

High density storage

AUSDOC information management

Leading offsite document storage and management specialists Ausdoc Information Management had a problem – in fact, a number of small problems adding up to one large one.



Ten years of rapid growth, both organically and by acquisition, meant it had ended up with nine storage facilities scattered throughout the Sydney metropolitan area. As a result, its operations were becoming increasingly inefficient. Documents owned by a single customer could be stored in several facilities, meaning that a retrieval request may have required consolidation of documents from a number of locations before being delivered to the customer.

Ausdoc was spending almost as much on transport services between its storage facilities as it was on transporting documents to and from customers.

To resolve this situation and cope with the company's projected growth, there was only one option: consolidate a number of the smaller, less-efficient sites into a major facility which would accommodate the long-term growth needs of Ausdoc.

In mid-2003, Ausdoc began moving into its new Moorebank Records Centre, in Sydney's southwest – a state-of-the-art warehouse with probably the highest storage density of any facility in Australia.

This facility features a four-level mezzanine storage system supplied by Dexion Australia, and installed during an eight-part staged implementation with extremely critical delivery dates.

About Ausdoc

Ausdoc Information Management, which operates in all state capitals, along with a number of regional centres, is owned by the private equity arm of ABN Amro Bank.

Ausdoc is a business archive service provider. Businesses typically generate enormous amounts of paper-based material, which they have to keep for a variety of reasons.

"We specialise in tasks that support the risk management, corporate governance, administrative and compliance objectives of our customers. Because we are a specialist document management service provider, we can typically



secure, store, manage and maintain documents more efficiently and cost-effectively than a company trying to do this internally," said Ausdoc CEO Michael Evett .

Nationally, Ausdoc has about 10,000 customers, from large "Top 100" companies, to very small single-person operations.

Document tracking

With a customer base the size of Ausdoc's, an effective operational IT system is essential, and Ausdoc has recently completed the implementation of a single standard national IT platform, known as Loc@te.

Loc@te provides a warehouse management tracking system that manages the receipt, location and movement of items throughout the organisation. Every box handled by Ausdoc (and there are literally millions) is in effect a unique SKU.

The growth challenge

As briefly covered in the introduction, Ausdoc's need for a consolidated operation in Sydney resulted from its rapid growth over a number of years.

"We had acquired a number of businesses, and at the same time, the business had grown very rapidly," said Evett.

"When we acquired a new business, we would integrate it at a process and operations level, rather than at a facilities level.

"This was compounded by our dynamic storage methodology which means that an item which is retrieved from one Record Centre does not necessarily have to be refilled in the same Record Centre when returned by a customer.

"This meant that customers' records may be stored in a number of sites. And when you have nine record centres, there are various logistical challenges associated with consolidating these items and satisfying customer expectations.

"This led us to our Moorebank facility, and the spare 'paddock' next to our new Records Centre which will handle our growth for the next 12 years. Operating from a single site means we can be far more efficient," said Evett.

The facility

While Evett, for commercial reasons, is not prepared to divulge the storage density of the Moorebank Records Centre, or the number of SKUs stored there, he believes the facility is achieving the best storage density of any warehouse in Australia – largely due to its unique design.

"One of our key partners in this exercise was Dexion Australia and in particular Mark Barraclough (Dexion's national business development manager)," he said.

"Dexion had a great deal of industry experience, and had done some work in designing similar facilities. Both Dexion and ourselves had looked at best-practice operations overseas, and there was a lot of alignment in our thinking in terms of how the facility should be configured, what it should look like and so on."

Product supplied by Dexion included the following – and gives a good idea of the size of the installation:

- 67.5 km of Keylock uprights in a pregalvanised finish
- 154 km of Keylock beams



- 105,000 nuts and bolts
- 1200 tonnes of Keylock rack
- 45 tonnes of structural steel
- 16,000 sq m of grid floor
- 103,000 sq m of MDF board
- 85,000 Wingtek screws.

"Having developed an understanding of the required racking configuration, we asked our property partner, Macquarie Goodman, to design a building to accommodate the racking structure," Evett said.

"Our building has been designed to ensure we are still able to satisfy the service expectations of our customers, whilst meeting our storage density objectives.

To achieve this, a lot of engineering and design work was required."

In its old Sydney warehouses, Ausdoc used stock pickers, which required aisle widths of 1200-1250 mm.

At the new facility, it has opted to pick direct from mezzanine floors – allowing significantly narrower aisles and achieving the doubling in storage density.

The 15,000 sq m warehouse footprint has four mezzanine levels,

giving a total working area of 60,000 sq m.

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Features include:

- An energy-efficient lighting system, that ensured there was sufficient light for Record Centre staff to perform their tasks, but which turned off automatically when an area was unoccupied
- A sophisticated fire engineering solution that included in-rack sprinklers on each mezzanine level
- Thermal engineering to prevent the building from heating up excessively; this includes thermal sandwich panel walls instead of the traditional tilt-up concrete, and a heat exchange system to purge warm air from the day before and replace it with cooler air when overnight temperatures are at their minimum.

"At any one time, we had an 'army' of consultants working together developing all the options," said Evett.

"Mark Barraclough and the Dexion team were involved at all levels, because just about every decision had to be looked at in the way it would affect the preferred racking configuration and storage density."



The density challenge

Obviously there are practical commercial limits to density for any installation, and there is a need to balance storage density with access and handling requirements. However, engineering and human resources issues also limit densities, Evett said.

"When you get above a certain height, there is an array of additional matters that come into play – you need to think about moving people up and down, and lifts come into the equation, you potentially have local council height restrictions, and there are further engineering challenges in the racking structure itself.

"We believe the height of our Records Centre is about the optimum; go any higher and you add extra layers of cost and complexity."

Achieving best practice

"In terms of the document management industry in Australia, there are some installations around with similar storage densities; however, we have not compromised on any aspects of the design, engineering and fit-out that relate to security, operational efficiency, employee friendliness and customer service," said Evett.

"Because of this, we are confident that our Records Centre is at industry best practice levels.

"A key element in the operation of the centre is its flexibility. The design of our system allows us to have as many people as we want working on all four levels.

"That gives us a lot more flexibility, and allows very high picking rates compared with other systems," he said.

"The end result is a state-of-the-art document management facility that allows us to better manage our customers' needs more efficiently and cost-effectively," said Evett.

