

The shift from owning to sharing: employing action research to facilitate SMEs' business model transformation

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Abstract: The sharing economy has witnessed tremendous growth in a multitude of industries around the world over the past decade. Access to, and a more sustainable use of, resources, cost saving potential, and a multitude of strategic benefits have been identified as attractive opportunities for small and medium-sized enterprises (SMEs) to engage in business-to-business (B2B) sharing with some frustration by governments, researchers and practitioners that so little actual B2B sharing can be observed in industry practice. It remains a strategic challenge for SMEs to manage the shift from resource ownership to sharing since that transition requires a permanent change in their business model.

In light of the transformational nature of this qualitative research gap, an Action Research methodology has been developed and implemented in partnership with a selected sample of Swiss SMEs favourably inclined towards B2B sharing activities. While discussing how Action Research might bridge the research gap and develop tangible, empirically grounded management recommendations, this paper also contributes specific Action Research methodology for other cases of transformational nature which present an ever more frequent and common scenario in business management research.

Keywords: Action Research, sharing economy, business-to-business (B2B), small and medium-sized enterprises (SMEs), business model transformation, sustainable development.

El cambio de tener en propiedad a compartir: utilizando la Investigación Acción para facilitar la transformación del modelo de negocio de las PYME

Resumen: La economía colaborativa ha experimentado un enorme crecimiento en multitud de sectores de todo el mundo durante la última década. El acceso a los recursos y su uso más sostenible, el potencial de ahorro de costes y una multitud de beneficios estratégicos se han identificado como oportunidades atractivas para que las pequeñas y medianas empresas (PYME) participen en el intercambio entre empresas (B2B). Sin embargo, hay cierta frustración por parte de los gobiernos, los investigadores y los profesionales porque se observa poco intercambio en la práctica de la industria. Sigue siendo un reto estratégico para las PYME cambiar de tener la propiedad de los recursos a compartirlos, ya que esa transición requiere un cambio permanente en su modelo de negocio.

Debido al carácter transformador de esta investigación cualitativa, se ha desarrollado una metodología de investigación-acción, que se ha puesto en práctica en colaboración con una

muestra seleccionada de PYMES suizas favorables a compartir B2B. A la vez que se discute cómo la investigación-acción puede salvar la brecha de conocimiento y desarrollar recomendaciones de gestión tangibles y con base empírica, este artículo también aporta una metodología de investigación-acción específica para otros casos de naturaleza transformacional que empiezan a configurar un escenario cada vez más frecuente y común en la investigación de la gestión empresarial.

Palabras clave: investigación-acción, economía colaborativa, business-to-business (B2B), pequeñas y medianas empresas (PYMES), transformación del modelo de negocio, desarrollo sostenible.

1. Benefits and obstacles of the B2B sharing economy

Sharing, sometimes referred to as collaborative consumption, mostly appears as a peer-to-peer-based (P2P¹) activity of obtaining, giving, or sharing the access to goods and services, coordinated through community-based, often online services (Decrop et al., 2018; Hamari et al., 2016; Weiber & Lichter, 2019). In the broader context, sharing can be associated to what is described as a civilizational crisis of the early 21st century where scientific and technological discoveries allow for a new relationality by means of re-communalization of social life for individuals and corporate citizens alike (Escobar, 2021; Maffesoli, 2020; Wielecki, 2020). Ownership is substituted by access to resources, while at the same time infrequently used assets are used more frequently, resulting in “shared” use (Botsman & Rogers, 2010). While society and governments face the depletion of planet earth’s resources in the post-liberal market society of the 21st century (Foord, 2014), sharing could offer a more sustainable alternative to consumption (Daunoriené et al., 2015; Demary, 2014; Georgi et al., 2019; Hamari et al., 2016).

Relatively few cases of business-to-business (B2B) sharing have been described so far, though specific sharing in some industries takes place already (Eschberger, 2020) with a growing global community of pioneers emerging in the post-COVID era (Radjou, 2021). For more companies to actively participate in B2B sharing, a better understanding is needed on the transformational effort required to shift a company’s business model from ownership to sharing (Choi et al., 2014) for which the cyclical nature of Action Research is particularly well suited.

1.1. Sustainability

A more efficient use of (existing) resources avoids additional, individual ownership creating economic sustainability at companies and the macroeconomic level (Daunoriené et al., 2015; Demary, 2014; Georgi et al., 2019). B2B sharing prevents the purchase of new assets or resources, which systematically avoids overproduction and depletion of resources, improving ecologic sustainability (Acquier et al., 2017). Sharing goods with a significant CO₂ footprint

1 Peer-to-peer (P2P) and consumer-to-consumer (C2C) are often used synonymously in literature ignoring the fact that two companies could also be considered as peers and would thus need to be included in P2P

(e.g. trucks or industrial machinery), particularly contributes positively towards energy efficiency and clean air (Pisaniello, 2018). This even more so since businesses – with a focus on their own profitability – are unlikely to generate compensating overconsumption in other domains, critically observed in C2C sharing (Aptekar, 2015).

1.2. Access to resources

Companies create competitive advantage from the resources they own (Prahalad & Hamel, 1997). Therefore, a key driver for B2B sharing is for participating companies to get access to resources they could not afford to own, because they use them only infrequently (Eschberger, 2020). In a number of industries, vertical integration is reducing and companies tend to specialize on their core competencies (Langlois, 2001), thus, the opportunity for sharing as a means of access to resources outside of a company's core competence is growing. The higher the investment and operational cost of a resource, the more likely companies are willing to share it (Grondys, 2019; Vătămănescu & Alexandru, 2018). Which specific resources companies are likely to share, remains confined to patchy evidence of select cases to date (Choi et al., 2014) or a wide definition taken from C2C Sharing: *“high price, low availability, short period of use compared to the durability of products, and low frequency of use”* (Cho et al., 2013, p. 111).

1.3. Business models

While large organizations own more of the crucial resources for conducting their business, it is their size alongside leverage, tax position, growth, cash flow coverage and ownership concentration which determines what assets to lease or rent, and which to own (Ezzell & Vora, 2001). Contrarily, small and medium-sized enterprises (SMEs²) benefit from B2B sharing which provides them with access to resources they could otherwise not afford (Soltysova & Modrak, 2020). SMEs especially in asset-intensive industries are more likely to share resources (Vătămănescu & Alexandru, 2018) with fixed assets as a share of total assets positively correlated towards sharing (Grondys, 2019). Sharing adds to the competitiveness of SMEs like other forms of cooperation which are well established and researched (Choi et al., 2014).

At the heart of market economics, competitiveness is created by rivalry, innovation and differentiation (Steininger et al., 2011). Businesses are typically built on competitive advantages and benefit most if they outplay their rivals (Porter, 1997). Sharing resources with other businesses therefore does not come naturally to companies and is rarely built into business models (Choi et al., 2014; Daunorienė et al., 2015). The willingness to share a resource and subsequently adapt one's business model varies, because each business model is unique and sharing a particular resource may impact a business model at varying degrees (Choi et al., 2014; Soltysova & Modrak, 2020). From the perspective of the business owning an underutilized asset, sharing that asset offers the potential of additional income or contributing margins from an otherwise idle resource (Choi et al., 2014; Radjou, 2021); specif-

2 The term Small and Medium-Sized Enterprises (SME) will be used along the OECD (2019) definition of companies with between 10 and 250 employees, those above being classified as “large” and below as “micro” enterprises

ically for SMEs their focus is on added value through cost optimisation and the development of a joint network of like-minded SMEs (Niederhauser et al., 2022). Also, a range of success factors were identified for SMEs participating in B2B sharing, such as the contribution to business value, the relationship with sharing partners and the process of the sharing transaction (Huber et al., 2022).

Much academic interest has been directed at understanding the dynamics of sharing between consumers and the resulting business opportunities and business models, their impact on existing markets and ecosystems with digital platform operators particularly in focus (Soltysova & Modrak, 2020). Current research on unsuccessful B2B sharing platforms indicates that a mere transfer of digital, platform-based business models from intermediaries of C2C sharing concepts does not respond sufficiently to operational needs of sharing between companies (Esselin & Falkenberg, 2019; Friederici et al., 2020; Laczko et al., 2019). Therefore, the focus on business model transformation remains with the participating SMEs and does not concern itself with a potential business model or value proposition of a platform or other intermediary between companies (Huber et al., 2022).

1.4. The shift from owning to sharing

In search for more sustainable alternative ways of running businesses, recent discourse calls for novel business models based on collaboration, co-creation and co-opetition for competitive advantage (Cho et al., 2013; Ritala et al., 2014) where sharing fits more naturally, challenging traditional views on competition. While consumers in the C2C sharing economy often participate opportunistically (Bratianu, 2018; Pisaniello, 2018), companies must engage in a more strategic change since the shift from owning to sharing might change causalities within their business logic, e.g. resource use, cost, revenue streams, partnerships, activities, even customer relationships (cf. Business Model Canvas by Osterwalder & Pigneur, 2010). While the object of sharing (resources being offered or used), type of sharing model (co-ownership, reciprocal use, role of intermediary / platform) and subsequent impact on a participating company's business model will likely vary, there is always a transition effort and managerial action required to enable the shift from owning to sharing (Antikainen et al., 2018). Sharing in itself is specific (unlike networked business models) and affects specific resources and markets, thus it impacts business models in various aspects and degrees (Huber et al., 2022; Perren & Kozinets, 2018).

2. Employing Action Research to understand the shift from owning to sharing

Some knowledge exists on the potential benefits and motivations for companies and especially SMEs to share resources with one another, however, there is a lack of knowledge on how these companies manage the shift from owning assets to sharing them. There is a need for a shift in companies' business model, but the transitional effort and transformation process that lead an organisation from resource ownership to resource sharing remain unclear (Antikainen et al., 2018; Choi et al., 2014).

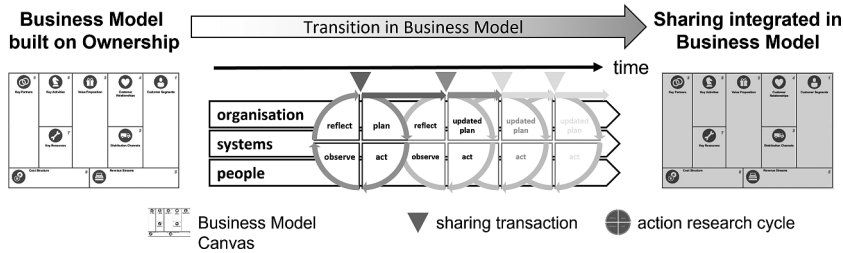
2.1. Action Research and SMEs

With only few observable cases of B2B sharing available from practice, qualitative research is needed to understand the required change and transformation of organizations (Dick, 2000) for which Action Research is particularly well suited as it combines activities “in action” with research by acting in the field while generating new knowledge or theory about these actions (Eden & Ackermann, 2018). Due to its collaborative nature close to application and practice, Action Research has been well received by the SME community for topics often focused on the transformational nature of management actions such as innovation and knowledge management, organisational learning or process optimisation (Bhat et al., 2020; Doppio et al., 2021).

In Action Research, transformation and change happen simultaneously with researching and understanding it by applying a cyclical process in sequences of activities and critical reflection, which allows particularly well to accompany the evolution of a novel concept (Jüttner, Huber, Furrer, et al., 2019), such as the emergence of management actions required to shift a business model from ownership to sharing. Later cycles refine methods, data and interpretation of earlier cycles, creating a spiralling, iterative process where the depth of understanding on a subject matter subsequently increases (Dick, 2000). Given the iterative nature of sharing transactions leading to a transformation of the business model, the cyclical yet structured method of Action Research suits these objectives. The participative character where both the researcher and data providers from the object of research are contributing to the process of generating new knowledge is particularly suitable in a case where first-hand insights along the transformation process in the shift from owning to sharing shall be collected.

Using Action Research to understand the transition from a business model based on ownership to a new business model that embraces sharing, the following conceptual research framework was designed (Figure 1): a company participating to the research is portrayed by means of its business model using Business Model Canvas (BMC, Osterwalder & Pigneur, 2010). In a cooperative effort between researcher and the company, its business model is described twice, (1) before engaging in any sharing transaction (on the left) and (2) after its transition through a series of sharing transactions (right). As the company engages in sharing transactions, a full participatory Action Research cycle (plan, act, observe, reflect) is completed for each transaction. This corresponds to the gradual, iterative transformation of the business model in B2B sharing (Cho et al., 2013). The cycles of Action Research focus on the activities of management in the three domains of systems, organisation, and human beings. From one cycle to the next, the understanding in theory and practice about managerial action required to enable the shift from owning to sharing improves. Both the researcher and manager participate and contribute to the company sequentially transitioning from a state of resources ownership to a state of enabled sharing. After several sharing transactions and their Action Research cycles, the business model of the company is revisited to identify in dialogue with the manager which changes, if any, occurred in the transition from ownership to sharing.

Figure 1: conceptual research framework (own illustration)



2.2. Business model analysis

Business Model Canvas (BMC, Osterwalder & Pigneur, 2010) has received widespread acclaim to allow a succinct description and analysis of a company's "*content, structure, and governance of transactions designed so as to create value through the exploitation of business opportunities*" (Amit & Zott, 2001, p. 493). For each company participating in the shift from owning to sharing, the BMC was collaboratively documented prior to its first sharing transaction using two steps for data collection and analysis along BMC's nine building blocks:

1. Using publicly available sources (website, trade registry entries, media reports, etc.) as well as internal documents (financial reports, strategy papers, etc.) within a maximum of a two-year record, a first draft of the BMC was completed by the researcher;
2. During a 1-hour interactive workshop with a senior company representative, the draft BMC was validated, completed, and detailed further.

After sharing had become an integral and recurring part in their business activity, the formerly confirmed BMC was revisited in another interaction with the industry partner to identify areas of change, where the business model evolved because of the company's participation in sharing transactions. This identified (a) which of the nine BMC building blocks were affected, (b) what specifically changed in each of the affected blocks and (c) how significant that transformation was for the business model overall.

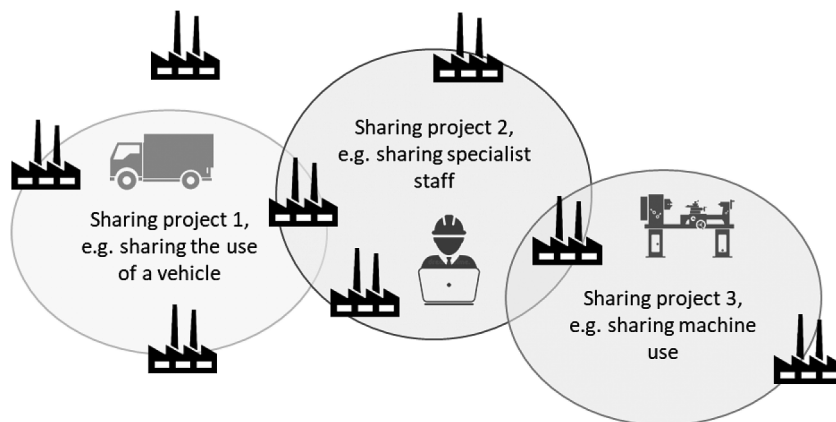
The business model analysis in itself completes one overarching cycle of Action Research, namely (1) the planning step in which the business model is described from sources and discussed with the industry partner, (2) the action of engaging in a series of sharing transactions, (3) the observation of what elements within the business model have changed and (4) the reflection on how these changes might benefit other companies for their shift from owning to sharing.

2.3. Industry case studies

With only limited cases of B2B sharing available in practice, a B2B sharing research initiative was established in partnership with a set of Swiss industrial SMEs that have prequalified with an interest in initiating, accelerating or expanding their B2B sharing activities (Jüttner, Huber, & Wäfler, 2019). The subjects of the research process about the shift from owning to sharing were twofold (cf. Figure 2): (1) sharing projects evolved from prototype status to im-

plementation through repeat sharing transactions. Within each of those sharing projects, (2) two or more SMEs engaged in sharing activities – and by doing so – transformed their own business model from ownership to sharing of resources.

Figure 2: sharing projects and participating SMEs (own illustration)



The research initiative's setup, with actual SMEs and industry experts available and willing to directly test and implement research findings in repeat interactions and partnership with researchers to collect and analyse data while reflecting the findings, further supports the argument for action research. Due to its transformatory nature, this research employed several cycles of Action Research (Dick, 2000) to understand the shift which leads SMEs from ownership to sharing of resources on the level of their business model.

2.4. Within-case analysis

Collaboratively working with SMEs in Action Research cycles along every sharing transaction within each case, the researchers (1) collected data about managerial action by observing and documenting activities by the company decision makers before a sharing transaction, (2) collaboratively developed management actions with regards to the planned sharing, (3) accompanied the implementation of the actions by observing and documenting managerial action during the sharing transaction and (4) evaluated and reflected upon the impact of managerial action for the sharing transaction in a post-sharing narrative interview. By doing so, each cycle generated new insights and documented input for the next cycle and next sharing transaction. Each sharing transaction generated at least two cycles with (a) the provider and (b) user of the shared resource. During the process focusing on managerial action, cross-case analysis was omitted to allow for more progressive developments between cases and avoid early spill-over from one case to the other which could unnecessarily lead to more homogenous results in this exploratory research.

2.5. Cross-case analysis

For each company case, the sharing transaction and managerial actions were time-stamped to understand their sequence and time-distance in relation to the initiation of a sharing transaction. By counting from day zero when sharing is initiated, each cycle and matching managerial action from each case was tracked and then compared across the other cases and cycles to understand if there are any common patterns in the managerial action and their sequence along the timeline. This cross-case analysis allowed to understand the transformational process, namely if there are common patterns of managerial action along the timeline of a sharing transaction.

2.6. Contributing to Action Research for SMEs

Action Research has been previously used for analysing business model transformation (e. g. Athanasopoulou & De Reuver, 2020) and investigated transformative processes in SMEs (McGrath & O'Toole, 2012; Sundström et al., 2021). Given the case-specific and resource-intensive nature of interactive Action Research, studies are often found to focus on only one SME case (Jüttner, Huber, Furrer, et al., 2019; Kampf et al., 2021; Kocher et al., 2011). The purposive design of this research on business model transformation in SMEs therefore contributes to Action Research for SMEs in two ways: first, it demonstrates how managerial action towards the development of a company's business model can be recorded, evaluated and improved over several cycles of Action Research; secondly, it showcases a method of comparison across several cases of Action Research by (a) using a common business model framework and (b) time-stamping the sequence of actions to reveal common patterns and cause-effect-relationships.

Instead of documenting the results of a transformation (i. e. the before and after state of an research object), Action Research allows us understand action along a transformation due to its dialogical, participatory and iterative nature. To both facilitate and investigate the managerial action required to transform a business from owning to sharing requires such a design. Through direct and iterative interactions between researchers and managers, Action Research allows the researcher to contribute research-based tools, analysis, and reflection to industry practice along the transformation, while the manager at the same time shares insights on the transformation for research and analysis while it happens. This design contributes to research practice by evaluating the suitability and potential benefits of the participatory and dialogical nature of Action Research for understanding transformatory processes in business with a focus on managers in SMEs.

3. Implementation and findings

SMEs from Virtuelle Fabrik, a Swiss mechatronics network (virtuellefabrik, 2022), had temporarily exchanged various resources in previous transactions without using the term "sharing", admitting some frustration on the accidental nature of such transactions and their uncertain economic viability. They hence developed an interest in systematically under-

standing the benefits and challenges for successfully sharing their idle resources. For doing so, Virtuelle Fabrik approached a team of academics which subsequently recruited an interdisciplinary research team in engineering, psychology and business alongside managers and leaders at selected industrial SMEs in Switzerland with a joint interest in developing B2B sharing for their business, which lead to a research initiative on B2B sharing (Jüttner, Huber, & Wäfler, 2019).

From March 2020 to March 2022, the research initiative investigated B2B sharing transactions with a set of ten Swiss SMEs in asset-intensive industries (Table 1). The initiative analysed what preconditions need to be met for companies to share a resource (both in terms of the resource characteristics and conditions for companies to participate) along with a process of how B2B sharing can be transacted repeatedly (Huber et al., 2022).

Table 1: SMEs participating to the B2B Sharing initiative (* members of the virtual factory network), own illustration

Company	Job Title
PEKA Metall AG*	Head of Production
Tschudin + Heid AG	CEO
RERO AG	CEO
Estech Industries AG*	Head of Division
KEBO AG	Head of Production
Control AG*	Business Development Engineer
Shiptec AG*	Member of the Executive Board
HEVO AG*	Project Manager
Lastech AG*	President
Virtuelle Fabrik*	President

3.1. Researcher profile and role

The research team is closely embedded with the SME community at large and the Virtuelle Fabrik specifically, both of whom they have been collaborating with for years in various forms of research, consulting, student assignments and other projects. On topics of business model transformation, the specialist researcher has previously headed his own SME and worked with executives in SMEs of a broad range of industries in his previous professional work experience and academic research, occasionally employing Action Research (Jüttner, Huber, Furrer, et al., 2019). The focus topic of B2B sharing emerged collaboratively from discussions with company executives and was subsequently opened to a growing network of SMEs along the setup and initialisation of the research initiative. This included on-site company visits, virtual and in-person interviews, workshops and other forms of repeat collaboration between the researcher and industry practitioners to enable and facilitate B2B

sharing transactions as a precursor to the focused research on business model transition from ownership to sharing.

3.2. Stakeholder involvement and participation in action research cycles

Representatives from the participating SMEs interacted frequently and democratically with the researcher team. Sharing cases, for example, were jointly explored in co-creative workshops – both in terms of the suitable resources and potential partners. The industry partners took the lead on the selection of resources and outlining conditions for partnerships while the researchers provided a framework for structuring the discussion. Also in analyzing and evaluating sharing transactions, the company executives provided expert insights through narrative interviews which were then processed by the researchers, condensed into hypotheses for validation in dialogue with the practitioners. Recording the exchanges between partnering SMEs before, during and after sharing a resource, researchers selectively intervened to ensure that managerial action remained on focus and was recorded on either side of the two participants to the transaction.

Table 2: sharing transactions in the Shift from Owning to Sharing (own illustration)

Shared Resource	Provider Company	Receiving Company	Case Description
3D Measurement	Tschudin + Heid AG	PEKA Metall AG	For measuring a technical part, Tschudin + Heid shares their 3D measurement device with PEKA several times per month.
Delivery Service	RERO AG	Tschudin + Heid AG	Excess loading capacity on the delivery van of RERO is provided to Tschudin + Heid when needed for delivery of their finished products to customers in close-by areas.
Marketing Expertise	Shiptec AG	Contrel AG	Shiptec temporarily provides its marketing expertise to consult on the digital marketing communication of Contrel.
Personnel	PEKA Metall AG	- (undisclosed)	In times of excess capacity, PEKA provides select members of its production workforce to a partner company where these skills and capacity are needed

Four cases of sharing projects were implemented and each documented in two cycles of Action Research between March and November 2021: marketing expertise, 3D measurement, delivery service and personnel (cf. Table 2). With the exception of one case where the receiving company did not participate in the research, seven transformations from owning to sharing were recorded (two companies for each case).

Since Action Research systematically enforces a constant and cyclical dialog between in-practice action and research (Coghlan & Shani, 2020), the research included data collection from observation, interviews and workshops which were fully and appropriately embedded

into the day-to-day managerial actions of participating companies. Particular attention was given to ensure that the sharing transactions were carefully documented, and the actual sharing was recorded such as it occurred in the real world. This included data-based observation of each sharing transaction followed by a semi-structured interview to reflect the observations and especially evaluate managerial action for each transaction. With the explicit permission of interviewees (Table 1), the interviews were audio recorded, transcribed at verbatim and coded independently in two cycles by two researchers using a coding system built from (a) the nine building blocks of Business Model Canvas, (b) timing of managerial action before, during and after the sharing transaction, (c) the three domains of managerial action (systems, organisation, people), (d) the importance of action at strategic, tactical or operational level and (e) the organisational level of responsibility for sharing.

3.3. Transformation in SMEs through action research

Along the cycles of Action Research, the companies transformed from an erratic and coincidental occurrence of sharing transaction in spontaneous partnerships, towards more conscious choices for sharing resources with purposefully selected partners. By exposing their intentions to participate in the B2B sharing community, the SMEs transformed towards a more collaborative and open company culture with a higher trust into new partnerships within a wider network.

The focus on management action along a jointly developed frame of reference guided participating SMEs to identify areas of transformation (a) in nine dimensions of their Business Model Canvas, (b) along the transformation timeline with iterative cycles of Action Research and (c) their people, systems, and organisation. Particularly, the changing role of the manager along the company's shift from owning to sharing was reflected through the dialogue between researchers and practitioners. Not only did managers realise that they need to lead the transformation in their organisation along the shift from owning to sharing in dimensions of people, systems and organisation, they also adapted their own role and managerial action as their company transformed from resource ownership to sharing.

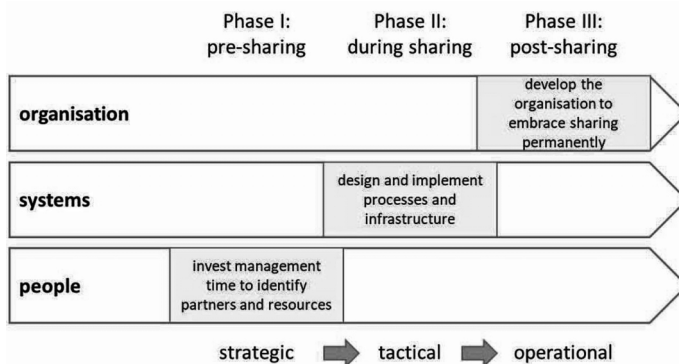
The participatory nature of Action Research ensured that the results, findings, tools and recommendations were jointly owned by the industry practitioners and researchers. While the results provided new findings from a research perspective, they made explicit what the companies had already adopted and implemented along the process – making the transformation visible that had implicitly occurred along the cycles of Action Research.

3.4. Findings

Out of the nine building blocks of Business Model Canvas, three areas of change were identified across all company cases: value proposition, partnerships and cost structures. The shift from owning to sharing leads companies (1) to rethink and potentially expand their value proposition on the market, (2) to open up their business model to new partnerships and (3) to deliver benefits on their cost structure by either monetising an idle resource (as provider to the sharing transaction) or use a resource from a partner at a lower cost than ownership or market-based rent.

All cases illustrated the need for managerial action on all three domains of (1) systems (predominantly processes, technical infrastructure and IT), (2) organisation and (3) people (investing management time and staff development and training). Actions in all three domains were apparent during the entire process of planning, implementing and evaluating sharing transactions. When the timing of management action was specifically cross-referenced with the three domains, a priority of management action became apparent for each of the phases (cf. Figure 3): *before* a sharing transaction, management activity focused on investing time to identify potential resources for sharing (idle capacity or demand for resources) and select potential partners for sharing. *During* the sharing transaction, the focus was on the design, adaptation and implementation of processes and infrastructure to accommodate the sharing transaction. *After* one or several sharing transactions of the same resource, the focus turned to enable and develop the organisation to embrace sharing more permanently, empowering the teams and staff to actively integrate sharing in their day-to-day routines.

Figure 3: focus of management action along three phases of sharing transactions (own illustration)



Cross-checking the relevance of sharing, managers also assigned a more strategic importance to the first phase, moving to tactical priority during the sharing itself and handing further sharing transactions of the same resource to an operational level thereafter, correlating with the three phases (cf. Figure 3).

4. Discussion and further research

This research depends on actual sharing cases taking place between participating SMEs, which remains rare in practice and often cannot be observed in significant frequency without direction. The direct involvement of a researcher in an industry case with an agreed purpose of improving the quality and frequency of B2B sharing underlines the argument for using Action Research. The empirical scope and research methodology, however, are not confined to the set of already confirmed company cases, but can easily be expanded to additional companies. Two sets of Action Research cycles and data records were generated with each sharing transaction (i.e., one for each sharing participant company) which allowed for swift accu-

mulation of empirical data even with a relatively limited set of participants. Further sharing transactions along with additional cycles of Action Research might be required at the same or additional companies still to fully validate the findings.

Along an Action Research project, research goes hand-in-hand with problem solving, which required a stronger emphasis on reflective action or reflexivity in balance of generalisation (Eriksson & Kovalainen, 2008, pp. 207–208). For doing so, the contextual conditions of the research project were aptly outlined (Jüttner, Huber, & Wäfler, 2019) along with detailed descriptions of the participating organisations and the key informants along a Business Model Canvas analysis of each SME. The transfer of contextualised knowledge to other settings requires an active process of reflexivity instead of direct generalisation of findings (Eriksson & Kovalainen, 2008, p. 208).

Given that transformational issues present an ever more frequent challenge in applied business management research (Frishammar & Parida, 2019; Rahman & Thelen, 2019), the methodology outlined here might find its application in other relevant areas such as digital transformation, service transformation, change management or organisational development. While it continues to be relevant to understand such transformations with regards to their outcome (before / after), i.e. in terms of *what* has changed, an equally attractive question will be to better understand *how* the transformation was achieved. As the role and actions of managers and executives in such transformations are already subject of research (Kumar Basu, 2015; Wrede et al., 2020), they are often investigated and described as static characteristics of a leader's profile or organisational parameters. This Action Research design through its iterative nature could potentially allow us to understand such characteristics as evolving roles and actions along the timeline of a transformation.

With related business research focused on (1) a need for business model transformation, (2) aiming to understand effective managerial action and (3) the interest in a transformation along a timeline, this specific Action Research methodology and its tools might be considered along a series of qualitative case studies in potentially a broad range of similar subject matters. Quite directly, Business Model Canvas might be embedded along an overarching Action Research cycle as a structuring model to identify areas of transformation and change. In working interactively with managers along several iterative cycles of Action Research, their evolving actions and roles along a transformatory process may be documented while facilitating the transformation itself. In so far, Action Research can cooperatively contribute to a transformation in business within a research project while simultaneously documenting its findings for a broader audience. Looking at managerial action in the dimensions of systems, organisations and people equally merits consideration in transformatory processes which might require change at varying degree in these dimensions at different times. Again, the iterative nature of Action Research allows us to record a time dimension for managerial action in the scope of analysis.

The participatory nature of Action Research makes it appropriate for transformations that include participatory elements, either in their process or as a result. B2B sharing being a collaborative activity in comparison with competitive ownership of resources, Action Research has itself facilitated participating SMEs to transform towards a more participating business model for themselves.

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