

Root Cause Analysis – Data and Context Packet

WHAT & WHY?

On Saturday, January 22nd, each committee will brainstorm causes for the unmet needs selected for analysis. This is hard work that needs a deep understanding to be successful. You will receive readings for context around all three unmet needs selected during the December 14th Committee Meeting. Reading this packet will help you get the most out of the activities, including:

1. Provide a deeper understanding of the context around unmet needs.
2. Jumpstart your thinking on causes through guided prompts.

PART 1 REVIEW

Review the final unmet needs statements developed by your committee to perform a root cause analysis upon. Review the context from the Community Interviews and the “who”, “what”, and “why” identified in the development of that unmet needs statement.

PART 2 READ

Learn more about the context around each unmet need by reading the following perspectives:

1. Expert Interviews
2. Committee Insights
3. Research and Data

estimated time: 20 minutes or more

PART 3 REFLECT

Using the readings from Part 2, begin your initial brainstorm using the following prompts:

1. What might be causing this unmet need to happen?
2. What causes might be connected to the work of other committees?

recommended time: 10 minutes or more

Part 1 – Review | Unmet Needs Statement

This is one of three unmet needs statements prioritized by this committee for the January 22nd Root Cause Analysis exercise(s). This statement was selected by the committee during the December 14th committee meeting.

Students, educators, and staff in aging facilities need funding for timely maintenance and infrastructure replacement to ensure health, safety, welfare, and educational success.

Part 1 – Review | Unmet Needs Statement Generation

Funding and lack of maintenance is impacting student health/safety

A/C doesn't work reliably/consistently

- “The interior of the school needs some updating, we have AC issues all the time. We need a more holistic approach to updates. The first day of school we had AC issues.”
- “The air conditioning is not reliable. Some spaces are too cold, others are too warm.”

5 Mentions: (2) CAC Meetings, (1) Parent, (1) AISD Staff/Educator

Old and poorly maintained facilities/ grounds

- “Old and has many leaks (Kocurek) throughout the year. Ants invade and they get denied work orders (it becomes frustrating because it puts students' safety in jeopardy).”
- “Regarding facility, there needs to be more cleanup when it comes to the parks. Too many masks, bottles of water and tissues left out and it is dirty.”

5 Mentions: (2) Parents, (1) CAC Meeting, (1) AISD Staff/Educator

Bathroom locks get stuck

- “Bathroom locks get stuck - kids get locked in, a lot of them lack privacy.”

1 Mentions: (1) AISD Staff/Educator

Need working water fountains accessible in multiple areas of the school building

- “Improvement of the track (water fountains, lights, shaded areas).”
- “I like that there are sports. The water thing doesn't work, but there is access to water.”

2 Mentions: (1) Parent, (1) CAC Meeting

Damaged restrooms due to TikTok trend

- “Navigating restrooms was a challenge with TikTok. That it was big, but that is mostly due to the transition.”
- “The district has locked the bathrooms due to a TikTok trend with bathrooms.”

2 Mentions: (2) Parents

- **Who:** Students, educators, and staff in aging facilities
- **What:** timely, funded maintenance and infrastructure replacement of facilities & grounds
- **Why:** Improve learning environments to support education & ensure health, safety & welfare

Are there other avenues to support providing snacks to students? (see notes/discussion below)

Unmet Needs Generation Draft:

“The lack of timely maintenance of aging facilities & grounds is impacting the ability of students to effectively & safely learn thereby negatively impacting student performance.”

Finalized Unmet Needs Statement:

Students, educators, and staff in aging facilities need funding for timely maintenance and infrastructure replacement to ensure health, safety, welfare, and educational success.

Part 2 – Read | Expert Interviews

This page contains contextual information related to district practices, operations, and constraints as it relates to the identified root cause. Some of this information may have been relayed verbally during committee meetings. This information was provided by AISD staff selected by the PMs for the knowledge provided by their roles.

Custodial maintenance needs better equipment for housekeeping with an FTE reduction, each staff member is having to cover more SF).

Many aging facilities have equipment and systems that are at a "replace not repair" place, meaning the Maintenance department is spending excess hours trying to keep things running, only for them to breakdown again.

- District has preventative maintenance scheduled for HVAC systems that we perform every year. But we have equipment that has exceeded its useful life so maintenance can only go so far.

Aging equipment means that parts can be expensive or hard to source, delaying Maintenance's ability to address campuses' needs due to a lack of supplies/equipment to perform tasks

- Cost of unique or outdated parts is also skyrocketing

Staffing for custodial and maintenance doesn't meet current needs.

- District's current staffing policies for maintenance don't align with staffing ratios of other similar districts (consulted with Dallas ISD)
- For safety purposes, a lot of maintenance jobs require 2 staff, which means someone is pulled off of their regular maintenance duties to deal with issues that pop up (high urgency needs result in continuously delayed ongoing maintenance).
- Closed schools or facilities still need to be maintained, which takes time from staff but doesn't contribute enrollment to support increasing staffing (enrollment vs. infrastructure portfolio misalignment).

When there are behavior-related issues/damages, campus leaders will ask Maintenance to hold off on repairs until the behaviors are addressed and resolved at the campus level – affects perceived timeliness of maintenance.

Part 2 – Read | Committee Insights

This page contains any feedback from committee members across all committees from the November 30th committee meeting discussion around unmet needs not yet expressed or identified that the committee members were aware of or wanted to share. These have been organized as they relate to the existing unmet needs or grouped into new ones.

- Maintenance of specialty facilities influences enrollment - poor facilities reduces enrollment which reduces funding for maintenance.
- In order to do a good transportation and maintenance plan, committee needs a clear heads up/insight into consolidation recommendations in order to plan appropriately.
- Need to manage training of janitorial / housekeeping staff and monitor the cleanliness of campuses by conducting regular inspections, meeting with staff and admin. Share info with admin and custodial staff to stay on top of cleanliness.
- If we're constantly fixing the same problems... we need to look at the condition of these facilities and if systems are not working. Age of campuses and upkeep is concern
- Communication with maintenance dept. (both at campus and from Facilities dept) is challenging – takes too long to comm

There is a need to bring HVAC and water systems on campuses across the district up to standard (some have been there since the original campus was built), but in order to do that kind of infrastructural replacement, there needs to be a bond package.

- Lack of temperature control/AC/

Athletic fields are not taken care of, turn to mud after rain storms also create holes in the ground. those issues will lead to injuries with band students and athletic students whose those fields. Not enough fields for use of athletics and band marching field. Also, maintenance issue - sprinkler management, etc.

- Sports fields are not maintained – dangerous

Part 2 – Read | Research and Data

This page contains key findings from the additional data sources identified by committees during the October 26th committee meeting, as well as key findings from validated external resources and research from the AISD Department of Research and Evaluation.

Timing of Orders

- Over the past four years, there were 171,631 work orders submitted
- There were significantly more maintenance requests filed in 2019 (66.86K) than in 2018 (26.76K), 2020 (43.33K), or 2021 (34.68K). BUT note that data for 2018 and 2021 is for part of the school year.
- Over the past 4 years, the most work orders were submitted in August of 2019 (9.06K)
- There does not appear to be a trend in certain months or quarters being more typical for requests to be submitted.

Source:

Work Orders from 6-28-2018 to 8-21-2021

Most Common Work Order Issues

- The most common work order categories were:
 1. building operations (19% / 33K)
 2. HVAC – Air Conditioning (13% / 23K)
 3. Plumbing (11% / 19K)
 4. Integrated Pest Management (7% / 11K)
 5. Locksmith (7% / 11K)
 6. Life Safety Systems – Alarms (6% / 10.5K)
 7. Structural (6% / 10K)

Where were orders filed?

- There were almost double the work orders filed at schools in high vulnerability neighborhoods than schools in any other neighborhood vulnerability category – *this shows that these facilities simply are experiencing more issues and degradations.*
- Completion of work orders was consistent across all vulnerability categories – *this tells me that even though work orders are getting completed at the same rate, the perception of maintenance issues / disrepair is higher because there are far more frequent issues that have to get reported.*
- While high schools were the biggest filers of work orders as individual facilities (9/10 top filling facilities were high schools), 50% of work orders were filed by elementary schools.
- The individual facilities that filed the most work orders were all high schools or the service center. This includes these locations in order:
 1. Service Center (6.3K)
 2. Bowie HS (5.2K)
 3. Navarro ECHS (4.9K)
 4. Akins HS (3.8K)
 5. Crockett ECHS (don't want to list this for all of them it takes forever)
 6. Northeast ECHS
 7. Travis HS
 8. LBJ ECHS
 9. Anderson High
 10. McCallum High

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Work Order Completion

- The vast majority of work orders were completed (91%).
- Only 2.5% of work orders were declined. The remaining orders were placed on hold, duplicates, deprecated, or partially completed.
- There was a lower completion rate of work orders in 2021 compared to previous years: 79% compared to the four-year avg of 90% - *this could be due to issues with maintenance staff retention and hiring as expressed in interviews.*

Source:

Work Orders from 6-28-2018 to 8-21-2021

Age-appropriate learning spaces that offer flexible learning opportunities that pupils can adapt and personalize are shown to positively affect academic outcomes.

- 16% variation in student outcomes and progress in reading, writing, and mathematics was attributed to the physical learning environment. ¹
- Connections between learning spaces that are easy to navigate and that may provide additional learning opportunities were shown to contribute to student outcomes. ¹

Source:

1. [The Impact of School Infrastructure on Learning](#) (Barrett, Treves, Shmis, Ambasz, Ustinova, 2019)

The aim of this report is to review current research studies on how school infrastructure affects children's learning outcomes and to identify key parameters that can inform the design, implementation, and supervision of future educational infrastructure projects

Part 3 – Reflect | Guiding Questions

This page contains guiding questions to brainstorm causes and reflect on connections between the work of different committees. The cross-committee connections highlighted on this page were identified by the PMs and/or committees prior to and during the December 14th committee meeting.

Unmet Needs Statement

Students, educators, and staff in aging facilities need funding for timely maintenance and infrastructure replacement to ensure health, safety, welfare, and educational success.

Cross-Committee Connections



Reflection Questions

What might be causing this unmet need to happen?

What causes might be connected to the work of other committees?