Making hash out of an elephant - Public-private Circular business model development

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Abstract

A transition to a Circular economy depends on the development of circular business models. Extant research suggests the need for business to cooperate broadly to address sustainability issues of a systemic nature. Thus this paper seeks to explore and explain how business and public actors work together to develop circular business models. We conduct a longitudinal case study of coordination and cooperation between city planners and private developers for vehicle access-without-ownership provision for residents in an area they are planning together. Drawing on an understanding of coordination and cooperation as contingent on its institutional context, we show how frictions between rules, norms and understandings pervade efforts at deciding on value creation and capture. Thus we contribute to the understanding of circular business model development in general and public-private development in particular.

Keywords

Introduction

The Circular economy is gaining popularity among business leaders and policy makers, particularly in the EU (Geissdoerfer *et al.*, 2017), referring to attempts to go beyond prevailing, linear, take-make-waste resource and product flows for an economy that is "restorative and regenerative by design and provides benefits for business, society, and the environment" (Ellen MacArthur Foundation (EMAF), 2017, p. 22). A transition to a Circular economy depends on its implementation within business, thus circular business models (CBMs) need to be developed (Pieroni, McAloone and Pigosso, 2019).

CBMs are suggested to create and capture value by turning products into services (Tukker, 2015; Corvellec and Stål, 2017), narrowing, slowing or closing resource flows (Bocken *et al.*, 2016), or by "utilizing economic value retained in products after use in the production of new offerings" (Linder and Williander, 2017, p. 183). Yet, because CBMs also aim for integrated environmental, social and economic value creation (Bocken *et al.*, 2014), and thereby address issues of a systemic nature, research is increasingly stressing the importance engaging for business to engage with stakeholders beyond those typically found in value chains and industries (Fehrer and Wieland, 2021). For instance favorable regulation and public policies are important for the success of CBMs (Corvellec and Stål, 2019) and public actors, such as cities, are also important drivers of CBM development in sectors such as infrastructure and housing where they are the ones to initiate, plan and procure business activities. Nonetheless, so far we know little of how business develop CBMs together public partners, although this is becoming more common (Christensen, 2021) and if effective, engagements could speed up CBM development, which despite its suggested benefits, is lagging (Tura *et al.*, 2019). Subsequently, in this paper we seek to *explore and explain how business and public actors work together to develop CBMs*.

LITERATURE REVIEW

Circular economy and circular business model development

Definitions of CBMs diverge, but they can be distinguished through their underlying principles for value creation and capture, two key dimensions of any business model (Teece, 2010). Here Tukker (2015), among others, draws on the vast product-service systems literature to showcase how circularity involves turning products into services, as in providing customers with access, via leasing, lending, sharing and pooling, and not ownership. Several others also make use of the business model canvas (Osterwalder and Pigneur, 2010) to suggest different CBM-types (e.g., Lewandowski, 2016).

Among product-services systems, providing access instead of ownership is an oft mentioned CBM-type, where product ownership is retained with the producer or an intermediate provider, e.g., a provider of a car pool. These models are assumed to extend and increase the utilization of products and thus replace the purchase of new ones, and thereby curb the energy, material and waste that goes into virgin production. Moreover, when customers lease rather than own products they pay the cost of their usage and tend to use products less, which has environmental benefits for such products, e.g., fossil cars, that have their impacts during use. Lastly, when ownership is retained, and products are not dispersed among customers, it can be easier to recycle or remanufacture them, their materials and components, as they remain with firms. Providing access instead of ownership is particularly important for the product exemplified in this case study, namely fossil cars. Business models that provide the sharing instead of owning of cars have been around for some time, and mounting evidence suggests that these CBMs provide environmental benefits (Amatuni *et al.*, 2020).

Besides seeking to define what CBMs are, there is a growing agreement that CBM development call for joint action among broader groups of stakeholders (Fehrer and Wieland, 2021). For one resource flows extend beyond the reach of single firms (Bocken, Schuit and Kraaijenhagen, 2018; Parida *et al.*, 2019), and thus closing loops call for coordination and cooperation, even among competitors (Manzhynski and Figge, 2019). Such interactions can reduce the risks and uncertainties that accompany CBM development (Brown *et al.*, 2021), so that by adjusting several business models a new offer is made possible (Hellstrom *et al.*, 2015) and systemic change is enabled (Perey, Benn and Edwards, 2018).

Importantly, the systemic nature of the sustainability issues that CBMs pertain to address also demands, and enables, forms of collective action that go beyond business ecosystems (Fehrer and Wieland, 2021). It demands such action because CBM development needs both policy support and regulatory adjustment, for instance car pools severely depend on whether the cities in which they operate subsidize, or neglect, their parking needs (Bocken *et al.*, 2020). But equally important is also that CBM development enables cross-sectoral cooperation because they align business goals with those of policy makers, and increasingly so as Circular economy policies are proliferating. For instance, in the example of car pools, city planners have recently begun to set aside space and subsidies in the plans made for new residential areas, increasingly promoting car pools while problematizing the use of private cars. Thus CBM development suggests interactions between "partners [that] might be quite different from 'conventional' value chain partners" (Bocken et al., (2018, p. 82).

Cooperation and coordination

To advance knowledge of public and private CBM development we review research into collaboration, coordination and cooperation, three terms that have been used

interchangeably to understand inter-organizational relationships (Cropper *et al.*, 2009; Gulati, Wohlgezogen and Zhelyazkov, 2012; Castañer and Oliveira, 2020). Somewhat simplified these terms refer to interactions that differ from the arm-length market transactions between buyers and sellers, and from the hierarchal relations between owners and subsidiaries. Instead they entail communication, trust and commitment (Hardy, Phillips and Thomas B. Lawrence, 2003) but also asymmetric power, negotiation and conflict (Hardy and Phillips, 1998). The importance of joint goals are often stressed, although Cropper et al., (2009) observe that partners typically have mixed motives.

Because we are interested in interactions between private and public partners we draw on Castañer and Oliveira (2020) who assume a broad focus in their efforts to clearly define the meaning of collaboration, cooperation and coordination. They stress the importance of the goals that partners jointly set, as few partnership proceed without first having agreed upon goals to strive for, and suggest that goal setting and goal implementation are two distinct parts of inter-organizational relationships, demarcated by time. They refer to the former as *coordination*, and the latter as *cooperation*.

Nonetheless, both coordination and cooperation are assumed to be dynamic, as much about sharing of resources and mutual learning as they are about political maneuvering (Hardy, Phillips and Lawrence, 2003). Here extant research has stressed the need to consider the *institutional context* in which coordination and cooperation take place – the rules, norms and understandings partners perceive and enact – to explain events.

Institutional context

To analyze such contexts we turn to institutional theory, where institutions are historically entrenched patterns of behavior that have acquired the "status of taken for granted facts which, in turn, shape future interactions and negotiations" (Barley & Tolbert, 1997: 99). They are made up of rules, norms and understandings that, depending on how coherent and structured an institution is, may be more or less aligned (Stål, Bonnedahl and Eriksson, 2015). *Rules* refer to legal regulations that are backed up by the coercive potential of the state, thus rule-based prescriptions of stakeholders' rights and responsibilities come with a threat of legal sanction (Hoffman, 1999). *Norms* refer to the values that prevail in a context, what is considered right or morally appropriate (Maguire and Hardy, 2009). These can be embedded in professional values or codes of conduct (Scott, 2008), but recently sustainability has emerged as a new powerful moral theme among organizations, one that defines what is morally legitimate to do (Hengst *et al.*, 2020). Lastly with beliefs institutionalists refer to the culturally-cognitive, "shared conceptions that constitute the nature of social reality" (Scott, 2001: 57). Thus understandings are often taken-for-granted and unquestioned as they describe deep-seated assumptions of how the world, or a particular industry (Stål, Bonnedahl and Eriksson, 2013), works and why (Hoffman, 1999). Such understandings are ontological,

and thus they form the basis of pragmatic legitimacy, what actors believe *can* be done. Understandings appear as facts, so that their socially constructed origin is hid from view.

When rules, norms and understandings align they effectively stabilize and reproduce roles, relationships and practices in the domains in which they prevail, maintaining an "iron cage" that positions stakeholders and interests, in other words, the world appears as it is and should be (DiMaggio and Powell, 1983). However as elements are always somewhat heterogeneous (Greenwood *et al.*, 2011), there is room for dynamics, prompting actors to reflect upon the state of their practices, interests and ambitions (Garud, Hardy and Maguire, 2007). From an institutional perspective such reflections are signs that rules, norms and understandings have become misaligned or contradictory, causing institutional friction (Fehrer and Wieland, 2021). For instance, contradictions can appear as functional gaps (Stål and Corvellec, 2021), where some institutional elements, for instance the laws that prevail, appear incapable of achieving treasured results (Seo and Creed, 2002). Contradictions motivate stakeholders to seek out change. A case in point are social and environmental objectives, increasingly seen as morally appropriate within business yet contradictory and misaligned with perceptions of how markets work (Hahn *et al.*, 2014). For instance, policy makers are not susceptible to market pressures in the same way as commercial businesses are, and therefore perceive social and environmental objectives from the perspective of political, instead of market, interest (Stål, Bonnedahl and Eriksson, 2013).

In conclusion, to explore and explain how business and public actors work together to develop CBMs we apply a conceptual frame that:

1) Acknowledges value creation and value capture as two key dimensions of CBMs

2) Distinguishes between coordination and cooperation.

3) Analyses effects of rules, norms and understandings.

METHOD

To explore and explain how business and public actors work together to develop CBMs we followed the advice of Flyvbjerg (2006) who argues that case studies are imperative for providing deep and contextual insights into less explored, dynamic and processual phenomena. Our pre-knowledge of the housing sector led us to believe that this constituted an empirical setting with much public and private cooperation in a highly structured, ut also problematized, institutional context.

A CBM for residential mobility

Our case refers to public-private CBM development undertaken in Burg, a fast growing, anonymized, medium-sized city in Sweden. Here civil servants from Burg's planning departments (planners), and representatives from seven (7) real-estate and construction

firms (developers) are jointly planning, from scratch, Burg's largest residential development project, Santalodge. Santalodge is to contain 3000 apartments and 70000 square meters of workplaces and to be built in three stages between 2024 and 2030. Partners' cooperation is unusually close as planning is usually solely done by cities. Coordination began already 2017 when planners and developers jointly set a vision and goals for the area, and we followed cooperation through interviews and observations between 2019 and 2021.

One of the most difficult issues for these partners has been the goal to provide reduce residents' dependence on owning cars. For this goal providing vehicle access-without-ownership services is key. Access to vehicles such as electric cars, electric bikes and cargo bikes, along with digital mobility-as-a-service prescriptions, are to enable residents to live without cars, and instead make room for Santalodge's children, pedestrians and bikers, to reduce CO_2 emissions and city congestion and to improve Burg's poor air quality. Through cooperation it is decided that these circular services are to be physically located in *mobility hubs*, multi-functional facilities that also provide private parking space. To implement the goal, partners repeatedly stress their quest of finding an appropriate business model that can integrate their sustainability aspirations with what is perceived economically viable. This has proven Santalodge's most important and difficult task, perceived equivalent to trying to "make hash out of an elephant".

Data collection

We collected our via 51 interviews and 32 meeting observations and used Santalodge's documents (deposited at Share point) to verify our interpretations. All interviews were recorded and transcribed verbatim. Observed meetings were of three different types: Project meetings open to all participants, Mobility meetings open to ten (10) participants devoted especially to hubs and mobility, and Business model-meetings, open to the two project leaders (planners X1 and X2), three particularly involved developers (Y1-3) and their coordinator (YC). The Mobility and Business model-meetings were observed by the first author, because they were confidential he could not record them but nevertheless managed to transcribe large parts of them verbatim.

We asked respondents to explain the rules, norms and understandings they perceived, but as understandings are difficult for respondents to accurately describe, we also asked them to describe their interests, what they did and why, and how they explained the various happening. While our interviews provided us with a rich contextual understanding, our meeting observations gave us a first-hand experience of cooperation, as in particular norms and understandings "played out" during the lengthy efforts to nail down value creation and capture.

Data analysis

Following the recommendation of Eisenhardt (1989) we wrote up a case description, to provide initial insights among us. We also constructed a rough time-line over project events, enabling us to demarcate coordination from cooperation. As goals were clearly formulated in Santalodge's Sustainability program, we defined coordination (goal setting) as the activities resulting in the program, while cooperation meant when partners worked together on the legally binding plans that would turn goals into "built environment". We divided data excerpts into those that referred to coordination and those that referred to cooperation, e.g., talk about how goals were set, why they mattered, and how they related to planning as such were coded as "coordination" and talk about details of hubs, their costs and practicalities, were coded as "cooperation".

We then embarked on a new theory-driven coding as we looked for excerpts that referred to rules, norms and understandings within coordination and cooperation respectively. For instance, we coded any talk about the Swedish building law as an example of how rules were perceived and enacted, talk about environmental and social issues as examples of norms. After some consideration we decided that the recurring statements, primarily from developers, of "bringing the market to the table" (Y8) or stressing costs and economic viability, were best seen as examples of taken-for-granted understandings, both among planners and developers of how the housing world works. Even if these statements clearly had a normative side to them, especially in their implications, we found it better to consider them examples of what institutionalists label understandings as they seemed so taken-for-granted and ontological in nature. Having listened to respondents throughout multiple meetings and hours of transcribed recordings we realized that they were simply describing what they perceived as "economic realities", the world as they perceived it to be, not necessarily the world as they wanted it to be.

FINDINGS

Coordination

Rules – Burg's planning monopoly. Santalodge came about as a group of developers approached Burg's politicians with the idea to turn the forest at Santalodge into a "sustainability profiled" residential area, which was timely, as politicians were contemplating new ways of working with developers. Politicians and planners perceived that the planning monopoly that the Swedish building law gave them, was not enough to achieve sustainability outcomes. Developers knew this: "[Y]ou're not forced to build anything. The zoning plan is about what you can do. It doesn't mean you have to do it." The law only grants the right to determine what *can* be built, not to actually get it built. There has to be developers that are interested, otherwise "nothing gets built" (Y9). Sometimes developers will secure building permits only to turn around and protest that they cannot follow plans and build. And as X5 explains:

> Then we're not able to say: no, you're wrong, because we can't force them to build something they can't sell. And it happens sometimes that they come and say something like that. And then we have to decide if we really want the houses to be built, then we might have to redo the zoning plan. We don't want to because it takes a lot of energy.

Another possibility is cheating:

> They don't trust us because [planners] want to control [building] materials and other things. In some way, they are right. I do understand them because there are many builders in Sweden who have done awful buildings, awful really (Y12).

Rules - land allocation. There are also laws regulating land sales, cities have much freedom to decide how they sell their land, Burg can decide rather freely which developer will get what piece of land. Thus for developers joining forces seemed as a way to access land to build on. Y3 explains: "[T]his is a lot of land [...] if we get one project or one land plot then we will be satisfied. If we don't get that of course we will not be satisfied." Planners know that in a growing city like Burg, land is precious: "[I]t is very important for them [to] get the land. Or if they get to build 50 apartments or 500. It's very important for each company. In [City], which is a growing city, many companies want to build. So which ones should we pick to get the chance to build?"

Yet even these rules do not grant planners with full control because land deals do not effect building permits, there are recognized loopholes, as Y9 explains:

> And Building Permits, that department, can only look at the laws and regulations, they can't look at land allocation, the contract. So I think in Burg and other cities there's been a lot of times that people said, company said: 'I will do this, and I will do that.' And then nothing happened. They just built a regular box house. And the problem here is that is hard to regulate.

Thus despite rules, politicians and planners perceived frustration in being able to realize their plans. In Beach, a previous, now finished project, planners wanted social and environmental qualities, but Beach turned out a failure, as a Burg politician explains: "[W]hen [developers] got their land plots, they went away from [agreements]. [...] And that area doesn't look good." Even worse, developers complained about the zoning plans and got them changed, something which costs planners time, money and prestige.

Thus, even before coordination for Santalodge began, politicians and planners had realized that rules did not enable them to get the sustainability results they wanted. Seemingly there was a functional gap between what institutionalized rules enabled and what their sustainability aspirations implied. Looking at developments around Sweden they saw an array of social and environmental quality improvements being made in new housing projects, just not in Burg.

Norms – sustainability. Functional gaps seemed propelled by norms emerging in the Swedish construction sector that both planners and developers perceived. Y6 explains "Sustainability is such a big question now in every company" and Y2 knew that: "If there is a sustainability project somewhere in Sweden then the CEO goes there for the first dig or to cut the ribbon".

Thus the rather unique decision was made to allow developers to partake in planning Santalodge and setting its sustainability goals, as politicians, planners, and developers participated in City lab, a an externally driven one year program. Here partners translated 17 SDGs into a five goals for Santalodge, and wrote them into the Sustainability program, a 48-page document signed by Burg's major. During the work it became apparent that developers had rather vague notions of sustainability, stating "we see this is education, you see this as a chance to try this and engage in the participation may give some benefits". Planner X1 had to admit that "three fourths were written by civil servants from the municipality and one forth was written by developers". Burg, on the other hand, had worked much with sustainability, in particular with mobility, and the goal to decrease car dependency ended up in the program, where it was stated that all residents should "become members of car pools" and thereby be "highly mobile without having to own a car" (Sustainability program, 2018, p. 28). Cars, in turn, should be parked in joint facilities, referred to as "mobility hubs". Thus already in goal setting it was clear that Santalodge should enable vehicle access-without-ownership for its residents and contain "mobility hubs".

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That car reduction was perceived very differently between planners and developers was soon realized, as traffic planner Y14 explains:

> One example was that in the beginning a lot of developers, and their coordinator, jointly said that ' If we can reduce family car ownership from two to one then we have achieved a lot'. [...] I had to ask my statisticians to dig up numbers that showed that it is more common in Burg for families to own zero cars than to have two.

Nonetheless, partners managed to set joint goals because they explicitly choose to just focus on what was desirable, to entirely disregard how they were going to achieve it. After coordination, hopes seemed high, and perhaps, naïve:

> Stated from both sides: we're willing to put working with sustainability first and try to find the business models and the win-win solutions afterwards. [...] But there are not many conflicting goals between companies, and with us, the municipality. Because right now at least, we have an agreement [...] That is our sustainability program (X1).

Thus Santalodge ended up with an ambitious goal to reduce cars via car- and vehicle pools and mobility hubs, an ambition that aligned with planners wishes but seemed unfamiliar

to developers. To implement this goal, they hoped to, somehow, bring forth "win-win solutions afterwards".

Cooperation

In 2018 implementation began by inscribing goals into the legally binding plan documents, e.g., the maps and texts, that according to the law governs any construction. Things now grew more problematic. Now the sustainability norm, expressed in the goal to reduce cars, came in full confrontation with the understandings of developers. Developers now began to (Y9) "bring the market to the table" and problematize things:

> I mean, if I have a good location I will sell all of apartments. That will always work. It's location, location, location, you know, the first course in real estate. This location isn't A, it's probably B. […] But the biggest problem is that it's 3000 apartments. 50% is rental and 50% is condominium. (Y2)

Developers tried to make sure that there would be room for cars in Santalodge, as they believed that buyers would want that. Y2 had learnt that "they just do not buy the apartments if parking is not convenient" and planners also grew more ambivalent: "People [may] not want to live here if there is no possibility to park a car. [This is not] central Stockholm or Gothenburg. [We have another] challenge [in Burg]."

Thus a new type of institutional friction arose, between how sustainability norms were expressed, and how the housing market was understood. In 2019 this friction became apparent to all, as an argument over how close car parking should be broke out. Conflicts temporary halted planning for months, but as one planner left in protest and a new one (X2) took over, a special "business model group" was formed. Here a more focused search for a business model began, with less planners and developers involved. Y1 explained to the others the challenge the group faced: "Yes, you can say it is difficult, it is damn difficult, but we are working on it".

Thus more focused discussions regarding value creation and capture emerged as issues became more challenging. These discussions were both as a direct outcome of the goals set (to have car pools and mobility hubs) but also sought as a way to align conflicting views, as X2 explained: "We need a compromise, somewhere in between".

Value creation. The CBM was to create value for residents by facilitating convenient daily travel to and from the area without relying on cheap, convenient and plentiful parking spaces that residents rent on a monthly basis. Parking spaces create "linear" value as they presuppose, and facilitates, the buying and ownership of private cars. With mobility hubs, parking is instead restricted and located further from residents. In parallel, space is made for vehicle pools, with cars, cargo- and electrical bikes, with the intent that residents can use these when they need to transport things or people. While car pools and parking could have been separated, as planners initially wanted, one

outcome of the previously mentioned conflict was that they would be co-located in the hubs, in other words, car pools would not be closer to residents than their own cars. Thus hubs should contain elements of both circular and linear value creation. As developers and planners continued to plan, CBMs came to center on hubs, as tension between sustainability aspirations and developers' perception of realism continued:

First, as mentioned, developers protested plans to separate linear and circular elements and put parking outside Santalodge, Y2 explained: "I think 300 meters is reasonable. That is where you can have your parking. But if it is 600 or 700 meters – it may not sound much but it is damn far. And you are to walk there every morning."

Second, developers problematized the idea to have houses built entirely without parking, although zero-parking houses represent the "cutting edge":

> A zero parking project – how to we handle it in X years when we see that it does not work? When we have already built a parking house, I do not see the long-term perspective with this type of goal. It is show-off, I cannot see that it is feasible over time. We have to have a base, parking between 0,5 and 0.35 [spaces per apartment] (Y1)

Thus a decision was made to have 0.5 parking spaces per apartment and one (1) pool car per 50 apartments. The first hub built, meant to service 800 apartments would thus mainly contain regular parking (400 spaces).

Subsequently it is perhaps understandable that the business model-group became primarily devoted to figure out how to build the house, difficult because, as Y3 explained: "The problem is that we don't know if and when we will get land, we cannot pay for building the hub before we have our land deals, and those could take five years to complete".

After four months, X2 frustrated exclaimed: "And here is the parrot again – don't forget the mobility services!". Being satisfied that they had come up with an idea of how to build the thing, developers now participated in planners initiative to describe hubs' circular elements as well. Yet, after complaining that Burg has taken control again, after another four months it was time to, again, focus on the economic side of things, as Y2 explained: "The stress is almost unhealthy" and that "We have to focus on the economic sustainability, otherwise this all ends up as just fancy ideas". Focused now turned to value capture.

Value capture. The costs of the CBM stem primarily from the physical construction of parking spaces, both for private cars and for pool ones. Construction costs vary quite a lot, depending on how fancy the hub should look, but developers were convinced that they could build at 150-200 thousand SEK for each space. Thus a hub with 400 spaces would cost between 60 Million and 80 Million SEK to build, not a negligible

cost, and if each space cost 200 thousand, at 0.5 spaces per apartment, apartment prices would increase by 100 thousand because of the hub.

With costs fairly known, the big question was now the revenue model:

1) Developers could pay a large sum upfront, enough to both build the hub and establish to a mobility fund to subsidize residents' membership and use of vehicle pools. Both planners and developers believed that residents would not just by themselves use the pool if there were no incentives. On the other hand they assumed that demand for parking was stable, in other words, they did not themselves believe that the market really wanted what they offered, but still Y1 believed that "in the long run car pools will sustain themselves".

2) Developers could pay less upfront and instead use monthly revenues from parking to pay both for construction costs and the mobility fund, Y1 explained: "200 per space, we pay some of it upfront and then make monthly parking rent expensive. We charge car owners a substantial amount so that we can built a mobility fund for the future".

Thus in both these revenue models car owners would subsidize circular services, in other words, for the model to work there would have to be enough conventional car parking to provide revenues. But if residents' relative demand for pool vehicles grew then these would need less subsidies and conventional parking spaces could be "turned" into pool ones. However, the apparent risk was that it could go the other way, if car pools end up unused then residents may want to turn their space into ordinary car parking instead. This pointed to the risk of future ownership, what would happen to their aspirations when things had been built and they would move on to other projects.

Primarily, the choice between the two models depended on who would own the hub. Either it would be turned over to residents, who would then own and manage the hub via an elected residential board, or it would be built and owned by some external parking company. The latter worried Y1:

> It feels really awkward. I cannot from [My company] send away millions to Parkhub, there has to be some security for my condo residents that they will be able to use [the hub] for 25 years.[…] When we tried to squeeze the quy (Parkhub representative) he would not reveal anything. We need to sit down and look at their business, how they can guarantee things, after all we are going to give them 50 Million.

On the other hand neither planners nor developers trusted residents to be professional enough to be able to manage the hub with its dual linear and circular elements:

> We cannot have 10 different condo associations trying to figure out management for themselves […] how to make it work in practice with pool cars, maintenance, who cleans and has the keys? We have to have a finalized, safe, solution. Buy it from someone, don't make it difficult. If we expect that the condo associations will handle all of this, it will

generate so much negative media attention so then it is better for my company to stay out of it.(Y1)

For three months planners, and in particular developers, racked their brains, but then Y1 thought he found a solution: "I have tried to weigh everything we have said together, and an idea have started to emerge, that I think would work both for the building and running the hub". His idea was for developers to build the hub and then commission Burg's parking company, an actor they all trusted, to manage its funds and operations on behalf of Santalodge's residents. That would take care of the ownership risks. Nonetheless, after almost two years of high-stress cooperation the group had made several important decisions regarding value creation and value capture at least for the first hubs to be built.

DISCUSSION

In this paper we set out to explore and explain how business and public actors work together to develop CBMs. Our review of the literature led us to focus on joint efforts as a process consisting of two parts: coordination and cooperation, shaped by rules, norms and understandings. Below we tentatively discuss our observations.

The CBM literature is pervaded by a stubborn insistence on the business model canvas as key for understanding CBM development and the inter-organizational relationships it entails. The canvas portrays relationships in a static way, as being about exchange. This seems like a gross over-simplification, what appears is instead a process fraught with tensions, learning and, sometimes creativity, energized by those underpinning institutional frictions that fuel corporate sustainability at large.

Public-private CBM development as motivated by institutional frictions

Institutions are suggested to particularly matter for CBM development because this development goes beyond mere matters of competitive advantage, aiming also for social, environmental and economic integration (Fehrer and Wieland, 2021). In our case we show how this mattering surfaces in two ways:

First, CBM development is embedded within a joint effort that comes about out of experiences of institutional misalignments, a frustration over the difficulty to achieve sustainability results via the inter-organizational relationships and roles prescribed by the law. As Bryson and colleagues (2015) observe in their many studies of private-public partnerships, experiences of failure often motivated actors to engage in cooperation to make up for the short-comings of single sector approaches. Thus public-private CBM development occurs in a context of partners trying to challenge institutions, research needs to consider that CBM development has this meaning. It makes public-private CBM development extra challenging, as it needs not only to deal with the many challenges that

CBM development represents, but also has to cope with the challenges that comes with challenging institutions.

Second, CBM development is not only characterized by such above-mentioned motives but is also understood as a *solution* to institutional frictions: CBMs are examples of business models for sustainability (Schaltegger, Luedeke-Freund and Hansen, 2016) and as such represent, for actors, this quest for "win-wins", for being able to integrate social, environmental and economic objectives. Thus ingrained in CBM development is this hope of coming to terms with another type of institutional tensions, between the normative aspirations of sustainability and the perceived economic realities of doing business in a market (Stål and Bonnedahl, 2016; Stål, 2018).

Public-private CBM development as permeated by institutional friction

Our second observation is that while the business model-literature, just like the planners and developers we examined, hope for creative ways to combine the moral and the pragmatic, and finding these "win-wins", in practice CBM development turns out to be laden with tensions, trade-offs and potential conflicts, demanding hard work to soldier through numerous issues and decisions without losing pace, energy or determination. These efforts can be highly emotional, and are just as much about creativity as about needing to be systematically worked through, as creative solutions often fail to materialize themselves. It is about stamina and perseverance, just as much as about creativity and genius. Institutional frictions do not end as CBM development beings, they pervade its entire process. Through the multiple issues and details that must be decided institutional frictions repeatedly get new chances to manifest themselves and come "alive". This process is as much about "win-wins" as it is about endless bargaining as partners try to have each other to assume responsibility for costs and responsibilities. Yet at the same time there is learning, as partners oscillate move between common and private interests, helping *and* tricking each other, sometimes honestly trying to solve the problems at hand.

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