Organization for Innovation

Managing Differences Between Assemblages Productively

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Publication date:
2020

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ABSTRACT

This study poses the question of how startup companies and corporates can collaborate while utilizing the full potential of their organizational differences. The inquiry inhabits the epistemic orientation of New Materialism based on the works of Gilles Deleuze & Felix Guattari as well as Manuel DeLanda. Through this epistemic point of departure, organizations are social assemblages of machinic parts in consistent interaction with each other. This study is based on empirical data produced from three distinct collaborations between mature companies and startups. With organizational structures enabling fast decision making and experimentation, startups' primary driving directives are expansion and growth. They can test new ideas in the market, use feedback productively to adapt to the feedback quickly, and roll out new solutions at high speed. In contrast, corporates are large and complex social assemblages. They utilize rigid and bureaucratic authority structures to remain compliant with legal jurisdictions, in accordance with established IT infrastructure, and to minimize risk. The relationship between the two organizational structures of startups and corporates is one of difference. Each organization has something that the other wants: capital, knowledge, and resources or innovation and speed of execution. These differences must be sustained without one organisation 'overcoding' the other. Abductively and based on the Gioia-methodology, the Assemblage Connector Mapping (ACM) Model is synthesized to encompass the designed space of resource and knowledge flows exchanged in asymmetric collaborations. Through the use of the ACM model, the study suggests that startup/corporate collaborations should establish mediating interfaces that enhance the innovation potential of such collaborations while maintaining the productive difference in each party.

Keywords: Open Innovation, Assemblage Theory, Corporate Ventures, Asymmetrical Partnerships, Deleuze, DeLanda, Agile, Bureaucracy, Collaboration

INTRODUCTION

Within the past five years, ventures have increasingly been deployed by large international incumbents, to solve critical strategic challenges both at the core and at the periphery of their businesses. (Peter *et al.*, 2019:21) Rather than developing internal innovation projects, fortune 500 incumbents are facilitating long-standing collaborations with external or semi-external startup entities who can operate outside of the incumbent's organizational structure. (Bonzom & Netessine, 2016:25-27) Through startup/corporate collaborations, startups benefit from the immense resources, brand, infrastructure, and knowledge of their corporate counterparts. (Peter *et al*., 2019:23) These complementary assets present opportunities to gain unfair advantages against competing tech companies in the same market. (Teece, 1986:288)

Simultaneously, the corporate backer can scope new markets, increase brand recognition among new customers, or rapidly experiment with new technologies without compromising its core functions. Startup/corporate collaborations, thereby, provide competitive advantages for emerging startups while enabling large incumbents to scope future strategies safely. (Peter *et al.*, 2019:23) Though the topic of Open Innovation has been studied at length very few have outlined the collaborative structures with which small agile organizations such as startups and large bureaucratic organizations such as corporations interact with each other.

The question of how to manage startup/corporate collaborations while maximizing the benefits by acknowledging, protecting, and promoting the partners' differences has been largely overlooked. (Spender et al., 2017:7-8) Hence, collaborative structures between corporates and startups are often established ad-hoc, through unofficial channels, or guided by coincidence. There are, effectively, as many collaboration models, as there are startup/corporate collaborations. This paper makes the argument that the differences between corporates and startups need to be examined and managed much more carefully than the current literature and managerial practice suggests.

In this study, we expand on the field of Open Innovation by providing an answer to the question of how startup/corporate collaborations can be managed to maximize the benefits of organizational differences based on an ontology that dissolves the 'outside-inside' dichotomy proposed by Weiblen & Chesbrough (2015). This paper combines the methods of Grounded Theory (GT) with the methodological conceptions of DeleuzoGuattarian philosophy for the purpose of data analysis.

Based on our empirical study of three high-profile startup/corporate collaborations and usage of DeleuzoGuattarian thought as practice theory, our main findings have led to a conceptual heuristic of the Assemblage Connector Mapping model (ACM-model). The ACM-model outlines how flows of resources and cultural influence between organizational structures can be mapped and managed to produce desired outcomes of collaborative activities. The ACM-model enables collaborating organisations to map-out how knowledge, infrastructure, and human resources are transferred between organisations to ensure competitive advantages while ring-fencing the venture from the unwarranted influence of bureaucracy. Furthermore, the ACM model suggests how to protect the integrity of the corporation against the anarchical influences of the venture.

The paper is structured as follows. First, the theoretical positioning and choice of ontology are presented, followed by the method section. Third, the findings are presented, and

finally is the conclusion offered together with limitations of the study and managerial implications.

THEORETICAL BACKGROUND

In innovation studies, the research paradigm of Open Innovation (OI) explores new product/service development as a result of cross-organizational collaboration. Chesbrough et al. (214:17) define OI as: *"A distributed innovation process that involves purposely managed knowledge flows across the organizational boundaries, using pecuniary and non-pecuniary mechanisms in line with the organization's business model."* Hence, OI refers to a relationship between two entities in which each participant draws on the capacities of the other in the development of new products and services. OI is an inherently dynamic process, involving multiple aspects such as risk, exchange, belief, governance, sharing, and more. Though OI has been researched at length, one area that has been consistently overlooked is the collaboration between large incumbents and agile startups. By definition, startups operate in markets characterized by "extreme uncertainty" (Ries, 2011:8). Often lacking in resources, collaboration with larger organizations can prove a viable strategy for acquiring sustainable competitive advantages in highly competitive environments. (Bogers, 2011:114-116).

Puranam et al. (2006) accentuate that it is a "coordination-autonomy dilemma" (p263) to manage technology-based firms to "exploit their capabilities and technologies in a coordinated way and foster their exploration capacity by preserving their autonomy" (ibid). Kupp, Marbal, and Borchers (2017) propose in a conceptual paper that success with corporate accelerator programs is "tricky" (p52) but argues the goal alignment is a key factor. Doz (1988) were among the first to point to critical issues in partnerships between larger and smaller firms. Particularly, three issues are critical for success: convergence of purpose, consistency of position within the large firm, and finally, the interface (Doz, 1988). Jackson, Richter, and Schildhauer (2018) suggest that "there are substantial differences in the objectives, working culture and work practices of established companies and startups" (p87), and further, "these differences have [...] been little researched" (p87).

Open innovation is only one approach as the collaboration interface is not only a problem of knowledge flows but is associated with other management challenges as well. Jackson, Richter, and Schildhauer (2018) proposed a process model five steps to successful collaborations where step one is to devise an innovation strategy upon which clear objectives are formulated, accentuating the convergence of purpose accentuated by Doz (1988). While Jackson, Richter, and Schildhauer (2018) view differences as problematic suggesting "*In spite* of these differences," the present study attempts to view differences epistemically different by assessing how these can be made more productive.

Applying New Materialism as a Research Ontology

To account for organisational *difference,* we draw on the thoughts and concepts outlined by the philosopher duo of Gilles Deleuze and Felix Guattari in *A Thousand Plateaus* (1988). Additionally, we draw on the concept of the *Assemblage* as described by the young sociological school of thought, New Materialism, spearheaded by Mexican-American Philosopher, Manuel DeLanda.

Deleuze & Guattari propose a worldview where everything is in motion and in processes of constant development (becoming). They argue that social sciences and philosophy have given disproportionate weight to capturing the 'identity' and 'stability' of the world while neglecting 'difference' and 'change' as objects of research. (Adkins, 2015:1) Instead of looking at how things adhere to solid forms and transcendent rules, Deleuze and Guattari seek to understand the relationship between parts and wholes in continuity. (DeLanda, 2006:11) They ask the questions, 'how do things *become* in the world?' and 'how can discrete entities form larger wholes without each part losing their identity?' (Ibid.)

> *"What is an assemblage? It is a multiplicity which is made up of many heterogeneous terms and which establishes liaisons, relations between them, across ages, sexes, and regions - different natures. Thus, the assemblage's only unity is that of co-functioning: it is a symbiosis, a 'sympathy'.* (Deleuze & Partnet, 1977:52)

Deleuze & Guattari (1988) provide an ontology within which objects, subjects, and social formations can be observed as *assemblages* of distinct parts interacting in relations of *exteriority.* The Assemblage concept describes the ontological view that everything is assembled of individual components, each holding specific capacities to affect and be affected. The structured and consistent interaction between 'affects' leads to emerging properties establishing the assemblage as more than the sum of its parts.

Assemblage theory

Manuel DeLanda (2006) has conceptualized the theory of assemblages first proposed in *A Thousand Plateaus* and made it into a tool for social analysis. In *A New Philosophy of Society* DeLanda describes the assemblage as formed over three axes, e.g. one of content/expression, one of territorialization/deterritorialization, and one of coding/decoding. (DeLanda, 2006:12)

Considering the first axis, an assemblage consists of different variations of forms of content and forms of expression. Assemblages are characterised by their degree and balance between expressive and extensive content. Take, as an example, the social assemblage of a conversation. A conversation has 'extensive' content such as bodies (lips, vocal cords, eyes, ears, brains, words) as well as 'expression' such as sound, emotions, and the gaze. The assemblage of a conversation is, hence, contingent on each person being able to hear what is said and able to understand the language spoken.

The 2nd axis of territorialization/deterritorialization defines the rigidity of its borders and the homogeneity of its inner composition. (DeLanda. 2006:12) The degree of territorialization and deterritorialization determines the stability of an assemblage. An assemblage will often be composed of a relatively stable inner territorial core surrounded by deterritorializing borders that 'merge' with the surrounding world. Say, the physical assemblage of a person is made out of stable territorial components, such as a head, two arms, two legs, and a torso. The person also has more de-territorialized and de-territorializing components, such as sweat and tears. For example, the grasping of a hand is territorializing as it extends the territory of the body with objects. (Deleuze & Guattari, 1988:61) The functions with which an assemblage deterritorialize and subsequently re-territorialize varies from assemblage to assemblage. (DeLanda, 2006:18-19)

The final axis of the assemblage defines the extent to which the parts adhere to an internal code or logical structure. As with the two previous axes, each assemblage can be defined

in relation to how coded or decoded it is. (DeLanda, 2006:19) In a coded social assemblage, such as the conversation, it is immediately clear when a procedure is broken. If a person in the conversation interrupts the other participants as they speak, the code is broken. The break might be so severe that the conversation dissolves or that the perpetrator is expelled.

Analysing an assemblage involves estimating its internal composition in relation to these three axes. What is its relation between content and expression? What constitutes the assemblages territory, and what are its deterritorializing parts that interface with the surroundings? Which codes orients its interior components, and how strictly are these upheld? By determining these factors, this paper seeks to outline the different modes with which corporates and startups develop (become) through time. Startup/corporate collaborations are effectively a matter of co-development, hence the necessity of understanding how the structural needs of each organisation enables the further development of collaborative structures.

RESEARCH DESIGN

Data collection

The study was initiated by examining cases through secondary research and interviewing key actors to gain a deeper understanding of the field of study. From this starting point, we designed semi-structured interviews around pre-established topics to enable comparisons across interviewees. The open-ended structure of the interviews also allowed for divergence into the expert knowledge of our interviewees. (Easton, 2010:124). The progression of our interviews was designed to uncover three thematic areas:

1. The challenges and benefits resulting from startup / corporate collaborations
2. The structures created to accommodate the collaborations
3. The end goals and strategic aspirations behind the startup/corporate collaborations

We sampled three cases under the criteria that they were early-stage collaborations between large corporations and newly founded startups. In all three cases, the ventures were founded with the corporate's value chain, brand, and competitive advantages in mind. We did not study outside-in collaborations, where startups had developed individually and only later had initiated collaborations with mature companies. (Weiblen & Chesbrough, 2015:72)

Interviews were conducted with eight informants in total across three collaborative setups. Interviewees were selected among key decision-makers directly involved with collaborations and with regular interactions across organizational structures. For two of our cases, namely Insure Corp/InsuranceVenture and Finance Corp/Finance Venture, one interview was conducted per organization. For the collaboration between Logistics Corp and Logistics Venture, we conducted 2-3 interviews with each company.

Data analysis

To obtain quantitative rigor in our qualitative data, we applied a keyword analysis and grounded theory coding proposed by Gioia et al. (2013). The keyword analysis enabled us to weigh the relevance of different topics against one another. Through keyword analysis, we identified

approximately 300 relevant '1st order codes' maintaining the original wording of the interviewees.

By bundling the initial 1st order codes, we defined 2nd order themes heavily influenced by theory. The process is visualized below:

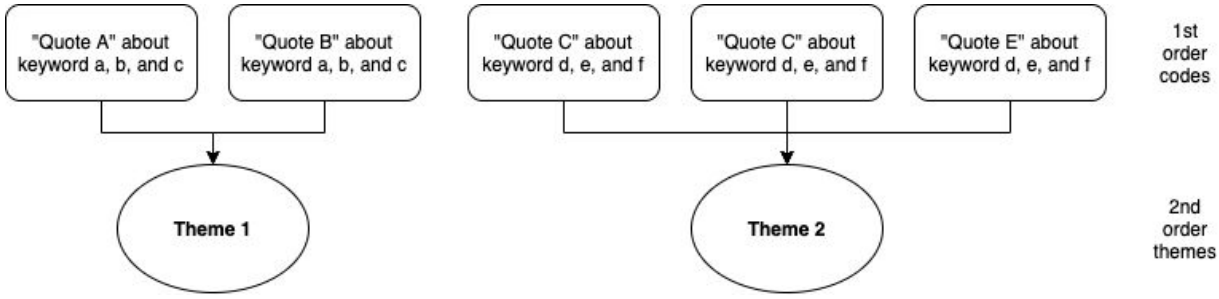


Figure 1. Coding process based on Gioia, et al. (2013)

The final step expands on the *2nd order themes* and connects them as the basis for new theory creation. Here, our approach combines Gioia et al. (2013) with a DeleuzoGuattarian-concept creation. Our process uses the *2nd order themes* as the starting point for the creation of new concepts. In the new concept, the content of the *2nd order themes* is grouped under a new semantic structure. After the concept is created, it can be used as a lens to clarify specific problems or questions, in accordance with its explanatory radius.

FINDINGS: THE ANATOMY OF THE STARTUP/CORPORATE ASSEMBLAGE

Startup becoming

All three of our observed startups inhabit relatively small and undefined territories. They operate with small teams where employees often work within proximity to one another. Each startup operates in relatively early stages of development. Both Insurance Venture and Finance Venture had no users by the time of our research. In contrast, Logistics Venture had already defined their market segment at the time of our interview and was serving customers, both referred by Logistics Corp and acquired externally (CEO, Logistics Venture). Through quantitative coding of our empirical data, we assess how startup organizations differ from corporations in terms of *speed* of decision making, *Agility* of roles, and structured *experimentation*.

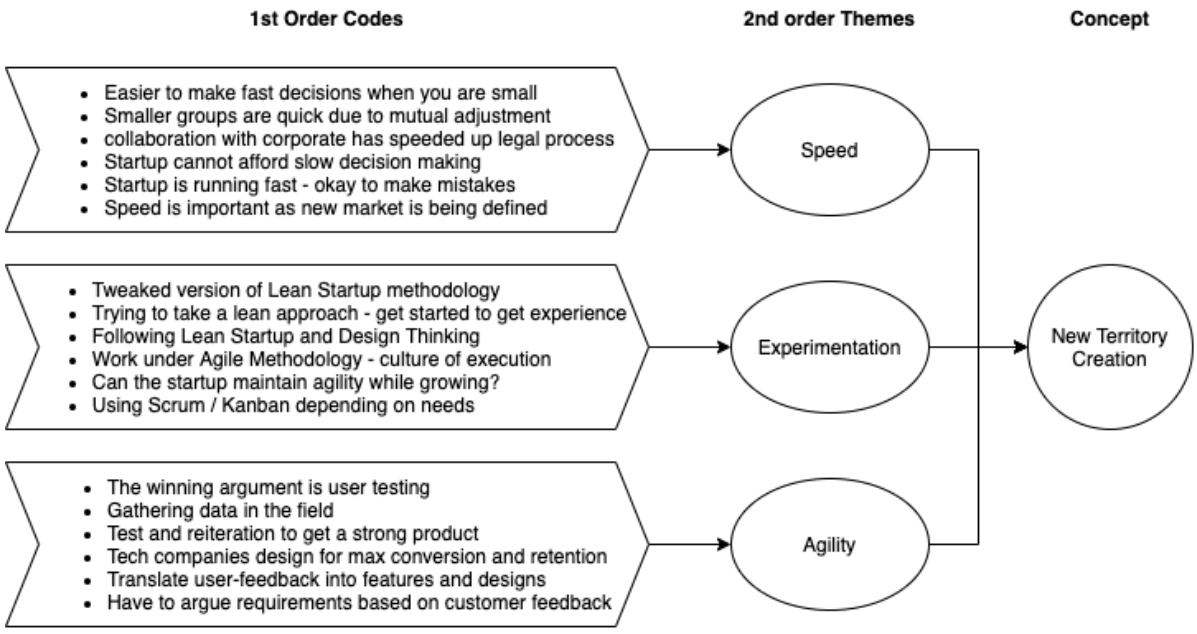


Figure 2. Coding Structure - New Territory Creation

Speed of Execution

The first theme of speed emerged consistently throughout all eight of our interviews. We were able to find 18 distinct quotes referring directly to the theme of speed. Our data show that 'speed of execution' is often attributed to 1) the small team size of the startup organizations, 2) the acceptance of mistakes, errors, and failures. Addressing the first attribution, all three of our observed startup companies operate with relatively small team sizes**.** The small territorial size of the startup assemblage allows for direct face-to-face communication and near-immediate decision-making across the entire organization. Entire teams often work in close physical proximity with one another. You don't have to go far to engage in a conversation, and different members can easily coordinate the needs and requirements of their work between each other. The same extent of interaction is difficult to achieve in more mature corporations with teams scattered across multiple offices, departments, and countries. The direct communication of startups was often compared to the medium of emails and conference calls favored in mature organizations.

Another contributor to 'speed of execution' is the acceptance of failure. Decisions in a startup don't undergo the same scrutiny as decisions made in mature organizations. This leniency is partly due to startups not having resources to spend on the same level of due diligence: *"As we are running very fast, we know that we will make mistakes. And we are fine with making mistakes."* (CEO, Logistics Venture) It is also partly due to the perceived learning that can be obtained through failure. Startup employees are encouraged to 'fail fast,' acknowledge what caused the failure, and use that knowledge to adapt. We observed how Logistics Venture formalized an open forum for discussing valuable failures with the intention to learn and improve day-to-day performance. This formalization is an essential means for Logistics Venture to re-code the behavior of each employee to make faster decisions without fear of failure while

simultaneously extracting key learnings out of everyday praxis (Deleuze & Guattari, 1988). As many of Logistics Venture employees are hired from within the mother organisation, the coding process helps new employees get accustomed to the speed of the organisation.

Agility

The acceptance of failure is enforced by the fact that startups often operate under flexible governance frameworks rather than strict rules. The three startups showed very few formalized rules of conduct compared to their corporate counterparts. *"We do not have any rules of conduct, so to speak. We have leadership principles".* (CEO, Logistics Venture) Each employee within the startup organization is expected to act on opportunities, threats, and failures with a high level of autonomy contrasted with strict adherence to rules seen in mature companies. *"Not being a back-office clerk also means that if you have an idea that something is going to go wrong with a shipment, then you immediately have to notify the customer. We would not do that in (the corporate)."* (CEO, Logistics Venture) The startup can't act with the same speed if everything is managed through rigid coding from the top-down. Contrary, it maintains its speed through supple coding of its components, meaning that it relies on people adjusting their activities based on immediate stimuli rather than predefined scripts. (Deleuze & Guattari, 1988:41) Using the words of Deleuze and Guattari, the startup assemblage is well aware that it is 'leaking.' It knows that its system is incomplete and even counts on it. By letting its employees make autonomous decisions, the startup assemblage is able to 'track' its own *lines of flight* and subsequently make decisions to 'seal' these through formalized rules or to follow the *line of flight* and build new territory upon it. (Deleuze & Guattari, 1988:204)

Structured Experimentation

Due to the uncharted nature of the startups' designated markets, each startup assigns great importance to structured experimentation. Startups effectively "probe" markets through experimentation to see what 'sticks' and what doesn't. Only when a product or process has proven exceptionally agreeable with the market, the startup will commit to more substantial investments.

> *"So, in the beginning, we will not make any type of advertisement. We will simply try to test and reiterate until we feel like we have a very strong product. What we are hoping is that the product will be so strong that people will start recommending it to their friends."* (CEO, Insurance Venture)

As the team behind Insurance Venture doesn't have full clarity on 'what' actually resonates with their core audience, they refrain from making significant investments upfront. Large-scale decisions are discouraged if they aren't backed up by small-scale experimentation. As mentioned under Agility, small-scale experiments are encouraged through organisational coding. "*So sometimes we just say - let's start small. I do not know what the outcome will be. So let's try something. Do not over analyse it."* (Head of Product, Logistics Venture) Through structured experimentation, startups let the market drive their decision-making (becoming) rather than internal stakeholders and path-dependency. Through experimentation, the startup assemblage intentionally creates lines of flight from its current setup. It 'probes' a possible future, assesses the effect, and, depending on its estimations, decides to double down or seal a new direction of

becoming. "*It proceeds by experimentation, groping in the dark, injection, withdrawal, advances, retreats. The factors of decision and prediction are limited."* (Deleuze & Guattari, 1988:461)

Conceptualization: New Territory Creation

Experimentation and constructive failure, the startup gathers feedback from its embedded market and integrates it into its composition. The startup continually coordinates its becoming in relation to intensive 'affects' from its surroundings. (Deleuze & Guattari, 1988:476) It is a continually mutating entity designed to extract useful data from its milieu to determine new territorial opportunities. We determine the instrumental function of the startup assemblage as *new territory creation.* The creation of new territorial components is the primary concern in the initial phase of the startup's existence. The startup both follow and create lines of flight through structured activities. It evaluates feedback derived from these exercises and recontextualizes it as stimuli for reterritorialization (investments in new features, employees, and software) as well as re-coding (new processes). Both the territorial components, as well as the orienting codes, mutate as a result of feedback loops. As shown in **figure 3** (below)**,** the startup continually creates and removes territorial components and tests the effect through user feedback. The blue circles established around the startup assemblage represent the process of expanding into new territory based on user feedback, while the dotted circle surrounding it represents its market environment. The startup's mode of organisation seeks to effectuate its becoming.

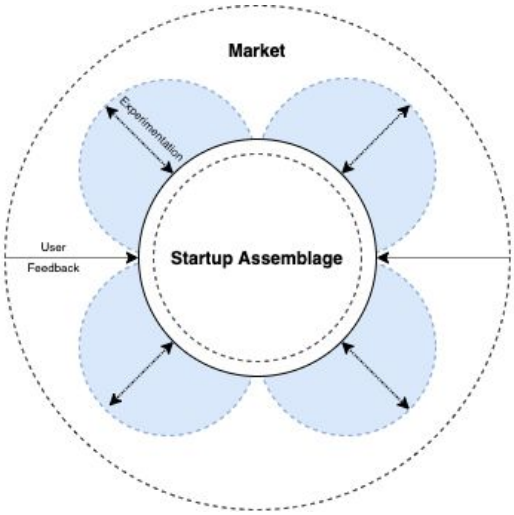


Figure 3. Startup Assemblage iterating its territorial components

Corporate Becoming

Through the coding, we have outlined three themes that constitute the corporate assemblage's mode of becoming: *bureaucracy, legacy,* and *compliance.* These three themes make up the key differentiators of the corporate assemblages from the startup assemblages. Whereas the startups'

becoming revolved around the acquisition of new territory, the corporates were primarily focused on *maintaining consistency* between their already existing territories.

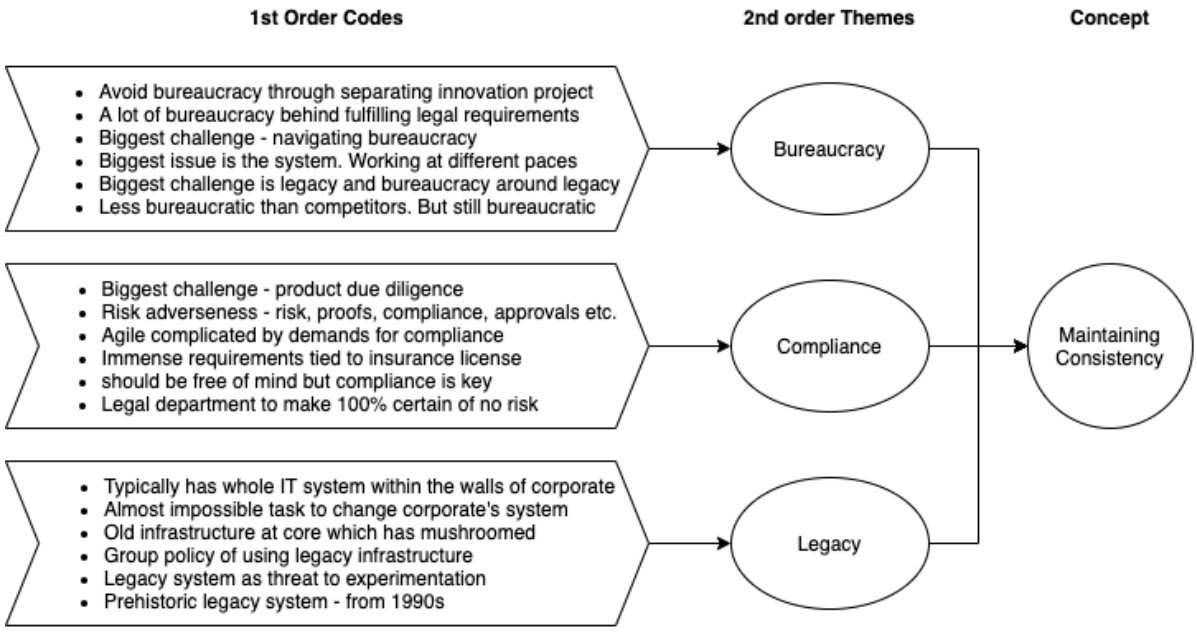


Figure 4. Maintaining Consistency

Bureaucracy and Rigid Segmentarity

For Deleuze & Guattari, bureaucracy implies the division of assemblage components/parts into rigid sub-systems referred to as 'segments.' The substance of people entering into the bureaucratic assemblage is allocated rigid segments that define them as stable content. The bureaucratic assemblage *"substitutes space for places and territoriality."* (Deleuze & Guattari, 1988:247) The bureaucratic assemblage transforms 'molecular' substance (mass of people) into forms of content (managers/workers), which are, in turn, oriented towards each other through forms of expression (authority). (Deleuze & Guattari, 1988:73) The consistent distribution of authority in the bureaucratic assemblage makes it possible to maintain control of the assemblage from the position of centralized management.

For bureaucracy to work, a person has to identify first and foremost as their professional role and segment as opposed to their passionate subjectivity. (Deleuze & Guattari, 1988:266) Through the relational governance of rigid segments with defined relations of authority, bureaucracy enables what one interviewee calls the organizational immune system. (Project Lead, Insure Corp) The segments relate to each other to detect and act on anything that falls out of the defined categories.

> *"So I can take my credit card, buy a domain, build something in my garage, and put the company logo on it. Well, that contradicts a shitload of things. Our marketing department is put in place to guard our brand and not take any chances on that. Our legal department is put in place to make 100 percent sure that we don't do anything that can be perceived as risky."* (Project Lead, Insure Corp)

Compliance

As all three corporate assemblages operate within highly complex markets, we observed considerable concern for compliance within the scope of the collaborations. Two of our three corporate cases operate within the financial sector and require substantial due diligence in all of their affairs. This had a considerable effect on collaborating startups. In one example, the startup had to instill a process of due diligence 'vetting' of all new users on the platform to protect the corporate partner from unwarranted affiliation. (Project Lead, Finance Corp) Another collaboration within the insurance sector, focused a large part of their product development stage, together with the corporate client to align the startup's insurance product with the legal requirements of the industry. (CEO, Insurance Venture) As one interviewee notes, the asymmetric collaboration also entails asymmetric risk. Whereas the startups barely have any customers, the corporates have brand, assets, and legitimacy to lose. They act as '*risk carriers'* for their startup counterparts, which necessitates stricter adherence to due diligence. (Project Lead, Insure Corp)

Legacy

Another dominant theme emerging when discussing the relationship between mature companies and startups was the role of *legacy.* The word legacy refers to the accumulated, and sometimes outdated, processes and IT. These systems are socio-technical and orient the social conduct of employees. (Garrison in Wellar et al., 2011:48)

The issue of legacy is mentioned in all three cases. In one example, legacy systems, and the bureaucracy surrounding them, is referred to as a key 'threat to experimentation,' meaning that the adherence to corporate legacy is holding the startup back from trying new things. (CEO, Logistics Venture) Though the existing infrastructure is adept at performing standardized tasks with high reliability, problems arise when communicating with new digital infrastructures. This challenge is only partially technological and also involves people's sense of job security (CEO, Logistics Venture) as well as the consistency of the already functioning business. (Project Lead, Insure Corp) All three corporations are not able to start from scratch, as processes and customer relations are tied to current infrastructure. The risk associated with introducing new technology, e.g. a digital platform such as Insurance Venture or Logistics Venture, is that they can deterritorialize the existing and well-functioning processes.

Conceptualization: Maintaining Consistency

All three mature companies show significant concern for maintaining coherent relations between their activities. New activities formed in relation to the mature company both have to comply with the legal requirements of overlapping jurisdictions as well as accumulated IT infrastructures that enable its current processes and workflows. We argue that the bureaucratic authority structure enables the three mature companies to coordinate their component parts in adherence to both compliance and legacy.

Contrary to startup assemblages, mature companies do not have the creation of new territory as their main ordering principle. Due to the established success of their existing territory, the bureaucratic coding of our three mature companies acts as measures to defend and maintain the internal consistency of its internal relations. Through rigid segmentation of

departments, the organization can withhold resources and approvals through processes of due diligence, thereby, limiting risks of un-categorized activities.

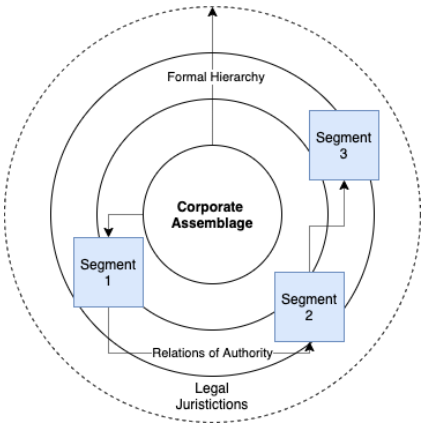


Figure 5. Rigid Segmentarity in a Bureaucratic Organisation

Difference and Partnerships

Exploring the relationship between the Startup and Corporate partners, we discovered patterns that led to three main themes. Numerous quotes around the exchanging, sharing and trading of assets as a main motivational factor to enter into the partnerships were subsumed under the theme of *Shared Assets*. The distribution of assets as tangible and intangible objects, even conversation, we summarized under the theme *Flow Management*. Prevalent codes of management, steering, governing of the overall interactions and partnership in general were integrated into the 2nd order Theme *Stakeholder Management*. Exploring the themes in more depths, analysing the empirical and additional theoretical implication, we developed the concept of Assemblage connectors, demonstrated in Figure 6.

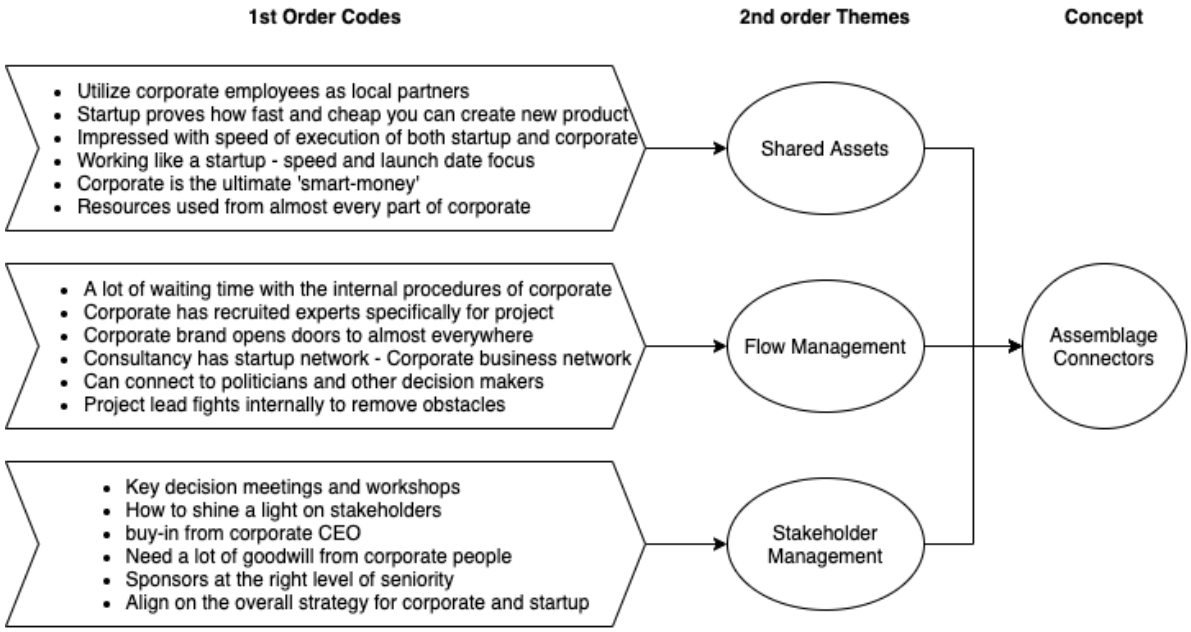


Figure 6. Assemblage Connectors

Shared Assets

One of the main issues compelling the corporate assemblages to look for partners to become „faster and more innovative“ (Head of Global Strategy, Logistics Corp) was their fear of disruption. As Christensen argues (2003: 27-35), disruptive potential usually grows unnoticed by the corporate as disrupting companies are catering to customer groups not directly addressed by the corporate's services/products. The startup assemblages actors voice these fears of the unknown that would render their organizations irrelevant. (Project Lead, Insure Corp) Taking the threat of disruption seriously puts the corporate assemblages in a paradoxical position. Since the CAs are in constant need to innovate in order to counteract disruptions while, as we've seen earlier, their internal coding prohibits exploration, agility, and innovation by design, they are hardly in a position to produce the innovation themselves This makes them vulnerable for disruption.

On the other hand, the startup assemblages rely on their mode of becoming that allows them to innovate and tap into new markets. They often have ideas, data, and products but not assets such as capital and industry knowledge. The concept of complementary assets coined by David Teece's concept of complementary assets (1986:288) helps to understand the relationships between the startup and corporate assemblages that we observed. Teece argues that companies engage in asset exchanges for innovation purposes (Ibid). The relationships we observed between the startup and corporate assemblages can be conceptualized as an exchange of complementary assets. Teece's framework explains that the partnerships are mutually beneficial insofar as both companies want to increase their innovative capabilities. (Ibid:288/300) Empirically, the startup assemblages are accessing a variety of assets such as knowledge, capital in form of money, brand, access to customers, supplier networks and data. (CEO, Insurance Venture) On the other hand, the corporate assemblages in these partnerships are not so much after tangible assets but are looking for equity to access potential future innovation or to have access to rapid product development. These are not necessarily assets the startup owns, the CA's are rather interested in the future potential of the SAs. As a result, the startup assemblage becomes the asset the CA wants to aquire itself. The SA as an asset is partially exchanged in the form of equity, as the CA is investing in the SA. Thus, the relationship includes the CA striving for ownership over the SA.

When the CAs & SAs grow together via equity, while the organisational differences are maintained, the different ways of organisational structuring collide. The different modes are deeply rooted in the organizational setups, ways of communication, how people dress, how hierarchy affects interactions, and many more aspects. Some of our interviewees directly address the differences between their respective SA and CA *„as different as day and night"* (Global Head of Operations, Logistics Corp)

As both assemblages grow closer together via the exchange of assets and collaboration, their differences likely become a problem. The CA is programmed to prohibit its acting parts, such as their employees and programmes, from behaving like the acting parts of the SA. The closer both organizations grow, the more likely conflicts and damaging dynamics such as over-coding arise between their distinctly different modes of becoming. How these dynamics are hurtful is explored later in more detail. Our cases show awareness of the issue regarding the inherent difference between both organizations.

> *"I mean, you know the startup is a fast-moving agile work environment completely different from a mature organisation where you have approval processes. There are all these processes in place, and before you know it, they are infecting the startup."* (Global Head of Operations, Logistics Corp)

His statement shows concerns around process-driven management infecting Logistics Corp's startup partner. He sees the risk of transferring the internal codes that define how Logistics Corp is doing its business to Logistics Venture. Within assemblages, codes define how the assemblage structures itself. The codes help the assemblage react to and solve arising problems. Codes, in this conception, are merely the linguistic and non-verbal communicative rules that structure actions of the assemblage components, defining modes of becoming within assemblages. Within the assemblage, codings connect to parts of the assemblage and connect between inanimate and animate parts of assemblages. (DeLanda, 2016:51-53) Thus, codings order assemblages by

coding and recoding them. An example of this dynamic of coding and recoding is the definition of right and wrong behavior within an assemblage.

We argue that the inflow of the CA codings, connected to resources, strategy, compliance, and reporting has the potential to inhibit the startup structure and methodology, making it slower and less efficient in producing innovation. This dynamic is bad for both sides - corporate & startup assemblage - because both do not get what they want from one another. The CA is damaging the production of qualities and products it set out to acquire in the first place, and the SA cannot use the newly acquired assets to become more innovative and to outcompete competitors, or roll-out its products as quickly as possible.

Flow Management

In our cases, the assemblages exchanged resources, culture, ideas, codes, and more. A major topic when looking at exchanged assets was the exchange of knowledge.

> *"They always have somebody in Finance Corp who knows about X, Y, Z that we can leverage on so that is a huge benefit as well. (...) There is a budget that makes things possible, which is also great, so it opens some doors.* (Interim CEO, Finance Venture)

The idea of knowledge exchange is one of the critical premises within Chesbrough's original setup of Open Innovation. Chesbrough uses the concept of flows to describe the exchange of knowledge that enables innovation. (Chesbrough & Rosenbloom, 2006, 548-549) The flow concept itself remains very much undefined. The concept of flows is pivotal for Deleuze & Guattari. within assemblages. (Deleuze & Guattari, 1988:257)

The DeleuzoGuattarian concept of flows offers a way to conceptualise all tangible and intangible objects or entities exchanged in the startup/corporate partnership. Judging from our findings, the main exchange (flows) we identified were clearly assets. Our cases confirm that asset flows between the assemblages cover a wide array of tangible and intangible objects. In the Finance colab, the Interim CEO of Finance Venture states that knowledge has been one of the key resources that Finance Venture needed to access. (Interim CEO, Finance Venture) Customers, funds, and digital competencies are resources being exchanged between Logistics Venture and Logistics Corp. (CEO, Logistics Venture) That entrepreneurial culture could also be a potential exchanged resource is indicated by the Global Head of Operations' hopes for spillover effects from Logistics Venture to Logistics Corp in the form of a more innovative mentality adapted by Logistics Corp. (Global Head of Operations, Logistics Corp)

Inspired by our findings and DeleuzoGuattarian concepts, this paper argues that flows can be understood as streams of tangible and intangible things, that, like a river, flow from point A to point B. While the river would be transporting water molecules, fish, possibly boats, and many more objects, the flows shared between CAs and SAs are codings embedded in cultural frameworks or certain processual approaches to problem-solving, as well as resources such as capital, employees, or tasks.

Flows are enabled when the assemblages connect to one another. As soon as there is a connection established, it can function as a bridge that allows codes to flow from one assemblage to the other. In general, all interactions between actors of the two partner assemblages transport their coding into the other assemblage simply by communicating in accordance with the internal codings. Since assemblages consist of all its animated as well as its inanimate entities, such as

knowledge, money, processes, problem-solving approaches, employees, and even speech, all these parts are embedded within assemblage-specific codings that enforce a specific mode of becoming. Thus, every exchange entails exchanges of codings that have effects within the respective other assemblages. As suggested earlier, both assemblages benefit from their specific mode of coding. If these different modes of coding penetrate the other assemblage the effect of that could play out like in the graph below. This represents the process of ***over-coding*** visualized in **Figure 7.** The bureaucratic codes employed by the CA are represented by the dotted line that forms half a circle, while the SA is shown as being partially over-coded by the CA.

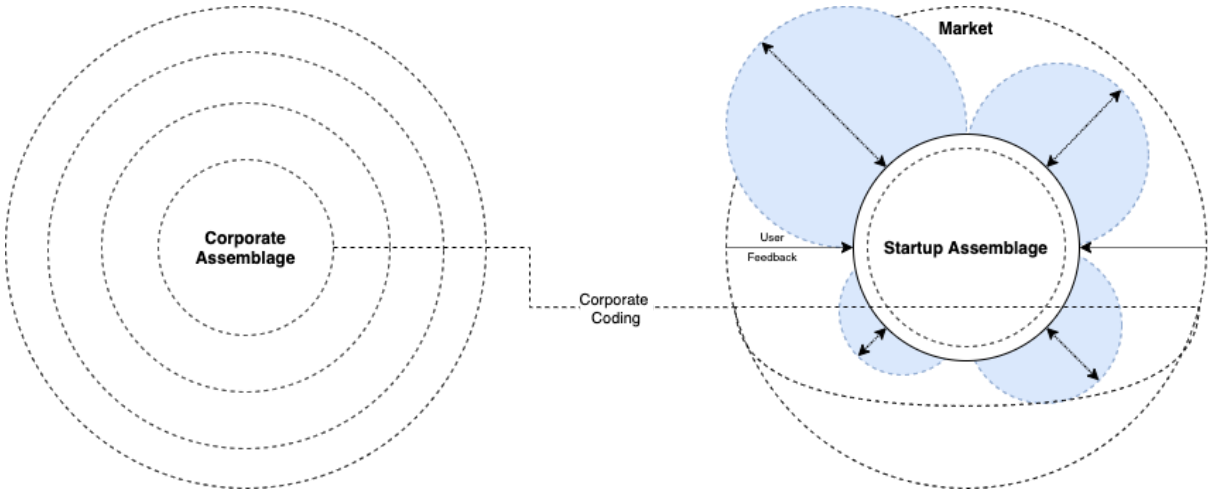


Figure 7. Corporate Coding Affecting New Territory Creation

The process of over-coding demonstrates how the SA's mode of becoming is affected and how it, in turn, grows into a new version that is only partially exploring market potentials around it. Instead, it starts to build a stronger segmentation, which limits its explorative capacities. Over time, if the over-coding process continues, the SA will most likely become like any department within the CA and will have lost most of its innovative capabilities. The process of over-coding could also work the other way around. The startup culture flowing into the CA could create dynamics within a CA. Examples for potentially harmful outcomes of such a process would be compliance and process violations, which can have devastating effects on process chains, disrupting internal value chains, or have legal ramifications.

Therefore, we conclude that flows between both assemblages need to be managed in order to make CA and SA partnerships work as intended. Flows of codings and the potential over-coding processes reduce the differences between both the CA and SA. Thus, minimization of the potential effects of over-coding is pivotal for these relationships because the differences exemplified in their modes of becoming made the partnership attractive for both organizations in the first place.

Stakeholder Management

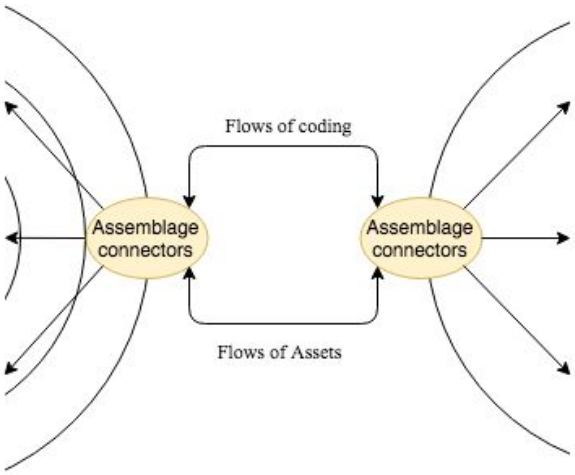
All cases we observed had mechanisms or processes managed by specific actors in place to manage the exchange of assets. These governance structures are mainly responsible for managing multiple stakeholders. These actors were specifically managing how the CA and SA

collaborated. They were steering the flows that were described above. The actors of such governance structures are what we call the *assemblage connectors*. They fulfill the critical function between the two assemblages to create paths via connections through which complementary assets can start to flow. In that regard, those actors enable or block flows. They are therefore in a unique position to manage the ways assemblages connect via the exchange of its parts.

Conceptualizing Assemblage Connectors

The concept of *assemblage connectors* combines the understanding of asset exchanges that lead to code exchanges, works with the concept of flows, and provides an explanation of the mechanism that enables or blocks the exchange of the flows, developed earlier. By, for example, helping the startup actors to navigate and contact the right expert or manager within the corporate assemblage to establish a connection between startup and corporate actors, knowledge flows or funding requests are initiated. On the other hand, these connections can become the paths that export codes into the other assemblage. Figure 8 synthesizes these dynamics.

Figure 8. The collaboration as an assemblage



This mechanism is often fulfilled by multiple actors without consideration of the effect of flows and how interactions form connections that function like bridges transporting coding back and forth. The importance of these actors that are acting in assemblage connector roles is pivotal for a successful partnership because they can, if they manage flows adequately, maintain the different modes of their respective organizations. Through maintaining the different modes of both the CA and SA the collaboration is enabled to produce a mutually beneficial partnership by granting both partners access to that which they want from their collaboration.

THE ASSEMBLAGE CONNECTOR MAPPING (ACM) MODEL

When combining our findings, we arrive at a formalized model that represents how corporate and startup assemblages interact and connect: the Assemblage Connector Mapping (ACM) model. The model maps how two vastly different assemblages - one structured around *Maintaining Consistency* and the other structured to engage in *New Territory Creation* - connect via mediating assemblage connectors. **Figure 9** represents our model in its generic form. The Bureaucratic Assemblage represents the corporate on the left side. It maintains its consistency through clear segments organised through authoritative relations. One the right side, the startup assemblage is represented in its movement towards new territorial components. Its aim is to integrate user-feedback via experimentation, speed, and agile learning from failure.

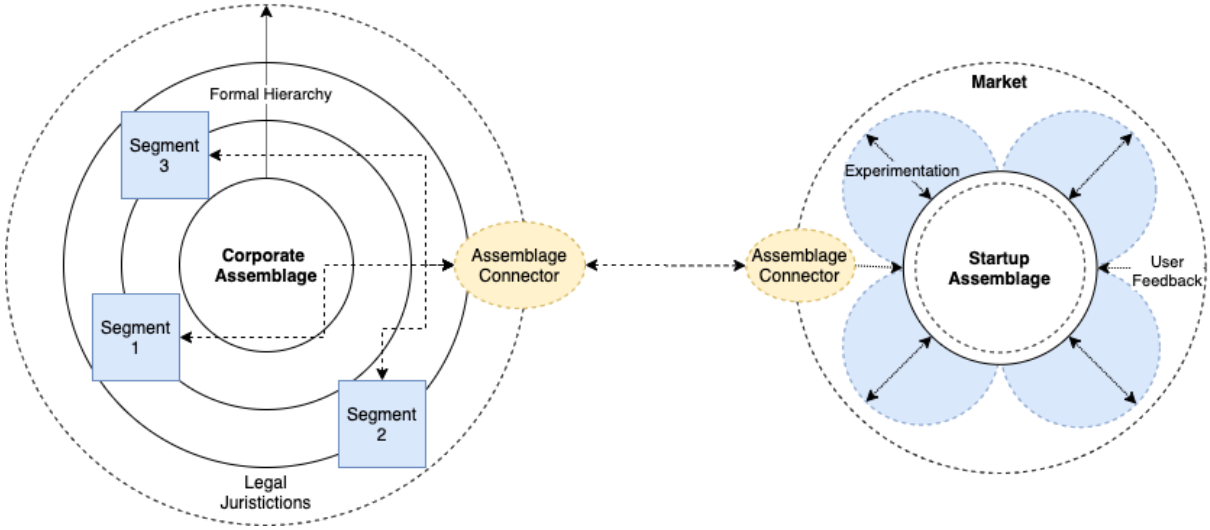


Figure 9. The Assemblage Connector Mapping (ACM) Model

Both assemblages connect via assemblage connectors positioned at the 'borders' of both organisations. Assemblage connectors are essential means to circumvent the structural coding of their organisations to successfully interact with the other assemblage. Flows of resources, knowledge, and coding are distributed via the assemblage connectors and can both be enabled and blocked by them. **Figure 9** focuses on a conceptual and simplified model for collaboration, whereas an application of the model to a case would involve more connections, both official and unofficial. The ACM model is a means to 'zooming in' on 'how' two collaborating assemblages structurally interact with each other and *present the space 'in-between' organisations as a field of research*.

Based on our empirical findings, we argue that the specific collaborative structures established between startups and corporates pose the most significant indicator for whether or not such collaborations succeed. Though the challenges and opportunities of corporate/startup collaborations have been addressed by scholars such as Puranam *et al.* (2006), and Weiblen & Chesbrough (2015), their research, to a large extent, omits the importance of 'how' those

collaborations can be steered towards success. The established research also tends to omit the structural realities of such collaborations and the ad-hoc connections that often form between the collaborating parties.

Discussion: Designing for Success

The ACM model expands on the claims of Puranam *et al*. (2006), that the explorative capacity of startups is often limited when undergoing acquisition and structural integration into a corporation. (Puranam *et al.*, 2006:272). They propose that the challenges of such integrations are more severe for pre-launch startups than post-launch startups. Our findings suggest, however, that even though corporate collaborations can pose threats to startups' explorative capability, they also present explorative opportunities that would have otherwise been sealed off. Hence, while Puranam *et al*. (2006) viewed collaboration as dilemmas, these findings indicate more to view them as a paradox. (Lewis, 2000: 760-776)

This is observed in the collaboration between the startup, Insurance Venture, and the insurance company, Insure Corp. Perhaps the most crucial factor in this specific collaboration is that Insurance Venture is dependent on the use of Insure Corp's insurance license. Without the association with a licensed corporate counterpart, the startup wouldn't have been able to operate in the first place. Furthermore, expert knowledge from the corporate proved instrumental for the startup to develop new products within the complex insurance industry. The startup was assigned two internal advocates from within Insure Corp with the assigned objectives of helping the startup navigate the organisational complexity of the corporation.

The Project Leads (the assemblage connectors) hired to manage the collaboration from the Insure Corps side, hold a double responsibility of helping the startup extract (reterritorialize) embedded knowledge and resources (content) from the corporate while simultaneously ring-fencing Insurance Venture from any unwarranted demands (coding). They orient flows of resources and knowledge while helping mediate across organisational boundaries. The two parties also arranged a structure with which Insurance Venture could leverage on expert knowledge of the corporation through the payment of a consulting fee. This scheme was initiated to maintain the organisational 'distance' between the two companies while protecting the corporate against conflict of interest. We see similar instances across all three cases, where partial structural integration with a corporate allows the startups to maximize their explorative capabilities. Through Logistics Corp, Logistics Venture is able to roll out in new markets at a much higher speed than without the corporate association. Logistics Venture was able to hire from local Logistics Corp offices, source customer leads for local CRMs, and integrate with existing Logistics Corp IT infrastructure.

Through expert knowledge and licensing, it is effectively the tie-in with the complementary assets of the corporate that enables this startup to explore and develop territory within the insurance industry while leaving competitors at the proverbial gate. When collaborations are managed with the right level of 'distance', startups can maintain their autonomy under coordinating structures that protect the internal consistency of the corporate counterpart. Expanding on the findings of Puranam *et al.* (2006), early-stage startup success in corporate collaborations rely less on their stage of development and more on the mediating structures (assemblage connectors) established between the two collaborating organisations. Though the data analyzed by Puranam *et al.* (2006) clearly points to acquisition posing a

challenge for the explorative capacity of pre-product-launch tech companies, our research suggests cases where the association with corporates is the prime enabler of exploration.

The approach here also expands on the theoretical framework brought forward by Weiblen & Chesbrough (2015). Weiblen & Chesbrough (2015) present a typology of four collaborative models depending on whether equity is involved and whether the corporate is utilizing an inside-out or an outside-in strategy (p81). Though we acknowledge the importance of such considerations, the framework seems to put unequal weight towards the role of corporations, while under-emphasizing startup involvement in such collaborations. Weiblen and Chesbrough (2015) present a useful framework for how to 'initiate' startup collaboration. However, once contact has been initiated, we argue with the findings of this study that the intentional design of assemblage connectors takes precedence over the strategic consideration of outside-in or inside-out. While Weiblen & Chesbrough accentuate the necessity of *"orchestrating internally"* (p80) and *"buffering the startup from the Bureaucracy"* (p85), the question of 'how' to practically design such setups in between remains only at the periphery of their research.

CONCLUSION

This paper posed the question of 'how startup companies and mature companies can collaborate while utilising the full potential of their organisational differences.' Through the empirical study of three high-profile startup/corporate collaborations, we conclude that the inherent difference between such organisations requires structural design towards success. Resources and knowledge do not flow 'neutrally' between organisations. They involve a constant exchange of organisational coding with the potential to disrupt both organisations' modes of becoming. Once collaboration between a startup and corporate has been initiated, the question of outside-in and inside-out becomes less prevalent than the tangible interface between organisations. This paper proposes the ACM-model as a practice-focused tool for designing the entanglement of startup/corporate collaborations. Through the strategic deployment of assemblage connector functions, collaborating parties can mediate the exchange of resources/knowledge in accordance with the explorative needs of the startups and the complimentary capacities of the corporate, while ring-fencing the startup from bureaucratic influence.

Limitations and Suggestions for Further Research

Though our current data suffice to reveal a need for contextuality in corporate/startup engagement, our research design does have its limitations. The three collaborations, consisting of eight interview partners shed light on resource and coding flow, but we only get a partial view of the actual connections between companies. A larger number of cases might further our vocabulary around such collaborations and as well as a categorisation of concrete assemblage connector setups might be developed. Future research should consider how different designs of assemblage connectors might be suitable for different collaborations. Though there is no one-size-fits-all for startup/corporate collaborations, we argue that there are principles upon which best-practice can be developed. Through further research, a general model for managing assemblage connectors might be developed. Though we provide an outline of how such a model could look we suggest that further sophistication would increase its applicability in the everyday management of startup/corporate collaborations.

Another interesting aspect that could be developed in more detail in the temporal development of the collaborations. As we only engage with our cases through single standing interviews our understanding of the collaborations merely represents a snapshot. Through a longitudinal study of startup/corporate collaborations, we might be able to observe and formalize how the role of the assemblage connectors changes over time.

Managerial implications

We argue that partnerships involving both bureaucratic and agile organisational structures require conscious management of their connections and interactions. If not managed, the two organisations will begin to over-code each other's structures, negating the differences which make the partnership valuable in the first place. The corporation is damaging the assets it set out to acquire in the first place and the startup can’t use the newly acquired assets to become more innovative, outperform competitors, or roll-out its products as quickly as possible.

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