanding Innovation'.

Chesbrough, H.W. (2003) *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Harvard Business Press.

Chiaroni, D., Chiesa, V. and Frattini, F. (2011) 'The Open Innovation Journey: How firms dynamically implement the emerging innovation management paradigm', *Technovation*, 31(1), pp. 34–43. Available at:
<https://doi.org/10.1016/j.technovation.2009.08.007>.

Cohen, W. and Levinthal, D. (1990) 'Absorptive Capacity: A New Perspective on Learning and Innovation', *Administrative Science Quarterly*, 35, pp. 128–152. Available at: <https://doi.org/10.2307/2393553>.

Cragun, D. *et al.* (2015) 'Qualitative Comparative Analysis: A Hybrid Method for Identifying Factors Associated with Program Effectiveness', *Journal of Mixed*

Methods Research, 10(3), pp. 251–272. Available at: <https://doi.org/10.1177/1558689815572023>.

Cricelli, L., Mauriello, R. and Strazzullo, S. (2023) ‘Preventing open innovation failures: A managerial framework’, *Technovation*, 127, p. 102833. Available at: <https://doi.org/10.1016/j.technovation.2023.102833>.

Dahlander, L. and Gann, D.M. (2010) ‘How open is innovation?’, *Research Policy*, 39(6), pp. 699–709. Available at: <https://doi.org/10.1016/j.respol.2010.01.013>.

Della Porta, D. and Keating, M. (2008) ‘Approaches and Methodologies in the Social Sciences: A Pluralist Perspective’, (Comparative analysis: Case-oriented versus variable-oriented research), p. (198-222).

Delmas, M. and Burbano, V. (2011) ‘The Drivers of Greenwashing’, *California Management Review*, 54. Available at: <https://doi.org/10.1525/cmr.2011.54.1.64>.

Diamantopoulos, A. and Winklhofer, H.M. (2001) ‘Index Construction with Formative Indicators: An Alternative to Scale Development’, *Journal of Marketing Research*, 38(2), pp. 269–277. Available at: <https://doi.org/10.1509/jmkr.38.2.269.18845>.

Eisenhardt, K.M. (1989) ‘Building Theories from Case Study Research’, *The Academy of Management Review*, 14(4), pp. 532–550. Available at: <https://doi.org/10.2307/258557>.

Flyvbjerg, B. (2006) ‘Five Misunderstandings About Case-Study Research’, *Qualitative Inquiry*, 12(2), pp. 219–245. Available at: <https://doi.org/10.1177/1077800405284363>.

Gassmann, O. and Enkel, E. (2004) ‘Towards a Theory of Open Innovation: Three Core Process Archetypes’, *University of St.Gallen*, 6.

Gimmy, G. *et al.* (2017) ‘What BMW’s Corporate VC Offers That Regular Investors Can’t’, *Harvard Business Review*, 27 July. Available at: <https://hbr.org/2017/07/what-bmws-corporate-vc-offers-that-regular-investors-cant> (Accessed: 25 February 2026).

Granados, C., Ayala, Y. and Ramos-Mejia, M. (2024) 'Is it substantive or just symbolic? Understanding innovation theater in organisations: The case of technology-based innovation', *Technovation*, 129, p. 102880. Available at: <https://doi.org/10.1016/j.technovation.2023.102880>.

Grandhi, S., Chhetri, P. and Molla, A. (2024) 'Assessing the effect of open innovation on firm performance: a study of Indian IT organisations', *European Journal of Innovation Management*, 28(6), pp. 2581–2606. Available at: <https://doi.org/10.1108/EJIM-10-2023-0844>.

Greco, M., Grimaldi, M. and Cricelli, L. (2019) 'Benefits and costs of open innovation: the BeCO framework', *Technology Analysis & Strategic Management*, 31(1), pp. 53–66. Available at: <https://doi.org/10.1080/09537325.2018.1484442>.

Gutmann, T. *et al.* (2020) 'Startups in a corporate accelerator: what is satisfying, what is relevant and what can corporates improve?', *International Journal of Entrepreneurship and Innovation Management*, 24(6). Available at: <https://www.inderscienceonline.com/doi/10.1504/IJEIM.2020.110098> (Accessed: 25 February 2026).

Hargadon, A. and Sutton, R. (1997) 'Technology Brokering and Innovation in a Product Design Firm', *Administrative Science Quarterly*, 42, pp. 716–749. Available at: <https://doi.org/10.2307/2393655>.

Hossain, M. (2012) 'Performance and Potential of Open Innovation Intermediaries', *Procedia - Social and Behavioral Sciences*, 58, pp. 754–764. Available at: <https://doi.org/10.1016/j.sbspro.2012.09.1053>.

Hossain, M. (2013) 'Open innovation: so far and a way forward', *World Journal of Science, Technology and Sustainable Development*, 10(1), pp. 30–41. Available at: <https://doi.org/10.1108/20425941311313083>.

Howells, J. (2006) 'Intermediation and the role of intermediaries in innovation', *Research Policy*, 35(5), pp. 715–728. Available at: <https://doi.org/10.1016/j.respol.2006.03.005>.

Howells, J. and Thomas, E. (2022) 'Innovation search: the role of innovation intermediaries in the search process', *R&D Management*, 52(5), pp. 992–1008. Available at: <https://doi.org/10.1111/radm.12534>.

Huizingh, E.K.R.E. (2011) 'Open innovation: State of the art and future perspectives', *Technovation*, 31(1), pp. 2–9. Available at: <https://doi.org/10.1016/j.technovation.2010.10.002>.

Huston, L. and Sakkab, N. (2011) 'Inside Procter & Gamble's New Model for Innovation'.

Kohler, T. (2016) 'Corporate accelerators: Building bridges between corporations and startups', *Business Horizons*, 59(3), pp. 347–357. Available at: <https://doi.org/10.1016/j.bushor.2016.01.008>.

Krippendorff, K. (2019) 'Reliability', *Content Analysis: An Introduction to Its Methodology*. SAGE Publications, Inc., pp. 277–360. Available at: <https://doi.org/10.4135/9781071878781>.

Kurpjuweit, S. and Wagner, S.M. (2020) 'Startup Supplier Programs: A New Model for Managing Corporate-Startup Partnerships', *California Management Review*, 62(3), pp. 64–85. Available at: <https://doi.org/10.1177/0008125620914995>.

Laursen, K. and Salter, A. (2006) 'Open for innovation: the role of openness in explaining innovation performance among U.K. manufacturing firms', *Strategic Management Journal*, 27(2), pp. 131–150. Available at: <https://doi.org/10.1002/smj.507>.

Lewandowska, M. (2015) 'Capturing Absorptive Capacity: Concepts, Determinants, Measurement Modes and Role in Open Innovation', *International Journal of Management and Economics*, 45. Available at: <https://doi.org/10.1515/ijme-2015-0015>.

van Lieshout, J.W.F.C. *et al.* (2021) 'The interrelatedness of organizational ambidexterity, dynamic capabilities and open innovation: a conceptual model

towards a competitive advantage', *European Journal of Management Studies*, 26(2–3), pp. 39–62. Available at: <https://doi.org/10.1108/EJMS-01-2021-0007>.

Lopez, H. and Vanhaverbeke, W. (2009) 'Connecting open and closed innovation markets: A typology intermediaries'.

March, J.G. (1991) 'Exploration and Exploitation in Organizational Learning', *Organization Science*, 2(1), pp. 71–87.

Meilich, O. (2019) 'Strategic groups maps: review, synthesis, and guidelines', *Journal of Strategy and Management*, 12(4), pp. 447–463. Available at: <https://doi.org/10.1108/JSMA-03-2019-0046>.

Miles, M.B. and Huberman, A.M. (1994) *Qualitative data analysis: An expanded sourcebook*, 2nd ed. Thousand Oaks, CA, US: Sage Publications, Inc (Qualitative data analysis: An expanded sourcebook, 2nd ed), pp. xiv, 338.

Morandin, C. and Corso, M. (2022) *Measuring the impact of Open Innovation initiatives: Multiple case study on large Italian firms*. Politecnico di Milano.

Mortara, L. and Minshall, T. (2011) 'How do large multinational companies implement open innovation?', *Technovation*, 31(10), pp. 586–597. Available at: <https://doi.org/10.1016/j.technovation.2011.05.002>.

Nambisan, S. and Sawhney, M. (2011) 'Orchestration processes in network-centric innovation: Evidence from the field', *Academy of Management Perspectives*, 25(3), pp. 40–57. Available at: <https://doi.org/10.5465/AMP.2011.63886529>.

Nardo, M. *et al.* (2005) 'Handbook on Constructing Composite Indicators: Methodology and User Guide', *OECD Statistics Working Papers*, 2005(3). Available at: <https://doi.org/10.1787/533411815016>.

Patton, M.Q. (2002) *Patton, M. Q. (2002) - Qualitative Research & Evaluation Methods. Sage. | PDF, Scribd. SAGE Publications.* Available at: <https://www.scribd.com/document/702154410/Patton-M-Q-2002-Qualitative-research-evaluation-methods-sage> (Accessed: 4 February 2026).

Richter, N., Jackson, P. and Schildhauer, T. (2018) 'Outsourcing creativity: An abductive study of open innovation using corporate accelerators', *Creativity and Innovation Management*, 27(1), pp. 69–78. Available at: <https://doi.org/10.1111/caim.12252>.

Riva, E. (2024) 'Open innovation intermediaries'. Available at: <https://www.politesi.polimi.it/handle/10589/227425> (Accessed: 24 October 2025).

Rodríguez, J.L. and Lorenzo, A.G. (2011) 'Open Innovation: Organizational Challenges of a New Paradigm of Innovation Management', *EUROPEAN RESEARCH STUDIES JOURNAL*, XIV(Issue 1), pp. 77–84. Available at: <https://doi.org/10.35808/ersj/311>.

Salter, A., Criscuolo, P. and Ter Wal, A.L.J. (2014) 'Coping with Open Innovation: Responding to the Challenges of External Engagement in R&D', *California Management Review*, 56(2), pp. 77–94. Available at: <https://doi.org/10.1525/cmr.2014.56.2.77>.

Schäper, T. *et al.* (2023) 'The S-shaped relationship between open innovation and financial performance: A longitudinal perspective using a novel text-based measure', *Research Policy*, 52(6), p. 104764. Available at: <https://doi.org/10.1016/j.respol.2023.104764>.

Shohet, S. and Prevezer, M. (2007) 'UK Biotechnology: Institutional Linkages, Technology Transfer and the Role of Intermediaries', *R&D Management*, 26, pp. 283–298. Available at: <https://doi.org/10.1111/j.1467-9310.1996.tb00962.x>.

Siota, J. *et al.* (2020) *Corporate Venturing*, JRC Publications Repository. Available at: <https://doi.org/10.2760/976372>.

Srisathan, W.A., Ketkaew, C. and Naruetharadhol, P. (2023) 'Assessing the effectiveness of open innovation implementation strategies in the promotion of ambidextrous innovation in Thai small and medium-sized enterprises', *Journal of Innovation & Knowledge*, 8(4), p. 100418. Available at: <https://doi.org/10.1016/j.jik.2023.100418>.

- Teplov, R., Albats, E. and Podmetina, D. (2019) 'What does open innovation mean? Business versus academic perceptions', *International Journal of Innovation Management*, 23(1). Available at: <https://doi.org/10.1142/S1363919619500026>.
- Van Der Meer, H. (2007) 'Open Innovation – The Dutch Treat: Challenges in Thinking in Business Models', *Creativity and Innovation Management*, 16(2), pp. 192–202. Available at: <https://doi.org/10.1111/j.1467-8691.2007.00433.x>.
- Vanhaverbeke, W., Van de Vrande, V. and Chesbrough, H. (2008) 'Understanding the Advantages of Open Innovation Practices in Corporate Venturing in Terms of Real Options', *Creativity and Innovation Management*, 17(4), pp. 251–258. Available at: <https://doi.org/10.1111/j.1467-8691.2008.00499.x>.
- Vanhaverbeke, W., Vermeersch, I. and Zutter, S. (2012) *Open innovation in SMEs: How can small companies and start-ups benefit from open innovation strategies?*
- Viki, T. (2020) *What Is Innovation Theater?*, *Forbes*. Forbes. Available at: <https://www.forbes.com/sites/tendayiviki/2020/05/24/what-is-innovation-theater/> (Accessed: 4 December 2025).
- Weiblen, T. and Chesbrough, H.W. (2015) 'Engaging with Startups to Enhance Corporate Innovation'.
- West, J. *et al.* (2014) 'Open innovation: The next decade', *Research Policy*, 43(5), pp. 805–811. Available at: <https://doi.org/10.1016/j.respol.2014.03.001>.
- West, J. and Bogers, M. (2013) 'Leveraging External Sources of Innovation: A Review of Research on Open Innovation', *Journal of Product Innovation Management*, forthcoming. Available at: <https://doi.org/10.1111/jpim.12125>.
- Yin, R.K. (2017) *Case Study Research and Applications: Design and Methods*. SAGE Publications.

SITOGRAPHY

I. Accept Mission. “How to Score Your Innovation Portfolio: Self-Assessment Framework.” Accept Mission Blog, n.d.

<https://www.acceptmission.com/blog/score-innovation-portfolio-framework/>

II. 1000minds. “Multi-Criteria Decision Analysis (MCDA/MCDM).” 1000minds, n.d. <https://www.1000minds.com/decision-making/what-is-mcdm-mcda>

III. PwC. “Looking Ahead: Driving Co-Creation in the Auto Industry.” PwC, May 2013. <https://www.pwc.com.ar/es/publicaciones-por-industria/assets/pwc-looking-ahead-driving-co-creation-in-the-auto-industry-pdf.pdf>

IV. Open Innovation in Italia e ruolo delle startup. Update 2025 – PoliMi School of Management: <https://www.osservatori.net/report/startup-thinking/open-innovation-italia-ruolo-startup-update-2025/>

V. ISF. Innovation, Strategy and family Business. Open Innovation Lookout 2024: <https://www.innovationandstrategy.it/osservatorio/osservatorio-open-innovation-2024/>

VI. CB Insights. “State of CVC 2023 Report.” CB Insights, 7 March 2024. <https://www.cbinsights.com/research/report/corporate-venture-capital-trends-2023/>

VII. The Wall Street Journal. “Where Does the Best Innovation Happen? Not in Stand-Alone Labs, Some Companies Say.” The Wall Street Journal, 10 April 2024.

<https://www.wsj.com/articles/where-does-the-best-innovation-happen-not-in-stand-alone-labs-some-companies-say-e9b4cf0b>

VIII. Patnaik, Dev. “Is It Time To Rethink Your Innovation Strategy?” Forbes, 24 March 2024. <https://www.forbes.com/sites/devpatnaik/2024/03/24/is-it-time-to-rethink-your-innovation-strategy/>

IX. Koch, Katharina. On the Fast Track: Three Essays on Corporate Accelerators. Technical University of Munich, 2023. <https://mediatum.ub.tum.de/doc/1706945/1706945.pdf>

1. Unilever – Magnum ice cream tubs

Unilever. “Magnum launches new tubs made with recycled plastic.” Unilever News, 11 August 2020. <https://www.unilever.com/news/news-search/2020/magnum-launches-new-tubs-made-with-recycled-plastic/>

Unilever. “We’re making the switch to recycled food packaging. Here’s how.” Unilever News, 24 March 2022. <https://www.unilever.com/news/news-search/2022/were-making-the-switch-to-recycled-food-packaging-heres-how/>

Sabic. https://www.sabic.com/en/news/24118-magnum_launches_new_tubs_made_using_certified_circular_polypropylene
https://www.sabic.com/en/Images/Ice-cream-container_tcm1010-21982.pdf

2. Procter & Gamble – Connect + Develop

P&G. “P&G Connect + Develop™.” P&G Connect + Develop, n.d. <https://www.pgconnectdevelop.com/>

P&G. “News & Insights.” P&G Connect + Develop, n.d. <https://www.pgconnectdevelop.com/news>

3. PepsiCo – Greenhouse Accelerator

PepsiCo. “PepsiCo awards \$100,000 to ¡Ya Oaxaca!, winner of 2024 Greenhouse Accelerator: Juntos Crecemos Edition.” PepsiCo Newsroom, 3 December 2024. <https://www.pepsico.com/newsroom/press-releases/2024/pepsico-awards-100000-to-ya-oaxaca-winner-of-2024-greenhouse-accelerator>

PepsiCo. “Innovators wanted: PepsiCo Greenhouse Accelerator Juntos Crecemos Edition returns with renewed focus.” PepsiCo Newsroom, 6 March 2024. <https://www.pepsico.com/newsroom/press-releases/2024/innovators-wanted-pepsico-greenhouse-accelerator-juntos-crecemos-edition-returns-with-renewed-focus>

4. Fiat / Stellantis – FIAT Mio

Fiat / Stellantis Media. “Next Fiat concept car will have direct contribution from consumers.” Stellantis Media, n.d. <https://www.media.stellantis.com/br-en/fiat/press/next-fiat-concept-car-will-have-direct-contribution-from-consumers>

Fiat / Stellantis Media. “Fiat Mio wins the International Design Excellence Awards (IDEA).” Stellantis Media, n.d. <https://www.media.stellantis.com/br-en/fiat/press/fiat-mio-wins-the-international-design-excellence-awards-idea>

5. Volkswagen – People’s Car Project

Volkswagen UK Press. “Chinese showcase concepts for the Volkswagen of the future.” Volkswagen Media Centre, n.d. <https://www.vwpress.co.uk/releases/1690>

Volkswagen UK Press. “‘People’s Car Project’ internet platform is launched in China to develop the ‘Volkswagen’ of the future.” Volkswagen Media Centre, n.d. <https://www.vwpress.co.uk/assets/documents/original/217-64127vw.doc>

The Guardian. “VW admits marketing rethink in China after ‘wake-up call’ over brand.” The Guardian, 18 June 2013. <https://www.theguardian.com/media/2013/jun/18/volkswagen-marketing-lost-way-china>

6. BMW – BMW Startup Garage

BMW Group. “From pioneer to innovation powerhouse: BMW Startup Garage marks 10 years.” BMW Group PressClub, 20 February 2025. <https://www.press.bmwgroup.com/global/article/detail/T0448127EN/from-pioneer-to-innovation-powerhouse%3A-bmw-startup-garage-marks-10-years?language=en>

BMW Group. “BMW Startup Garage rolls out innovations in record time.” BMW Group PressClub, 2 August 2023. <https://www.press.bmwgroup.com/global/article/detail/T0426038EN/bmw-startup-garage-rolls-out-innovations-in-record-time?language=en>

Reuters. “BMW to use software from Israel’s Tactile Mobility in vehicles.” Reuters, 15 September 2020. <https://www.reuters.com/world/middle-east/bmw-use-software-israels-tactile-mobility-vehicles-2020-09-15/>

7. Shell – Shell GameChanger

Shell. “Shell GameChanger.” Shell, n.d. <https://www.shell.com/what-we-do/technology-and-innovation/innovate-with-shell/shell-gamechanger.html>

Shell. “Who we are | Shell GameChanger.” Shell, 20 December 2025. <https://www.shell.com/what-we-do/technology-and-innovation/innovate-with-shell/shell-gamechanger/about.html>

8. bp – Launchpad

bp. “bp to grow leading US technology company that turns commercial buildings into virtual power plants.” bp News, 7 October 2021. https://www.bp.com/en_us/united-states/home/news/press-releases/bp-to-grow-leading-us-technology-company-that-turns-commercial-buildings-into-virtual-power-plants.html

bp. “bp acquires majority stake in largest US forest carbon offset developer Finite Carbon.” bp News, 16 December 2020. <https://www.bp.com/en/global/corporate/news-and-insights/press-releases/bp-acquires-majority-stake-in-largest-us-forest-carbon-offset-developer-finite-carbon.html>

9. Enel – Open Innovability

Enel. “Enel Open Innovability®.” Open Innovability, n.d. <https://openinnovability.enel.com/>

Enel. “Enel Startup Ecosystem.” Open Innovability, n.d. <https://openinnovability.enel.com/startup-ecosystem>

10. Meta / Facebook – Facebook Accelerator Singapore

Infocomm Media Development Authority. “Policy Prototyping – Singapore.” IMDA, n.d. <https://www.imda.gov.sg/how-we-can-help/data-innovation/policy-prototyping>

Infocomm Media Development Authority. “People-centric Approaches to Notice, Consent, and Disclosure.” IMDA, c. 2019. https://www.imda.gov.sg/-/media/imda/files/programme/data-innovation/policy-prototyping/approaches_to_notice_consent_and_disclosure-v3.pdf

The Business Times. “Facebook, IMDA to launch startup accelerator in Singapore in February.” The Business Times, 2 October 2018. <https://www.businesstimes.com.sg/international/asean/facebook-imda-launch-startup-accelerator-singapore-february>

11. Alphabet – X

X, The Moonshot Factory. “Google X: Home.” X, n.d. <https://x.company/>

X, The Moonshot Factory. “Waymo — A Google X Moonshot.” X, n.d. <https://x.company/projects/waymo/>

TechCrunch. “Google’s self-driving car unit becomes Waymo.” TechCrunch, 13 December 2016. <https://techcrunch.com/2016/12/13/googles-self-driving-car-unit-spins-out-as-waymo/>

Reuters. “Alphabet’s Waymo picks up speed as Tesla robotaxi service expands.” Reuters, 15 July 2025. <https://www.reuters.com/business/autos-transportation/alphabets-waymo-picks-up-speed-tesla-robotaxi-service-expands-2025-07-15/>

12. Snap – Yellow Accelerator

Snap Inc. “Yellow Accelerator’s Latest Class.” Snap Newsroom, 7 April 2022. <https://newsroom.snap.com/yellow-accelerator-latest-class>

Snap Inc. “Launching A New Accelerator Program To Support Black Creators.” Snap Newsroom, 23 June 2022. <https://newsroom.snap.com/523-black-creator-accelerator>

TechCrunch. “Snap debuts its fifth cohort of Yellow accelerator startups.” TechCrunch, 12 April 2022. <https://techcrunch.com/2022/04/12/snap-fifth-cohort-yellow-accelerator-startups/>

Business Insider. “Snap is shuttering its startup accelerator program Yellow as part of company-wide cuts.” Business Insider, 31 August 2022. <https://www.businessinsider.com/snap-shuttering-its-startup-accelerator-program-as-part-of-layoffs-2022-8>

13. SAP – SAP.iO

SAP. “100 SAP.iO Startups Solutions Available on SAP Store.” SAP News, 23 June 2021. <https://news.sap.com/2021/06/celebrating-100-solutions-sap-io-startups-sap-store/>

ViewAR. “ViewAR @ SAP.iO Foundry Munich.” ViewAR Blog, 24 September 2019. <https://www.viewar.com/blog/viewar-sap-io-foundry-munich/>

TechCrunch. “SAP’s SAP.io Foundry debuts the graduates of its second women-focused accelerator.” TechCrunch, 15 August 2018. <https://techcrunch.com/2018/08/15/saps-sap-io-foundry-debuts-the-graduates-of-its-second-women-focused-accelerator/>

14. AT&T – 5G Innovation Studio

AT&T. “AT&T Labs | Our Work | 5G Innovation Studio.” AT&T, n.d. <https://about.att.com/sites/labs/our-work/5g-innovation>

AT&T. “Happy Birthday to Us: AT&T Celebrates 147 Years.” AT&T Blog, 7 March 2023. <https://about.att.com/blogs/2023/celebrating-147-years.html>

15. Telefónica – Wayra

Telefónica. “Wayra at Telefónica.” Telefónica, n.d. <https://www.telefonica.com/en/sustainability-innovation/innovation/wayra/>

Telefónica. “Wayra celebrates 15 years in Barcelona as a meeting point between start-ups and Telefónica’s business.” Telefónica Press Room, 26 February 2026. <https://www.telefonica.com/en/communication-room/press-room/wayra-celebrates-15-years-barcelona-meeting-point-start-ups-telefonicas-business/>

TechCrunch. “UK spy agency-backed cyber security incubator picks first seven startups.” TechCrunch, 11 January 2017. <https://techcrunch.com/2017/01/11/uk-spy-agency-backed-cyber-security-incubator-picks-first-seven-startups/>

WIRED. “Cybersecurity: Seven startups picked to be in GCHQ, Wayra and DCMS’ accelerator.” WIRED, 11 January 2017. <https://www.wired.com/story/gchq-wayra-accelerator-cybersecurity-uk/>

16. Zurich – Zurich Innovation Championship

Zurich Insurance Group. “Zurich Innovation Championship.” Zurich, n.d. <https://www.zurich.com/campaigns/zic>

Zurich Insurance Group. “Zurich’s global startup program crowns nine winners of the 2024 Zurich Innovation Championship.” Zurich Media, 29 May 2024. <https://www.zurich.com/media/news-releases/2024/2024-0529-01>

17. BBVA – API Market

BBVA. “BBVA API_Market, where open banking means opportunities.” BBVA API_Market, n.d. <https://www.bbvaapimarket.com/en/>

Finextra. “BBVA launches Open API marketplace.” Finextra, 24 May 2017. <https://www.finextra.com/newsarticle/30614/bbva-launches-open-api-marketplace>

18. adidas – Platform A

adidas. “adidas launches sports accelerator program ‘Platform A’ at Station F in Paris.” adidas Press Release, 18 January 2019. <https://www.adidas-group.com/en/media/press-releases/adidas-launches-sports-accelerator-program-platform-a-at-station-f-in-paris>

eyecandylab. “eyecandylab joins adidas program to develop pilot for its ecosystem.” eyecandylab, 18 January 2019. <https://eyecandylab.com/eyecandylab-joins-adidas-program-to-develop-pilot-for-its-ecosystem/>

19. Airbus – Airbus BizLab

Airbus. “Airbus BizLab.” Airbus, 3 November 2021. <https://www.airbus.com/en/airbus-bizlab>

Airbus. “Twenty-two start-ups join Airbus accelerator programme.” Airbus Newsroom, 4 November 2019. <https://www.airbus.com/en/newsroom/press-releases/2019-11-twenty-two-start-ups-join-airbus-accelerator-programme>

20. Boeing – Boeing NeXt

Boeing. “Boeing to Establish New Aerospace & Autonomy Center.” Boeing Press Release, 1 August 2018. <https://investors.boeing.com/investors/news/press-release-details/2018/Boeing-to-Establish-New-Aerospace--Autonomy-Center/default.aspx>

Boeing. “Boeing Autonomous Passenger Air Vehicle Completes First Flight.” Boeing Press Release, 23 January 2019. <https://investors.boeing.com/investors/news/press-release-details/2019/Boeing-Autonomous-Passenger-Air-Vehicle-Completes-First-Flight/default.aspx>

21. Eni Joule: <https://www.eni.com/joule/it-IT/media/2025/10/eni-joule-for-entreprenurship-2025-cinque-anni-innovazione-sostenibilita.html>

“Joule: the path to make your startup grow.” Joule, n.d. <https://www.eni.com/joule/en-IT/home.html>

Joule | Eni. “Who we are.” Joule, n.d. <https://www.eni.com/joule/en-IT/who-we-are.html>

22. Tetra Pak – CBA ReAl

Companhia Brasileira de Alumínio (CBA). “CBA ReAl.” CBA, n.d. <https://www.cba.com.br/en/cba-real/>

Tetra Pak Brasil. “CBA desenvolve tecnologia inovadora para a reciclagem de embalagens multimateriais.” Tetra Pak, 26 November 2024. <https://www.tetrapak.com/pt-br/about-tetra-pak/news-and-events/newsarchive/CBA-desenvolve-tecnologia-reciclagem-multimateriais>

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