

**KLEVA ASSET MANAGEMENT – WORKING
TOGETHER, MANAGING TOGETHER, ACHIEVING
RESULTS TOGETHER**



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ABSTRACT

Two years on from the merger of three water authorities, Wannon Water Corporation has achieved much. Now it is time to focus more on the assets; time to become more KLEvA (**K**now our assets, **L**ook after our assets, **E**very Asset) with our asset management. Already we have integrated information systems and work practices from the former water authorities and made plans for enhancements. To facilitate further improvements we believe there is need build on the past and to become an ‘asset centric’ organization, an organization that recognizes and values the contribution of our people to achieve clearly defined asset management objectives. We intend to build this culture and achieve these results through broad based training and awareness raising, consultative and cooperative development of an asset management strategy, plans and systems, and effective communications and feedback throughout the organization.

KEYWORDS: Asset management, organizational change, culture, human resources, training

1.0 INTRODUCTION

Wannon Water Corporation is now two years old. It was formed from a merger of the former South West, Glenelg and Portland Coast water authorities. As would be expected, the initial priorities were to address the organizational and human resources issues of joining these organizations together while also continuing to provide services to our customers as they had received under the former water authorities. An integrated approach to customer service was naturally an initial focus as well as continuing to meet various regulator requirements such as from ESC, DHS and EPA. As all of us know who have been through a merger (or organizational split-up), the human issues of such massive organizational change are indeed challenging. For Wannon Water while there may still be some minor ‘wrinkles’ to address, the merger has been an overwhelming success. The new organizational structure is as shown in Figure 1.

2.0 ASSET MANAGEMENT SO FAR

Like all water organizations, while the basic principles of managing our assets may be the same, in reality different approaches, information systems, priorities and work practices exist in different organizations. Our precedent water authorities were no different and we inherited a variety of different skills and experience, information systems and ways of looking after assets. As might be expected, a number of persons for various reasons left and new personnel have come ‘on board’. There has been much good work done in the past and we have inherited and since acquired many great people in our organizations. It is a very common observation that we are all ‘hard pressed’ in our work but also as an organization we are clearly focused to work to common goals, as a team and as a sustainable and successful water and sewerage organization.

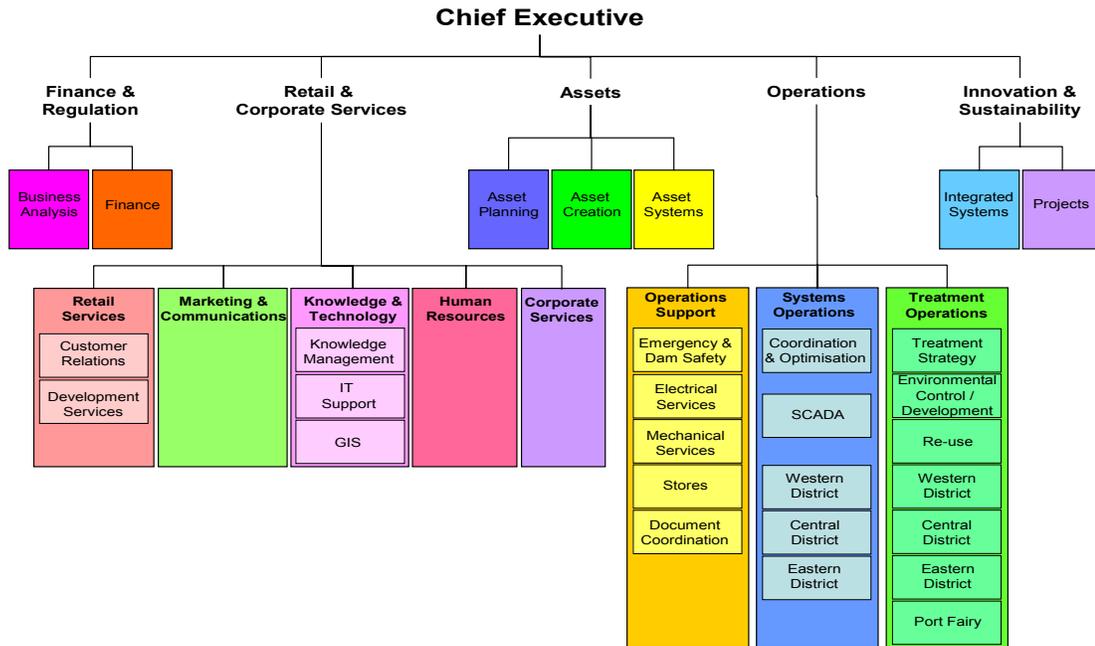


Figure 1: Overview Organizational Structure of Wannan Water Corporation

Now several years on, our attention is turning to how we can be more clever and smart to better manage our assets. As is apparent from the above organizational structure, there is an implied focus in how we manage our assets with clearly assigned responsibilities for the different stages of life cycle asset management and encouragement for us to be innovative, long term in our thinking and business orientated. This is complemented in our Corporate Plan and a variety of strategies prepared in Wannan Water. To date we have not yet prepared asset management plans for the whole organizations nor clearly defined our asset management strategy. There is clearly strong support for this in the organization but so far, it is a ‘work in progress’.

Already in our relatively short history we have set up an integrated Geographical Information System (GIS) combining information from all former water authorities. We use a MUNSYS system that supports ENLIGHTEN as the ‘front end’ that is easy for our people to use. Complementing this we will continue to use MapInfo for our detail investigations and analysis. We use CONQUEST as our asset management system software and now have all data from the precedent water authorities in a single database. To date we are not using the full functionality of CONQUEST (e.g. inspection and maintenance activity management) but our intentions are to take our various paper based and simple Microsoft Office based systems into an integrated asset management system. Our Operations colleagues have made significant progress in reviewing and developing operations and maintenance procedures. A more recent innovation is our proposal to introduce a Mobile Information Management Systems (MIMS) to give information availability to our field staff, to improve our information systems quality and in time to improve our productivity as we operate our many water supply and sewerage systems over our vast area of responsibility.

3.0 NOW WHERE TO?

The stage is set and has been for some time going back to the former water authorities.

Having gone through a substantial reorganization, we are keenly aware that for us to be successful in improving how we manage and look after our assets, our approach has to be HR focused. There is clearly a strong willingness and desire to improve our asset management. The challenge is how we take our life cycle management concepts, our plans for improved information systems and management, our intentions for more robust investigations and analysis of asset condition and performance data to make better Operations and Maintenance (O&M) decisions and renewal of assets and to marry these with sustainable development and deployment of our human resources.

To facilitate this we are intent on working with our staff, to take on board their desires and aspirations for improved asset management and to introduce a program which we will call KLEvA asset management. KLEvA asset management is partially an acronym and partially like a 'jingle' that we hope is 'catchy' and gets people talking and sharing in the organization about how we can indeed be better at managing our assets with the resources we have available. As Figure 3 illustrates, KLEvA asset management start with clearly defined objectives that address asset management principles shown in Figure 2. The KLEvA concept encourages our people to achieve these objectives for all facets of managing our assets. So in short the message we are promoting is integrated asset management for all aspects and for all time in the best way we can.

4.0 THE WAY FORWARD

So what are we doing to achieve KLEvA asset management in Wannon Water? The first point to make is that this concept is currently a proposal. Wannon Water has made great advances since its formation and the feeling in the organization is positive and progressive, even if somewhat stressful given the work volumes for the water and sewerage systems spread over a large geographical system. We feel the 'ground is fertile' and the time is right to become more clever with how we manage our assets. The plan for how we achieve this is a 'work in progress'. It is expected to include the following elements.

4.1 Training and Awareness Raising

Asset management (AM) is like a 'buzz word' – often mentioned / talked about but often not clearly understood what it is and how it will help teams and individuals with their work. There has been much written about asset management, many 'recipes', many 'prescriptions' and 'how to' strategies, plans and manuals written that are often confusing and unclear. There is no doubt that in the long term 'Advanced' AM, 'Total' AM, 'Comprehensive' AM or whatever we want to call it does achieve better service at a lower cost. The challenge is how do we get the messages and ideas across so that within our organization we talk the same language and together change the way we think about and act as we manage our assets. As a starting point, it is proposed to arrange a number of awareness raising and training sessions with key stakeholders in the organization. Supporting this may be an internal newsletter sharing ideas and experiences between relevant persons in our organization.

1. **“Value Added’ / Standard of Service” principle** – assets exist to deliver goods and services that are desired / valued by customers and/or stakeholders – for each there is a minimum service level where service does not add value and/or is considered unacceptable;
2. **“Life Cycle” principle** – all assets pass through an observable life cycle – they are created and eventually are disposed off / replaced;
3. **“Failure” principle** – all assets naturally degrade over their life cycle – because of their usage and their operating environment, they eventually ‘break down’; failure occurs when an asset is unable to do what it required to do;
4. **“Failure Modes” principle** – not all assets fail in the same way;
5. **“Probability” principle** – not all assets fail at the same time;
6. **“Consequence” principle** – not all failures have the same consequences;
7. **“Total Cost of Ownership” principle** – over the life cycle of an asset, there exists an optimal investment that for a given target ‘Standard of Service’ and risk level balances performance with minimum life cycle cost.

Figure 2: Basic Principles of Asset Management



KLEVA Asset Management



Figure 3: KLEVA Asset Management – an integrated approach

4.2 Asset Management Strategy

There have been many positive steps in our organization and the precedent water authorities but to date there is no clearly understood long term strategy of where we are going and the strategy of how we are going to get there. Through a consultative process, we intend to collaboratively put together a Wannon Water asset management strategy and to incorporate this into the training and awareness raising sessions.

4.3 Asset Management Plans (AMPs)

The work required to prepare these are often underestimated but once they are completed, are highly valued by relevant stakeholders including those looking after the various systems. It is anticipated to initially review previous work and as for the AM strategy, as a consultative process to prepare AMPs for the various systems managed by Wannon Water.

4.4 Asset Management Systems

To achieve our AM objectives, it is clear we need to ‘manage by data’; to have sufficient reliable information to make good and timely decisions and to facilitate efficient execution of the various activities undertaken as we manage our assets. There are already various information systems in use, some operational and under development, others on the drawing board. There are a number of committees set up to manage the development of these various information systems. A particularly exciting prospect is to put information and work management onto a mobile platform, what we are calling our MIMS project. As shown in Figure 4, this both gives and receives information from field activities and facilitates management of the work flow and coordination. The project is several years away but already is generating productive discussion.

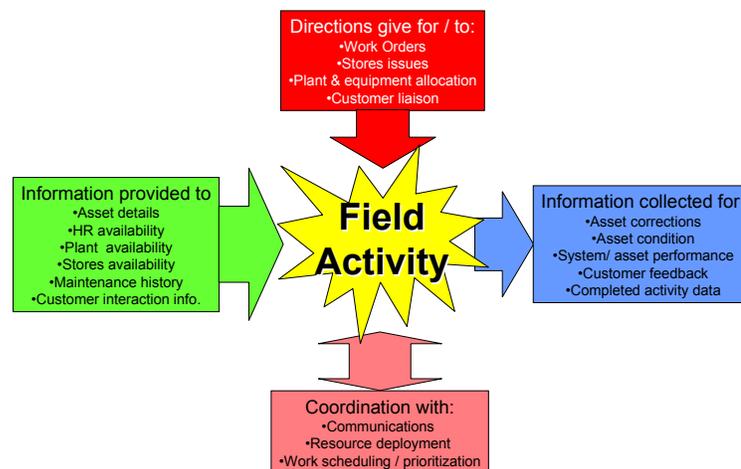


Figure 4: *MIMS Project Information Into and Out of Field Activities*

4.5 Communication and Feedback

As is obvious from the above discussion, we feel strongly that the success or otherwise of improving the way we manage our assets and the outputs from these processes will depend on the attitude, the involvement and the hard working efforts of people in our organization. In short of developing an organizational culture that as well as being customer focused, business focused and valuing our personnel is also an organization that is very much ‘asset centric’. A key part of fostering this ‘asset centric’ culture in Wannon Water will be clear and effective communications, interactions and feedback throughout the organization.

5.0 CONCLUSION

Our organization is changing from predominantly reacting to asset failures to being more proactive through means of scheduled maintenance planning to achieve improvements in service delivery and optimum asset lives. The initial commencement is expected to show little short term results and possibly provide a greater demand on resources as we continue to address the existing reactive maintenance requirements, however as it progresses and evolves the benefits will become more apparent and our assets will begin to fulfill their full life expectancy along with achieving greater performance and efficiencies. We consider our people as a 'critical success factor' to achieve these long term improvements.

This paper may sound like a 'hard sell'; a lot of promises and hype of how we are going to become more KLEvA at managing our assets. It is true that there is a way to go yet; much has been achieved to date in our young organization and many opportunities to go further. We have our work cut out, but we also have tremendous goodwill to continue moving on. This is not going to be without its challenges. We are setting expectations, we are unashamedly creating 'hype' but we think for good reason. We know that as shown in Figure 5, early on our outputs are not going to match our early promises, but we believe in time we will get there. We hope that as an industry undergoing continual change, you can watch us, help us and together we can learn from each other.

Finally as is probably obvious from the above, this is our first paper as we continue on our journey to achieve KLEvA asset management. We intend in subsequent years to present other papers so that we can track our progress.

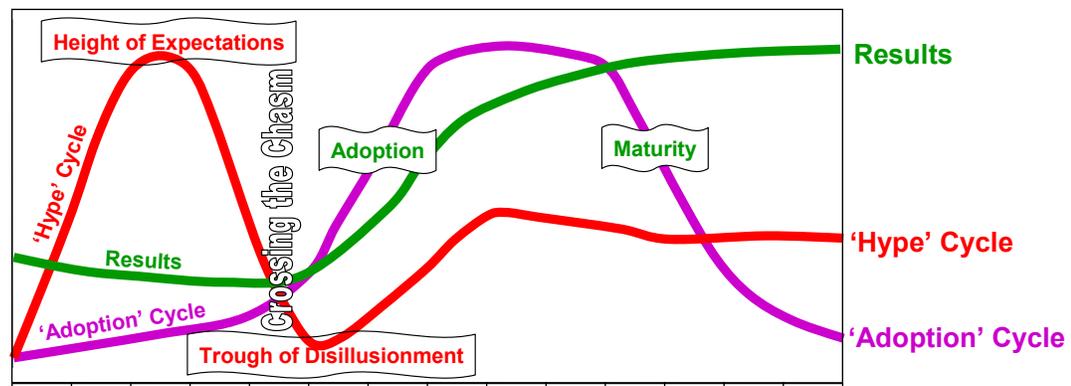


Figure 5: *Riding the 'Rough' in Change Management*

6.0 ACKNOWLEDGEMENTS

This paper is the result of discussions with many people in Wannon Water who have supported the concepts discussed above. Their support is highly appreciated as is the permission of Wannon Water to publish this paper. Having said that much of this paper expresses intent of what we expect to happen in Wannon Water and as such is the view of the authors and not the official view of the organization. The paper has been prepared to stimulate both internal discussion and response from our peers in the industry.