

Managing Assets through Capability and Knowledge (MACK) – Return on Investment

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1 Introduction

The City of Tea Tree Gully (CTTG) must continually review how it manages its assets and to ensure it meets the community's ever-changing needs. This has required changes in our systems, staff and structure. The 2014 launch of the ISO55000 Asset Management Standards along with the NAMS maturity model provided clear direction and a level for CTTG to strive for. This paper outlines how CTTG has gone about implementing best practice in asset management and undertaking significant organisational change and the associated returns on investment that are being realised.

2 Asset Management at CTTG

CTTG has an asset base of approximately \$1.3bn with over 90,000 assets. Asset Management within CTTG wasn't broken when the organisation began the MACK program, we identified that we had significant room to grow. The organisation wanted to move from making decisions based upon age of assets and depreciation values to a condition based forward thinking organisation that better understood its assets and the community expectations. The impacts of conducting business as usual long term was identified to be significant, and moving from a basic methodology to using condition the organisation can ensure they are applying the correct treatment at the optimum time to ensure the organisations long term financial sustainability.

2.1 What is MACK

MACK began as an outcome from the development of an Asset Management steering group initially named Asset

Management Initiative Steering Group that was established to help provide the initial direction for the organisation; The MACK program started based on a review of CTTG's current Asset Management systems and continued to grow into more than just an implementation project but into a cultural acceptance program for Asset Management within CTTG.

Spatial Services

The creation of the Strategic Assets team allowed for the ownership of CTTG spatial data to align with asset data under a single business owner rather than being spread across multiple teams within the organisation. Given the importance of the spatial data for the mobility solutions this alignment has proven to be a significant milestone and helped position the organisation moving forward.

Technical Assets Group (TAG)

TAG is a group within CTTG that has representatives from the Asset teams within the organisation. Regular meetings are held in which all asset practitioners can discuss current issues and projects and with a focus on MACK at these meetings the reinforcement of Strategic Assets vision and the Asset Management journey can be discussed and kept at the forefront.

Audit Committee & Council

The MACK program made the decision to regularly present and communicate with Council's Audit Committee. The regular communication helped MACK gain significant support from the full council as the Elected Member representatives became the spokesperson for the MACK program in the chamber. This has meant that MACK has become a way of thinking for the Elected Members (EM's) and has helped pave the way for funding submissions being supported as they are able to see the significant benefits of

the MACK program from both community and financial perspectives.

2.2 Asset Management Maturity

The organisation identified that there were a number of areas in which we could focus on that would significantly increase the organisations asset management maturity and could help to drive the long-term outcomes that the MACK steering group had identified.

These priorities were:

Asset Management Strategy

The development and implementation of the organisations Asset Management Strategy through the MACK program has provided EM's and staff with the key focus areas for the next 10 year period, this period aligns with the organisations current strategic plan.

The AM Strategy identifies the 3 key focus areas for the organisation and allows the measurement of the impact of the MACK program against the strategic priorities. As the EM's have an understanding of the focus areas and as a result are supportive of funding submissions that directly relate to the strategic priorities. These focus areas are regularly monitored and provide a strong basis for measuring the progress of MACK within the organisation.

Asset Management Information System Implementation (AMIS)

The implementation of the new AMIS was undertaken over a 2 year period and saw the engagement of a full time IT Project Manager to oversee the implementation and the creation of a new role within Strategic Assets of the Assets Business Administrator that would work with the Project Manager to ensure the successful implementation and ongoing management of the AMIS.

Post implementation the AMIS needed to transition into business as usual (BAU), this required the development of processes and procedures and the subsequent engagement of stakeholders within the organisation to embed the change and strive to develop an asset management focussed culture.

Mobilising the Blue Collar Workforce

Mobility is something that is changing the way CTTG does business and long term can provide better information to customers in a timely fashion while supporting our field staff in the maintenance and renewal of our assets.

The process prior to the AMIS implementation was pieces of paper being passed between workers and was identified as a key area in which significant efficiencies can be gained through the use of mobile devices.

The implementation of mobile devices for the field staff has made enabled data to be available in field and the organisation is able to collect data about what maintenance tasks have been performed on an asset.

2.3 Change Management

With any significant project, particularly projects that change the way employees do business, guiding staff through the change is the most important part of the project. Without successful change management often the change doesn't embed itself within the organisation.

The key to the success of MACK has been through strong ongoing two-way communication with staff. From the beginning of the implementation staff were involved in helping to define the current business processes and identifying the key outputs of their teams. During the implementation of the AMIS, staff were engaged and while implementation is complete this high level of engagement through the Strategic Assets team has continued.

A change management plan using the Prociis ADKAR methodology was used within the AMIS project and has helped to determine where the hold points for change are and which areas to focus on to ensure staff moves through the change successfully.

Empowering Staff

The key to the success of MACK has been by providing training and education to field staff about how what they do is not just fixing something but impacts on asset life, long term financial effects and the like. This education has helped to provide significance to the workforce and ensure they understand that what they do matters and impacts on the greater community.

Another key has been involving all staff on the MACK journey and particularly through the AMIS implementation. This has been done through regular interaction with the field staff, and ensuring they were able to have input into the configuration of the maintenance areas, where they are the technical experts. This has seen a level of ownership being taken by the

staff that are going to be affected by change and has seen field staff being open to change rather than pushing against it.

The role of the executive sponsor has been imperative in supporting the MACK program and helping with the empowerment of staff. The organisation has seen significantly higher buy in when staff have been encouraged and recognised by a senior executive, particularly when this recognition has been made in front of their peers.

Celebrate Wins

A key emphasis of MACK has been to celebrate even the small wins with staff and ensure they understand that even the smallest win helps the overall program. CTTG has seen a significant change in attitude from field staff involved after key stakeholders (Directors, Managers) make note of their positive involvement in project outcomes. This emphasis on ensuring staff feel significant in what they are doing has made the change that little bit easier.

Consolidate

With the 3 pilot teams currently using the new mobile solution, it needs to be understood that each of these teams will progress at different rates. The implementation of on-going training both for individual and groups along with further development of online training modules to help support the teams until the system becomes embedded. The 3 pilot teams can then act as champions to provide further support to each new team that moves to the mobile solution.

3.0 Return on Investment

Like all projects with significant investment, the ability to identify and measure returns is paramount. MACK was heavily invested in by the organisation with the development of the Strategic Assets Team the implementation of the new AMIS, funding for condition assessments and other MACK initiatives.

Measuring returns can be difficult without substantive and measured baselines, in the case of CTTG's AMIS role out, given where we came from we were unable to accurately measure our current baselines as most processes were manual in nature. What we were able to do was to measure processes at a high level to get some indicative baselines that we could measure against, particularly in regards to the time taken to process customer requests.

An example of this was the Concrete Maintenance team, whose manual process saw the customer request come in and be printed by the Team Leader who inspected and made notes on what work was to be undertaken. After inspection this request was passed through three more teams before being handed back to the Team Leader for completion. This manual process took at a minimum four days to complete and had significant risks of requests being lost or not handed over in a time sensitive fashion leading to delays.

With the implementation of the new AMIS this process was converted into an electronic process that had the request move directly from the call centre to the Team Leader for inspection. This work could then be immediately passed onto the first crew and this process repeated as each crew signed off the work it was immediately available to the next team. This meant that with proper planning, works could be completed within two days.

A subsequent return on investment from this same process was the availability of asset maintenance data. Previously as everything was done manually there was no way of tracking what work had been completed at an asset level. The AMIS implementation allows for Asset Planners to utilise this data in their decision making, development of whole of lifecycle costings and capital renewal optimisation.

A significant return that was realised by the organisation was the ability to do more with the same money in terms of the capital renewal program. Through moving to a condition based methodology the organisation was able to begin optimising its capital works program and identifying the optimal time to apply treatments to the assets. Our tree screen program, with an asset value of ~\$20M, was used as a pilot for optimisation. The historic value of the renewal program was ~1.0M annually, running a number of different scenarios covering differing condition intervention points and budgets, the optimised budget was reduced to requiring ~\$760K to maintain the current level of service over the next 20 years.

Our roads predictive model showed similar results in that using the optimised capital program we identified we could make savings based on our un-optimised estimation of requiring an investment of ~\$6.0M per year to meet our service level. Using the optimised outputs it is estimated that our required output to meet the required service level would be

~5.0M per year. This is a saving of ~\$1.0M and would mean our return on investment would be realised within 2 years based just on the savings from our roads network.

The biggest return while hard to measure was the cultural impact of the MACK program. The maturity of the organisation has significantly increased in regards to Asset Management and we have seen a more collaborative approach between Customer Excellence, Information Technology and Asset Management. This collaboration has moved the organisation from a data and compliance driven space to a focus on outcomes and turning data into knowledge and wisdom that can be used to guide better decision making for our community.

4.0 Conclusions and recommendations

Asset Management is a core part of Local Government and is the basis of providing sustainable infrastructure that underpins the organisations ability to provide community services.

A new system which provides the functionality should be treated as the enabler and the focus needs to be on the people and processes that drive the organisations Asset Management decisions. The empowering of staff and increasing the organisations asset maturity allows us to move to an evidence-based decision making model in which we are able to compare a number of scenarios with a long-term lens to identify and highlight to potential impacts of our decisions. Understanding these impacts allows decision makers within the organisation to be informed and encouraged to look beyond the short term to ensure we try to limit to potential of intergenerational inequity.

We saw that with an initial investment, returns could be paid back in a short period of time, with the community outcomes being maintained or enhanced for the same level of annual investment.