Locale Status Presentations

New Zealand

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NZ MINISTRY OF EDUCATION
NZ Education Sector Overview

198,887 Learners
28,230 Teachers
5172 ECE Services & Playgroups
59,500 from ECE providers
2,500 without ECE
62,000 new entrants per year

2529 Schools
Structural Changes 53,229 per Year

587,960 Learners
55,020 Teachers

59,500 from ECE providers

Concurrent Enrolments 50,000 per Year

39,065 direct from school per Year

415,870 Learners
148,405 Industry Trainees

55,020 direct from school per Year

180 Communities of Learning | Kāhui Ako

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The case for change

Māori are 22% less likely to achieve NCEA level 2 than other students.

By 2043, 39% of NZ’s population will live in Auckland.

2,500 more teaching spaces will be needed by 2020.

Nearly half of all eligible schools still need to be connected to Kāhui Ako.

In 2015, 24% of Māori school leavers had no formal qualification.

High performing but significant disparities.

Information is incomplete and inaccessible.

Decision making is decentralised and inconsistent.

Some good practice – but isolated and not scalable.

Significant reforms underway need enabling technology.

System settings are provider-centric not learner-centric.

Demographic changes challenge current delivery models.

It costs $0.75 billion each year to maintain and upgrade the school property portfolio.

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The Big Problem

- EVERYTHING IS DECENTRALISED
- LEARNERS MOVE BETWEEN PROVIDERS
- LEARNER RECORDS GET LEFT BEHIND
- TRANSIENT LEARNERS ARE HIT TWICE
Learners move between schools

- 59,500/yr arrive at school from ECE
- 2,500/yr arrive at school without any ECE
- 160,000/yr change school
  - ~53,000 – structural changes
  - ~108,000 – ad hoc
- 50,000/yr are co-enrolled at multiple providers
- 40,000/yr direct from School to Tertiary
Learner records get left behind

- 60,000 new entrants – no records from ECE
- 53,000 move to next school – minimal records
- 108,000 change schools – ad hoc records at best
- 50,000 co-enrolment – ad hoc (or no) records
Transient Learners

Learner Transience (2017)

- ~3,700 move twice or more per year
  - ~3,250 - moved twice
  - ~370 – moved 3 times
  - ~80 – moved 4 or more times
The Solution

- NATIONAL LEARNER REPOSITORY & DATA EXCHANGE
- TE RITO
- A LITTLE PROBLEM
- EARLY STAGE ROLLOUTS
Learners can access, analyse and manage their own information throughout their life-long learning journey.

COL can access a unified view of student data across participating schools to improve decision-making and resource allocation across the COL.

Administration is streamlined for Schools, Early Childhood and Tertiary providers. The reporting burden is reduced and when a new student arrives they can access their data from SISI.

Parents/Whānau/Care-Givers can view their learner’s progress information anytime they want, whether or not the school SMS offers a parent portal.

SMSs and other software vendors can use the SISI APIs to increase the value of their products and simplify data exchanges with other vendors.

Education Agencies can pull reporting data directly from SISI any time they need it rather than rely on historical reports from providers. Agency access to SISI data is subject to strong governance.

CoOL can access and update student data from SISI.

3rd Parties Providing Education Innovation, Data Analytics, Research, System Integrators and Standards.
Introducing Te Rito

If the heart of harakeke was removed, where will the bellbird sing?
If I was asked, what was the most important thing in the world?
I would be compelled to reply, It is people, it is people, it is people.
Introducing Te Rito

The proverb reflects the Māori reference to the harakeke plant as a whānau (family group).

The outer leaves are the tīpuna (ancestors); the inner leaves are the mātua (parents); the most inner leaf is the rito or pēpē (baby).

When taking leaves for weaving, only the tīpuna are cut as the mātua are left to protect te rito.
Introducing Te Rito

With the purpose of enhancing student information sharing for the wellbeing and educational success of the child, the name Te Rito, in the first instance, refers to the child being at the very core of the project, requiring constant care, support, and consideration.

In the second instance, the name Te Rito refers to the national repository in which all of the child’s information is stored, requiring input and protection from the vendor, schools, the Ministry and other key stakeholders.
The Little Problem

1 On Premises SMS
(376 Schools
260,000 Learners)

9 x Cloud SMS
(2,100 Schools
520,000 Learners)

Data is integrated using SIF.

What's SIF???

National Learner Repository and Data Exchange

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Focus is getting the student assessment and wellbeing data into the TeRito platform.

Data is integrated using functionality native to the TeRito platform.

Learners

Four Student Management Systems

Business Intelligence Tool

Kāhui Ako – Community of Learning

12 Schools

National Learner Repository and Data Exchange

We have a mix of high schools, primary schools and area schools participating, that cover both the NZ Curriculum and Te Marautanga o Aotearoa.
ESR – Student Management Systems

Data is integrated using SIF.
SIF Technology to be Used

- **SIF Direct Architecture**
  - REST API endpoints
  - JSON Payloads
  - Asynchronous data updates in direct architecture:
    - WebSockets over Pub/Sub & Queues
    - Query for ‘changes since’

- **NZ Data Model** – based on SIF AU v3.4
SIF NZ Data Model - Assessment

SIF Data Objects
- Adopted as is from SIF AU Data Model
- New for SIF NZ Data Model
- Altered from SIF AU Data Model
This version:
http://specification.sifassociation.org/Implementation/NZ/3.0/index.html

Previous version:
http://specification.sifassociation.org/Implementation/NZ/3.0/

Latest version:
http://specification.sifassociation.org/Implementation/NZ/

XML Schemas
- SIF_Message (single file, non-annotated) (ZIP archive)
- SIF_Message (single file, annotated) (ZIP archive)
- SIF_Message (includes, non-annotated) (ZIP archive)
- SIF_Message (includes, annotated) (ZIP archive)
- DataModel (single file, non-annotated) (ZIP archive)
- DataModel (single file, annotated) (ZIP archive)
- DataModel (includes, non-annotated) (ZIP archive)
- DataModel (includes, annotated) (ZIP archive)

Note: SIF.Message schemas define every data object element as optional per SIF's Publish/Subscibe and SIF Req

JSON Schemas
- JSON Schema definition (json)(yaml)
- Open API definition (json)(yaml)

Please refer to the errata for this document, which may include some normative corrections.
4 Domain Map

This section presents the SIF Data Objects in each of the SIF Data Model domains:

- Enrolment
- Provider
- Attendance
- Education Organisation
- Hauora / Wellbeing
- Timetable
- Student & Whānau
- Aromatawat / Assessment

4.1 Domain: Provider

The Provider domain describes education provider entities, the relationships between them, and the Staff that work at them.

**Provider**

A recognised provider of education services in the New Zealand education system. Providers may operate in the Early Childhood Education Sector. A generic organisation that operates within the education sector, but doesn’t provide education services. E.g., Communities of Practice.

**Provider Relationship**

Records a recognised relationship between two education Providers. The two providers are referred to as the Source Provider and the Target Provider.
```json
{
    "Provider":{
        "RefId":"D3E34B35-9D75-101A-8C3D-00AA001A1652",
        "LocalId":"01011234",
        "Authority":"1",
        "Organisation":{
            "AddressList":{
                "Address":{
                    "Type":"2",
                    "Role":"2",
                    "Street":{
                        "Line1":"1175 Lake Ferry Rd"
                    },
                    "Suburb":"RD 1",
                    "City":"Martinborough"
                }
            }
        }
    }
}
```
SIF NZ Data Model – Publication

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THANK YOU