



Social media & mobility: Empowering citizens toward social and economic participation

Working Paper Number 2 – July 2014

The [IBM Cúram Research Institute's](#) research project: **Social media & mobility: Empowering citizens toward social and economic participation** aims to explore the role of social media and mobility based solutions in empowering citizens to achieve better social outcomes within the social protection system (in this context the term social protection covers social security, social services and social care).

[Working Paper Number 1](#) was issued in May 2014 for public comment. Working Paper Number 1 examined the new relationship model emerging from social media engagement. Working Paper Number 2 examines 'Mobility and the Emerging Value of the Internet of Things'.

During February and March the first round of interviews and workshops were conducted with several organisations and individuals from across the Nordic countries and Western Europe. Further interviews and workshops were conducted in Europe and North America during April-May. An interim report was delivered at the International Social Sector Forum in Vienna in June 2014. The final report will be launched at the [IBM Cúram Health and Social Programs Summit](#) in Washington DC in October 2014.

The purpose of this working paper is to provide some preliminary commentary on the workshop and interview outcomes and identify a unifying theme(s) to be explored and tested in subsequent rounds of interviews and workshops.

A list of general observations is also included at the end of this working paper which will be expanded/validated in subsequent workshops and interviews.

Feedback and comments on this paper are most welcome and should be sent by 15 August 2014 to: Eloise O'Riordan at eloise.oriordan@ie.ibm.com



Scope of this paper

This working paper is focused on mobility. Within the IT industry mobility has several dimensions. For this working paper we have confined the discussion to mobile computing for staff working in social protection and for people using the social protection system.

The IT industry is promoting the potential of mobile + cloud computing + analytics + social media as a new frontier for enabling the next wave of economic growth. Mobility is often coupled with one or more of these components – cloud computing, analytics and social media. Working Paper Number 1 examined the social media component and Working Paper Number 3 will address the analytics (or data) component – better data leads to better social policy and service delivery.

Cloud computing offers a more flexible delivery and procurement model for IT related products and services. There is little evidence so far from this research that cloud computing offers any unique value for social protection organisations over and above the general value proposition for all industries such as flexibility and scalability in terms of procurement and delivery models. While it is likely social protection organisations will explore the potential of cloud based computing to deliver social media and mobility based solutions for their clients, it will not be addressed as a separate topic in this research.

Mobility for this research examines the value proposition for staff working in social protection and the people accessing benefits and services from the social protection system.

Mobility in Social Protection – what do we mean?

Mobility or sometimes just referred to as mobile, is a rapidly developing area in the information technology industry. The rapid penetration of smartphone capability around the world combined with the convergence of telephony networks and the internet has provided the opportunity for people to remain connected 24 x7 to internet based applications. This is opening up many new business models some of which are relevant to the social protection industry.

As stated in the research brief for this project, the intent of this exercise is not to examine mobility technology per se, but rather step back and look at what impact and benefits it has for the social protection industry.

In the context of social protection, mobility comes in three flavours:

1. Enabling social protection staff/case workers to operate away from the home office with access to IT systems with client information via a mobile device. There are two modes – connected and disconnected.



2. Enabling citizens to access the IT systems of the social protection organisation to transact business via a mobile device e.g. a smartphone, laptop computer, tablet device.
3. The Internet of Things (IoT) – having devices transmitting data via a network to the social protection organisation e.g. home monitoring systems used in social/aged care situations.

In the context of this research with a focus on social media and mobility, the most overlap occurs when examining citizen's access to the IT systems of the social protection organisation via a mobile device. In this scenario citizens have the opportunity to combine social media interactions with their transaction activity with the social protection organisation. This has been likened to people's experiences in the retail sector where they may use social media to research product and service options within their trusted networks before they make a transaction either online or in a shop.

From the workshops and interviews to date, this has been the area of most focus. Enabling citizens to self-manage is taking a higher priority over enabling social protection staff to be better equipped to operate in the field. Surprisingly, enabling social protection staff to operate in a mobile manner has not been a major issue although it remains important and will be further investigated. This could however be a function of a social insurance bias in the organisations involved in the research to date. This will be addressed in the next round of interviews and workshops.

This observation however is consistent with the empowerment principle at the heart of this research. It makes sense that an organisation would put more effort into developing capabilities to empower a significant proportion of the serviced population to self-manage ahead of capabilities to improve productivity for servicing smaller cohorts requiring mobile equipped case workers operating in the field.

The IoT and the data and information collected from devices either on a person or in the home is the new frontier. In the area of social/aged care this is likely to rapidly escalate as organisations deal with ageing populations and the need to invest in these technologies to enable people to remain safely in their own homes rather than moving into high cost institutional care. Perhaps the IoT is a subset of the trend towards self-management as it represents a higher level of automation designed to enable people to live more independent lives.

The Mobile Case Worker

Placing social protection staff in the field e.g. home visits, workplace inspections, outreach activities, has long been a requirement for many organisations. Carrying paper based files out to the field presents both an occupational health and safety risk and a data/information security risk. Mobile computing has opened up a whole new world of capability with the opportunity to equip a field worker with the same access to IT systems as if they were based in the office. While these solutions are addressing many of the occupational health and safety risks through the use of tablets and



smartphones, the information and data security issues remain a barrier for many organisations to realise significant productivity dividends from mobility solutions.

Social protection organisations want solutions that operate in both connected and disconnected mode. Connected mode is real time access to business applications via a mobile based network. Disconnected mode is providing a business application and data onto a mobile device – tablet, smartphones etc. without continuous connectivity to the core business applications. Information is downloaded onto the device (usually while the staff member is at the office) and new information collected in the field is uploaded on return to the office or wherever there is access to a network.

In some countries, especially those with large dispersed populations in rural remote areas, social protection organisations demand the capability to be able to operate in a disconnected manner.

With the growth in availability of high speed wireless based networks, the trend will lean towards connected mode. This has two distinct advantages:

1. Access to the most up-to-date information at all times.
2. Data/information is prevented from being stored on the device – having client sensitive information stored on a mobile device is a high security risk.

Mobile device security remains a critical issue. If a mobile device has connectivity to core business applications, then the security risks of managing data access on the device need to be carefully managed. With a growing trend towards Bring Your Own Device (BYOD), mitigating the security risks of managing client sensitive information via a device also used for personal use will be a significant barrier for many organisations to overcome.

While this research has not so far involved organisations involved in emergency management (natural disasters, security/terrorist related incidents), this is a situation where social protection organisations have an immediate need for mobility based solutions – both connected and disconnected. Social protection organisations in many countries are deployed right behind the first responders (fire, police, medical) providing cash benefits and related services to the people affected by the emergency. There always needs to be provision for disconnected operations as network availability maybe affected short or long term by the emergency related incident.

The Empowered Self-Managing Citizen

It goes without saying that social media usage has accelerated in line with the adoption of mobile devices. Without repeating the issues raised in Working Paper Number 1, it is safe to say mobility is a key enabler for the social media take-up within the social protection industry.

Working Paper Number 1 examined the new relationship model emerging where social media is enabling greater levels of empowerment for people to self-manage their social related matters.



Mobility based solutions have largely been the catalyst for this to occur. With the world average mobile phone penetration of 93% (ranging from 151% in central and eastern Europe to 12% in South Asia) and 26% social penetration (ranging from 56% in North America to 5% in Central America)ⁱ, it is not surprising mobile based access to social protection systems is becoming the new norm. Mobile brings its own unique business model characteristics over and above another channel complementing the traditional face-to-face and call centre based business models. Smartphones and tablet devices are rapidly becoming the standard for mobile devices with for example, the number of active smartphones in China exceeding 700 million by the end of 2013ⁱⁱ.

We anticipate there will be a high demand for the development of mobile appsⁱⁱⁱ to support the empowered self-managing citizen. A mobile app is a computer program designed to run on smartphones, tablet computers and other mobile devices. We found evidence of social protection specific apps emerging such as notifications of absences from work within sickness benefit schemes. Somewhat surprisingly, we found there was an equal desire to invest in making websites dynamic to enable people with mobile devices to directly transact with the social protection organisation via applications running on the website. This approach was usually aligned with an emphasis on offering a personal account model, such as a pension account, where people have full access to all their information.

Mobile apps are designed for a specific purpose to be (ideally) used on a regular basis to perform a repeatable task – e.g. a share price tracker, weather tracking. For social protection these repeatable tasks could cover mandatory reporting obligations such as:

- Casual earnings
- Job seeking activity
- Absences from work
- Student re-enrolment
- Child absences from childcare
- Children in/out of care
- Seniors in/out of care
- Social media applications – social protection specific forums, chat rooms

To date, the range of social protection apps that could fit the criteria of repeatable high volume activities appears limited. It seems people prefer full access to a website via their mobile devices to perform the tasks listed above with the additional flexibility to perform a full range of variable tasks from information gathering to updating personal details.

An interesting development in mobile apps is gamification. Gamification refers to the practice of using game playing techniques for non-game activities by motivating users with rewards such as badges or unlocked levels. Gamification transforms the completion of dull or difficult tasks into play. Gamification is emerging in the healthcare industry with apps designed to assist in monitoring health and fitness, making them interesting and fun and more likely to be used^{iv}. While we have found no evidence to date of gamification in social protection, the close link between social



determinants and health outcomes is likely to see a crossover from pure health related gamification apps to social/health related apps. An area where we predict to see game based apps emerge is in rehabilitation activities for people on a return to work program, people with disabilities and the elderly.

There are pros and cons for mobile apps versus dynamic websites with cost and speed to market being major considerations. Another consideration is widespread access (at minimal or low cost) to wireless broadband either via wi-fi or telecommunications networks – 3G/4G. It is likely we will continue to see the development of mobile apps in parallel with richer website experiences.

The Internet of Things (IoT)

The Internet of Things (IoT) is a computing concept that describes everyday physical objects connected to the Internet able to identify themselves to other devices. The term is closely identified with RFID (radio frequency identification) as the method of communication, although it also may include other sensor technologies, wireless technologies or QR codes (quick response)^v.

At face value it is perhaps difficult to see where the IoT has a role in social protection. The IoT is significant because an object that can represent itself digitally becomes something greater than the object by itself. The object is connected to surrounding objects and computer applications. Examples include health monitoring equipment that uploads vital life sign data via the internet enabling interventions to be initiated before more serious health complications occur.

The IoT is however emerging as a key technology of the future in the area of aged/eldercare. As populations age around the world, policy makers are confronted with how to enable people to live safely and with dignity in their own homes, remaining there until end of life, if possible.

While a significant majority of elderly people remain in their homes, the increasing proportion of elderly people in the population means that the absolute numbers of people needing acute or residential care will grow dramatically in many countries. Finding new ways to keep this growing population of elderly people out of high cost medical facilities and residential care will become a significant public policy issue.

The Scandinavian countries have emerged as leaders in the use of technology within the social protection system to assist people with disabilities and the elderly. The term welfare technology is used within the Scandinavian countries. Welfare technology is designed to preserve or develop welfare services (social services) and many of these will be based on the IoT. In the Nordic countries the public sector is already offering a range of welfare services to citizens with special needs



including assistive technology and home adaptations. For example, the Nordic Ministers of Trade and Industry decided in the Nordic Cooperation Program for Innovation and Business policy 2014-2017 to launch a lighthouse project on innovative Nordic welfare solutions. The mission of the lighthouse project is to position the Nordic region as world leading when it comes to innovative health and welfare solutions^{vi}.

A challenge for policy makers will be deciding where to allocate IoT based resources and infrastructure. Should all homes for elderly citizens be made “smart” to provide remote monitoring or should this be done on a targeted basis. As with any rationing of public funding within the social protection system, decisions will have to be made on the basis of identifying the most vulnerable people. At the same time, what role can the private sector play and how should IoT based technology be incorporated within housing designs for an ageing population? However the IoT raises the potential for low cost solutions to be deployed. By adopting a preventative mindset on a universal basis i.e., by installing IoT based technology in the homes of all elderly people and people with disabilities, the social and economic benefits may justify the cost.

Concluding Comments

It is clear that mobility in its various forms, relevant to social protection, contributes to the theme of enabling the empowerment of individuals to self-manage and self-determine within the social protection system. The more in-depth question is whether mobility is becoming an essential component of social protection administration and perhaps a game changer in achieving service delivery excellence? The rise of smartphones within the general population, including within developing countries, is enabling the social protection system to come to you, rather than the other way round. Many social protection organisations have found that adding new service delivery channels increases overall demand for services without significant and corresponding decreases in demand for high cost traditional field office based services. There can be no question mobility solutions will lead to efficiency and productivity gains and can address this increase in demand but can they deliver better social outcomes?

As discussed in Working Paper Number 1, social media is providing an opportunity for people to address the power imbalances that exist in the social protection system. Mobility may also have similar characteristics by placing some of the control of the social protection system in the hands of the citizen, anywhere, anytime, anyplace.

Working Paper Number 3 will examine building trust in government through citizen empowerment coming from social media engagement and mobility solutions. Social media and mobility based solutions are service delivery initiatives. They turn social policy into social outcomes. Achieving excellence in service delivery are keys to restoring a trust in government that is so vital for sustainability of the social protection system. The final working paper will seek to draw the link



between encouraging social media and mobility activity amongst social protection users and achieving better social outcomes.

References and Endnotes

ⁱ We Are Social (2014) Global Digital Statistics 2014 – wearesocial.sg Singapore

ⁱⁱ Umeng Insight Report (2014) – China Mobile Internet Review 2013 Overview – www.umeng.com/umengdata_reports

ⁱⁱⁱ App is a shortening of the term application software

^{iv} See <http://www.evolution1.com/healthcare-trends-institute/the-gamification-of-healthcare/>

^v See <http://www.techopedia.com/definition/28247/internet-of-things-iot>

^{vi} See <http://www.nordicinnovation.org/projects/lighthouse-projects/innovative-nordic-welfare-solutions/>