

Cobar Shire Council

IT Strategy

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Table of Contents

Executive Summary	1
Issues.....	1
Solutions	1
Short term	1
Operating Environment	1
CivicView and Power Budget	2
Information Services Manager.....	2
Medium Term	2
Civic View Training	2
Power Budget Training.....	2
Develop policies for using various technologies.....	2
Overhaul records management	2
Long Term	2
Intranet	2
Document Control.....	3
Records Management System	3
Online services	3
Document scope	3
Methodology.....	3
Introduction	4
Current IT System.....	6
User Systems.....	6
Email Server	7
Internet	7
Remote Access	8
Remote Sites	8
Depot.....	8
Lilliane Brady Village	8
Youth Centre	8
Museum	8

Library	8
Family Day Care.....	9
Terminal Service (Remote Desktop Services)	9
What is it?	9
How does it work?	9
Backup and Disaster Recovery.....	10
Security services.....	10
Civic View	10
Data protection e.g., anti-virus software.....	10
Phones.....	10
General Productivity Software.....	10
Microsoft Office	11
Web Management	11
Line of Business software	11
CivicView	11
Power Budget.....	12
MapInfo.....	12
Support and maintenance	13
Procurement	13
Future needs and opportunities	13
Stabilise current IT systems	13
Terminal Services (Remote Desktop).....	14
CivicView	14
CivicView Training.....	15
Training and implementation opportunity	15
Price an alternative	16
Staff compliance.....	16
Implement Power Budget.....	16
MapInfo Training.....	16
Information Services Manager.....	16
Standard Operating Environment (SOE)	17
Data Risk Management.....	17
Backup and recovery.....	17
Document Control.....	17

Records Management.....	18
Email.....	19
Remote Sites	19
Depot.....	19
Lilliane Brady Village	19
Youth Centre	20
Museum	20
Library	20
Family Day Care.....	21
IT Induction	21
Intranet	21
Web Site.....	22
Online Facilities.....	22
Cloud Computing	22
Video Conferencing.....	22
Smart Phones	23
Tablets.....	23
Social Networking	23
Timeline.....	24
Information Services Manager.....	24
Network stability.....	24
Standard operating environment	24
Line of business.....	24
Policies	24
Records Management.....	24
Document Storage and Control	24
Intranet	25
Online payment and applications	25

Executive Summary

Issues

The IT systems at Cobar Shire Council are generally well designed. They are based on a standard Microsoft business network architecture. Unfortunately a long period of underfunding, insufficient support services and the absence of clear IT strategy have meant the working environment at the council is inadequate and in certain cases quite dysfunctional.

The issues with the council's IT systems fall into four broad categories. They are;

- Old and out-dated computers and operating software. E.g., The common version of Microsoft Office cannot read files created in versions later than 2003
- The poor state of CivicView utilisation caused by an incomplete installation and unsatisfactory investment in staff training. These matters have been exacerbated by conflicts between key staff and a failure to develop a good working relationship with Insight Informatics who are the CivicView vendor.
- Poor network links to remote centres especially the depot
- Poor support arrangements and insufficient on site skill

The consequences of the IT infrastructure's poor state are;

- Considerable wasted time
- Double and triple handling of data for operational and reporting purposes
- Little management of electronic documents including emails
- Frustrated staff
- Poor management reporting
- Lost opportunities re: developing streamlined procedures and innovations in the general working environment

In short the council is getting a very poor return on its investment in IT with the systems in their current state.

Solutions

The solutions to these difficulties need to be separated in to short term, medium term and long term strategies.

Short term

Operating Environment

The council needs to provide staff with a functional operating environment. This involves providing adequate network speeds to the out centres. (In the case of the Lilliane Brady Village, Family Day Care and the Youthie this is due to be completed in the New Year). Staff need to be supplied with a standard operating environment that is of a high enough standard not to delay them as they carry out their work. If the council can't afford to replace computers use of a Terminal Server may solve these problems (see below). The council already owns a well provisioned Terminal Server that is

only used by support staff. This may present a cost effective answer to the issue of establishing a functional standard operating environment.

CivicView and Power Budget

Full implementation of CivicView and Power budget is essential. CivicView has never been fully implemented while power budget has never operated successfully. That means that the council has been paying a considerable sum for something it does not use. Two council staff need to establish a working relationship with Insight Informatics as soon as possible and develop a plan to fix CivicView. Recently Carol Pritchard and Heather Holder attended a CivicView user group meeting and have begun the process of developing such a relationship.

Information Services Manager

In order to successfully maintain the IT infrastructure the council should seriously consider retaining the services of an Information Services Manager at least on a part time basis - 20 hours per week. The current provision of 10 hours a week of help desk services is simply not enough for the council to get adequate returns from its IT investment.

Medium Term

Civic View Training

Training on CivicView is urgently required but cannot be successfully undertaken until the system is operating correctly. Training should be offered at three levels.

- General orientation. All staff
- Task specific training. CivicView users
- System administration training. Two nominated staff who are high level users

Power Budget Training

Power Budget training is needed for all staff that create and manage budgets.

Develop policies for using various technologies

- Mobile Computing
- Smart phones
- Tablets
- Social Networking
- Remote access
- Security matrix for the network and CivicView

Overhaul records management

Records management procedures need to be overhauled to comply with current legislation. Once this is done the council will be in a position to review records management systems and develop an implementation plan.

Long Term

Intranet

An intranet should be developed to make policies, procedures, and standard documents and general information available to staff. There are a myriad of uses for an intranet so its development should

be begun with a staff survey followed by some workshops to ensure the council gets the most useful result.

Document Control

A major element of an intranet is document control. Document control requirements should be reviewed as part of creating an intranet for the council.

Records Management System

A records management system should be decided upon and implemented over a 12 month period.

Online services

CivicView has the ability to connect with online services such as the payment of rate and submission of applications. These services should be offered through the council's web site.

Document scope

CEF was asked to provide an IT strategy in order to assist council in its efforts to improve current systems and to plan for future developments. The scope of the document includes an examination of the effectiveness of current systems and ways of improving them, a review of the business requirements of the council as they impact on IT strategy and proposals for future development. In a meeting with the council's general manager Gary Woodman on the 17th of November 2011 the scope of the work was refined to address specific issues such as an upgrade program for the computer network, payment of money to the council over the Internet, an induction for new employees including Civic View and a program for implementing a records management system with 3 years. A focus on the TRIM software for records management was also discussed. Mr Woodman also requested that particular emphasis should be put on the state of the current IT infrastructure.

Methodology

In order to produce the IT strategy document the following work was undertaken.

- Meet with key council staff to ascertain their needs and objectives
- Review the IT strategies of other comparable councils so that existing systems and best practice can be taken in to account in the development of the council's IT strategy
- Determine which systems are in common use within the local council sector
- Discuss technology developments with exiting suppliers and significant vendors who deal with councils in order to determine potential future hardware and software requirements
- Examine the current IT systems that are used by the council
- Review contractual arrangements between the council and software or hardware vendors if any
- Evaluate the relevance of emerging technologies (e.g., Social networking, smart phones, etc.,) to the council's operations
- Taking the above into account produce a draft IT strategy for consideration by the council's staff and key stakeholders
- Produce a final IT Strategy document taking into consideration feedback from council staff

Introduction

Within any organisation Information Technology has become an indispensable part of the day to day operations of their core business. Any interruptions or loss of the Information Technology systems has a significant negative impact for that organisation and its customers.

Cobar Shire Council relies on its Information technology system to allow its staff to go about their day to day tasks of supplying services to the residents of the shire. Interruptions to these services results in dissatisfaction from not only the residents but the staff members trying to deliver these services.

Information Technology is also an area where the budget is quite easy to overrun. Badly planned and managed projects and systems can very quickly turn into significant budget deficits.

A Strategic Information Technology Plan is a critical to guide the development and maintenance of information technology, align activities to corporate goals and effectively manage the financial commitment to technology resources.

By implementing a proper IT strategy an organisation can reap multiple benefits including:

Budgets that are properly planned

By focusing resources, projects are more likely to be delivered on time

The strategy will deliver IT systems that more effectively respond to the requirements of the council and align it to corporate goals

IT systems will be available when staff need to use them

Efficient and effective responses to internal and external customer requirements contribute to more satisfied staff and residents

An Information Technology strategy is not a one off document. It needs to be revised regularly and modified as the situations change within council. The plan needs to be reviewed and upgraded regularly to keep it abreast of changes to the direction of the council and in tune with the changes of technology and software.

A suitable goal is to use this plan to implement immediate improvements in the council's IT systems; to provide a platform for the development of systems and for discussion of strategies for future programs.

In the Council's mission it states that;

(Cobar Shire Council's mission) is to provide sound and sensible government and ensure that works and services are delivered effectively and equitably to the community of Cobar Shire.

A significant factor in providing good government is the development and maintenance of quality information services that suit the council's needs and budget. Quality information systems contribute to staff productivity, customer service, management decision making and required record keeping. In addition a well functioning IT system opens up opportunities for innovation and empowers staff and management to get maximum value from the information and processes that they deal with on a daily basis.

In broad terms a well functioning IT system is essential in the management of the following areas of an organisation's activity.

- Data creation and storage including document and records management.
- Management reporting.
- Budgeting.
- Communication internally and externally. Email, VoIP telephony, Web site, Intranet.
- Service delivery.
- Management and support of procedures.

Unfortunately Cobar Shire Council's IT systems are not currently functioning well. A significant period of under investment and poor management of the IT budget has resulted in a system which delivers a poor return on investment and is to a significant degree dysfunctional. This impacts negatively on staff productivity, information management, especially management reporting and this has an inevitable impact on service delivery.

The problems with the councils IT systems can be divided into two broad categories. They are:

- The functionality of the standard operating environment comprising hardware, software and connectivity i.e., local network, remote networking and internet.
- The council's line of business systems CivicView and Power Budget are in a poor state. These applications suffer from a low skill base among council staff due to a lack of training and the fact that it has never been fully implemented. In the case of Power Budget it has not been implemented at all.

Clearly an IT strategy for the council must firstly address these areas of concern and then see how it can get maximum leverage from its existing systems. Only then can it explore the opportunities for improved service delivery and more streamlined processes offered by advancements in technology that have happened since the council's network was designed and implemented.

For those reasons this document will contain a review of current IT operations followed by suggested strategies to bring the existing IT system up to standard. Finally other systems and technologies that can augment the existing systems are discussed.

Current IT System

The councils IT infrastructure includes 57 desktop computers, 10 laptops, 2 Tablets (RTA), 28 printers and 5 network servers. The network is based on Microsoft Windows Server which is suitable for small to medium size enterprises like Cobar Shire Council. The network provides the following functions to the council

- Secure user access to desktops, laptops and network resources
- Central file storage
- Central data backup and recovery
- An email, calendaring etc., system
- Houses CivicView data and system functions
- Internet access
- Remote access where approved
- Virtual Private Network for remote centres
- Network wide antivirus capability
- Terminal Services
- Personal productivity software e.g., Microsoft Office

The network server software is Windows Server 2003. As part of the general IT plan provision should be made to upgrade to Windows Server 2008. A 2011 version of Windows Server exists but at this stage it has not been available long enough to warrant its stability.

The age of the IT infrastructure is of concern. Of the existing desktop computers seven have Windows 7 which is the latest operating system and are two years old or less. Fifty computers are running the Windows XP operating system which puts their age between five and ten years old.

The five network servers all have Microsoft Windows Server 2003 installed. This makes four of them at least five years old. The server that runs CivicView was replaced later than 2008 but had the 2003 version of the server software installed so that it was compatible with CivicView

A replacement policy and upgrade plan for all computers is strongly recommended. In the absence of such a plan the only indication of the need to replace IT systems is when they fail. This is a very undesirable state of affairs.

Indicative costs for the replacement of IT systems are;

Servers: \$10,000 including installation costs and GST

Workstations: \$1500 including GST

User Systems

User systems primarily consist of desktop computers with a few laptops. The primary standard productivity software on them is Microsoft Office 2003. The operating system is Microsoft XP. Both

of these pieces of software are out of date. This is especially important in the case of Microsoft Office 2003 because file formats have changed since it was released and many users cannot open files saved in Microsoft Office 2007 or 2010.

Quite a few of the desktops are extremely slow to start up and perform basic functions. This significantly slows down staff in the performance of their tasks and leads to frustration and the feeling that the IT system in general is of a very low standard.

There is a revised Standard Operating Environment (SOE) however it requires new computers to run effectively. Due to time and budget constraints only 12% of the computers on use have been upgraded to the new SOE.

Providing a responsive and reliable working environment for staff is a major element in getting an efficiency dividend from the council's IT system. Doing this should be a high priority. Options for achieving this goal will be discussed below.

Email Server

The Microsoft Exchange email system appears to be working well. During discussions with staff no-one complained about the ability to send and receive email other than a remote site user who was experiencing a network outage at the time. The system is the 2003 version and should be considered for upgrade to the 2010 version when other server software is upgraded.

Microsoft Exchange is capable of doing more than sending and receiving emails, managing calendars and contacts. It is possible to use it to archive emails so as to comply with any legislative requirements. It provides a public folder system that can be secured as needed. This presents users with a series of folders much like the ones they have in their inbox that can be used to store email's for a particular subject, act as a group calendar for projects, automatically send emails or receive emails sent to a particular address. E.g., a number of staff members could be given access to a folder called 'info'. An email address of info@cobar.nsw.gov.au could be publicised. All emails sent to that address would arrive in the public folder and all staff with access could read and respond to them. The folder could also automatically send an email to anyone sending to info@cobar.nsw.gov.au telling them their email has been received and will be responded to directly.

This is a minor example of an Exchange feature but it serves to show that the email system is capable for much more than it is being used for.

In addition Microsoft Exchange comes with a Web version of Outlook built in. Providing the appropriate changes were made to the firewall staff could check their email, calendar etc., over the web without needing to access having to access the VPN. E.g., a staff member on holidays in Europe could access their email and forward on an important message without having to ring the council and give someone their password to log in and send it. Any staff member with access to the web could securely check and send email, manipulate calendars or use tasks and contacts within their council email account. As the council already owns this capability it should consider the benefits of implementing it.

Internet

Internet access is an ADSL 2 + and appears to be quite serviceable. Telstra supplies the firewall which protects the network from external attack. It works well however Telstra has proven not to be particularly responsive when changes to the firewall are needed e.g., to permit the delivery of emails directly to mobile phones.

Remote Access

Remote access to the council's systems is by means of a Virtual Private Network (VPN). It seems to work quite well for users who have been granted remote access permission. A number of staff enquired about remote access permission but it seemed that they only intended using it for email. That could be dealt with by implementing Outlook Web Access as mentioned above.

Remote Sites

Depot

The council depot is connected to the main council IT system via a leased line. They use it mainly for ordering via CivicView. They also use the connection for viewing historical data for job costing purposes.

The depot's staff report that the systems they use are very slow and at times don't work at all. Blackouts can lead to outages and there are issues with the reliability of the phone system with the main phone line being down at times.

The system is also too slow to implement mapping in CivicView. If mapping was available to depot staff they would be able to search for properties by a number of means and print maps for use in their work.

Lilliane Brady Village

The Lillian Brady Village is currently not connected to the council's main systems but will be connected in the New Year. They have good system availability with the existing systems. They would use their connection for CivicView access, access to the Exchange Server for email and calendaring, access to an intranet should one be developed.

Youth Centre

The Youth Centre has one computer running Windows XP and MS Office 2003. They are scheduled to be connected to the main systems early in the New Year. At present the centre can function however documents created in MS Office versions later than 2003 need to be sent to IT support to be converted to files that can be read on the Youth Centre computer.

Museum

The Museum has four computers that are not networked to each other. Their main use is for MS Office applications and email. The staff at the museum report a degree of unreliability and some frustration with the current MS Office 2003 and Windows XP configuration.

Library

The Library offers public internet access, manages library facilities and hosts computers for TAFE. Internet speeds are often quite slow and there are no printing facilities on the computers used for Internet access.

Family Day Care

FWFDC uses three computers. They run Windows XP and MS Office 2003 however the manager of children's services does not have access to MS Outlook. The software package 'Harmony' is used for child care benefit administration and managing timesheets for carers. It runs independently of the council's other systems.

Family Day Care has one computer connected to the council system. The person using that system can access all the functions on that computer as well as council data. However when that computer is connected to the council other users can't print. This is a network configuration issue. In addition users can't print on their colour printer.

Terminal Service (Remote Desktop Services)

The council has a well provisioned Terminal Server that is only used by software support staff. It is restricted currently as there are only three licenses to use it.

What is it?

Terminal Server is built in to all Windows servers. It allows users to log in remotely from various types of workstations and "thin" clients. By logging in users create their own client sessions on the server. This means that all the programs that a person is using are actually running on the server not on their workstation. The obvious question is if you can run all of your applications on your desktop machine, why would you need to log in to a terminal server?

Improved performance is possible when using Terminal Server. The desktop PC may be able to perform certain tasks, but it may also be old or slow. Or you may be working at home and accessing your files---which reside on one of the departmental file servers---over a slow (by local network standards) link. You will find it faster in such cases to log into the Terminal Server to edit your large spread sheet rather than to edit it on your home PC, since the latter would entail downloading the file from your file server directory to your home system, then uploading the results back to the file server.

How does it work?

Terminal Server works by knowing how to respond to a client process that you run on your local Windows server. This "terminal client" presents you with a window that simulates a local monitor. The Terminal Server manages all computing resources for you and provides you with your own environment. The server receives and processes all key strokes and mouse clicks sent by each client and directs display output (audio and video) to each client as appropriate. You have access to all of your authorized network resources and can run any applications made available to you on the server. All the applications supported by Windows 2003 Server can be run via the Terminal Server.

For the purposes of the council it allows staff to have access to a high quality working environment that can run effectively on low powered and out-dated machines. Due to current budget constraints and the fact that the council already has the equipment to deploy terminal services it should be considered as an option for improving the operating environment of the staff.

Backup and Disaster Recovery

System backups are performed daily and data is stored on a standard backup tape. Tapes are stored in the strong room which I have been told is fireproof. Some tapes go offsite. This is an industry standard for backup management.

While computer data is protected by this means the councils paper records are exposed to a disaster, especially a fire. This leads to the consideration of a records management system which will be addressed below.

Security services

A security matrix exists for the computer network and is properly implemented. However the structure of data on P: drive makes it very difficult to apply securities over a wide range of archived documents to which all users appear to have access. A revised filing structure for the network would allow for a better application of the network security features.

Civic View

The CivicView security structure appears not to be implemented at all which exposes the council to the loss of important data and access of unauthorised people to sensitive information. This could give rise to very serious issues. All data in Civic View can be deleted or modified by unauthorised people and given the confidential nature of data such as payroll information, rates and other accounts, land information and planning information the council may find itself with significant legal liabilities.

It is imperative that CivicView's security features be properly implemented. A first step in that direction would be to develop a security matrix that defines which users have access to the various elements of CivicView and the related data. When a security matrix is prepared implementing securities should be a relatively straight forward process and could be conducted by senior administrative staff, existing IT resources or Insight Informatics staff. It is likely that it could be done remotely if needed.

Data protection e.g., anti-virus software

The antivirus software on the network is MacAfee and all enquiries indicate that it is performing well.

Phones

Currently the new 'voice over IP' system suffers from a lack of internet bandwidth. An attempt to address this issue was made by John De Bruin recently. At the time of writing the success of these changes was not known.

The ability to send emails to phones exists. The delay in implementing this has been due to having to wait for Telstra to make changes to it firewall to let the emails through.

Some sites, especially the Depot, have reported problems with phone becoming unavailable at times. It appears that support for the phone system is the responsibility of a trainee engineer and this may not be the best solution to implementing a new phone system.

General Productivity Software

Microsoft Office

The most common version of Microsoft Office found at the council is MS Office 2003. There have been two new version released since MS Office 2003. In those releases the files formats were changed. Unless documents being sent to the council are specifically saved in MS Office 2003 format many users are unable to use them. These users include Family Day Care, The Youth Centre and people who take laptops home and access the council by VPN.

MS Office 2010 is available to the council and is part of an upgrade plan. However that plan includes new PC's and Window 7 and budgetary issues have meant the upgrade cannot be performed as planned.

Web Management

The web site generally works well. It is maintained by an external company and the council can update it by means of a content management system. It is envisaged that each department will manage content relating to its area of responsibility. However this is not yet happening on a large scale. Instead the council's web content management falls mainly to the general manager's executive assistant. Some additional staff training and clear guidelines about responsibility for content management may go some way to changing this situation.

Line of Business software

CivicView

CivicView is an integrated software system for local governments. Cobarr Shire Council has chosen it as its line of business application. It represents a significant investment in software and skills but has unfortunately never been fully implemented. In addition there has been a significant underinvestment in training in its use.

Among the council's functions that it covers are;

- Financial Management
- Asset Management
- Investment and Loan Registers
- Payroll
- Human Resources
- Contractor Management
- Works Orders
- Development Applications
- Plant Management
- Purchasing
- Inventory
- Residency relevant to the LBV
- MapInfo Integration
- Noxious Weeds
- Street Register
- Rates Forecasting

- Cemetery Management
- Custom Reporting

Of these functions payroll in CivicView works and is used. However The HR module is not functional which means that the organisational chart must be done manually and functions that depend on the org. chart don't work. These include work orders, job costing, contracts, position histories and the registers of licences, qualifications and inductions

Of course performance management would assist in more cost effective staff management as would the facility to review demographics e.g., skills, age, years of service

Training records can also be kept in CivicView and this would greatly help staff to maintain accreditation and to allocate people with appropriate skills to various tasks

Relationships between Insight Informatics, the CivicView consultant used by the council, council IT people and users has been quite dysfunctional. A lot of energy has been expended on personality conflicts that could have been better used developing relationships that benefited the council. Good relationships between all of the stakeholders in CivicView is essential to resolve current issues and get maximum value from the system in the future. Currently the council gets very poor return on its investment.

There has been a critical under investment in CivicView training at both the user and system administrator level. This has led to a commensurate lack of use of the system for anything other than essential tasks leading to a further reduction in the return on investment for the council.

Many functions that could be performed using CivicView are done manually on Excel spread sheets. This double and sometimes triple handling of data is error prone and wastes a lot of the staff's time.

Power Budget

Power Budget would be of considerable assistance to the various managers in budget preparation and management. Currently it is not connecting to CivicView properly and so can't be used.

Power Budget requires no understand spread sheet navigation and formula building. It has a Visual, intuitive hierarchy structure so that Staff can use it with only their existing MS Windows skills. It provides real time budget reviewing with results immediately available for reporting and analysis. It uses a common data source for all users ensuring data integrity.

Power Budget allows users to create budget models to calculate and capture data. They can adjust rules or formulas to produce budget forecasts and store unlimited versions of the budget for a complete historical record. It can be used to generate financial, labour and other budgets with the option to decentralise the budget process so all managers, not just financial decision makers can participate.

MapInfo

The council's mapping/GIS software MapInfo is well utilised. It runs well and the Land Management Officer has a high level of skills. She is able to teach other potential users and expand the use of the software as needed.

Support and maintenance

IT support for the network infrastructure is available for 10 hours per week. The support person is almost always engaged in fixing faults and has little time to develop a proactive plan to improve the network overall. This has led to a patchwork of fixes and the lack of an orderly maintenance and upgrade scheme. In turn the computer infrastructure delivers significantly below its capacity, causes delays for staff and will eventually require a major, expensive overhaul rather than be maintained in incremental, planned improvements.

In the current circumstances it is hard to budget for network maintenance or to prioritise work because there is a very large number of unanticipated faults.

It is noted that in the 2011-2012 IT budget no provision was made for computer equipment purchase. It seems unlikely that this is the result of either a well developed IT plan or a network that is performing extremely well. With the large number of badly functioning workstations and the ever present possibility that one or more of them might break down completely some provision for computer equipment would appear to be necessary.

Support for CivicView has been a major issue for the council for a long time. In the past the council used a support person who was a software developer rather than a systems engineer or a trainer. The unintended consequence of using him was that Cobar Shire Council did not have its issues registered in the support systems of Insight Informatics who own and maintain CivicView. Recently Carol Pritchard and Heather Holder went to the CivicView users group and made contact with the CivicView product specialist from Insight Informatics and now know how to get the best value from their support system.

Procurement

Currently support services are provided by the same people that provide IT hardware and software. This situation is appropriate and convenient for small items such as peripherals and minor components. However a formal procedure for getting quotes and proposals would benefit the council and improve accountability. While there is no reason to believe that the current arrangement is being abused, well managed procurement processes would provide council with competing options and prices and offer opportunities to fine tune the IT systems costs and performance.

Future needs and opportunities

Stabilise current IT systems

The most common complaint of council staff regarding their computer working environment was that it was slow and/or unreliable. There are a number of reasons for that but the most common ones are;

- Old computers which are too slow
- Slow network speeds
- Incomplete upgrades or configurations

There is little doubt that the main reason for these issues is the small amount of support provided for the council's IT infrastructure. After discussions with John De Bruin and independent analysis it appears that the IT systems need a minimum of 20 hours per week in addition to any time required by CivicView. This amount of system support would only maintain the systems at a functional level and leave little time for development.

In order to move forward the council must first provide tolerable working conditions to its staff. Due to budgetary constraints it is unlikely that funds would be available for a range of new computers. As a result doing the best with what the council already has must be the first option when confronting any of the current network issues

Terminal Services (Remote Desktop)

An answer to the slow computers of staff who use only the basic operating environment is to provide them with access to the Terminal Server that the council already owns. Because all processing happens on the server staff would be able to use their existing machines to access their terminal server login. Working in terminal server is the same as working on any Windows machine and has the added advantage that if a piece of software e.g., MS Office is updated on the Terminal Server it is updated for all users. Insight Informatics has been contacted about this option and have confirmed that CivicView will run properly on a Terminal server.

A Terminal Server solution would also be suitable for remote users as it uses significantly less bandwidth than a conventional network connection. It could also be used to improve the access of remote users to CivicView. This would be of considerable consequence to the Depot and Lilliane Brady Village.

Naturally all data is stored on the server for both local and remote users. This makes backup more certain because there is no access to the C: drive on the local computers.

Finally the implementation of Windows Terminal Services makes the administrator's job much simpler because they don't need to visit every computer to implement changes.

In order to implement this solution the specifications of the existing Terminal Server need to be established and then compared to a sizing formula to see how many users it can host. Software would need to be installed on the server including MS Office 2010, CivicView and any other commonly used software. A test user should be set up and suitable testing performed to ensure all application will run as expected. Terminal Server licences would need to be purchased and installed on the server. Users will need assistance to set up their Terminal sessions although it should be noted that many user settings will automatically be picked up by the server. Access to a support person with Terminal Server experience would be helpful although it is a fairly robust and simple thing to use.

CivicView

Many modules of CivicView have not been implemented. In large part this seems to be due to three factors

- The HR module has not been successfully set up. Many of CivicView's functions depend on the HR module working properly

- A lack of user and system admin training has meant that staff members can only barely use the system, are largely self taught and cannot fix or extend CivicView's use as needed
- There is no knowledge of Crystal Reports in the council so special reports cannot be created

A concise report of the application's errors should be compiled and sent to Mark Smith the product specialist at Insight Informatics to request a quote and his thoughts on the best way forward. The two staff members who attended the recent CivicView users group have been invited to submit their 10 highest priority problems for Mark Smith to address. This is a step in the right direction however it still runs the risk of running up unplanned and unbudgeted bills. If possible a fixed quote would be preferable.

CivicView Training

Training is urgently required in all CivicView functions and at both user and system administrator levels. Unfortunately the CivicView consultant that the council has been using is not a particularly good trainer. The preparation of a training needs analysis that can be sent to Insight Informatics so they can quote on a training package needs to be done. Training is available from Insight Informatics either in face to face sessions or online.

Offering all staff an overview of CivicView and its capabilities would be of considerable benefit to the council. Currently there are a number of staff who are unable to comment on what they want from CivicView because they aren't aware of its functions and features. With more awareness of CivicView it could be put to a greater range of uses and further leverage the investment in the system. Such an overview of CivicView should be included in the induction of all new staff members.

A general overview of CivicView should be followed by targeted training relating to the way CivicView is used in each employee's area of responsibility whether they are going to be using CivicView immediately or not. Insight Informatics offers an online training option that may be suitable for this level of training. This would be especially useful if staff were supported by another staff member who already has skills in CivicView.

Two users who have a good knowledge of CivicView should be nominated as the council's CivicView specialists. They should receive comprehensive training in the system and also attend a course on training others. These two staff members would be the first point of call for CivicView issues and they would then escalate the issues as needed. This is needed to protect the council's investment in CivicView and ensure that once it is operational it does not fall into a dysfunctional state again.

Ad Hoc reporting from CivicView can be done by means of Crystal Reports. It is a report writing program that has been an industry standard for many years. It is important that the council gets access to Crystal Reports skills. This can be achieved by training the council's CivicView product specialists, contracting the work out to an outside developer or getting insight Informatics to create the reports. Training council staff is by far the cheapest option.

Training and implementation opportunity

Carol Pritchard is due to retire soon and she has expressed an interest in working with CivicView after her retirement to assist the council in fully implementing the software and training the staff. Carol is one of the better users of CivicView and would be well suited to the job. If Carol received CivicView system administrator training and was supported by Mark Smith from Insight Informatics

she would be in a good position to deal with the CivicView issues and be able to pass her skills on to others. Using Carol would be significantly than any of the other alternatives.

Price an alternative

It would also be prudent to get quotes and estimates on resolving system, training and implementation issues with CivicView and compare them with implementing competing systems. It is unlikely that the cost and disruption of buying a new system would be to the council's benefit however quantifying viable options should be done so that, in the event that CivicView cannot be successfully implemented, the issues relating to its replacement are fully understood. Of the competing systems Civica would be an obvious choice to investigate.

Staff compliance

Even with the smoothest running systems little is gained if the systems aren't used. To that end it is important that the management clearly understand which elements of CivicView are used in which positions, make its use part of the position descriptions and provide suitable mentoring and support.

Implement Power Budget

Once CivicView is functioning correctly Power Budget should be properly implemented. This will provide budgeting tools to department heads and allow them to track their budget's use. As it relies on work orders it is important that the work order feature of CivicView be properly used throughout the council.

MapInfo Training

In addition to CivicView training it would be advantageous to have the engineers trained in the use of MapInfo. Heather Holder has the skills to do the training and online training is available as well. A combination of Heather and the online option is likely to yield the best results.

Information Services Manager

Information services at the council suffer from a lack of investment, focus and the limited availability of properly trained personnel. It appears that in practice no-one is accountable for the state of the IT infrastructure. The responsibility for it lies with an external contractor and the authority to manage it is not clearly defined. For any business activity to be successful these three elements; authority, responsibility and accountability must reside in the same person or properly constituted body. An Information Services Manager would be the obvious person to take on these management roles re: the councils IT systems. In addition an IS Manager would have the skills required to get the maximum leverage out of the existing systems.

IT tasks are presently performed by a contractor and number of staff who have little or no proper IT training. There is little co-ordination or planning. The ad-hoc, reactive way in which the IT systems are managed leads to delays, inefficiency, dysfunction and frustration.

Most of the council staff interviewed in the course of preparing this document see a clear need for a full time Information Services Manager. In addition to maintaining the network (20 hours minimum) an Information Services Manager would manage the phone system, do system administration for CivicView, plan upgrades and maintenance in a proactive manner, liaise with suppliers, provide

helpdesk support, develop and maintain a training schedule and is likely to be the person best placed to write reports for CivicView in Crystal Reports.

The cost of using a contractor for IT support would go a long way towards retaining an Information Services Manager. That combined with the cost to council of the present system failures and inefficiencies makes it possible to mount a case for an IS manager even in times of budgetary stress.

Standard Operating Environment (SOE)

The council needs to develop a standard operating environment that is rolled out to all staff in a timely manner. The SOE specifies the operating system various types of staff members will use. The personal productivity software e.g., Word Excel, Publisher, Web browser, email client etc. It also specifies the type of computer the staff will have depending on their needs.

Maintaining the SOE not only keeps the computer systems up to date but informs the training plan and makes the IT element of staff inductions more valuable. It also makes troubleshooting easier because all computers are the same and faults can be isolated more readily.

The SOE should be reviewed annually and any new elements fully tested by IT staff before they are implemented.

At present the SOE is Windows 7, Microsoft 2010 and a suitable desktop computer. Unfortunately this environment has only been rolled out to 15% of the council's staff and due to current budgetary difficulties the roll out has stopped. The Terminal Server solution mentioned above may allow the roll out of a serviceable SOE without the need to spend a lot of money on the hardware required by the existing SOE. Note that this will not obviate the need to spend money on computer hardware when the budgetary pressures have eased.

Data Risk Management

Backup and recovery

Backup and recovery is currently being performed effectively. In future consideration should be given to backing up to an internet server. This option is discussed briefly below.

Document Control

Maintaining control over electronic documents is vital for any organisation especially one whose decisions and activities can be subject to legal action. A document has a number of states and it needs to be treated in accord with the state it is in. Typically those states are;

- Draft
- Submitted for approval
- Approved
- Published/Released
- Superseded
- Archived

It is the function of a document control system to track documents and ensure that they are used for the right purpose and only approved people have access to them. This is true of all forms, proforma

letters, planning documents etc. Document control systems also provides sophisticated search capabilities and many offer offline archiving features as well.

There are a range of electronic document control systems some are fairly simple and integrate with an intranet system like Microsoft SharePoint. Others are suitable for major legal and drafting offices like Documentum. The council needs to determine its document control needs and investigate the suitable software with a view to implementing it in the future.

CivicView has an electronic management component that should be investigated. Reports are that it is very basic however it may suit for a short term solution providing the metadata associated with each document can be successfully exported.

Records Management

Records management is the practice of maintaining the records of an organisation from the time they are created up to their eventual disposal. This may include classifying, storing, securing, and destruction (or in some cases, archival preservation) of records.

Records can be either a tangible object or digital information: for example, birth certificates, medical x-rays, office documents, databases, application data, and e-mail. Records management is primarily concerned with the evidence of an organisation's activities, and is usually applied according to the value of the records rather than their physical format.

The records management program should be viewed as an important management issue, equivalent in importance to the management of other activities within Council; it is part of the totality of 'information management'.

Records management proceeds from the assumption that information is a resource which must be managed if it is to be used effectively; good records management is of key importance to good management. The ability to leverage information improves staff productivity and drives business efficiencies and service to the customer. In addition secure access to the right information at the right time enables better use of information and ability to respond to legal discovery and audit.

Meeting regulatory compliance is an obligation: non-compliance exposes the council to financial penalty, legal and operational risk and cost. For this reason the council is required to implement some form of compliant records management system. While it is uncertain whether the council is mandated to implement an electronic records management system it is clear that the Water Board is mandated to be progressing towards electronic records management. As the council manages records for the Water Board it would be wise for it to begin investigating electronic document management for all of its records.

At this time the council's records are exposed to a disaster especially fire. With a fully scanned records system data could be kept off site in a secure location that is either a physical local location or store at an internet storage facility.

The council's Records Officer has already done some good preliminary work reviewing and evaluating a number of records management systems. In discussion with her it became clear that three key things need to be addressed prior to the implementation of a records management system for the council and the water board. They are;

- The existing records management processes need to be overhauled to comply with legislation
- An extra staff member needs to be assigned to the records department for 12 months to prepare documents for import into a records management system
- Determine the councils needs and responsibilities so they can be matched with a suitable system

Many councils use a product called TRIM. It is a well respected system. In addition it interfaces with Microsoft's SharePoint software which integrates intranet and electronic document management services. These two products together would make all council records and electronic documents available to staff through one unified interface. The only thing that may not make it an appropriate choice is its price. Another good system is Dataview.

It is important that as far as possible the council uses a system that is in use in the local government sector and producing good results. The reasons for this are twofold. Firstly it increases the chance of employing someone from the local government sector who has exposure to the system and secondly that it opens up the opportunity to get support and suggestions from other councils.

Successful implementation of a records management system requires both good training and a considerable effort to make records management part of the corporate culture.

Email

There are two primary innovations that the council can make with email.

Firstly is to make emails available to staff wherever they are. Currently the council has a project to send emails to the smart phones of people offsite. This is waiting on work from Telstra.

In addition to that the council could make use of Outlook Web Access (which it already owns) to make email, calendars etc., available to employees via the web. Outlook Web Access has been in use for many years and has proven both robust and secure. Staff would access their email through their web browser using their existing user name and password. No data is left on the computer that they use so there is no chance that they will leave an email on their home computer or the like.

The second advance that can be made is to automatically store all emails coming in to or going out of the council network. There is likely to be a legal responsibility to do this but in any case it would serve to protect the council in the event that someone makes a claim against the council based on an email communication.

The council's email server, Microsoft Exchange, is capable of doing this and there are also programs that enhance that capability. It would not be a difficult or costly thing to do.

Remote Sites

Connecting remote sites to council servers via new Cisco 800 routers is planned for early in the New Year. It will encompass Lilliane Brady Village, Family Day Care, The Youth Centre and the Depot.

Depot

Lilliane Brady Village

The village is due to be connected to the main council network early in the New Year. The infrastructure is in place. This will give the village access to CivicView and the email server for calendaring, email and contacts.

Sharon has expressed a desire for the provision of aged care software for administration, management of care and budget control. She recommends iCare as an appropriate solution. It would give the staff at the village more time for resident care by decreasing paperwork and streamlining training.

She has also said that the village would like to provide computer access to the residents for general computing activities, internet access and email communication.

Should the council implement an intranet the village would be able to put useful links on it as well as define policies and procedures.

Youth Centre

Like the village the youth centre is set up to be connected to the council offices early in the New Year. Again this will provide access to CivicView and the councils email system.

The youth centre computer is currently using the old operating system and the 2003 version of MS Office. This means that when documents are received that are created in later version of MS Office they can't be opened. These documents have to be sent to IT support for conversion to MS Office 2003 format. This seems to be a very inadequate solution to the file format problem and should be rectified as soon as possible as it makes the youth centre unresponsive to documents and wastes IT support's time.

The youth centre has a Facebook page which is used to publicise meetings and activities.

Museum

At present there are no plans to connect the Museum to the council systems.

Staff in the Museum would benefit if their 4 computers were networked. This should be a relatively simple and inexpensive operation.

The primary use of the museum's computers is to create documents, access the Internet and send and receive emails.

The main requirement that the Museum has is to provide wireless internet for travellers. It would serve to make it a more desirable stop for certain travellers.

Library

The library has fairly simple needs but they affect its functions significantly. There is an urgent need to replace the existing server and to upgrade the library software. The server itself is over seven years old. It often fails to permit user login to the Libero system that the library depends on for managing its database of books and DVD's, its borrowing, inter library loans and to track the value of its stock for reporting purposes. The server has failed to login users 14 times in the past 12 months and recently the librarian was unable to login to the server itself. Each time there is a failure the server needs to be restarted. This is an unacceptable state of affairs and will inevitably lead to the server failing completely.

The newest version of the Libero system is web based and due to the unreliability of internet services at the library there is reluctance to move the libraries functions to the new system.

The staff report that their computers lock up frequently and Crystal Reports, which is used to create overdue notices, does not work on the front desk computer.

The library computers that provide public internet access need upgrading in order to provide a good basic level of service to those people who use them. In addition to their age and poor performance the installed copies of Microsoft Office are the 2003 version and this prevents users from opening documents produced in later version of the software. This includes most Office documents now available on the internet or received in email.

The ability to scan and email documents is desired as is the implementation of WIFI for connecting library clients who have their own laptops.

It would also be an advantage to be able to print black and white and colour documents from the Internet computers.

Family Day Care

As with the village and the youth centre Family Day Care is due to be fully connected to the council's systems in the New Year. This should remove problems associated with the dual role of the computer they refer to as their server. It will also give them CivicView access so that they can input monies received and check payments that have been made over the counter at the council offices.

They are able to use the council's web site to post policy documents, enrolment documents, regulations, quality assurance documents, medication forms and excursion notes. This situation would be preferable to updating data on memory sticks at the monthly carers meeting. The web site is not being used by them at present. The web site could also be configured to allow carers to send data to Family Day Care. Some further training and explanation of the possibilities and benefits could yield good results for them.

IT Induction

Council employees should be given a full induction into the council's systems. They are significant and complex and an induction would serve to lay the groundwork for subsequent training. The induction should be in the form of a PowerPoint presentation and live familiarisation. An induction booklet should be developed that staff can retain for ready reference.

Intranet

The development of an intranet would be a positive step forward in communication and productivity for the council. An intranet is simply a web site that is only available to council staff. By using an intranet it would be possible to publish standard forms, manage document control, make proformas and templates available as well as displaying current policies and procedures. It could also be used to detail a council style guide, facilitate collaboration between staff members and provide links to commonly used resources such as legislation.

An intranet is a great resource for staff and a major asset to new people starting work in the council.

There are various ready to implement intranet solutions available such as Microsoft SharePoint, Intranet Dashboard, Intranet Connections, etc. Some solutions are free but these should be very carefully researched as there no support for them. The cost of SharePoint Server is a good indication of the cost of high quality intranet packages on the market. It is \$6000 for the server software and \$115 for each user that will access the system.

It would be useful to contact other councils with intranet solutions to find out what they have used and how well it is working.

Web Site

The council's web site is working quite well. It provides useful information to the public and is attractive and well laid out. The content of the site is edited by means of a content management system. At the present the Executive Assistant to the GM does most of the work to update the web site. The content management system makes it possible for different departments in the council to update their own information. This would take pressure off the Executive Assistant and cause the web site to reflect changes in information in a timelier manner. To this end more training and a revision of procedures should be undertaken to change the organisation's culture to be more web site aware and having contributed to by multiple authors.

Online Facilities

Various online facilities could be offered through the council's web site. CivicView has the ability to accept online payment of rates and charges and this should be implemented once CivicView is operating properly. The council could also offer the ability to track DA's and accept online applications. Also it would be possible for clients to view their accounts online.

All of these facilities would need to be accompanied by the appropriate securities which would present little difficulty as the technology to manage web security is well advanced.

Cloud Computing

Using computing resources that are located on the Internet is often referred to as Cloud Computing. It is possible to have operational software and information stored on Internet servers so that they are accessible from anywhere that there is Internet access. This provides for the widest possible access and also insures that data is backed up on multiple secure sites.

Possibly of more interest to the council is using the Cloud as a backup option. This involves regularly having data saved to a suitable internet site e.g., Google offers this facility. It has the benefit of keeping backups very secure and raising the concept of offsite storage to another level.

It should be remembered however that backing up to and internet server will involve a monthly or annual fee and will consume some of the council's internet bandwidth. The cost for the facility and consequences of using Internet bandwidth to back up data should be investigated to assist council to make an informed decision about this opportunity.

Video Conferencing

The council may benefit from the introduction of video conferencing facilities. It would enable staff to interact with a range of people to make decisions, get information, engage in training and attend

virtual conferences. Video conferencing technology is well advanced and not overly expensive. It should be considered as a medium to long term goal.

Smart Phones

Smart phones offer a range of opportunities for communication and information gathering. Emails can be received by them and the council is currently undertaking work to make this happen.

Appointments can also be stored in a smart phone and be synchronised with the calendar that is in the email system.

Photos and video can be used to collect information in the field like damaged plant or infrastructure, noxious weed identification, to support finding from inspections etc.

A great benefit of smart phones is the availability of a very large range of applications. It is possible for staff to use helpful apps in the fields of business, engineering, document creation etc.

Smart phones can also access web sites which can be invaluable for finding out information while in the field rather than waiting to return to the depot or office to look it up.

It may also be useful to create a text message service to members of the community to spread disaster warnings e.g., fire and possibly even allow people to subscribe to road closure information sent by text.

There are many other uses for smart phones and the council should develop a policy in their use if it hasn't done so already.

Tablets

Mobile staff and others who needs to produce and revue documents in a range of locations would benefit from being provided a tablet computer like and iPad or Samsung Galaxy etc. Tablets are generally cheaper than notebook computers and can also be ruggedized to make them suitable for outdoor staff. They can be particularly useful for collecting data and displaying information that is too complex for mobile phones and in situations where a notebook is impractical due to their bulk or need to open them to use the keyboard and see the screen.

Tablets are increasing in popularity and it would be wise to see if notebook users would be more suited to a tablet when time to upgrade comes along.

Social Networking

Social networking is a very significant phenomenon in the online world. The council should consider its suitability for a range of uses.

Like SMS social networking sites can be used to spread disaster alerts. It can also be used to disseminate information and showcase small but significant council achievements like road repairs, new infrastructure etc.

Young people especially use social networking as a communication tool. Use of social networking would be a good way to engage young residents and get their input into council decisions. The youth centre already disseminates information via its Facebook page

In order to successfully deploy a social media strategy and avoid its pitfalls a social media policy needs to be developed.

Timeline

Information Services Manager

- *Review options for providing the services of an IT Services Manger*
- *Define the role of an IT Services Manager*

Network stability

- *Investigate Terminal Server Option*
- *Quantify the cost of providing a suitable working environment using existing SOE*
- *Provide sufficient support to manage the IT infrastructure*
- *Implement network stability plans*

Standard operating environment

- *Review standard operating environment*
- *Fully implement revised SOE*

Line of business

- *Establish full functionality and implementation for CivicView*
- *Training*
- *Implement Power Budget*

Policies

- *Mobile Computing*
- *Smart phones*
- *Tablets*
- *Social Networking*
- *Remote access*
- *Security schema for the network and CivicView*

Records Management

Document Storage and Control

Intranet

Online payment and applications