



## Anytime, Anywhere, Anyhow

A Review into Paperless Council Meeting Initiatives in Victoria:  
Implications & implementation

MAV TECHNOLOGY

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## 1. About this Report

This report reviews the introduction and use of technology to improve the governance of meeting processes, in particular those that relate to ‘paperless’ Council meetings, in Victoria. It details a number of Council journeys to a paperless future, including descriptors of the technologies and platforms they are using.

One of the key findings of this study was the identification of some 23 Councils, across Victoria (29%), who have already successfully implemented paperless processes. They represent every type of Council; city, regional and rural. Based on their experiences, the intent is that the documentation of their journeys, descriptors of ‘paperless’ architecture and the detailing of suggested implementation guidelines, will be used to encourage all Councils to adopt paperless processes.

This report suggests that the shift from ‘paper based’ to ‘paperless’ approaches improves governance, lowers transaction costs and provides opportunities for decision making and collaborative activity that are simply not possible in traditional models. However it goes much further. It argues that the paperless Council meeting process is just one example of how rapidly emerging but proven technologies (both devices and applications) can now deliver better Council services while radically reduce costs. In the case of paperless Council meetings this cost reduction is in excess of 80%.

In a world where Council budgets are under increasing pressure, the opportunity to deliver more with less, by working smarter, is clearly of interest to every Council. Paperless Council meetings are just one example of a number of opportunities enabled by mobility and ‘apps’ and our case studies suggest that the transition to a paperless future requires relatively little effort. We suggest that the introduction of a paperless Council meeting process is not really about technology, or even the ‘solution’ such technologies enable. Rather it is about recognizing that this is a new way of working in a networked world. It is therefore vital that those responsible for Council Information Technology functions understand the shift that paperless Council meetings imply and that they then facilitate and lead the transition to this networked future.

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## 2. The Brief and Objectives

This report was commissioned by MAV Technology who wished to review how technology was being used to improve governance meeting processes inside Councils.

It arose from an awareness that a variety of solutions had already been implemented by Council IT departments in Victoria. MAV Technology were concerned that in the process “the take up has not always been great, there were varying degrees of success and some participants wanted paper copies.”

It therefore asked for:

1. An overview of literature in this field and the identification of references that will assist an understanding of what works and what doesn't.
2. A survey of Councils that have attempted to implement paperless systems be carried out. This should report on what technologies have been used and how the process was 'rolled out.'

Michael McAllum of Global Foresight Network was commissioned to undertake the report, following consultations with the MAV Technology Steering Committee.

It should be noted that this report focuses on mainly the second of these objectives with the results of the literature overview being presented in an accompanying wiki. That said, where appropriate, supporting references are included in this document.

As a result of the interviews and related research, the authors became aware that the concept of paperless Council meetings was indicative of a more systemic shift to what are described as mobile enterprise application platforms or MEAP's. This shift represents the potential for considerable change in Council IT business models. However this report has, for the most part, only explored this shift in relation to paperless Council meeting systems.

### **3. The Audience**

This report is intended for the use of participating Councils who wish to explore, understand and implement paperless Council meetings, either as a stand alone process or preferably as part of an integrated transition to a digital future.

This document may be shared with other parties related to MAV Technology and participating Council's for the purposes of considering both paperless Council meetings and the broader issue of mobile enterprise architecture.

### **4. Disclaimer**

Every effort has been made in the production of this report to accurately reflect the information provided by both participating Councils and vendors of paperless systems.

Our view is that when taken as a whole, the lessons from the adoption journeys and related desktop research clearly point to what future best practice will look like. We have also endeavoured to provide links to the parties that provided information and recommend that Councils wishing to pursue paperless systems contact those they believe will help them in this process.

However the author does not assume and hereby disclaims any liability to any party for loss, damage, or disruption, caused by errors or omissions. Whether such errors or omissions result from negligence, accident or any other cause.

## 5. Methodology

Following discussions with Lisa Bennetto of MAV Technology, nine Victorian Councils were identified as being among those that have either successfully or unsuccessfully introduced paperless Council meetings. The IT manager of each of these Council's was interviewed against a template which explored:

- Technology architecture.
- Reactions and uptake by Councillors.
- Benefits.
- Issues.

The details of these interviews are recorded as Case Studies.

In the course of the interviews and through desktop research, a number of providers of Mobile Enabled Applications were also identified. The web details of each were searched and contact was made with two, assessed as being 'representative' of what is likely to be a rapidly expanding number of 'app' offerings. Both these vendors have developed Australian Council specific interfaces.

This report does not assert that any one application is better than another, although views are provided as to benefits or otherwise. Those contacted were very generous with their time and both provided not only a list of their Victorian Council clients who were paperless but also case studies or contacts that broadly support the general thrust of this report.

Research was also carried out with respect to other jurisdictions, in particular NSW, New Zealand and the UK (see [modern.gov.co.uk](http://modern.gov.co.uk)). Direct contact was made with the Local Government Association of New Zealand and their advice on future governance issues they are pursuing was particularly helpful.

A more generalized search on paperless governance was also carried out and contact was made with the Australian Institute of Company Directors. With respect to the latter, it was established that to date, they have no guidelines related to paperless governance. However they do use a paperless system in their Mastering of the

Boardroom program offering. Discussions are being held with leading facilitators of that program about governance issues related to paperless governance. It is hoped that their opinions can be fed into any process that MAV Technology may establish following this report.

As it became clear that the paperless Council meeting apps were part of a much bigger mobile enterprise enabled application shift, further research was done into the nature of this shift and how the various actors see it evolving. While this thinking frames the report and influences its tone, the logic of this larger shift is developed in the ‘wiki’ or ‘scan’ that accompanies this report.

Finally, extended conversations were conducted with Professor Graham Samson of UTS who is influential in the reform process of Local Government in Australia and New Zealand.

That said all views in this report are the responsibility of the author.



## 6. The Current State of Paperless Governance in Victoria.

The iPad that for the most part kickstarted the ‘read on the device’ revolution was only released in Australia in August of 2010. As such the collective experiences of users of tablet type devices and of the designers of ‘apps’ designed to enhance the user experience is, with a few exceptions, relatively recent. It is therefore appropriate to suggest that the use and acceptance of apps and devices as governance tools is also in its early stages.

The use of paperless Council processes in Victoria, is part of a broad scale adoption of this technological approach, across Australia and New Zealand. Despite the relative newness of the technology, which extends now to Android devices, some 24 Victorian Councils have been identified as using the technology for paperless council meetings. Whilst we are aware of a few Councils who use some paper to complement the technology (in one instance, the Mayor’s master meeting agenda), most are completely paperless.

We were also not able to identify many Councillors who insisted on paper in this new environment. Indeed the opposite seemed to be the case. Across the entire spectrum; from small to large, from city to rural and regional, the uptake, if well introduced, seemed almost universal. As one IT manager reported an older Councillor/farmer was heard to remark “I love this device.”

In the course of the research we identified only two Councils where the introduction of a paperless process has ‘failed.’ Our view is that this was a mix of Council leadership who were not prepared to model appropriate paperless behaviours and perhaps issues that related to the architecture selected. There may also have been political factors at play. We suggest, that as the technology evolves, these Councils will revisit the possibility.

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## 7. Why Go Paperless?

There are three major reasons why the Councils should consider a paperless governance system if they have not already done so.

1. The technologies are making such systems easy to use and are increasingly expected as the ‘de facto’ standard by digital natives (those under 35).
2. There are significant and demonstrable cost savings in adopting such systems.
3. There are considerable and proven benefits for end users and producers of materials in this process. These benefits are at a level that suggests key elements of governance systems are enhanced by adoption of a paperless process. These include transparency, traceability, real time updating and information integrity.

### 7.1 Drivers

The ease of access and use of mobile devices, together with access to secure ‘clouds’ is, in many ways, a profound and pervasive realisation of new way of working; a style which promotes networks and renders mechanistic siloes obsolete. They come together as ‘Apps.’ The implications of the shifts to a world of ‘Apps’ are:

1. **User Centricism.** The widespread ubiquity and power of mobile technologies places the user or customer at the center of any transaction.
2. **Smart is cheap.** Many applications and services radically reduce transaction costs and make traditional ways of providing such services slow and expensive. This includes many Council services and processes.
3. **Solutions not Technology.** The speed of this revolution is driven from easy to use, plug and play solutions that users can quickly customize with no cost.
4. **Geographic freedom.** The work of Councillors, outside of the meeting process and the services provided by Council together with the administration of those services can now be done anytime, anywhere. No longer then should many Council functions be tied to ‘the office.’
5. **Redesign of the IT to Smart Control.** As has already been signaled these apps, the best of which can use data from any source or format, replace the

enterprise system, as the controlling IT architecture, at ridiculously low costs, with better functionality. The respected IT commentators Gartner argue that *“this is a shift from IT acting for absolute centralized control over technology, people, infrastructure and services to a role as influencers, facilitators and implementers of user experiences where they the user can access what they want and how they want it on any device they want.”*<sup>i</sup>

## 7.2 Cost.

*More than 100% of the value at less than 10% of the cost*

The Council meeting system in Australia has considerable equity, probity and procedural overlays. For the most part this system of policies and procedures has evolved over many years, as Councils have sought to respond to the experience of previous successful issue resolution and/or publicized failings. On top of a number of functions have been ‘devolved’ by other levels of government often without anything like the necessary funding to meet such imperatives. The result is a meeting system that it is estimated costs many Councils at least \$100,000 a year to service and in the case of Councils that are geographically dispersed up to \$200,000 a year to service. This system sits at the centre of a regulatory and service requirement that Councils everywhere struggle to fund.

In the case studies, several Councils indicated that they had reduced their costs of servicing the Council meeting process by more than 60% (a saving of in excess of \$100,000). Only one Council had undertaken any precise metrics on the question of cost and even for that Council, the metrics will change as this particular Council is contemplating replacing its generic Council controlled model with an app.

Our research has shown that Council specific, paperless meeting system providers offer access to their App platforms for a figure of approximately \$500 per month for 20 users. Some have slightly higher 1<sup>st</sup> year costs which include providing devices, training (user and administrator), configuration and help desk. They claim payback periods of between one and two months for adopting such platforms. The evidence from our case studies supports this contention.

If Councils wish to extend the number of licenses beyond these quoted numbers then a cost of about \$20 per extra user is charged, whether that relates to the paperless Council process, or some other function that can be administered in the same app. The Wellington NZ case study provides two good examples of such extensions.

On the basis of these figures it is possible to argue that if a Council uses a 3<sup>rd</sup> party application platform of the type detailed in this report then the cost of a paperless system is between 5% and 10% of the cost of current paper systems.

In the scenario that there are one or two Councillors who refuse to participate in a paperless system, the cost of producing materials for them would add to that cost and should be identified separately. We would point out though that of the 24 Victorian Councils surveyed and in conversation with vendors, we know of no Councillor who has chosen this path, although many have understandable initial misgivings.

This radical reduction in costs to service the meeting process has important implications for the budgets of those smaller Councils facing structural deficits and the ongoing arguments about their sustainability.

This radical difference in the cost value equation underpins the earlier claims being made about the transformative nature of the drivers of mobile enterprise architecture. As this architecture evolves, there will be more 3<sup>rd</sup> party offerings (e.g. virtual marketplaces) that will utilize and enhance the generic mobile enterprise offerings. In other words the user experience of how work is done will track the same path that most of us have experienced as users of iPhones, iPads or other tablet devices.

The increase in productivity that developers of apps claim is likely to be reflected in a paperless Council meeting systems. Extensive time spent searching for the right appendix will be shorter, references to early decisions easier to find and accepted amendments to resolutions can be transmitted in real time. Thus there are benefits both for the system and the individuals within it.

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## 7.3 Benefit Analysis

It is clear that the successful introduction of a paperless Council process will only occur if the benefits of a paperless process can be demonstrated to outweigh a paper based system. In addition to the cost considerations identified above, our research shows that there are clear user and provider benefits.

### **User Benefits.**

While clearly there are some transition issues for those who are not digital natives, the benefits of a paperless process that uses a standard range of ‘application’ features include:

- Ease of access, search and cross reference.
- Ability to be rapidly updated with or without notification.
- Non discriminatory access in terms of end user technology (iPad, Android Tablet, Phablet, phone or computer).
- Ease of ability to highlight, annotate and compare (although this depends in part of the ability to type).
- Light weight (in 1 case study they reported that some Councillors routinely carried up to 1200 pages over great distances).
- Linked in to other digital interactions including emails, calendars and potentially video-conferencing.
- Capable of being easily organized and multiple levels of security and access.
- Capable of being used for collaborative activity.
- With experience over time, easier to use than paper systems and with more tools.

### **Provider benefits.**

The way that mobile enterprise application platforms are designed not only streamlines the process of document distribution, it enables very efficient collaborative document creation processes. As these standardize, they will also enable easier sharing between Councils. Our research has shown that the existing benefits of a paperless system include:

- Simplicity in the production and distribution of documents.
- Better security and traceability through authentication and encryption.
- Time and materials saved in production, distribution and storage of physical documents (1 case study suggested that for that rural Council this was in the order of \$100,000 p.a.).
- Better decision making as easy to use search to access and integrate current, previous or unlinked documents.
- Ability to integrate documents from a variety of platforms.
- Capacity to hyperlink documents to server based video or other materials.
- Ability to establish and confirm calendars and link emails.
- Increased organisation responsiveness.
- Ability to demonstrate regulatory compliance.
- Enhanced protection of archived and institutional knowledge.
- Through a radical reduction in the use of resources deliver significant benefits to the environment.

## **7.4 Migration Considerations**

While the technologies and applications being used are all relatively new they are already proven in practice. However they will continue to evolve in a way that enhances the user experience and introduces new tools to aid decision making. The rapidity of this evolution suggests that it would be unwise to invest in a solution that is not capable of migration.

## **7.5 The Mobile Revolution**

Of perhaps greater importance is to understand that the use of these technologies enables Councillors to better understand what is driving the mobility revolution, how Council delivery can be reconceived and how a growing number of their constituents expect services and communication to occur.

## 8. Understanding the architecture of paperless processes

What emerged from the interviews on existing practice in Victoria were three distinct architectures for paperless council meetings. These are:

1. The generic ‘plug and play’ model, based on near to free pdf reader applications.
2. Third party mobile enterprise architecture platforms or MEAP’s.
3. Third party MEAP’s that extend beyond the meeting process to a ‘paperless’ document creation and collaboration process required as an input to the paperless meeting process. MEAP+

In analyzing the potential architectures the paper-based model has been used as the base case. **What is useful to note is how the transaction costs change and reduce as the benefits of the ‘applications’ are applied.** This reduction in transaction cost manifests itself in considerable time savings for Councillors as they become familiar with the easy to use technologies involved and in a reduction of time spent collating, annotating, printing and distributing by Council staff.

Paper Model



*Note: A = administrator*

## 8.1 Generic Plug & Play App Architecture

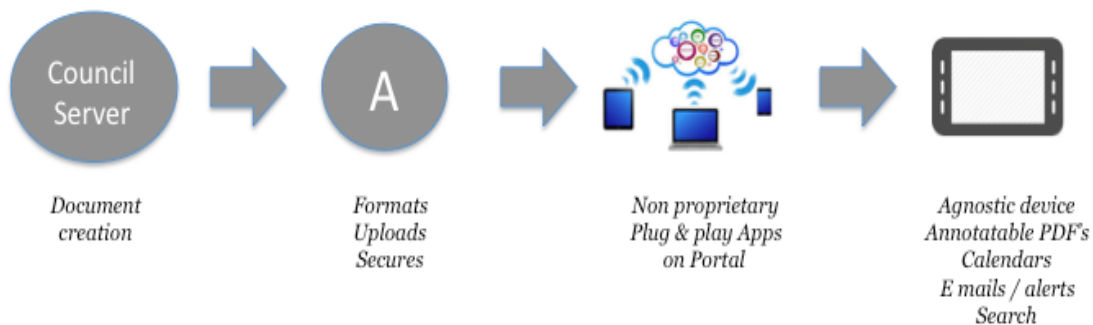
*“If it is just an e-reader it doesn’t really change the underlying dynamics going on in the boardroom.”*

- David Yoffie, Harvard Business School, Financial Times April 9 2012.

In the generic Plug & Play model, the paperless solution provides an electronic replication of the traditional model of printing and distribution. In other words it simply replaces printed versions with electronic materials.

Each Councillor is provided with a device of their choice (iPad, tablet or laptop) preloaded with appropriate apps including a pdf reader with annotation features (e.g. Goodreader, iAnnotate) and other normal features like email and calendars. Council materials are then **pushed** to these devices. Security, privacy, authentication and version control are designed and managed by an in-Council Administrator. In this generic model the integrity of the administration and management functions lies within the control of that particular Council provider.

### Generic Plug & Play Architecture





## 8.2 Mobile Enabled App Platform (MEAP) architecture.

In the MEAP model, proprietarial application software is at the center of an e-governance system. As the name suggests, by design it can be accessed from anywhere, with anything, by approved users, at anytime.

Currently there appear to be two kinds of MEAP's although as they evolve this distinction is likely to disappear.

In the first version the MEAP's have many of the features of the generic system. Where they differ is that they are cloud based and their focus is on security and integrity. In their packaging they have the look and feel of a set of Board papers as we have come to expect them, albeit in electronic form. Their names (e.g. BoardPapers, BoardDocs, BordTrac) reflect that design architecture. This may provide some degree of comfort to some directors and Councillors. They may offer other features including access to live feeds, news, governance advice and the like.

In the second version, the MEAP's have been designed from an app mindset and typically start with a user centric dashboard. These second stage MEAP's are increasingly concentrating on tools that facilitate and extend ease of use. They are also building in features that are specific to the Council sector.

In the MEAP architecture, all data is uploaded into a secure cloud and the key security and management features are built into the design of the platform. These include system security, authentication and user management. Most have a bundle of specific tools such as search, easy switching to appendices etc., online collaboration, both type written and hand written annotation, one to one video-conferencing and e-voting, depending on the app.

A key difference between generic and MEAP architecture lies in the integrity of the design of the administrative function and the robustness of the security and authentication services. Many of the functions that would be run by an IT department in the generic model are embedded in the app design. With the generic model the integrity of the system rests with the Council itself. With the cloud option, the integrity of design is embedded in the systems themselves.

What features are included in any particular offering seems dependent on the ‘developer’ philosophy. The Australian product BoardTrac for instance is driven by the law firm Minter Ellison and reflects that firm’s intent to strengthen its brand identity in the digital legal space. It looks to add value by focusing on and offering resources that Councillors might need; e.g. how to act in a conflict of interest situation. In contrast others are more interested in enabling resourcing and collaboration that is not bounded by particular geographic location. In time this will likely extend to virtual attendance and electronic voting.

Another difference is that the role of the Administrator changes significantly. In this architecture, both system (who can access etc.) and data administration is done through an ‘administration’ dashboard. This is accessed in the same way that end users access the cloud although the dashboard for the administrator is different.

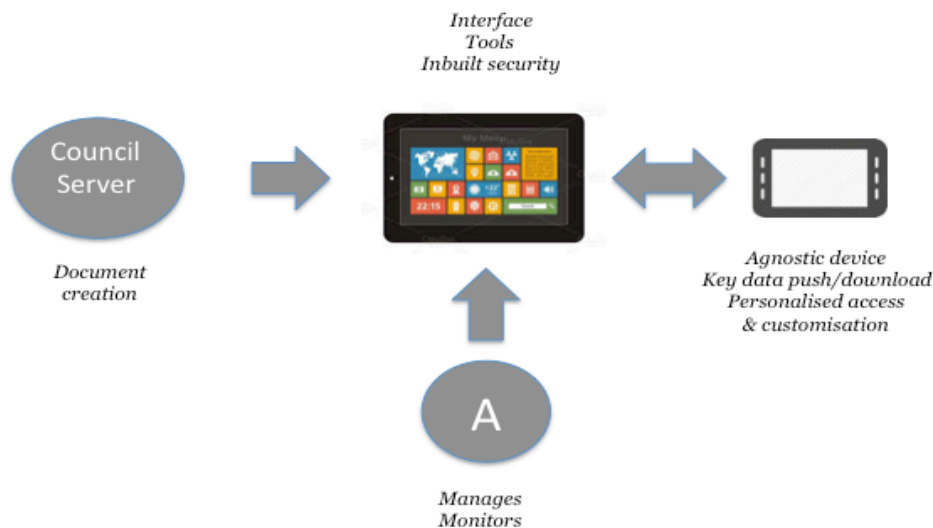
System administration in MEAP architecture is focused on ensuring that system integrity is maintained in each instance where the app the ‘system’ is accessed. While the platforms themselves have this architecture inbuilt, it is likely that the local IT team would manage this system administration function. App providers offer training and support in this process. Some systems also offer a range of analytic functions (such as the number of docs read etc./when). To get value from this analytic capacity thought needs to be given by IT managers and governance specialists as to what and which analytics might help facilitate better Council meetings. It is doubtful whether any Council in Victoria has the capacity to offer a level of system integrity and security at the level app providers claim that they provide.

	Security	Authentication & Access	Analytics
Cloud	✓	✓	✓
Application	✓	✓	✓
Device	✓	✓	✓

The second area is data administration. This involves deciding what documents, video, photos or any other form of data require uploading and who can access them

under what conditions. No conversion of this data is required by the Administrator prior to upload and if conversion is required then it is done by the app itself. In contrast the plug and play model almost always requires conversion (to pdf's) before upload. Version control and notification are handled automatically.

#### Mobile Enterprise Application Platform (MEAP) Architecture



Three important recommendations emerge from the development of this MEAP architecture:

1. That MAV Technology establish a Task Force to develop a set of guidelines to identify what key system integrity features and data administrative features any MEAP should have if it is to be used by Councils. This will assist Councils who have yet to do so to evaluate which paperless systems to adopt.
2. That MAV Technology recommend that any Council adopting a paperless Council system, do so without agreeing to 'unreasonable' lock in of any particular system. In the current model, most are operating on a one year license with rollover, and the annual user costs are so low that any shift (from one app to another) would hardly be of concern.
3. Given the nature of MEAP design, there is no reason why there must be one kind of MEAP that all Council's adopt. This is because MEAPs have an ease of integration through application that is not true of disparate and often highly customized Enterprise IT architectures.

There is no question that MEAP technology is the fastest growing 'productivity' technology on the planet. Their rapid evolution will require existing MEAP providers

to rapidly evolve or else others will seek to take market share. Further, any MEAP must be customized to the Australian Council market, as this is the current competitive benchmark. While some claim having their Cloud hosted onshore is added security and therefore important, it is doubtful if this claim can be substantiated, providing the Cloud is hosted in a jurisdiction where the rule of law (v the rule by law) can be applied.

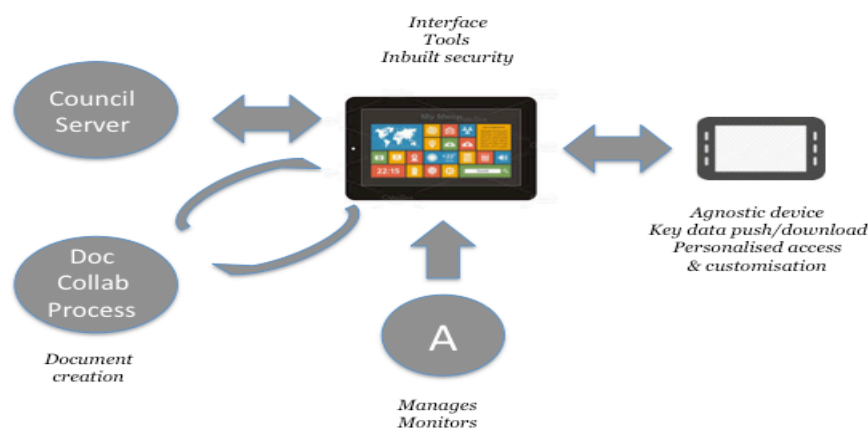
### 8.3 Collaborative MEAP Architecture (MEAP+)

The final model is an extension to the MEAP model. Essentially it provides the facility to extend the application architecture back into the Council document creation process. At least two of the providers of Council specific MEAP's offer this option; one through their dashboard, the other through a companion app.

In this architecture, the process of producing Council documents and the monitoring and control of both content and process of document creation (who and when) is provided in the architecture. There is therefore a mixture of push and pull in all parts of the system.

There is no doubt that as these mobile platforms become more widespread, the number of 'relationships' enabled by the platform, will continue to grow. For instance apps already enable 'forms' – thus allowing a way for Council functions where 'application forms' are part of the process (e.g. alcohol licensing) required to be easily managed. As bandwidth grows the integration of a considerable variety of location based services will also be possible. They are likely over time to offer a comparative and very cheap solution, comparable to the New York 311 call centre solution, where user input and Council response is seamlessly blended. <sup>ii</sup>

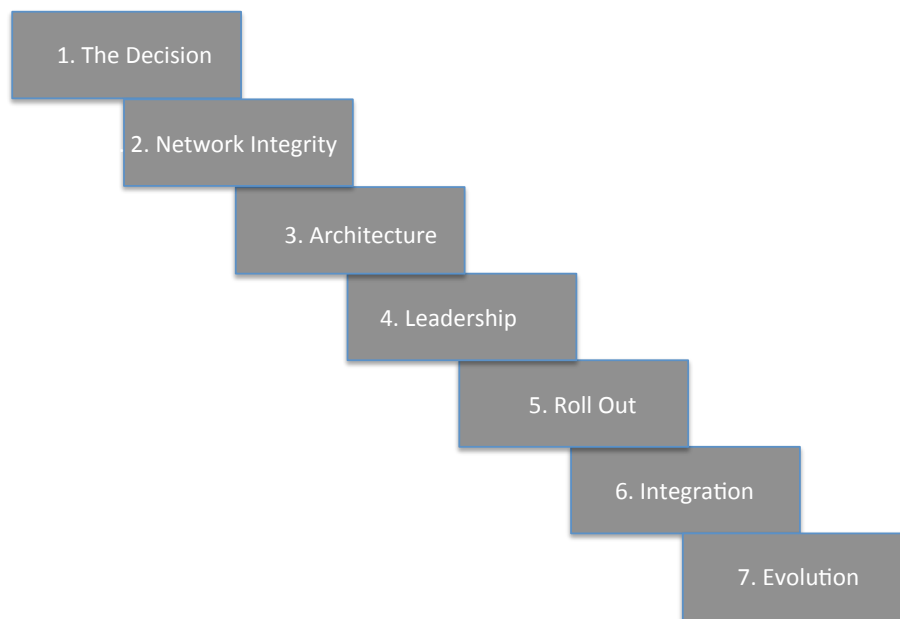
Mobile Enterprise Application Platform + (MEAP+ ) Architecture



## 9. THE IMPLEMENTATION PROCESS

### The Steps

Our research and the case studies suggest that there are 7 steps to the successful implementation of a paperless council meeting process. We would point out that 24 councils in Victoria and many more nationwide have already successfully put this in place. Some are metro while others are regional or rural.



### Step 1 - The Decision

While the decision may be seen as paperless or not, this study suggests it might have other dimensions.

*Decision point 1...*What is our prime motivation for this decision? Cost? Efficiency? User experience? Error reduction?

So .....

*Decision point 2...*Is this 'paperless project' a stand alone process or part of a wider initiative to introduce mobile enterprise apps into the organization?

If the mobile enterprise architecture is part of a broader strategy to rethink a number of Council functions in the digital era, it might include the use of crowd sourcing for community consultation, the introduction of programs like ‘Patchwork’ for cross community collaborations or the migration to the MAV Cloud.

*Decision point 3...*What is the role of IT in this process? Will IT retain absolute control over the technology, infrastructure and services or will it act as an influencer, facilitator and implementer of platforms that enable the user to control technology, infrastructure and services?

On the basis of these decisions....

What is our strategy to develop the business case?

Do we have buy in from key internal stakeholders, especially the CEO and Senior team?

Do we have the required information?

## **Step 2 - Network Integrity**

App based systems require reasonable speed of access for users (anytime, anywhere, anyhow) and high access speeds for administrators.

A strong recommendation from one CIO interviewed was that prior to the implementation of a paperless process, it is important to ensure that robust and sustainable networks exist that can support both user and administrator demands of such a system. We concur.

*For Users.* While all paperless systems can cache information, the capacity to upload and download easily is critical. At an individual Councillor level this is only likely to be an issue if their home location is very remote. Should that be the case then a combination of wireless and mesh might be required. Some might also need a small printer for their own use. In the remote Councils surveyed for this project, no one reported this as a problem although one Council noted that Councillors used the 3G network for downloading.

*For Administrators.* The integrity of the network may be sustained through a combination of Enterprise WAN’s, individual user WAN’s or fixed line access, public wifi and in the future mesh networks. A mesh network is a network typology where

each node acts in a way, where if required, it cooperates in the distribution of data, in addition to its function as a user device.

*For Meeting Rooms.* Of particular importance is the capability and the capacity of any meeting rooms that may be used by Councillors, especially those where there is an expectation that they have access to appropriate information. This capability includes sufficient bandwidth for Councillors to be able to update in real time and in the Council Chambers themselves a level of redundancy is recommended. Our view is that domestic grade systems are insufficient to meet this requirement.

### **Step 3 – Selecting the Architecture**

The nature of possible architectures and particular vendor offerings are canvassed elsewhere in this report.

Our view is that Enterprise centric systems, where the portal and security are managed by the IT department, together with the use of free apps, is too expensive and difficult to manage when compared with the current MEAP offerings. These new offerings in our view are well attuned to the needs of Councils. But, as has already been indicated, they do shift the locus of control. Furthermore stand-alone systems miss out on an increasing number of benefits (tools and features) that the race, by MEAP providers, currently provides. The only caveat when selecting a MEAP is to ensure that there is minimum lock in and that there is both a capacity for migration and an expectation of further development. Both the MEAP vendors we have case studied meet these criteria.

The range of Councils who are already paperless is very diverse in nature and geography. They include Councillors who have previously been digital skeptics and/or digitally illiterate. Both MEAP vendors assist with training and familiarisation. Few problems with adoption have been reported.

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## Step 4 – Leadership

In our research we found only two Councils where implementation (not through a MEAP vendor) had been unsuccessful. In both cases it appeared that part of the cause was a Leadership team that failed to ‘walk the walk’ with the technology themselves.

While there are many case studies where the Leadership team and the Councillors made the journey together, our view is that it is preferable for the Leadership team to adopt and explore the technology before providing it to Councillors. The growing capacity of the MEAP’s to facilitate collaboration and tracking relating to document creation should also assist Leadership teams to commit to the process.

Our recommendation is that until Leadership teams are running their own meetings in a paperless fashion, then the concept should not be introduced to the Council itself. This lead-in process also gives the Council staff time to understand how the administrative functions of a paperless system work.

Finally as Leadership teams begin to understand the other opportunities mobile enterprise apps bring they will have a greater capacity to explore mobility at a strategic level.

## Step 5 - Roll Out

Many Councils have rolled out their paperless process at the time of an incoming Council. This has the advantage of setting an expectation with new Councillors that this is the way that things are done around here. Others have simply done it opportunistically as part of a cost saving process.

Either way the ease of use of the devices, particularly iPads and Android tablets, make the process relatively intuitive and given their widespread use by people of all ages, there should be no reason why Councillors should not be able to master them.

The app ‘dashboard’ approach also makes navigation very easy. One vendor reported that they have an error alert monitoring system and that they are able to contact



administrators and suggest appropriate courses of action if users seem unable to do the things that they want to do.

Our recommendation is that if there is a particular Councillor that refuses to go paperless then this should not be made an issue and appropriate arrangements made.

## **Step 6 - Integration**

*Enterprise mobility has the power to improve employee (and Councillor) productivity, transform business processes and drive new revenue streams (or reduce cost).*

*This has elevated mobility to a strategic level. Councils should look to more cloud based and agile mobile application strategies to support the growing demands for their services and the constraints imposed by governments. Without such strategies enterprise productivity and cost effective delivery will suffer.*

- Adapted from Chris Marsh Yankee Group Enterprise Research.

The introduction and use of a paperless Council app is likely to be one of many apps that Councils are considering or are already using. For some smaller Councils, the number of applications in use may be in the 10's, for larger councils in the 100's. While it is beyond the scope of this report, we recommend that the IT function ensure that they have clear mobile device management (MDM) and mobile enterprise application (MEAP) strategies and processes. This is important for visibility, compliance and support on the one hand and for understanding synergies on the other.

## **Step 7 - Evolution**

There are three aspects to MEAP evolution that should be considered:

1. The evolution from paperless Council meetings to other mobile enterprise applications. This has implications not just for the IT function but the design and organization of work and workforce culture.

2. The evolution of the Council specific MEAP's themselves in terms of what they offer.
3. The evolution of how the technologies access and use information.

Paperless is not just a change from enterprise centric systems. It is a fundamental change in the way that work is organised and 'the culture of how work is done.' It is a change in the locus of control.

IT managers should also be aware therefore that they will need to work closely with a wide variety of functional managers to both customize and integrate what will rapidly become a fragmented, distributed and mobile environment.

Finally IT managers should also work closely with Culture and Human Resource Managers to ensure that the shift from enterprise centric to mobile centric work is supported at a culture level. Some will find the process of being liberated from their desks difficult to accept.

Mobile Enterprise Application vendors are moving rapidly into apps that facilitate collaboration in the content creation and management space. These apps are capable of being customized for Councils. Harboursoftware have a specific application called Doc Assembler and Council Dashboard (bigtincan) have bundled content creation into their offerings. Both offer similar customization with forms.

With the development of Council specific user groups we imagine that this evolution will continue to increase.

Elsewhere, flexible displays are currently being developed and these will enable the image in an application to be transferred and manipulated on 'intelligent' surfaces. These new materials allow displays to flex, bend or even rolled up. <sup>iii</sup> At that point (circa 2016) devices and furniture will merge as an idea and both users and administrators will move seamlessly from one surface/interface to another.

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## 10. CASE STUDIES

Case Studies on eight Councils are presented below. Six of these have been produced as a result of a set of interviews with the respective IT managers of these Councils and two have been produced as a consequence of vendor recommendations. With the exception of the Wellington NZ case study, it was felt that these were representative of both the Australian experience and the use of paperless meeting systems by other kinds of organisations, including private corporations and not for profits. Most vendors have a range of case studies on their web sites.

### **Case Study 1: East Gippsland Shire Council (EGSC)**

In August 2010 the EGSC introduced a ‘plug and play’ paperless system for its Council meeting process.

#### **Drivers.**

There were three important drivers for EGSC. The first was as a cost reduction strategy as the paper system was estimated to cost in excess of \$200,000. The second was geographical. East Gippsland’s catchment is some 21,000 sq. kilometers and the logistical challenge to maintain a paper based process was considerable. Finally the Council packs were in excess of 400 pages and Councillors routinely were carrying packs of up to 1200 pages.

#### **Features**

- The initial process was based on the use of Council provided iPads.
- The Goodreader pdf app was installed to read all docs converted to pdf’s.
- All documents are converted to pdf and emailed.
- The Council uses WebDav and a Citrix portal.
- Secure access, common storage and synch functions are managed by the IT function.
- The paperless Council process is not connected to any other function.
- The iPads are also used for point to point video-conferencing using polycom.com

- Functionality is limited to the features provided by Goodreader – highlighting, annotating and hyperlinking.

### **Process.**

The process was initially trialed as an option with a new Council. While an opt in arrangement was used, all the Leadership team use iPads for their meeting processes. Arrangements were made to ensure that Councillors were able to easily download at their homes. The IT function provided support and training where this was required. Within 12 months of introduction the entire meeting process, including agendas, was paperless. EGSC is now looking to evaluate a number of MEAP's as the next stage in their paperless evolution.

### **Key Learnings**

- Positive leadership by the Senior team is critical to the successful introduction of a paperless system.
- A plug and play system, while making some demands on the IT function, can reduce costs. It is estimated that in EGSC's case the saving is in the order of 52%
- Paperless systems are highly beneficial in geographically dispersed regions.

### **Case Study 2: City of Ballarat. (BCC)**

The City of Ballarat (BCC) has one the longer histories by any Council in the paperless process. They initially started in 2005 with the emailing of pdf's to each Councillor and providing a printer for each Councillor to print off what they required. They are also interested in the future of paperless processes and the governance challenges this poses.

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**Drivers.**

Ballarat's journey to a paperless process emerged from a strategic view that they would be a leader in the use of technology in the digital age. They also have a strong commitment to sustainability. They identified significant cost savings in their processes – removal of 0.5 of a staff member and a reduction in paper of 10 reams per week.

**Features**

- Plug and play system on any device that Councillors prefer
- Paperless meeting process is part of an integrated system linked to emails sent on behalf of Councillors
- Hosted on Sharepoint+
- Security, access and remote wiping managed by IT function
- Users have normal pdf app services but search process not optimized
- The paperless process has also changed how documents are created and how Council information systems are organised.

**Process**

The paperless process was initiated by the Leadership team. All Councillors are trained at Induction in the Council process and a full reference manual is available online. The IT function acts, to support and train, as required. However the Mayor still uses a paper agenda when running the Council meetings.

**Key Learnings**

- Paperless Council meetings should be positioned as a journey not an end point.
- Some thought needs to be given to the future role of the CIO when everything is available electronically.
- There are high expectations about the quality of 'connections.'
- There are a range of issues related to the governance of paperless meeting processes that are yet to be resolved. These include the use of electronic signatures, how decisions are formalized electronically, probity around face to face or video-conferencing and how the rules from paper systems transfer.

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## Case Study 3: Corangamite Shire Council (CSC)

### Drivers

CSC introduced a generic plug and play paperless system in November 2012. The CSC process was driven by the Leadership team and the CIO. They saw that the technology was now at a stage that it was easier to use and manage than traditional paper based processes. Furthermore they were conscious that CSC in addition to traditional approaches, will need to engage in online formats with their communities.

### Features

- Developed exclusively for Council members provided iPads
- Material delivered as pdfs from WebDav and InfoCouncil
- Goodreader and Noteability apps used by Councillors to read, annotate, markup and share.
- Calendars, emails and alerts built into system
- IT function controls security environment and access
- Capacity for remote wiping
- Capacity to use hyperlinks and shared folders

### Process

Like other Councils, a new election term was used as the start date. Councillors were encouraged to 'play around' with the technology and the apps. Some training was provided if required but "the process is very intuitive so there are few user concerns. Neither the paper based process nor the paperless process have been costed although savings in paper of over \$5,000 and at least \$15,000 in indirect costs have been noted.

### Key learnings.

- It is useful to establish a baseline cost in the paper process before proceeding.
- App based processes are very intuitive
- Leadership modeling is essential.
- Paperless Council systems help 'educate' Councillors in how technology might be used in other Council functions.

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## Case Study 4: Melbourne City Council (MCC)

MCC introduced a paperless process in 2012. The goal was for Councillors, the CEO and Directors to be able to easily and securely access information such as Induction programs, Council and Committee papers, briefing documents and other resources online or on a tablet device, anywhere and anytime.

### Drivers

For MCC the sheer volume and size of files that Councillors may be required to consider is considerable. MCC also wanted the capacity to quickly and easily update Council papers and ensuring that each Councillor had the relevant updates. MCC was also aware that the cost of servicing its paper based process was in excess of \$250,000. The time frame from the decision to go paperless (May 2012) to implementation (October 2012) was also very short.

### Features

- A product called Board Papers was chosen to provide a paperless functionality.
- It operates on an anywhere, any device basis.
- The Melbourne branded Councillor portal is a cloud solution using SharePoint technology
- It allows secure meeting packs to be created with user authentication being required.
- The portal also provides a live media feed, a scrolling by the numbers area, an events calendar and a 'consultation' area.
- Available updates are notified via alerts.
- Security and access are built into the portal but managed by a Council administrator.
- There is a personal area available for each Councillor to customize as they wish.
- Annotation features allow staff to write notes, text or highlight.

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## Process

MCC reported few issues in adoption although they did have concerns about the ability of users to download anywhere, anytime. In making the decision to use Board Papers the options to build either in-house solutions or use generic plug and play models were considered and rejected. The system now has over 100 users and staff who are no longer required to bring physical copies of briefing papers to FMC and Council Meetings. While this process is currently seem as standalone considerations including Nintex forms and Workflow will require MCC to look at its MEAPs in a more integrated way. We were advised that the time and cost to develop the cloud solution was \$76,000 plus GST.

## Key Learnings

- MEAPs can provide more than Councillor packs and files.
- The integrity of the network is critical in a paperless environment.
- Most MEAPs work on any device. This is critical for people who use and migrate across multiple devices.
- The platform provides for access to other than pdf's – such as video.
- Cloud solutions promote a two way flow of information and notifications.

## Case Study 5: City of Hobsons Bay (Hobsons Bay)

Hobsons Bay introduced a paperless system in 2011. As one might expect, given their early adoption Hobsons Bay spent 12 months testing and bug fixing before they released the application to Councillors.

### Drivers

The CEO of Hobsons Bay is very digitally literate and he, together with the Director of Corporate Services, saw the possibilities that a mobile application offered. They chose a MEAP known as Docs on Tap provided by Harboursoftware (formerly Casalar) software.



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## Features

- Dashboard based Cloud.
- Customised to Hobsons Bay with distinctive interface.
- Documents remain in the Cloud and are organized in a way that is typical of Councils in Victoria.
- Users can highlight, annotate and write within the app.
- Users have own workspace in the Cloud.
- App provides all the security and the logic.
- The app is not integrated into the Council system.
- A range of permissions is available, easy to configure and able to be granulated to a fine degree.
- Seen as very user friendly, logical naming conventions and puts docs at fingertips.
- Docs on Tap is soon to be accompanied by a collaborative document creation app known as Doc assembler.

## Process.

Initial testing and customising by a committed Leadership team has already been highlighted. Upon introduction at the convening of a new council training was provided when required. There appeared to be few objections by Councillors although two of the seven only partially use the app. No estimate of the savings has been made yet although there are currently 31,00 documents loaded with 995 being currently active.

## Key Learnings

- Commitment by the Leadership team is essential.
- MEAPs can be customized to reflect the identity of individual Councils.
- Docs on Tap designed for and by people familiar with Council systems and processes.
- Paperless systems are important in managing information overload and toxicity.

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## Case Study 6: Macedon Ranges Shire Council (MRSC)

MRSC were among the early adopters of iPad technology (2010) although their platform is device agnostic. They use the Council Dashboard MEAP that runs on a bigtincan application.

### Drivers

Introduced to new Council under sponsorship of Manager of Governance. Total package approach including dashboard set up, provision of devices (iPads) and both administrator and user training appealed. They were concerned about the size of the large paper files (100's of pages) that the Councillors were required to have with them and the difficulty in navigating a complex document process.

### Features

- Can take data from anywhere and upload to portal.
- Has easy to use annotate, write and highlight features.
- Dashboard style makes navigation of portal and individual documents simple.
- Can take any kind of data uploaded onto to secure Australian based portal (note some other non specialist vendors of bigtincan in Australia access a US based portal).
- Inbuilt security, access and authentication features managed by administrator.
- Can be accessed anytime anywhere on any device.
- Has point to point video conferencing built into app.
- Encourages collaborations through navigation pane.
- Can be cached offline.
- Dashboard and interfaces customizable.
- Has built in forms feature.
- Is developing document creation collaboration process for administrators.
- At the time of writing the only device that cannot use the app is Apple Mac.

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## Processes

Very easy installation of package (a few hours) seems the norm. Ongoing upgrade of the application is continuous and consistent with the bigtincan reputation as one of the most exciting apps of 2015. (Gartner)

MRSC reported that the vendor had excellent case studies on their web site. The ease of use of the Dashboard prompted one old farmer /Councillor to opine “I love this device.”

Vendor quotes for use of app plus provision of devices – year 1 \$7,500 plus GST. Includes set up and training of both users and administrators. Year 2 \$6500 plus GST based on 20 users. Additional licences are \$20 p.a.

## Learnings

- Cloud based apps with their larger Council user base are significantly cheaper and have more features than generic plug and play options.
- Ease of user centric navigation prime focus of MEAP's.
- Mobile architecture can be extended to other Council functions.
- The type of device used is becoming a non issue with MEAP providers.

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## Case Study 7: North Grampians Shire Council (NGSC)

NGSC were early users of electronic meeting materials. They first provided computers and printers to Councillors in the mid 1990's. As early as 2010 they helped co-create the application known as Docs on Tap.

### Drivers.

NGSC were early adopters of iPads following the introduction and modeling of the technology by their Director of Corporate Services. They rapidly became aware that pdf readers with a wide range of features were difficult to navigate when large pdf files were in use. They therefore worked with Docs on Tap to provide an application with a simple directory, familiar to Councillors, that had all the appropriate security and access features that Councils would expect.

### Features and Processes.

- As stated in the City of Hobsons Bay case study.
- Regularly use electronic signatures.
- Have introduced virtual meetings for the West Wimmera Library Meetings.
- They have a collaboration with Harboursoftware in the development of the Docs Assembler application.

### Learnings

- Like Melbourne City, NGSC have paid close attention to the integrity of the wireless environments inside the Council Chamber. In their view domestic grade systems are insufficient for what is required. They are now working on extending the bandwidth of their systems for all the locations in which they work.
- They believe that Docs on Tap is 'industrial strength' as an application.
- Their view is that 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."
- They are now migrating the whole Council system to Google docs and have a Sydney based firm advising them on the security framework.

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## Case Study 8: Wellington New Zealand.

Wellington New Zealand, like most other Councils wished to replace a cumbersome paper process, where often “there were amendments to Council Business Papers that would require the whole process to repeated. The system was very unproductive, inefficient and costly.” Council Dashboard was selected as a cost effective and productive way to solve this issue.

### Drivers and process.

The initial drive was to improve the productivity of the governance staff. It was implemented in April 2013. Training for administrators and end users was completed within four weeks. In the Wellington example the Council Dashboard app was also used to facilitate the District Licensing Committee process which has responsibility for alcohol licensing and related administration.

The Dashboard was also extended to Council Committees. They report “ Council Dashboard initially served the purpose of allowing administrators to manage and deliver content for meetings and other purposes. However with the ability of users to create, edit, annotate and share content managers are now able to collaborate in teams on tasks such as drafting and approving Business Plans, managing projects and developing plans.”

Wellington have also used a combination of Council Dashboard and online forms to manage their community grants funding process.

Most importantly Wellington report that Councillors typically find it easy to find and navigate through content and make annotations and much more.

### Key Learnings

- Wellington’s experience is entirely consistent with the asserted claims of MEAP vendors with respect to cost, productivity and user experiences.
- The case study exemplifies the collaborative potential in the document creation process – the architecture of MEAP+.
- As an approach to governance MEAP’s have benefit well beyond the formal Council process.

## 11. VENDOR CASE STUDIES

### 11.1 Overview

Listed below are brief profiles on three vendors. These vendors were identified, during the research phase, by Councils as providers that these particular Councils were using. They are: Board Papers, Council Dashboard (bigtincan) and Docs on Tap.

The number of providers of paperless Board application solutions is already considerable and likely to grow rapidly. In the course of our research, we identified other providers, including BoardTrac, BoardPad and BoardPortal, who are active in the Australian market, primarily in the private sector. A desktop review of the above providers suggests that their offerings offer broadly similar benefits to Board Papers and that their orientation is primarily towards the Corporate Sector.

There is no intention in this document of nominating a preferred provider. Nor in our view do Councils need to settle on a common provider in order to overcome the synergy issues that beset enterprise architecture systems and make inter Council cooperation difficult. This is because most apps are, or soon will be, device and system agnostic. Furthermore the better apps have the capacity to take documents from any source (Sharepoint / Citrix/InfoCouncil/Office/GoogleDrive) and share them through their cloud. Finally on the proviso that the app concerned operates a secure cloud, in either Australia or jurisdictions where the conventions of international commercial law are both protected and respected, geographic location of such clouds, is in our view, it is a non issue.

The existence of multiple application providers, competing actively in the market, is we suggest a good thing because it will ensure ongoing development of the paperless Council applications and the extension of the paperless principles into other parts of Council activity. There is some evidence this is already occurring (see the Northern Grampians and Wellington NZ case studies).

Most importantly the cost of migration from one app to another seems to be relatively simple, if the benefit can be demonstrated. Clearly though user familiarity and comfort needs to be a prime consideration. In our research we identified two

Councils looking to move to MEAP's from a freeware self supported and generic architecture.

Implementation costs provided are as quoted by the vendor or the client.

### 11.2 Gartner's Rule of Three 2012. <sup>iv</sup>

Industry analysts Gartner also developed a "Rule of Three" in relation to assessment of MEAP vendors. They argued that vendors of such apps have significant advantages over application suite or mobile OS platforms/tools if they offer approaches that support mobile OS diversity in three situations:

1. Where there are three or more applications.
2. When there are three or more targeted OS or runtime platforms.
3. When projects involve the integration of three or more back-end systems.

### 11.3 Board Papers

*Provide a great meeting experience for your Board and management committees.*

#### Source

<http://www.pervasent.com/board-papers/>

#### Value proposition

Using Board Papers®, you can halve the time required to organize and deliver board packs, while your directors read and annotate documents using an iPad app that Apple features on its "how-to" site.

- Simple - a book-like iPad app requires only minutes of training
- Secure - meets the requirements of leading financial institutions
- Affordable - one-time license fees for unlimited numbers of users
- Worldwide - used by boards and



committees on five continents

- On-premise option - installs on your SharePoint server in an hour

## Provider

Pervascent UK.

## Known Footprint

<i>Victorian Councils</i>	Melbourne City
<i>Other Councils</i>	Unknown
<i>Companies (examples)</i>	Standard Charter Lion Connections Uniting Care VIS Insurance FMG

## Features

- Cloud solution using Sharepoint 2010
- Access via desktop or iPad app
- Creates secure meeting packs with annotation/ note capability
- Portal also contains induction packs/ governance and finance resources, live feed scrolling and consultation area
- Email alert facility
- Managed using active directory, user accounts and groups

## Reported Implementation Costs

*Time and materials to develop portal was \$73,600 plus GST*





## 11.4 Council Dashboard

*Delivering real benefits to over 70 Councils including better management and control of content, faster distribution of content and a great user experience, Council Dashboard is easy to implement and scalable.*

### Source

<http://councildashboard.com.au>

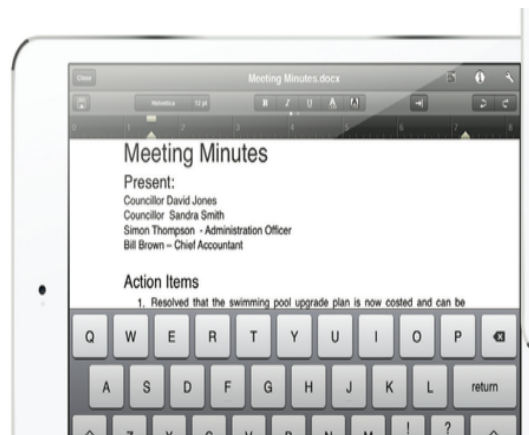
Demo <https://vimeo.com/65037130>

### Value proposition

- Better management and control of content
- Faster distribution of content
- A great user experience
- Easy to implement
- Increased productivity (includes mobile workforce)
- Ability for users to collaborate to create and edit content.

### Provider

Council Dashboard is the trading name for TaskExchange which is powered by the bigtincan hub. It has been specifically developed for and is focused on the Local Government market.



## Known Footprint

<i>Victorian Councils</i>	Baw Baw Buloke Cardinia Casey Macedon Ranges Nilumbik South Gippsland Wangaratta
<i>Other Councils</i>	Over 70 Councils in NZ & Australia

## Features

- Secure Cloud solution which takes multiple feeds (Sharepoint/Infocouncil/Citrix etc.
- Automatic download of documents.
- Access via any device.
- Creates secure dashboard with annotation /note taking and other collaboration tools.
- Email alert facility.
- Enhanced encryption, remote content wipe, user authentication for highly confidential docs, location protection.
- Capacity to look at multiple documents.
- Easy to customize and brand for a particular Council.

Ranked as one of best 'cool' apps of 2015 by Gartner.

## Reported Implementation Costs

*First year cost 20 users including devices, training and set up & \$7,500 plus GST.*

*From Year 2 circa \$6,300 plus GST. Additional licenses \$20 per head.*

## 11.5 Docs on Tap

*Docs On Tap provides a solution to enable you to manage and distribute documents and content to the people that need it.*

Also produce a companion application **Doc Assembler**.

Doc Assembler is an intuitive web based solution that facilitates collaboration across an organisation when working on either simple, think letter, or complex, think Agenda's or Minute documents. It is able to be delivered as an on premises or fully hosted solution, Doc Assembler is simple and easy to configure. Not being reliant on complex word macros, the ability to maintain and control document templates is delivered to the end user in a modern browser based application which can be run on any device.

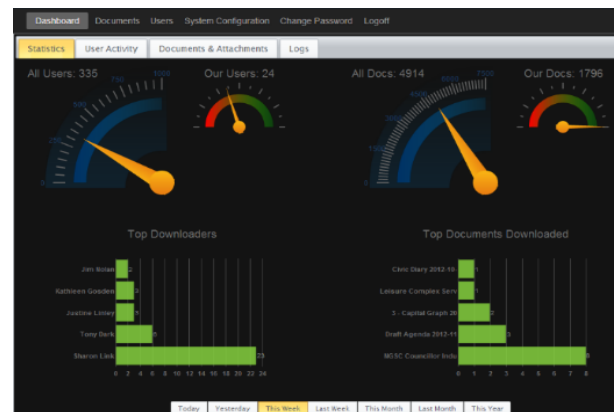
### Source

<http://www.harboursoftware.com.au/docs-on-tap/>

Demo: <https://www.youtube.com/watch?v=RoOocHrOa28>

### Value proposition

Docs On Tap is one of the leading solutions dedicated to the complete management of the process for distributing documents from desktop to iPad. Docs On Tap can be used by just about any organisation that has a need to distribute information to a mobile platform: the possibilities for Docs On Tap to benefit your organisation are endless.



### Provider

Harboursoftware formerly Casalar software based in Victoria.

### Known Footprint

Victorian Councils	Northern Grampians Shire Council Central Goldfields Shire Council
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	West Wimmera Shire Council Hobsons Bay City Council Horsham Rural City Council Ararat Rural City Council Mt Alexander Shire Council Pyrenees Shire Council Hindmarsh Shire Council Yarra Ranges Shire Council City of Yarra Wimmera Regional Library Corporation
<i>Other Councils</i>	Over 1030 individual licensed users from just under 50 organisations out there using the app each day, with over 34,500 documents having been uploaded onto our system

## Features

- Desktop application to control the distribution and structure for the delivered content.
- Cloud based service for documents example content link style makes it convenient for the end users to access the documents when and where they want.
- Synch process that eliminates the need for the end user to have to manage the documents on their mobile device.
- Secure document delivery based on device id's.
- Makes managing attachments to documents simple and easy.
- On the iPad or Tablet device provide the end user with the ability to:
  - Annotate documents.
  - Highlight text.
  - Search documents for key words.
  - Simple synchronisation process.
  - Automatic notification of new documents.
  - Bookmarking.
- Version control.
- Easy to customize and Brand front end.

## Reported Implementation Costs

*First year cost 20 users including devices, training and set up & \$5,000 plus GST.*

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## 12. Governance

*Despite the fact that our policy environment is being redefined, our policy institutions (Councils) continue to be dominated by the culture and practices of the past, including winner take all debates, siloed policy solutions, a passive public and ideologically driven decision making.*

*The question now is: can we fashion a new approach to governance- one more in keeping with the needs and aspirations of our time?*

*Don Lenihan, Canadian Public Policy Forum 2013.*

There are three important governance issues that emerge from the emergence of paperless Council processes;

1. Enhanced transparency and traceability of Council documents and updates to same.
2. Governance protocols are not aligned to this new networked environment.
3. The nature of what constitutes locus and control in the networked technology environment.

### 12.1 Enhanced transparency and traceability

MEAP architecture leaves clear electronic trails in the processes of document creation, collaboration, distribution and user response (read, comment, disseminate). Much of this is done automatically. For instance amended documents are uploaded and integrated seamlessly. While for the most part this has considerable benefit, it does impose higher standards on those engaging in the process. For example it is possible to know if someone has read a key document or not. The defense of “I didn’t know’ might become difficult to sustain in many instances.

Our view is that it is important that users are made aware of this higher standard of responsibility in their initial training. However, as the above quote from Lenihan suggests, the deployment and use of technologies that by design encourage cooperation, networking and collaboration open at least the possibility of a different style of decision making than we have hitherto been used to.

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## **12.2 Governance protocol issues require review in a paperless meeting environment.**

The shift from printed to digital platforms improves key aspects of Council governance with respect to security, privacy, searchability, availability and administration. However this improvement would be enhanced if there were agreed guidelines across Councils with respect to the following basics of governance:

- Ensuring that key aspects of the ‘administration’ of a paperless governance systems are defined and attended to. This includes definition and management of the wireless or other networks on which the devices used by users rely.
- Ensuring that protocols are developed and standardized with respect to electronic signatures.
- Development of common standards that formalize electronic voting and ensure the probity and integrity of all kinds of electronic decision making. This is important in other meetings than formal Council Meetings.
- Ensuring that there are protocols that protect notes and comments of elected representatives on documents. These differ from those of Directors in public companies where all notes are regarded as the property of the Company.
- Establishing codes of conduct and rules for remote attendance (e.g. Skype) and other rules governing meeting procedures where all information is electronic.

## **12.3 The locus and nature of control changes**

As we indicated in Section 7 of this report, the locus of control for the IT function changes. It moves from one where all information flows and processes in an enterprise centric system are controlled (the traditional view of the Enterprise IT function) to one of influencing, facilitation, enablement as well as being the guardians of network integrity. In this networked future the ‘governance obligations’ of Chief Information Officers, or as they might be called in the future Chief Advisers on Mobile and Enterprise Applications , also need clarification. <sup>v</sup>

### 13. Conditions for Success

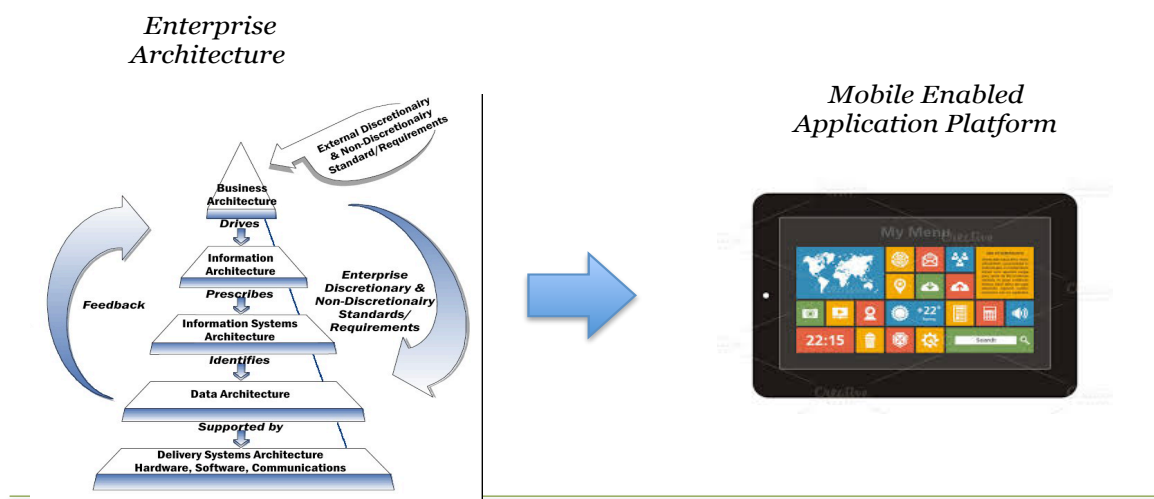
In the Cast Study interviews, the attitude of senior leaders in Councils was established as the determining factor in the success or otherwise of a paperless Council solution. What this suggests is that the primary issue for the future is one of understanding the work 2.0 culture and work practices that flow from it not which technology might be adopted.

It therefore follows that senior leaders and Councillors will not be able to take advantage of the significant cost savings of emerging mobile enterprise application solutions, if they cannot master the idea of paperless Council meetings.

The rapid evolution of MEAP's allows people to access their dashboards on their preferred device or devices. However emerging research suggests that in the near term future people will routinely access and migrate across up to five different devices.<sup>vi</sup> This indicates a shift from a 'device centric' view of the world to an 'access centric' view of the world and has as a consequence important implications for future system design thinking.

A failure to master the digital networks space will also isolate Councils from mostly younger community members who expect that all communication and services will where possible be delivered through these user centric technologies.

One would also expect that the absence of mobile and user centric apps at a Council meeting level will also slow their adoption in other areas of Council activities. Within 3 years this 'failure to adopt' will be reflected in wide disparities between Councils, in both the quality and quantum of service delivery (transaction costs).



However a rethink and redesign of current Council IT systems will be required by those Councils that adopt the idea of paperless Council meetings and begin to use the same technology for other Council functions (e.g. collaboration on all Council documents and budgets). This redesign will most likely be predicated on the idea that MEAPs provide a relevant and cost effective option, when considering how and when to replace outdated and expensive legacy systems.

As has already been suggested this shift to application centric enterprise requires a rethink of the IT function as well as the IT system itself. The logic for this shift according to industry analysts Gartner is outlined in Appendix 1.

## **14. Future Evolution**

As the case studies demonstrate, the successful introduction of a paperless Council system and the shift to MEAP architecture suggests a number of possible extensions that will reduce cost, improve productivity and enhance the user experience.

### **14.1 Councils and Community**

The first is the extension in the use of networked based technologies into an increasing number of interactions with members of the community. Some of these interactions will occur through applying the same technology to other Council or statutory meeting processes (see the Wellington NZ case study). Some will be through the provision on an increasing number of online services, for individuals, in their interactions, through whichever platform those individuals wish to communicate (anytime, anywhere, anyhow).

There is of course also the ability to deeply engage with people as a community to crowd source ideas and responses to issues. The recent Melbourne City 'People's Platform' (reported in the Age, Sept 1 2014) is an example of this engagement potential. Both these forms of engagement (individual and group) like MEAPs are for the most part cheaper and considerably more effective through network technologies and apps than traditional measures.



## **14.2 Rethinking the work of Council**

While it is not within the remit of this paper, clearly MEAPs provide a number of opportunities for Councils to migrate desk bound systems to mobile systems. This will require the rethinking of workflows. Based on case studies already showcased in MAV Technology Awards, this rethinking of workflows can increase productivity by at least 50% ,while radically reducing the transaction costs associated with those workflows.

It is recommended that MAV Technology set up a Task Force to assist in defining the design guidelines and change management processes.

## **14.3 Environmental sustainability dimensions and Factor 10**

For some a quest to reduce paper can lead a Council towards paperless Council meeting systems. In sustainability terms a radical reduction in resources to deliver the same or greater value should also be at the core of the sustainability debate, rather than just a concentration on waste. This report argues that paperless Council meetings can be shown to deliver greater value using 1/10<sup>th</sup> of the resources (what is known as Factor 10).<sup>vii</sup> If this radical reduction in the use of resources ( a reduction in anthropocentric activity) is also extended to other Council work then the shift to paperless and mobile enterprise generally should be at the heart of any sustainability strategy.

## **14.4 Stand alone or part of reconception of Councils?**

For the reasons outlined above, the introduction of paperless systems can usefully be seen as a part of a transition pathway from enterprise centric work systems to mobile application platform based systems, rather than just as stand alone projects. As the case studies clearly demonstrate, the use of cloud base systems can also change both the process of collaboration and/or the process of engagement. Most importantly they can do so at a cost level that is ‘dramatically’ below paper based systems.

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## 15. Conclusions.

What has emerged during the course of this study are the following:

1. Some 24 Councils in Victoria have already successfully implemented paperless systems. These include city, regional and rural Councils of all types.
2. Our research shows very little Councillor resistance to the implementation of such systems and often considerable support once the power of the devices are understood.
3. The cost argument for maintaining paper based systems is simply not sustainable, given that MEAP's deliver more for less than 10% of the cost. Some though have maintained that it is simply too expensive to maintain a paper based system for the few that insist on paper while maintaining a digital system for the rest. Seen through the traditional IT lens this might well be the case. However if it is seen through the MEAP lens printing one or two copies for those that insist on this option, is still a quantum cheaper than perpetuating a paper based system for everyone.
4. The interviews that were carried out, together with evidence from vendors, suggests that there are few implementation problems, if the Leadership team in the Council are committed to and model this technology themselves. We have evidence of people in every demographic and in very different locations who have mastered the technology.
5. We identified only two Councils that did not succeed with their first implementation. In both cases they tried to implement stand alone rather than MEAP solutions.
6. The introduction of paperless Council meetings is not a technology issue or even a 'solution.' Rather it is a fundamental shift from an old mechanistic way of doing business to a mobile interactive way of doing business. This changes the locus and nature of control for the IT function.
7. The introduction of MEAP's not only has significant cost savings but they offer a range of tools that enable better information management by users and

better decision making. It has also been demonstrated that MEAP's work very effectively in all Council meeting processes and in the creation and management of documents required by Councils.

8. The MEAP's we have reviewed do not have any long term lock in (by design) and it is relatively easy to migrate from one to another, should any particular app fail to offer what is required.
9. Given the nature of app design, there is no particular requirement that all Councils in Victoria adopt the same app. That said the bulk of Victorian Councils are now choosing one of two Council specific apps.
10. The whole notion of MEAPs requires a rethinking of how workflows are designed and the culture that is required to support that.
11. A review of proper governance in this new technology environment is also required and there is an opportunity for MAV Technology to take leadership in this process.

***In the end the shift to a paperless systems will not be optional as cost considerations, performance factors and community expectations will far outweigh maintenance of the current status quo. The only question is; will the transition be complete in three years or five?***

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## Appendix 1. THE SHIFT FROM ENTERPRISE CENTRIC ARCHITECTURE & GARTNERS RULES FOR SUCCESS.

The shift from Enterprise Centric Architecture to MEAP's according to Gartner requires a rethinking of the IT function. At a 2010 symposium the respected IT analysts Gartner defined three rules for success, in face of a set of new realities and opportunities for IT leaders.

These new realities were:

***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.

In the face of these new realities, Gartner argue that three rules will be constants in this new era.

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1. **Smart Control.** This is a shift from IT acting for absolute centralized control over technology, people infrastructure and services to influencers, facilitators and implementers of user experiences where they (the user) can access what they want and how they want it on any device they want. Smart Control is about understanding that users can only maximize their capabilities with the assistance of an IT department in a way where the management of technology is more tightly aligned with the business goals of the organization.
  2. **It Dynamism.** Under the old rule IT was routinely tasked to develop solutions that delivered a specific business function, mostly with a one size fits all mentality. Now the imperative is to avoid rigid systems and invest in systems that are built to change.
  3. **New opportunities.** The shift from enterprise centric systems to MEAP's represents a significant opportunity to support Council's in new ways and lay the foundation for a new kind of infrastructure. It will require interactions by IT across many functions in ways that innovative and value creation focused. It will necessitate a willingness to live with ambiguity and risk.

*These notes are a synopsis of a Gartner Press Release from October 18, 2010. (Op cit)*

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## Appendix 2: DINOSAURS AND GIANTS

On the 27<sup>th</sup> of January 2010, the CEO of Apple Computers held a special conference to announce the introduction of the iPad. As was reported at the time, the announcement was met with equal amounts of excitement and derision.<sup>vii</sup> What we now know is that in just a few short years, iPads and Android tablet devices have changed the way information is produced, distributed and stored.

In July of 2014 the arch enemies of the digital revolution, Apple and the giant IBM 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®.”<sup>vii</sup>

What this forced marriage signaled was a rapid shift from geographically immovable information systems, controlled by an IT department, to a world where through ‘apps’ much of the business of any enterprise, controlled by the user through easy to use tools, can occur anywhere anytime. This new technology platform is called **the mobile enterprise application platform (MEAP)**.

The January 2015 announcement by IBM that it intends to cut 25% of its global workforce shows how profound this shift to MEAP is for the conventional view of IT. At the time of writing the future role of the once dominant Microsoft in this MEAP world is unclear.