



WHITE PAPER

Lessons Learned From SAP's Largest Cloud ERP Deployment: New South Wales Department for Trade and Investment

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IDC OPINION

In July 2012, SAP announced its largest deal to date for its SAP Business ByDesign ERP solution in the public cloud. The buyer was an Australian government entity, New South Wales Department of Trade and Investment, Regional Infrastructure and Services (NSWTI), which needed an organization-wide back-office system for 8,500 users fast with a hyper-aggressive go-live date by end of 2012. This IDC White Paper highlights viewpoints from key stakeholders, explores how the implementation actually went, and reviews lessons learned from the implementation.

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Based on interviews and other information gathered, IDC concludes the following:

- ☑ *Large organizations can implement SAP's cloud-based ERP solution to manage and automate back-office processes much faster and at a lower cost than traditional, on-premises ERP solutions.* In phase 1, NSWTI rolled out an accounting application to 5,000 users in less than five months, which is very fast by normal ERP project standards.
- ☑ *Public sector organizations operating under general accounting principles, such as IFRS, can implement and use a commercial ERP package, such as SAP Business ByDesign largely out of the box.*
- ☑ *Change management was the biggest challenge of the implementation, despite a clear focus on organizational change throughout the project.* Implementing cloud-based best practices requires an immense and continuous effort to ensure that new practices are embraced.
- ☑ *The NSW government expects that the near-term savings related to decommissioning of legacy systems and redeployment of IT and back-office personnel will pay for external project costs with a payback period of less than two years.* Furthermore, beyond these immediate savings, the organization has experienced significant benefits related to organizational transparency, strategic alignment of finance, HR, and operations, and operational control and risk reduction.

BUSINESS CHALLENGE

New South Wales is one of the six states in the Commonwealth of Australia and its capital is Sydney. New South Wales Department of Trade and Investment, Regional Infrastructure and Services (NSWTI) is one of nine principal government agencies of the state. The department is led by Director General Mark Paterson, and has approximately 8,500 employees across three operational divisions plus one central

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division for finance and operations in the principal department plus a number of other cluster entities.

During 2004–2011, the state of New South Wales reorganized and consolidated its government entities during several rounds of consolidation in an effort to organize entities in fewer clusters in order to get higher scale and better administrative efficiencies. By April 2011, NSWTI comprised 62 distinct organizational entities, most of which had their own administrative processes, ERP applications, payroll processing, and HR systems. Furthermore, from a geographic view the organization was spread across 220 office locations.

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There was no central system nor any integration between the myriad of systems. Standard inquiries related to for example total headcount, annual spend on external consultants, number of motor vehicles owned by the department, or annual travel spend had to be managed as surveys to local unit administrators. Answers would typically take three weeks to collect and analyze and would have a significant margin of error due to the cumbersome and manual process, and uncertainties and misunderstandings regarding definitions.

DECISION TO IMPLEMENT CLOUD ERP

Following the government reorganization in April 2011, it was clear to the management of NSWTI that a new administrative platform for the entire organization was needed urgently. By yearend 2011, NSWTI assembled a team tasked with selecting and implementing a new finance and HR system within 12 months.

Options for New Back-Office Platform

The first possibility considered by the team was to implement a **new on-premises ERP solution**. This option was quickly discarded because of timing and budget reasons. Based on the experiences of other government entities in Australia, the team estimated that an ERP solution would take between three and five years to implement and cost in the range of A\$40 million to A\$50 million.

NSWTI considered four different options for get a new administrative platform.

A second option was to take one of the **existing ERP solutions** among the entities within NSWTI and modify it to cover the entire organization. This option was also discarded because each of the existing ERP solutions was heavily modified, meaning the implementation would have to start almost from scratch. The team estimated that such an extension of existing ERP would take approximately three and a half years and clearly exceed available budget.

A third option was to **outsource back-office operations** and IT to one of several existing government shared service centers. This option was discarded for a number of reasons. Firstly, it was considered a high-risk option because of uncertainties related to costs and capabilities. Secondly, each shared service center would need between 18 and 24 months to onboard NSWTI, which was significantly beyond the deadline for the project.

The fourth option was a **software-as-a-service** solution. Jeannine Biviano, deputy director general of NSWTI, explained: "We were running out of ideas. Our CIO, David Kennedy, suggested software as a service, and we began investigating this option. We could see early experiences indicating fast implementations and relatively low cost. So, we thought, OK, let's tender and see what providers exist and what they propose."

IMPLEMENTATION OF SAP BUSINESS BYDESIGN

In early July 2012, NSWTI signed a contract with SAP to implement SAP Business ByDesign across NSWTI. The implementation plan was very aggressive, even by cloud standards: After project initiation on July 24, 2012, almost 5,000 users of NSWTI went live on the system on December 10, 2012.

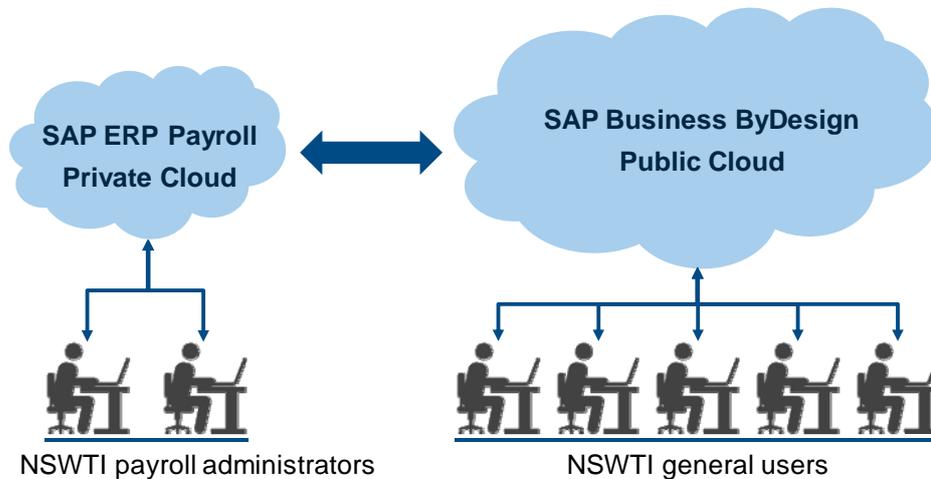
Cloud ERP Solution

NSWTI wanted a unified accounting, payroll, and HR system, yet wanted the payroll maturity and functional capability of the SAP ERP HCM payroll module. To meet these demands, SAP proposed a hybrid solution consisting of the Business ByDesign public cloud solution run out of datacenters in Germany for accounting, expense management, and human resources, and an SAP payroll solution, run and managed in Australia by SAP partner CN Group. The payroll data is displayed via SAP Business ByDesign and Business ByDesign users can work with payroll data natively in Business ByDesign without knowing that it has been generated in a hosted instance of SAP ERP. This is illustrated in Figure 1.

NSWTI wanted a unified accounting, payroll, and HR system.

FIGURE 1

NSWTI Cloud ERP Solution



Source: IDC, 2013

Implementation Approach and Milestones

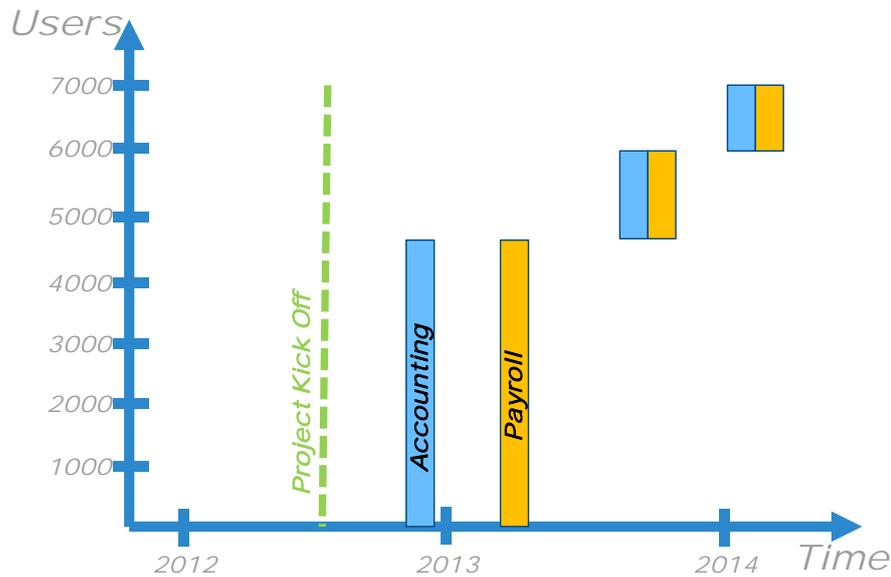
The extremely aggressive timeline and the fact that no other government entity of the size of NSWTI had embraced cloud ERP called for a new approach to implementation. "We entered uncharted territory with this project. SAP told us that with these goals, the normal ERP implementation rule book was irrelevant," said Jeannine Biviano.

NSWTI made a number of decisions related to implementation approach to meet the project goals:

NSWTI made a number of decisions to help pull off a very fast yet successful ERP implementation.

- ☒ *Treat the project as a business transformation project as opposed to an IT project.* As a business transformation project, sponsorship and steering was firmly rooted in top management at NSWTI, across director general, deputy director general, CIO, and CFO.
- ☒ *Run the implementation itself, directly with SAP.* NSWTI made the controversial decision to run its own implementation without any systems integrators involved. SAP assigned a number of implementation resources and technical project management that worked alongside two project managers from NSWTI.
- ☒ *Split accounting and payroll go-live.* Accounting was the most pressing topic at NSWTI and the steering committee decided to reduce risk and simplify execution by going live first with accounting and three months later with payroll. The decision to postpone the payroll go-live was a major factor in achieving the aggressive implementation timeline for accounting.
- ☒ *Split the implementation according to user type and user priority.* The highest priority users (5,000) went live on December 2012, a further 1,000 users will go live in October 2013, and another 1,000 users in January 2014. Avoiding a big bang implementation for all users was a major risk-reducing factor.
- ☒ *Keep a very stable implementation team and steering committee.* From the onset of evaluation and planning, over selection and contracting, to implementation and post go-live, NSWTI maintained an internal steering committee consisting of the deputy director general, the CFO, and the CIO. The internal implementation team was also kept stable.
- ☒ *Take a risk management approach to the project and make decisions based on risk implications.* Initially, 138 unique risks were identified, of which payroll execution failure was the most important, and the team maintained a focus on reducing or eliminating each risk. The team managed to reduce the number of risks to fewer than 20 as of today.
- ☒ *Do time planning in reverse, starting from go-live and working backwards.* The normal ERP implementation rule book did not apply given the aggressive timeline and the steering committee instead used the desired go-live date as a point of departure, working backwards.
- ☒ *Insist on going with standard best practices except in rare circumstances.* NSWTI considered its back-office processes and IFRS-based accounting practices fairly standard. Therefore any deviation from the out-of-the-box supported best practices had to get steering committee approval and eventually only a few changes were approved.

The implementation project was kicked off on July 24, 2012. On December 10, 2012, NSWTI went live with close to 5,000 users with accounting, including accounts receivable and payable, general ledger, project accounting, fixed asset accounting, and expense management. On March 4, 2013, NSWTI went live with organization-wide payroll. The implementation timeline is shown in Figure 2.

FIGURE 2**Implementation Timeline**

Source: IDC, 2013

Implementation Challenges

The implementation is widely regarded as successful and as an example of how best to do a large-scale, mission-critical software-as-a-service deployment. Looking back at the project, a few aspects proved harder than expected:

Looking back at the successful implementation, a few aspects such as change management proved harder than expected.

- ☒ *Coping with change management.* Even though the project was treated as a business transformation project with an ingrained focus on and significant resources dedicated to organizational change, still more efforts were needed. The project required changes in business processes. For example, employees could no longer make purchases without a formal purchase order. Most employees are now required to fill out time sheets, which is a new procedure to many. Some staff, including IT staff, feared becoming redundant in a cloud world. Although users are operating in the new system, reaping the full business potential will require users to truly embrace the new working practices.
- ☒ *Managing a hybrid architecture.* The integration between SAP ERP Payroll and SAP Business ByDesign works but has been vulnerable to upgrades of either system. It is two systems that have been managed somewhat independently by SAP. NSWTI is looking for SAP to assume more responsibility and stricter service level agreements for the total solution.
- ☒ *A few missing large-scale features in Business ByDesign.* The cloud solution has worked well in general and with good response times. However, working with a user count in the thousands, NSWTI would like to see improvements related to bulk administration of users and employees, better inheritance options across user groups and roles, better options to manage temporary labor, bulk uploads of

certain types of master data, and large file upload. Some of these capabilities are expected to enter Business ByDesign as part of the next upgrade.

BUSINESS BENEFITS

The implementation of SAP Business ByDesign is transforming how NSWTI operates.

Looking at immediate **financial benefits**, the implementation has allowed NSWTI to decommission tens of different finance and payroll systems and services, to cancel service contracts, and to redeploy related operational staff. The resulting savings are expected to pay for the external costs of the project with an investment payback period of less than two years.

As a result of the implementation, NSWTI has achieved a new **operational transparency**. Jeannine Biviano explains: "We now have one source of truth for the entire organization and it is online. Queries are instantaneous and our managers can pull information themselves from the system." Christopher Martin, CFO of NSWTI, adds: "We are able to be compliant with the government reporting requirements as a result of the implementation. People can do their own reporting and analytics for finance and for projects without involving anybody. We found the analytical capabilities of Business ByDesign to be very strong and easy to use." David Kennedy, CIO of NSWTI, continues: "The new system allows for reporting on projects and programs consisting of multiple projects. This has hugely enhanced visibility in terms of costs and expenses."

Another strategic business benefit of the implementation is the **alignment of different parts of the organization**. Kennedy explains: "We now have one process across the entire organization for financials, procurement, projects, payroll, expenses and travel, and HR. This represents an enormous simplification for us." Christopher Martin adds: "The new system has a common model of the entire organization across finance and HR, completely consistent and greatly simplified compared to previously. Operational projects, which used to be separated, are also managed inside the system."

Paper-based processes have become electronic, leading to higher efficiency and **much better control and lower security risk**. "Before, when the organization was largely paper-based, processes were much slower and insecure. Papers got lost, authorization procedures were not always followed correctly, processes got interrupted due to absence, etc. The system enforces the procedures we have, we have a full audit trail now for all transactions, including access from mobile devices, and documents are readily available," says Martin. "Web-based self-service makes life easier for many, because employees and managers can now create new projects or conduct purchases without involving back-office administration."

LESSONS LEARNED

During the course of the implementation, the steering committee and project teams discovered new challenges and were able to make a number of conclusions related to large-scale cloud implementations:

- ☒ *Change management is harder than you think.* Despite a clear focus on change management from the onset with implementation newsletters, plenary sessions with users, webinars, etc., the team underestimated the amount of communication, education, and support needed to make people change

The implementation of SAP Business ByDesign paid itself back in less than two years but is also transforming how NSWTI operates.

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ingrained work habits. "Despite all our planning and efforts, we probably underestimated the organizational change aspect by a factor of two," says Martin. "Also, we were not sufficiently hands-on about it. For phases 2 and 3, we will use more face time, more elearning, and smaller educational sessions to help users adopt new working practices."

☒ *Technically, the SaaS ERP solution worked, even in the extreme case of NSWTI.* The organization wanted to roll out a new accounting solution to almost 5,000 dispersed users in Australia, hosted in the public cloud in a datacenter in Germany, in just over five months. Some onlookers predicted failure, but response times are satisfactory, uptime is satisfactory, and vendor support has been good.

"Technically, the SaaS ERP solution worked."

☒ *The public sector needs to change its perception of what is secure and what is not.* David Kennedy explains: "Our data are much more secure than they have ever been. Our limited IT resources cannot replicate the security measures taken by the likes of SAP or Google. If we have a breach internally, it is a major issue, but these providers risk going out of business if breaches occur. In the new cloud solution, all information access is governed by the user's access rights, procedures are always enforced, and any action leaves an audit trail."

"Our data are much more secure than they have ever been."

NEXT STEPS

The immediate priority of NSWTI is to **complete the rollout** and include another 2,200 users (see Figure 2). The current rollout also involves deploying mobile apps for expense management and time registration to all applicable employees. Finally, as the application is in place, more efforts will focus on benefits realization. Christopher Martin explains: "As the administrative self-service applications are increasingly adopted by employees and managers, we expect to be able to redeploy administrative resources to new areas. We see a potential to further automate and improve procurement as well as invoice matching as well as to further enhance the self-service applications and reporting."

The immediate priority of NSWTI is to complete the rollout.

Furthermore, NSWTI is planning to make use of Business ByDesign's support for new types of user experience among its users. According to David Kennedy: "We expect users to use **mobile devices** for a number of ERP-related tasks, including time sheet entry, procurement, reporting and analytics, approvals, and expense management. **Social network capabilities** is another useful development in the system and we expect users to subscribe to objects, find other users, etc. It will also be very useful for IT to maintain an overview. And the **built-in analytics** is something we want to build out in order to increase organizational transparency and make people more self-sufficient."

"We expect users to use mobile devices for a number of ERP-related tasks."

Finally, several new cloud initiatives are in the planning phase. NSWTI is currently planning to deploy the **CRM** modules of Business ByDesign to support a number of business-to-business processes within NSWTI, including attracting investment, serving small businesses, managing interactions related to gaming and racing and grants management. Furthermore, NSWTI plans to deploy the **enterprise asset management** module of Business ByDesign to help keep track of and conduct maintenance of physical assets of the organization.

NSWTI plans to deploy cloud-based CRM and enterprise asset management.

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