

Insular ABC's Phase 3  
**Training and Sustainability Program**  
**Needs Assessment Compilation and Findings**  
September 2017

**American Samoa**  
Department of Education



*Commonwealth of the Northern Mariana Islands*  
**PUBLIC SCHOOL SYSTEM**  
STUDENTS FIRST



**GUAM DEPARTMENT**  
**OF EDUCATION**



**Virgin Islands** Department of  
**EDUCATION**



**US Army Corps**  
**of Engineers**  
Honolulu District



Office of Insular Affairs  
US Department of Interior



**HHF PLANNERS**  
*places for people*

## Contents

1. Introduction .....	1
2. Needs Assessment .....	2
2.1. Survey.....	3
2.2. Findings .....	3
2.2.1. Topic 1: Organizational Sustainability.....	3
2.2.2. Topic 2: Technical Skills.....	4
2.2.3. Topic 3: Planning and Design .....	5
2.3. Topic Ranking .....	6
3. Next Steps .....	6

### **About the Insular ABCs Initiative**

The initiative is a multi-phase partnership between the US Department of Interior’s Office of Insular Affairs (OIA) and the Governors of the US Insular Areas (Guam, Commonwealth of Northern Marianas, American Samoa and the US Virgin Islands). The initiative is being managed by the US Army Corps of Engineers. The initiative is focused on two objectives: (1) improving the physical condition of the US Insular Area Public Schools and (2) to support capacity building initiatives to manage the school facilities. Actions to address Objective (1) are well underway as described in the Year One report (<http://hhfplanners.com>). The Training and Sustainability Program (TSP), described in the following pages, is one of OIA’s major initiatives supporting Objective (2) and will require a close collaboration with the Governors, school district leaders and facility managers to succeed.

# Training and Sustainability Program Needs Assessment

---

## 1. Introduction

Assisting the territories with developing a sustainable<sup>1</sup> and appropriately funded school M&R program is a major priority of the Office of Insular Affairs (OIA). Hallmarks of a sustainable program include qualified and motivated staff, an annual budget based on a scientifically derived maintenance and renewal metrics, a well trained workforce, clear maintenance and repair (M&R) program standards compliant with regulatory guidance, and information technology to provide data-driven support for managers, administrators, and elected leaders.

The Training and Sustainability Program provides background and rationale for the development and deployment of a series of training and sustainability initiatives focused on building local school facility management capacity.

OIA established two major objectives for Phase 3: to reduce the amount of deferred maintenance (DM)<sup>2</sup> starting with the highest priority projects, and to build local capacity to prevent the DM backlog from re-occurring. The DM backlog occurred due to a lapse in the territory's ability to support an adequate repair and maintenance program resulting from a lack of funding, limitations of existing practices, and higher priorities for public funds.

The ABCs Initiative provides technical assistance, tools, and coordination to help meet the needs of local facility managers and maintenance staff. Capacity building activities are essential to develop and implement facility management standards, to promote systemic change where best practices can be employed, and to fulfill OIA's second ABCs objective.

The Training and Sustainability Program (TSP) was created to articulate a clear path to achieving sustainable school facilities management, including the background and rationale for the development and deployment of a series of training and sustainability initiatives focused on building local school

---

<sup>1</sup> *Organizational sustainability is the ability for an organization to sustain enduring business processes, institutional policies and practices, and historical knowledge. Organizational sustainability provides institutional continuity that extends beyond individuals so that as people come and go from an organization it continues to thrive through established processes and sound resource management (Pena, 2013).*

<sup>2</sup> Deferred maintenance is defined by The Federal Accounting Standards Advisory Board ([www.FASAB.gov](http://www.FASAB.gov)) as: *maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period. For purposes of this standard, maintenance is described as the act of keeping fixed assets in acceptable condition. It includes preventive maintenance, normal repairs, replacement of parts and structural components, and other activities needed to preserve the asset so that it continues to provide acceptable services and achieves its expected life. Maintenance excludes activities aimed at expanding the capacity of an asset or otherwise upgrading it to serve needs different from, or significantly greater than, those originally intended.* Statement of Federal Financial Accounting Standard 6.

facility management capacity (referred to as TSP modules). The objective of the TSP is to develop and deliver a core syllabus of best practices and maintain contemporaneous records of attendees, hours of classes, and other metrics to objectively demonstrate OIA's commitment to building local capacity. The program will also address a schedule to transition responsibility of the DMRP to the local government in the last year of the program.

The TSP is focused on raising awareness of the long-term value of effectively operated, sized, and funded territorial maintenance and repair (M&R) programs and helping school facility managers put these concepts into practice. TSP background, objectives, and strategy are defined in the TSP Framework Plan (<http://hhfplanners.com>).

The long-term success of the TSP is highly dependent on the level of local participation. The ABCs Team, led by the local HHF Program Managers (PMs) and including locally embedded personnel (the embedded team personnel hired by HHF Planners to oversee Phase 3 efforts), will provide facilitation and leadership at a programmatic level, while host and sister agencies, vocational/technical training organizations, and private sector engagement is essential for success.

Capacity building activities will help insular facility managers operate as efficiently as possible to maximize use of limited funds, as well as to provide training on facility standards, maintenance, and construction techniques as needed. The TSP provides an important framework for achieving this objective and TSP-related activities may be refined annually as the work period proceeds. The TSP Needs Assessment helps establish the path the ABCs Team, in collaboration with Territorial leadership, will take in encouraging sustainability initiatives in each facilities management department. The ABCs Team will work with the host agencies to identify reciprocal duties and expectations between the ABCs Team and the territory partners as a part of defining capacity-building efforts. Once the needs and duties are identified, the ABCs Team will ask each territory to endorse the actions defined to confirm commitments of all involved.

## 2. Needs Assessment

The TSP Needs Assessment was created to guide the host agencies in soliciting input from their facility management staff for defining steps that the host agencies can take to move toward sustainable facility management. Topics related to facility management sustainability include the role of school facility planning, programming and budgeting, building local technical and vocational skills capacity, and practicing essential job site safety awareness related to school facility repair, maintenance, and construction. The TSP was conceived to provide an important framework for building capacity, essential to enhance facility management standards and design and construction techniques, as well as to

The TSP focuses on the long-term value of maintenance and repair (M&R) programs that are effectively:

- operated
- sized
- funded

Related topics include:

- school facility planning, programming, & budgeting
- building local technical & vocational skills capacity
- staffing and structure for ongoing maintenance

promote systemic change where best practices can be employed. The Needs Assessment survey, see example survey in Attachment 1, was created to assist in this effort.

## 2.1. Survey

The Needs Assessment was conducted remotely (e.g., via phone conferences and email) and well as through the Embedded Team PMs (for on-the-ground information request follow ups and discussion during weekly program calls). Discussion and responses were guided through the Needs Assessment survey that was distributed to host-agency personnel with a brief explanation of potential modules, and areas for write-in responses. Participants were asked to prioritize the various modules according to what is most useful to their facility management efforts.

The ABCs Team worked with the host agency in surveying the appropriate personnel and establishing commitments for engagement and timeframes. Agreements were made with the host agencies on the use and distribution of the survey results, and information gathered was carefully analyzed and organized to respect the confidentiality of individual respondents and prioritize issues based on local and national fact finding. Phone and email correspondence preceded distribution of the survey and continued thereafter to ensure concurrence on findings. Action steps were then considered for each of these topic areas in order to define the most valuable steps that could be taken during the course of the ABCs Initiative to help the territories' provide more proactive facilities-related management.

## 2.2. Findings

The TSP Needs Assessment included an example survey (Attachment 1) that was created to guide the host agencies in soliciting input from their facility management staff for defining the steps most needed to move towards operational sustainability. Surveys completed by the host agencies are provided in Attachment 2.

The survey responses identify which priorities are aligned across the territories, and which priorities fit within the TSP resource constraints such as time and funding. The Needs Assessment also included more in-depth interviews with facility managers, and other stakeholders as appropriate, to help identify challenges and define facility management needs, particularly for the Organizational Sustainability module.

### 2.2.1. Topic 1: Organizational Sustainability

With regard to the ability of the respective facility management organizations to endure personnel changes and volatile funding climates, participants were asked to rank the importance of example "Organizational Sustainability" topics (1 = most and 4 or 5 = least important).

*The most common high ranking needs were highlighted green.*

#### Organizational Sustainability:

- The ability for an organization to sustain enduring business processes, institutional policies and practices, and historical knowledge.
- Provides institutional continuity that extends beyond individuals so the organization continues to thrive through personnel changes with established processes and sound resource management.

Table 1 - Organizational Sustainability Needs

Topic Focus:	AS	CNMI	Guam	USVI
Staffing/Administration Best Practices	1	2	1	2
Asset Management: Lifecycle Cost Analysis	4	5	2*	4
Asset Management: Maintenance and Capital Renewal Budgeting	2	1	4	1
Asset Management: Benchmarking/metrics	3	4	3	3
Other: Procurement		3		
Other: Maintenance and staffing needs; job descriptions		2		

\*Discussion with DOE revealed that this need aligns capital renewal budgeting and planning (Topic 3)

Staffing and budgeting were the highest concerns across the territories. The one exception is lifecycle cost analysis for Guam Department of Education (GDOE). After further discussion with GDOE personnel, it is understood that concerns are associated with how to address the aging facility inventory. This topic is addressed more in Topic 3: Planning and Design, but also aligns with capital renewal budgeting.

CNMI added project procurement to the list, because of long delays typically experienced in trying to move large projects and limitations of the existing system. The CNMI ABCs Program Manager (PM) worked with the Public School System and identified ways to move projects. The other CNMI addition, to create positions and job descriptions for needed maintenance staffing positions, is also improving and mostly relates to the first focus topic and the need to recruit and/or train tradesmen and create a position for a project engineer. Another common concern is the aging maintenance work force and the need to recruit and train the next generation of tradesmen. Procurement and staffing are major concerns in all of the territories and were flagged for further action.

Budgeting concerns need to be at least partially addressed through the creation of maintenance programs to define appropriate tasks (based on available budgets) and the staffing required to execute the work. This exercise will also identify basic maintenance tasks that may go unfunded and help the host agencies communicate needs to legislators (U.S. Virgin Islands Department of Education is currently doing this).

Write-in responses to the surveys also brought up needs for resource support and leadership in planning for CIP initiatives, in alignment with capital renewal budgeting and administration best practices. American Samoa Department of Public Works (ASDPW) raised the concern of communications and standard operating procedures for maintenance work flows and capital renewal planning between it and its client, ASDOE; this also correlates with administration best practices, as well as facility planning topics. U.S. Virgin Islands Department of Education write-in responses aligned with budget and facility maintenance staffing needs, with a focus on having empirical data with which to vie for limited financial resources.

**2.2.2. Topic 2: Technical Skills**

Topic 2 focuses on the technical skills needed to bolster facility maintenance and renewal efforts, and included various trades, repair skills, and safety awareness. Survey focus topics and responses:

Table 2 - Technical Skill Needs

Topic Focus:	AS	CNMI	Guam	USVI
Jobsite Safety Training	3	4	1*	5
Structural repairs training	5	3		2
Concrete forming	4	2		5
Construction Best Practices	2	5	2	3
Tradesman Apprenticeship Program	1 HVAC, electrical, plumbing	1 HVAC, plumbing, electrical, and fire systems	3	1 HVAC, electrical, plumbing
Other:				

\*Safety training will be pursued by PMs on an ongoing basis  
 No other focus topics were proposed

The most common priority across the territories was for maintenance staff training, e.g., a tradesman apprenticeship program, focused on HVAC, electrical, and plumbing. These particular skills also offer a favorable cost benefit when compared to outsourced options, but both methods require that facility management define a clear and comprehensive set of tasks with follow-up to ensure the job is being done properly. This means that the facility managers must also be knowledgeable about the tasks that need to be done and how to follow up with the personnel executing the work. These considerations will be discussed further in the Organizational Sustainability Plan, but, for the purposes of the Needs Assessment, recruitment and training programs are needed where resources to support the positions exist.

Fire systems maintenance was noted by CNMI respondents and speaks to a need for all territories that have fire alarm systems due to the common issues of system malfunction caused by humidity, dust, vandalism and lack of proper maintenance, as well as other issues that can be managed if maintenance staff are aware and available.

Guam respondents also indicated that safety training was a high priority. Although respondents didn't mark this highly in other territories, safety does appear to be under-addressed. Safety training should be provided on an ongoing basis to keep the points fresh in the minds of maintenance personnel and to account for staff changes to ensure that all staff have a basic level of awareness.

Another element of technical staff training, which is critical to sustainable facility management, is scope writing, cost estimation, and construction observation. Referring back to the enduring business processes, institutional policies and practices, and historical knowledge that are needed for sustainable organizations, having well established methods and living documents to reference helps organizations weather various challenges, particularly personnel changes. Documentation of related methods and resources, as well as ongoing mentoring on applying these resources in practice, is needed to varying degrees and is best achieved through record keeping and on the job training.

**2.2.3. Topic 3: Planning and Design**

Established maintenance structure and staffing are important for preventing the deterioration of facilities, and realizing their expected useful lives, but managing high amounts of existing deferred maintenance and building new facilities requires planning. For example, coordinating with maintenance staff, identifying and prioritizing repairs, analyzing capacity and enrollment trends, and incorporating educational program goals into capital renewal can all help inform budget needs and investment timing.

For Topic 3, only write-in responses were collected. Planning was recognized as a high priority need, but respondents did not provide explanations or specifics on what type of planning is needed. Planning needs will be explored further in the Organizational Sustainability Plan.

### 2.3. Topic Ranking

Respondents categorized the three topic groups in order of importance for helping their organizations become more sustainable. Responses show that all topics warrant further efforts.

Table 3 - Topic Ranking

Topic Focus:	AS	CNMI	Guam	USVI
Organizational Sustainability	2	3	1	1
Technical Skills	3	2	2	2
Planning and Design	1	1	3	3

### 3. Next Steps

Systemic change is needed to prevent the DM backlog at the territorial schools from recurring, or in other words, reducing the DM backlog without changing the underlying reason why it occurs does not meet initiative goals. OIA is committed to using available assistance programs to help the insular areas institute improvement efforts. Heightened awareness of the value of building maintenance as an important government function, on the part of insular area leaders, is also needed to sustain sound facility management.

Focus areas for further action, based on the findings of the Needs Assessment, are presented in Table 4.

Table 4 - Next Steps

Topic 1
Create preventive maintenance programs to define tasks and staffing requirements
Recruit, train, and advancement programs for maintenance staff (transition planning for aging workforce)
Topic 2
Apprenticeship program, focused on HVAC, electrical, plumbing, and fire systems
Ongoing safety training
Documentation of scope writing, cost estimation, and construction observation methods and resources; ongoing mentoring on applying these resources in practice
Topic 3
Technical assistance for facility planning

On-the-ground briefing sessions of Needs Assessment and preliminary Organizational Sustainability Plan findings and related working sessions were held with American Samoa, CNMI, and Guam host agencies in August. USVI briefings and working sessions were planned for October, but have been postponed due to the ongoing hurricane response and recovery efforts.

Proposed next steps were created based on the briefing and working session discussions, and confirmed with host-agency personnel. The next steps addressed further in the Organizational Sustainability Plan, but are summarized by year to include:



## Year 3

- Maintenance program and related job plans
- Capital planning components (e.g., conditions, capacity, useful life/functionality)

## Year 4

- Analysis of staffing configuration; mentor/apprenticeship model
- Trades training (AC, electrical, plumbing)

## Year 5

- Asset management benchmarks (performance metrics)
- Document libraries and cross-training (e.g., documents needed for project delivery)

Staffing, or more specifically staff capabilities and accountability, is the greatest challenge (besides funding) in all of the territories. Funding is a continuous and rigid limitation that is beyond the scope of facility management capacity building. Working within set limitations focuses on maximizing efficiency and creating empirical data on actual needs to help facility managers fight for funding. Facility planning is an integral component of facility management as in tied to related concerns such as forecasting major repair and replacement costs, as well as new capital improvement project investments. Investments are best made when informed by enrollment and socio-economic trends that define capacity needs, an understanding of inventory-wide facility conditions, and educational program needs. The Organizational Sustainability Plan addresses needs and strategies for working through these challenges.

The ABCs Team continues to work with the host agency and other local organizations, primarily through the embedded team Program Managers (PMs), to clarify support needs and roles for those participating in the various components. As a part of EAMS buildout, and separate but integral to the TSP, multi-year preventative maintenance budgets will be created to provide a basis for annual funding requirements that can be refined over time as additional information and current costs are collected. This component will require ongoing collaborative work with at least one host-agency partner to establish institutional knowledge and facilitate migration of duties to the host agency. Where applicable, measurable benchmarks will be incorporated into the TSP for periodic evaluation. The EAMS and local partnership roles are key components of the TSP. The long-term success of the plan is highly dependent on the level of local engagement; host and sister agencies, vocational/ technical training agencies, and private sector engagement is going to be essential for success. Planned actions may be revisited annually to ensure that efforts continue to align with host-agency needs and are producing the most effective tools for host-agency facility managers and staff.