



From Spreadsheet to System

Developing a robust data infrastructure

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Data Strategy for Systems Change - By All Means Spring Convening - May 18, 2023

Death by a thousand data cuts

2016

- The Big Spreadsheet
- Manual data entry
- Hard coded values
- Shaded notes/reminders
- Manual paste into MS Word

86.7923076923077%

Copy/Paste into MS Word

		86.7923076923077%									
		Enroll in Post-Secondary									
		Rates					Population Size				
Year	Category	2013*	2014*	2015	2013*	2014*	2015	2013*	2014*	2015	2013*
2014-15	Low-Income	66%	64%	67%	455	428	416	18%			2013 (Class of 2007)*
	English Learners	55%	64%	70%	156	155	223	22%			
	African American	80%	74%	69%	64	65	70	19%			
	Asian	87%	88%	84%	130	135	128	59%			
	Hispanic/Latino	69%	67%	68%	421	434	450	27%			
	White	83%	81%	80%	1289	1291	1,213	57%			
	All	79%	77%	77%	1999	2009	1,928	52%			
	Low-Income	66%	64%	66%	152	151	185	18%			
	English Learners	65%	66%	39%	110	111	18	22%			
	African American	87%	83%	39%	23	23	18	6%			
	Asian	79%	82%	81%	33	34	32	57%			
	Hispanic/Latino	67%	64%	65%	132	133	152	25%			
	White	84%	78%	79%	328	342	349	51%			
	All	79%	75%	74%	566	572	589	46%			
	Low-Income	66%	62%	71%	215	214	174	*			
	English Learners	25%	60%	73%	36	40	205	*			

Ready Proficiently by 3rd Grade
 Thirdgraders meeting or exceeding Common Core Standards

Master Critical Math Concepts by 8th Grade
 Eight graders meeting or exceeding Common Core State

Graduate High School Ready for College & Career
 Complete course requirements for CA public universities

Enroll in College or Post-Secondary Programs
 Enrolled in college or post-secondary program during the fall after graduating high school

Complete College or Post-Secondary Program
 High school graduates who completed a college or post-secondary program within 6 years

Cradle to Career Milestones Over Time
 Marin County

	Economic Status	2012-2013	2013-2014	2014-2015	2015-2016	Change Since Baseline	2016-2017 Goal	2017-2018 Goal	2018-2019 Goal	2019-2020 Goal	State Average 2015-2016
Overall	77%	76%	76%	Not Available	-1% pt	80%	80%	100%	61%		
Low-Income	NA	NA	NA	NA	-	-	-	100%	NA		
Overall	Difference State Assessment	60%	62%	(2,626)	(2,586)	+2% pt*	63%	68%	100%	43%	(457,539)
Low-Income	Difference State Assessment	24%	29%	(746)	(749)	+5% pt*	34%	40%	100%	39%	(291,469)
Overall	Difference State Assessment	54%	59%	(2,346)	(2,465)	+5% pt*	62%	65%	100%	36%	(451,671)
Low-Income	Difference State Assessment	20%	26%	(626)	(687)	+6% pt*	31%	38%	100%	29%	(276,755)
Overall	41%	43%	*	+	69%	70%	100%	43%	(426,950)		
Low-Income	31%	27%	+	Not yet available	+	42%	47%	100%	34%	(217,931)	
Overall	73%	77%	77%	(1,999)	(2,009)	-2% pt	78%	80%	80%	-	
Low-Income	61%	66%	64%	(1,509)	(455)	(428)	(416)	-2% pt	72%	69%	80%
Overall	52%	51%	51%	(1,909)	(1,932)	(2,004)	Not yet available	-1% pt	55%	60%	80%
Low-Income	18%	21%	19%	(161)	(193)	(297)	Not yet available	-1% pt	27%	39%	80%

District	Historographic Breakdown										2014-15														
	White					Hispanic/Latino					Low-Income					English Learners									
Year	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
Marin County	24%	25%	24%	24%	24%	16%	16%	16%	16%	16%	33%	33%	33%	33%	33%	18%	18%	18%	18%	18%	64%	64%	64%	64%	64%
Novato Unified School District	27%	27%	27%	27%	27%	17%	17%	17%	17%	17%	33%	33%	33%	33%	33%	18%	18%	18%	18%	18%	64%	64%	64%	64%	64%
San Rafael City Schools	20%	20%	20%	20%	20%	15%	15%	15%	15%	15%	30%	30%	30%	30%	30%	18%	18%	18%	18%	18%	64%	64%	64%	64%	64%
Tam Unified School District	25%	25%	25%	25%	25%	16%	16%	16%	16%	16%	32%	32%	32%	32%	32%	18%	18%	18%	18%	18%	64%	64%	64%	64%	64%

Spreadsheets vs. Databases

Spreadsheets

PROS

- Everybody's using them
- Easy to format/produce small reports
- Great for quick analyses

CONS

- Normally requires manual data entry
- Limited ability to connect to other data
- Small datasets (record/type limitations)

Databases

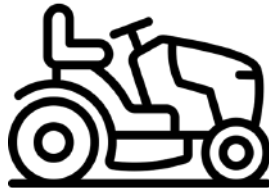
PROS

- Reduced data entry = reduced errors
- Connect/relate easily to other data/systems
- Store/process large datasets (including files)

CONS

- Might need an expert (\$\$)
- Back-end that needs front -end visualization(s)
- More a lawnmower than weed wacker

Which tool should I use?



Spreadsheets

MS Excel, Google Sheets, Apple Numbers

Small Databases

Airtable

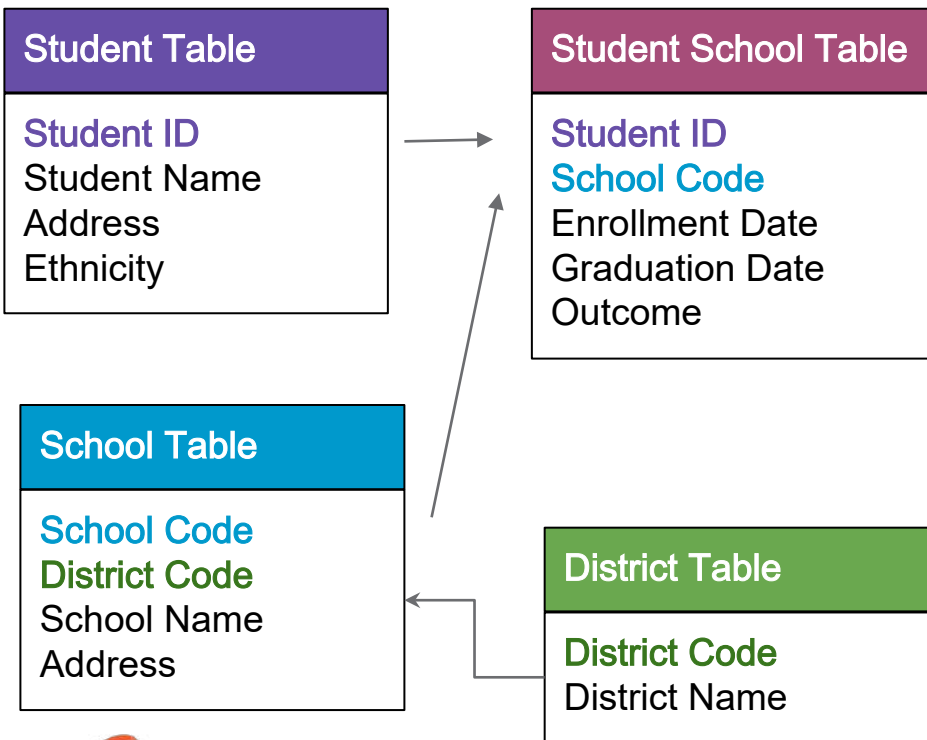
Intermediate Databases

MS Access, MySQL

Large Databases

Oracle, SQL Server, Amazon, BigQuery

How to stop worrying and learn to love databases



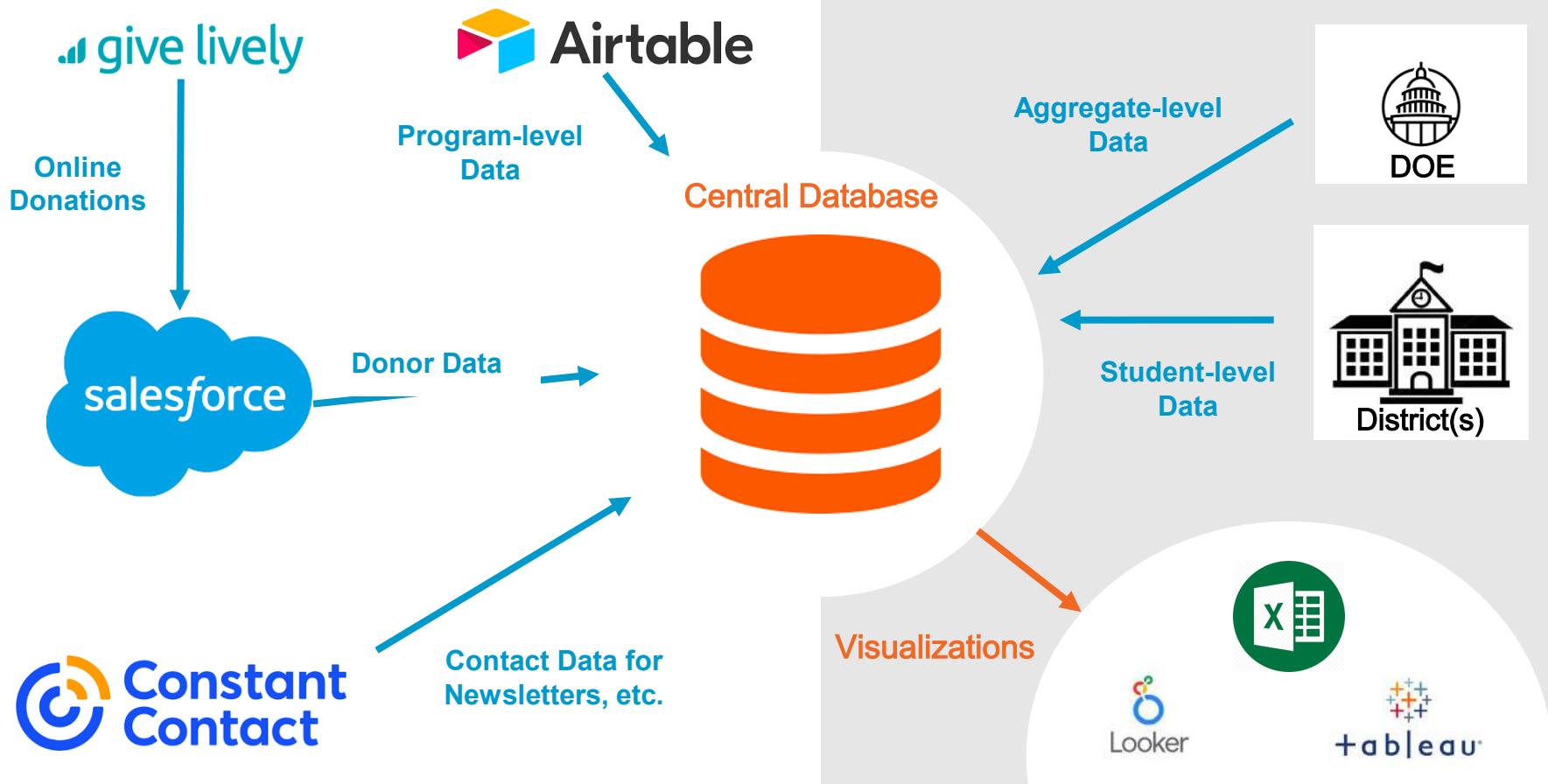
Automated View

Graduation View					
Student	School	District	E Date	G Date	Outcome
Jorge H	Rindge Upper	Cambridge Public Sch.	8/27/16	6/12/19	Certificate
Jorge H	Rindge & Latin	Cambridge Public Sch.	9/2/19	6/16/23	Diploma
Sam G	Haggerty	Cambridge Public Sch.	9/1/11	6/16/19	Certificate
Jean T	Haggerty	Cambridge Public Sch.	9/3/10	6/16/19	Certificate
Billy B	Haggerty	Cambridge Public Sch.	9/2/21	N/A	N/A

When and how should I migrate to a database?



Marin Promise Partnership Ecosystem - 2023



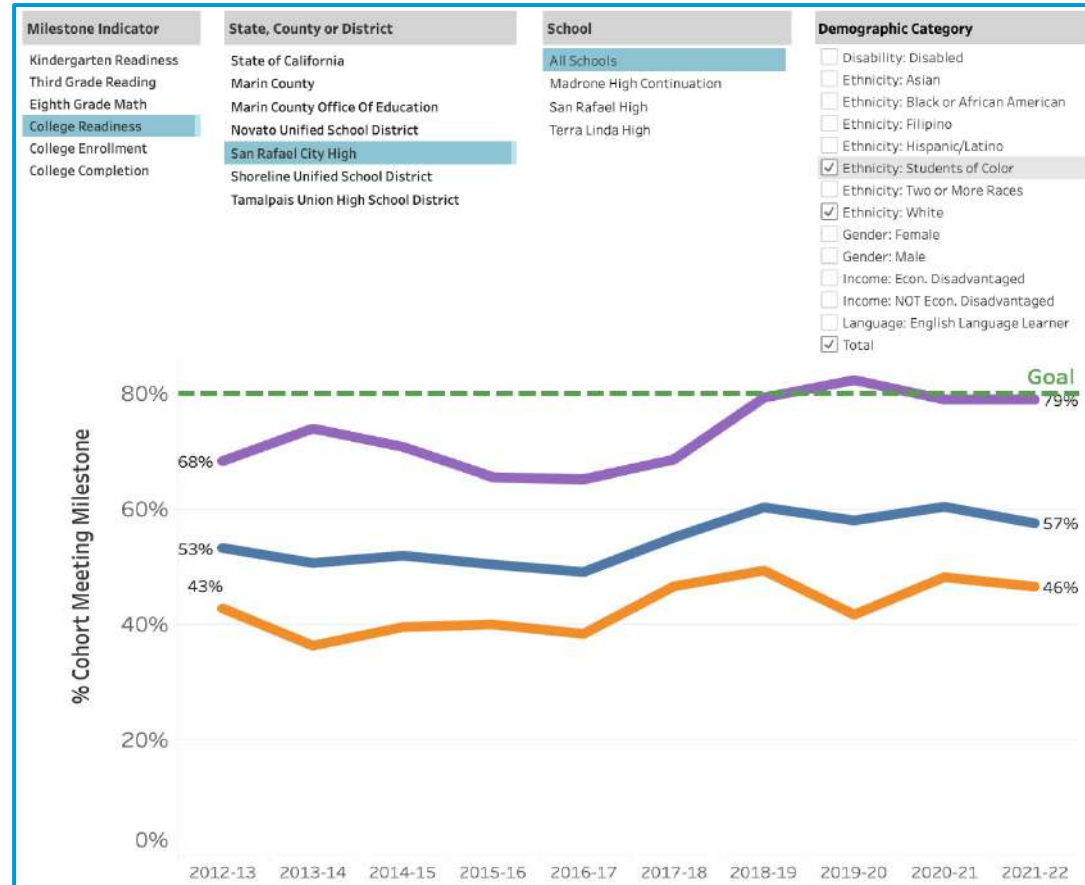
Visualization Ex: Run Chart w/Tableau

Follow Along:
marinpromisepartnership.org -> Data
-> Milestone Results Over Time

1. Four separate data sources
2. Users can toggle indicator data by demographic at the State, County, District, and School levels
3. Self-service model ensures “requests for data” are kept to a bare minimum

Chart Legend

- Overall
- Students of Color
- White



Visualization Ex: Google Studio

Follow Along:
marinpromisepartnership.org -> Initiative
Results-> Contributing Indicators

Initiative: Future Ready (1) ▾

Unique Indicators

6

Attendance
Financial Aid Form Completion
On-Track Rate for A-G Requirements
Passing Rates
Persistence Rate into Year 2
Readiness Plan Completion Rate

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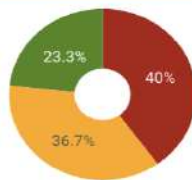
Partners Engaged

30

10,000 Degrees
Bridge the Gap College Prep
Canal Alliance
Coastal Health Alliance
College Dream Team
College of Marin
ED Trust West
Enriching Lives Through Music
ForWords Literacy Lab
Huckleberry Youth Programs
Mallory, Baron, Ross & Kindler- Educational Counseling and
Marin County Office of Education
Marin Promise Partnership

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Indicators On Track Status



Key

Approaching: within 20% pts of reaching the latest metric goal(s)

Off Track: more than 20% pts away from latest metric goal(s)

On Track: within 5% pts of reaching the latest metric goal(s)

Process Only: Not tied to a specific goal

Detail

Indicator	Description	Location	Demographic: Grade	Latest Data	Result	Goal	On Track Status
Attendance	% of promise students at Tomales High NOT chronically absent	Shoreline Unified School District: Tomales High	Promise Students: Grade 9-12	Nov 2021	66.20%	75.00%	Approaching
Attendance	% of promise students at Redwood High NOT chronically absent	Tamalpais Unified School District: Redwood High	Promise Students: Grade 9-12	Nov 2021	41.05%	50.00%	Approaching
Attendance	% of promise students at Tamalpais High NOT chronically absent	Tamalpais Unified School District: Tamalpais High	Promise Students: Grade 9-12	Nov 2021	54.73%	60.00%	On Track
Financial Aid Form Completion	% of eligible promise students completing financial aid forms	Marin County: All Schools	Promise Students: 12th	May 2022	67.00%	85.00%	Approaching

Visualization Ex: Google's Looker Studio

