

A single view of the customer- Education

The Problem

The client, a long-established Education provider, had multiple sources of student data that required streamlining to be reported upon. They had varying legacy systems running alongside recently introduced data management facilities, all of which required transforming into a single source of data. This, in conjunction with the need to be able to accurately compare their data with their peers, the broader education system, and then publish this data to the boards and parents alike, meant that the insights required to be created, had to be simple, accurate and effective in portraying the message.

The Solution

BITQ were engaged to delve deep into the legacy systems and understand what was required for the future of the education sector, whilst effectively integrating the recently introduced programs.

BITQ also suggested that the data being provided, required to be more intuitive. For example, a traffic light system that gave a high-level view of the data compared to the local or national picture, did not dive deep enough to be useful. BITQ created a more in-depth analysis of the data, to ensure that when a red light was raised, it had merit and had been truly compared to other sources of data, thus, the necessary steps could be implemented in order to affect the changes required.

The Outcome

The client ultimately, moved from a cumbersome, time consuming, manually intensive set of reports, to a dashboard based, live reporting tool that enabled them to accurately report to board members, education facilitators and parents alike. The systems created, allowed for an accurate and detailed overview of all sources of data, managed centrally, for all to use as their roles within the business required.

Year 3 NAPLAN Mean Compared to State & National

Domain	Mean Score	Diff. Mean Score to State	% Diff. to State	State Mean	Diff. to National Mean	% Diff. to National	National Mean
Reading	415.7	-14.0	-3.3%	429.7	-18.1	-4.2%	433.8
Writing	391.2	-6.5	-1.6%	397.7	-16.0	-3.9%	407.2
Spelling	391.5	-19.4	-4.7%	410.9	-26.3	-6.3%	417.8
Grammar & Punctuation	435.0	5.3	1.2%	429.7	3.3	0.8%	431.7
Numeracy	386.3	-12.9	-3.2%	399.2	-21.4	-5.3%	407.7

Year 5 NAPLAN Mean Compared to State & National

Domain	Mean Score	Diff. Mean Score to State	% Diff. to State	State Mean	Diff. to National Mean	% Diff. to National	National Mean
Reading	507.1	1.0	0.2%	506.1	-1.9	-0.4%	509.0
Writing	470.9	17.0	3.8%	453.9	6.3	1.4%	464.6
Spelling	498.6	1.9	0.4%	496.7	-3.9	-0.8%	502.5
Grammar & Punctuation	517.2	16.1	3.2%	501.1	13.6	2.7%	503.6
Numeracy	477.5	-10.1	-2.1%	487.6	-16.7	-3.4%	494.2

Year 7 NAPLAN Mean Compared to State & National

Domain	Mean Score	Diff. Mean Score to State	% Diff. to State	State Mean	Diff. to National Mean	% Diff. to National	National Mean
Reading	525.6	-11.9	-2.2%	537.5	-15.9	-2.9%	541.5
Writing	491.5	-2.0	-0.4%	493.5	-13.8	-2.7%	505.3
Spelling	538.8	-3.1	-0.6%	541.9	-6.4	-1.2%	545.2
Grammar & Punctuation	539.4	-2.8	-0.5%	542.2	-4.5	-0.8%	543.9
Numeracy	538.7	-3.0	-0.6%	541.7	-9.5	-1.7%	548.2

Year 9 NAPLAN Mean Compared to State & National

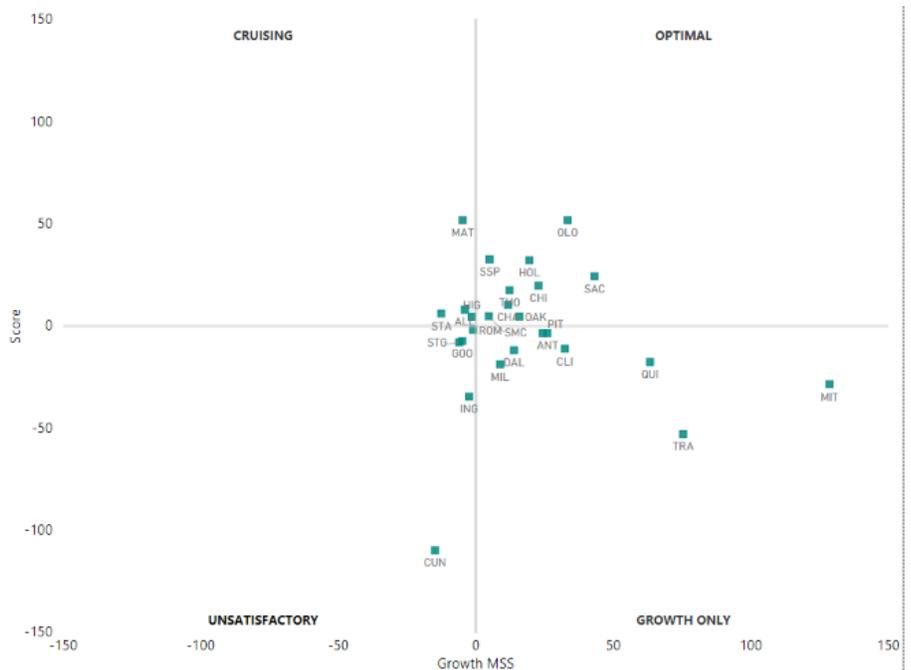
Domain	Mean Score	Diff. Mean Score to State	% Diff. to State	State Mean	Diff. to National Mean	% Diff. to National	National Mean
Reading	569.3	-8.5	-1.5%	577.8	-14.5	-2.5%	592.3
Writing	522.4	-4.6	-0.9%	527.0	-19.9	-3.7%	546.9
Spelling	568.7	-11.4	-2.0%	580.1	-14.6	-2.5%	583.3
Grammar & Punctuation	574.3	-5.3	-0.9%	579.6	-5.8	-1.0%	580.1
Numeracy	583.1	-5.3	-0.9%	588.4	-12.5	-2.1%	595.6

Assessment Area: Reading, Writing, Spelling, Grammar & Punctuation, Numeracy

Year: 2016, 2017, 2018, 2019

Year Level: 5, 9

Location & School Name	Short Code	Year Result	Year Result - 2
ALLORA - St Patrick's School	ALL	517.0	437.6
CHARLEVILLE - St Mary's School	CHA	519.3	424.2
CHINCHILLA - St Joseph's School	CHI	528.8	422.6
CLIFTON - St Francis de Sales School	CLI	497.8	382.0
CUNNAMULLA - Sacred Heart Primary School	CUN	399.1	330.5
DALBY - Our Lady of the Southern Cross College	DAL	497.1	399.9
GOONDIWINDI - St Mary's School	GOO	501.6	423.1
HIGHFIELDS - Mary MacKillop Catholic School	HIG	513.4	431.5
INGLEWOOD - St Maria Goretti School	ING	474.4	393.5
MILLMERRAN - St Joseph's School	MIL	490.2	398.0
MITCHELL - St Patrick's Primary School	MIT	480.4	268.4
OAKKEY - St Monica's School	OAK	513.5	414.4





Technical Details

BITQ analysed the source data to identify entity relationships. With the entity relationships mapped, BITQ then designed and built a data vault model data warehouse. The data vault model provides an efficient storage layer that enables fast data loading. It is also extremely agile, allowing business areas to be added when available / ready.

BITQ built the data warehouse and all of the ETL routines required to support it, and then designed a presentation layer using a Kimball style dimensional model optimised for reporting.

BITQ developed a deduplication process to enable our client to access a single view of parent and family details across the two distinct business unit datasets. This enabled the client to develop a consolidated approach to communications and invoicing.

BITQ developed various reports for the client, including Debtors reports, to allow the identification and management of family accounts, student placemat reporting for student and class performance overviews, and school shop sales & stock levels, amongst others.