

Department of Defense Education Activity BUILDER Program Highlights



White Elementary School, Ft Benning, GA

February 2020

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Objectives

Department of Defense Educational Activity (DoDEA) Overview History of Asset Management Program

- Congressional Support

Facility Asset Management Program

- Managed Transition to BUILDER

- Multi-Dimensional Scope

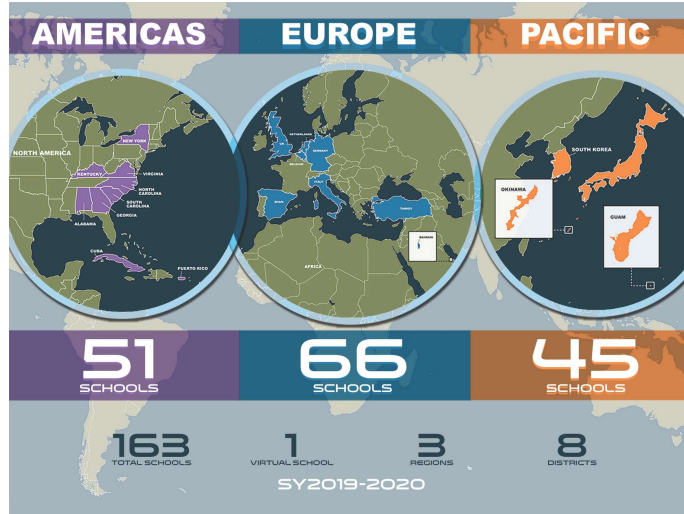
- Reporting and Data Analysis Capabilities

- Sustainment of Program

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- 600+ Buildings
- 19 Million GSF
- \$9 Billion PRV

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BLUEPRINT

for Continuous Improvement

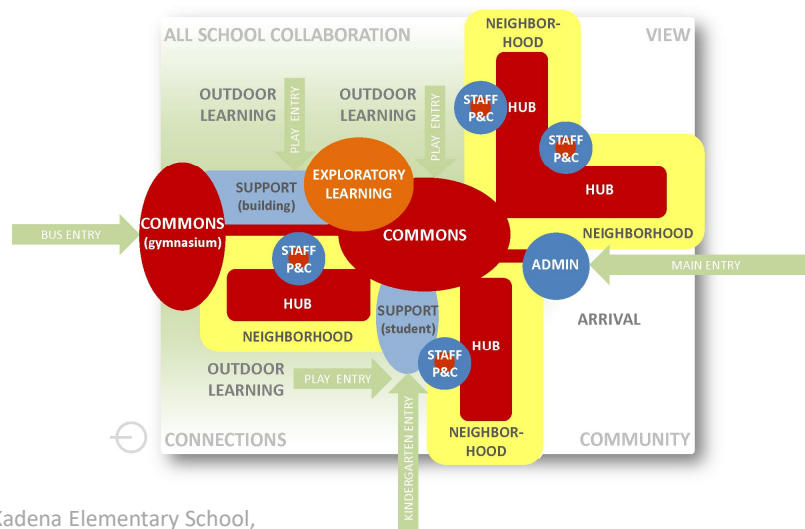
Vision	<i>Excellence in Education for Every Student, Every Day, Everywhere</i>		
Mission	<i>Educate, Engage and Empower military-connected students to succeed in a dynamic world.</i>		
Core Values	<i>Student Centered Excellence Continuous Improvement Diversity</i>	<i>Individual Potential Lifelong Learning Shared Responsibility Trust</i>	
Goals	<i>All schools at a Good (Q1) or Fair (Q2) condition</i>		
We Support In These Ways	<ul style="list-style-type: none">▪ <i>Refining education specifications and designs</i>▪ <i>Identifying efficiencies</i>▪ <i>Implementing cost effective solutions</i>▪ <i>Maintaining close ties with Military Services:</i>▪ <i>Building on enduring installations in support of master plans</i>▪ <i>Sizing schools to support projected enrollments at end state</i>		

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21st Century School Diagram

- The commons is the heart of the school
- Hubs are the heart of the neighborhoods
- Outdoor learning surrounds the school



Kadena Elementary School,
Okinawa, Japan

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21st Century School Arial Photo



Kadena Elementary School, Okinawa, Japan

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21st Century Schools - Neighborhood

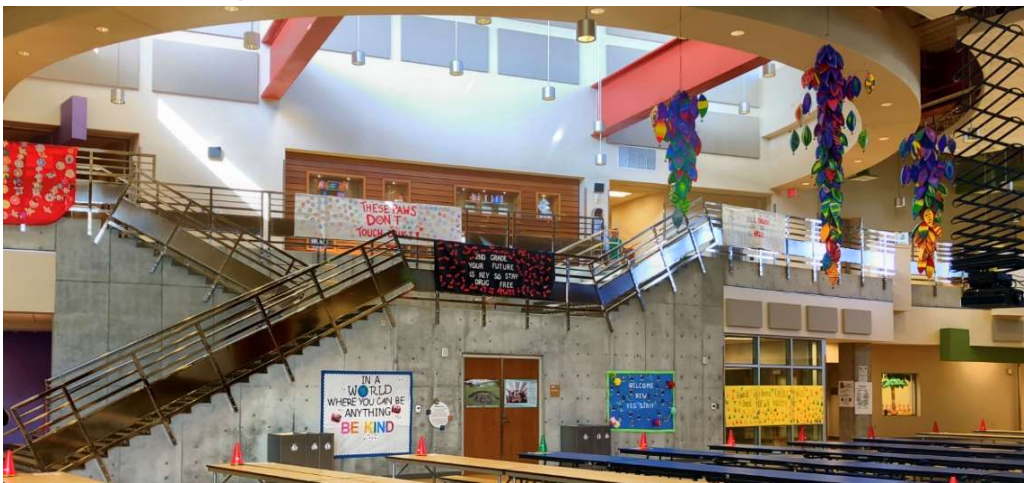


Kadena Elementary School, Okinawa, Japan

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21st Century School - Commons



Kadena Elementary School, Okinawa, Japan

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21st Century Schools

Facility as a Teaching Tool

- Demonstration solar panel and wind turbine
- See building systems in walls and ceilings
- Educational building signage
- Explorative and collaborative spaces

Outdoor Learning

- Outdoor classrooms and amphitheaters
- Gardens and learning trails

Neighborhoods



Zukerman Elementary

Commons



Play Spaces



Flexible and Adaptable Facility

- Neighborhoods: Open to central learning spaces with operable partitions
- Higher utilization of larger spaces
- Furniture: Allows project-based learning



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History of Facility Asset Management Program

- Initiated Asset Management Program in 2002
 - Assessments were based on a parametric cost model
- Multi-Dimensional Scope of Work
 - Facility Condition Assessments
 - Asbestos Inspections
 - As-Built Drawing Updates
 - Facility Utilization Surveys
 - Real Property Reconciliation
 - Playground Assessments
 - Kitchen Equipment Assessments
- **Three-year assessment cycle driven by EPA asbestos requirement Asbestos Hazardous Emergency Response Act (AHERA)**

Middleton S. Elliott Elementary School
Facility Condition Assessment Report

CAMPUS SUMMARY

Year Built	2008
CAFPE	12-101
Date of Assessment	11-Apr-2019

SCHOOL SUMMARY

Category	Count	Comments
Asbestos	1	Asbestos
As-Built	1	As-Built
Facility Utilization	1	Facility Utilization
Playground	1	Playground
Kitchen Equipment	1	Kitchen Equipment

BUILDING SUMMARY

Category	Count	Comments
Asbestos	1	Asbestos
As-Built	1	As-Built
Facility Utilization	1	Facility Utilization
Playground	1	Playground
Kitchen Equipment	1	Kitchen Equipment

INTRODUCTION

Middleton S. Elliott Elementary School is located at 12000 1st Avenue, Suite 100, in the City of Middleton. The physical condition assessment includes general building and grounds surveys at the time of this site visit.

II. OBSERVATIONS

The following observations were made during the assessment. The observations are listed in the table below. The observations are listed in the table below. The observations are listed in the table below.

III. QUALITY CONDITION RATING

The following table provides information on the quality condition rating of the building. The quality condition rating is based on the following criteria: 1. Building 100% (100% of the building is in good condition). 2. Building 75% (75% of the building is in good condition). 3. Building 50% (50% of the building is in good condition). 4. Building 25% (25% of the building is in good condition). 5. Building 0% (0% of the building is in good condition).

Category	Count	Comments
Asbestos	1	Asbestos
As-Built	1	As-Built
Facility Utilization	1	Facility Utilization
Playground	1	Playground
Kitchen Equipment	1	Kitchen Equipment

W112000-0000 Middleton S. Elliott Elementary School - State of Wisconsin
11-Apr-2019

W112000-0000 Middleton S. Elliott Elementary School - State of Wisconsin 11-Apr-2019

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History of Facility Asset Management Program (Cont'd)

- Schools Required Significant Reinvestment
- Congressional Report 2009 Summarized Need and Proposed a Wellness Plan
- Congress Approved Plan to Improve all Schools to a Q1 or Q2
 - Half of the schools replaced in a 10-year period between FY2010 and FY2020
 - 80 projects with over \$3 Billion Funding
 - DoDEA continues to explore BUILDER functionality to improve the Asset Management Program

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DoDEA Facility Asset Management Program

2014 BUILDER Implementation

- Migrate from Parametric Based Assessment to BUILDER Assessment Methodology
- BUILDER Configuration – Patterned after Air Force Cost Book/Policies and Standards
- Inventory
 - BUILDER setup to report FCI to try to maintain a relationship with 2009 Congressional Report
 - Inventoried renewable systems
 - Non-renewable systems only inventoried if damaged and then only the damaged section was inventoried

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DoDEA Facility Asset Management Program (Cont'd)

BUILDER Implementation

- Managing Transition was Critical – 2014-2017
- Requirement to Provide Portfolio Wide Reporting with Legacy and BUILDER Applications
 - A 3rd application was needed to support transition.

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DoDEA Facility Asset Management Program (Cont'd)

BUILDER Implementation Observations

- Migration from parametric cost model to the detailed BUILDER inventory method impacted the Q-Ratings
 - Parametric model
 - System Level
 - HVAC system was the same percentage of the building
 - BUILDER inventory
 - 3 times the number of component sections
 - Make up of the system varied by building
- Methods Developed to Explain Differences were Reviewed and Supported by BUILDER Community Leadership

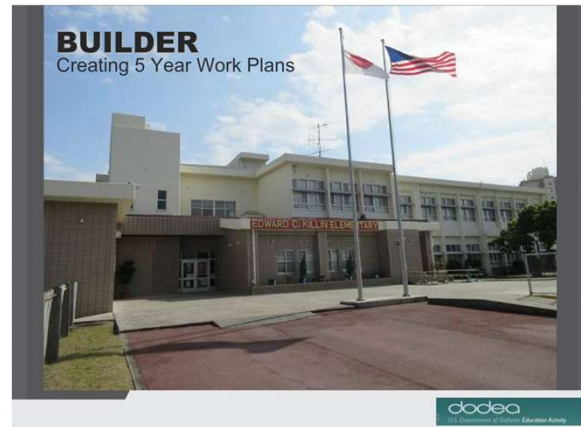
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DoDEA Facility Asset Management Program (Cont'd)

Work Planning

Starting 2016

- Five-Year scenarios run and provided to the DoDEA engineers
- DoDEA given Two-hour training class on how to use the output to support planning efforts



DoDEA Facility Asset Management Program (Cont'd)

BUILDER Implementation as of December 2019

- Every region has had two rounds of inspections
- Lessons learned
 - Refined Sectioning Approach
 - Refined Business Rules for Inspections
 - Refined Policies and Standards

DoDEA Facility Asset Management Program (Cont'd)

Policy Sequence, Policy and Standard Change

- Repair work items were causing Q-Rating Movement
 - Q-Ratings were fluctuating independent of repairs that had been performed.
- Refined Policy Sequences, Policies and Standards.
 - No Repair - Assigned to just about everything
 - No Work - Only assigned to Kitchen Equipment
 - Using BUILDER to inventory and provide condition of Kitchen Equipment without impacting the FCI

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DoDEA Facility Asset Management Program (Cont'd)

“What If” Planning

- BUILDER Scenario Capability was the perfect vehicle for determining the impact of the change without having to implement the Change
- Created scenarios that used the New Standards
- Ran the scenarios and compared the data to the current data

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DoDEA Facility Asset Management Program (Cont'd)

Results of Refining Standards

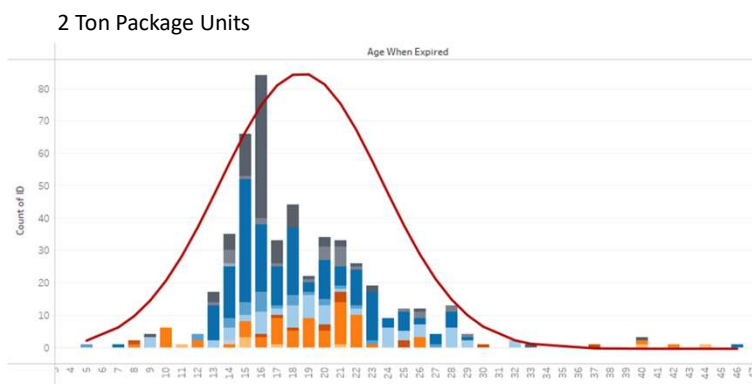
- 87% of Schools had at least 1 repair work item
- Repairs counted for 7.3% of all the work item costs
- Maximum impact to a school was FCI went up 2 points
- Only 2 Schools had a Q-Rating change

Good time to make the change

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Data Analysis

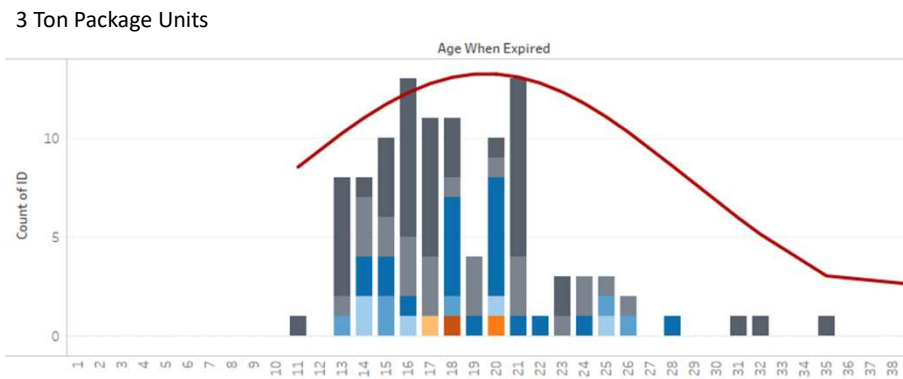
- **Looking for differences in life cycle**



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Data Analysis (Cont'd)

- Looking for differences in life cycle

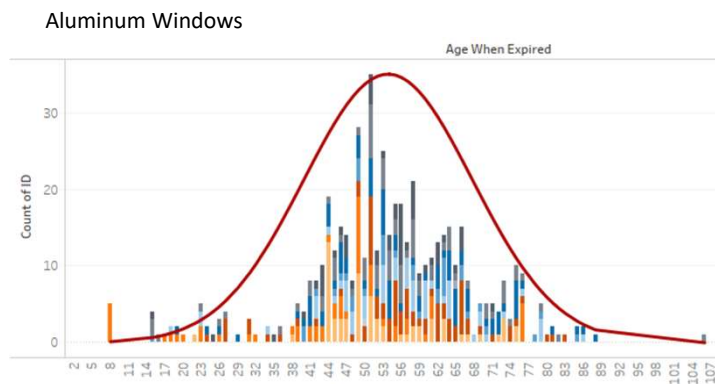


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Data Analysis (Cont'd)

- Looking for differences in life cycle

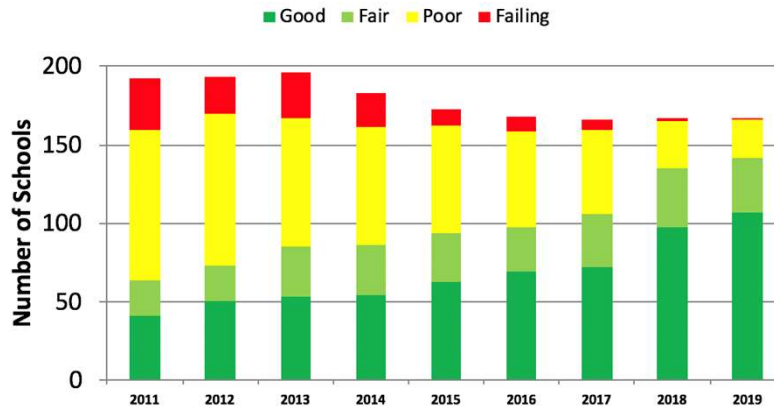


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Tracking Improved Conditions

State of DoDEA in 2019



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Looking Ahead - Planning

Challenge – Dynamic, Competing Priorities

- Capacity
- Temporary classrooms
- 21st Century learning studios (classrooms)
- Single building schools for security
- Condition
- Asbestos
- Age

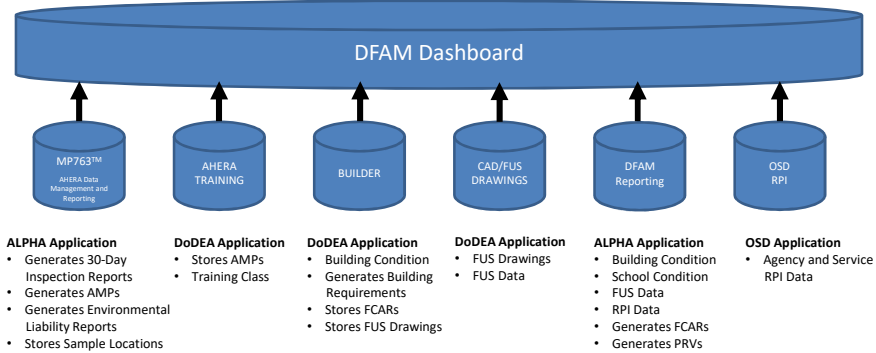
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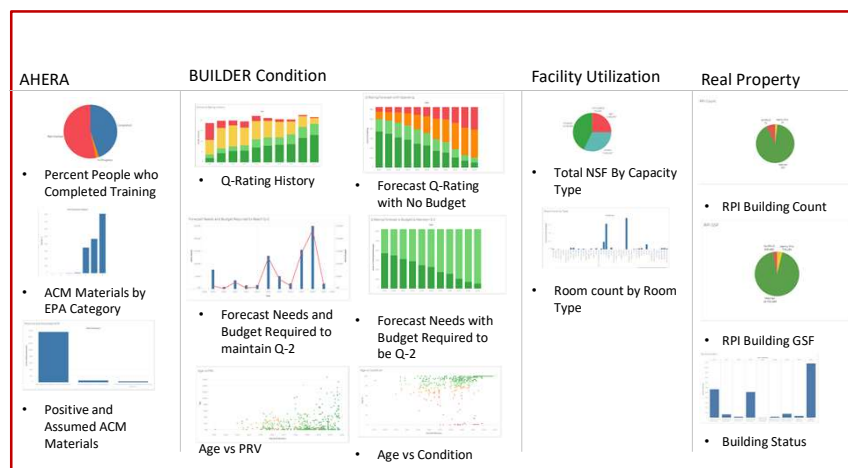
DoDEA Facility Asset Management (DFAM) Dashboard

1. Final, Completed Data/Deliverables are pushed to Dashboard, so Dashboard only displays most recent vetted data.



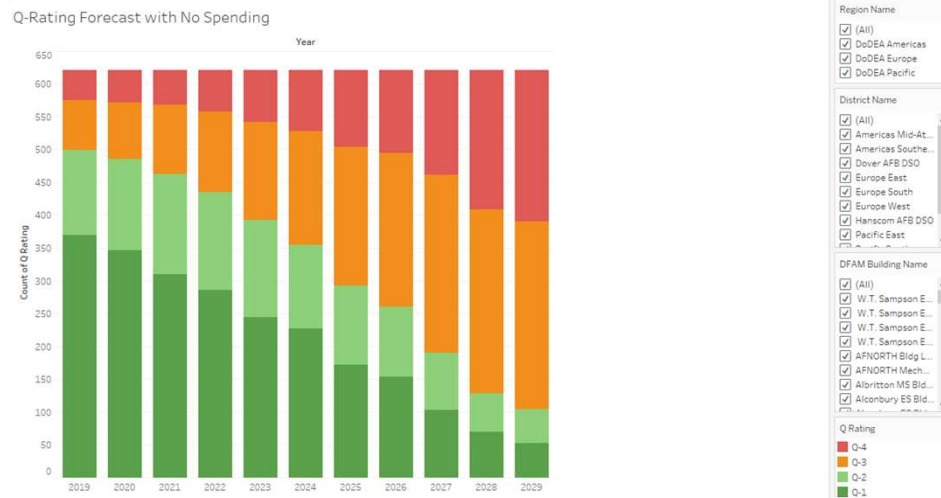
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Dashboard Home Page



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Condition Forecast with No Spending



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Forecast with Budget to Maintain Good or Fair Condition



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Open Discussion

Thank You



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