

***THE BUSINESS CASE FOR STRATEGIC
ASSET MANAGEMENT;
“Goals And Results To Date From
A Port Collaboration”***

***AAPA 2011 FACILITIES ENGINEERING
COMMITTEE SEMINAR***

***Erik Stromberg
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9 November 2011***

AGENDA

- ***What's Strategic AM?***
- ***Who's doing it? Why?***
- ***Approaches to SAM development;***
 - ***AAPA Port Collaborative Approach***
- ***Discussion***

BACKGROUND

- ***Financially, port authorities are on their own as perhaps never before***
 - ***Public capital less available***
 - ***Private capital more careful***
- ***Aging infrastructure, deferred maintenance, inconstant demand***
- ***Looming perfect storm—coming to your port soon(er or later)?***

NORTH AMERICAN PORT MANAGEMENT IMPERATIVE

- **North American public ports are:**
 - **Asset intensive public enterprises,**
 - **Established to fulfill often diverse public mandates,**
 - **Through self sustaining operations.**
- **Therefore, ports need to manage their assets in a manner that fulfills their role:**
 - **As responsible stewards of public resources,**
 - **Generating economic benefits to their communities,**
 - **Maximizing ROI,**
 - **At the lowest possible cost,**
 - **Over the life of the asset,**
 - **Within an acceptable risk regime.**

STRATEGIC AM

- What it is:

- *A business support process that assists port managers prioritize capital planning decisions based on the organization's mission and goals, through a systematic and functionally integrated assessment across the entire enterprise, supported by an improved understanding of asset value, performance, cost and risk over the asset's life cycle.*

- What it's not:

- *A maintenance program (necessary but not sufficient).*

WHY SAM?

- **PHYSICAL INFRASTRUCTURE AND EQUIPMENT**
 - *Aging infrastructure*
 - *Increasing demands port's asset base*
 - *Productivity and unplanned level of service declines*
 - *IT capabilities in place*
 - *SAMIEMSIERM>Sustainable development*
- **SUSTAINABLE BUSINESS PROCESS IMPROVEMENTS**
 - *Scarce capital and need for optimal investment strategies*
 - *Inadequate or unavailable information necessary for decisions: inventory , condition assessment or asset classification*
 - *Suboptimal processes necessary to prioritize investments*
 - *Conscious linkage between existing facilities and future demands*
 - *Run to failure leads to higher costs and longer down times*
 - *Retirements and the loss of “institutional knowledge”*
- **GOVERNMENT OR COMMERCIAL REQUIREMENTS**
 - *US Federal Executive Orders 13327, 13423, 13514*
 - *FASB 34*
 - *Privatization due diligence*

WHY NOT SAM?

- **Corporate culture—“we’ve got it covered”**
- **Insufficient or “silo’d” knowledge base**
- **Other priorities (“AM is on the front burner, and it sits there with 20 other front burner issues”)**
- **“What I don’t know won’t hurt me....?”**
- **Inertia—where to start?**
- **Up front commitment of time and money**
- **Consultants selling too much, or not the right stuff**
- **Lack of clear, feasible goals—why we doing this?**
- **Ain’t broke: North American ports faced for first time with generational, end of life-cycle condition for such a large percentage of asset base**

WHO'S DOING STRATEGIC AM

- **US federal agencies**

 - USCG**

 - USACE**

 - FHWA**

 - USN**

 - USAF**

 - GSA**

 - National Park Service**

 - NASA**

 - FHWA**

- **US and Canadian municipalities, counties/provinces**

- **Utilities**

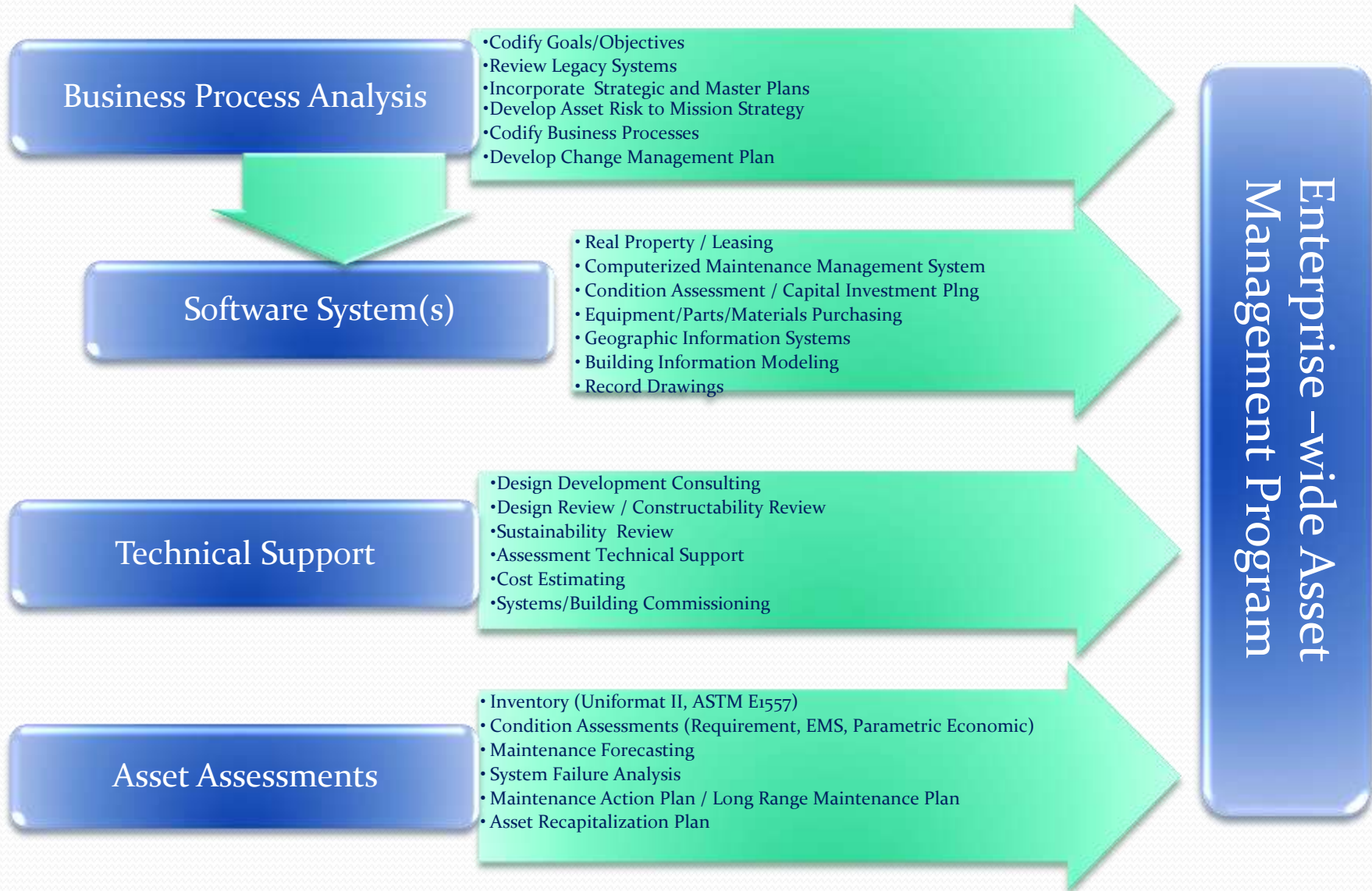
- **Railroads**

- **US and Canadian airport authorities**

- **International seaports**

- **North American seaports**

Successful AM Program



AAPA PORT COLLABORATION*

- ***Port Metro Van BC***
- ***Port of Portland***
- ***Port of Oakland***
- ***Port of Houston***
- ***NC State Ports Authority***
- ***Maryland Port Administration***

****NYINJ, NYC EDC, Seattle, Tacoma,
Great Lakes ports—U Wis***

SOME INITIAL QUESTIONS

- ***What is the inventory and condition of port assets and related infrastructure critical to the port's mission?***
- ***How can the port improve the way it currently is managing its assets?***
- ***Are current and planned initiatives and capital budgeting sufficient, or do they require modification, addition, or redirection?***
- ***What approaches have worked well with other ports and other industries, and which are most appropriate for your port?***

BENEFITS VARY BASED ON PORT CONTEXT

- ***Lower long-term costs for infrastructure preservation;***
- ***Improved performance and service to customers;***
- ***Improved cost-effectiveness and use of available resources;***
- ***A focus on performance and outcomes;***
- ***Improved credibility and accountability for decisions and expenditures.***

AAPA Economic Development Seminar

Strategic Asset Management

July 12, 2011



PORT OF OAKLAND

Jean Banker

Manager, Finance/Admin

Maritime Division

EVOLUTION OF BUSINESS MODEL

- ***From 1997-2007, focus investing in expansion and modernizing its container terminals and intermodal assets***
- ***Oakland is evolving from:***
 - ***Engineering focus to business development focus,***
 - ***From developer model of business to a true landlord model.***
- ***Results over last three years:***
 - ***Completed PPP with long-term business partner who will bear the cost of bringing terminal to state-of-the-art facility***
 - ***Three new state-of-the-art cranes: Tenant owned***
 - ***Negotiating with a private developer to develop a former army base***

THE PORT OF OAKLAND'S INTEREST IN SAM

- ***Provide an inventory of assets***
- ***Assess age, condition, replacement cost***
- ***Develop a risk assessment strategy to upgrade, replace, and expand***
- ***Provide a decision making tool for the board and senior management***



PORT METRO
vancouver

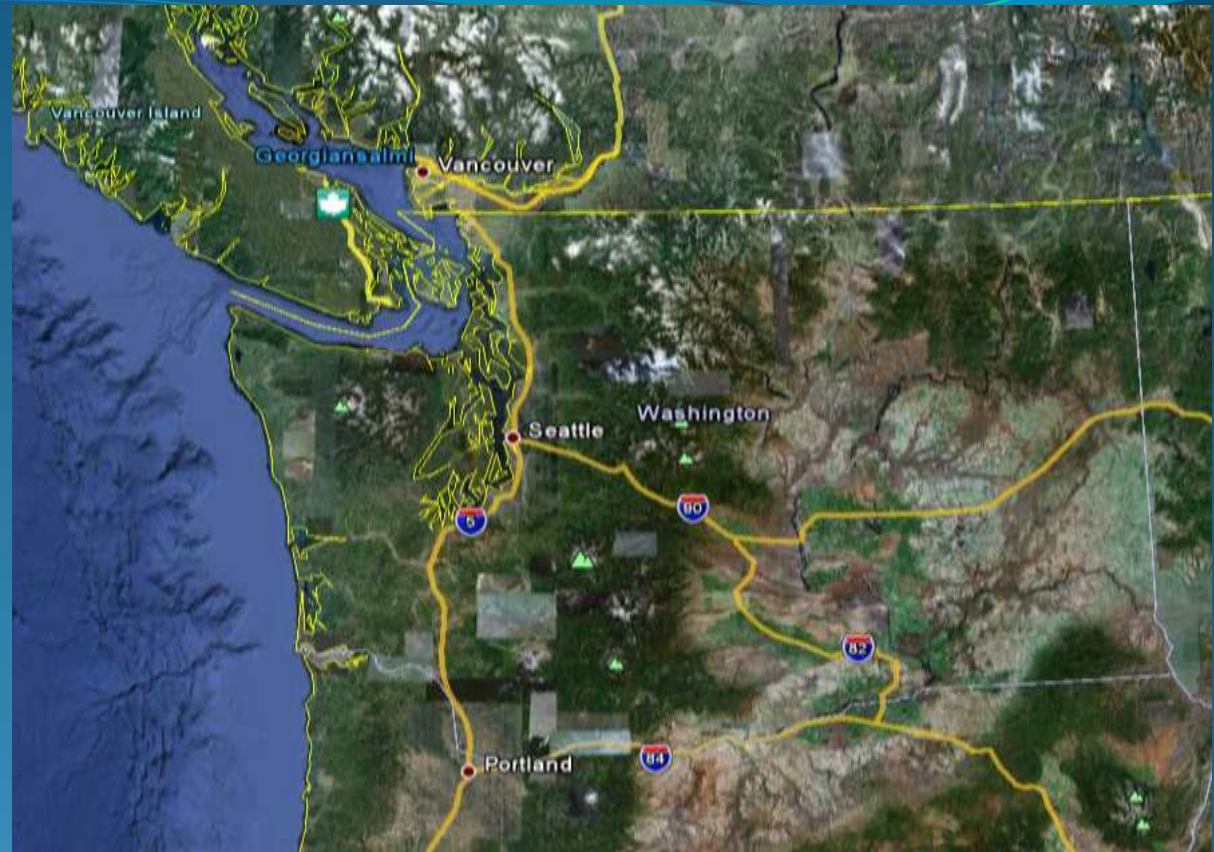
Infrastructure Asset Management at Port Metro Vancouver

Gary M. Tosh

A.M. Coordinator
Engineering Dept.

July 12, 2011

PMV



- ***Largest, busiest and most diversified port in Canada***
- ***Handled 118 million tonnes of cargo in 2010***
- ***28 major marine cargo terminals and 3 Class 1 railroads***
- ***600 km (373 miles) of shoreline, bordering on 16 municipalities***

SAM at PMV to Date

- ***Prior to 2005, no AM program existed***
- ***Infrastructure assets were inspected based on:***
 - ***Random observations***
 - ***Accident reports***
 - ***Intuition***
- ***In 2005 an engineer with AM experience was hired with the secondary goal of starting an AM program***
- ***Program started in 2008***

Next Steps at PMV

Level 1 condition inspection.

High level visual inspection

682 assets to be inspected by end of 2012.

Level 3 condition assessments.

In-depth engineering evaluation

Yearly budget of \$300,000/year

AM Directive

Levels of Service

Software needs analysis

Port of Melbourne



- ***Owns and manages a diverse range of infrastructure assets -- current total replacement value : AU\$1.8 billion.***
- ***Asset renewals, rehab and mtce: \$60–65 million (annual average)***
- ***Maintenance dredging: \$7 million annualised per annum (inc. capping)***
- ***Actively building on its asset management processes since 2008.***

CRITICAL STEP: 2000 POMC POLICY

PoMC shall adopt the following principles for the development and implementation of a robust and sustainable tactical (basic) and advanced asset management strategy.

Maintain a computerised asset management system which incorporates a comprehensive register of all of PoMC's infrastructure assets.

Maintain appropriate interfaces between the asset management system and other relevant corporate systems such as the property management system, the financial management system, the document management system and the Geographical Information System (GIS).

Develop a robust asset condition rating methodology framework and apply this to all relevant PoMC assets.

Maintain a structured inspection regime for PoMC's infrastructure assets to facilitate the timely reporting of defects and the development of work plans.

Maintain a costing and valuation history for all PoMC infrastructure assets and develop an appropriate unit cost framework to enable the development of asset renewal profiles.

Ensure infrastructure assets are maintained in a fit-for-purpose state.

Develop Asset Management Plans (AMP's) for relevant assets and asset classes.

Establish and manage scheduled and unplanned maintenance regimes and associated budgets so that assets are maintained in a condition suitable for their intended use.

Establish and manage appropriate performance or prescriptive based asset inspection and maintenance contracts with suitably qualified providers.

Ensure all relevant assets comply with appropriate Acts, Regulations, Standards and Guidelines.

Develop and maintain standard operational policies and procedures for PoMC assets where relevant.

Consider requests from users to apply special loads to assets, i.e. heavy mobile cranes on wharves, on a case by case basis.

Maintain appropriate backup systems for mission-critical assets.

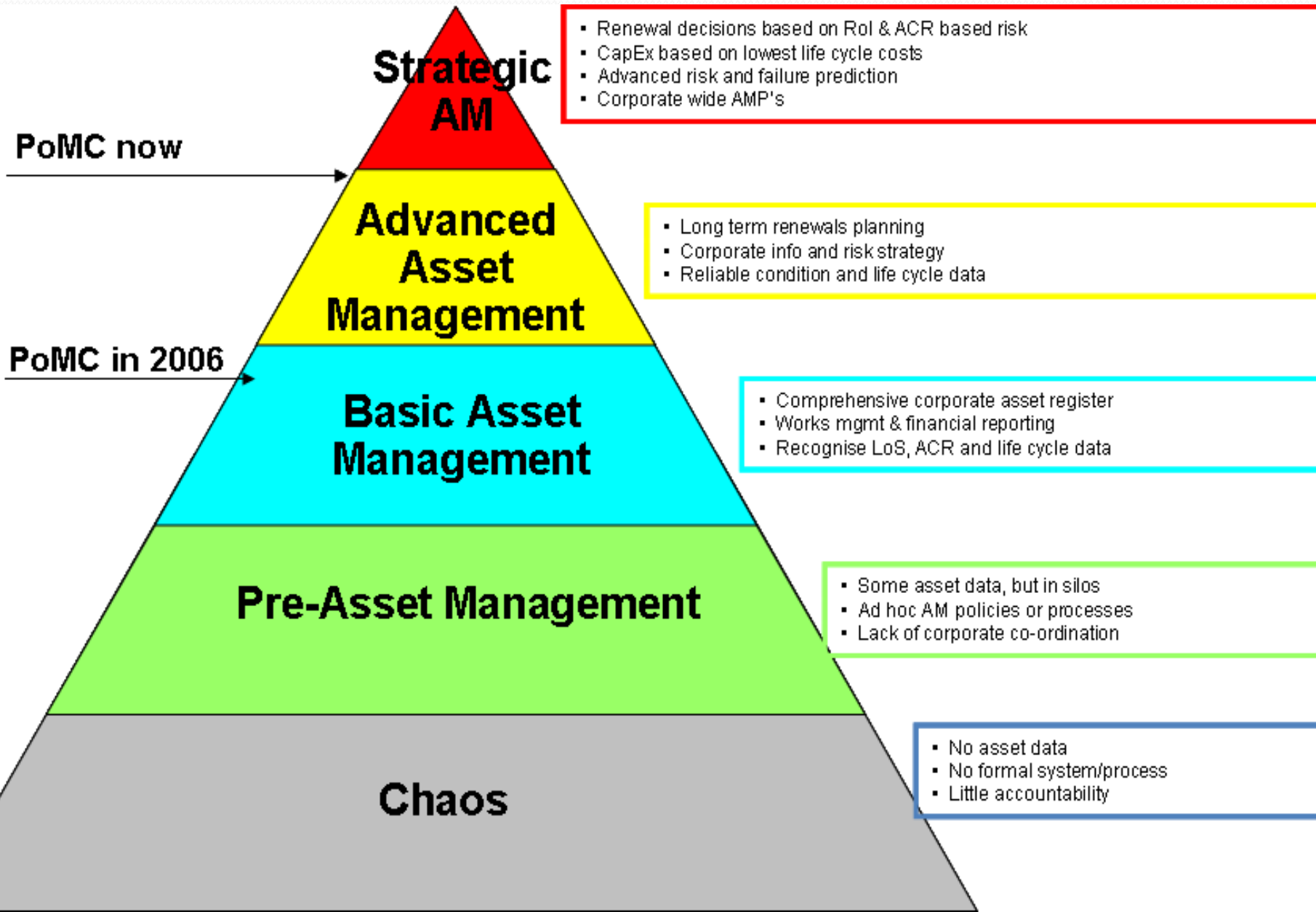
STRATEGIC AM at POMC

- **The key deliverables of the AM Strategy are to:**
 - **Develop asset renewal forecasts based on age, condition, level of service and risk.**
 - **Develop life cycle planning processes so as to understand and predict total cost of ownership.**
 - **Understand asset risk exposure and its influence on maintenance and renewal forecasting.**
 - **Develop optimized renewals decision-making processes so as to reliably determine optimal treatments and associated timings.**
 - **Embed asset management as a core business discipline within the business.**

FOUR KEY ELEMENTS

- ***Renewals Modelling***
- ***Risk Management***
- ***Life Cycle Planning***
- ***Optimised Renewals Decision Making***

Port of Melbourne Australia



STRATEGIC AM at GRAND PORT MARITIME DU HAVRE

- **Largest French container port**
- **Aging asset : facilities date from 2000 to >100 years ago**
- **260 assets classes**
- **Needs:**
 - **Vision of critical risks**
 - **Maintenance master plan**
 - **Inspection master plan**



Grand Port Maritime du Havre : Critical Issues

- Safety** of goods, people and the environment
- Asset availability**
- Performance**



NEXT STEPS FOR COLLABORATIVE SAM PROGRAM

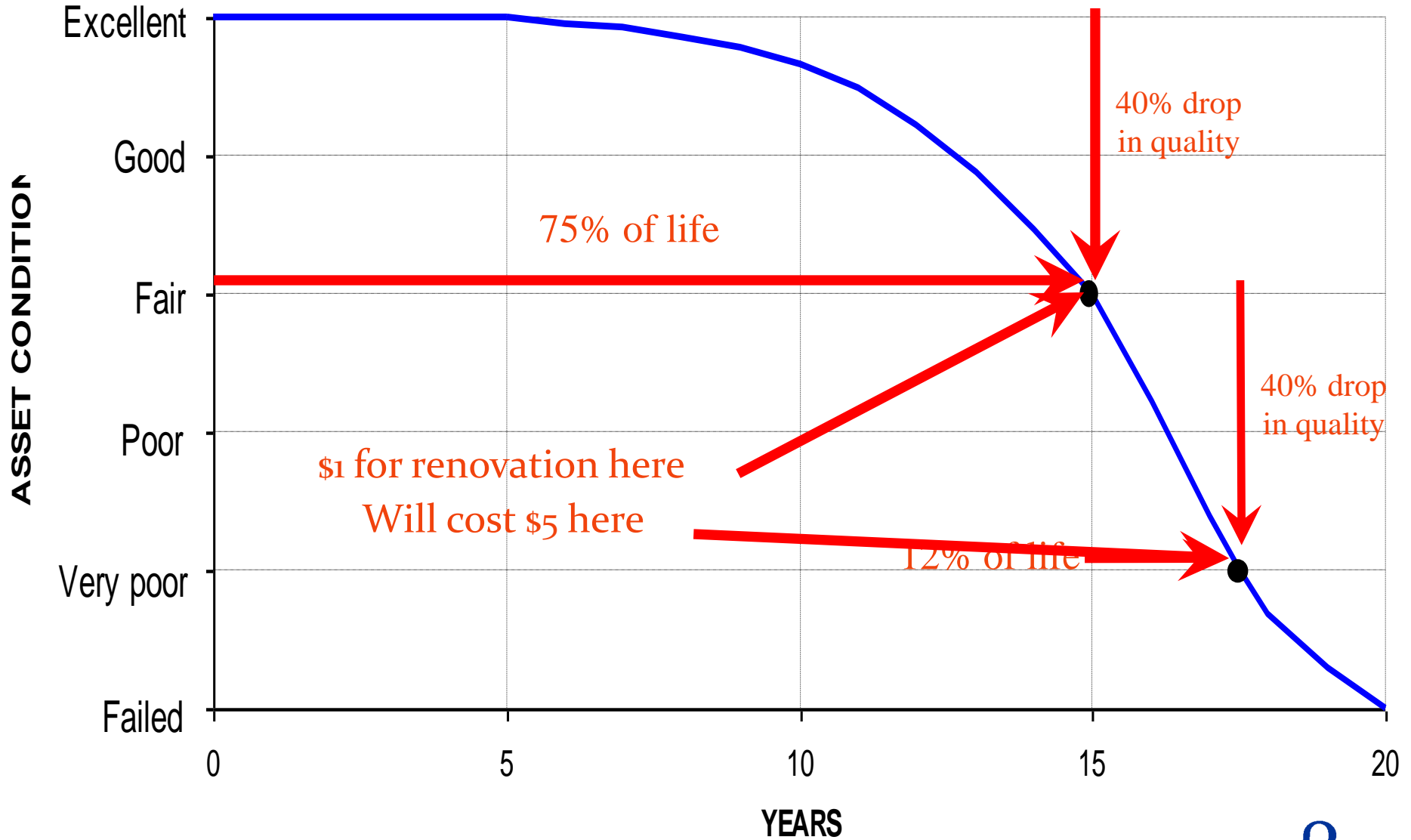
- ***Program concludes Spring 2012 with written report and individual port “road maps” to SAM development***
- ***SHARE with Port Industry: AAPA Best Practices Web site***
- ***Continue to Monitor Global and AAPA Member Best Practices and Lessons Learned***
- ***Facilities Engineering and Finance Cte Support***

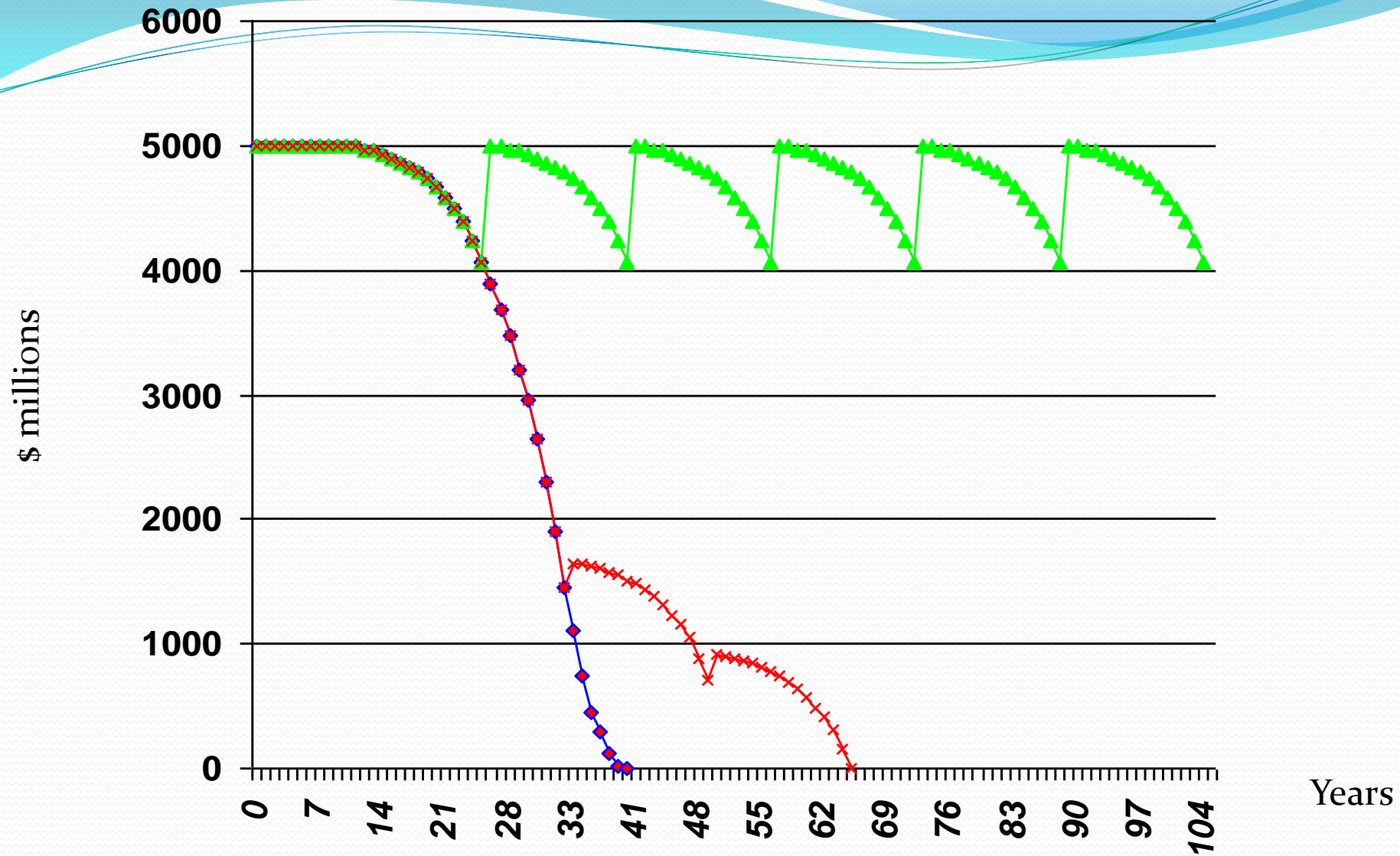
CONCLUDING THOUGHTS

- ***Don't let best get in the way of the good!***
- ***It's not easy and sometimes intuition and tradition are not helpful--SAM at its core is a different way of doing business***
- ***AM issues will not go away--solutions will neither get easier nor cheaper over time***
- ***Pick a goal and a starting point and get started;***

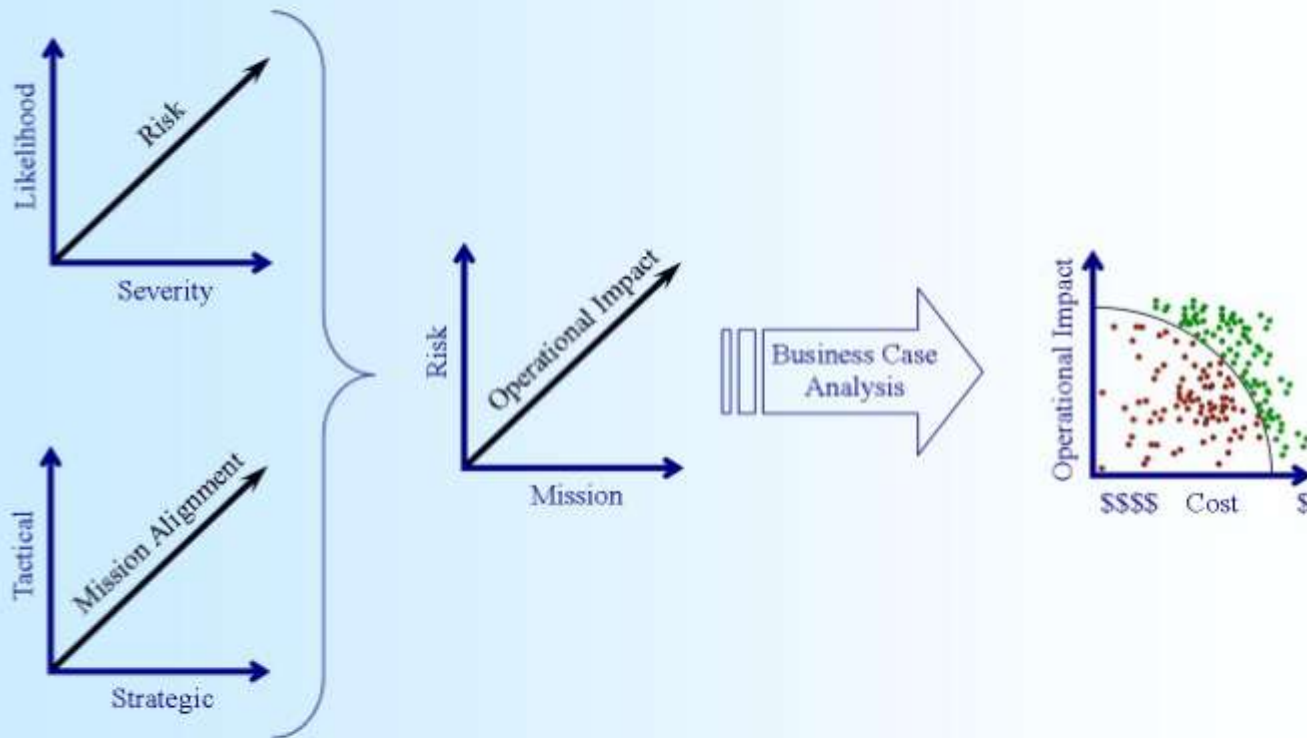
DISCUSSION

ASSET LIFE CYCLE





Evaluation of Risk to Mission: US Coast Guard



Evaluation of Risk to Mission— Business Case

