



## Microsoft Solutions Development Centre Helps Strengthen Child Safety in Queensland

### Overview

**Country or Region:** Australia

**Industry:** Government

### Customer Profile

The Queensland Department of Child Safety is responsible for protecting children and young people at risk of harm, and whose parents cannot provide adequate care or protection for them.

### Business Situation

In accordance with the Queensland Government's commitment to reform the state's child protection system, the department was required to replace outdated and ineffective systems with a single, statewide electronic client management system.

### Solution

The department worked with Microsoft Consulting Services, the Microsoft Solutions Development Centre and Microsoft partners Avanade, Devtest and Readify to create the new system.

### Benefits

- Mitigated risk with sound development environment.
- Access to specialist skills on call.
- Enhanced decision making.
- Access to accurate, timely information.
- Increased staff satisfaction.

“The disciplined approach Microsoft brought to the development has resulted in a system which, since it went live in March 2007, has had no unscheduled outages.”

Andrew Spina, Executive Director, ICT Reform, Shared Information Solutions, Queensland Government

The Queensland Department of Child Safety needed to replace the outdated, inefficient and cumbersome legacy systems it used to manage client information. The department worked with Microsoft Consulting Services and Microsoft Gold Certified Partners Avanade, Devtest and Readify within the Microsoft Solutions Development Centre to build the Integrated Client Management System (ICMS). This controlled environment mitigated the risk of such a complex and high-profile project and gave the department access to Microsoft's global skills base. The ICMS was developed using the Microsoft® .NET development framework and based on a variety of Microsoft server products and technologies. The department is now taking advantage of access to timely, accurate and consistent information, which has enhanced decision making. Other benefits include enhanced security, improved reporting and increased staff satisfaction.



## Situation

In 2003, after a series of accusatory media reports, the Queensland Government launched an inquiry into the poor state of child protection services such as foster care. The inquiry was conducted by the state's Crime and Misconduct Commission and the resulting report, *Protecting Children: An Inquiry Into Abuse of Children in Foster Care*, included more than 110 recommendations to change the way child services were provided and managed in the state.

Following the report's recommendation, in 2004 the Department of Families was split into the Department of Communities and the Department of Child Safety. The latter was charged with ensuring the safety and wellbeing of children across the state.

The report was particularly concerned with the poor state of information technology (IT) systems relating to child safety management. It stated: "Information management systems and practices are outdated and inefficient, and this has a severe impact on our ability to deliver effective services to children and carers."

The Queensland Government mandated its Shared Information Solutions – Strategic Projects division to develop the Integrated Client Management System (ICMS). Shared Information Solutions is the shared IT services and support provider for the Department of Child Safety, the Department of Communities and Disability Services Queensland.

ICMS would become a key element of child safety reform, replacing the disparate systems the department was using to manage child services.

"The system we were working on was developed in the mid to late 1990s and was built on outdated systems, software and

architecture," says Deirdre Mulkerin, Executive Director, Child Safety, Queensland Department of Child Safety.

Child Safety Officers and management relied on a series of IBM Lotus Notes databases that were managed at each office. Information was entered into local databases and then replicated to regional servers and back to a central server in Brisbane. Key data was extracted and distributed in a browser-based format across the state.

According to Mulkerin, "Because no-one had committed any money to upgrading or changing the system, as time went on and our work changed, it just became further and further out of synch with what we were doing."

"Information was never available in real time, which was frustrating for staff and made it difficult for Child Safety Workers to collaborate or share information across the state," explains Mary Greenwood, Child Protection Business Analyst Lead, ICMS Project, Queensland Department of Child Safety.

Because the system was so cumbersome, many Child Safety Officers avoided using it and instead created their own spreadsheets and databases to keep track of local children, carers and suspects. However, this information was often lost or forgotten once a person of interest moved to a different region and became the responsibility of another Child Safety Officer. As a result, there were large gaps in client histories, which adversely affected the department's ability to make accurate, timely and well-informed decisions.

"The system was a real chore for Child Safety Officers," says Andrew Spina, Executive Director, ICT Reform, Shared Information Solutions, Queensland Government. "They should be focused on being out in the field

## “Developing the ICMS solution within the controlled environment of the Solutions Development Centre mitigated project delivery risk and gave the department and Shared Information Solutions the best possible support and deep engagement with Microsoft.”

Vajira Weerasekera, Practice Manager,  
Microsoft Services – Solutions Development  
Centre

working with people, not sitting inside an office entering information into a system that doesn't give them anything back.

“We needed a system that would provide an integrated client and carer view across agencies to improve the quality of decision making statewide. In turn, this would enable practitioners to respond much faster and more effectively to the needs of children and young people at risk.”

The department made a significant number of changes to its child protection practices as a result of the report, and the new system had to ensure Child Safety Officers worked within the parameters of the new legislation.

The Department of Child Safety set out a number of key requirements for the new system. It needed to provide:

- Secure access to information for users across the department.
- An audit trail of any changes to information.
- Alignment with business practices and relevant legislation.
- Statewide access to information.
- Decentralized information input.
- Real-time updates.
- In-depth reporting tools.
- Intuitive workflows for staff.
- Automated forms-based information entry.
- Scalability and flexibility.

### Solution

The department asked Microsoft Consulting Services to review its requirements for the ICMS and to propose a solution.

Microsoft had already worked with the Queensland Government's Shared Information Solutions division on its ICT renewal project, another aspect of the recommendations implemented following the report. Microsoft was involved in redeveloping

the department's core IT infrastructure, including desktop PCs, servers, the network and the email system. The majority of these systems were migrated to the Microsoft platform.

“The comprehensive review Microsoft Consulting Services carried out demonstrated that an off-the-shelf solution wouldn't cut it; we would need to build a custom application from scratch,” says Spina. “The relationships we needed to track around each child were very complex and that was fundamental to any reporting we did. Window dressing was useless if the core engine within the system didn't operate the way we needed it to.”

Microsoft Consulting Services recommended bringing together a team of top-notch developers, architects and testers in Microsoft's Sydney-based Solutions Development Centre to complete the project. The department agreed with this approach and in January 2005 engaged Microsoft to develop the new ICMS.

### Microsoft Solutions Development Centre Provides Ideal Build Environment

The Microsoft Solutions Development Centre is a dedicated software development facility designed to reduce the risk of large, high-profile and complex IT projects. It is located within Microsoft's secure Sydney headquarters. It gives customers access to Australia's leading Microsoft experts and support professionals, backed by an array of Microsoft infrastructure, tools and resources and powerful, dedicated computers. It can also draw on Microsoft's worldwide network of technical resources and development teams.

Microsoft began with an initial engagement at the Solutions Development Centre. The engagement combined the skills and resources of many other teams, such as

Microsoft partners and Microsoft Consulting Services teams in Brisbane and Sydney.

Over time, the engagement grew until a full-time team of 45 Microsoft staff and partners was working on the project. This team was complemented by approximately 100 government IT staff and sub contractors, engaged by Shared Information Solutions.

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#### **Partnering for Success**

Microsoft engaged three Gold Certified Partners, Avanade, Devtest and Readify, to conduct specific aspects of the development process. Each firm placed staff within the Solutions Development Centre, where they worked with Microsoft as a cohesive team.

“The Solutions Development Centre model enables Microsoft to bring a range of specialized skills together to provide a safe pair of hands and a predictable heart beat for a software development project,” says Weerasekera. “Having the developers, architects and testers in one controlled location that acts as a central hub gives us far greater productivity and quality, yet provides the flexibility to work with remote teams across different states.”

Avanade worked on developing the application, assisting with the design of the system architecture and migrating data from the old system to the new.

“It was a great opportunity to develop strong relationships with other Microsoft partners,”

says Dean Oelkers, Business Development Executive, Avanade. “The importance of this project for Queensland was a real driving force for everyone involved.”

Readify’s consultants and developers conducted an in-depth analysis of user requirements and created system functionality to meet those needs.

“Readify was engaged primarily for development, but we capitalized on our other skills and experience to help the project in areas such as user experience, security, databases and the communication stack,” says Andrew Parsons, Marketing Manager, Readify. “This project was one of those special moments in a developer’s career when you think, ‘Wow, this really means something’.”

Devtest brought its unique and stringent methodologies to automating and reporting on software testing. Each software build was automatically regression tested overnight, providing a way to manage and monitor quality.

“Most traditional software development projects do not start automated testing until the project is 60 to 80 percent built, which is far too late” says Sarah Richey, Managing Director, Devtest. “Doing daily tests in the Solutions Development Centre meant we immediately caught any issues and could rectify them before they affected other aspects of the project. This greatly increased the quality and speed of the build.

“The Solutions Development Centre creates a supportive team environment where partners leave their logos at the door and establish strong working relationships with each other.”

Another crucial factor to the success of the project was the way Microsoft worked with Shared Information Solutions and the

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department to keep all parties fully informed of progress during the development cycle.

“As we approached critical times such as releases, we would have weekly conference calls to discuss progress, address concerns and escalate any issues,” says Matt Easterby, Principal Engagement Manager, Microsoft Services. “It really was a partnership between organizations totally committed to the same goal.”

#### **Integrated Solution for Maximum Functionality**

The Solutions Development Centre realized the best approach would be to leverage the features built into Microsoft server products and technologies, then develop custom functionality on top of them.

“We focused on building an extensible underlying framework so the solution could later be expanded to other parts of their business,” explains Easterby.

The ICMS was built using Microsoft Visual Studio® .NET 2005, leveraging the Microsoft .NET development framework. It incorporated process automation tools and relied on resources from the Microsoft Developer Network (MSDN®).

The project team also used Microsoft Visual Studio 2005 Team Foundation Server to store, manage and control all source code in a single, centralized repository. This helped the large team of developers collaborate effectively and keep track of progress on each area of the build.

The system architecture is based on Windows Server® 2003 R2 and is protected from unwanted access or tampering by Microsoft Internet Security and Acceleration Server 2004. The integrated Active Directory® technology manages user information and permissions through Microsoft Authorization

Manager and also provides a central, comprehensive contact list of staff across offices statewide.

Data is stored in Microsoft SQL Server 2005 SP1. SQL Server Reporting Services provides advanced, real-time reporting. Microsoft Office InfoPath® 2003 provides the forms used in automated workflows, which are accessed through Windows® SharePoint® Services 2.0.

The development team used Microsoft BizTalk® Server 2006 to move data from the old system to the new; the migration involved transferring 1.7 million documents. It also used Microsoft Virtual Server 2005 R2 for development and testing and to provide an online training environment for users.

Shared Information Solutions staff now use a range of tools such as Microsoft Operations Manager 2005 SP1 and custom management packs to keep the system running smoothly.

Windows Server Update Services manages security patch delivery to the ICMS production server environment.

“Microsoft brought a huge wealth of IT experience, exceptional project management skills and in-depth technical expertise,” says Mulkerin. “They displayed above-and-beyond commitment throughout the project and really understood how critical the ICMS was for us.”

#### **Benefits**

The ICMS solution has transformed the Queensland Department of Child Safety’s operations. It has streamlined workflows, improved decision making, automated data entry and enabled Child Safety Officers to use a technology system that followed and supported their work processes. Developing

the project within the Solutions Development Centre brought its own raft of benefits, including access to the best-available technical resources, faster development times, reduced costs and a stronger, more reliable product.

#### **Sharing the Risk**

Once development was complete, Microsoft Consulting Services worked with Shared Information Solutions to deliver the project to 2,000 users across the department.

“When a customer is building a project of this scale and importance with Microsoft products, we should be prepared to take on some of the risk and responsibility involved in development,” says Gavin Douglas, Account Manager, Public Sector, Microsoft. “It is testament to the quality of projects coming out of the Solutions Development Centre that we can achieve this level of predictability in delivering complex projects.”

Working with Microsoft Consulting Services through the Solutions Development Centre gave Shared Information Solutions and the department the confidence that its critical solution was in good hands.

“The key issue for us was managing risk; we had to have a solution that would work,” says Spina. “We definitely felt that we had support from the highest levels of Microsoft and senior management was watching the project’s progress very closely.”

#### **On-Call Access to Specialist Skills**

Working with the Solutions Development Centre ensured the department could access the skills of the partner organizations and other Microsoft technical resources as required.

“If we had major issues to resolve, Microsoft would bring in the required skills from experts around the world,” says Spina.

“Microsoft’s disciplined approach to development resulted in a system which, since it went live in March 2007, has had no unscheduled outages. The application is reliable and robust and we’ve been very impressed with its performance.”

#### **Structured Decision Making with Timely, Accurate Information Access**

The ICMS gives Child Safety Officers and department management a complete, integrated view and history of each client, wherever they are in the state. This allows the department to track at-risk children, as well as carers and family members, as they move across Queensland. A sophisticated search engine uses techniques such as fuzzy logic and phonetic matching to make it easier to find clients.

A statewide system that is updated in real time means staff across Queensland have access to the most accurate, complete and up-to-date information and make more informed decisions. The consistency of decision making has also improved with all staff seeing the same information at the same time, presented in the same way.

“The ICMS gives us crucial information we didn’t have access to before such as identifying the known members of a household around a child at any point in time, which an off-the-shelf customer relationship management system can’t do,” says Spina. “This quality of information helps us address the care needs of a particular child based on the risk level of his or her current situation.”

#### **Enhanced Security**

The Active Directory technology in Windows Server 2003 ensures that only authorized Child Safety Officers can access sensitive client information.

Microsoft Internet Security and Acceleration Server 2004 provides an additional layer of

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security, protecting against external threats such as hackers. In addition, Windows Server Update Services ensures all ICMS production servers are running with the latest security updates.

“The information we have stored on the ICMS must be protected by the highest possible security and privacy – internally and externally,” says Mulkerin. “Microsoft technology gives us the peace of mind that this information is secure.”

#### **Improved Reporting**

The ICMS provides a suite of reports available to all users, removing the need for local spreadsheets and ad hoc reports. The system can also prepare specific operational and management reports using live data. The wide variety of reports enables the department to track factors such as the number of children in the system and their geographic location.

The advanced functionality of the system also enables more complex reports to be generated, such as providing a complete snapshot of a child’s history and the ability to track progress on cases to ensure required actions are carried out in a timely manner.

“The ICMS has really helped the department begin to understand the importance and power of the information we have and how we can use it,” says Mulkerin. “For example, we will now be able to conduct extensive research and analysis of child safety issues using the information we can extract from the ICMS.”

#### **Automated Workflows**

The ICMS’s automated, forms-based workflows were delivered through Office InfoPath 2003 and Windows SharePoint Services 2.0. These ensure the department consistently follows correct business

processes internally and when working with external agencies.

“Forms and automated workflows help guide staff through the process they need to follow and allow team leaders to track and monitor work,” says Mulkerin. “It ensures department staff follow correct business processes and comply with our legislative policy and practice requirements.”

#### **Boosted Credibility within Queensland Government**

The success of the ICMS project has lifted the Department of Child Safety’s profile across the state and helped the department prove it is serious about improving the way it provides child protection.

“The project raised our credibility within the Queensland Government, because we delivered something several larger agencies couldn’t achieve,” says Mulkerin. “This partnership between Microsoft and the Department of Child Safety really stands out as a success.”

#### **Increased Staff Satisfaction**

The ICMS won the widespread support of Child Safety Officers; approximately 90 percent of staff surveyed said they were satisfied with the new system. They were particularly complimentary of its ability to deliver instant access to the information they needed and the automated processes that complemented the way they worked.

“The ICMS gives me quick access to a holistic view of information from every Child Safety Service Centre about a client,” says Carly Deighton, Intake Officer at Woodridge Child Safety Service Centre, Queensland Department of Child Safety.

“The ICMS has taken child protection to another level – it has allowed the department to operate as a whole. This is vital, especially

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For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about Avanade products and services, call +61 7 3117 4520 or visit the Web site at: [www.avanade.com/au](http://www.avanade.com/au).

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For more information about Readify products and services, call +61 3 9600 2339 or 1300 666 274 (within Australia) or visit the Web site at: [www.readify.net](http://www.readify.net).

For more information about Queensland Department of Child Safety services, call +61 7 3224 8045 or visit the Web site at: [www.childsafety.qld.gov.au](http://www.childsafety.qld.gov.au)

because we have to deal with so many mobile families. I would love to be able to have the same level of access to child protection information across the country.”

## Microsoft Services

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For more information about Microsoft Services, go to: [www.microsoft.com/microsoftservices](http://www.microsoft.com/microsoftservices).

For more information about the Microsoft Australia Solutions Development Centre, go to: [www.microsoft.com.au/sdc](http://www.microsoft.com.au/sdc).

## Software and Services

- Products
  - Microsoft Visual Studio 2005
  - Microsoft Visual Studio 2005 Team Foundation Server
  - Microsoft Office InfoPath 2003
  - Windows SharePoint Services 2.0
  - Microsoft SQL Server 2005 SP1
  - SQL Server Reporting Services
  - Windows Server 2003 R2
  - Microsoft Virtual Server 2005 R2
  - Microsoft BizTalk Server 2006
  - Microsoft Internet Security and Acceleration Server 2004
  - Microsoft Authorization Manager
  - Windows Software Update Services
  - Microsoft Operations Manager 2005

- Services
  - Microsoft Consulting Services

- Technologies
  - Internet Information Services (IIS) 6.0
  - Microsoft ASP.NET
  - Microsoft .NET Framework 2.0
  - Microsoft Active Directory

## Hardware

- 2x Dell PowerEdge 6850 database servers
- 18x Dell PowerEdge 1855 blade servers
- 2x Dell PowerEdge 2850 ISA servers
- EMC CX3-20 storage area network

## Partners

- Avanade
- Devtest
- Readify