WHO IS WATCHING THE WATCHERS?

A proposition in the latest James Bond movie 'Spectre' is that while 'surveillance is the new norm', what this information gathering actually delivers is a real source of power. While the potential for a nightmarish Orwellian world of 1984 'Big Brother' monitoring is also real, so is the scope for improving the operation of our built environment and the multiple layered public infrastructure that underpins its performance.

With fast emerging big data systems, digital communication and techno interfaces, the long talked of 'Smart City ' is real, with a contingent rise in data collection, and a corresponding drop in individual privacy. Video surveillance is everywhere! Google Earth monitors our properties, and we have those ubiquitous parking space saucers telling us (supposedly) how many cars are parked in the village, and when a ticket may be expected. There is car number plate recognition in Market Square as an example of real trial by technology!

At a recent Future Cities Collaborative forum titled 'A Tale of 2 Smart Cities', speakers from Vienna and Chicago gave oversights of their respective urban environments and how shared information can improve system performance and bureaucratic efficiency from local up to metro scale. Chicago's open city data portal operates to improve user experience and bureaucratic operations, giving real time data on everything from garbage collection to city planning. Cities and their residents linked together in networks have the potential for optimizing energy use, transportation, logistics, medical information, entertainment, voting and much more.

In every major city, there are a multitude of sensors and meters collecting data of all kinds, but very few are able to transform this data into actionable knowledge. With the right management and feedback process, there is scope to improve performance, lower use and wastage via system monitors, and share use patterns or errors to learn and refocus our ways and means of living in urban environments.

Metrics and algorithms to measure, diagnose and improve ourselves and our world abound, with a plethora of real time data available via the exponential rise in apps and their links to an overloaded World Wide Web of information. But while we are being monitored this can also enable us to listen and learn from an emergent connected city that can be a platform to rethink our problem parts as bits of future solutions. As users, our device patterns and feedback can assist the development of tools for next regeneration of digital technology.

Street or building lighting can monitor passing pedestrian or vehicular traffic and be adjusted to appropriate levels of need or safety, residents can be updated with pre-emptive notice of imminent events, or you can log onto an IP address of almost any object or service to register a malfunction or check availability. While your FitBit tracks your exercise, your mobile phone becomes a tour guide, plotting a path via certain shopfronts based on your 'user profile' or taste in coffee. But such levels of cooperation do freak out many who feel they will be exposed to manipulation or corrupt influences, and trust will certainly be tested.

Although largely not yet designed for smart technology, our built environment does have the capacity for much improvement provided there is the will and ways to integrate and

utilise the growing multitude of data sources in equitable ways. Research institutions like UNSW Smart Cities Research Cluster are fundamental to creating platforms for the design, planning and implementation of data management aimed at sourcing, evaluating and applying multiple information strands that can be used to promote:

- Sustainable economic development
- Higher quality of life and environments
- Management efficiencies for natural resources and energy
- Participatory action and engagement of communities

While all this should be regarded as investment in human and social capital, there is still suspicion of losing control or privacy at the individual's level, or giving away intellectual property in the corporate world. A balance of surveillance with collective observability and civic responsibility is needed – just as the blog 'In The Cove' is an example of sharing local news and information, a smart open source approach can reduce manipulation and maintain a sense of democracy.

Open source sharing is a concept of releasing intellectual property for the benefit of the broader community (eg. Wikipedia), taking innovative solutions or systems out of the profit driven realms of big business and putting it into a collaborative economy. Urban living is based on sharing, and this is where we can all benefit without paying for corporate overheads, and feel we still have some degree of control – and create time for face to face communication over a coffee!