

USACE Infrastructure Strategy: UIS Overview and P3 Review

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March 3, 2016



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Challenges and Opportunities

- **Infrastructure Investment = Global Challenge**
- **Corps Civil Works Portfolio: 3,000+ Operational Projects, with Replacement Value of Approx \$268B**
- **Corps Civil Works Asset Classes are Diverse**
 - Flood & Coastal Storm Damage
 - Coastal and Inland Harbors
 - Inland Waterways
 - Hydropower
 - Dam & Levee Safety Programs
 - Water Storage
 - Aquatic Ecosystems
 - Water-Based Recreation
- **Demands for CW Infrastructure Maintenance, Operations, and Capital Investment are Expanding**
 - Civil Works New Construction Backlog → \$ 60B
 - ASCE: Dams, Levees, IWW's = "D" → \$140B
- **CW Infrastructure Systems Aging, Experiencing Negative Performance Trends Across Portfolio (Serviced by ~\$4.6B Annual Budget Nationally....)**



Civil Works Transformation

Infrastructure Strategy Components



Infrastructure Strategy

Alternative Financing

Life Cycle Management

Asset Management

- **Asset Management:** Assets identification, assessment of conditions/reliability, categorization
- **Life Cycle Portfolio Management (LCM):** Ensure future systems' viability through risk assessment and management, funding prioritization in a systems decision making process
- **Alternative Financing:** Identify alternative financing mechanism and options to leverage funding to increase infrastructure investments



Life Cycle Portfolio Management Approach

Asset Visibility → Asset Condition + Consequences of Failure = Risk → Investment Priorities

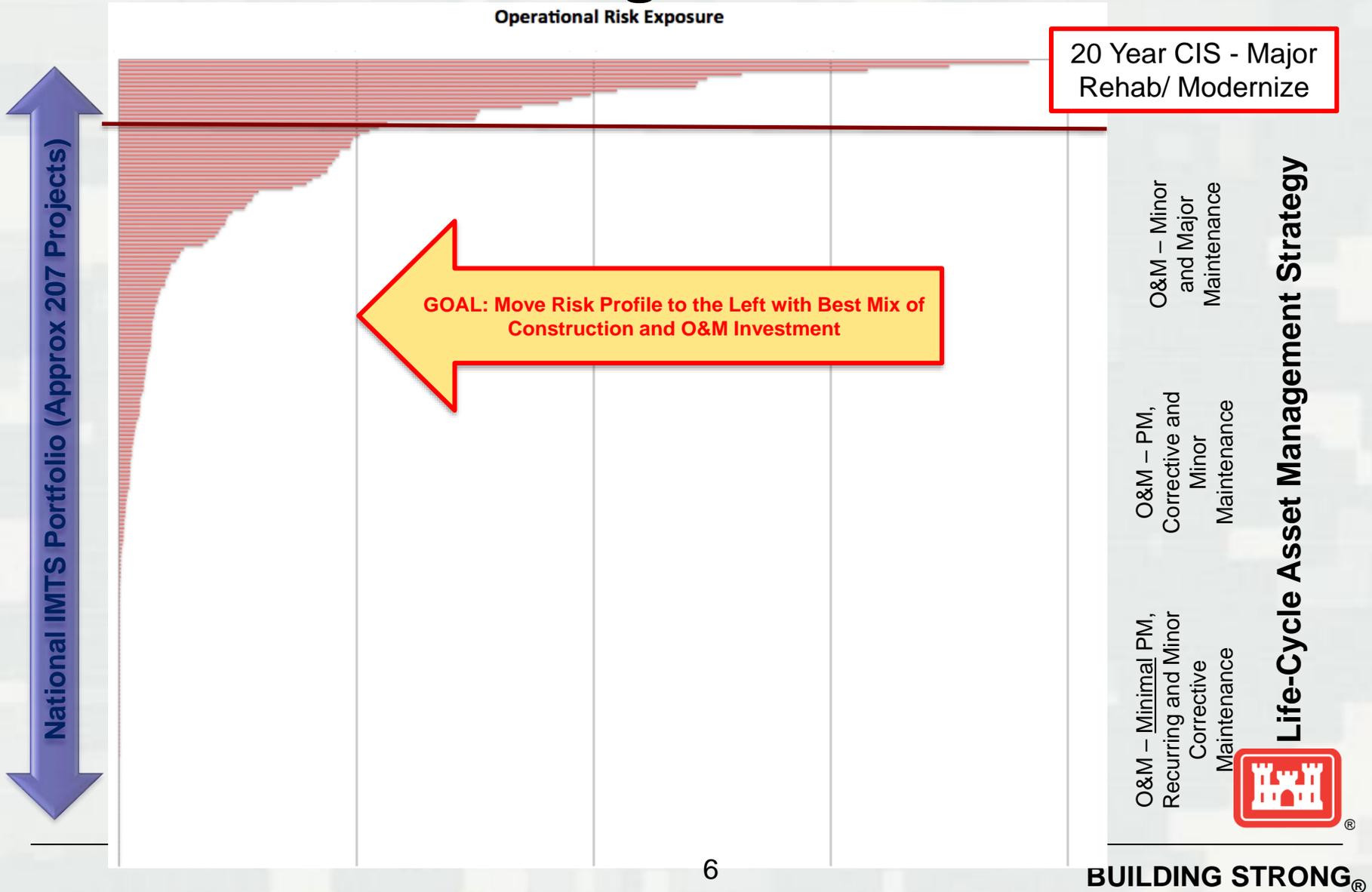
Asset Type	Requirements/Execution				Assessments/Planning								Analysis/Budgeting											
	Asset Visibility				Condition	Mission		Risk					Portfolio											
	MMIP Phase 1 & 2 (Inventory)	MMIP Phase 3 (Work Orders & Work Flow)	MMIP Phase 4 (PMMP)	MMIP Phase 5 (Supply Chain Mgmt)	Baseline OCA	Consequences / Benefits	Safety (RAC)	BL 5x5	Operations 5x5	ORA v1.0	Common Value Model (with ERDC, IWR)	ORA v2.0 (using Common Value Model)	Enterprise Risk Model	Operational Risk Exposure	AMPA v1.0 (FY16 budget pilots)	AMPA v2.0 (FY17 budget)	Watershed Data Integration (with IWR, CECI, ITL)							
L&D	30-Sep-14	30-Sep-15	30-Sep-16	30-Sep-17	Tier 2 (highest criticality)	FY15	FY15		FY15	Nav WB	FY14	FY16	FY14	FY15	FY16	FY16	FY15							
Coastal NS																								
Coastal SDRS																								
Channels																								
FRM (non-MR&T)									9/30/2016*	FY14	FY15		FY15	FY14				FY14	FY15	FY14				
Hydro (powertrain)													FY15	HMI				FY14	FY16	FY16				
Hydro (BP critical assets)									FY15					FY15				FY14						
Bridges													FY15	FY15				FY15						
Rec										FY15	FY15		FY15	FY15				FY15						
ES									30-Sep-17	FY15	FY15		FY15	FY15				FY15						

Legend	Acronyms	Upcoming Actions
 Budget EC Requirements	MMIP - Maintenance Management Improvement Plan	MSC Webinars Training - Ongoing
 Collaborative (Key Enablers)	OCA - Operational Condition Assessment	Use of LCPM tools & processes for Navigation FY17 budget build
 80-100% Complete	ORA - Operational Risk Assessments	AMPA implementation & evaluation
 26-79% Complete	AMPA - Asset Management Portfolio Analytics	Improving MMIP: revising Phase 1 & 2 data and prepping Phase 3
 0-25% Complete		

LCM = Different Thinking = Culture Change



Integrated Investment Strategy Inland Navigation Portfolio



Hydropower System Risk Profile

Hydropower Modernization Initiative Outputs

Hydropower Project Risk

USACE Hydropower Portfolio, Less BPA Plants (54 Projects)

Major Rehab?

GOAL: Move Risk Profile to the Left with Best Mix of CG and O&M Investment

O&M – Minor and Major Maintenance

O&M – PM, Corrective and Minor Maintenance

O&M – Minimal PM, Recurring and Minor Corrective Maintenance

Life-Cycle Asset Management Strategy



National Research Council Findings

- NRC Suggests Appropriate Maintenance Investment Range of 2-4% PRV
- FY 15 USACE Infrastructure Plant Replacement Value* (PRV) = \$268B

Est FY15 PRV =	\$268,000,000,000	% PRV	
NRC "High" (4%) =	\$10,720,000,000	4.00%	← Fiscally Impossible
NRC "Low" (2%) =	\$5,360,000,000	2.00%	← Exceeds Corps TOTAL Budget
TOTAL FY15 O&M Budget =	\$2,600,000,000	0.97%	← < 1%, Incl "O"
O&M Allocated for Just Maintenance =	\$618,500,000	0.23%	← <i>Current Reality and WHY O&M Efficiencies are SO Important</i>

Akin to buying a \$30,000 car and spending \$69 annually on maintenance and repair for its life, with no warranty service

Like Other Agencies, the Corps is Not Close to NRC Recommendations... EVEN IF O&M is Optimized...this is a National Infrastructure Priority



Key P3/P4 Principles

■ P3/P4 Background and Operating Context

- ▶ P3/P4 Not as Mature in US: Municipal Bond Market, Unique US Risk Profile
- ▶ P3/P4 is Essentially Another Acquisition Tool, Though Complex & Longer Term
- ▶ P3/P4 Cost of Money and Investor ROI, and Primacy of Federal/Taxpayer Equities
- ▶ P3/P4 Application in Water Resources Context is Presenting Challenges

■ P3/P4 Can Help the Corps/Sponsors Address Two Critical National CW Infrastructure Challenges

- ▶ Existing Infrastructure: Sustain Performance, Extend Service Life, and/or Buy Down Risk for the Nation
- ▶ New Infrastructure: Accelerate Delivery, Reduce Life Cycle Costs and Achieve Earlier Accrual of Project Benefits to the Nation

■ Three Primary P3/P4 Revenue Generation Mechanisms

- ▶ User Payments
- ▶ Availability Payments (Federal Budget)
- ▶ Commercial/Ancillary Revenues



Corps' P3/P4 Journey

- **Ongoing P3/P4 Demonstration Program (w/i Existing Auth/Policy)**
 - ▶ Most Mature: Fargo-Moorhead Metro (FRM Construction)
 - ▶ Most Sophisticated: Illinois Waterway (Inland Navigation O&M)
- **Administration Interest**
 - ▶ OMB
 - ▶ White House Build America Initiative → Water Infrastructure
 - ▶ April 2015 Treasury Report → *“....years of underinvestment in our public infrastructure have imposed massive costs on our economy.”*
- **Sponsors and Stakeholder Interest**
- **Challenges and Issues Under Discussion**
 - ▶ Revenue Generation and Ring Fencing; Budget Ranking and Scoring



Current Organization and P3 PMO Function

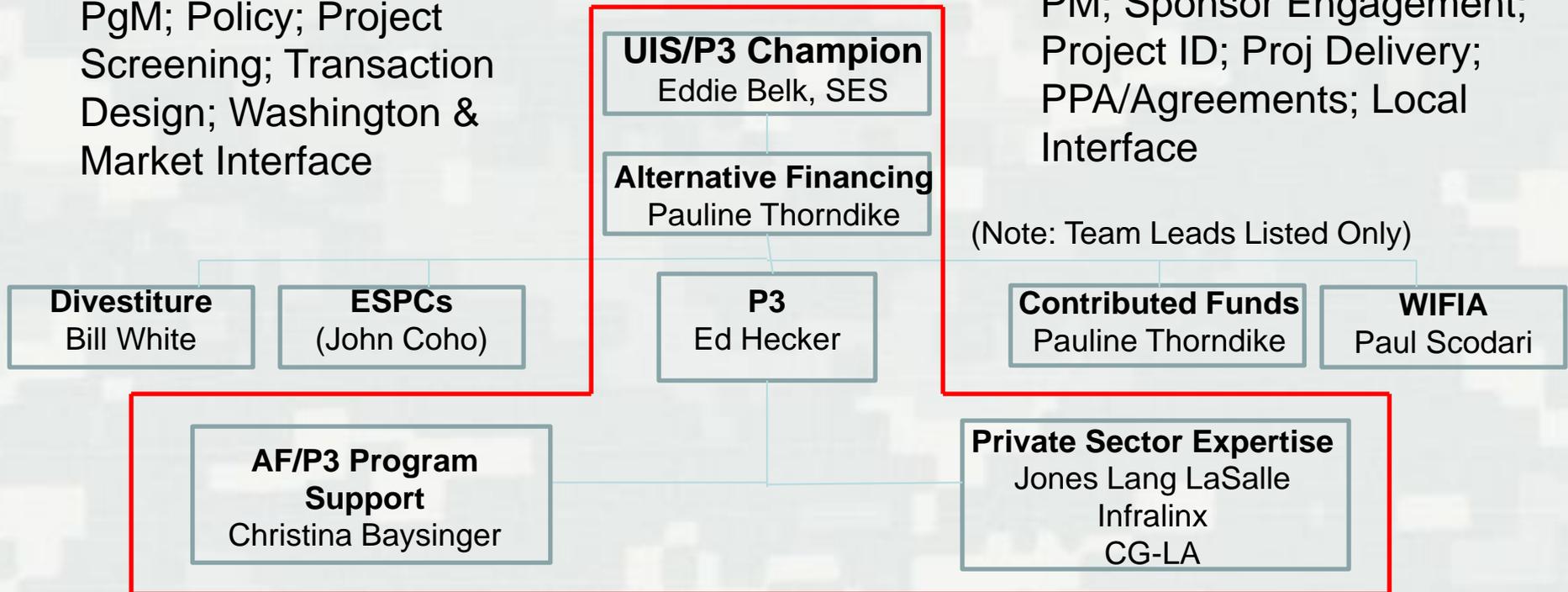
HQUSACE P3 Role:

PgM; Policy; Project Screening; Transaction Design; Washington & Market Interface

Current PMO

Field P3 Role:

PM; Sponsor Engagement; Project ID; Proj Delivery; PPA/Agreements; Local Interface



Recommendation:

Continue current PMO model
(based on a review of RCI, Energy Initiatives Task Force, FHWA Office of Innovative Programs)

Decision criteria for future PMO model:

- Authorities fully vetted and approved
- Stakeholders in agreement
- Guidelines and procedures in place
- Credible deals identified and approved



P3/P4 Challenges

- **Payment Mechanisms, Availability Payments**
 - ▶ Inability to Make Commitments on Future Appropriations
- **Budget Scoring**
 - ▶ Scores Full Federal Project Cost Up Front in First Year
- **Revenue Generation and Ring-Fencing**
 - ▶ Ability to Collect, Retain and Reinvest Fees/Charges
- **Budgetability**
 - ▶ Prioritization of Projects Within Current Budget Policy (Benefit-Cost Ratio)



Section 5014 of WRRDA 14

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- ▶ Implementation Guidance Issued 30 Sep 15
- ▶ No Implementation or Further Action on Pilot Projects Unless/Until Appropriations Provided

■ Section 5014.....

- ▶ Sets Forth a Process for Implementing a P3 Pilot Program
- ▶ Allows for Design/Build/Finance P3 Structure
- ▶ Focus on Authorized Backlog (Construction)
- ▶ Encourages Greater Non-Federal Investment in Infrastructure



AF: How You Can Help

- **Communication and Engagement.** Educate and Inform Internally and Externally
- **Contributed Funds.** Work with vertical team to meet goal of 120-day processing timeframe (team effort). Ensure sponsors aware of contributed funds policy and new model MOAs
- **Divestiture.** Consider Divestiture Opportunities Across Your Region Where No Major Rehab Work is Required
- **ESPCs.** Build on Successes to Date
- **P3/P4 Program.** Continue to Mature Existing Demonstration Portfolio; Consider Further Opportunities within Budgeted Project Portfolio (>2.5 BCR) and During Feasibility Phase; Leverage HQs Team/Private Sector Expertise



Closing Thoughts

- **Addressing the Nation’s Infrastructure Investment Needs and Challenges is a Shared Responsibility...Not Just About Current and Future Corps “Portfolio”**
- **Infrastructure Investment: Financial (and Generational...) Challenge**
- **P3: Another Tool in Toolbox...Not Magic (and Not Entirely New)**
- **P3 is Not Just About Money...It’s About Transferring Risk that will Accelerate Project Delivery and Accrual of Benefits to Achieve a Lower Lifecycle Cost**
- **The Corps Doesn’t Deliver Anything by Itself... Critical that We not Lose Focus on Traditional Resourcing Engines and Our Local Sponsors as We Leverage Alternative Financing**
- **Need Some Creative “Game Changers” to Develop New Ways to Address Infrastructure Needs (Both Existing and New Systems)...What are YOUR Ideas?**



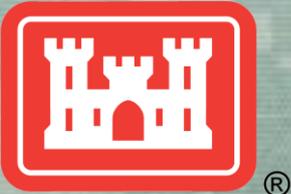
Planning and Alternative Financing

Why Planners Should Consider Alternative Financing:

- Alternative Financing helps achieve goals of Planning Modernization (fund to completion, etc.)
- Alternative Financing mechanisms help us do more with the same amount of federal dollars
- Alternative Financing affords another way to consider a local financing plan
- Alternative Financing enhances and expands the scope of stakeholder relationships
- Early communications of Alternative Financing opportunities in the feasibility stage can result in greater possibility for cost-share sponsor to provide funds for project execution



QIA



Summary

- Alternative Financing is a key component of our overall Infrastructure Strategy and Civil Works Transformation. It enables the Corps to continue to meet water resources infrastructure needs of the nation in a very fiscally constrained federal climate by leveraging private sector capital and expertise.
- The Corps is exploring alternative financing approaches to deliver resilient, reliable and sustainable water resources infrastructure, with the goals of sustaining performance, extending service life, and buying down risk for existing infrastructure; and accelerating delivery, reducing life cycle costs, and achieving earlier accrual of project benefits for new infrastructure.
- The Corps Alternative Financing effort features five lines of effort:
 - Public Private Partnerships (P3) & Public-Public Private Partnerships (P4)
 - Divestiture
 - Water Infrastructure Finance & Innovation Act (WIFIA)
 - Contributed Funds, Advanced Funds, and Accelerated Funds
 - Energy Savings Performance Contracts (ESPCs)

