



PAPERLESS COUNCIL MEETINGS & THE DASHBOARD REVOLUTION A 1ST STEP INTO A WORLD OF MOBILE ENTERPRISE APPLICATIONS.

This short scan explains why increasing technology mobility and the widespread use of 'Apps' will not only radically reduce the cost of supporting processes like Council meetings, but why it will also change the nature of how the IT function operate in Councils.

Design: Mike McAllum
Futures Architect, Global Foresight Network
e: michael.mcallum@globalforesight.net
m: +61 414 797 645

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HOW TO READ THIS SCAN

Document purpose This emerging future scan is designed to help Victorian Councils identify and understand the implications of a recent shift from Enterprise centric information architecture to Mobile Enterprise Application Platforms.

What this paper isn't This paper is intended as a thought starter. It **is not** exhaustive nor is it intended to either advocate or produce the final or comprehensive answer to emerging questions. Rather it intends to challenge current thinking patterns and stimulate strategic conversation.

Reading the scan Readers of emerging future scans similar to this one have found that a very effective way to synthesise what is being argued is to start reading down the left side headlines of each scan “thread”, and jump into the detail where interesting.

Where possible hyperlinks have been added. As always with documents of this kind they are best accessed through e-reader devices.



What to look for

As you read the report, we recommend you **highlight** any TRENDS, DISRUPTIONS and CRITICAL UNCERTAINTIES which you believe will be critical shapers of either your organisation or Local Government in the 21st century..

TRENDS	Ideas that we can see now. The key is to understand how they might play out in the future. (e.g. 3D printing; Real time information to consumers)
DISRUPTIONS	Events, technologies or ideas that abruptly change the rules of success. (e.g. the rise of social networks; mobile enterprise architecture)
CRITICAL UNCERTAINTIES	Events, technologies or ideas where we simply don't know how they might play out. (e.g. influence of a majority of Gen Y's in the workforce by 2017)

AT A GLANCE....

Paperless Council meetings work

Already 1/3rd of Victorian Councils are using paperless technologies at their Council meetings. The use of these technologies has been shown to lower costs and improve the ability to search, compare, update and record.

They are all part of a mobile device revolution that has some way to go yet

The introduction of smart mobile devices have not only enabled these new meeting processes they may finally drive the disappearance of many paper based processes and first generation digital practices like 'circular' emails (replaced by Facebook type processes). These are now reaching a level of maturity that no one device will dominate and people will expect access anywhere anytime, increasingly through the use of highly intuitive dashboard interfaces.

But paperless meetings are but a symptom of a more important shift

The latest technologies to enable paperless meetings are known as mobile enterprise application platforms. These MEAPs suggest that a shift will quickly occur from Enterprise centric IT systems to apps. As this occurs there will be a rethinking of how work in the sector is organised.

The power of Zoom : rethinking government

Radical shifts in transaction costs enabled by MEAPs will have far reaching consequences for how public services are delivered and the way that public sector organisations operate. This shift will not be optional as private sector entities use the same technologies to compete with current public sector offerings, in their interests rather than the communities.

At another level, MEAPs are simply an indicator of how the idea of work is changing

The shift to MEAPs and dashboards is also reflected in the design and nature of contemporary workspaces, living arrangements and organisation form. As the Gen Y 'digital natives' come to dominate the workforce, Baby Boomers and Gen Xers will be forced to redefine how they work, not the other way around.

Taken together these shifts will require a rethinking of the IT function and Council strategy

In this emerging world CIO's will need to move from a control and implementation mindset to an influencing and advising role where partnership and collaboration are preferred behaviours . This is premised on the view that the change that is occurring is more about culture and ethos than it is about technology.

FINALLY ALMOST PAPERLESS

Paperless Council Meetings: solution or symptom?

At the time of writing there were 23 Councils in Victoria using electronic paperless processes at their Council meetings. These included Councils of every type; city, regional and rural. The research shows that if paperless, the costs of such meetings, even in a worst case scenario, are half of paper based processes. This falls to less than 10% if a technology application based process is deployed. Therefore the real question is not whether this paperless process works or it doesn't; rather it is more about whether it should be seen as a stand alone solution or part of something bigger. In a world where everything is connected to everything else this scan outlines why the paperless Council meeting is merely the tip of a substantive shift in both the business of Councils and the nature of work as we understand it.

The possibility of paperless was made possible with the iPad revolution

Recent developments in mobile technology, including the introduction of the iPad and other smartphone and tablet devices, have provided important new tools for communication. The wide availability of these portable, powerful, networked technologies has changed how we work, learn, spend our leisure time, and interact socially. The impact has been rapid and widespread.

Within 90 days of the release of the iPad over 50% of Fortune 500 companies were using the technology (Dignan, 2010); by 2012, Apple had sold over 2.5 million iPads to schools in the United States (Uhlig, 2012). Mobile technology use is now ubiquitous: Smartphone users spend over 4 hours a day using their devices (Barrabee, 2013); and teenagers send over 30 text messages a day (Lenhart, Ling, Campbell, & Purcell, 2010). Although the iPhone and the iPad garnered the most attention initially there are now a wide variety of mobile technology devices using iOS, Android and Windows operating systems. Around the world, nearly three-quarters of the world's population has access to mobile technology, and over 30 billion mobile applications ("apps") were downloaded worldwide in 2011 (World Bank, 2012).

Source: <http://www.spectronics.com.au/blog/wp-content/uploads/2013/07/iPad-and-AAC-mcnaughton-light2013.pdf>

And as Sacramento Council have shown the key learning is that the challenge is one of culture NOT technology

A Californian report on the use of paperless processes for Council meetings argued that the biggest challenge is change management not technology. Key points included:

- Digital delivery should not be an IT initiative
- Don't worry about 100% consensus
- Have a clear vision about why you are going this way
- Get buy in from key stakeholders
- Provide a product that users can't live without
- Avoid feedback derailing
- Be available for 24/7 support.

Source: <http://www.govtech.com/technology/Making-a-Paperless-City-Council-040511.html>



Some argue it also improves governance processes

Others argue that any tablet enabled boardroom revolution should be more than space saving and eliminating paperwork. “The potential is there for the technology to give the Board better knowledge of the company (in this case the Council and its community),” says Didier Crossin, Professor of Finance at IMD. The devices he says are currently being used in a static way rather than as a tool for managing and exploiting information. If it’s just posting documents, I don’t think it’s the best use of the technology.”

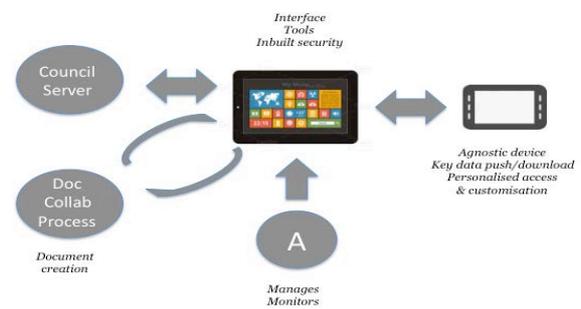
Source: Financial Times; The rise of the paperless meeting.
<http://www.ft.com/intl/cms/s/0/10f92696-7f18-11e1-a26e-00144feab49a.html#axzz3UDj5GL1Q>

Paperless architecture - There are essentially 3 approaches currently in use

There are essentially 3 current ways that paperless processes are being used.

1. **Plug & play** using off the shelf technology
2. **Proprietary mobile apps which push** information using the cloud
3. **Proprietary apps which** do the above while also back integrating into the processes being used to create the Board inputs – **push & pull.**

Mobile Enterprise Application Platform + (MEAP+) Architecture



Source: MAV Paperless Council Meetings Report 2015

But the mobile enterprise apps far outperform the other options in terms of cost and user access

The research showed that the cost of paper based systems in Victorian Councils was likely to be in excess of \$200,000, although few had quantified this. One Council where a generic system was introduced reported a drop in costs of over 50%. BUT vendors of mobile enterprise architecture have quoted costs for 20 users of figures less than \$10,000 in the first year of operation (including customisation, training of users and admin and ongoing support) and figures less than that for subsequent years.

Source: Docs on Tap (Harboursoftware) & Council Dashboard (Task Exchange & bigtincan)

As Wellington NZ knows its not only in the Chamber that there is a mountain of paper

Since its introduction into WCC, Council dashboard is now being used for many different committees including the District Licensing Committee, the Grants Committee and other senior committees. The governance advisor to WCC states “Council dashboard has made a massive difference in the process and proven to be a major time saver. It’s great that we know that all Councillors can easily access documents instantly available on their iPad, including reports that are submitted late.”

Source: Wellington NZ Case Study. Council Dashboard. <http://councildashboard.com.au>

ANYTIME ANYWHERE ANYHOW: THE FUTURE OF DEVICES

The Mobile Device revolution

The whole shift from Enterprise Centric architectures to Mobile Enterprise Application Platforms (MEAPs) has been enabled by the widespread and almost ubiquitous use of mobile phones and other devices that use applications or apps as the way that users interact with both the device and those offering services that the customers require. At first these services focused on those services that customers wanted (FaceBook, Twitter and the like). Now there is increasing attention being given to apps for enterprises and specialist communities.

Digital and smartphone usage is now ubiquitous

As at May 2013, 89 per cent of people aged 18–24 years had a smartphone and 83 per cent of this age group downloaded an app in the six months to May 2013. In comparison, 22 per cent of people aged 65 years and over had a smartphone but only nine per cent downloaded an app in the same period.

Figure 1 Smartphone ownership, by age

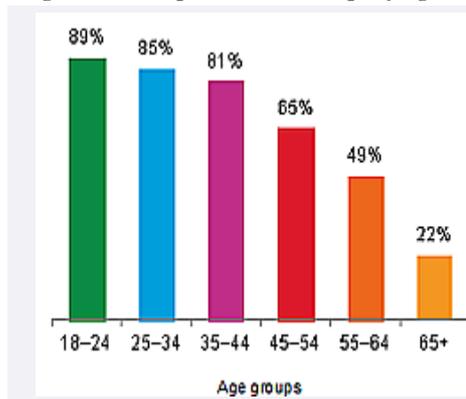
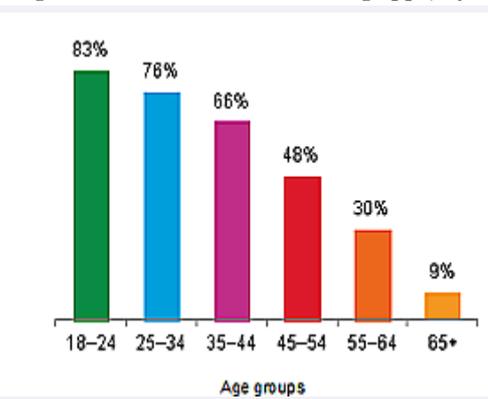


Figure 2 Australians downloading apps, by age



Note: Relates to downloading of apps in the six months to May 2013.
Base: Total population in each age group.

Source: ACMA-commissioned survey, May 2013.

Mobility moves

- iOS and Android smartphones and tablets are the fastest adopted technology in human history.
- There will be more than 22 billion web-connected devices by 2020, the vast majority of which will be found in devices that are mobile.
- By 2020 mobile phones will have the option of texting by thought power alone.
- There is an approaching convergence of transaction-related services (payments, loyalty, offers, etc) into single "digital wallet"-style solutions. The holy grail of mobile payments.



And in addition to iPads, tablets and phablets there is an avalanche of wearable devices coming our way



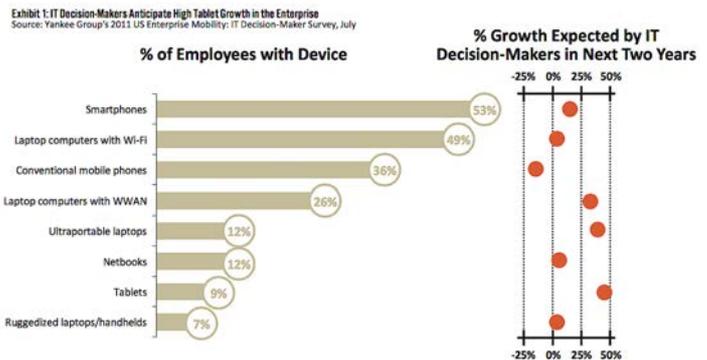
Wearables: Everybody in the tech world is talking about them, but no one has quite nailed it – yet the category, which includes everything from smart glasses that record video to watches that answer phone calls, is generating some of the biggest buzz in the tech industry, and for good reason. Wearables are a long way from overtaking smartphones, but the market is expected to grow at a fast pace over the next few years.

Look for completely different products to emerge. Health care is an area that could see a surge in wearables. We'll also see more wearables for pets, such as new activity and biometrics trackers, as well as toys. There will also be other types of devices that extend the capabilities of the smartphone or allow for social interaction, like a ring that lights up when a loved one taps the other half of the matching pair. Another big area is clothing. For instance, manufacturers are working on smart buttons that could change the color of a fabric when pushed or buttons and fabric that could measure UV exposure in sports equipment.

Source: <http://www.cnet.com/news/the-future-of-wearables-8-predictions-from-tech-leaders/>

This represents a major shift in how we interact with technology

The history of network computing is characterized by an ongoing struggle between end-user/business requirements and IT capabilities/budgets. At times, IT has been ahead of the curve, with innovations in technology—deployed creatively—enabling new conveniences for users and new value for businesses. At other times, like today, end-user and business demands often exceed IT’s capacity to fulfill them. IT needs to find ingenious ways to fill the gap between expectations and reality.

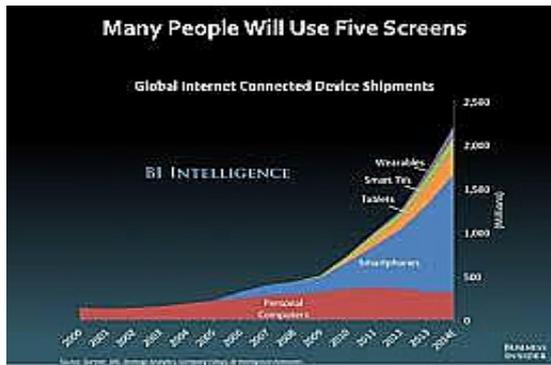


At least **three major trends** developing within the networking industry have the potential to **drive traditional IT departments toward new operating models**.

1. The increasing influx of mobile consumer devices into the enterprise.
2. The second trend impacting IT operating models is virtualization.
3. Which brings us to our third big trend: cloud computing. Cloud computing makes data more mobile so it can be accessed from anywhere.

Source: Any device, anywhere: The Next Phase for the Enterprise.
http://www.cisco.com/web/solutions/trends/intelligent_network/docs/Any_Device_Any_Where.pdf

So ubiquitous are these devices becoming that the expectations are that people will expect to move seamlessly between up to 5 devices



Mobile is over. I think its just a screen. You'll absolutely need a screen, but you'll need more than one."

Matias Duarte Android Design Head
April 2014.

Source: *The Future of Mobile 2014*, Tony Danova, Business Insider.
<http://www.businessinsider.com/future-of-mobile-slides-2014-3?op=1#-1>

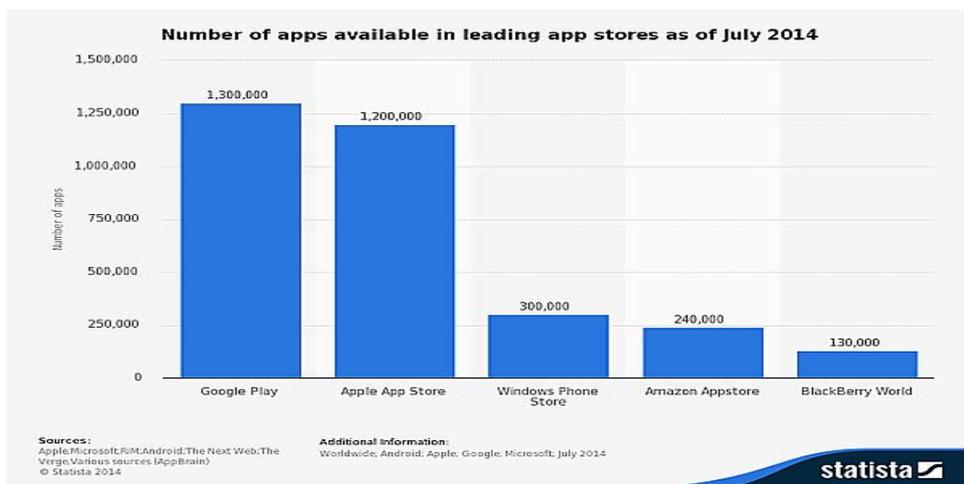
If Corning have their way then "the screen" will be everywhere

The giant US manufacturer Corning has been developing glass that acts as its own blinds, surfaces that can act as proxy screens and others that can act as virtual mirrors. In short the glass can do everything the iPad can do and more.

Source: <http://www.youtube.com/watch?v=jZkHpNnXLBo&feature=youtu.be>

And soon there will be an app for everything

This graph shows the number of apps available for download in leading app stores in July 2014. As of that month, Android users were able to choose between 1.3 million apps. Apple's App Store remained the second-largest app store with 1.2 million available apps.



Source: <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/>

ENTERPRISE 2.0 FROM ENTERPRISE CENTRIC ARCHITECTURE TO MOBILE APP ENABLED FUTURES

Gartner is suggesting that there is a rapid and dramatic shift

Forbes recently identified four critical reasons to build enterprise apps, which in their view are changing the face of business.

1. Enterprise apps are fuelling business processes and worker productivity.
2. Enterprise apps empower field workers
3. Enterprise big data and analytics generate smarter apps than ever before.
4. It has never been so easy to develop enterprise apps.

Source: <http://www.forbes.com/sites/benkerschberg/2015/01/15/four-critical-reasons-to-build-enterprise-apps/>

This shift has profound implications for CIO's and the IT function in Councils

Gartner suggests that there are new realities for IT. These include:

The power of unprecedented choice – We now live in a world where the IT function is losing control of infrastructure, control of applications and control of devices. The only question for CIO's in this environment is about whether they focus on control of function and cost on the one hand or control of actions that the organization requires to deliver on its mission on the other.

The wide open world – The power of choice exercised by people in the community leaves a trail of what they have done online, leaving a rich body of information about their interests, intentions and activities. There have been two consequences. Firstly, to date this mine of big data seems to be used almost exclusively for interests in the private sector. Secondly this data mine has blurred the boundaries to a point where you cannot see them any longer, between roles and responsibilities, internal and external information and personal and professional relationships between clients, partners, other competitive interests and suppliers.

A shift from Outputs to Outcomes – This requires a shift in emphasis by the IT function from projects, budgets and enterprise technology to outcomes that make things tangibly different in the organization through innovation and the creation of value.

Source: <http://www.gartner.com/newsroom/id/1453516>

Those that see digital as just a replacement for paper really don't get it

One of the key outcomes of recent research into paperless Council systems in Victoria was to show that whatever process was used a radical reduction in cost and effort was possible while improving the ability of decision makers to understand what was before them. Where MEAPs were used these costs and benefits were even more significant. More importantly MEAPs introduced a fundamentally different way of receiving, updating, interacting, sharing and modifying documents.

Source: MAV Paperless Council Meetings Report 2015

Welcome to the world of the dashboard



Dashboards continue to get a lot of attention in most organizations, Not just because of their visual appeal but because they help organizations communicate strategy, monitor and adjust the execution of strategy, and deliver insights to all.

Let us break this into simple terms. Dashboards, in the most simplest terms is a collection of different reports, all in one page or view.

Now let us tune this statement. These reports in the dashboard contain high level summary information rather than detail transactions. For example in traditional reports, you see a detail listing of orders or invoices with neat formatting, totals and sub-totals whereas the reports in dashboard mostly contain aggregate information such as total orders for current month, total invoices for current month, profit for this month, total cost for this month. If you notice, the common term here is total (sum, aggregate, or high level) view. Now you may show these numbers as they are or canvas them in beautiful charts.

Source: <http://www.appsbi.com/benefits-of-dashboards-and-its-purpose>

The idea of MEAPs is capturing the attention of the worlds largest technology companies



On a wider scale, the introduction of MEAPs is capturing the attention of the world's largest companies. The announcement of a hitherto almost unthinkable partnership between IBM and Apple is symptomatic.

On 16 July, 2014—Apple® and IBM (NYSE: IBM) today announced an exclusive partnership that teams the market-leading strengths of each company to transform enterprise mobility through a new class of business apps—bringing IBM's big data and analytics capabilities to iPhone® and iPad®.

The landmark partnership aims to redefine the way work will get done, address key industry mobility challenges and spark true mobile-led business change—grounded in four core capabilities:

- a new class of more than 100 industry-specific enterprise solutions including native apps, developed exclusively from the ground up, for iPhone and iPad;
- unique IBM cloud services optimised for iOS, including device management, security, analytics and mobile integration;
- new AppleCare® service and support offering tailored to the needs of the enterprise; and
- new packaged offerings from IBM for device activation, supply and management.

Source: <https://www.apple.com/au/pr/library/2014/07/15Apple-and-IBM-Forge-Global-Partnership-to-Transform-Enterprise-Mobility.html>

It is likely that most of the apps required by any Council will be developed free of charge to Councils

From generic to customised to indivual

When there is a cluster of similar type businesses (such as Councils) that might benefit from an app based process e.g. paperless Council meeting processes, then it is likely that 3rd party vendors partner with the generic app provider to provide a customised solution. This solution can then be easily configured to reflect the identity of any individual entity. Furthermore this process of customisation requires very little extra cost. Current providers in the Australian Council space Council Dashboard and Docs on Tap are classic examples of this customisation pathway.

Source: <http://www.forbes.com/sites/benkenschberg/2015/01/15/four-critical-reasons-to-build-enterprise-apps/>

But IF some specialist app was required the business model for doing so can be remarkably different, while radically reducing development costs

Often crowdsourcing can be used to access communities with the software development skills that might be required **IF** the Council had **specialist needs beyond** what the generic apps and the customisation of the same provide. The community, often managed by a corporate entity, extracts from an apps' initial specifications those relevant parts that can be designed simultaneously in parallel. Suitable solutions are then put together as a cohesive whole.

The solution is less expensive and faster than a traditional mobile developer. Moreover when the answer to a subset does not fit the solution, the self selected programmers go back to the drawing board quickly. They fail fast, begin again and deliver world class solutions to forward thinking enterprises.

Source: <http://www.forbes.com/sites/benkerschberg/2015/01/15/four-critical-reasons-to-build-enterprise-apps/>

Tilting at Windmills: Debunking 5 myths in today's mobile-first cloud-first world



Given that the strategies we develop are almost always informed by the myths and metaphors we have in our minds, there are 5 myths that can be debunked almost immediately.

1. *Myth: Enterprise apps take at least 6 months to develop and deploy.* No - appropriate platforms can be identified and deployed in a matter of days not weeks.
2. *Myth: Data is king but its too complicated for apps to access legacy systems.* No – the best apps can take data from a variety of sources and have inbuilt conversion capacities inside the app itself.
3. *Myth: Mobile app developers must keep up with a myriad of coding languages and frameworks – its impossible.* No – to simplify development developers can use mobile app platforms using a bring your own toolkit approach that allows them to use the languages they are comfortable with.
4. *Myth: Enterprise apps are always data heavy placing high loads on handsets and backend systems.* No – the best apps take large amounts of data from the backend but transmit only a small amount to the handset or device., thus reducing and customising demand.
5. *Having a Chief of Mobility is the best way to handle organisation wide development.* No – this assumes that one figure will successfully oversee app development and deployment. In reality it takes a number of people, at all levels of the organisation, acting as a guiding and steering group, including managers, project managers and employees to actively engage in and collaborate in the process.

Source: <http://www.information-age.com/technology/mobile-and-networking/123458417/5-myths-enterprise-app-development-mobile-first-world>

So how do I choose a MEAP?

In the early phases of MEAP development the options were to simply adopt an existing platform, customise your own platform or a hybrid of the two. In the 2015 generation of MEAP's, ease to use hybridisation is now an inbuilt feature of many platform offerings.



	Pros	Cons
Existing platform	<ul style="list-style-type: none"> Faster speed to market Potentially lower cost Ongoing support 	<ul style="list-style-type: none"> License costs Lock-in to one supplier Flexibility
Creating a custom platform	<ul style="list-style-type: none"> Tailored to the organisations needs Flexibility 	<ul style="list-style-type: none"> Keeping up to speed with technology development Can be costly to develop and keep up to date
Hybrid model	<ul style="list-style-type: none"> Combining the best of an existing platform and custom development 	<ul style="list-style-type: none"> License cost Lock-in to one supplier

The essential guide to becoming an enterprise app rock star (Part 3)

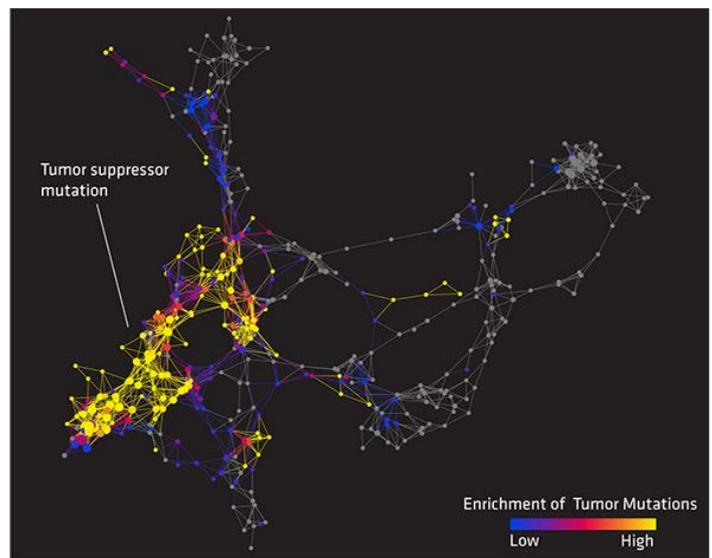


Source: <http://www.slideshare.net/goldengekko/gg-marketing-finder-become-a-mobile-enterprise-rock-star-p3>

And the next generation of MEAPs will focus on Visualisation

that includes Algorithms that create visualisations for data set analysis

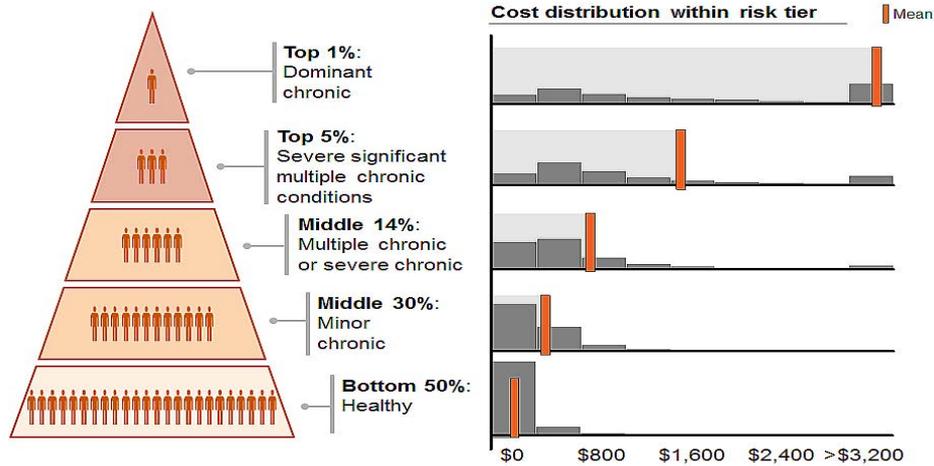
The idea of network graphs isn't new, but [Ayasdi's](#) approach to it is. Under the covers, there's an HBase data store, a technique called topological data analysis and hundreds of machine learning algorithms to churn through complex data sets and determine the similarity among the data points. To the end user, though, [there's a map of the data set that looks a lot like a network graph](#) (only it's probably not network data) highlighting clusters of related data points that analysts might want to investigate further.



Source: <https://gigaom.com/2013/05/13/visualization-is-the-future-6-startups-re-imagining-how-we-consume-data/>

With Robotic (Avatar) help

BeyondCore actually operates under the same basic premise as Ayasdi –it shows users the significant correlations so they don’t have to think of the queries that will uncover them. But it uses some different techniques to get there. It uses a different visualization method to, BeyondCore sticks to standard charts but actually offers the option of having an avatar talk users through the correlations that the software has discovered.

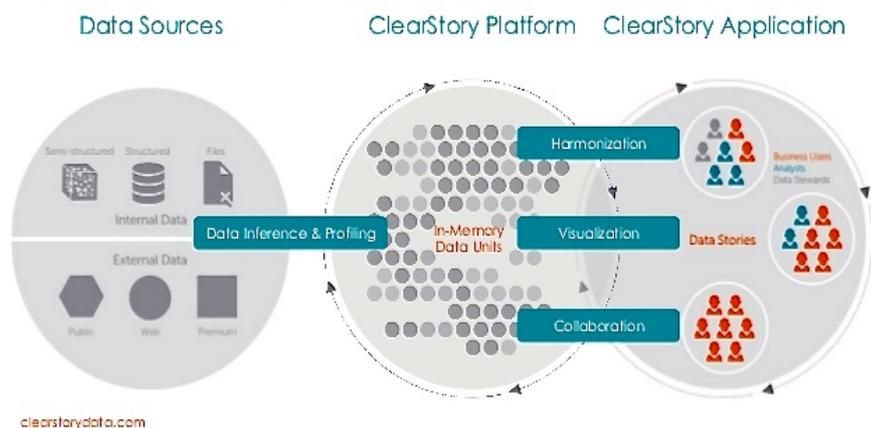


Source: <https://gigaom.com/2013/05/13/visualization-is-the-future-6-startups-re-imagining-how-we-consume-data/>

And mashups

ClearStory has a pretty unique product in the works — even if it’s keeping many details and all of its screenshots under lock and key until it formally launches. Essentially, though, [it’s trying to tell stories via visualizations](#) that display mashups of numerous data sources, update automatically when the source data changes, and invoke collaboration and social concepts.

ClearStory Application & Platform



Source: <https://gigaom.com/2013/05/13/visualization-is-the-future-6-startups-re-imagining-how-we-consume-data/>

MEAPs can reframe the notion of work

If we understand that mobile apps have reframed our lifestyles through a combination of the following:

Modularized/single purpose: you use Instagram to share photos, Facebook to catch up with your broader friend networks, GroupMe to communicate with smaller groups, and Twitter to broadcast your voice to the world. Each one of these apps serves a distinct and well-defined purpose.

Speed: It's much faster to share and communicate on a mobile device than it is on a desktop. Just think of the process of sharing a digital photo.

Context: Your phone is a powerful tool to surface relevant contextual information based on your location.

Convenience: Your mobile device is always on you, so you are always just a few taps away from valuable data.

Engagement: Great mobile apps are streamlined, simple, easy to use, and because only one app can occupy a screen at a time, they are highly engaging.

Thus we can expect apps will do the same in the workspace if they can:

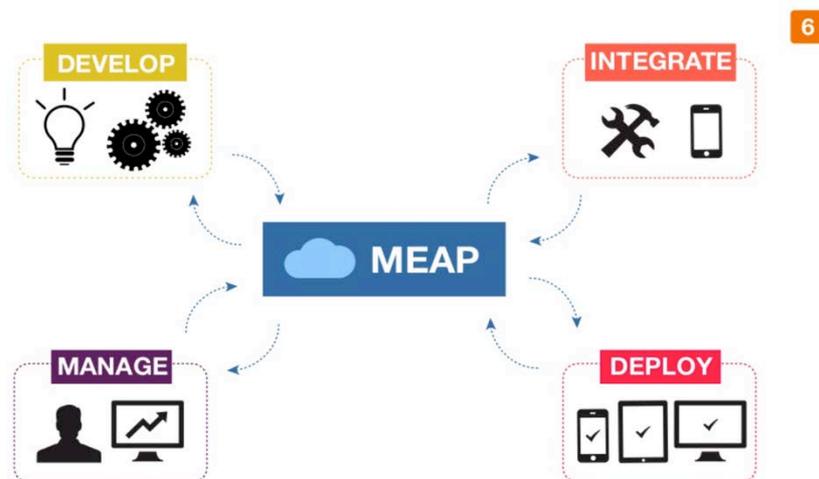
Increase workplace efficiency – help people do their jobs better, by improving the capture and delivery of the right information from and to the right people within an organization.

Prove ROI – show that better information and communication that apps deliver lead to increased revenue and decreased costs, higher conversions, happier customers, and happier employees.

Backwards integrate with existing legacy IT systems out of the box, to overcome the hurdle of setting up new social network every time and alleviate concerns of companies dropping existing systems altogether.

and they have already demonstrated the features that will make this so

Source: <http://www.onlineeconomy.org/mobile-apps-have-changed-the-way-we-live---will-they-change-the-way-we-work>



The essential guide to becoming an enterprise app rock star (Part 3)



THE POWER OF ZOOM: RETHINKING THE SHAPE AND FORM OF THE PUBLIC SECTOR

While Government policy machines everywhere are fixated on the deregulation agenda the reality is that new more cost effective ways of creating and delivering public goods are emerging. This includes the development of standards that provide the essential platform for most interactions in a networked world, be that for consumer smart phones, packaging or logistics. As the benefits of near zero transaction costs, in a highly interactive and standardised architecture are realised they will prove to be far more robust and perhaps even supplant current public sector methodologies.

The Culture Revolution

Where does the public sector place its effort and time?

According to Russ Ballard on his retirement from the NZ public sector as a CEO, most public sector organisations focus on conformance not performance, process not results and management rather than leadership.

In his view in a networked world, they need to move as follows



<p>FROM</p> <ul style="list-style-type: none"> Backward looking Process driven Performance review Compliance Capability Departmental One size 	<p>TO</p> <ul style="list-style-type: none"> Forward looking Outcome driven Performance management Adding value Performance System-wide Tailored
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Source: Edmund John Richard Norman. Obedient servants: Management Frontiers and Accountabilities in the NZ Public Sector
http://books.google.com.au/books?id=SXCXxezvnuoC&pg=PA181&lpg=PA181&dq=retirement+of+russ+ballard+NZ&source=bl&ots=2SjVrZlrYY&sig=xpr26MRDRfxmBphovaex_vFXFFk&hl=en&sa=X&ei=kSB2VOeXB4Xd8AXB54GQBw&ved=oCEQQ6AEwBQ#v=onepage&q&f=false

MEAPs provide the capacity to deliver scope not scale.

One of the great advantages of MEAPs is that they can operate at whatever scale is required. There are very little cost difference between their use for the few and their use for the many. Which is just as well because the benefits of economies of scale in the public sector have always been questionable.

There is no evidence that economies of scale have any benefit in the process of delivering public services.

When he was in the UK Government Cabinet Office, Geoff Mulgan commissioned a report into the benefits of economies of scale in the public service. The report found that there were none.

Source: John Seddon, What do we believe in economies of scale? 2010
http://s3.amazonaws.com/connected_republic/attachments/33/Why_do_we_believe_in_economy_of_scale.pdf

However the cost of information exchange has been radically reduced.

Scope and connectivity has replaced scale as the basis of advantage.

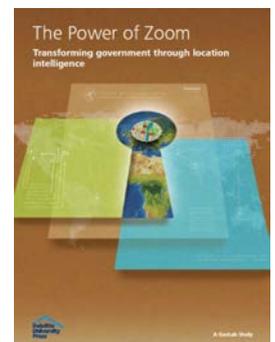
One of the key features of today and tomorrow is that the cost of information exchange has been radically reduced. As Coarse points out in his Nobel Prize winning essay *The Theory of the Firm*, historically, many organisations had particular sizes and structures because the cost of information transfer, both specific and general, outside these boundaries, was simply too high.

Now, well organised networks of specialists can be rapidly formed to compete with many large centralised entities. They can even be used to create new sources of funding or even build strategy through ‘crowd sourcing’.

*Source: “Rethinking form and space in the 21st Century” – Mike McAllum – ANZ Property Journal – March 2013
No link: subscription required*

The power of zoom represents an evolution in the way government sees and interacts with the world as these transaction costs change

The *power of zoom* represents an evolution in the way government sees and interacts with the world. When location data is coupled with existing government data and expertise, every point on the map can provide historical and predictive perspective to inform complex policy decisions. The map itself has been transformed from a static picture to a living platform for shared decision making and real-time collaboration, focusing the energy of the *crowd* and empowering government and citizens to work together to respond quickly to challenges at any scale.



*Source: “The Power of Zoom - Transforming government through location intelligence” – Deloitte University Press – 13 Feb 2013
http://cdn.dupress.com/wp-content/uploads/2013/02/DUP157_PowerofZoom1.pdf*

Many opportunities for government to collect and use the digital exhaust which is created as a byproduct of our daily lives.

With the convergence of emerging geospatial technologies and the increasing wealth of location data provided daily by smartphones and sensors embedded in everything from buildings to buses—the “digital exhaust” created as a byproduct of our daily lives—government can pursue new models for delivering public services, better understand the challenges of diverse communities across the nation, and design more effective solutions. There is an opportunity for citizens to share and receive information customized not only to who they are, but where they are—creating a new paradigm for how government can understand and serve the public.

*Source: “The Power of Zoom - Transforming government through location intelligence” – Deloitte University Press – 13 Feb 2013
http://cdn.dupress.com/wp-content/uploads/2013/02/DUP157_PowerofZoom1.pdf*



Technologies using the benefit of lower transaction costs

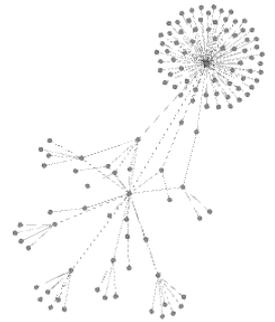
Accelerator	Impact	Today	Tomorrow
'Smart' devices 	Mobile devices that can detect location, direction and movement, enabling context-based interaction between government and citizens.	Geotagged tweets and text messages are used to connect with citizens	Government uses geofencing to push information to individuals based on location
Sensors 	Sensors provide constant data collection about our physical and natural infrastructure, offering a vibrant picture of trends across a range of data sources.	Cities can monitor and track air quality to inform better regulations	Government can trace contaminated food to its source immediately, and even predict an outbreak
Cloud storage 	Cloud-based storage allows for the collection, scaling and processing of vast amounts of location data, and enables geo-data sharing.	Agencies share geo-data on a common platform.	Real-time data from millions of sources are securely available anywhere, anytime.
Machine learning 	By learning from historical data, computer algorithms can scan new data to identify anomalies and patterns that yield predictive insight.	Law enforcement can create predictive models for violent crimes	Unstructured social data becomes insight for policy makers.
Remote imagery 	A blend of commercial and government satellites, planes and drones provide a near real-time picture of the changing conditions on the Earth's surface	Imagery provides awareness about events like natural disasters, migration patterns and foreign conflicts	More granular imagery allows for remote monitoring of public infrastructure to predict future needs
BIM/CAD/GIS integration 	The integration of Building Information Modelling, Computer Aided Design and Geographic Information Systems enables analysis inside and outside of structures	Site planners and inspectors use GIS and building specifications to perform more uniform evaluations	Directions continue seamlessly from outdoors to inside buildings
IPv6 	Internet Protocol Version 6 will expand the number of unique addresses on the Internet, improving geolocation	Road signs, utilities and other infrastructure are connected to the Internet	Emergency managers rapidly assess damage using data points from thousands of inanimate objects

Source: "The Power of Zoom - Transforming government through location intelligence" – Deloitte University Press – 13 Feb 2013

In a world of lower transaction costs power lies in creating, innovating and delivering through networks of seamless collaboration.

The new competitors also understand that their power lies in creating, innovating and delivering through networks of seamless collaboration. They have little time for those who are distracted and waste energy in a red ocean of competition, a place where often there is a destruction of value and a race to the bottom.

*Source: "Rethinking form and space in the 21st Century" – Mike McAllum – ANZ Property Journal – March 2013
No link: subscription required*



The use of Patchwork by Victorian Councils is a good example of this emerging collaborative intelligence

Patchwork is an innovative web application developed in the UK by FutureGov to connect practitioners from different agencies working with common clients within a geographic area.

The idea behind Patchwork is that professionals are able to provide better services to a client when they know and can communicate with the whole team working with the client. This has the added benefit that each person working with a client can be on the look-out on behalf of other agencies, and share their concerns in a quick and simple way.



UK Councils have found that Patchwork can improve collaboration, offer joined-up services from multiple agencies, lead to earlier intervention where required, deliver better outcomes for clients and improve the efficiency of administrative procedures.

MAV Patchwork Pilot Project

The Patchwork Pilot project is run in collaboration with five Victorian councils: Yarra, Melbourne, Brimbank, Wyndham and Kingston. It has the aim of transforming the way governments interact with vulnerable families through improved collaboration.

The project involves staff working in the areas of maternal and child health, and youth services, but Patchwork is potentially applicable to all human services areas in which councils are involved. Given the success of the pilot, we are now commencing the second stage of the roll out to 15 – 20 more councils

Source: <http://www.mav.asn.au/policy-services/social-community/Pages/patchwork.aspx>

Buckminster Fuller, World Game & collaborative intelligence

Buckminster Fuller conceived the idea of "World Game" (1961), "design science" (1951) and "Spaceship Earth" (1963). Fuller's vision was "to make the world work for 100% of humanity in the shortest possible time through spontaneous cooperation without ecological offense or disadvantage of anyone" (motto of the Buckminster Fuller Institute). [World Game was a powerful idea to harness game methods to environmental sustainability challenges. But the internet, ubiquitous mobile computing, and social networks were needed to implement this vision](#)



Standards will still matter but in a different way

**My standards?
Your standards?**

**Social
MOBILE
Local**

= SoLoMo.

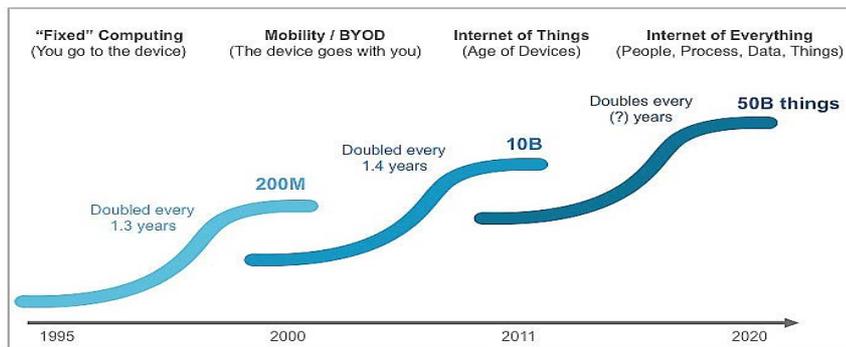
What is emerging as a common theme in mobile technology, location based services and the evolution of artificial intelligence is the development of standards.

Increasingly the acceptance and use of these standards will be fundamental to any economic or social activity – otherwise users will not be able to interact. This includes even activities on a very local level – often called SoLoMo. However the question will not be one of my standards – your standards or who might be right or wrong. Rather the priority will be on how these standards talk to and integrate.

Could it be that in this future world what we now call red tape will of necessity be embedded into processes and goods and services themselves?



Click graphic above to view this short 3 minute video



They will be integral to a new kind of connectedness in what is becoming known as the Internet of Things. (IOT)

The Internet of Things is a new mega standards construct.

“The Internet of Things will connect every thing with everyone in an integrated global network. People, machines, natural resources, production lines, logistics networks, consumption habits, recycling flows and virtually every other aspect of economic and social life will be linked via sensors and software to the IOT platform continually feeding Big Data into every node – businesses, homes and vehicles –moment to moment and in real time. Big data in turn will be processed by advanced analytics, transformed into predictive algorithms and programmed into automated systems to improve thermodynamic efficiencies, dramatically increase productivity and reducing the marginal cost of producing and delivering a full range of goods to near zero across the entire economy.”

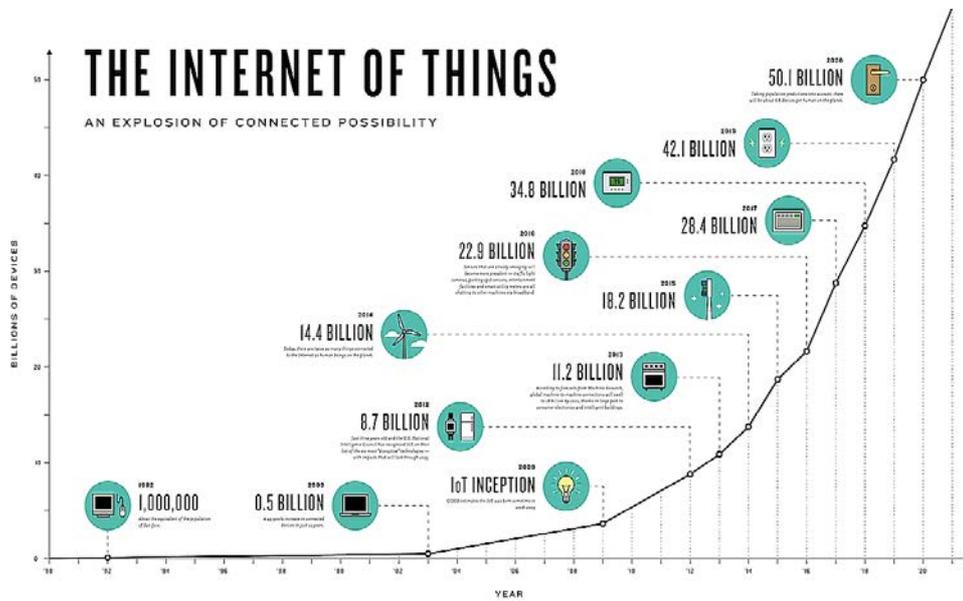
Source: Rifkin J, The Zero Marginal Cost Society. pub Palgrave MacMillan 2014, p. 11

The IOT is already gathering pace.

Gartner, Inc. forecasts that 4.9 billion connected things will be in use in 2015, up 30 percent from 2014, and will reach 25 billion by 2020. The Internet of Things (IoT) has become a powerful force for business transformation, and its disruptive impact will be felt across all industries and all areas of society. “The digital shift instigated by the Nexus of Forces (cloud, mobile, social and information), and boosted by IoT, threatens many existing businesses. They have no choice but to pursue IoT, like they’ve done with the consumerization of IT,”

Source: <http://www.gartner.com/newsroom/id/2905717>

The speed at which the IOT is emerging is truly staggering. The number of objects connected to the Internet and in use will grow 30 percent from this year to next, for a total of 4.9 billion, according to a new report from market research firm Gartner, and will hit 25 billion by 2020. CIOs must look for opportunities to create new services, usage scenarios and business models based on this growth.



Source: <http://theconnectivist-img.s3.amazonaws.com/wp-content/uploads/2014/05/Unknown.png>

These forces of collaboration are driving new and deeper forms of engagement with stakeholders and consumers.

Crowd sourcing (and its financial child, crowdfunding) are now becoming the de facto standard for engaging with communities at multiple levels, at very low costs, in comparison with conventional face-to-face models. They can be used in gaining understanding and feedback (as KPMG do) or for highly interactive and sophisticated design (as a recent DARPA new troop carrier proposal) did. In general the public sector has been slow to utilize this kind of technology.



KPMG's global crowdsourcing tool,

[Crowd Connection®](#), powered by the Chaordix Crowd Intelligence™ offers organisations insights from a customisable online community to provide employee engagement, market intelligence, brand feedback and product co-creation and innovation.

Crowdsourcing can tap into key customer and employee segments to help organisations understand what they want them to do and, most importantly, why, before implementing change within their business. It can also be utilised to gain feedback on changes organisations have already made.

<http://crowdsourcingweek.com/businesses-are-turning-crowdsourcing-communities-into-assets/#ixzz3JaQUbUQm>

However the capacity to engage is problematic as it often starts from a low base, in a 'dumbed down' society.

While the idea of mobility is widely understood the base for engagement in serious issues is problematic.

A group of Americans shopping at a farmers market were recently asked what the term GMO meant. The results are of course as tragic as one would expect. I'm unsure if the results in this part of the world would be substantially better.

YouTube link is

<https://www.youtube.com/watch?v=EzEr23XJwFY>

Yet the DARPA model shows how crowdsourcing can leverage intelligent conversation and deepen stakeholder engagement.

Designing and building things for the United States military is a notoriously slow-moving and costly endeavor. The time from idea to manufacturing for a new armored personnel carrier or a tank is typically 10 to 20 years. The Defense Advanced Research Projects Agency wants to change that, and drastically so. It seeks to cut the design-to-production cycle to two to four years. So how are they going to do it? Crowdsourcing and prize contests are crucial ingredients in the speed-up recipe.

The crowdsourcing effort will rely on a software initiative, called Vehicleforge.mil, which will be a Web portal for gathering, sharing and testing ideas.

Source: <http://bits.blogs.nytimes.com/2012/04/05/pentagon-pushes-crowdsourced-manufacturing>.

THE CHANGING NATURE OF WORK

The shift to MEAPs is not the only sign that work is changing

As we have argued a paradigmatic change in communications technology reframes our sense of form and space. The shift from Enterprise centric systems to MEAPs is only one symptom of a larger shift in the way we think about work.

But MEAPs are just a small part of the network revolution that is upon us

Companies that don't evolve have believed their press, clinging to the business models that got them to the top. The head of a technology company that dominates its market confessed to me that engineers and managers are so enamored of their success that they shut out ideas incompatible with the current model.

*Source: "Evolve (again) by Rosabeth Kanter" - Harvard Business Review – Jul-Aug 2011
No link: subscription required*

For a start it is a generational thing

By the end of 2016 there will be more Gen Y's – digital natives - in the workforce than Baby Boomers

Changes in the workplace are nothing new. What is new is the extent to which the retirement of the Boomers will leave employers scrambling to recruit and retain the talent they need. The American Society of Training and Development is predicting that 76 million Americans will retire over the next two decades. Only 46 million will be arriving to replace them. Most of those new workers will be Generation Y-ers.

Furthermore in a survey conducted for job site CareerBuilder.com last year, nearly half the respondents noted Generation Y's preference to communicate via blogs, IMs and text messages, rather than on the phone or face to face, methods preferred by Boomers and Generation X. Technologically facilitated communication can feel abrupt and easily be misunderstood by Boomers and Gen X-ers.

Source: <http://www.cio.com/article/2437236/staff-management/gen-y--gen-x-and-the-baby-boomers--workplace-generation-wars.html>

	Born between...	Age in 2008 is between	Age in 2018 is between	Technology mastered...
Civics	Before 1922	86 and 92+	96 and 102	Telephone
Matures	1922 and 1946	62 and 86	72 and 96	TV
Baby Boomers	1946 and 1964	44 and 62	53 and 71	Mobile Phone & VCR
Generation X	1965 and 1980	28 and 43	38 and 53	Office, WWW, & Email
Generation Y	1981 and 2000	8 and 27	18 and 37	Instant Messaging
New Millennials	2001 and 2020	0 and 7	0 and 17	Web gaming, VR

What they want in a workspace is very different

THE WORKFORCE

The newest members of the workforce will be “digital natives” and will drive the efficiency and speed of communication, necessitating open floor plans and mobility within the office. They will optimize time at the office with multitasking as they seek greater work-life balance.

THE WORKPLACE

The next-generation workplace will offer environments that blur the lines between work and private life. The office will function as an anchoring physical location away from the digital realm. It will house a variety of workspaces and be a place for collaboration, face-to-face encounters and team building.

AMENITIES

The Office Building of the Future will provide greater access to daylight and natural ventilation, views, green space, public transit, on-site parking and proximity to residences. Numerous studies indicate that these attributes directly result in a more content and healthy workforce, thereby contributing to increased productivity. Better working environments also serve to attract and retain top talent. While certain features may increase up-front costs, they are offset by the gains from increased employee productivity.

Source: <http://www.di.net/articles/the-office-building-of-the-future/>

The signs of this work shift are now being reflected in workplace design NOW

NAB has finalized its move into 700 Bourke Street, putting an end to almost three years of planning and construction. Since July, staff have been moving into the new building, which features an unusual, triangular floor plan and is designed to house a total of 6,000 employees.

Staff share a total of only 4,500 workspaces. Like in [Commonwealth Bank Place](#), they don't have pre-allocated desks and move between meeting rooms, desks and casual settings depending on the task at hand.

Activity-based workplace advocates say desks in traditional offices tended to be underutilised because of the number of staff on leave or working remotely at any given time.

But for NAB project manager Roger Macmorran, the most significant aspect of 700 Bourke Street is its flat structure – in terms of management hierarchy, not physical height – and its ability to link about 15,000 staff across NAB's three Bourke Street buildings.



Source: <http://www.businessinsider.com.au/first-look-inside-nabs-newest-flexible-working-building-in-docklands-2013-9#NAB-700Bourke-1>

Its also reflected in new living spaces

Just over 2 years ago, Small Giants embarked on the ambitious task of building one of the most sustainable residential developments in Australia. Today, Small Giants has handed over the eco-apartments to the new residents – ready for the new owners to build upon the foundations of this inner-city, vertical eco-village. The Commons is home to just 24 apartments, along with two artist studios, a cafe and retail space. All of the apartments were sold prior to the completion of construction and all purchasers were eager to settle and move in before Christmas. The café space is currently being fit-out and is expected to open in early 2014.

Source: <http://www.smallgiants.com.au/a-new-eco-village-is-born-the-commons-is-complete/>



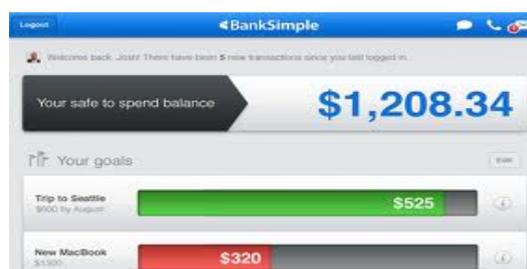
And the development of totally different kinds of organisations

Last week, the banking group BBVA bought a personal-banking startup called Simple for a hundred and seventeen million dollars. Simple is a banking service that bills itself as a kind of anti-bank—no overdraft fees, an easy-to-use Web site—with a relatively small, if loyal, user base. For people who had never heard of Simple, the deal raised questions about whether BBVA, which is based in Madrid but has operations around the globe, had made a wise decision.

Again based on the dashboard!

Another question is whether Simple’s technology is truly game changing. Jim Bruene, an author and the publisher of the Online Banking Report, calls Simple “the Apple of banking,” with respect to design. It not only looks good but also aims to re-engineer how people interact with their money, for the better. On the *Times’* Open blog, Andre Behrens wrote that Simple has done this by making banking feel like a game. The “aesthetics are just a baseline. Because what Simple actually wants to do is get you to play a game. The game is called ‘Master Your Finances,’ and you are Player 1.”

Source: <http://www.newyorker.com/business/currency/the-bank-and-the-anti-bank>



REFRAMING THE STRATEGIC CONVERSATION

Mobile technology is now front and center of the Australian Public Sector productivity debate

Australians have long expressed a preference for accessing government services using online channels. The availability of innovative and convenient mobile services offered by the private sector, such as online banking and the increased use of social media, are indicators that the public expectations are for similar access to government services and information. The expectations that government will embrace the opportunities of mobile technology also carry into the workplace where staff see practical applications for the devices they already use in their personal lives.

The most compelling call to action is mobile technology's recognized contribution to productivity for both consumers and providers of government services and for society as a whole. A recent Deloitte Access economics study estimates an \$11.8 billion productivity benefit from 2012 to 2025 as mobility shifts from being a device for individuals to being a platform underpinning businesses.

Source: <http://www.finance.gov.au/files/2013/06/APS-Mobile-Roadmap.pdf>

But the challenges to the current conception of IT are considerable

As one Victorian IT manager said, *"the days of spec & tender are sort of dead in a world where, if you are not cloud based, you might soon be out of business."*

Gartner agree. They argue; "an old rule for the old era was absolute, centralized IT control over technology, people, infrastructure and services. Now CIO's and IT leaders must transform themselves from controllers to influencers; from implementers to advisers and from employees to partners."

Source: Eric Knipp, Principal Analyst at Gartner.
<http://www.gartner.com/newsroom/id/1453516>

CIO Journal suggests that there are 3 steps public sector CIOs can take to help MEAPs deliver value

Steps which can help the transition to a MEAP future include:

1. Rethinking business processes and how work is done
2. Focusing on the design of user experiences while using mobile technology (note this includes providing appropriate bandwidth anywhere anytime)
3. Making mobile a source of security not a threat

Government agencies aren't the only organizations struggling to adapt to mobile technology; many private companies struggle with this as well. But if mobile is a challenge, it is also an opportunity: a chance for the public sector to start closing the productivity gap, reassess its business practices, boost its efficiency, and renegotiate its relationship with the public it serves. When approached correctly, mobile can transform government's capabilities.

Source: <http://deloitte.wsj.com/cio/2013/09/12/tackling-mobile-technology-challenges-in-government/>

McKinsey suggests that this shift requires Boards (and Councils) to ask some interesting questions about the role of technology in Councils

A recent McKinsey article on technology suggests that such is the impact of recent technological changes, there are important questions that need to be asked and answered for good governance reasons.

These have been adapted to reflect the Council centric nature of this scan and the mobile app centric premise that it asserts. The questions include:

1. How will mobile apps change the basis of services and products and who provides them?
2. What will it take to exceed customer and community expectations in a mobile centric world?
3. Do our business plans reflect the full potential of technology to improve performance?
4. Is our portfolio of technology investments aligned with the opportunities and threats that face this Council and Councils in general?
5. How could a coherent suite of mobile apps improve our operational and strategic agility?
6. Do we have the capabilities to deliver value in a mobile enterprise application world?
7. Who is accountable for considering and actioning this shift?
8. Are we comfortable with our level of IT risk?
9. Are we making the most of our technology story?

Adapted from: http://www.mckinsey.com/insights/business_technology/the_do-or-die_questions_boards_should_ask_about_technology

The hard truth is that if the sector doesn't adopt MEAPs, their role will be usurped as recent moves in the Health sector seem to suggest

The danger is that if the public sector does not adopt these technologies quickly, other parties will look to take the high ground.

For example the rapid intrusion of TelCos and Technology companies into the Health Sector have the potential to reshape how health is delivered within months not years.

Sample only:



Investment of \$100m in Health care Services. It is seen as the number four revenue stream within five years. Have announced partnership with Medgate which offers ability to consult Doctors online or via phone and order pharmaceuticals online.



New iOS8 provides easy to read health and fitness dashboard. iPad Apps allow use of augmented reality for specialists in hospitals.



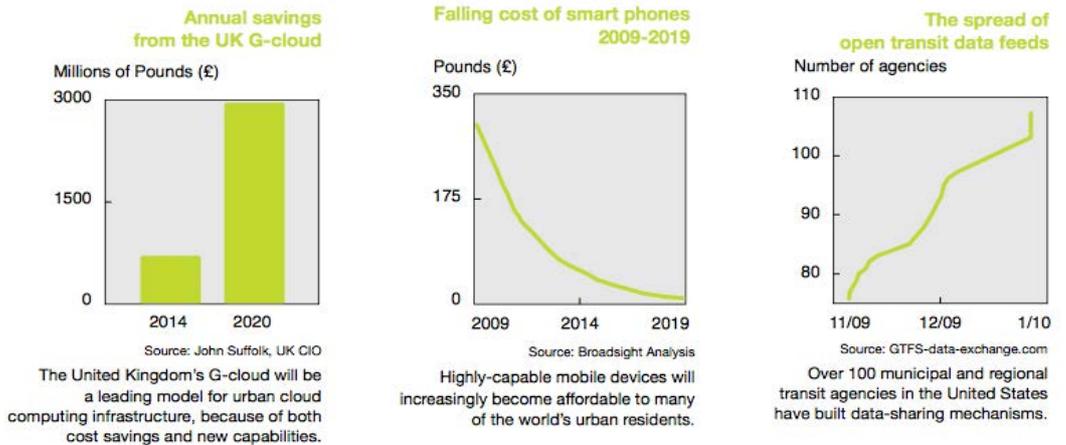
Trialing Wearable devices that monitor glucose levels
Building a genetic and molecular information database
Own Doctor on demand.

So increasing numbers in Gen Y's in community and workforce + preferred means of communication + migration of user centric culture from personal to business = foundation for MEAPs

One might argue that just as the shift to early digital was not optional neither is the shift to MEAPs. The Institute for the Future suggests that this is not a threat. Rather it provides the opportunity to create a planet of civic laboratories – a way to rediscover and regain what it means to be a community. This new community will be built on:

1. the shift to mobile devices.
2. the transition from voice to multimedia through smart phones.
3. open data infrastructures.
4. a proliferation of public interfaces.
5. cloud computing.

Source: http://www.iftf.org/uploads/media/IFTF_Rockefeller_CivicLaboratoriesMap_01.pdf



The transition will be rapid

The rate of adoption of the technologies suggests that the transition will be rapid. It requires a re-examination of the assumptions that have underpinned local government and the narrative or social licence under which it operates. Only then can appropriate strategies be developed that can realise the potential of the MEAP revolution.

