Introduction to New Economic Models of the Digital Economy Minitrack

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At the centre of our research is the assumption that business and economic models are changing because of changes in what technology can do. Put simply, devices (sensors, mobiles, tags, google glasses etc.) produce data on people and things: this is sometimes called datafication [2], ‘big data’ or meta data (although definitions of these vary across disciplines). The data is stored and accessed (often in ‘the cloud’) then analysed using a variety of mathematical and statistical methods and/or algorithms. This gets turned into information that informs practicing managers. This may then change any one of the three elements of the business model: value creation, value capture or the value proposition. That is it may lead to the development of new product/service offering (the value proposition) eg logistics companies offering to deliver to where you are (not just home or office). It may inform value capture ie how we make money. For example, Rolls Royce use telemetry data on their engines to move from a selling model to a leasing model. In a similar vein photocopiers are sold on a use basis or councils pay for number of potholes fixed. The meta data may also be used to change the design, sell or make/do or after sales processes. For example, data on product usage can inform the development of an appropriate set of FAQs. The data might also inform the development of new companies through density [3], for example entrepreneurs see opportunities from the new data and challenge existing sectors (for example, Fitbit is using selling employers data on their employees physical activity). These in turn are changing the sectoral eco-system and altering ‘who does what and who gets what’ [1].

We have to be cautious about engaging too readily with the big data story. There are those on society’s margins who will become increasingly marginalised and unseen, especially if they are invisible to monitoring. There are also many examples of people deliberately providing misleading information. There are huge ethical issues about what data can be collected and how we are being watched (see the Fitbit story) – although there are movements to place the power back with the user (http://hubofallthings.wordpress.com/). As Lycett [2] argues all of this is a process of sense making and may be heavily biased by what aspects of the ‘big data’ we seek out and how our interpretations are turned into action.

The 4 papers presented in this track are simply an overview of what is emerging as a new theme of research. Other topics include how datafication impacts on issues of identity, trust and security, how 3D printing might revolutionise the economics of production, how the digital society is transforming volunteering and how digital is enabling the ‘sharing economy’. For readers who want to engage in these questions we suggest you consider joining our networks at http://www.nemode.ac.uk/ and http://www3.imperial.ac.uk/digital-economy-lab/partnernetworks/sustainablesocietynetwork

It may be too early to argue that we are living through the 3rd industrial revolution but at the very least they are interesting times. *As part of its $350M initiative RCUK has supported projects explicitly researching into the economic impact of the Digital Revolution. There are eleven projects in this topic, all of whom have research budgets between $1m-$1.8m. Details of these projects can be found at http://www.nemode.ac.uk/?page_id=925