Mandalay™

CASE STUDY
Dubbo Regional Council

Implementing a Comprehensive Digital Waste Management Solution

Overview

Before coming onboard with us, the Dubbo Regional Council waste team faced challenges with their existing waste management processes and software. To improve efficiency, compliance, and data accuracy, council partnered with Mandalay Technologies to implement a comprehensive digital waste management solution. We had the pleasure of speaking with Jamie Lobb, Manager of Resource Recovery and Efficiency, and Jaydon Archer, IT Infrastructure Specialist from Dubbo Regional Council.

Dubbo Regional Council currently operates two landfill sites (with one of those sites due to close soon), and five rural transfer stations available for domestic use. Initially the Facility Product Suite was implemented for use at the two landfill sites, including Facility Core Ticketing, Image Capture, and EFTPOS Integration. Tablets are being used to run Ticketing at their rural transfer stations. The Resident Product Suite including Self Service Bulk Waste Bookings and Voucher Management are also now in operation. Federated ID has been implemented to manage all user access and the Dubbo team uses Premium Facility Analytics & Reporting for their reporting needs.

'Mandalay came on board to consolidate systems for our facilities. Our main focus was on what data we are capturing and how we can capture that data. On the back of that we learnt about the other service offerings.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

Background

Prior to implementing Mandalay's software solution, Dubbo Regional Council relied on multiple systems for waste management service delivery, leading to inefficiencies and data discrepancies. Dubbo Regional Council's primary goals were to:

- Consolidate waste management systems into a single platform
- Improve data capture and accuracy
- Enhance compliance and governance
- Streamline reporting and analysis

Once settled with the Facility Product Suite to improve the day-to-day operations at their facilities, council looked to Mandalay to help streamline and improve the management of their Tipping Vouchers and Bulky Rubbish Collection Bookings processes.

The Challenge

Waste Voucher Management

Dubbo Regional Council have two different tipping vouchers for their residents. Domestic rate payers with a bin service can access one free tip voucher per year while rural residents without a rubbish bin service get 52 free uses of the transfer stations every year.

Before utilising Mandalay's software for their tip vouchers, Dubbo Regional Council had no data and no verification process for residents presenting vouchers at facilities. Their only method of verification was via a driver's licence. They were also encountering an issue where rental property owners were presenting multiple vouchers, then when their tenants wanted to use a voucher, it had already been used for their address.

It was extremely difficult to maintain an accurate record of voucher use across the two voucher types. Plus, Council had no way to see which transfer stations residents were using.

Bulky Rubbish Bookings

The bulky rubbish collection service offered by Dubbo Regional Council was only made available during a fixed time period across three months. During that period, they would sweep the entire region and experienced a lot of challenges around presentation time because of the fixed-period setup. Some piles were sitting on the curb for the entire three months resulting in health and safety concerns and they were getting multiple call ins for illegal dumping.

Multi-Factor Authentication

Dubbo Regional Council has implemented the ASD Essential Eight maturity model for cyber security, which requires multi-factor authentication and secure access for any system that stores sensitive data. When onboarding a new system, this was a mandatory requirement according to Jaydon. They would not go live until a product was implemented that met this requirement.

The Solution

Mandalay Technologies provided a comprehensive digital waste management solution that suited Dubbo Regional Council's specific needs. Key components of the solution included:

- **Facility ticketing system:** A system for accurately capturing data at waste facilities, including image capture and integration with EFTPOS terminals.

- **Voucher management system:** An online system for residents to verify and access their waste vouchers prior to arriving at the facility.

- **Bulky waste collection booking system:** An online system for residents to book and track bulky waste collections.

- **Federated ID:** Driven by a requirement from Dubbo Regional Council IT to align with their implementation of the ACSC Essential Eight model to improve their cyber security.

Facility Core Ticketing

TConsolidating multiple systems into one has improved the accuracy of the transaction data being captured, it has improved compliance and gives the team at Dubbo a clearer understanding of diversion and recovery across their multiple facilities.

Images captured via the Image Capture product are directly linked with transactions and have allowed the team to resolve disputes related to material being brought into the facility.

The native integration with the voucher management system ensures resident verification takes place prior to the resident arriving at the facility to use their waste voucher.

Voucher Management

Dubbo Regional Council now has a robust voucher management process with digital vouchers in place.

Residents can access vouchers within an online self-service portal where they undertake a verification process. A resident's address determines which type of tipping voucher they can access, and as resident verification now takes place before they visit the facility, the transaction process for staff has been streamlined. Vouchers are issued as a QR code that is scanned by facility staff, immediately recording the use across both the ticketing and voucher systems.

To maintain access across their community, residents can provide the QR code via their mobile device or as a printed copy. Jamie estimates that approximately 95% of vouchers are now being presented via a mobile device, either as a saved image or directly within the self-service portal.

Along with ease of use for their community, the data and reporting capabilities have been a huge benefit for the Dubbo Regional Council team. They can now access information related to voucher use and can begin to use this to educate their community.

'Now we've adopted the new tip voucher online system, in conjunction with the bulky collection, there is a verification system to say a resident is who they say they are before turning up to the facility. It was very much a trust and honor system before that.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

'If residents want to book a bulky collection, they can walk in if they don't have internet access to do it, or they can phone up and a Council worker can book it on their behalf. We wanted to be flexible with the booking arrangement too.'

Jamie Lobb,
Manager of Resource
Recovery and Efficiency,
Dubbo Regional Council

'It was easy, it went well, and the team is all using it today.'

Jaydon Archer,
IT Infrastructure Specialist,
Dubbo Regional Council

Bulky Waste Collections

Dubbo Regional Council are currently in a 12-month trial for a bulky waste click and collect service utilising Bulk Waste Bookings by Mandalay. Residents can now choose which date they would like their collection to take place, based on the availability controlled by council, giving them flexibility to use their allocated collection at a time that suits them across the 12 month period.

The biggest benefit for the waste team in implementing the bulky waste collection service this way is the resource recovery opportunity. Previously short-term contractors were doing the work. Now they have full-time workers picking up bulky waste leading to a lot more care and diligence to set aside materials that can be recovered. Along with choosing their own collection day, residents can also identify what they are putting out for collection. That data goes to the collection contractor, and they work out their routes and what trucks to send out, allowing them to segregate and recover the materials more effectively.

The flexibility and ease of use is great for the residents too as they can make their booking online, over the phone or in person.

Federated ID

While not offering a direct multi factor authentication (MFA) solution, the Federated ID product offered by Mandalay allowed Dubbo Regional Council to use their own MFA solution with their users. Staff access Mandalay systems using their Dubbo Regional Council login details and council has set policies for authentication. For example, if a user is outside of their network, they need to use multi-factor authentication to gain access, which satisfies the ASD Essential Eight requirement.

From Jaydon's point of view, it took around half an hour to setup and another half an hour worth of testing. Their users don't need to setup new passwords to access Mandalay systems and if a staff member leaves, they are unable to login as soon as their account is disabled, because it is federated.

'We got all the stakeholders engaged with Mandalay during adoption, and I think that's really important. To have those robust conversations with Mandalay in the room and all our stakeholders internally I think is priceless. Mandalay took a lot of the punches that the waste team would have gotten after implementation of the new system. Consultation is an integral part of adopting a new system.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

The Implementation Process

The implementation process across all products involved several key steps:

- **Stakeholder engagement:** Dubbo Regional Council engaged with all relevant stakeholders across Council to ensure buy-in and address concerns.
- **System configuration:** Mandalay Technologies worked with Dubbo Regional Council to ensure the system met the council's specific requirements.
- **Training and support:** Mandalay provided comprehensive training to Council staff on how to use the new system with training delivered based on roles within Council.
- **Phased rollout:** The solution was rolled out in phases to minimise disruption and allow for testing and refinement.

The Outcome

Implementing Mandalay's digital waste management solution has resulted in several significant benefits for Dubbo Regional Council, including:

- **Improved efficiency:** Having a consolidated system has streamlined processes and reduced the administrative burden on their waste team.
- **Enhanced data accuracy:** Dubbo Regional Council now has accurate and reliable data on waste generation, diversion, and recovery.
- **Increased compliance:** The system has strengthened compliance with waste management regulations.
- **Improved resident experience:** The online tip voucher and bulky waste collection systems have made it easier and more flexible for residents to access waste services.
- **Cost savings:** The solution has helped Dubbo Regional Council identify cost-saving opportunities.
- **Enhanced cyber security:** Allowing Dubbo Regional Council to implement multi-factor authentication and meet ASD Essential Eight Requirements.

'The team are so willing to answer your call, and the ability to get in contact after everything is connected. That is priceless.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

'Opportunities are endless when you have data. Anything we do now, it's about 'can it be quantified?' and 'is it objective?'. It's taking the emotions out of it and making sure it's not a biased decision.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

The successful outcome was greatly attributed to the support they received from the Mandalay team during and after implementation.

Valuable Data

Mandalay's detailed reporting tool, Facility Analytics & Reporting, has given Dubbo Regional Council access to a huge amount of information.

They now have detailed data that can support various business cases. For example, with the impending closure of one of their landfills there is an opportunity to review facility opening hours based on what they can see in the data, e.g. facility use, which days are the busiest, when is the peak time etc. The same data could also inform a potential shutdown in the event of work needing to take place to minimise disruption for the community. With the data they have captured since going live, Jamie and the team can already see the peaks and troughs linked to facility use.

Moving beyond operational decisions, an important factor for Dubbo is being able to accurately measure what is being landfilled, what is being diverted from landfill, and what is being resource recovered. They can see where they are doing well but more importantly can start to identify where they should focus next and make informed decisions that will get them closer to their 80% diversion targets by 2030.

The data they have now is also allowing them to educate their population more effectively. For example, Jamie says that if they know that some residents are putting hazardous materials out for bulky waste collection from the data they collect, they will educate their population to prevent that from happening again next time.

Streamlined Reporting

Annual reporting to the State Regulator (WARRP report) has now been streamlined and is simply generated as a report within the Facility Analytics & Reporting tool. This replaces a very manual process that involved Excel spreadsheets and compiling data from three different systems to come up with the numbers.

Access for the Community Experience Team

Dubbo Regional Council's Community Experience (CX) team are now able to administer both voucher and bulky waste click and collect programmes directly with residents. A majority of questions received from the community can be addressed immediately by the CX team rather than being forwarded to waste.

They attribute a lot of their success to having a representative from the CX team involved through the whole implementation process, before it was adopted.

'We chose Mandalay because we knew it was a proven system for waste facilities, but we also chose it because we knew we could do add-ons. For us, it's about the bigger picture.'

Jamie Lobb,
Manager of Resource Recovery and Efficiency,
Dubbo Regional Council

Future Opportunities

Jamie tells us that Dubbo Regional Council plans to continue expanding its use of Mandalay's digital waste management solution.

Initially they would like the new click and collect bulky waste collection to be adopted and endorsed full time after the trial period has ended, as this is a service where they see huge value.

Next, they are keen to focus on commercial customers and reducing administration for council staff. Activities such as allowing commercial facility users to access their own data if they need something such as weighbridge dockets or missed invoices rather than requesting it would reduce workload. Giving commercial customers the ability to input certain data and being able to setup prepaid accounts would also be of great benefit.

Advice for Others

Jamie had this piece of advice to share with other councils who may be considering Mandalay Technologies.

> *'Look at the bigger picture. Having a clear action plan and strategy in place before approaching the likes of Mandalay to understand what else they offer would be my biggest advice.'*
>
> *- Jamie Lobb*

Plus, take advantage of Mandalay's customer success catch-ups and ongoing support. Jamie tells us they have already been reminded about functionality that had been implemented that wasn't being used, ensuring they are getting the most from the system.

Jaydon also shared some advice for IT teams in other councils aiming to comply with ASD Essential Eight guidelines and who may be considering Mandalay's Federated ID product.

The partnership between Dubbo Regional Council and Mandalay Technologies has been successful in transforming their waste management operations, bulky collections and voucher management services. The digital waste management solution has provided Council with the tools and data needed to improve efficiency, compliance, and resident satisfaction, and Jamie says they wouldn't hesitate recommending Mandalay Technologies to other Councils and their waste teams.

'Bite the bullet. For an hour's worth of work, it is worth not having users setting and forgetting passwords. Everything is MFA protected, and we don't need to worry about offboarding.'

**Jaydon Archer,
IT Infrastructure Specialist,
Dubbo Regional Council**

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