The reaction of coworking spaces to the COVID-19 pandemic. A dynamic capabilities perspective

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Abstract
The COVID-19 pandemic has led to many firms reassessing how to deal with their communities. In this study, we focus on a coworking space and examine how the management staff and its coworking community reacted to the pandemic. The uniqueness of coworking spaces is that the community is both the paying customer and it is an integral part of the coworking value proposition. For this paper, a case study in Amsterdam was analyzed and the symbiotic relationship between the coworking space and one of its key resources (the community) was examined. We build on dynamic capabilities theory to identify the processes of how a firm and its community maneuver through the pandemic. We propose that in vibrant times, firms and communities should work in close alignment in order to sense, seize, and transform resources and opportunities.

Keywords Dynamic capabilities · COVID-19 · Coworking spaces · Sensing · Seizing · Transforming

1 Introduction

The COVID-19 pandemic is an unprecedented global crisis situation with severe impact on many organizations. Recent research finds that in the services sector, many industries face enormous challenges and that the negative effects of the outbreak might last for years (Cameron and Morath 2021; Gia Hoang et al. 2021). Moreover, the pandemic has led to dramatic changes in how businesses act and consumers behave (Donthu and Gustafsson 2020). This paper analyzes how the
COVID-19 pandemic affects coworking spaces, a relatively recent social workplace concept that has proliferated in the last two decades.

The unique service of coworking spaces lays in the opportunities they provide for self-employed people and businesses to have access to flexible office space and simultaneously benefit from being embedded in coworking space communities (e.g., Moriset 2013; Gandini 2015). Whereas coworking spaces and embedded communities used to be location-bound in physical spaces, COVID-19 has forced their clientele to move into new hybrid (digital/physical) arenas. This paper examines how coworking spaces have reacted to the COVID-19 pandemic. For this, we apply dynamic capabilities (DC) theory, which is a frequently used lens in management research (Schilke et al. 2018). Helfat et al. (2009) describe DC as “the capacity of an organization to purposefully create, extend, or modify its resource base.” Dynamic capabilities enable firms to address changing external and internal environments (Teece et al. 1997). The COVID-19 pandemic is an example of a sudden and radical change in the environment that has forced a rapid change in the conditions in which coworking spaces and communities were used to maneuver.

A coworking space presents an interesting case because, due to COVID-19, the nature of the services that coworking spaces offer is changing. Around the world, their physical layout is being altered to accommodate fewer people, and the communities are partly shifted to digital realms. We are specifically interested in the response of the coworking community, i.e., the members/clients of the coworking space.

Despite the plethora of insights produced by DC research, there have not been studies that highlight the mechanisms of how firms that encounter themselves in vibrant environmental situations manage key resources of which they only have partial control. In the case of coworking spaces, the community is a key resource and part of its value proposition (which, to some extent, can be controlled and can be called upon as a source of ideas and information) but also at the same time, it is the coworking spaces’ market and client (with uncontrolled market-based behavior that is influenced by many external factors). Even though there have been various studies that have looked at clients as a market-based source of information or innovation for firms (e.g., Payne et al. 2008; Kurtmollaiev et al. 2020), there have not been studies that examined how firms deal with their resources (in this case, the community) in situations of drastic change, and when there is only limited control. Thus, it is not obvious from prior research how DCs in newly emerged business contexts enable firms to identify opportunities, integrate and build resources, and reconfigure them when there are hybrid (firm-client) resources. To address this gap, we take a DC lens to explore how coworking spaces and communities reacted to COVID-19 and subsequently, how DCs evolve when they are not only situated in a firm but also in a community at large.

Our main research question is: How did the dynamic capabilities of coworking spaces evolve in reacting to the COVID-19 pandemic?

The nature of this research is exploratory. We adopted a case study approach to make an in-depth analysis of one coworking space in Amsterdam, the Netherlands: StartDock. We conducted expert interviews with the managers of StartDock.
and with users/tenants. Moreover, we performed a content analysis of conversations among the coworkers, retrieved from a mobile chat application used by the tenants.

This paper provides an empirical and theoretical contribution to the literature. Empirically, it offers an analysis of how a specific type of organization, coworking spaces, has reacted to the COVID-19 crisis, from the lens of DC theory. Theoretically, this paper contributes to DC theory by further exploring the role of the user community in the firm’s capacity to renew competencies so as to achieve congruence with the changing business environment. We explore in detail how the community, in an intricate interplay with the coworking space management staff, contributes to the three main process components of the DCs: sensing, seizing, and transforming (Teece 2007).

The paper is structured as follows. First, we discuss what coworking is. Second, we present a contextual situation of the coworking space industry in relationship to COVID-19. Third, we discuss dynamic capabilities. Next, we introduce our frame of analysis. Next, the StartDock case is analyzed through the DC lens of sensing, seizing, and transforming. Finally, a discussion is held and future lines of study are proposed.

2 Literature review

2.1 What are coworking spaces?

In recent years, there has been a rise in the number of coworking spaces (e.g., Gandini 2015). Coworking spaces can be defined as “collaboration-enhancing office environments where workers work next to other unaffiliated professionals for a fee” (Spinuzzi 2012). Coworking spaces are becoming ubiquitous in many cities, especially in “creative cities” (Florida 2004). Coworking responds to changes in the labor market where many firms take more flexible approaches to where work can be performed (e.g., Felstead et al. 2003; Spinuzzi 2012). In parallel, there are more and more ‘digital workers’ who are not bounded by constraints of the traditional office. For many of such workers, there is the need for office space while having access to social networks, since this can enhance their business performance (Burt 2004, 2008). Coworking spaces are work environments that respond to such trends (Leclercq-Vandelannoitte and Isaac 2016). The opportunity to exchange knowledge, contacts, ideas, insights, and industry information is the lure that attracts increasing numbers of people to coworking spaces. Spinuzzi (2012) examined coworking spaces in Austin, Texas, and detailed the following groups of coworking customers: owners of small businesses (often self-employed), business consultants, and people working on contract for larger companies. According to Salovaara (2015), the main benefits of working in a coworking space are as follows: efficiency (productivity), communication, inventiveness, and being part of a community.
2.2 Coworking spaces and COVID-19

COVID-19 has been an abrupt exogenous shock for societies and economies worldwide. Most actors central to shaping the economy would admit that the COVID-19 pandemic has been an unpredictable event of great significance and severe consequences that dramatically changes the political, social, and economic environment (Winston 2020; Cameron and Morath 2021). Likewise, coworking space managers experience COVID-19 as a disruptive, unexpected shock that has been impacting their business heavily. A survey among 14,000 coworking spaces in 172 countries revealed that shortly after the outbreak 72% of spaces had witnessed a significant drop in the number of people working from their space (Konya 2020). Also, 41% of coworking spaces experienced a negative impact on membership and contract renewals since the outbreak.

Events as COVID-19 evidently impact the competitive edge of firms and the service that they were used to provide (e.g., McKinsey 2021; Wang et al. 2021). Due to the COVID-19 pandemic, governments have forced many social spaces to rapidly adjust their spaces in line with regulations that stimulate social distancing, implying less people being physically present. Also, governments prohibit or dissuade the organization of social physical events where large groups of people gather together. Coworking spaces had to adjust to such imposed regulations, altering their model that always revolved around building communities based on physical proximity and interaction (e.g., Parrino 2015; Cabral and van Winden 2016; Spinuzzi et al. 2019). A clever adaptation of the coworking space business model and associated strategic choices (e.g., redefining the physical and digital realms) is fundamental to sustain and guarantee a coworking space success, both during and after COVID-19. In this process, coworking space managers need to make judgments concerning current and future coworking space demand and responses associated with hybrid coworking space trajectories (hybrid forms of network infrastructure that includes both a physical environment and a virtual component (Sechi et al. 2012)), and also around the pay-offs from investments in new physical and digital assets and its effect on perceived coworking space communities. Adjusting the coworking space to an ecosystem that produces the necessary social services which are needed by coworkers is crucial to overcome the detrimental effects of Covid-19 (Belso-Martínez et al. 2020)

The COVID-19 pandemic also presents opportunities for coworking spaces. Firstly, COVID-19 has instigated shifts in workplace arrangements, accelerating organizational developments toward short-time working, and flexibilization in work location and hours (e.g., Spurk and Straub 2020). Many firms see the crisis as an opportunity to economize on real estate, and in order to provide workplace solutions for employees who seek social work environments, some firms provide subscriptions at coworking spaces (Amsellem 2021), a concept that has been coined ‘corpoworking’ (Golonka 2021). Second, the pandemic happened in a moment when there is ample technical infrastructure available; a variety of video conferencing tools already existed and were rapidly improved to provide worldwide solutions for individuals and firms, e.g., platforms such as Skype, Whatsapp, MS Teams, Google Meets, and Zoom. Considering that many activities (had to be) moved to the digital
realm, the availability of such platforms provides opportunities to seek for its appli-
cability to the coworking space model.

Recent industry reports and studies foresee growth opportunities for cowork-
ing spaces (e.g., Ceinar and Mariotti 2021). Coworking Resources (2020) estimate
that the number of coworking spaces worldwide will pass 40,000 by 2024, up from
20,000 in 2020. Worktech academy (2020) expects that approximately five million
people will be working from coworking spaces by 2024. Against this background,
the dynamic capabilities of coworking spaces (which we describe in the next sec-
ction) lay in the ability to sense and recognize opportunities and threats and make
informed decisions about the path ahead. Over time, a successful coworking space
will deploy new (hybrid) structures, assets, rules, and routines that are both profit-
able and provide sustainable community aspects to coworking space users.

2.3 Dynamic capabilities

Dynamic capabilities (DC) refer to the ability of firms to sense, pursue, and recon-
figure opportunities and resources in response to quickly shifting environmental
situations (Teece et al. 1997). DC has been defined as “the capacity to renew com-
petencies so as to achieve congruence with the changing business environment…”
by “…adapting, integrating, and reconfiguring internal and external organizational
skills, resources, and functional competencies.” (Teece et al. 1997). DC allow firms
to create new products and processes and respond to changing market circumstances
(Teece and Pisano 2003). In essence, a dynamic capability can be described as a
systematic means that entails the capacity to carry out activities in a practiced and
patterned manner in order to deal with change (Schilke et al. 2018).

According to the DC literature, successful firms are the ones that have the
dynamic capabilities to adapt current routines (Ludwig and Pemberton 2011). Suc-
cessful organizations are able to purposefully adapt a resource base in order to bet-
ter deal with external challenges. Even though there are different views on whether
DC directly affects the success of firms or whether it is how a firm ‘uses’ dynamic
capabilities, there is wide agreement that improving DC of firms in order better deal
with changes coming from both inside and outside a firm, positively influences firm
performance (Drnevich and Kriauciunas 2011).

Eisenhardt and Martin (2000) discuss that even if firms have appropriate
resources, competitive advantage will not be sustainable if firms do not have the pro-
cesses necessary to identify and reconfigure resources to pursue new opportunities
and adapt to shifting environments. From the point of view of DC, these processes
comprise three main components: sensing, seizing, and transforming (Teece 2007).
These capabilities enable firms to identify (sense) opportunities, integrate and build
(seize) resources, and reconfigure (transform) resources in order to deal with exter-
nal threats or exploit market opportunities (Winter 2003).

The DC literature recognizes that capabilities related to such processes do not
only derive from a firm’s own asset base (Eisenhardt and Martin 2000; Augier and
Teece 2009), but also from external actors such as clients or stakeholders (Kurtmo-
laiev 2020). This resonates with concepts from strategic marketing and innovation
literature such as crowdsourcing (Schenk and Guittard 2011), service co-creation (e.g., Grönroos and Voima 2013), and open innovation (Chesbrough 2003), that all acknowledge that resources, ideas, and innovation often emerge in the interplay between firm-internal resources and communities of users.

Relatively few attempts have been made in the DC literature to further elaborate and scrutinize how the three specific DCs processes (sensing, seizing, and transforming) play out in the interaction between the firms and their user community. Coworking spaces are a good setting to explore this, as the coworking community is a key element in their value proposition. When it comes to identifying opportunities, integrating them, and reconfiguring parts of the coworking model, DC literature has not yet delineated the role of a community as a resource in such newly emerged working contexts. In the next part, we revisit three process components (sensing, seizing, and transforming) as defined by Teece (2007) applied to the coworking context.

2.3.1 Sensing

Due to the COVID-19 pandemic, consumer behavior, consumer needs, and consumer segments of coworking spaces showed drastic changes (Konya 2020). For coworking spaces to be aware of these changes, Teece (2007) describes the DC process of sensing as an activity related to identifying new opportunities and threats by scanning, creating, learning, and interpreting the environment. Therefore, to identify and shape opportunities, coworking spaces must constantly scan, search, and explore across technologies and markets. This activity not only involves investing in research activity by constantly examining customer needs and technological possibilities, but also understanding the evolution of industries and markets. In sum, the process of sensing involves identifying opportunities and threats and enabling the filtered information to flow to those capable of making sense of it.

2.3.2 Seizing

Teece (2007) states that once a new (technological or market) opportunity is sensed, it must be addressed through new products, processes, or services. The process of addressing such opportunities by investing, developing, and commercializing activities is defined as seizing. Seizing opportunities and investing in activities to address changes that resulted from the COVID-19 pandemic require strategic choices. And just as any other strategy, it encompasses uncertainties due to unsure market acceptance. Therefore, in this phase, it is important for coworking spaces to select or create a particular business model that defines its commercialization strategy and investment priorities. Investment often involves committing (financial) resources based on assumed (incomplete) information about the technological and marketplace future. The task for coworking space managers is to make judgments in uncertain circumstances around future demand and coworking community responses. In doing so, coworking space owners/managers need to take into account the pay-offs from making investments in (in) tangible assets.
2.3.3 Transforming

Teece (2007) describes that the successful identification of technological and market opportunities, the design of new business models, and the commitment of (financial) resources to investment opportunities can lead to firm growth and profitability. For coworking spaces, a key to sustained profitable growth is the ability to recombine and to reconfigure assets and structures as the enterprise grows, and as markets and technologies change. Transformation is needed to maintain evolutionary fitness (Wilden et al. 2013). To increase the likelihood of successful transformation, Teece (2007) suggests that firms should have decentralized structures for the purpose of flexibility and quick responsiveness toward consumers. Teece (1986) also introduces ‘cospecialization’ for successful firm transformation processes. Cospecialization relates to continuous realignment between strategy, structure, and processes within firms. The ability to integrate and combine assets including knowledge is a core capability (Grant 1996).

Table 1 synthesizes the Dynamic capabilities process components as defined by Teece (2007), as well as the descriptions, and examples of firm dynamic capabilities.

2.3.4 Frame of analysis

We focus on the question on how the dynamic capabilities of coworking spaces have played out and evolved in responding to the COVID-19 pandemic. We build on the three processes components as described by Teece (2007): sensing, seizing, and transforming. Based on insights from DC literature, and recent studies on the impact of COVID-19, we identify potential threats, opportunities, and strategic issues that are relevant for coworking spaces. Figure 1 shows our frame of analysis.

| Process component | Description | Examples of dynamic capabilities |
|-------------------|-------------|----------------------------------|
| Sensing           | "The process of identifying new opportunities and threats by scanning, creating, learning, and interpreting the environment." (Teece 2007) | Processes to identify target segments and changing customer needs; processes to tap into developments and technology; processes to tap into supplier and complementor developments. |
| Seizing           | “The process of addressing opportunities by investing, developing, and commercializing activities” (Teece 2007) | Selecting target customers; designing mechanisms to capture value; designing revenue structures; assessing appropriability; demonstrating leadership; recognizing values and culture. |
| Transforming      | "Reconfiguring a firm's asset structure, in order to accomplish the necessary internal and external transformation" (Teece 1997) | Integration and coordination skills; knowledge transfer skills; managing strategic fit amongst assets; incentive alignment across various parties. |
2.3.5 Research methodology

2.4 Setting

Our research was conducted at StartDock, a coworking space in the center of Amsterdam, the Netherlands. StartDock embodies the typical aspects of coworking spaces, offering a flexible office concept including a variety of network-enhancing activities and facilities for entrepreneurs and independent workers. StartDock was launched in 2016 by 5 young entrepreneurs that looked for proper office space and were interested in being with other start-ups, to share physical resources, knowledge, and ideas. The founders started to run a 300m2 coworking space. The vision of StartDock is not only to provide workspaces, but also to facilitate co-creative communities based on the principles of “joint growth, friendship, and entrepreneurship” (Startdock.nl 2020). By 2020, StartDock had grown to two locations in Amsterdam, and one in Rotterdam. It now offers various types of office spaces, business and social events, and a coworking community. In 2018, StartDock was awarded “the best coworking space of Amsterdam” at the Coworker Members’ Choice Awards (CMCA) (a global coworking industry competition to recognize the top coworking spaces in each city). StartDock embodies the typical aspects of coworking spaces, offering a flexible office concept including a variety of network-enhancing activities and facilities for entrepreneurs and independent workers.

2.5 Methodology

Qualitative data were collected through semi-structured interviews. We conducted two in-depth semi-structured interviews with one of the owners and the community manager of StartDock. The choice was made to interview only one of the owners and not all five, since this would lead to data saturation. By interviewing
both an owner and a community manager, we aimed at getting insights regarding 1) strategic choices made by the coworking space in dealing with COVID-19 and 2) StartDocks’ point of view as far as the reaction of the coworking community to the pandemic. In the interviews, we discussed how the COVID-19 pandemic impacted the coworking space, and how attempts were made to balance the coworking space. In addition, to have the perspective of one of the key resources of the coworking space (i.e., the coworking community), we conducted interviews with 5 tenants (owners of start-ups, self-employed workers, employed workers). In these interviews, we examined how the users of the coworking space experience the impact of COVID-19 on coworking. At the time of selecting the respondents and planning the interviews, the researchers faced the situation of very few coworkers working at StartDock, mainly due to governmental advice to stay at home as much as possible. However, in order to include these data source and to assure diversity in views on the impact of COVID-19 on coworking, we interviewed coworkers who still decided to work at StartDock and were willing to cooperate, but also found a coworker who decided to work from home. All interviews lasted between 15 and 30 minutes.

Furthermore, we had access to unique and first-hand data from a mobile chat application used by the members that contain short conversations, mostly informal, in which about 125 members react to events (both external and internal to the coworking space), share experiences, and exchange ideas and suggestions. These data offer unmediated access to the reactions, emotions, and behaviors of the coworking space community regarding the pandemic. Table 2 displays the different data sources.

Data of the interviews and of the chat application were analyzed by using Atlas.ti. This analytical tool was selected since it allows for the uncovering and systematically analyzing phenomena hidden in text (Silver and Lewins 2014). This was particularly relevant when analyzing how the coworking space and users/tenants are dealing with and reacting to COVID-19. Codes were developed a priori involving the three DC process components and coworking themes that resulted from the literature review. During data analysis, the list of codes was expanded with posteriori codes. Examples of emerged codes include the following: ‘home delivery stations,’ ‘registration of users,’ ‘financial impact,’ ‘digital couponing service,’ and ‘need for community.’ The next step was analyzing quotations per DC component and examining the associated emerged codes.

Besides the different data sources, one of the authors gained additional knowledge about this coworking space: in the 12 months prior to the pandemic, for the purpose of another study, he worked at StartDock for 1 day per week, interacted with the member community and the owners/managers, and attended workshops and other common activities. Also during the first months of the pandemic, the researcher continued being a member at StartDock. This helped to understand and interpret how the coworking space changed after the pandemic broke out. Moreover, being a member facilitated getting access to respondents, as well as having
access to internal websites (such as the event webpage and community webpage which were consulted on a continuous basis), and the chat application tool.

2.5.1 Results

This section describes how StartDock developed and used dynamic capabilities to create a responsive approach during the COVID-19 pandemic. The case study narrative is organized into three phases to describe the processes involved in the reaction to COVID-19: sensing, seizing, and transforming (Teece 2007). The analysis of our data analysis is summarized in Table 3. Table 4 synthesizes and visualizes the most prominent changes in the configuration of the coworking space as a result of COVID-19.
Table 3  Three DC process components, key issues, dynamic capabilities, and representative quotations from the StartDock case

| DC process         | Key issues                                                                 | Dynamic capabilities                                                                 | Representative quotations                                                                                                                                 |
|--------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sensing            | Need for change in office layout to meet social distancing                 | Sensing and shaping the modifiability of the physical space                          | “We would like to know how you experience the various facilities, hospitality and activities within the StartDock community! We would also like to know how you are doing in this strange period and what you think of StartDock’s approach to the corona measures. We’ve made small customer satisfaction survey and hope that you’re willing to fill it out.” (Announcement by StartDock in the mobile chat application) |
| No physical social gatherings/events | Considering alternatives, learning, and evaluating among the coworking community |                                                                                      | “When COVID-19 hit us, me and two colleagues of which one is an event host, started working on a more professional approach towards organizing online events. We tried various events and by receiving continuous feedback of our members, we really able to improve it.” (Community manager) |
| Change in consumer behavior (working remotely, increasing online presence) | The role of the community manager in assessing customer needs                      |                                                                                      | “What we are really strong at is at having conversations with our members. Since COVID-19 we really put a lot of effort into that, and that really saved us from getting the worst of this whole situation.” (Community manager) |
| -Losing clients    | -Processes available to mitigate risks (knowledge available in the community; support platforms) |                                                                                      | “Let’s take care of each other, share knowledge and expertise and help the ones that need this most. The StartDock team would like to setup groups. First online (right now), later offline (after the threat) to share best practices, links, ideas, company-measures to survive in case of emergency and governmental regulations concerning this outbreak.” (Announcement by StartDock in the mobile chat application) |
| New customer segments | Ties with externals                                                      |                                                                                      | “We are in touch with many corporations. And what we see is that employees are working more from home and want to work closer to home. If people commute less they can have more effective working hours. We might be a solution for such workers.” (Co-founder) |
| DC process | Key issues | Dynamic capabilities | Representative quotations |
|------------|------------|----------------------|--------------------------|
| Seizing    | Reconfiguration of the physical space (layout; reservation system; home delivery service) | Recognizing clients needs vs. economic trade-off; demonstrating leadership | "We made a responsible decision and that is to keep delivering workplaces to our clients. Adjusting the communal areas might mean that there will be temporarily less 'coworking'." (Co-founder) |
|            |            | Selecting technology and product architecture; assessing appropriability; and target customers | “The online formal events are actually still good for the exchange of ideas and knowledge. That goes pretty well online with small groups. You just don’t hang out afterwards. That is what you miss now. Online you get to the point and you just want to finish the call.” (Tenant 3) |
|            | Building a coupon service | Designing revenue architectures to help and sustain clients | “The upcoming months are nothing like we have ever experienced before. We wouldn’t be us if we didn’t try and do something about it. We are a community of almost four hundred young entrepreneurs and small companies. We sell coupons for our services, with a discount, to use at any time in the future. It is the support-your-locals-movement for entrepreneurs.” (CollabNow website “Our story”) |
|            | Develop a new sense of community | Including the community in coworking space initiatives; visualizing community; availability of platforms that enable community initiatives from within the community | “A: We can probably all use some extra help right now. For that reason I created an online version of 'Wants & Haves'. I made this in (Platform X), but I’m sure that someone else might think of a better solution for this. B: Such a great initiative! Yes, we can combine it with the idea of X! C: This is really impressive! Nice thinking outside of the box!” (Interaction on the mobile chat application) |
Table 3 (continued)

| DC process          | Key issues                                      | Dynamic capabilities                                      | Representative quotations                                                                 |
|---------------------|-------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Transforming        | Hybrid offering of office space and events      | Developing integration skills; Examining cospecialization  | "The market is showing a lot of changes. But during COVID-19 we developed a lot of experience. For instance in providing online events. We can now host an event and stream it live at the same time." (Co-founder) |
| Rebuild community   | Learning; knowledge transfer; developing online community building mechanisms |                                                          | "During online events people can do just something else. They can just switch of their camera during a presentation, which is not nice for the speaker. I think that in this particular aspect you do not create a community feeling. We need to find ways to get the community feeling back, but this is difficult." (Community manager) |
2.6 Sensing opportunities and threats

The immediate impact of the COVID-19 pandemic on StartDock was related to national governmental regulations that were aimed at social distancing and at dissuading social gatherings. StartDock’s staff had to consider how to reorganize the space layout. As far as the office configuration, before the pandemic, there were two types of workspaces: offices (mostly rented by SMEs) and flexible workspaces (mostly rented by individual entrepreneurs and self-employed people who enjoy the flexibility in workplace and time). In addition, there were communal spaces, i.e., places where people could gather, have lunch, or which could be hired for events by the coworking space community or by externals. In deciding how to reorganize the space, the most important implication of the regulations was to respect 1.5 meter social distancing. This meant that, mainly in the flexible work areas, StartDock could provide less work desks, which, in turn, meant that less tenants could be accommodated simultaneously.

Considering that social gatherings had always been a key pillar of StartDock, the community manager quickly started to consider alternatives of how to provide viable substitutes and evaluate those among the community. Close contact with the community and the possibility to run pilots allowed for detecting alternative means to continue providing formal and informal events.

An observed effect of COVID-19 was that it instigated a shift in consumer work patterns. The StartDock management noticed that more and more tenants started to work from home, mostly to avoid social contacts. In parallel, workers moved to the digital realm to sustain their social contacts. In order to remain in touch with the community that was not physically present anymore, the community manager played an important role in assessing community needs. On the one hand, she held many talks with the community in order to collect opinions, and to examine the well-being among the community. On the other hand, the availability of a mobile
chat application, on which most community members are present, provided valuable information and enabled getting indications on current issues among the community.

One of the consequences of the pandemic was that various tenants wanted to discontinue renting a desk because they were not (able or willing to) using it anymore. To address this threat, StartDock started assessing how to extend the coworking space into the homes of the tenants. The next step for StartDock was the development of a viable solution that continued providing basic office amenities to the tenants and, by doing so, continued delivering a core StartDock promise (office amenities).

The COVID-19 crisis also had a harsh financial impact on (many) tenants. For them, company survival was a key priority, which for some entailed that it became harder (and sometimes not equitable) to continue renting a desk. Considering the fact that, in the past, StartDock had always aimed at having diverse community (including having tenants from financial and legal backgrounds), the StartDock staff and the community started assessing if and how such community members could be helped in times of crisis. The variety of financial and legal knowledge available in the community in combination with the availability of digital platforms to convey support generated opportunities to provide aid, guidance, support, and sustain such tenants.

During the COVID-19 pandemic, the staff of StartDock also sensed that on the long run, an increasing need from corporates stared arising to hire desks at coworking spaces. One of the ways that this was sensed resulted from the variety of established contacts of staff members with external parties (who often hire event spaces, or provide workshops to the community). From a corporate firm perspective, one of the arguments to rent a workspace at StartDock is that employees can be close to sources of innovation, which are embedded in the many start-ups that are available. For firms, an additional argument that emerged during COVID-19 was that coworking spaces provide a good alternative for workers who (partly) reduced on commuting but still desired a social working space close their homes.

“We increasingly see that people working for large firms want to work closer to home. As a result, there are firms that provide a type of pass that allows employees to work from a coworking space near home. This provides benefits for both the employees, such as, less travel time and more effective working hours, while firms can reduce on office space. At StartDock we will have to see how to deal with this.” Co-founder.

Even though the flexibility in organizing the space for such cases in combination with the financial attractiveness, a next step for StartDock is to consider whether this fits the StartDock principle that was always aimed at independent workers or small-sized companies.

In sum, sensing opportunities and threats was a process in which there was close alignment between StartDock and the StartDock community. In this process, the community functioned as an important ‘sensing device’ for the management of StartDock.
2.7 Seizing opportunities

In adjusting the physical space, a key issue for StartDock was to ensure that current clients have a place to work while taking into account the social distancing measures and the physical boundaries of the coworking space. In order to deal with this, StartDock organized talks and surveys among its user community to assess the ‘modifiability’ (i.e., the flexibility of the space to support a versatile range of activities and collaborative ways of working) of the coworking space. In close collaboration with the community, it learned how to transform the available communal and event spaces into workspaces (which were hardly being used as a result of the pandemic), in order to continue delivering the required workspaces to tenants. Also, in order to have a systematic overview of available spaces, StartDock put a technological reservation system in place (showing which desks are available and which ones are occupied by whom).

To further service the tenants during COVID-19, StartDock started a home delivery service of workstations. This ensured that tenants who were not willing or able to go to StartDock could continue their business while having basic office amenities. In a period where many tenants were considering canceling their contracts, this service aimed retaining such clients.

“Tomorrow the StartDock team will help you to create a temporary ergonomic workplace at home, with your StartDock furniture! We can come and bring your StartDock-desk, StartDock-chair and/or StartDock-screen to your house. Obviously we also foresee that we can keep working from the StartDock-buildings, but with a lower frequency and high level of caution. The StartDock team is working on a process to further lower the risks of contamination within our premises. Would you like to get your inventory delivered at home by the StartDock team? Please complete this link: X. Team StartDock.” Announcement by StartDock in the mobile chat application.

A condition to receive the workstations was to remain a member of the coworking space during the period of working from home. Around seven percent of the tenants made use of this service.

Regarding the events, StartDock adjusted the organizational approach during the pandemic. In the physical realm, StartDock still continued organizing a limited number of events under the condition that social distancing rules were met, i.e., only a limited amount of people attending the events, and 1.5m distance between people should be guaranteed. To organize this, StartDock implemented a registration platform with a ‘first-come-first-serve’ principle. In the digital realm, in the early days of the pandemic, StartDock organized a few informal events, but these efforts were unsuccessful: participation was limited. By contrast, formal events turned out to be better transferable to the digital realm. Throughout the entire pandemic, StartDock maintained a weekly offering of online formal events on business- and non-business related themes. The COVID-19 situation stimulated and accelerated this new means to be perfectioned and professionalized, and StartDock also managed to reach bigger audiences. Most events used to be offered only to the StartDock community, but
increasingly such events were also streamed through publicly accessible platforms to non-community segments.

In all decisions, a key concern for StartDock was how to sustain or develop a new sense of community in a situation when people are not physically present at the coworking space. For this, StartDock took various decisions. First, it included the community in the building of the online coupon marketplace: ‘CollabNow,’ an online marketplace where every member of the StartDock community has the opportunity to offer services with a discount. A main objective of this platform is to financially support the tenants. However, it also had as a by-product the emergence of a community feeling among all people involved in building it.

“Although we were working from home more, I did get to know the StartDock team and some other people a lot better because I helped them with CollabNow. Through CollabNow everybody was doing a lot of positive things. This enhanced the StartDock experience and brought a lot of good energy into the group. Something that is really needed in these unusual times.” Tenant 5

Second, StartDock started making communities tangible through increased physical and digital visualization of the community (pictures, testimonials, and the like) to endorse a sense of community. Third, StartDock optimized the event platforms to enhance a community feeling and to increase the possibility of online interaction between tenants.

On top of the above-mentioned decisions to promote community, the mobile chat application also was a platform that enabled the enhancement of a community feeling. On the platform, a variety of initiatives emerged by the community itself. These were mostly voluntary initiatives related to the offering of skill-based services (e.g., marketing, finance, or legal advice in dealing with COVID-19). In general, in the chat application, it seemed that an empathetic stance within the community was recognized based on a “we are in this together”-feeling.

“Fellow Dockers, In the last few days I have been setting up an initiative to help entrepreneurs like you. For this reason we founded hulpisonderweg.com (hulpisonderweg.com) completely selflessly and without a commercial agenda. Marketers with a good heart who want to help, can post an offer to help entrepreneurs in need. Companies with an issue can place a call or make use of an offer on this platform. In addition, StartDock is an ambassador of #hulpisonderweg for both Flanders and the Netherlands because helping each other knows no boundaries.” Post by a community member in the mobile chat applica-tion.

To sum up, the activities that were executed by StartDock in this phase happened in close involvement and coordination with the community, which helped StartDock making informed strategic decisions.
2.8 Transforming practices over time

To sustain profitable growth, transformation is needed to maintain evolutionary fitness. For StartDock, a key to sustained profitable growth is the ability to recombine and to reconfigure assets and structures as the coworking market evolves. Even though it is too soon to assess this, we observed a number of developments.

During COVID-19, the labor market showed many changes in working behavior (e.g., increased remote working, increased usage of video conferencing platforms etc.). There are various indications that post-Covid-19 many of these changes will remain. It is likely that also StartDocks’ clients will continue working in hybrid forms (partly from the coworking space/partly somewhere else/partly in the digital realm). This means that StartDock can examine more flexible approaches toward a (hybrid) offering of the coworking promise as a whole.

StartDock gained vast experience in the management of the workspace by implementing a workplace reservation system. For StartDock, the system gave market insights regarding which tenants used the coworking space and when. For tenants such insights might be valuable since it provides an overview of which knowledge at which moments is available at the coworking space. Also, by adopting the home delivery service, StartDock experienced the effect of expanding the coworking space into the homes of tenants. The result was sustaining clients and providing flexibility in workplace location for the tenants. On the long run, StartDock might investigate cospecializing, i.e., investigating both the reservation system and the home delivery system; the complementary value of these assets in conjunction might be value enhancing for StartDock and the tenants.

When it comes to offering online events, the production and organization thereof were lifted to a new level during COVID-19. Compared to the period before COVID-19, StartDock had little experience with online events (yet, vast experience in organizing offline events). Now, StartDock developed skills and experience in delivering off- and online events in parallel. The participants responsible for delivering such events (event manager, community manager, interns) gained experience in using new methods and ways of organizing the events and service provision. A next step for StartDock might be developing further integration capabilities to sustain such offering and evaluate control and performance systems to increase effectiveness on the long run.

Well, we definitely want to keep offering the online events. This way we can appeal to a larger target group than just the people who are physically present here (at StartDock). Community Manager

A key topic for StartDock in the coming period is restoring a sense of community. During COVID-19, it was identified that it was challenging for StartDock to deliver community aspects. Social encountering was more difficult, while from the tenants side, there continued to be a vivid desire for community, fed by both social and economic needs. When looking at the future design of the physical space, StartDock has to await what governments will allow in terms of social distancing.

As far as desk layout, StartDock has solutions to accommodate more tenants in one space (and thereby increasing chances of social interaction), by having f.i.
see-through screens between the desks. However, according to StartDock, this is at odds with the concept of ‘coworking.’ As far as the communal areas, StartDock got confirmed during the pandemic how important such spaces are in promoting serendipitous encounters between tenants. When allowed, StartDock will restore the communal spaces from work areas to social areas. Key capabilities in this lay in both the learning of how space impacts community feeling as well as the knowledge transfer thereof to current and future StartDock staff members.

Well we are back to the cubicle principle now. It is feels very isolated, yet, for me that works right now because I need to call a lot so that gives me more privacy. So in the future you could dedicate a floor for those people needing more privacy and one floor just open-plan. That’s where I see it going."  Tenant 5

As far as the digital space, it became clear that it provides a relevant and sufficient alternative to physical settings. However, StartDock realized that a downside of online events is that in online environments, interpersonal engagement and informal interaction are not promoted, which is important to sustain a community feeling. During online events, it has been a challenge to organize smooth transitions between formal events and informal social ‘after-events.’ In offline settings, this used to be easily organized by StartDock, which commonly stimulated social bonding. StartDock also realized that in the online sphere, there are still undefined social norms on how to behave during online events (e.g., how to use a camera and/or microphone; how to behave once an event has ended). This often leads to decreased levels of social engagement compared to offline events. When the objective is building (online) communities and promoting online interaction, coworking spaces might examine ways to improve levels of social presence, which can be fostered by, for instance, considering characteristics of the coworkers. This implies that organizing digital events should come with new underexplored mechanisms that are preferred by users and also promote community building.

3 Discussion, conclusion, and limitations

COVID-19 is having a deep (and probably lasting) impact on work practices and office locations. In this paper, we examined how the pandemic affected a coworking space, a flexible office concept that is often associated with ‘coworking communities’ and which has become ubiquitous in the last decade. A unique aspect of coworking spaces is that the paying customer (the person hiring a desk at the coworking space) is also a key resource of the coworking space; coworking communities are an integral part of the value propositions of coworking spaces. We analyzed the reaction of coworking spaces to the pandemic from the lens of DC theory, studying how the three key process components (sensing, seizing, and transformation) shaped the response of coworking spaces to the crisis.

Our case study convincingly shows that sensing, seizing, and transforming capabilities are not only situated within the management of the organization, but also play out in close alignment with the user community, that acted as key resource notably in the sensing and seizing processes.
With regard to sensing, the coworking community acted as a crucial sensing device for the management to understand what the emerging threats of the crisis were, and how they would play out. This seems to be in line with the concept of crowdsourcing or service co-creation (Schenk and Guittard 2011; Grönroos and Voima 2013), where the management staff can obtain ideas from an evolving group of customers. The community played a crucial role for the coworking space to rapidly discover, test, and validate new opportunities. More specifically, the community provided continuous input regarding alternative uses of the spaces and the development of new virtual concepts that could partially substitute for physical interaction. Through surveying and provoking community feedback, StartDock sensed how the physical space could best be used in dealing with safety regulations. Based on iterative feedback loops and close alignment with the community, it became clear that by using communal and event spaces as workplaces, there was a trade-off between being able to deliver the promised workplaces to clients versus an associated negative impact on community feeling and a possible miss of revenue streams.

When it comes to seizing opportunities, again there was a dense interplay between management and community; in fact, many of the new investments that sustained the coworking space were initiated and implemented by the user community rather than by the management. It was the close reciprocal relationship between the management staff and the community, and in parallel, the openness for community ideas that facilitated such processes. In this, a key stance for StartDock was to permanently have a tenant-centric orientation, which proved critical in garnering loyalty and commitment toward the community (Spinuzzi et al. 2019). Evidently, StartDock had a strong business interest in investing in new structures and architectures that would keep clients on board and feed the community. The coupon service, for example, helped to address the threat of losing clients who were at the verge of going bankrupt (because for many start-ups during the crisis, there was a reduced need for their services). However, the collective and inclusive approach to dealing with the pandemic led to various investments that contained mutual benefits.

Other parts of the trial-by-doing activities were more directed to the transformation of StartDock’s capabilities across settings and time. The tools for the delivering and evaluation of online events were continuously developed for both formal and informal settings, gradually increasing the knowledge needed to successfully develop this service across time. Event after event, the event- and community managers learned more about a number of important barriers and enablers that require attention, as well as about the social norms needed to stimulate social interaction. Indeed, this is still a relatively understudied phenomenon, but this is not to say that StartDock hasn’t developed basic skills and knowledge in order to improve this over time. The continuous trial-and-error of events and continuous interaction with the community, both physically and through the mobile chat application, have turned out to be important providers of information, while at the same time it has been a way to include the community in all the transformative steps during the pandemic. This seems to indicate that including the community in transformation processes may lead to customer loyalty and engagement as important by-products (De Vreede et al. 2013).
From the outset, the StartDock management staff is aware that the community are not only paying clients but also constitute a fundamental component of the product/service that they offer. As such, part of StartDock’s dynamic competence is situated within the community. A key concern of both the management and the coworking space members in reacting to the pandemic was “How to sustain a sense of community?”

On top of the many efforts by StartDock to enhance a community feeling during the pandemic (e.g., by organizing formal and informal digital events), the community itself started to unveil a strong desire for community. In the mobile chat application, a cornucopia of community-enhancing initiatives was revealed, especially in the first months of the pandemic. Remarkably, in a period of a few weeks, the organization of community-enhancing initiatives expanded from StartDock staff assisting tenants, to tenants helping other tenants, and to tenants helping the coworking space staff in return. In general, it seemed that at StartDock, such reciprocal behavior is recognized, and as a result, different forms of community involvement are expressed. The mobile chat application has been a key facilitator during the pandemic for establishing quick effective social interaction among community members. Also, the role of the community manager has been paramount (in line with Cabral and Van Winden 2016). The community manager acts as a bridge between StartDock and the tenant and provides value by finding solutions that meet common interests (e.g., providing platforms for entrepreneurs who are in need of business solutions and linking them with an audience. In turn, for StartDock this enhances the value of the coworking promise). The bridging role is executed by the community manager in both the physical and online spheres. This boundary spanning activity proved crucial in the sensing and seizing processes (Burt 2008). Notably, it are the interpersonal relationships between the coworking space management staff members and the community members which are conducive to productive dialogue during which opportunities may be indentified (see also Salvato and Vassolo, 2018). Our study thus underlines the strategic importance of dealing with the community as a dynamic capability that can inform and shape the offering of coworking services.

A strategic concern for StartDock is the decision to be made regarding ‘corpowerking’ (Golonka 2021) and what the impact will be on community. It is likely that in the coming periods, post-COVID-19, there will be an increasing need of corporations and employees/teams to work remotely at a coworking space. In this, an important capability relates to incentive alignment (Teece 2007). When corporations are embedded in coworking communities, it is likely that this might lead to mutual benefits, mainly due to the physical proximity between corporations and startups/self-employed people. At the same time, the question arises if and how corporate workers might contribute to the community, a key resource, as we have seen in this paper. In scenarios in which corporations have multiple workers at one specific coworking space, it likely that there is some form of emotional connection between those workers based on shared history, and as such, this might manifest itself in social networks displaying bonding social capital with exclusive characteristics (Putnam 2000) which would consequently impede integration with the coworking space community. For coworking space owners/managers, it is important to consider what this would imply for eventual (pre) selection and number of new corporate members.
Earlier studies show that effective selection/admission mechanisms increase the chance of fruitful interaction and community building (Van Winden et al. 2012).

Our study modestly contributes to the dynamic capabilities literature by showing that dynamic capabilities go beyond the ability of managers to create, extend, and modify the ways in which firms can cope with dynamic environments (e.g., Salge and Vera 2013). In fact, our study showed that in the case of coworking spaces, clients are a key source of information that can provide ideas to the coworking space management staff (as in, e.g., Grönroos and Voima 2013; Schilke et al. 2018; Kurtmollaiev 2020). But they are not only a key resource; they are also part and parcel of the dynamic capability of the coworking space itself. One which, during the pandemic, shaped the coworking service that is both offered, created, and consumed by the coworking community. Therefore, the case revealed that when communities play a crucial role in influencing and shaping the product, a symbiotic relationship between firm and communities is paramount in order to sense and seize opportunities and/or to create competitive advantage. We conclude that the community must be considered as a hybrid resource (both internal and external) into the concept. Managerially, the study highlighted how the curation and interventions of coworking spaces can help coworking space owners/managers to deal with drastic external influences, such as the COVID-19 pandemic, and create better services for people using or considering using coworking spaces. In addition, it provides insights for the design and use of coworking networks to overcome the pandemic (in line with Belso-Martínez et al 2020). By elucidating the StartDock case, we contribute to a more comprehensive understanding of coworking space dynamic capabilities and to a broader view of resource characteristics (as in Barney 1991).

If we make an attempt at looking at post-pandemic coworking, there are a number of indications that follow from this study that are relevant for both coworking owners/managers and for people working in coworking spaces. First, when looking at the physical space of coworking spaces, the flexibility of space came to the forth as a crucial element (as indicated by Oksanen and Stahle, 2013), because it increases the possibility to be adaptive to change. As we have seen, changes can be instigated in the internal coworking environment (e.g., the needs of the coworking community regarding space for engagement/disengagement appears not to be static) and/or in the external environment (e.g., governmental regulations imposed by governments during the pandemic). For coworking space owners/managers, it is paramount to investigate if flexibility of space can be in line with coworking business models that are both economically and socially sustainable. Second, the future will most likely entail more hybrid ways of working. As a result, people might spend less time in coworking spaces because technological advancements might present alternative solutions. If this will be the case, it is worth considering whether there are types of proximity (as in Boschma 2005) that can substitute or compensate for the decreased level of geographical proximity of coworkers in order to sustain similar levels of community as before the pandemic (e.g., investigate how to enhance social proximity). Third, in terms of offering events (a key pillar of coworking spaces), the digital realm proved to be a useful alternative space for physical events. Now that the value and possibilities of this underexplored space have been touched upon, this will
undoubtedly be a coworking facet that will be further investigated by coworking spaces.

Several investigative limitations of this study set directions for future research. First, because of the pandemic, the Dutch government strongly demoted traveling and people going to work. This had an impact on the number of people going to StartDock and, as a result, there were fewer people present than normal. This means that the StartDock population was not entirely represented in the research which limits its generalization and inference making. Second, this study analyzed one coworking space in Amsterdam that was dealing with local regulations and symptoms related to COVID-19. Future studies could consider expanding the number of coworking spaces and contrast different characteristics and approaches in order to enrich and/or generalize the results. Third, the findings confirmed the evolution of ‘corpoworking’ by both firms and coworking spaces. We encourage to further investigate how coworking space owners/managers deal with the curation in terms of the type of firms, the size of firms, and where such firms are situated inside the coworking space. In this line, we also favor researching profiles and professional circumstances of corporate workers and it’s link with coworking community development. Fourth, future research could also explore whether coworkers adopt ‘hybrid’ approach of coworking (i.e., partly physical at the coworking space and partly from home with online participation at events). In particular, this may yield insights into alternative effects on coworking community dynamics, usage of space, and coworking revenue models. Lastly, future studies could consider validating the conceptual model or introducing other DC models in order to improve the empirical reliability and validity of our findings.

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