

Financial budgeting

Education management company

Created a top-down P&L budget and automated the process by setting up connections between raw data, budget template and ERP system

Education management company needs to assess its budget allocation

Picture this...

You're looking to improve granularity of the annual budget to enhance the accuracy of revenue and payroll forecasts. Currently, the struggle is to effectively track, aggregate, and forecast key operational and financial metrics, resulting in substantial deviations from the budget targets. The inputs to the budget are compiled and entered manually, leading to inefficiency and lack of flexibility for dynamic updates.

You turn to Accordion.

We partner with your team to create a top-down P&L budget for the client and automate this process by setting up connections between raw data, budget template and ERP system, including:

- 1) Developing a budget model starting at classroom level which rolls up to school and department level to forecast revenue and payroll expense
- 2) Creating a dynamic algorithm to optimally allocate student FTEs into classrooms under constraints such as operating capacity, student to teacher ratio, child-trigger ratio (min. no. of students that can afford a teacher), increasing the accuracy in estimation of revenue and payroll expenses
- 3) Equipping the budget with end-to-end automation from various source files (from departments) to CSV mapping files to feed the data into NetSuite
- 4) Building a macro to generate enhanced outputs with financial and statistical metrics, year on year comparisons and variance visualization for leadership consumption

Your value is enhanced.

- You have a new budget and FTE allocation algorithm with enhanced accuracy of forecasting revenue and payroll expenses by efficiently allocating students into classrooms and forecasting all the major line items at a classroom level and then rolling it up to the school and group level
- You have optimal allocation of students into classrooms that saved \$3.5mn in annual payroll costs cutting down excess staffing and improving gross margin by 100bps
- You have more visibility into classroom-level occupancy, school-level operating metrics and variance analysis (Actuals vs Budget) to highlight corrective actions required to improve the business performance

KEY RESULT

- Optimal allocation helped in saving \$3.5mn
- Improved gross margin by 100bps

VALUE LEVERS PULLED

- Roll-up budget model
- FTE allocation algorithm
- Macro based automation

Annual budget for an education management company

Situation

- The client was struggling to effectively track, aggregate, and forecast key operational and financial metrics, resulting in substantial deviations from the school budget targets.
- Their legacy budget had drivers at a very high-level (department/school level) without getting into granular modelling. The client also lacked processes/methods to accurately forecast payroll costs (function of enrolments), which is a very big expense to the business.
- The inputs to the budget were compiled and entered manually, leading to inefficiency and lack of flexibility for dynamic updates.
- Partnered with the client to improve granularity of the annual budget to enhance the accuracy of revenue and payroll forecasts.

Accordion Value Add

- Developed a budget model starting at classroom level which rolls up to school and department level to forecast revenue and payroll expense.
- Created a dynamic algorithm to optimally allocate student FTEs into classrooms under constraints such as operating capacity, student to teacher ratio, child-trigger ratio (min. no. of students that can afford a teacher), increasing the accuracy in estimation of revenue and payroll expenses.
- Equipped the budget with end-to-end automation from various source files (from departments) to CSV mapping files to feed the data into NetSuite.
- Built a Macro to generate enhanced school level Outputs with Financial and Statistical metrics, year on year comparisons and variance visualization for school leaders' consumption.

Impact

- The new budget and FTE allocation algorithm enhanced the accuracy of forecasting revenue and payroll expenses by efficiently allocating students into classrooms and forecasting all the major line items at a classroom level and then rolling it up to the school and group level.
- The optimal allocation of students into classrooms helped the client to save \$3.5mn in annual payroll costs cutting down excess staffing, improving Gross Margin by 100bps.
- Provided more visibility into classroom-level occupancy, school-level operating metrics and variance analysis (Actuals vs Budget) to highlight corrective actions required to improve the business performance.

Methodology/Approach

01



Utilized the budgeted Enrollment FTEs and classroom information to arrive at an **optimum classroom level FTE allocation**. Optimization was built in Excel under operating constraints such as classroom capacity, student to teacher ratio and child-trigger ratio. FTEs derived from this algorithm acts as the **final FTE projection** to be fed into the budget template at a classroom level.

02



Built a school level and group level **Assumptions** tab to allow user-driven inputs as well as calculated metrics from source data, such as **FTE, Revenue Per Student, Wage Rates, Benefits** etc.. Connected the Assumptions tab to intermediate calculations such as **Staffing Model (for payroll), Pricing Model (for revenue)**, etc..

03



Rolling up the classroom estimates, built **Revenue, Payroll and OpEx** sections by school across months. Utilized these numbers to arrive at **Consolidated School Level** and **Consolidated Group Level P&L Budget**, summarizing by seasonality (Summers and Non-Summer).

04



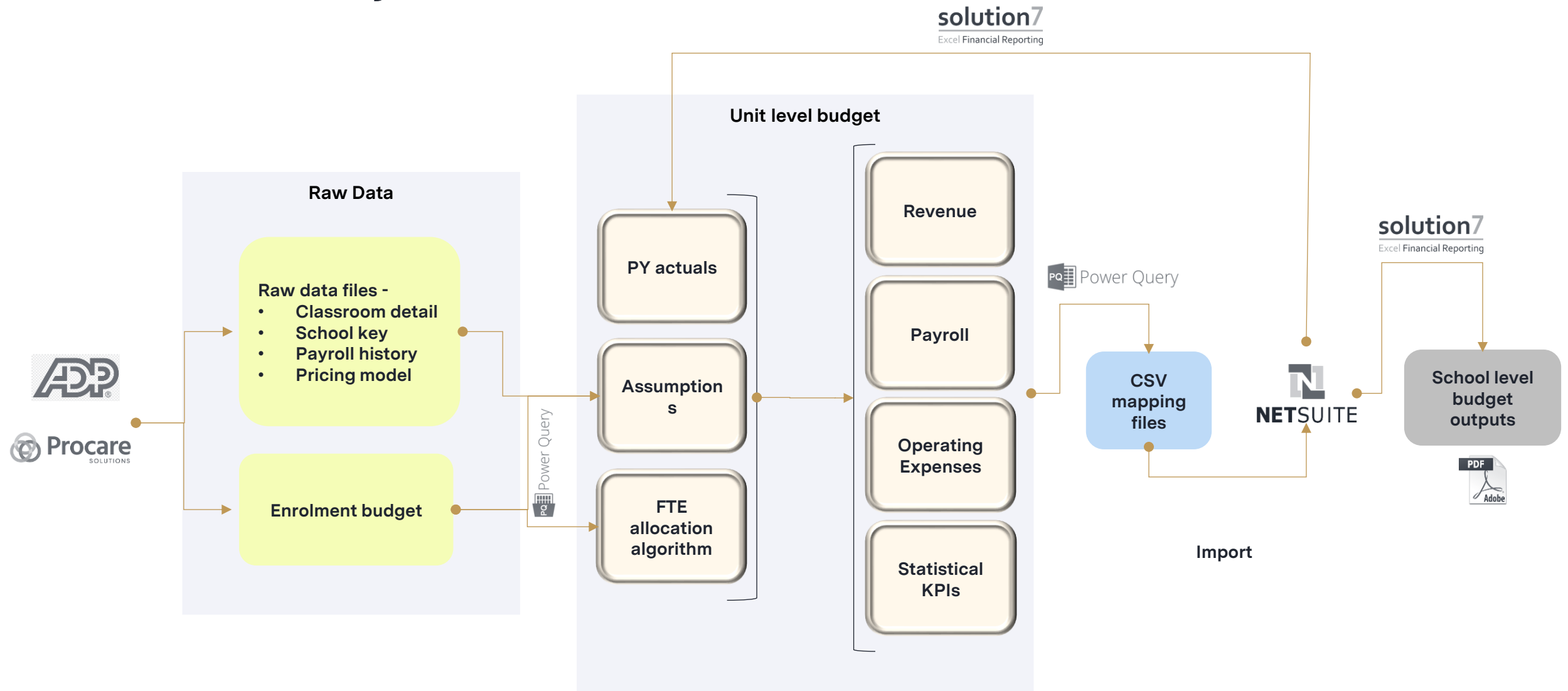
Used Power Query to **automate the import of raw data** from source files. Built macros to **generate CSV files** containing financial (Gross Tuition, Labor Expenses, Admin Expenses, etc.) and statistical (FTE, RPS, Teacher Hours, etc.) metrics to be imported to NetSuite.

05



Enhanced School Level output packages by reporting financial and statistical budget metrics by months, including chart for comparison with past years of KPIs. Built a macro to provide a lock functionality in the file, enabling the corporate team to have control over the budget numbers.

Data flow from systems



Consolidated – Group level budget

Full Year Budget

Actuals till Current
Month
+
Budget till EOFY

Consolidated P&L (\$'000)						
Items	FY23	FY24	FY25B	FY25E	FY25B vs FY24 %	FY25E vs FY25B%
Gross Tuition	424,524	480,149	410,298	355,318	(14.5%)	(13.4%)
Discounts	(25,076)	(26,455)	(25,512)	(22,604)	(3.6%)	(11.4%)
Net Tuition	399,448	453,694	384,786	332,714	(15.2%)	(13.5%)
Registration Fees	4,577	5,914	8,770	8,471	48.3%	(3.4%)
Miscellaneous Income	11,222	17,811	20,241	21,678	13.6%	7.1%
Total Revenue	415,246	477,418	413,796	362,864	(13.3%)	(12.3%)
Direct Labor	140,927	166,789	149,049	137,423	(10.6%)	(7.8%)
Direct Other	4,993	4,570	8,731	7,910	91.1%	(9.4%)
Indirect Labor	29,246	27,180	39,025	33,757	43.6%	(13.5%)
Bonus	2,795	1,767	2,165	1,970	22.5%	(9.0%)
Labor Expenses	177,961	200,306	198,970	181,060	(0.7%)	(9.0%)
Benefits	23,148	25,211	23,058	19,484	(8.5%)	(15.5%)
Payroll	201,108	225,517	222,028	200,544	(1.5%)	(9.7%)
Gross Margin	214,138	251,901	191,768	162,319	(23.9%)	(15.4%)
Gross Margin (%)	51.6%	52.8%	46.3%	44.7%	(6.4%)	(1.6%)
Total OpEx	136,725	166,852	167,896	141,033	0.6%	(16.0%)
EBITDA	77,412	85,050	23,872	21,287	(71.9%)	(10.8%)
EBITDA Margin (%)	18.6%	17.8%	5.8%	5.9%	(12.0%)	0.1%

Consolidated school level outputs

Outlier Identifier >>						Above	Below
Anchor >>						15.0%	(10.0%)
Seasonality		School Year					
Gross Tuition >>							
School	Organic/Acquired	FY23	FY24	FY25B	FY25E	FY25B vs FY24	FY25E vs FY25B
School - 1	Organic	5,325,987	4,207,379	4,707,369	4,198,973	11.9%	(10.8%)
School - 2	Organic	4,233,232	4,433,838	4,287,236	4,660,225	(3.3%)	8.7%
School - 3	Organic	8,549,650	9,064,391	8,972,732	9,654,660	(1.0%)	7.6%
School - 4	Organic	2,184,188	1,692,752	1,893,038	1,440,602	11.8%	(23.9%)
School - 5	Organic	5,962,362	5,887,992	8,189,124	7,239,185	39.1%	(11.6%)

Optionality to identify outliers

Outlier Identifier >>						Above	Below
Anchor >>						15.0%	(10.0%)
Seasonality		School Year					
Labor Expenses							
School	Organic/Acquired	FY23	FY24	FY25B	FY25E	FY25B vs FY24	FY25E vs FY25B
School - 35	Organic	1,769,962	1,950,702	2,160,815	1,756,742	10.8%	(18.7%)
School - 36	Organic	1,054,877	900,127	758,315	504,280	(15.8%)	(33.5%)
School - 37	Organic	1,197,256	1,126,518	1,294,759	1,421,645	14.9%	9.8%
School - 38	Organic	1,699,808	1,742,321	1,841,689	1,388,633	5.7%	(24.6%)
School - 39	Organic	2,248,170	2,125,099	2,461,719	2,470,496	15.8%	0.4%

Benchmarking Current Year against Budget

FTE – Optimum allocation to classrooms

Aggregate Unit Level Metrics

Capacity	FTEs Expected	Final FTEs	Discarded	Discard (%)	Utilization (%)
21,071	12,956	12,771	185	1.4%	60.6%

Total Student FTEs discarded in the allocation algorithm

Code	Age Group	Classroom	Operating Capacity	Operating Ratio	Month	FTE Expected	Final FTE	Discard	Discard (%)	Utilization (%)
School - 82	Infant	Guppies/ Infants	12	4	Sep-24	12	12	0	0.0%	100.0%
School - 82	Preschool	Jelly Fish/ 3's	25	15	Sep-24	16	15	0	0.0%	60.0%
School - 82	Preschool	Stingrays/4's	18	11	Sep-24	16	0	1	6.3%	0.0%
School - 82	Toddler	Lobsters/ 2's/3's	24	11	Sep-24	18	18	0	0.0%	75.0%
School - 82	Toddler	Starfish/ Toddlers	18	6	Sep-24	18	0	0	0.0%	0.0%
School - 82	Twos	Sea Turtles/ 2's	23	11	Sep-24	23	22	1	4.3%	95.7%
School - 82	VPK	Manatees VPK Wrap	25	11	Sep-24	25	25	0	0.0%	100.0%
School - 27	Infant	INF-RM4	16	4	Sep-24	6	4	2	33.3%	25.0%
School - 27	Primary	PRI-CH2	30	10	Sep-24	60	30	0	0.0%	100.0%
School - 27	Primary	PRI-CH5	30	10	Sep-24	60	30	0	0.0%	100.0%
School - 27	Toddler	TOD-RM2	21	7	Sep-24	14	14	0	0.0%	66.7%
School - 27	Toddler	TOD-RM6	21	7	Sep-24	14	0	0	0.0%	0.0%
School - 28	Infant	INF-RM1	16	4	Sep-24	16	16	0	0.0%	100.0%
School - 28	Primary	PRI-CH5	30	10	Sep-24	102	30	0	0.0%	100.0%
School - 28	Primary	PRI-CH6	30	10	Sep-24	102	30	0	0.0%	100.0%
School - 28	Primary	PRI-CH7	30	10	Sep-24	102	30	0	0.0%	100.0%
School - 28	Primary	PRI-CH8	30	10	Sep-24	102	10	2	2.0%	33.3%
School - 28	Toddler	TOD-RM4	28	7	Sep-24	21	21	0	0.0%	75.0%
School - 28	Toddler	TOD-RM3	28	7	Sep-24	21	0	0	0.0%	0.0%

Final FTE allocation

Classroom Level Allocation