

Civica's Technology Outlook for Education Management 2018

Schools have been using Civica's student management systems in Australia for the last 40 years. Although technology has been used for quite some time to capture data such as attendance, pastoral care and academic information, what has changed in the last few years is the amount of information that is captured and the need to correlate and analyse seemingly unrelated data.

With rapid advancements in technologies taking place in the past few years including the ubiquity of internet access and cloud hosting, Civica felt it was time to go back to the drawing board in 2012. We commenced upon an ambitious project to develop a next-generation education solution – the Civica Education Suite (CES) that leverages latest technologies to offer scalable solutions for managing Australian schools.

Simon Jones, Managing Director of the Libraries and Education business, shares his view on current technologies that are driving CES now and into the future which are developed with a clear outcome in mind - a focus on teaching and learning over administration.

A technology platform that shifts the focus from administration to teaching and learning

Our solution is designed to save time, improve data integrity and transparency, and consolidate information for users so they can work more effectively and efficiently. The following key technologies form the platform of the Civica Education Suite.



Cloud & security

Cloud computing has gained global popularity across all industries and sectors in the past few years, and education is not an exception. Civica's focus on cloud has shifted to provide the right mix of public and private cloud services to ensure that our customers can accomplish all of their specific business goals. These services include:

- ▶ **Web-based system:** CES is completely web-based, and our users can access **all functionalities** through a web browser, from any location and at any time.
- ▶ **Private cloud:** Whilst the data we store in CES is important to drive the decision-making process, there is a massive amount of Personal Identifiable Data (PID), which must only be accessible by authorised people. Civica operates an enormous private cloud in Australia housing more than 8 million PID records within it. This option provides a secure, trusted option for Government organisations as they transition towards the public cloud.

► **Public cloud:** The public cloud offers significant benefits for education. The most notable area of interest to us is elasticity - "the degree to which a system is able to adapt to workload changes by provisioning and de-provisioning resources in an autonomic manner, such that at each point in time the available resources match the current demand as closely as possible". When you consider a school – at around 9am, every teacher will call attendance which could move a single school from 10 to 100 concurrent users, and a jurisdiction from 5,000 to 50,000 users. To facilitate this we need lots of additional processing power – but only for 20 minutes – something the public cloud was built for.

With all options, Civica specialists manage the technology on our customer's behalf in a Software-as-a-Service (SaaS) model.

With over 90% of data breaches occurring because of human error, we recognise that best practise needs to be regulated across the business as well as across the technology (data) centres which we use. To that end, our data centre are accredited to the ISO27001 standard, and our education business is accredited to both ISO9001 and ISO27001 - ensuring that all of our policies and processes are both documented and well managed.

This means that our customers can be confident on the security of their PID, and concentrate on using the technology to deliver the best educational experience to their community.



Mobile first

Consumer mobile apps are already the norm, and CES' focus on "mobile first" has been a key driver in our product development strategy. Delivering software via a desktop optimised web browser is no longer enough, as users more often than not are undertaking tasks on a device with a smaller screen i.e. phone, tablet, phablet because it is more appropriate. Examples include teachers taking the roll, parents/carers and students checking a timetable or even a department head raising a purchase requisition. As a result, CES offers a range of options for end users to access the system via a mobile device.



Enterprise education systems

As schools collect an ever increasing amount of data, we recognise the need to concentrate on data integrity and how we subsequently use it.

CES users need tools to ensure that they have created a unique person record for each individual within their community. They use Civica's central person technology to "de-duplicate" records and to schedule regular checks in the future. The advances in our database technology, mean that this record is unique across all schools within a Jurisdiction.

For our customers, this means that a student record can be made instantly available when a student transfers and enrolls at a new school. Not only does this help teachers understand the needs of each student more quickly, it also saves a lot of time with data entry. It also allows students to attend multiple schools at the same time – which is increasingly important as specialist schools offer courses which may not be available at the student's local school.

When designing CES, we took a person-centric approach as opposed to limiting the system to be only student centric. This means our customers can offer carers access to information through a single portal, regardless of how many children they care for, and which schools they attend.

Finally the back office teams at the central, or regional offices are able to view and report on data across a single or multiple schools. As an example, this means that a central or regional office could generate a consolidated general ledger report covering all of their schools just as easily as a report covering a single school.



Business analytics

Business analytics or intelligence (BI) is a trend that has emerged in recent years to have an enormous influence on how organisations work. With the vast richness of information collected in CES comes the power to revolutionise the way schools make decisions through data driven analysis and insights. Whilst recognising the data privacy concerns mentioned above, CES makes data and insights accessible in several ways.

- Pre-built standard reports that all schools (or Jurisdictions) need on a regular basis, e.g. DEEWAR or ATO reports
- Custom reports built to specific school requirements
- A BI tool providing users with interactive dashboards and tools to empower school and regional/jurisdiction users to interrogate and monitor their data quickly and easily

As CES continues to provide more and richer data, the possibilities to use it for insights and analytics to improve teaching and learning are as exciting as they are untapped. The ultimate aim is to ensure that educators and education leaders are using better data to make more informed decisions.



Interoperability APIs & common standards

Schools, jurisdictions and systemic groups are technologically complex organisations & there is an ever increasing number of software applications which can help deliver better outcomes for students. With an existence of numerous systems, integration is essential to avoid duplication of effort and to help maintain data integrity. Civica will never supply every software application to our customers, but through CES we do provide the single source of truth for student data.

The education industry has adopted the global Systems Interoperability Framework (SIF), with specific configurations for the US, the UK and Australia. This is a modern secure API, which allows you to send information through publishing agents, or to receive information through subscribing agents. The CES has both a publishing agent and subscribing agent to make life easier for our customers. This means that any SIF AU ready third party which has been approved by the customer, can send and receive data to and from their system using this common standard.



Choice

With every Australian school already using software to complete some or all of their school management processes, we understand that there is no one size fits all. From the outset in 2012, we adopted a modular approach to the CES – with each module using RESTful web services to securely transfer relevant information. This means that a customer can pick and choose the modules from CES to address their own specific challenge – i.e. School Administration and/or Teacher Tools and/or Finance and/or Billing and/or Learning Management and/or Library etc. and use the SIF AU agents to transfer information with other third party products that they already use.

Historically the first year of a new system required a large, upfront capital investment. With Civica's SaaS option, our customers can use operational expenditure to pay a set annual amount to cover the software, implementation, training, hosting, upgrades and support making it easier to plan and budget for this expenditure.

Summary

Civica's approach to software development is underpinned by our deep understanding of both technology and the specific industries in which we operate in. By working with jurisdictions, systemic groups and individual schools across the world, we are able to align our investment in technology to the aspirations and challenges which our customers face.

Most importantly, using the latest technologies we have been able to reduce administration to ensure that the focus is on teaching and learning. This provides the following key benefits for our customers:

- ▶ Improved intervention and support with easy access to personalised information and alerts for action
- ▶ Maximise teaching and learning opportunities with world class learning management and library modules
- ▶ Greater support for remote communities with virtual lessons, resources and content that can be delivered digitally within the platform.
- ▶ Improved reporting and BI tools to ensure investment is made in the right places and with the appropriate resources
- ▶ Opportunities for greater levels of collaboration for all stakeholders.

CES is the result of collaboration with our education partners, and the R&D we invest ensures that our solutions meet the changing needs of education communities. Our aim is to take schools on a digital transformation journey that leverages the latest advancements in technology without a major capital outlay, or an investment in technical skills to manage the solution.



Start the conversation and get in touch with Civica

If you would like to know more about Civica and our Education Services, please speak to your Civica Account Manager or contact us.