Transforming education for the digital age

Education System Digital Strategy

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Overview

• Education System Overview

• Digital Strategy Overview

• Student Centric Design Approach
  • Past Achievement
  • Future Aspiration

• Enabling Capabilities
  • School’s Cloud Programme
  • Student Information Sharing (SISI)
  • Identity & Access Management (IAM)
Education System summary

- 200,000 EC enrolments
- 776,000 school students
- 60,600 school leavers – 50% with NCEA L3
- 358,000 tertiary enrolments (2015)
- 95,500 international students
- 2% with >50% Māori medium
- 48,700 sit NCEA Level 1 English

Sources: EducationCounts.govt.nz (2014 and 2015 figures)
## Education System Providers

<table>
<thead>
<tr>
<th>Education providers</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education and care services</td>
<td>2,360</td>
</tr>
<tr>
<td>Kindergartens</td>
<td>650</td>
</tr>
<tr>
<td>Kohanga Reo</td>
<td>450</td>
</tr>
<tr>
<td>Playcentres</td>
<td>440</td>
</tr>
<tr>
<td>Home based</td>
<td>370</td>
</tr>
<tr>
<td>Hospital based</td>
<td>20</td>
</tr>
<tr>
<td>State schools</td>
<td>2,100</td>
</tr>
<tr>
<td>Integrated schools</td>
<td>330</td>
</tr>
<tr>
<td>Private schools</td>
<td>88</td>
</tr>
<tr>
<td>Partnership schools</td>
<td>9</td>
</tr>
<tr>
<td>Private Training Establishments</td>
<td>550</td>
</tr>
<tr>
<td>Trades Academies</td>
<td>23</td>
</tr>
<tr>
<td>Institutes of Technology and Polytechnics</td>
<td>18</td>
</tr>
<tr>
<td>Industry Training Organisations</td>
<td>11</td>
</tr>
<tr>
<td>Universities</td>
<td>8</td>
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<tr>
<td>Wānanga</td>
<td>3</td>
</tr>
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</table>
Education System – agencies & national bodies

**Public service departments**
- Education system stewardship
- Funding, property
- Support and resources
- Interventions
- School and ECE review
- Education practice

**Statutory bodies and NGOs**
- Education Council
- REAANZ
- Netsafe
- PPTA

**Crown entities**
- Connections between education and employment
- Marketing and developing export education
- Qualifications system
  - NCEA
- Provider quality assurance
- Funding tertiary education
- Distance education

**Schedule 4A companies**
- Paying teachers and school support staff
- Managed network for schools

**Associated agencies (some)**
- National Library of New Zealand
- Inland Revenue
- Immigration New Zealand
- Ministry of Social Development
- Ministry of Health
Key Digital Strategy Elements

- Outside-in approach
  - A system-wide view by function
  - Support government-wide citizen “life-events” model

- Re-orient system focus to be Student/Learner centric
  - Establish a lifelong student record they control
  - Encompass past achievement AND future aspirations

- Focus on free flows of data
  - Enable personalised and data-driven learning
  - Information to follow the student through the system

- Align agency investment and governance to strategy
Student data at the core

**Strengthening 21st Century Practice**

**Supporting High Quality Teaching**
- Digital Assessment Tools (E-Astle, PACT, NCEA Online)
- Integrated Digital Learning Environments

**Expectation**
- Tertiary Qualifications
- Occupation Outlook

**Leadership**
- Communities of Learning information dashboard
- SMS systems to support Communities of Learning
- Schools migration to cloud

**Involvement**
- Record of Achievement
- Website for parents
- Parents Portal and Dashboard
- Data Feeds to 3rd parties
Aligning the Education System

A diagram illustrating various components and processes related to aligning the education system, including audiences, channels, business capabilities, information management, platforms & integration, infrastructure, and foundations. The diagram outlines different aspects such as learning management, provider administration, education system administration, workforce management, corporate, and reporting & analytics.
Schools Cloud

"Moving spend out of the server room and into the classroom"

1. A standardised but not centralised approach
2. Initial focus on Microsoft and Google office productivity and commonly used software applications
3. Commercial outcome – “Software as a Service” only
4. Enable schools to exit **ALL** on-premise server infrastructure
5. Enable greater levels of inter-operability
6. Time Frame
   • 2016   Proof of Concept, Commercials and Change Mgmt
   • 2017   Pilot 50 – 100 schools
   • 2018   Full rollout commences
Schools Cloud

**Vision:** A brokered cloud ecosystem provides service quality, data integration and cost benefits

Schools Cloud Broker: services, tools, integration, guidance to provide a managed cloud ecosystem for NZ schools

- **Catalogue of services**
- **Services setup and removal**
- **Monitoring services usage, costs etc**
- **Negotiate pricing and terms with service providers**
- **Privacy and risk assurance assessments**
- **Data integration and analytics for Communities of Learning**
- **Identity and access management**

Schools

IT Systems Integrators

Cloud Service Providers

**Vision:** A brokered cloud ecosystem provides service quality, data integration and cost benefits

Schools Cloud
Future State - Student Information Sharing Initiative

Governance board with sector, SMS vendors and agency representatives defines data interoperability and standards and approve access to central repository.

Central repository would simplify and streamline Schools reporting to agencies e.g. Roll Returns, Attendance etc.

Student record creates, reads and updates.

Public facing System Interoperability service(s) provide new system interoperability and improve data quality during the transfer of information.

Principals use SMS for reporting.

Student information recorded in Schools SMS.

Central Repository

Student Info Sharing (SISI)
Teacher records student contact, pastoral, health, progress, attendance, and achievement information in their SMS.

**Student Information Sharing Initiative**

**System Interoperability Framework (SIF)**

- **Common Data Scheme**
  - `first_name : "simon"`
  - `surname : "smith"
  - `data_birth : 26382`

**SMS A**
- `fname : "simon"
  - sname : "smith"
  - dob : "24.03.72"

**SMS E**
- `name_1 : "simon"
  - name_2 : "smith"
  - date_birth : "mar-24-1972"

**Central Data Repository**

- All information in the central system is stored in common format.

**SIF service(s)** enable interoperability between SMS's and agencies and ensure data quality.

Transformation of data happens in real time.
1. Establish an individual's identity reliably at point of first contact
   • *eg: at time of enrolment or employment*

2. Match to government’s authoritative identity records & maintain this linkage to survive underlying changes in identity
   • *eg: registers held by DIA*

3. Enable all users to only need a single logon credential in order to access systems and services they require
   • *ie: use your primary logon to access everything*

4. Leverage existing IAM systems to the maximum extent possible
   • *eg: Google, Microsoft, RealMe, Tahi*

5. Take an active risk management approach
   • *eg: introduction of biometrics when needed*
IAM Approach

Logon Credentials

Roles & Relationships

Identity Data

shared platform with DIA
Lifting aspiration and educational achievement for every New Zealander