ARIZONA SCHOOLS GET NEW TOOL TO IMPROVE PLANNING
Better Enrollment and Budget Projections Will Save Schools Millions

Disclaimer: For visioning purposes only, document may not reflect current state of project

(Phoenix, Az - March 15, 2022) A consortium of Arizona school districts have partnered with Arizona State University and Amazon Web Services to develop an innovative new prediction engine for school enrollment data. The system, named SD3 (school district daily data), solves the challenge of developing accurate and timely enrollment projections to support budget and planning. Accurate enrollment is essential to determine school district funding. SD3 predicts future enrollment and compares it to actual Average Daily Membership (ADM). SD3 uses real-time data to populate an enrollment dashboard that is simple, easy to use, and customizable.

School enrollment projections are an essential tool used by school administrators to project class sizes, resource needs and budgets. If projections are off, schools may over or under budget with consequences that can include layoffs, overcrowded classes and wasted resources. Before SD3, Arizona school administrators projected school enrollment by commissioning a demographic report from one of two major companies. The reports were developed annually by researchers and cost $10,000 to $20,000. The reports were static and provided only a fixed snap-shot of enrollment based on data at the time conducted. As such the projections fluctuated in accuracy and lacked the ability to be continually updated.

SD3 is a cloud-based software solution that solves the problem by generating the highly accurate and timely enrollment projections administrators need. SD3 starts with a data lake and the complete inventory of data required to develop the projections, including average daily membership. A customizable suite of analytics tools allows schools to fine-tune their projections based on local conditions. Projections are viewed on a dashboard and with reporting templates.

"As Superintendent of a large school district, understanding enrollment is a major concern. I have to make really big bets based on projections a year out," said Superintendent Julie Move. "With SD3, I have a monitor in my office that shows the real-time enrollment compared to our projections. I'm able to see how we are doing and make more informed driven decisions and get ahead of resource problems before they become resource problems."

To use SD3, school administrators register and log into the application on a computer. Guided prompts show users how to build a district profile, list the data sets needed and create a base projection using stock templates. The projections can be adjusted to increase accuracy and multiple models can be run and compared. Users can then create customized dashboards and reports at the class, grade, school or district level to see the health of their projections.

"Projecting our future enrollment and average daily membership with reliable accuracy was nearly impossible because of the complexity of variables and the reliance of demographic reports and outdated census data", Joe Budge, CFO of Surprise School District. "With SD3, the process is cheaper, easier, and far more accurate. Now we can use live data to run projections and update planning in real time. We now have access to our district and surrounding districts data and the ability to run analytics that simply weren't possible before."

For more information, please visit www.SD3.com.

FREQUENTLY ASKED QUESTIONS (FAQ)

Internal Stakeholder FAQs

1. What are we building and why?
    We are building an enrollment prediction model to better support school districts in the budget process as well as identify programmatic strengths of the school district.

2. How does it work?
    The dashboard works by leveraging federal, state, and city/town demographics to model on a dashboard a real-time picture of where the school district's current students reside as well as where all potential students within the district attend school. The primary functionality of the dashboard is to provide real-time information regarding student demographics.

3. Who will own and maintain the solution?
    The dashboard will need to be updated as information changes therefore a group or individual would need to maintain the dashboard. Higley Unified would volunteer the time and resources needed to provide maintenance. A potential IGA could be a solution if financial support was needed.

4. How much will it cost to build, operate and maintain?
    The build cost would be "man hours" to develop a dashboard with all the resources required to function as specified. Operation and maintenance would be much the same if the dashboard already exists.

5. What data sets does it require to operate?
    Student Information Systems - Private
    Arizona Department of Education Data - Public
    Enrollment District and Charter
    Private School Data - Public
    School by School
    Census Data - Public
    Maricopa Association of Governments; Construction Monitor
    Maricopa County Assessor
    City of Gilbert etc.
    City of Mesa
    City of Phoenix
    Town of Queen Creek
    City of Chandler
    Phoenix Business Journal

6. Who owns the data and is it accessible?
    Census data is publicly available, student counts are also publicly available

7. How complete, accurate and timely is the data?
   Census receives a full update every 10 years and a projected refresh each year.

8. Is this interoperable with state budget and ADM submission requirements?
   ADE potential?

9. Does it contain PII?
   If a District wants to drill down to show specifically where their students are coming from then yes but this is mostly public information.

10. How are users trained?
    A friendly user guide could be accessible for user training but ultimately the goal would be for the dashboard to be simple enough to not require training.

11. How do users register and access?
    If this is an IGA or housed at Higley Unified a request to join the SD3 would be required before access due to the sensitivity of the information.

12. What data is publicly available?
    Most is publicly available with the expectation of individual school student information systems (SIS).

13. What reporting templates come standard?
    Dashboard overlays that would come standard include:
         i.   District enrollment
              1. Ability to filter down to individual schools etc.
         ii.   Neighboring Districts
         iii. City/Town
         iv. Specialty programs

14. How can I customize to meet specific needs?
    Having a dashboard that allows customization options such as additional overlays of information would be an option.

15. Can I automate reporting?
    Scheduling a report would be an option

16. What is the algorithm and how does it work?
    The algorithm would pull information from the identified sources to provide the resources for the dashboard and overlaying options.

17. How accurate is the system - can it be 1 -2%?
    Within 1% would be an allowable standard deviation

18. What predictive analytics does the solution do?

Enrollment/Capacity
Capture/Loss
Program Influence
In/Out of District
Schooling Options - Charter and Private Enrollment/Capacity
New Construction/Business
Home Sales - Likely Presence of School Age Children
Birth Rates/Trends
Saturation/Risk - new school need/traffic