

DOI FACILITIES & ASSET MANAGEMENT CONFERENCE

Asset Prioritization Index (API)

Enhancing the National Park Service Asset Management Program

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Betsy Dodson, National Park Service
Scott P. Foster, Booz Allen Hamilton



Booz | Allen | Hamilton

“We will ensure long-term stewardship by implementing enabling technology and business practices to manage the life-cycle of the asset.”

Overview

- ▶ Background on NPS Asset Management
- ▶ Background on Initial API
- ▶ Evaluation of the Initial API
- ▶ Revised Approach and Results



There were several challenges to setting asset management priorities within the National Park Service' 387 park units

- ▶ Communication and decision making was difficult because of size and geography
- ▶ Priority setting and budget decision making processes were decentralized
- ▶ Influence of local interests often influenced business decisions for assets

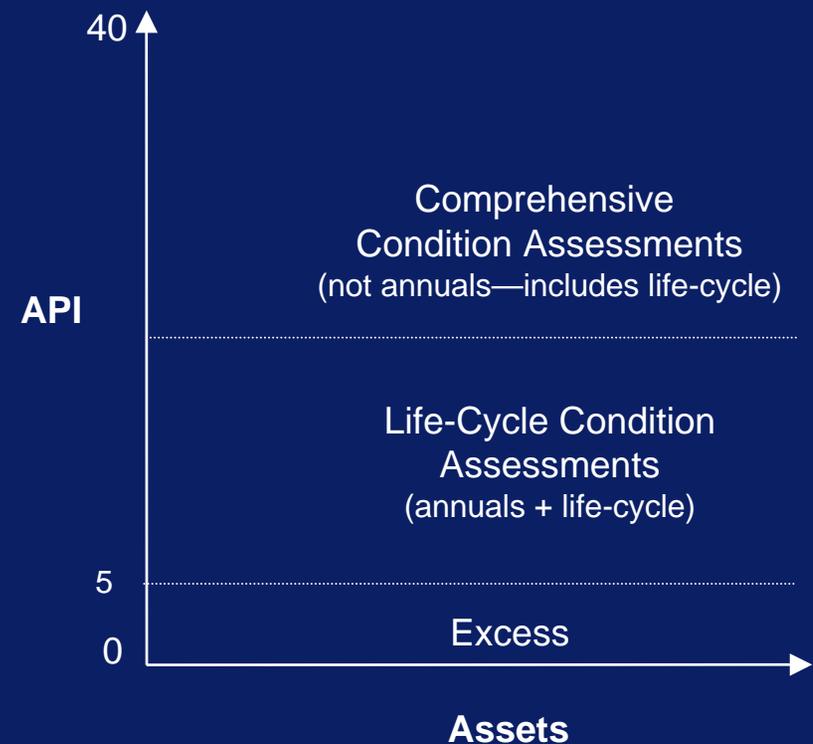


Strategic decision making and priority setting were inconsistent with asset management



The National Park Service Asset Prioritization Index (API) was first established in 2001

- ▶ Original used to identify assets that should be considered excess and therefore not receive condition assessments
- ▶ Also used to determine which assets received comprehensive assessments versus Life-Cycle condition assessments



The initial API criteria and paper-based worksheet consisted of five areas... an asset could receive a total score of 40 (highest)

- ▶ Importance to park mission
 - Yes/no (6)
- ▶ Other assets/methods to satisfy function
 - Yes/no (4)
- ▶ Type of use
 - Public (5)
 - Administrative (3)
 - Housing (1)
- ▶ Mandated Asset
 - Yes/no (6)
- ▶ Additional Considerations
 - Impact to resources (6)
 - Historic (6)
 - Politically sensitive (3)

Asset Priority Index Worksheet
(To be completed for each asset)

Date: _____
Asset description: _____
Park Assigned Identification Number _____
FMSS ID NO. _____
Park Interdisciplinary Team (List names and position titles) _____

DETERMINE THE CURRENT STATUS OF THE ASSET (CHECK ONE):
 Operational Operational/Obsolete Under Construction (new) Excess Planned

Please answer the following questions if you checked Operational, Operational/Obsolete or Under Construction. If you checked Excess or Planned go to the bottom of the page and enter zero for Total Point Value.

Is the function of the asset important to the park mission? (CHECK ONE)
 Yes (6 points) No (0 point) (If you checked YES please answer the following question. If you checked NO please skip the following question)

Can the function be accomplished through other assets or other methods? (CHECK ONE)
 Yes (0 points) No (4 points)

Type of use (CHECK ALL THAT APPLY)
 Primary Public Use (5 points) Administrative Use (3 points) Housing (1 point)

Mandated Asset (CHECK ONE)
 Mandated Asset (6 points) Asset Not Mandated (0 points)
(Required by agreement. ie. National Historic Landmark, concessions contract, water system, waste water treatment facility etc)

Additional Considerations (CHECK ALL THAT APPLY)
 Reduces negative impacts to the resource (6 points)
(ie. extreme erosion, disturbance of protected resource or species, loss of historic structure)
 Historic structures, cultural landscapes, etc. (6 points)
 Politically Sensitive (3 points)
Level of sensitivity (Congress, OMB, DOI, Director, Regional Director, etc)
 No other issues (0 points)

TOTAL POINT VALUE - ASSET PRIORITY INDEX (API) _____



Feedback on the API was gathered from a wide-variety of sources

- ▶ Asset Management Program's Independent Validation and Verification (IV&V) report
- ▶ Feedback received from the field maintenance staff in training programs
- ▶ Feedback to Washington Office (WASO) from park management teams

The initial API served as a good “first step” for asset prioritization within NPS, but changes were needed to take the program to the next level...



A series of interviews yielded feedback on the API process, criteria and worksheet

Summary of Feedback on API Process

- ▶ API process goals were not clearly understood by the park managers
- ▶ API is perceived as a “facility management program”

Summary of Feedback on API Worksheet

- ▶ API scoring is applied inconsistently throughout the parks due to subjective, open-ended questions
- ▶ Clear, standard descriptions (with examples) are not available for the criteria
- ▶ Worksheet allows for double or triple counting for one aspect of certain assets (e.g., historical, politically significant, and mandated for one cultural resource asset)
- ▶ Lack of a graded scale for each criterion creates frustration among users of the API... no ability to assign a “medium” relative to an assets’ value within each criterion
- ▶ Current criteria do not reflect the need to balance the priorities according to the park mission, specifically balancing “high-quality visitor experiences” with “protecting park resources”



Note: Feedback received via Independent Validation and Verification (IV&V) report on NPS program, feedback from training programs and park units staff.

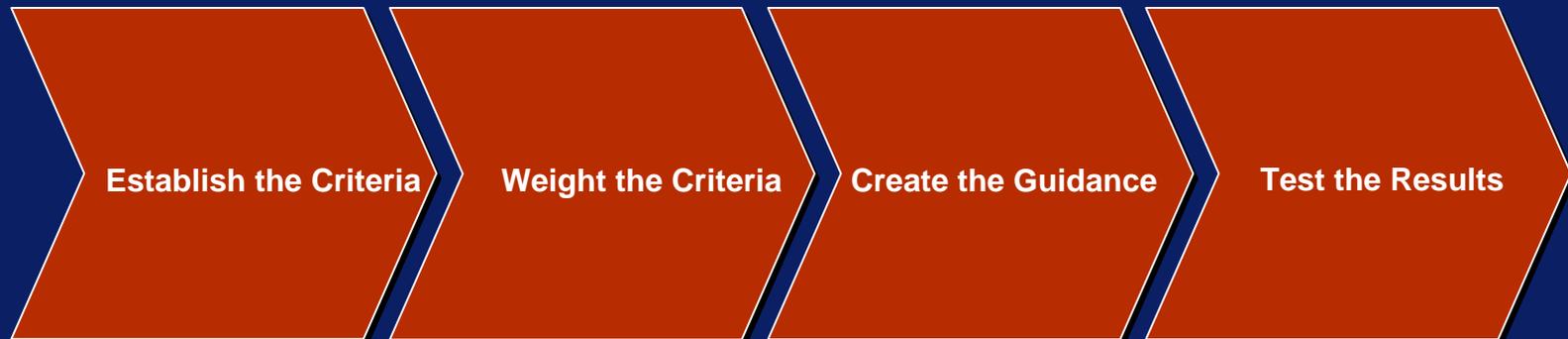
In the Fall of 2003, a cross-functional team was put into place to revise the API within the NPS

API Revision Team

Betsy Dodson (NPS)	Co-team lead, Park Facility Management Division training lead; field-based training experience and understanding of program improvement needs based on park unit feedback
Scott Foster (Booz Allen)	Co-team lead, Booz Allen Asset Management practice; experience in implementing prioritization strategies for Federal government and commercial clients
Core Team- Rich Schneider (NPS), Steve Wolter (Eppley Insitute), Stacy Banik (Eppley Institute), Robin Smith (Booz Allen), Robin Alexander (Booz Allen)	Core team members responsible for brainstorming the criteria, setting up a preliminary weighting scale, conducting the pilot, analyzing pilots results, revising the criteria and instructions, and implementing the web site
Subject Matter Experts (NPS)- Randy Biallas, Gary Mason, Mike Watson	National Park Service experts in core mission activities (e.g., cultural resources, natural resources, interpretation) responsible for assisting with the criteria weightings, definitions, and examples



Over the course of three months, the cross-functional team established new criteria, weightings, and tested the results



Participants

Core Team with Subject Matter Experts

Core Team with Subject Matter Experts

Core Team with Subject Matter Experts

27 park units (scoring more than 560 assets)

Key Activities

Agree upon framework (dimensions and individual components)

Generate list of potential criteria for vetting internally
Select quantifiable proxies for scoring the criteria

Assign weights to criteria using the established governance body

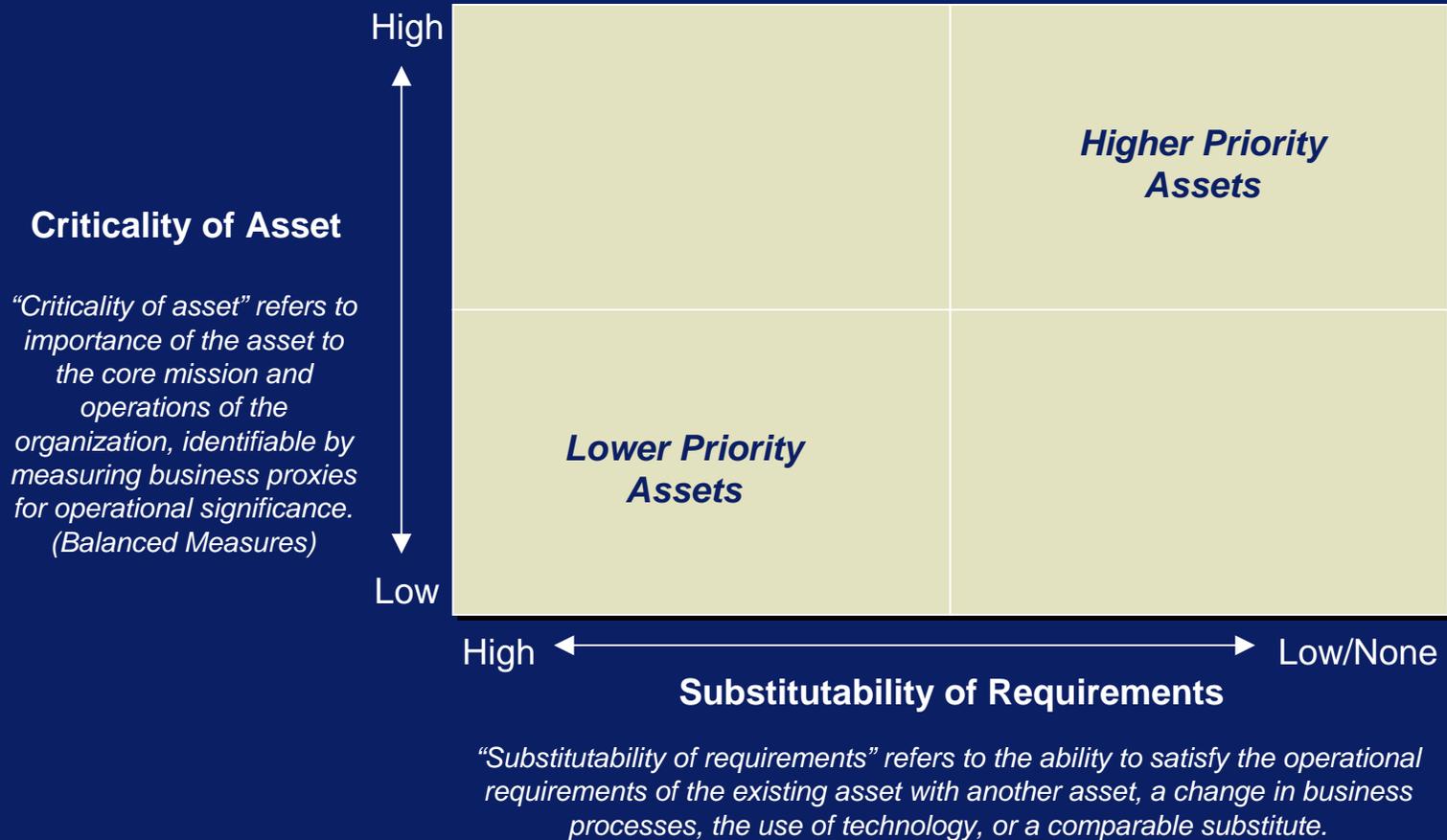
Develop guidance on using the scale associated with the scoring

Select reliable, quantifiable data sources and assign a score for each asset for each criterion

Analysis of pilot results
Revise criteria prior to full roll-out of revised API



The revised API frameworks addresses both how critical- and how unique- the asset is in the NPS portfolio



Source: Asset substitutability concepts from “Performance Portfolio Management, CoreNet Global leading issues seminar, Chicago 2002



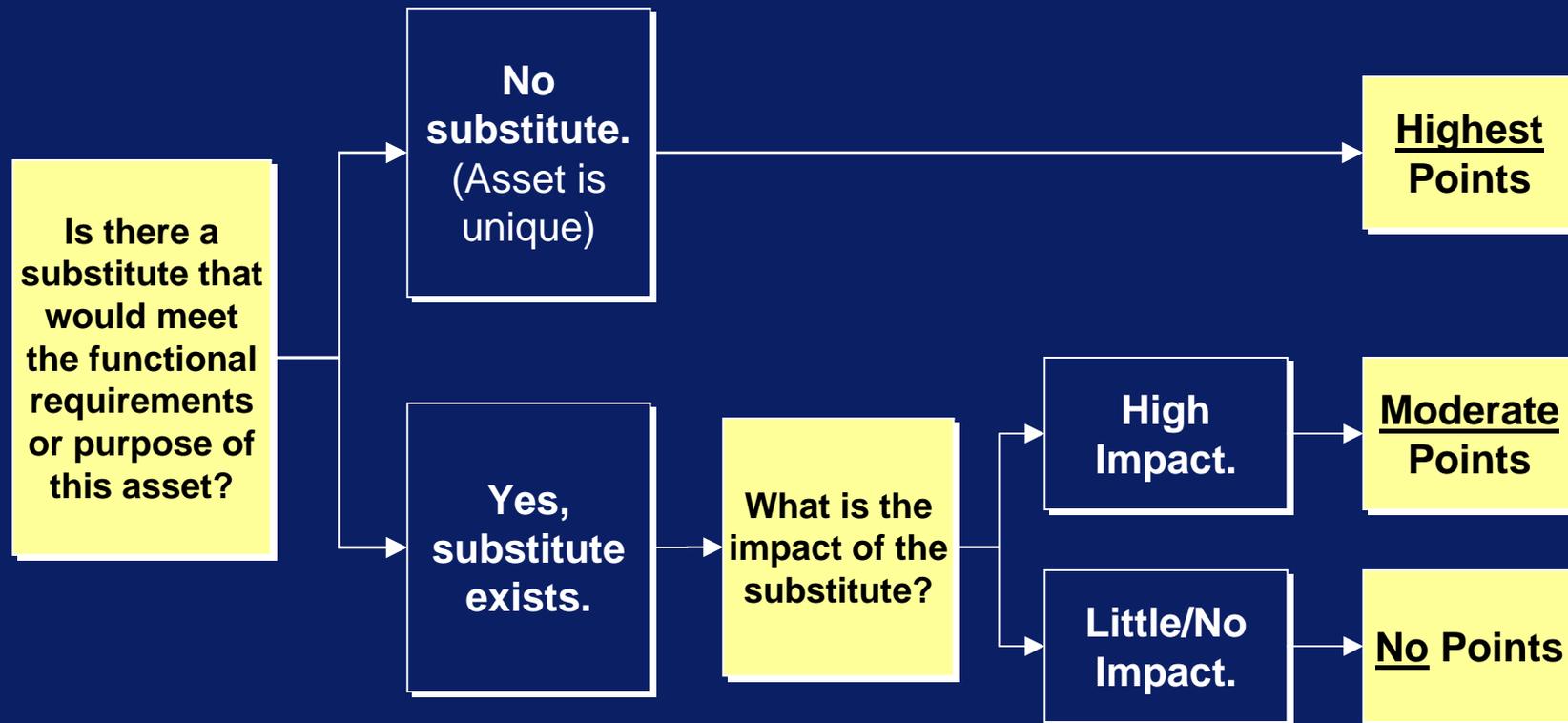
Asset criticality is based on a balanced scorecard (BSC) framework, and linked directly to the NPS mission and operations



Source: Framework adapted from “The Balanced Scorecard: Translating Strategy into Action,” Robert S. Kaplan, David P. Norton, 1996 Harvard Business School Press



Asset uniqueness is captured in how a substitute to this asset impacts the core mission and operations of the NPS

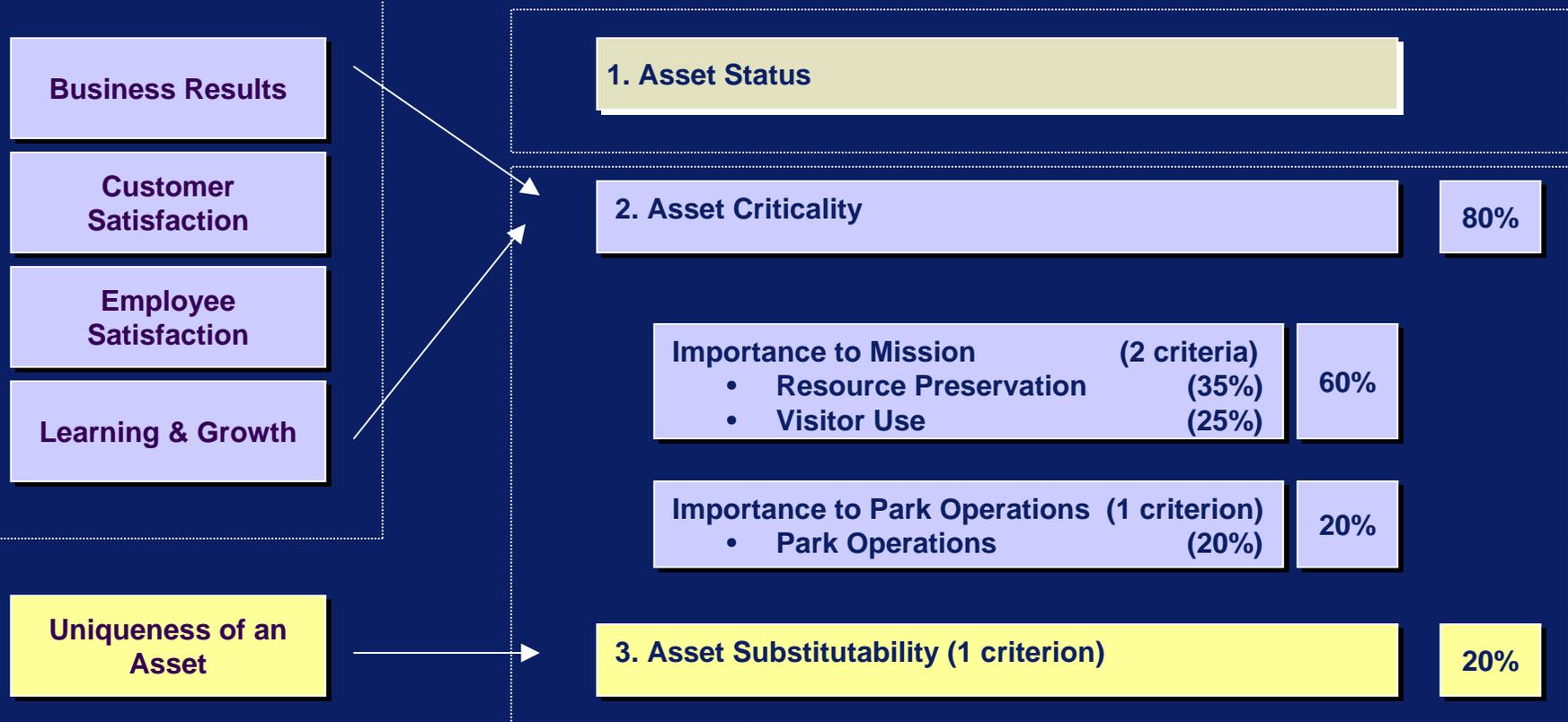


The resulting framework and criteria include a streamlined set of four questions relating to mission, operations and substitutability

BSC Framework



Revised API Worksheet



There are several organizational benefits of a set of “balanced” criteria tied to the NPS mission and operations

- ▶ Linking to mission means everyone better understands the role of assets in the National Park Service’ mission, and the importance of sound asset management practices
- ▶ “Balanced measures” create transparency for competing elements of core mission, and reduce the political aspect of asset decision making (e.g., resource preservation vs. visitor use)
- ▶ Measures recognize the “forward looking” elements of the National Park Service’ mission (sustainability) as well as the day-to-day operations

The API address one of the “Critical Issues for Implementing a Long-Term Capital Asset Management Program,” that is, to clarify the message about asset priorities and their overall relevance to the organization mission ⁽¹⁾



(1) From NPS Program/Asset Management: Long Term View, August 2002

Going forward, the new methodology and process will achieve several NPS Asset Management goals

- ▶ **Creates ownership** of asset management decision-making outside of Facilities Maintenance
 - Participation by other divisions creates ownership of results...
 - ...this is also facilitated by the new criteria being directly linked to the core mission
 - Management buy-in via Park Superintendent “sign-off” of park unit APIs
- ▶ **Aligns asset priorities with strategic management priorities**
- ▶ **Measurement of asset condition and asset priority** (API versus FCI metric)
 - Prioritization of maintenance workload, including O&M, preventative maintenance
 - Prioritization of asset recapitalization needs, including deferred maintenance and component renewal
 - Identification of disposition candidates
- ▶ Feedback loop allows for **continuous process improvement** and the tools used to support the process (e.g., web-based instructions/scoring)



The Web-based API is tied directly in to the Facility Management Software System (FMSS) and can be easily adapted over time

Web-Based Navigation Through Criteria

Home Incomplete Completed Approved Reports Logout

Question 1 - Asset Status for Main Park Road

-- Introduction

1) Asset Status

2) Resource Preservation

a) [Natural](#)

b) [Cultural](#)

3) Visitor Use

4) Park Operations

5) Asset Substitutability

1) Go Back 5) Save and Continue -> Skip Question

6) [Asset Adversely Impacts the Park Resources?](#) No

[Click Here to Apply Worksheet Answers from Another Asset's Completed API](#)

4) Enter Comments Below:

2) [Operational](#)

- Asset is occupied and used in support of the park mission and operations, or asset is not operational but supports the park mission and operations as a "maintained asset."

3) [Operational / Obsolete](#)

- Asset that is operational (see definition under 'Operational' Pulldown Option) and obsolete/functionally deficient for any reason, including:
 - Asset is undersized for its current use (does not meet functional demands/requirements.)
 - Asset does not meet applicable codes and regulations.

3) [Planned](#)

- Asset that is planned or under construction, from initial planning stages until the new asset has been accepted by NPS (at which time the asset becomes operational.)

[Excess](#)

- Asset does not meet the park's mission or is not required for operations (although it may be convenient to use.)

Complete Descriptions, Clearer Definitions, and Examples Provided



In addition to the Scorecard, the API Core Team developed a scoring process to ensure park management is more involved

Step
1A

Resource Preservation

A “Resource Preservation Working Group” scores all assets for the Resource Preservation criterion based on the definition and examples provided. Some groups of assets with no significant differences in importance could be evaluated as a group. The results would be identified as “preliminary” scores assigned prior to the Management Team Meeting.

Step
1B

Visitor Use

A “Visitor Experience Working Group” scores all assets for the Visitor Experience criterion based on the definition and examples provided. Some groups of assets with no significant differences in importance could be evaluated as a group. The results would be identified as “preliminary” scores assigned prior to the Management Team Meeting.

Step
1C

Park Operations

A “Park Operations Working Group” scores all assets for the Park Operation criterion based on the definition and examples provided. Some groups of assets with no significant differences in importance could be evaluated as a group. The results would be identified as “preliminary” scores assigned prior to the Management Team Meeting.

Step
2

Management Team Meeting Scoring Work-session

The Park Management Team reviews and validates the preliminary scoring as completed for the “Mission” and “Operations” criteria. Then the Park Management Team works through the substitutability decision support framework to assign an **Asset Substitutability** criterion score. Some groups of assets with no differences in scoring (entrance kiosks, comfort stations) could be evaluated as a group to determine their substitutability.

Step
3

Final Scoring Approval – Park Superintendent

Using the results of the Park Management Team Meeting, a report is generated with the overall scores in order, both overall and by asset type. The approval process includes the Superintendent signing-off on results, and the Management Team developing a list of any issues or questions that should be addressed by NPS PFMD to enhance the API process and tools.



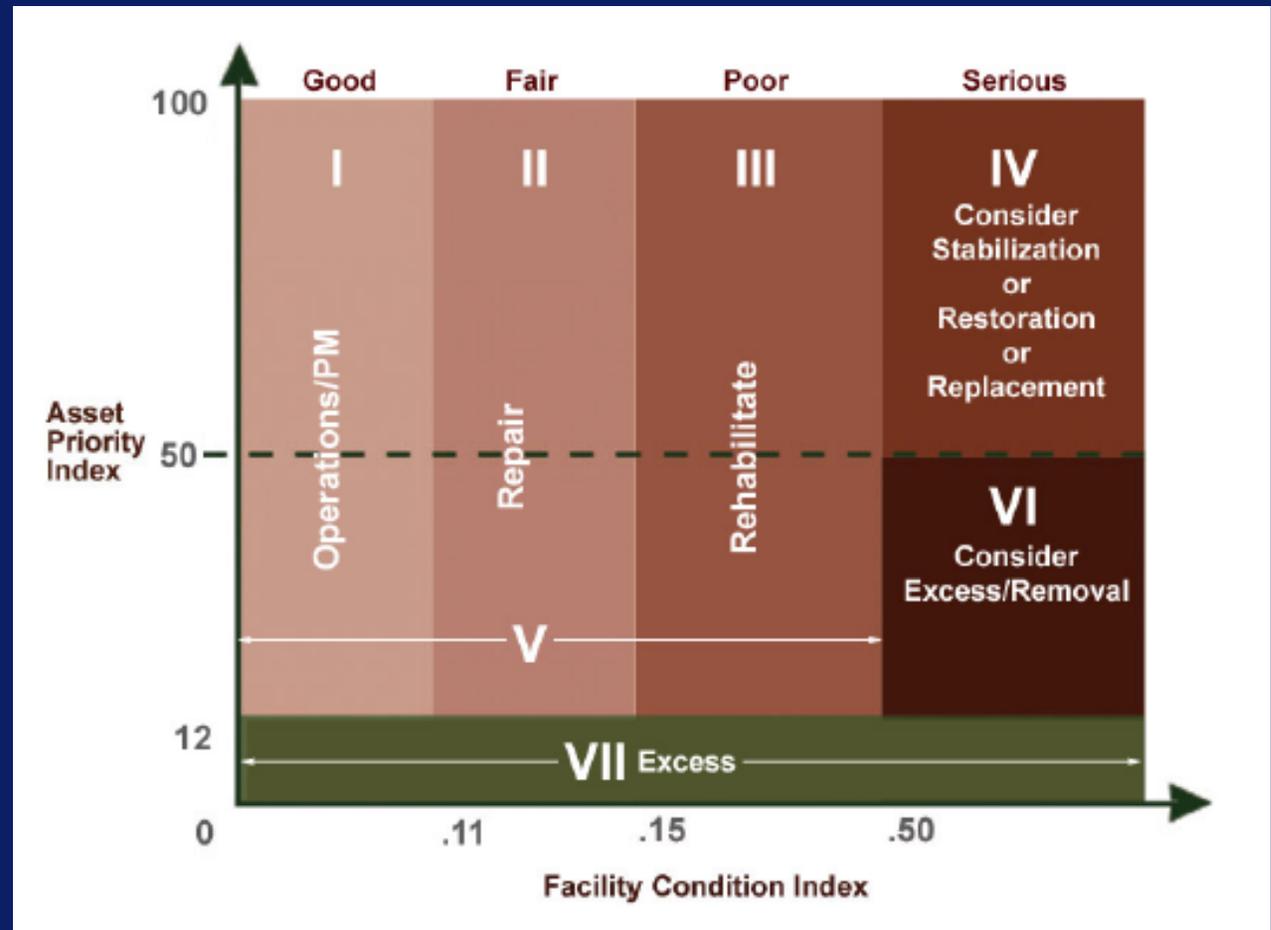
The project team compiled a series of lessons learned as a result of the API revisions

- ▶ Balance between a desired quick roll-out of new API and ensuring product is a significant improvement
- ▶ Include SMEs in the process to create buy-in
- ▶ Provide adequate background and translate “asset management” for SMEs
- ▶ Conduct a pilot and choose the right mix of pilot sites
- ▶ Enlist the support of field experts – they are invaluable



The next step will be the application of the API to strategic decision making within NPS

- ▶ Prioritizing recapitalization requirements (i.e., priorities for spending down the maintenance backlog)
- ▶ Portfolio decision-making (e.g., disposal of assets, linking to General Management Planning process)



In summary, the API is a critical component of the NPS Asset Management Program and Strategy

- ▶ Creates ownership of asset management decision-making outside of Facility Management Division
- ▶ Aligns asset priorities with strategic goals of the NPS
- ▶ Provides data-driven, objective portfolio metrics (API vs. FCI)
- ▶ Enables ongoing process enhancements via web-based tool

