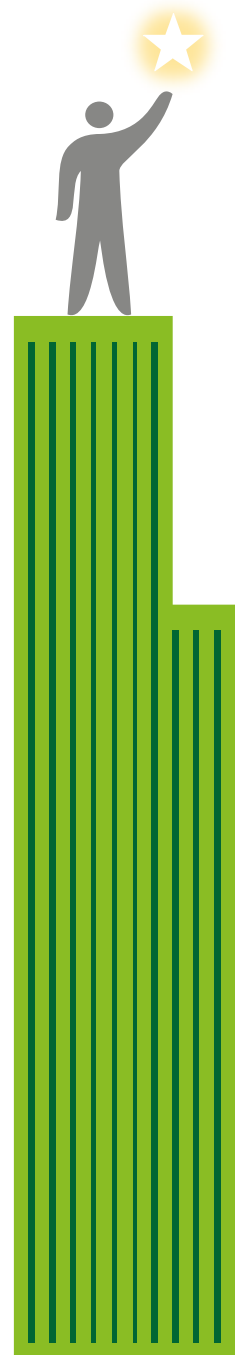
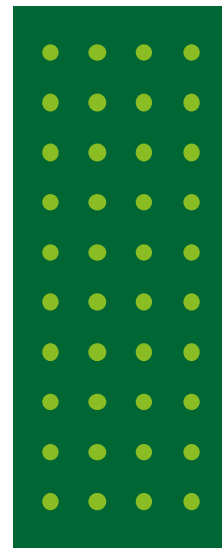


# What about “M” in DBFM?

*June 2014*

*Claudio Andreetta*

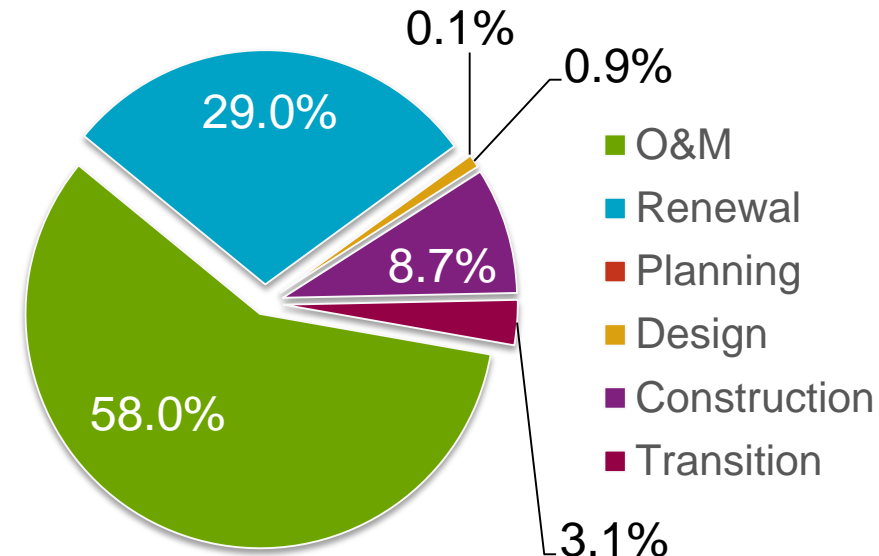
*Director, P3 Business Development  
Johnson Controls*



# The Value of Maintenance in a P3

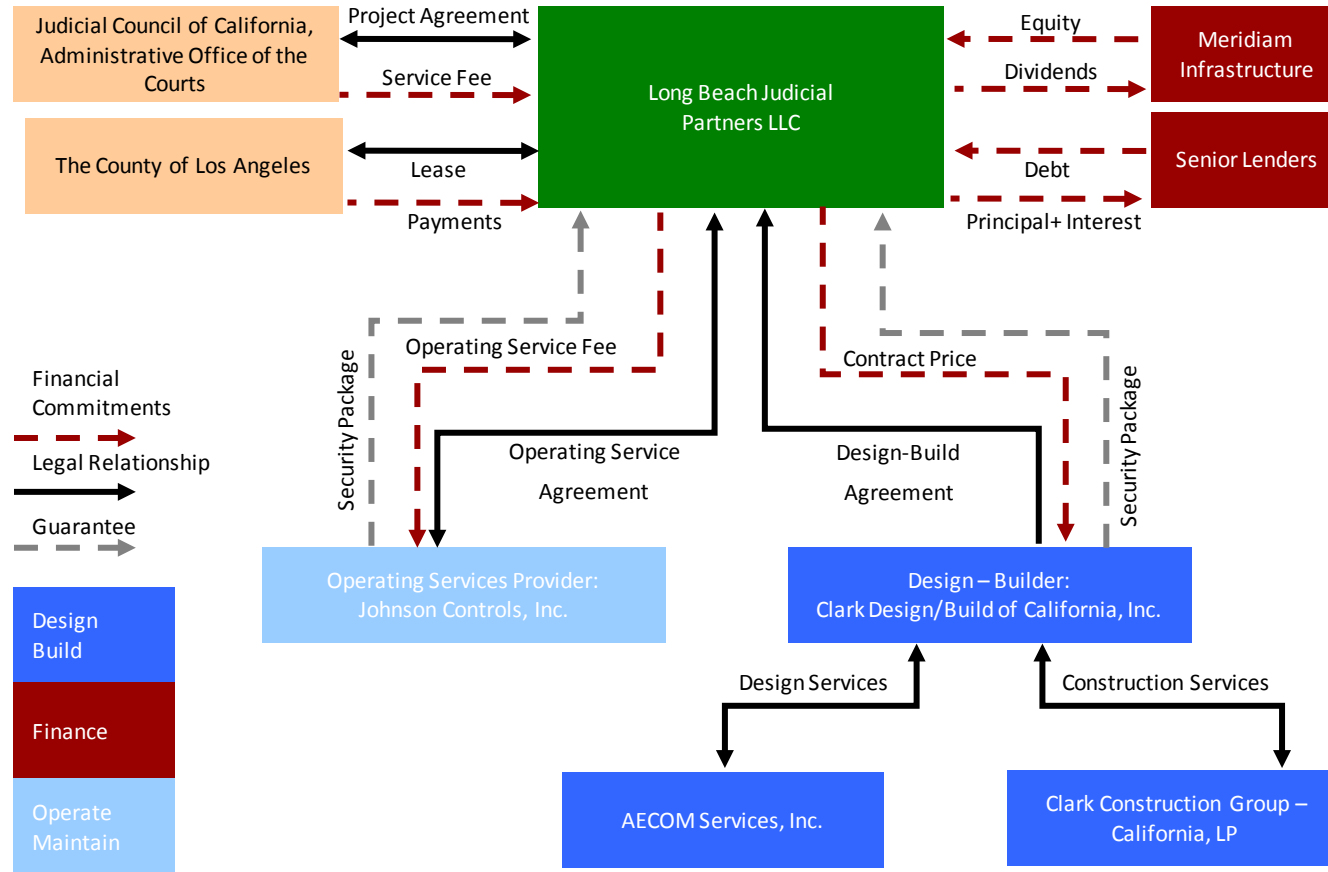
- O&M represents the biggest facility expenditure over the life of a building – Maintenance should be a big driver in the VfM analysis.
- a well maintained facility provides a safe, comfortable environment which increases the productivity of the occupants
- extends asset life
- FM providers role is to staff & program for maintenance & renewal throughout the concession
  - Maintenance Plan
  - Life Cycle Plan

## 40 Year Facility Cost of Operations<sup>1</sup>



Note 1: From July 2010 Healthcare BIM Consortium

# Facility Management Services Agreement



# Facility Management Services Agreement

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## The General Provisions

- ProjectCo must operate, maintain, repair, and manage the Project for the Concession Term in exchange for a Service Payment
- ProjectCo will transfer, on a back-to-back basis with the Project Agreement, all O&M risks and obligations to FM Service Provider
- Non-performance may result in deductions to the Service Payment
- In an Event of Default by FM Provider, ProjectCo may assign a replacement
- On the Expiration Date, the Project will be handed back to the Sponsor at predefined condition

# Guaranteed Operating Costs

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M is for Maintenance and provides the **risk transfer** to the private sector

## Facility Management Costs

- Hard and/or Soft Services + Ancillary Services
- Fixed for term with CPI Index

## Energy Consumption Guarantees

- Either Day 1 or Bedding-In Period Guarantees
- Painshare / Gainshare concepts

## Life Cycle Replacement Costs

- Guaranteed for Contract Term
- Includes Timing Risk
- Hand back Condition accountability

## Improved Service Delivery

- Service Penalties ensure ongoing operations
- Payments based on Availability



# P3 model drives strategy changes

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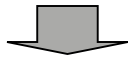
P3 has brought about behavioral changes by looking at the long term performance of a facility and the value for money drivers

FM plays Design-Assist role for energy/O&M input

FM guarantees Energy Consumption Model

Guaranteed Life Cycle Cost

Availability based Payments



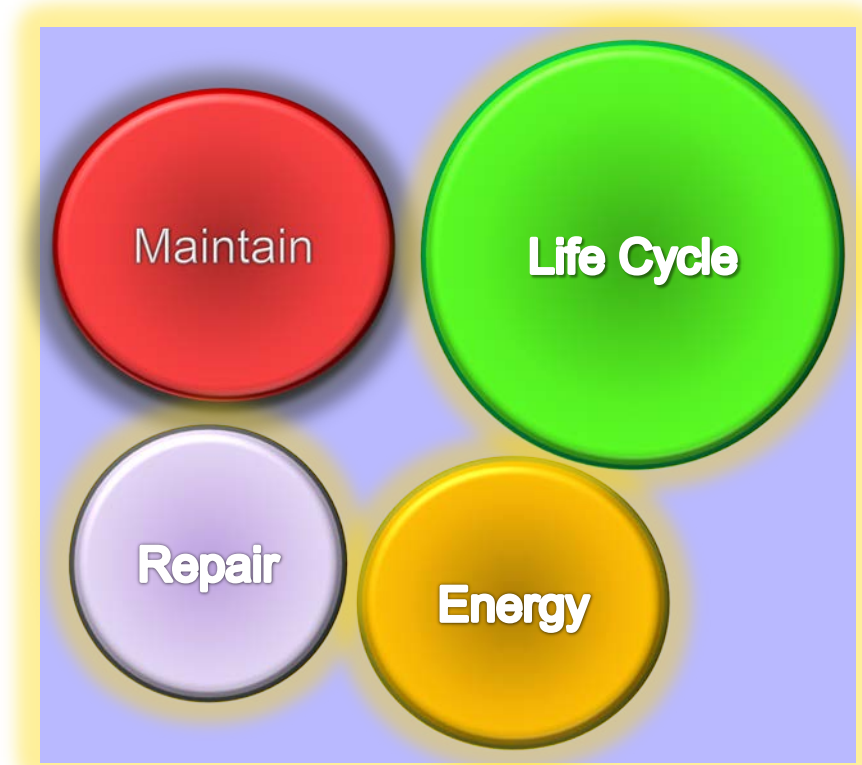
## **Drives Innovation in Maintenance Approaches**

Predictive Technologies

Proactive Approach

Corrective Maintenance

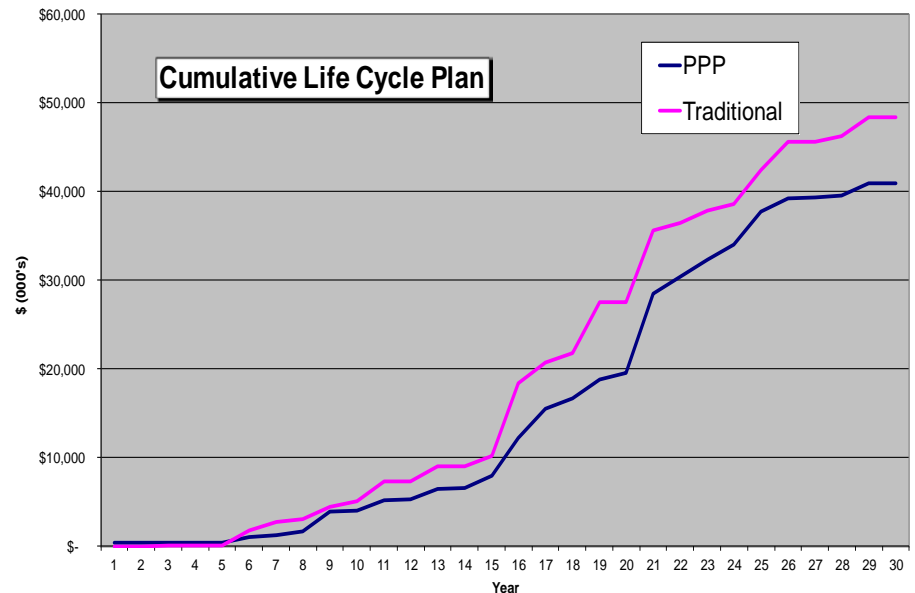
Application of Technologies that drive lower NPV



# Life Cycle Delivery Approach

Life Cycle costs are fixed from bid day and any shortfalls are the responsibility of the Service Provider

- Capital Replacement - Iterative Process
  - Determine Future Capital Expenditures
  - Analyze the NPV impact
  - Reevaluate or confirm initial selection
- Provide proven, higher quality technology
- implement advanced fault detection tools
- Aggressive Planned Maintenance program to extend equipment life



# Clear Performance Responsibility

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M is responsible to meet all Key Performance Indicators for service delivery or face payment deduction or fines

- Performance measures are very clear in the Project Agreement which holds the FM clearly responsible and financially at risk
- Service penalties are quantitative per occurrence which can be deducted from payment
- Penalties are scalable and weighted in favor of the Owner up to including deduction for the full amount of the monthly service payment
- Penalties make corrective action happen as they are a motivator to find solutions
- Financial assurance held by Lines of Credit which greatly exceed operating budget.



# Service Payment Deductions

## Key Performance Indicators

- Calls Responded to in 15 minutes
- % of Scheduled PMs Completed
- Asset Value maintained above threshold

## Availability Concept

- Facility Maintained in Required tolerances
- Linked Functional Units

### Example:

- Prisoner elevator is down
- Elevator serves holding cells between courtrooms
- 4 floors are affected
- space is unavailable for 5hrs
- holding cells and all linked space all deemed unavailable.

periods unavailable	2 (2 hr period)		
floors affected	4 floors		
	<b># of Units /</b>	<b>Unit</b>	<b>Total</b>
<b>Functional Unit</b>	<b>floor</b>	<b>Deduction</b>	<b>Deduction</b>
Courtrooms	2	\$384	\$6,144
Holding Cells	7	\$96	\$5,376
Interview Rooms	2	\$96	\$1,536
Attorney/Client Room	4	\$96	\$3,072
Elevator Unavailability Penalty			\$5,000
<b>Total</b>			<b>\$ 21,128</b>

# Guaranteed Asset Condition

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Project Agreement obligation requires usable life at the end of the contract term which is delivered by a guaranteed asset condition at hand back

- Third party inspection to determine if action is needed to bring the Project up to Hand back Requirement standards
- Industry standard measurement, Facility Condition Index FCI used to quantify the asset condition
  - Long Beach Court House a FCI of .15 is mandated
- Hand back to Public Sector allows risk transfer with the confidence that there is plenty of useful life remaining in the equipment and building systems

# Improved Service Delivery

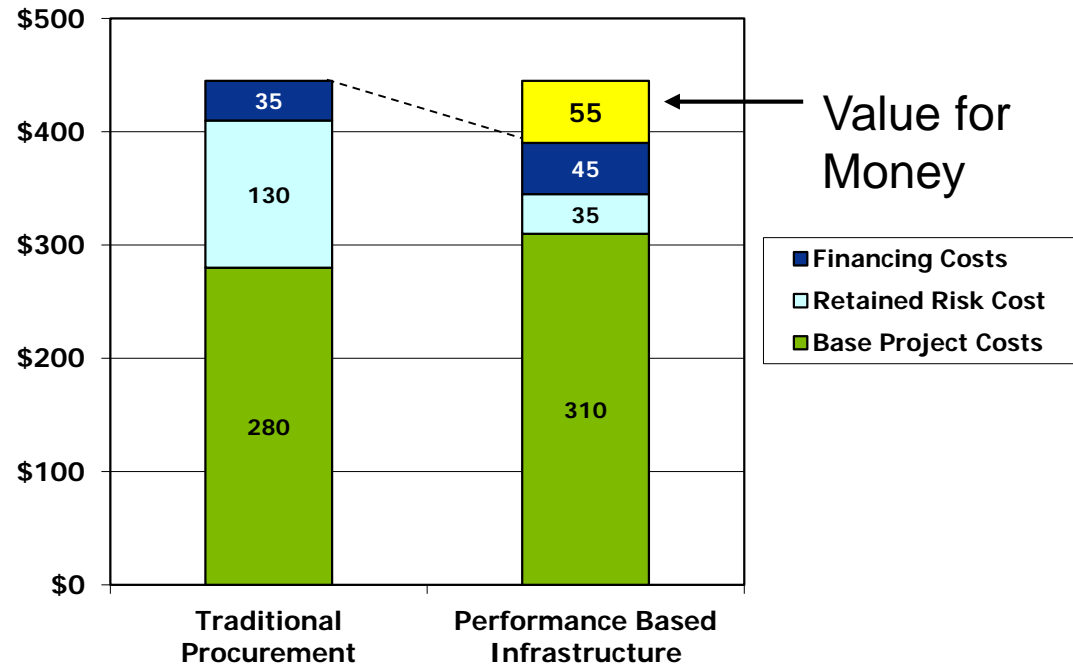
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M is expected to deliver at a higher standard of Operations and Maintenance than could be delivered under the Public sector delivery model. How is this possible?

- Penalty structure encourages the right behavior from the FM provider
- Failure is not an option as financial penalties are stiff
- Utilization of global based best practices to ensure operational outcomes
- Thoroughness and leadership around tool box in Quality & Reporting, Maintenance Management and Energy Management
- Improved access to cash necessary to maintain equipment proactively to ensure life cycle forecasts. Less chance of break down occurrence.

# Value for Money Analysis

- An analytical tool to compare project delivery by traditional construction vs P3 approach
- includes total project costs including risk of a facility over the contract period
- normally conducted by an independent firm



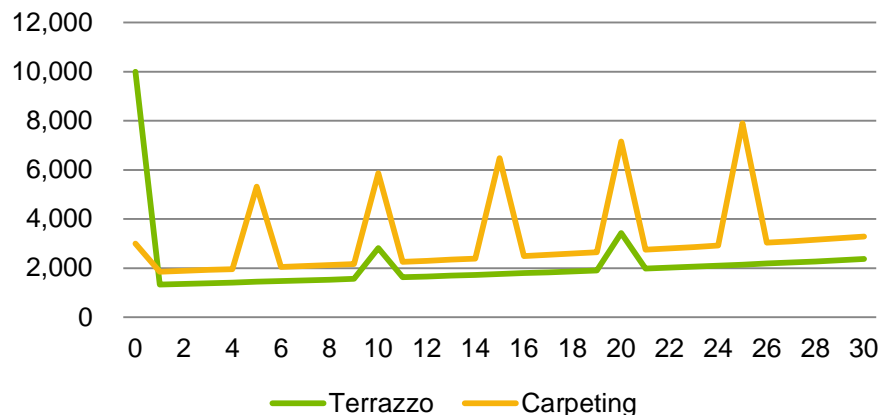
- Base Project costs include; construction, operations & life cycle costs
  - competitive P3 procurement creates a driving force for innovation in construction techniques and operating efficiencies
- Retained Risk costs include additional costs incurred related to omissions in the original delivery strategy
- Long Beach Court House VfM ended up at \$25.97m or 3.5% NPC

# Innovation & Life Cycle Impact

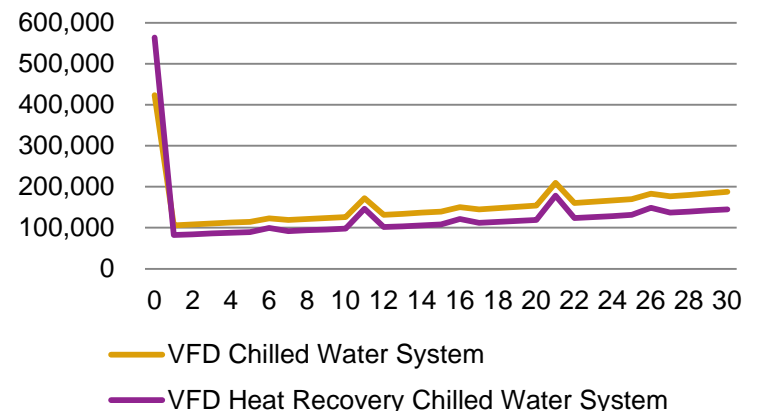


- Teams collaborate and compete to deliver the best 'whole of life' design
- Innovation in building systems yields a better quality building
- increases sustainability and reliability
- NPC analysis of life cycle expenditures – Lowest NPC delivers best value
- examples

## Flooring Systems



## Chilled Water System Innovation



# Performance Based Building Coalition



## Performance Based Buildings Coalition

- Industry association focused on raising awareness for P3 social infrastructure and market development
- 60 members to date
- Unlike the transportation sector, there are no special federal financing vehicles for public building construction, such as TIFIA and Private Activity Bonds (PAB).



To build upon the successful use of PPPs in the transportation sector, Congress is urged do the following:

- **Create a new category of PABs for public building construction that allows private investment to be combined with tax-exempt financing in a DBFM delivery model.**

