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Digital innovation opportunities for the UK Sharing Economy

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Background

PwC has calculated that five key sharing economy sectors could generate £9bn of UK revenues by 2025. Globally, revenues from these sectors could hit \$335 billion by 2025.ⁱ In November 2014 an independent review of the UK sharing economy was conducted on behalf of the Department for Business, Innovation and Skills (BIS). The report listed a series of recommendations aiming to pave the way towards the UK becoming a global leader for this fast growing sector.ⁱⁱ Up front was a recommendation for government to foster innovation in the UK sharing economy.

In October 2015 Knowledge Transfer Network (KTN) held a workshop at Nesta's headquarters to gather inputs from a wide range of stakeholders to inform the work of Innovate UK on the sharing economy, with a particular focus on digital innovation. The objectives of the workshop were:

- To identify commercial digital-related innovation challenges which, if solved, could enable:
 - organisations and companies to participate in sharing economy models for the first time
 - existing organisations and companies active in the sharing economy to be more effective
- To gather wider intelligence on challenges and opportunities faced by organisations and companies in the sharing economy to inform the wider work of Innovate UK, KTN, Nesta and BIS.

Definition

For the purposes of this workshop the sharing economy is defined as “online platforms that help people share access to assets, resources, time and skills.”ⁱⁱⁱ

Next steps

Innovate UK now expects to open an IC tomorrow innovation contest on the sharing economy in March 2016. The innovation contest forms part of the UK government's response to the independent review of the sharing economy.^{iv}



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Innovation Opportunity Areas Identified by Workshop Delegates

Workshop delegates identified the following themes as key innovation opportunities for the UK sharing economy. The themes below do not form a comprehensive analysis of digital innovation opportunities for the sharing economy in the UK but can be used as a useful input into a more comprehensive analysis.

Trust

The sharing economy's foundation on trust between people means that participants (both sharers and users) can be at risk themselves. There can be issues with an asset being used - imagine borrowing a faulty electrical item or staying in a property without a smoke detector. There could also be issues with the person you are interacting with: for example is that person qualified in the skill in which they claim to be qualified?

There are digital innovation opportunities for increased / improved use of technology to extend trust. Coming into a service with a clean slate, new users necessarily have no reputation to put forward.^v There is a need to reward good players and to ensure bad actors are identified and eliminated, whilst addressing privacy and right to reply concerns. Almost all platforms already have peer-review systems, but it was widely felt that these are not trustworthy (and not perceived to be trustworthy), open to abuse or subconscious bias and in need of some level of standardisation/benchmarking. Transfer of user profiles across to sharing economy platforms and sharing between multiple sites (portable digital passports), standardising of rating systems across sites or new / improved / integrated identity verification software could assist in generating and maintaining confidence for users. eRated is an example service attempting to tackle this issue but does not operate at scale yet.^{vi}

From a user perspective, there could be a benefit of creating "data dashboards" showing an individual's data across all sites to aggregate their personal footprint. Such a move could be incentivised by the EU General Data Protection Regulation, which is likely to introduce the right to data portability.^{vii}

Platforms and insurance

There are significant challenges in accessing good insurance for individuals and small companies participating in the sharing economy. Proof of insurance status is required by some platforms, for example TaskRabbit. The British Insurance Brokers' Association has provided guidance to its members



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and is working to provide information on which insurers will provide products for sharing economy services.^{viii} But insurance providers can struggle to keep pace with the fast-evolving sharing economy market or to justify investment to develop and provide products for niche areas or very short time periods (e.g. one hour's activity). As such there are digital innovation opportunities around insurance, for example solutions to join together to better negotiate terms and conditions, solutions to build / determine risk profiles for users and assets, and financial values for assets, in the sharing economy, methods to provide insurance to individuals and small companies and risk quantification systems.

The UK enjoys global leadership in the insurance sector and thus is well placed to lead the field in providing solutions to these issues.

Data

Data is a key element of successful sharing economy business models. "Participants freely share their data to let others know what they need, and big-data algorithms are applied to make recommendations based on where there's idle capacity available to meet needs. Data underlies the capacity calculations, social media integrations and digital technology interactions that together make on-demand access to things possible."^{ix}

There are opportunities for increased use of big data and open data to facilitate sharing economy services as well as potential to unlock new value from closed private data, for example sharing energy meter reading data to enable mass switching.

Communities

Proximity and convenience are key success factors in sharing economy business models. In the UK, many sharing economy services only currently operate in one city or even certain districts of cities (most notably in London).

In order for the sharing economy to take off in other areas, there is an opportunity to develop flexible models that can provide tailored services based on shared insight drawn from the local community to tap into local specificities and locally-identified problems and interests. Empowerment of local communities, strengthening of social cohesion, tapping into people's inherent desire to be involved in their communities and strong devolution and localism agendas were strongly highlighted as enabling factors at the workshop. Development of locally-tailored initiatives could be achieved by working with a local authority, community groups or university campus.

One example could be the development of a generic modular platform which has already built in various transaction methods (time, payment, barter),



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ratings systems, log-ins etc (similar for example to Wordpress for websites). Such a platform could be used in a bottom-up manner, personalised by local areas, avoiding the need to develop a new platform from scratch for each new sharing economy idea.

B2B services

The roots of the sharing economy are in C2C (consumer-consumer) sharing, tapping into the wealth of underutilised assets and skills held by individuals. It is recognised that businesses also have significant underutilised assets, such as equipment, facilities, meeting rooms as well as collective capabilities and individual employee skill sets. There are opportunities to reduce costs and detrimental environmental impact through sharing and exchange of underutilised assets, which could lead to potentially significant secondary benefits through the development of new business relationships and collaborations. Some initiatives already exist in this space: for example, Echo facilitates the exchange of skills between businesses.

Digital solutions to unlock significant opportunities for large companies to make their assets available to others for mutual benefits could be particularly interesting. For example companies with large estates making roofs available to an energy company to host solar panels, companies with large transport fleets hosting cameras to collect mapping data, and so on.

Location issues - people

The sharing economy's foundation on trust between people means that participants can be at risk themselves. Safe and secure mechanisms for sharing location are needed as well as mechanisms to provide location information to third party relatives / friends of sharing economy participants and also employers who are managing a dispersed workforce.

In addition to addressing safety concerns, increased use of location data can drive increased participation in the sharing economy and provide added-value to those participating in the sharing economy by driving increased personal interactions. For example, enabling users to connect to one another in the sharing economy so they can support each other, use of social media (+location) to encourage uptake through shared confidence and integrating information (i.e. locations) into existing apps (i.e. CityMapper, Google Maps) for constant exposure.

Conversely there are opportunities to encrypt location data more easily or to anonymise it to alleviate concerns about data misuse. Finally digital services could be developed to find places for people to meet more safely, avoiding the need to meet in the home.



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Tracking and tracing

The huge improvements in logistics and delivery services and infrastructure in the UK mean assets can now be transferred between locations rapidly and reliably. There are further opportunities to improve the management of dispersed inventories through embedding asset location tracking in sharing economy services and low-cost, low-power, easy-to-use solutions for physical asset tracking / connecting assets to the Internet of Things.

Automating the sharing economy

Whilst sharing economy models are in many cases developed in part to increase human interactions, there are opportunities for automation to help identify and realise opportunities for sharing. For example smart assets could report if they are underutilised and therefore available for sharing. In addition algorithms could be used to “match” potential sharers with potential users, perhaps in a similar way to internet dating. Such automated matching could reduce the reliance on human intervention (e.g. posting, manual searching) thereby making sharing easier and quicker.

Measuring value systems

There is potential for economic, social and environmental benefits through the uptake of sharing economy services such as reduced absolute consumption of resources and increased community interactions but also risk of unintended or negative consequences, for example perpetuating or exacerbating inequality or exclusion of certain social groups. Different sharing economy organisations have very different emphasis on desired impact but whatever the organisation’s aspirations, measuring e.g. social and environmental benefits of sharing can be challenging. Digital solutions to measure environmental metrics or social value tools were identified by workshop participants as a key area of opportunity.

Adaptive growth of advanced sharing economy business models through service design

Early exponents of sharing economy business models have seen rapid uptake of services by the general public, particularly in car sharing, accommodation and clothing. However, early adopter enthusiasm soon wanes as businesses reach a global scale and lose some of the personal touch that typified early sharing encounters. The challenge identified by one syndicate group was to use service design as a way of making these business models more adaptive during growth. This may involve service design to incentivise meaningful engagement, not only from “sharers” but also from the community which supports the sharing offer. For example, an accommodation platform could



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add local “flavour” such as restaurants, galleries, shopping, historic sites, etc. It is essential to maintain integrity and consistency of this personal touch as the business model grows. Digital innovations would be used to “tailor” this local network very specifically to the customers’ tastes. Research would be beneficial to explore co-creation, community definitions, story telling, and changing values as services are used multiple times.

Integration with existing services

One approach to increasing participation in the sharing economy identified was seamless integration with existing services. In the words of the Harvard Business Review “sharing is not just for start-ups.” There are opportunities for “traditional” organisations to integrate sharing economy services into their existing systems and thereby potentially provide access to the sharing economy to large existing customer bases. Alternatively, successful sharing economy platforms with a critical mass achieved through existing well-established communities could branch out into new areas, avoiding the need to build a community from scratch (a known challenge for many start-up platforms).

New markets

The sharing economy has taken off principally in the areas of accommodation, transport and skills and is rapidly emerging in areas such as fashion, food and personal items. There are innovation opportunities to support the development of the sharing economy in yet further sectors. Example areas which could warrant further exploration include assisted living / hospital equipment, utilities, logistics, pharmaceuticals and telecommunications. Sectors which are characterised as oligopolies (e.g. telecommunications) tend to have significant underutilised assets due to reduced market competition driving efficiencies.

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Workshop participants

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Benita	Matofska	Compare & Share
Matt	McStravick	Economy of Hours
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Matt	Stokes	Nesta
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Andrea	Westall	Open University



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