BIG DATA STRATEGY - ISSUES PAPER
Feedback from Design Managers Australia Pty Ltd (DMA)

On 13 March 2013 the Australian Government Chief Information Officer released the "Big Data Strategy – Issues Paper" for public comment. Big Data offers a compelling opportunity as an emerging, but one of many, potential quantitative inputs to the policy development and service delivery puzzle.

As a service design consultancy Design Managers Australia (DMA) has a strong interest in any sources of information that can add to the design process within public sector service design. Accordingly, our responses to the Issues Paper are very much from the point of view of service designers and not ICT-technical in nature, nor do we touch on the application of big data in the intelligence field (defence, security, science and other non-service based fields) which we do feel, while referenced in the paper, was missing from the content of the paper.

Big data presents an opportunity that service designers such as ourselves welcome. To be able to have detailed information about the operation of large systems is the kind of base research that underpins much of our work. We feel though that the desire for big data to answer questions around policy and service delivery should be put in its true place as input and not as a driver. Public sector policy and service design is much more complex than that.

Data doesn't make decision-making easier – the challenge of all those involved in improving services to citizens is turning data into usable information and that information into meaningful knowledge for outcomes.

ASSUMPTIONS ABOUT THE VALUE OF BIG DATA

"Big Data allows for more focused and evidence-based policy design and service implementation that in turn allow citizens to interact with government in a personalised and seamless way." [1]

The intent of this statement, and a number of other statements made with regard to the potential of big data, while positive, is perhaps too simplistic based on our experience in public sector service design and the use of quantitative inputs.

In particular we would reflect on the growing body of thought that big data is not the "pure" data set that Agencies imagine; big data is open to the same biased "fact-finding" as smaller data sets. An example of this is where the mining of social media is part of a big data approach. Use of social media is mass in terms of volume of users but still incredibly concentrated in terms of volume of use within that user group. Therefore "evidence" contained in big data can potentially skew an Agency's view of their user group or the experience of their users

There is no doubt that big data can help, however, we would expect the Strategy to charge agencies using big data as a catalyst for tailored services to test, and assume being big data doesn't mean it is correct or complete data.

ASSUMPTIONS ABOUT THE USER BENEFITS

"A great deal of research during the last decade, in cities as different as Mumbai and Chicago, suggests that once basic services are in place people don't value efficiency above all; they want quality of life. A hand-held GPS device won't, for instance, provide a sense of community." [2]

It is our experience that users of public sector services do not have the same types of relationship with different Agencies, and can even have different approaches or relationships within parts of the one agency. The current language of the APS in particular for "tell us once" or "personalise and make seamless" is an Agency desire

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[1] Department of Finance and Deregulation, 'Big Data Strategy Issues Paper' (March 2013), Pg 4

[2] 'Richard Sennett, 'No-one likes a city that's too smart', (The Guardian, 4 December 2012)

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for perceived effectiveness and efficiency, which is not necessarily a user preference– or even need – in dealing with government. In our experiences with users we have discovered they often shy away from "tailored" approaches, particularly in the benefit-based delivery areas of human services and taxation.

Data doesn't represent the needs of users; it represents clues and is one aspect of people. Where service delivery is the intent, actions and channel preferences can be mined but expectation, experience, emotions are not represented in data and need to be additionally collected through qualitative practices in order to ensure services are effective from the citizen/customer/user perspective.

The challenges raised in the paper around security, privacy and trust are critical from a customer/citizen/user perspective. In research we undertook for a government agency about people's attitudes to online privacy versus online security it was clear the definitions were different from the agency's own perspective. Users were more concerned about privacy than security and that may add an additional layer of complexity to the strategy "designing for privacy".

CORE CAPABILITIES TO MAKE THE MOST OF BIG DATA

The "Big Data Movement" has the potential of moving down the path of the "tail wagging the dog". Service delivery evolves from a policy need, therefore the use of big data in service delivery should be in the policy construct, not as a means to find outcomes to match 'cool things' that big data analysis may show. The potential for innovation with clear outcomes is in the design of the service, not in the exploration of data alone.

The notion that big data holds a solution in its own right places too much pressure on a singular discipline and is not realistic considering the many variables can affect data on any level (different data set definitions, data collection inconsistencies, data collection not reflecting the actual experience of the service recipient).

The Issues Paper identifies, correctly, that skills Agencies develop will need to mature as Big Data matures. That said, we would expect a full big data strategy to take into account the existing skill sets that utilise data in an APS setting.

There are a range of core capabilities that already exist both in the APS and in private sector agencies like ours working with the APS, and this should be reflected in the assessment of skills in any future Strategy. At a minimum, the design capabilities in the ATO, DHS, Australian Customs Service and other small agencies should be listed as stakeholders and users of big data outcomes just as much as emerging Centres for Data and Analytics [3].

As Service Designers we are always using data as a basis for our design research. Data tells us interesting things about the system in operation, and is important to provide an Agency led view of the system. Due to our method and approaches we then move past pure data when designing new services or improving current ones, because the critical factors in service design are not that we be creative with data but that we design services that users need (not want), that Agencies are capable of delivering and that create meaningful outcomes at a business level.

Services that are designed based on big data insights must be tested, prototyped and designed with real users to understand impacts at an experience level. Data analysis needs theory and hypothesis testing towards an outcome, not as validation of "what the data is telling us" – big data can help strengthen analysis, but it's existence is not analysis.

A SUSTAINABLE APPROACH – PURPOSEFUL AND PROVEN

There are a number of references to how big data is envisioned to be used in a sustainable way that should be looked at as the Issues Paper moves towards the development of a full strategy. There are some key points the strategy will need to address in terms of risk to the use of big data in the public sector context:

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[3] Department of Finance and Deregulation, 'Big Data Strategy Issues Paper', (March 2013), Pg 11

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- The complexity of inter-Agency cooperation should not be understated.
- Any reference to the NBN as a critical part of the big data picture should surely be listed as a risk in a full strategy in the current political environment.

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