How GoGet CarShare’s Product-Service System is Facilitating Collaborative Consumption

Product-service systems (PSSs), a type of collaborative consumption system that combines products with (often digital) services, are becoming increasingly important for firms’ eco-friendly strategies and national and local sustainability policies. IT plays a vital role in creating effective and scalable PSSs. The case of GoGet CarShare, an Australian car-sharing service, illustrates the stages of developing a product-service business model, including the evolving integration of IT that underpins GoGet’s success. This case provides lessons for organizations starting a transformation journey that incorporates shared access to products and services via PSSs.¹

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The Growth of Collaborative Consumption

In 2011, Time declared collaborative consumption one of the 10 ideas that will change the world.² Collaborative consumption refers to various socio-economic models that incorporate sharing, renting, swapping or trading goods and services. In practice, collaborative consumption can provide the experiential benefits of temporary ownership of goods but without the burden of actually owning them. Prominent examples include Airbnb and Zipcar, and their success has inspired countless new initiatives through collaborative platforms, redistribution markets and product-service systems (PSSs).³ PSS examples include Uber, GoCatch and Airtasker. Although PSSs vary greatly in terms of scale, maturity and purpose, they are important because they enable the exchange of and access to goods and services through advances in digital technologies.

The research questions we set out to answer were: 1) Why have collaborative consumption business models emerged as an area of interest for organizations? and 2) Why have they

¹ Ping Wang, Iris Junglas, Hope Koch and Arun Sandararajan are the accepting senior editors for this article.
³ Business models that provide for cohesive delivery of products and services.
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become an idea that will change the world? The answers are complex but are rooted in the ability of collaborative consumption business models to tap into emerging markets that have arisen because of fundamental changes in people’s relationships with the objects they consume. These changes in behavior are a response to a variety of significant economic, political, societal and technological changes that have occurred in recent times.

Economically, the austerity and crises of the "great recession" exposed the excess capacity problems of a throwaway culture riddled with the over-consumption of goods and services. In turn, people began to question the steep upward curve in consumption behaviors in the second half of the 20th century, driven by significant societal pressures for people to own the goods they wish to consume. Global political pressure to adopt a “correct” consumerism ethos from supra-national bodies (e.g., the EU) and local governments have also encouraged a consumer desire for collaborative consumption practices in their use of products and services. Finally, the rise in organizations adopting collaborative consumption business models has been driven by the widespread use of innovative digital technologies, particularly mobile technologies, which have provided new capabilities for sharing.

Despite the massive growth and success of the sharing economy as a whole, many new entrants have experienced setbacks and even failed when attempting to launch their platforms. Examples include BlackJet, Tutorspree and Ridejoy. A review of 45 collaborative economy startups across Europe, Asia-Pacific and the U.S. found that many had failed due to difficulties in achieving critical mass (scale), unclear value propositions, lack of product focus, insufficient funding, regulation challenges, trust issues and poor user experiences.

Four Principles Underpinning Collaborative Consumption Business Models

In their 2010 book, What’s Mine Is Yours: How Collaborative Consumption Is Changing the Way We Live, Botsman and Rogers examined the emergence of a large number of such businesses and proposed that there are four principles common to all types of collaborative consumption initiatives and that underpin these emerging business models. These principles are 1) critical mass, 2) idling capacity, 3) belief in the commons (a term invented by Botsman and Rogers and explained below) and 4) trust between strangers.

In reaching critical mass, a convenient amount of choices must be on offer to satisfy customers. A critical mass will generate enough momentum for a system to become self-sustaining. While the mechanisms for achieving critical mass depend on context, needs and expectations, attracting a core group of recurrent customers appears central in creating "social proof" of a collaborative consumption business model.

The second principle is concerned with harnessing idling capacity and relates to the actual exploitation of resources, be they tangible or intangible assets, and redistributing their surplus capacity for productive use among customers. The unused potential of resources may relate to, for instance, the use of an idle...
vehicle, or even an empty seat in a car during a morning commute.

The third principle, **belief in the commons**, refers to the idea that through participation—sharing or consuming—customers are providing value and supporting a system and, in turn, adding value to a wider community. This idea, as Botsman and Rogers note, "taps into an innate quest to be part of a solution or even a movement of people with similar interests ... every single person who joins or uses [it] creates value for another person, even if this was not the intention."

The final principle, trust between strangers relates to the idea that collaborative consumption ultimately depends on creating trust between people who are brought together through a collaborative consumption platform. For instance, sharing your home with strangers requires a level of trust. Airbnb prides itself as being a business built on trust that enables customers to share a part of themselves—their homes—with others.

### Car-Sharing is an Example of a Smart Product-Service System

For over a century, the ongoing and rapid development of automotive technology has continued to change people’s day-to-day actions and the physical infrastructure that connects homes, businesses and cities. The near ubiquity of privately owned vehicles has resulted in automobiles fading into the background as an everyday “tool,” despite being a ground-breaking technology that greatly advanced our industrialized society. As a result, the car now has a significant role in people’s lives.

However, the now almost ubiquitous use of privately owned cars has resulted in a raft of unintended physical, social and ecological consequences that have resulted in private car ownership being seen as a severe problem that requires urgent attention. In response to growing interests in sustainability, including social equity, economic efficiency and ecological awareness, an increasing number of car-sharing initiatives have emerged, providing individuals with access to fleets of shared-use vehicles. These initiatives are helping to reduce traffic, pollution and noise in urban areas.

In recent years, significant changes in consumers’ relationships with everyday objects, such as cars, have been facilitated by technological disruptions resulting in products and services that better meet their needs. These disruptions are apparent in the ever-increasing inter-networking of physical devices, packages, libraries, vehicles and buildings (homes and offices) through digital innovations such as online, mobile and sensor technologies. Radio-frequency identification (RFID) technology, for instance, is used to track and geo-reference physical products (e.g., cars, packages and parcels). Likewise, the home automation or “smart home” market—which is forecast to have a market value of nearly $80 billion by 2020—is changing people’s interaction with their homes. Home automation enables the remote control and automation of lighting, heating, ventilation, air conditioning and home appliances, as well as security monitoring, through Wi-Fi and mobile technologies.

Because smart products combine a physical product with additional services, they can be used to form a type of collaborative consumption system known as a product-service system (PSS). A PSS consists of a tangible product and intangible services that are combined to fulfill specific customer needs.

The PSS developed by GoGet CarShare in Australia (described in detail in the next section) is a prime example of this type of collaborative consumption. The products (cars) are owned by GoGet CarShare, which is responsible for maintenance, repair and control of the vehicles. Using web-enabled devices, customers reserve the use of a vehicle, which is used sequentially by different customers, each of whom pays for use of the vehicle.

"Use-oriented" PSSs, such as GoGet CarShare, are potentially excellent mechanisms for fostering
sustainability because they fulfill customers' needs while reducing the number of vehicles on the road, with corresponding reductions in transport emissions.\textsuperscript{15} As a result, the development of or engagement with PSS business models is now a strategic option for governments and organizations as they aim to develop product-services with environmentally friendly outcomes.

Overall, PSSs are attractive collaborative consumption business models because they allow organizations to create new sources of added value and competitiveness, allowing organizations to fulfill customers’ needs in an integrated and customized way in the form of a “product-service.” PSSs enable organizations to build unique relationships with their customers, to enhance customer loyalty and to even promote faster innovation by actively responding to customer needs.

However, it is not clear how IT can effectively support the various steps involved in developing a PSS or, indeed, how IT contributes to harnessing the critical mass, idling capacity, belief in the commons and trust between strangers needed to develop a PSS business. Research in this area is important to better understand how PSS providers can gain business value from technologies in formulating breakthrough strategies, in designing compelling new product-service systems and in transforming management processes. To find out how IT is used at different phases of developing a successful smart PSS, we studied the evolution of GoGet CarShare, from its inception as a neighborhood start-up to its expansion as the leading car-sharing service in Australia. The GoGet case provides insights on the strategies and organizational changes that enabled the expansion of a PSS.

\textbf{GoGet CarShare’s PSS}

Sydney is the most populated and developed city in Australia; however, its transportation network is fragmented and at times chaotic. A 2012 PwC report noted that Sydney ranked fourth to last for transport and infrastructure among 27 cities worldwide and highlighted the growing need to alleviate congestion within the city.\textsuperscript{16}

Today, car-sharing plays a prominent role in Australia’s solution to its growing problems with transportation infrastructure, and GoGet CarShare is Australia’s largest car-sharing organization. With a fleet of over 2,000 vehicles available across the country, its 90,000 plus users (known as members) have taken over 3 million trips, freeing up 55kms of on-street parking space across Australia. With an average of 34 members sharing each GoGet vehicle, communities, businesses and councils have actively welcomed the business because of its contribution to reducing traffic and parking congestion in major urban areas.

Since its inception in 2003, GoGet has expanded its PSS through the introduction of technology platforms to reach a wider audience across Australia. A timeline summarizing various milestones of GoGet’s evolution is shown in Figure 1. The adoption of technologies has allowed GoGet to recruit a wide range of customers and to create a simple and effective booking process for customers to reserve the use of its vehicles.

In studying the development of GoGet’s PSS, we carried out 15 in-depth interviews and observed its operations over a two-year period (the research method is described in the Appendix). This allowed us to identify and document how the organization expanded and to gain a better understanding of the strategic role of IT in the growth of GoGet’s PSS. Secondary data sources were also reviewed and analyzed, including local City of Sydney websites and their posts relating to the support of car-sharing initiatives, and customer reviews of GoGet services posted online (e.g., on the Australian Product Review website—https://www.productreview.com.au/). We examined 132 customer reviews of GoGet from 2012 to 2016 and categorized them by rating of the service (Excellent, Good, Ok, Bad and Terrible). We then corroborated these findings with information from the interviews about the perceived position and negative aspects of GoGet’s evolving product-service system.

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Surprisingly, we found that the key to GoGet’s success as an environmentally friendly PSS was not through innovations in “eco-friendly” product-services (e.g., electric cars). Instead, GoGet's growth took off when it began to consider the wider user experience and different “personas” involved in private car ownership. Its efforts to find and understand the “moments in life” when different people need vehicles enabled GoGet to diversify its PSS and achieve critical mass, making it the industry leader. By using the data collected from the millions of shared-car journeys it has facilitated, GoGet was able to educate individuals, communities, local governments and organizations on how they too could benefit from car-sharing services. Expanding its car-sharing services in this manner enabled GoGet to deliver the environmental impact it desired, while slowly transforming transportation policy across Australia in the process.

The Evolution of GoGet’s PSS

Two factors have been key to GoGet’s expansion and success: its introduction of a fleet of vehicles into several other organizations’ value chains and its spread across communities through actively engaging with and educating local councils and businesses. For instance, in 2011, GoGet introduced its vans into the car parks at IKEA stores to assist IKEA customers in transporting bulky items back to their homes. GoGet has also partnered with La Trobe University in Melbourne to integrate both GoGet and La Trobe’s fleets of vehicles so that both organizations could better manage the variations of peak and off-peak demand. Furthermore, GoGet has placed its vehicles at development and property sites for use by residents in apartment blocks, thus boosting the use and value of the shared assets.

Figure 2 provides an overview of the multistage evolution of GoGet’s PSS from 2003 to the present day. It shows the steps taken by GoGet to develop its PSS over time and highlights the different roles played by the IT
organization during each stage. GoGet predicts that its penetration of Australian households will reach 20% by 2020. It is also currently part of a project developing driverless and crash detection technologies, which one day could become part of the public transportation system.

**Stage 1: Amplifying Pro-Social Objectives (2003-2006)**

GoGet was founded in 2003 in Newtown, an inner-city Sydney suburb. Prior to the launch of GoGet, congestion and the availability of parking spaces in the Newtown area were significant issues. Hence, the rationale for founding GoGet was to create an eco-friendly car-sharing service to resolve the chaotic parking debacle in the streets of Newtown. During Stage 1, GoGet’s co-founders set about delivering a pro-social message. They sought to nurture a small but vibrant local community of users who would actively engage in car-sharing to reduce the number of unused vehicles on the streets and increase parking availability. They established a rudimentary PSS with the objective of cultivating trust and belief in the commons. Their intention was to increase sharing and access to private transportation in their community and to bring about a change that would benefit the environment.

Stage 1 began GoGet’s continuing journey of educating the population about how its disruptive product-service operates and of explaining the benefits of the service to local councils through holding public events. These initiatives sought to “educate people and make them aware of [the GoGet] system and everything that goes along with it,” such as “making sure you refill petrol to a quarter tank” or “making sure [the cars] are clean.”

The sole function of the rudimentary Stage 1 PSS was to provide information (a service) on the availability of shared private cars (the product). However, the members demonstrated exceptional trust in each other and belief in the vision of GoGet, often going the extra mile to ensure the cars were maintained and parked in the right location, as well as setting up an informal system to share car keys with one another.

The role of the IT function in Stage 1 was primarily that of evangelization—the simplicity of the setup allowed GoGet to get its pro-social message across in a clear and concise manner. The IT supporting the PSS in the initial stage was largely limited to emails and texts communicating the secure location of the car keys to community

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**Figure 2: GoGet’s Product-Service System Evolution**

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members. GoGet’s business manager described the basic website in Stage 1: “We didn’t have any in-car technology or remote access, we just had a public-facing website, which we did by ourselves, and also the booking systems, which included fleet management and billing. We didn’t have payment gateway integration as it was done manually.” Moreover, the unpolished (albeit non-deliberate) way in which IT was deployed served to reinforce the notion that GoGet was first and foremost a grassroots movement rather than a for-profit business.

**Stage 2: Ensuring Business Viability (2006-2011)**

Having established its ground-breaking business model and its intriguing pro-social message in Stage 1, GoGet expanded operations into several other suburbs, and its customer base began to grow steadily. However, this growth presented challenges. One challenge was the complexity of managing its growing operations outside of Sydney. As the product manager noted, “We had three or four vehicles stolen in Melbourne for a few weeks, but we got them back … people broke into the lockboxes and drove away with the cars … we’ve never had a vehicle stolen which we weren’t able to find,” but “we had to launch in-car technology sooner than later.” As a consequence, the emphasis of GoGet shifted to ensuring the viability of its business, and to achieve this, its PSS was developed to improve security and scalability and thus usage of the vehicles.

To increase scalability and drive the growth of its business, GoGet’s PSS was redesigned to enable customer self-service and, subsequently, to reduce operational and administrative overheads (e.g., eliminating the need to co-ordinate the exchange of keys between its members). To achieve these objectives, GoGet invested in the development of its first in-car technology, called the “magic box” unit, and the “FC system” (a pseudonym for the purposes of our study). With these technologies in place, a customer could now book a car on GoGet’s website then go directly to the vehicle and access it using only his/her GoGet membership card. Access was facilitated by an RFID reader that assisted in the remote locking and unlocking of the cars. The in-car unit recorded the location, speed and distance travelled, and this information was used to bill the member.

More importantly, the in-car technology proved to be crucial in enabling GoGet to achieve critical mass and thus to scale more rapidly and effectively. As GoGet’s product manager explained, “One of the reasons that GoGet has managed to grow into one of the largest sharing organizations in the world is that we have focused on growing a network [rather than] making sure our technology was perfect before we put it out to the market.”

The introduction of the “magic box” to GoGet’s expanding fleet marked a significant milestone in the PSS’s ability to scale into a large online “socio-material network” tracking people, journeys and physical vehicles. This integrated technology provided both functionality and geographic scalability. For instance, customer service staff could now remotely view the location of all GoGet cars on their screens and thus provide directions for customers to locate cars. They could also remotely open the car doors, sound the horn and kill the engine. Remote governance over the fleet enabled GoGet to expand from its locations in Sydney to other locations across Australia, while being able to securely monitor and maintain its fleet.

The PSS was also enhanced in Stage 2 to improve GoGet’s resource usage by ensuring that cars were available within a convenient distance, even during peak business hours. The product manager explained the problem that GoGet was facing in relation to idling capacity: “We wanted more utilization, but up to a certain point, because if a vehicle isn’t available for usage consistently in an area then people will stop using it at all. One of the things that we did with idling capacity was to look for a mix of both residential and commercial uses because if you have just personal use, you will find that everyone wants to use the car in the evening and during the weekends.”

During Stage 2, the IT function was concerned with systems integration and the development of in-car technology. Its role during this stage was therefore primarily that of orchestration.

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17 Socio-materiality is a theory built on the intersection of technology, work and organization. It attempts to understand “the constitutive entanglement of the social and the material in everyday organizational life.” For more information, see Orlikowski, W. J. “Sociomaterial Practices: Exploring Technology at Work,” *Organization Studies* (28:9), 2007, pp. 1435-1448.
GoGet invested heavily in the integration of systems to streamline business processes, such as making bookings, determining the location of cars, handling customer interactions and providing remote customer assistance. The business improvement and optimization manager explained how system integration helped improve resource usage not only for GoGet, but also for its partners:

“Our integrated fleet system allows large companies who have fleets of vehicles to install in-car technology and then have their vehicles on the same booking platform as the GoGet vehicles. It’s a fleet optimization system, and it enables them to have much better visibility of how their vehicles are being used and how many vehicles they actually need. And it eliminates [the need for a] “grey” fleet and also private use of company vehicles because they are being tracked. It also means that they can use GoGet cars during high usage periods [when all their vehicles are already in use]. [This means that] the base level of their fleet can be lower and they can reduce costs. We also integrated the payment gateway, thus improving security, and we also started [to use] a new payment gateway provider, which enables people to [use] their PayPal accounts.”

GoGet also integrated subsystem functions for recording trip information and for improving service delivery, fleet recovery (to improve fleet usage), vehicle scheduling and customer billing. These integration efforts were aimed at optimizing resource usage and improving the efficiency of allocating resources between GoGet’s members (i.e., sharing). In this way, the IT function supported the objectives of the Stage 2 PSS—improving scalability and idling capacity.

Stage 3: Blending Market and Social Logics (2011-Present)

With the Stage 2 PSS in place, GoGet’s customer base and the geographic scope of its operations grew even more rapidly. Indeed, the orange wing mirrors by which GoGet cars are known have now become part of the urban landscape in the largest Australian cities and have helped spread awareness and uptake of the business even further. However, GoGet’s rapid growth was accompanied by a dilution of its original pro-social message and a weakening of the close-knit sense of community and the accompanying sense of responsibility for maintaining the shared resources. A GoGet employee provided an illustration of the challenges associated with GoGet’s business growth and continuing to make GoGet users feel part of a community: “In terms of community of users, in the first few years of operation, it was important for our users to feel engaged and part of the organization ... As we have grown, [this] has become less feasible, and as the percentage of [early adopters] has decreased, people are less interested in GoGet as a community.” As a consequence, the management of GoGet felt the need to transform its PSS once again to achieve a balance between the market and social logics underpinning its business.

In particular, to sustain the growth of its business, GoGet sought to leverage the critical mass of its platform to carve out new, lucrative niches within its customer base and increase the attractiveness of its market offerings. To further this goal, GoGet implemented a CRM system, which maintains profiles of its members and helps staff create more personalized connections with them, making its members feel more privileged. In addition, by coupling the use of the CRM system with a sophisticated geographical information system, GoGet was able to use its customer profiles and location information to provide more value-adding and targeted offerings, moving from offering just passenger cars to vans, SUVs and even luxury cars, as well as a flexible booking model. A GoGet executive described the use of these systems: “So we have ‘heat maps’ on our websites that show a couple of different locations, people and utilization levels. We use technology a lot in looking for new areas ... demographics reporting and our existing data on similar profile suburbs.”

In addition, to reinforce its pro-social message, GoGet took a variety of measures aimed at bolstering the collective identity of its community. First, it gave human names to GoGet cars on its website, effectively anthropomorphizing its inventory. The rationale behind this seemingly trivial move was that it would improve the sense of ownership and create “personal” relationships between customers and their local GoGet car. GoGet’s Communications Manager explained, “They will see that resource always a bit as belonging to them, they will recognize it and know
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Second, GoGet sought to build more intimate relationships with its customers by using a variety of social media platforms and mobile booking options. As a customer services manager explained, “It’s hard because we definitely have two different types of members. The members that want to be in car-sharing for the green side, the environmental side, and really care about it, and the other group who don’t get car-sharing.” This split in the customer base was also evident in the online reviews, with many customers taking pride in using GoGet because of its green credentials: As one customer noted, they were “doing our bit to change the ‘car is king’ mentality, one less car on the road.” However, the majority of positive feedback from customers (those ranking the service from Ok to Excellent) cited cost-savings and convenience as the major value of being a member.

The more frequent and better quality interactions with the two types of customers enabled by these channels enabled GoGet to not only promote its pro-social objectives more effectively, but also to monitor the opinions of its customers and subsequently tailor its offerings in response to those opinions. For instance, online reviews from some customers showed that they felt that, as the business expanded, GoGet’s prices crept up, accusing the company of moving “from green to greenback.” The reviews also showed that customers found the vehicle booking options too inflexible. In response, GoGet expanded customers’ booking options to include flexible reservations and more user-friendly mobile app services. These changes provided more flexible and convenient use of GoGet’s product-service. The company has also begun to experiment with providing “green alternatives,” such as electric cars.

Overall, the role of the IT function in the ongoing Stage 3 of the evolution of GoGet’s PSS is primarily that of harmonization. IT is deployed in a variety of ways to reconcile GoGet’s business and social objectives, and to maintain the trajectory of growth while reinforcing the company’s pro-social mission that had diminished as a result of the growth of its community.

Lessons Learned and Practical Implications

In the digital era, there is increased pressure on executives to innovate, transform the organization and maximize the use of the business’s assets. They need to do this both to improve the bottom line and to enhance organizational reputation or market share. Executives today must be able to differentiate the business’s products or services in the marketplace. The findings from this study suggest that smart PSSs can play a significant role in organizations’ digital era strategies.

Given the ability of a PSS to combine a physical product with additional services—with minimal additional overheads—integrating a PSS into the organization can lead to innovation, organizational transformation and maximum usage of resources. In addition, the advent of the digital era has extended an organization’s social and environmental responsibilities. These responsibilities also impact the bottom line and must be reported in the annual report. However, in most businesses the potential benefits offered by adopting digital services, such as smart PSSs, are yet to be realized.

We have identified five lessons from the GoGet CarShare case. These lessons, and their implications for practice, are described below.

1. At First, Prioritize Pro-Social Objectives over Business Objectives

Although collaborative consumption has immense potential for generating both economic and social benefits (because sharing generally reduces wastage), a PSS should initially prioritize pro-social objectives over business objectives. A compelling pro-social message will help to legitimize the nascent collaborative consumption platform by attracting a sufficient initial mass of customers with whom the message resonates. Conversely, if the PSS focuses first on business objectives, the pro-social message may

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later be perceived as merely an afterthought and met with customer skepticism.\textsuperscript{20}

2. Subsequently Establish a Viable Long-Term Business Model

Although the pro-social objectives of a collaborative consumption platform should be prioritized first, there is a need to subsequently establish a viable business model if the PSS platform is going to not only survive, but also thrive and reach critical mass. Many early adopters of GoGet were attracted by its pro-social message, but the appeal of the platform needed to be widened if GoGet was to grow. GoGet therefore had to modify its business model to make its offering attractive to the mainstream market in order to achieve a critical mass of customers. GoGet did this by addressing the issues of idling capacity and business scalability. This lesson is consistent with the logic that underpins social enterprises. Businesses founded with a social cause eventually have to be operationally efficient and profitable. As they grow, however, their potential for effecting social change increases as well.\textsuperscript{21}

3. Reconcile Business and Social Logics if Business Growth Dilutes the Initial Pro-Social Identity

Balancing the business and social objectives of a collaborative consumption platform is difficult. As GoGet moved into the mainstream market, its customer base no longer consisted solely of those who identified with its pro-social message. GoGet needed to understand that it now had two distinct types of customers with diverse interests. Catering to those interests in different ways was key to sustaining the growth of its business while maintaining its original pro-social mission. In other words, collaborative consumption platforms, like social enterprises and other forms of businesses that emphasize a social cause, are inherently hybrid organizations.\textsuperscript{22}

As such, they need a delicate balance between the hybrid business and social objectives of the platform. They must resolve the tensions between these objectives if they are to build and sustain competitive advantage while not alienating any of the participating stakeholder groups. GoGet makes considerable investments in local community businesses and in reinforcing public-sector partnerships (i.e., with local councils). These investments serve not only to illustrate GoGet's commitment to the community as an eco-friendly business, but also to embed community experiences into its business model and thus increase its ability to combine social and financial goals.

4. Allow the Role of IT in Enabling the PSS to Evolve as the PSS Evolves

The PSS of a collaborative consumption platform is key to achieving the strategic priorities, and IT is a crucial enabler of the PSS. The GoGet case reveals that the PSS evolves in response to changing strategic priorities. This means that the IT deployed to enable the PSS must also evolve. More specifically, the role of the IT function evolves as well. In the initial stage, the role is evangelization as the IT function creates a PSS that cultivates trust and belief in the commons. In the next stage, the role is orchestration as the PSS evolves to support optimizing resource allocation and improving business viability. Finally, the role of the IT function becomes harmonization as it supports a PSS that facilitates market expansion and effective segmentation while reinforcing the business's social cause.

5. Avoid “Ideal” Solutions that Don’t Work in Practice

Despite its original eco-friendly motivation, GoGet learned that electric vehicles, at least as they currently are, do not work well for car-sharing. People simply did not use them. But GoGet's determination to succeed led it to review “actual” user experiences (e.g., going to IKEA and having to transport bulky items back home, trouble finding a parking space in their local area) instead of “ideal” user experiences (emission-free transportation). This exercise helped GoGet to identify that the best way forward was to simply expand the sharing of resources, even though


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this was not the greenest option. GoGet learned that by focusing on making its car sharing PSS as efficient and convenient as possible, it is delivering major benefits to the community—and to the environment. These benefits are baked into GoGet’s business model. By avoiding “ideal” solutions that don’t work in practice (such as using electric vehicles) and by staying true to the core of car sharing, GoGet is delivering significant social and environmental benefits.

The lesson here for executives seeking to make a genuine environmental impact is that sometimes the answer to innovation and organizational transformation has more to do with complementary activities (e.g., car-sharing) than with radical adoption of new practices or technologies (e.g., electric cars).

Concluding Comments

In this article, we have described the four principles of collaborative consumption business models—critical mass, idling capacity, belief in the commons and trust between strangers—that govern this emerging type of business. Based on our study of GoGet CarShare’s evolving product-service system, we have provided advice on how these principles can be applied.

The starting point to achieving critical mass is to emphasize a collaborative consumption platform’s pro-social objectives when the platform is initially launched to attract a core of users who identify with those objectives. As the number of platform users begins to grow, the emphasis switches to business fundamentals and to attracting a wider base of users who add to the original core group and thus create a critical mass. Idling capacity—i.e., resource capacity that is idle—can be minimized by using IT to optimize resource allocation. Specifically, IT can reduce the costs of searching for and using a resource on a collaborative consumption platform and facilitate the physical exchanges that must occur between customers and the resource owner. Belief in the commons is established by grounding the platform in a strong and coherent pro-social message and cultivated by continually sustaining the platform’s focus on that message as the number of platform users grows. Finally, the trust between strangers that has to exist on a collaborative consumption platform has two dimensions: a belief in the quality of the product-service and a belief in the legitimacy of the platform’s social objectives. It will take time and effort to establish and sustain these beliefs, but a collaborative consumption business can achieve this by carefully striking and maintaining a balance between the business and social logics of a product-service system over time.

Collaborative consumption business models are here to stay, and they are starting to proliferate across the globe. However, an important caveat is that applying the principles and the lessons described in this article can only guide businesses seeking to adopt the collaborative consumption paradigm and do not guarantee success. The inherent weaknesses of collaborative consumption businesses have already started to appear and include the burden of maintaining the focal resource and persuading mainstream users (rather than the original pro-social users) to consume resources via the platform. It is only by addressing these weaknesses that businesses can achieve the next step-shift level of growth and unlock the full potential of collaborative consumption business models.

Appendix: Research Method

We conducted 15 face-to-face semi-structured interviews with GoGet personnel over a two-year period and, if necessary, followed up later to clarify any uncertainties and issues that arose during the interviews. The aim of the interviews, each of which lasted approximately 45 to 60 minutes, was to obtain in-depth responses to the research questions. Each interview was recorded at the discretion of the participant to ensure maximum accuracy of verbatim statements from participants. The interviewees comprised a wide range of GoGet personnel, including top-level management, mid-level managers and GoGet users. This wide range of participants ensured that we captured data about all of the activities and technologies involved in GoGet’s product-service system. The participants and the topics covered in the interviews are listed in the table below.

We used a “snowballing” technique to select the interviewees, where the original interviewees were asked to set up the next set of interviews with key contacts within the business.
Based on findings discovered in an interview, the interviewee was asked to identify GoGet personnel who would be able to provide more depth and detail about the technologies and processes discussed. This snowballing process began in June 2015 with three interviews that focused primarily on GoGet’s business strategy. The process continued until late 2016, when we felt that the further 12 interviews had provided sufficient coverage in terms of the number and variety of participants across GoGet’s operations and partnerships. Each interview continued until we felt we had fully understood the participant’s knowledge, and we stopped conducting further interviews only when we felt that all key areas needed for our research had been covered. Additional follow-up interviews were conducted with some participants in October 2016 to clarify any uncertainties found during the analysis of data obtained from the original interviews.

### Interview Participants

<table>
<thead>
<tr>
<th>No.</th>
<th>Title</th>
<th>Topics Discussed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Accounts Manager</td>
<td>Customer accounts, GoGet community, rewarding customers</td>
</tr>
<tr>
<td>2.</td>
<td>Business Improvement and Optimisation Manager</td>
<td>History of GoGet, liaising with councils, security of vehicles, integration with new technology</td>
</tr>
<tr>
<td>3.</td>
<td>Chief Executive Officer</td>
<td>Direction and vision, business strategy, GoGet history</td>
</tr>
<tr>
<td>4.</td>
<td>Chief Financial Officer</td>
<td>Costs and savings, revenue and growth, strategy</td>
</tr>
<tr>
<td>5.</td>
<td>Communications Manager</td>
<td>GoGet history, social media platforms, growth, consultation with partners and stakeholders</td>
</tr>
<tr>
<td>6.</td>
<td>Customer (business user)</td>
<td>Purpose of using GoGet, restrictions on usage, issues/benefits of usage</td>
</tr>
<tr>
<td>7.</td>
<td>Customer (personal user)</td>
<td>Purpose of using GoGet, issues/benefits of usage, membership plans</td>
</tr>
<tr>
<td>8.</td>
<td>Customer Support Manager</td>
<td>Customer service, customer experience, GoGet culture, partnerships</td>
</tr>
<tr>
<td>9.</td>
<td>Fleet Manager</td>
<td>Vehicle maintenance, procurement of vehicles, GoGet culture</td>
</tr>
<tr>
<td>10.</td>
<td>General Manager of Melbourne and South Australia</td>
<td>Growth of GoGet in Melbourne/Adelaide, governments and councils</td>
</tr>
<tr>
<td>11.</td>
<td>Head of Business Solutions</td>
<td>Partnerships, business usage and plans, transport network</td>
</tr>
<tr>
<td>12.</td>
<td>Head of Locations</td>
<td>Councils and parking spots, location and demographics correlations</td>
</tr>
<tr>
<td>13.</td>
<td>Locations and Transport Manager</td>
<td>Vehicle placement, membership plans and profiles, councils, transport network</td>
</tr>
<tr>
<td>14.</td>
<td>Members Service Manager</td>
<td>Customer service, customer expectations, staff training, GoGet culture</td>
</tr>
<tr>
<td>15.</td>
<td>Product Manager</td>
<td>History of GoGet, member community, advertisement and marketing</td>
</tr>
</tbody>
</table>
How GoGet CarShare’s Product-Service System is Facilitating Collaborative Consumption

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Jonathan Englert
Jonathan Englert (jonathan@andirongroup.com) is the founder of AndironGroup and has worked as the Head of Communications for GoGet CarShare. He is currently pursuing a PhD at the University of Sydney which seeks to better define the nature of technological (and other) invention. He is a noted communications strategist specializing in disruptive technology, cybersecurity and the sharing economy. He has worked as a journalist and is an award-winning book writer, and a scriptwriter and producer for feature films, documentaries and interactive media.