Risk Management Applied to Port Asset Investment Strategies

Optimizing Opportunity; Mitigating Cost

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Understanding Risk—Central to Business Planning and Operations

- Linkage and integration of RM into strategic and business planning processes becomes Enterprise Risk Management (ERM)
- ERM is an emerging strategic management tool that "supports the achievement of an organization's objectives by addressing the full spectrum of its risks and managing the combined impact of those risks as an interrelated risk portfolio." (RIMS, 2009)
- Emerging concept
  - S&P 2008—ERM instituted as a rating factor
  - RIMS surveys show significant growth among Fortune 500 firms
- Gap remains—aligning RM across line operational functions and embedding as feature of corporate culture

Applying ERM to Port Strategic Asset Management

- More than a maintenance program--business decision support process
- Prioritizing resource allocation based on the organization's public and business strategic goals
- Through a systematic, enterprise-wide, functionally integrated process
- Based on an improved understanding of asset performance, life-cycle cost and value
- Applied across the organization's entire asset base in order to reduce risk and leverage opportunity, today and into the future.

Port Asset Management: Why does it matter?

- Capital Sourcing Challenges
  - It's been long ebb tide for port industry revenues
  - Public capital going, going, gone
  - Private capital available but much more cautious
  - Financially, port authorities are on their own as never before
- Aging Infrastructure
  - North American ports, like baby boomers, showing where physical maintenance has been neglected
  - Recession lessons learned: even considering re-emerging global trade and economic growth, service and pricing pressures on public ports continue to ratchet up

Additional Drivers at North American Ports

- **Need for well justified, transparent, repeatable capital investment process,**
- Distinguish between assets and liabilities in the context of the port's strategic priorities,
- **"Run to failure "yields higher costs, longer down times and poorer service,**
- Inadequate inventory and condition assessments,
- **Aging work force and the loss of "institutional knowledge",**
- Productivity declines,
- **Business resilience**
- Future, often hard to predict, facility utilization requirements,
- **Increasing public demands, including env. and security regs,**
- Need to assure tenants ' appropriate AM practices,
- **Federal and state/provincial policy initiatives,**
- Privatization due diligence,
- **Support required for sustainable development policies,**
- Cost effective and easily accessible IT capabilities facilitate implementation.

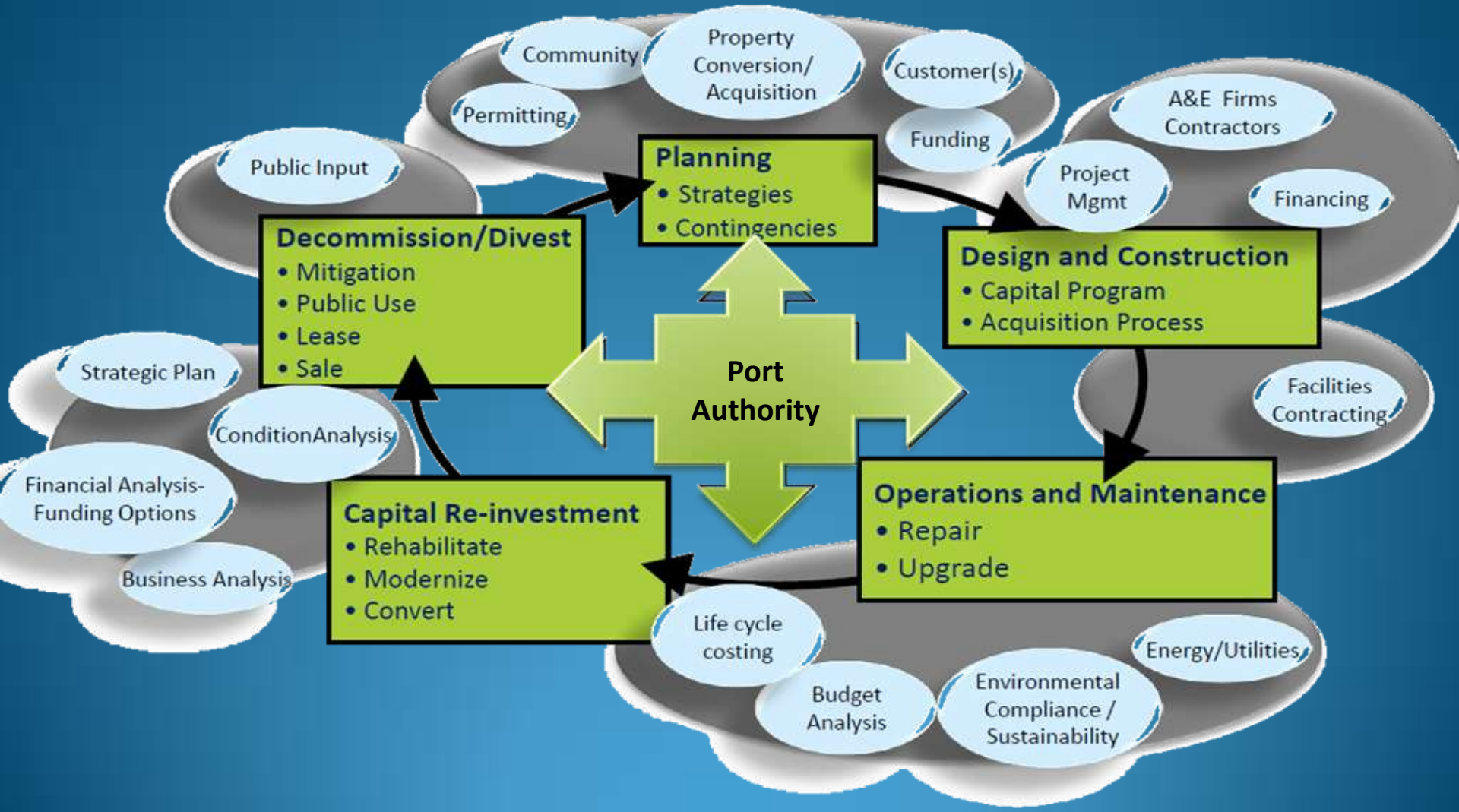
Constraints

- Corporate culture—”we’ve got it covered”
- Inertia—where to start?
- Up front commitment of time and budget
- Insufficient and/or ”silo’d” knowledge base
- Lack of clear, feasible goals
- Other priorities—”AM is on the front burner, and it sits there with 20 other front burner issues”

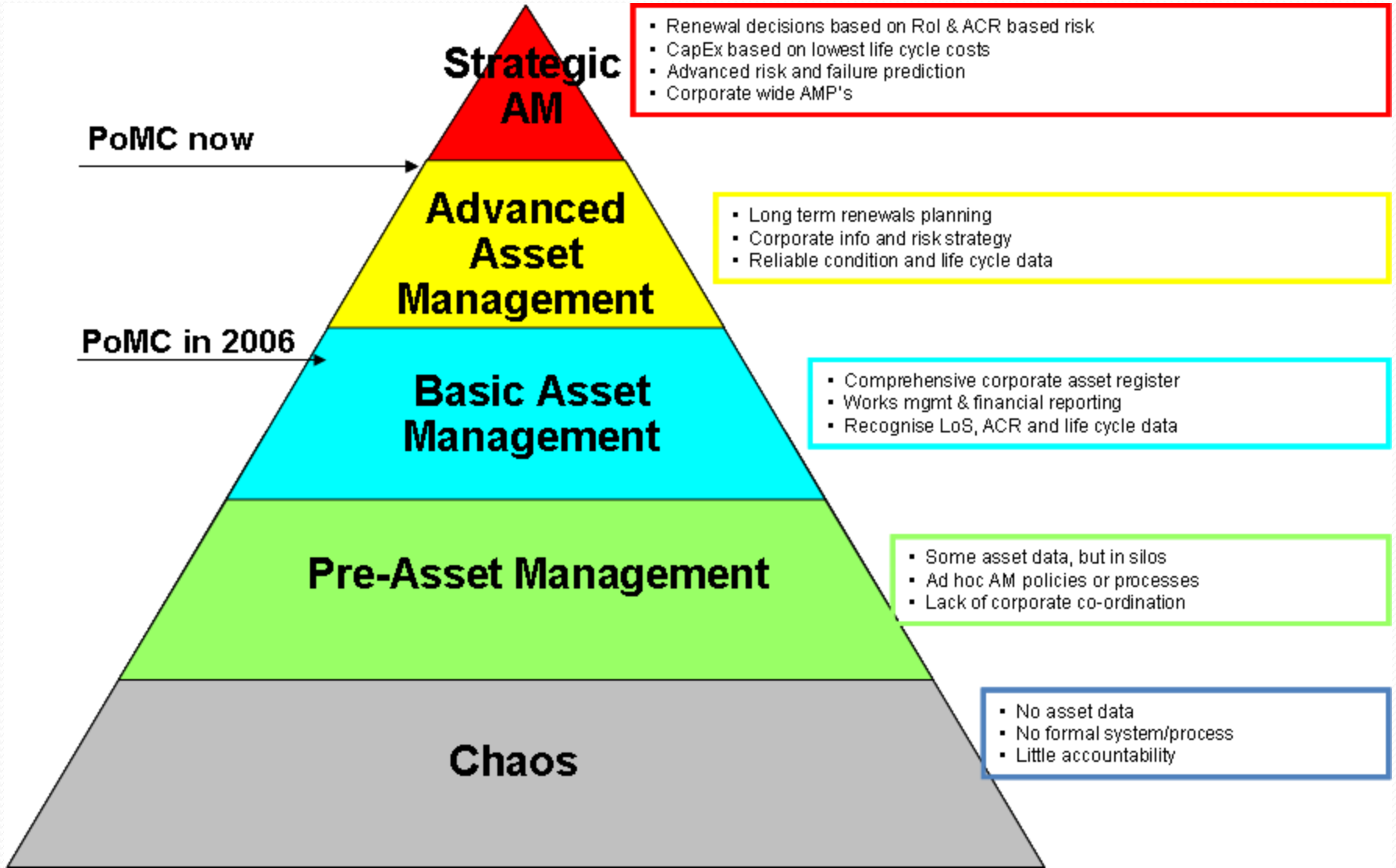
Steps to Development of an AM Program

- Well defined strategic goals.
- Inventory of assets (physical and human resources).
- Condition assessment and ongoing monitoring process.
- Life cycle cost assessment.
- Asset valuation.
- Development of performance measures.
- Alignment with strategic goals.
- Performance-prediction capabilities.
- Integrate individual management systems.
- Linkage to the budget process.
- Useful outputs, effectively presented.
- Continuous feedback procedures.
- Change in corporate culture—a different way of doing business.

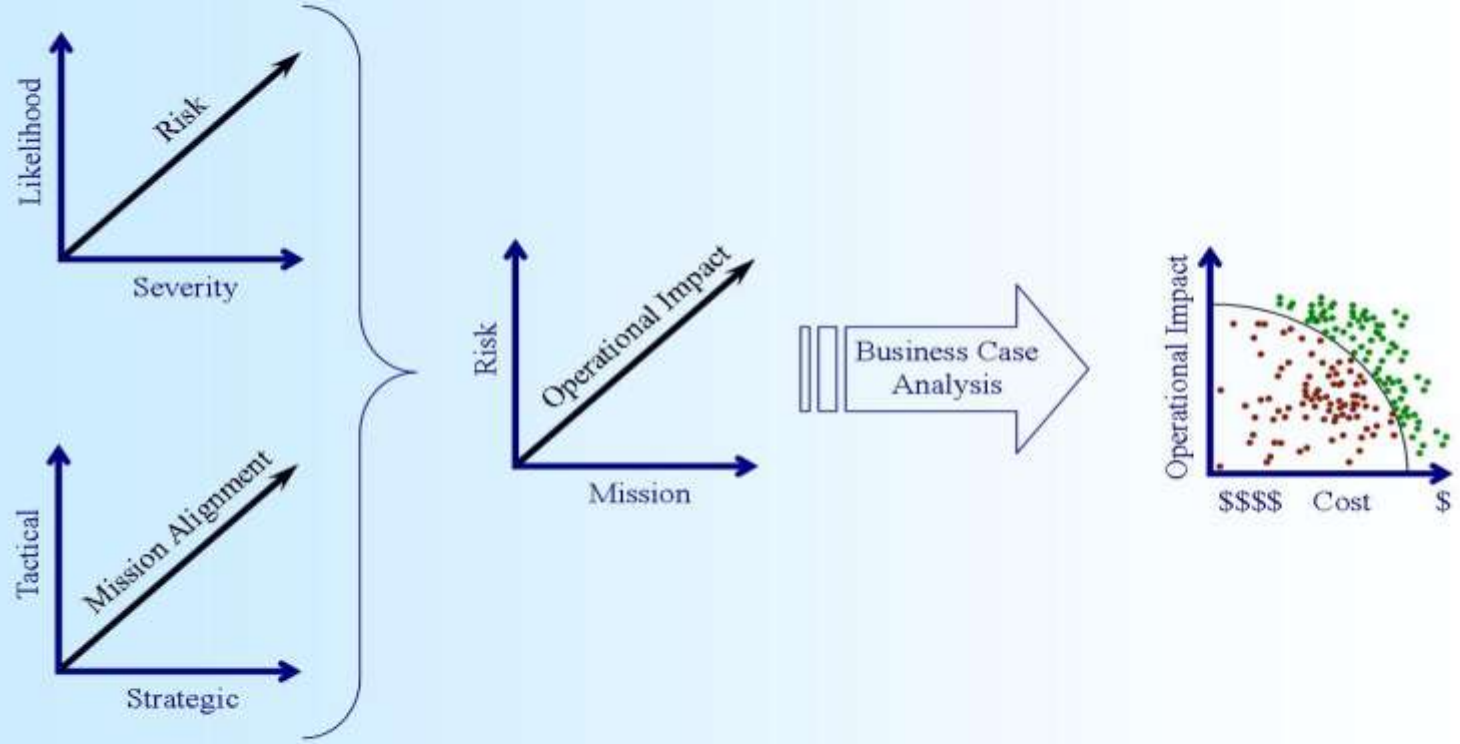
Infrastructure Decision Life Cycle



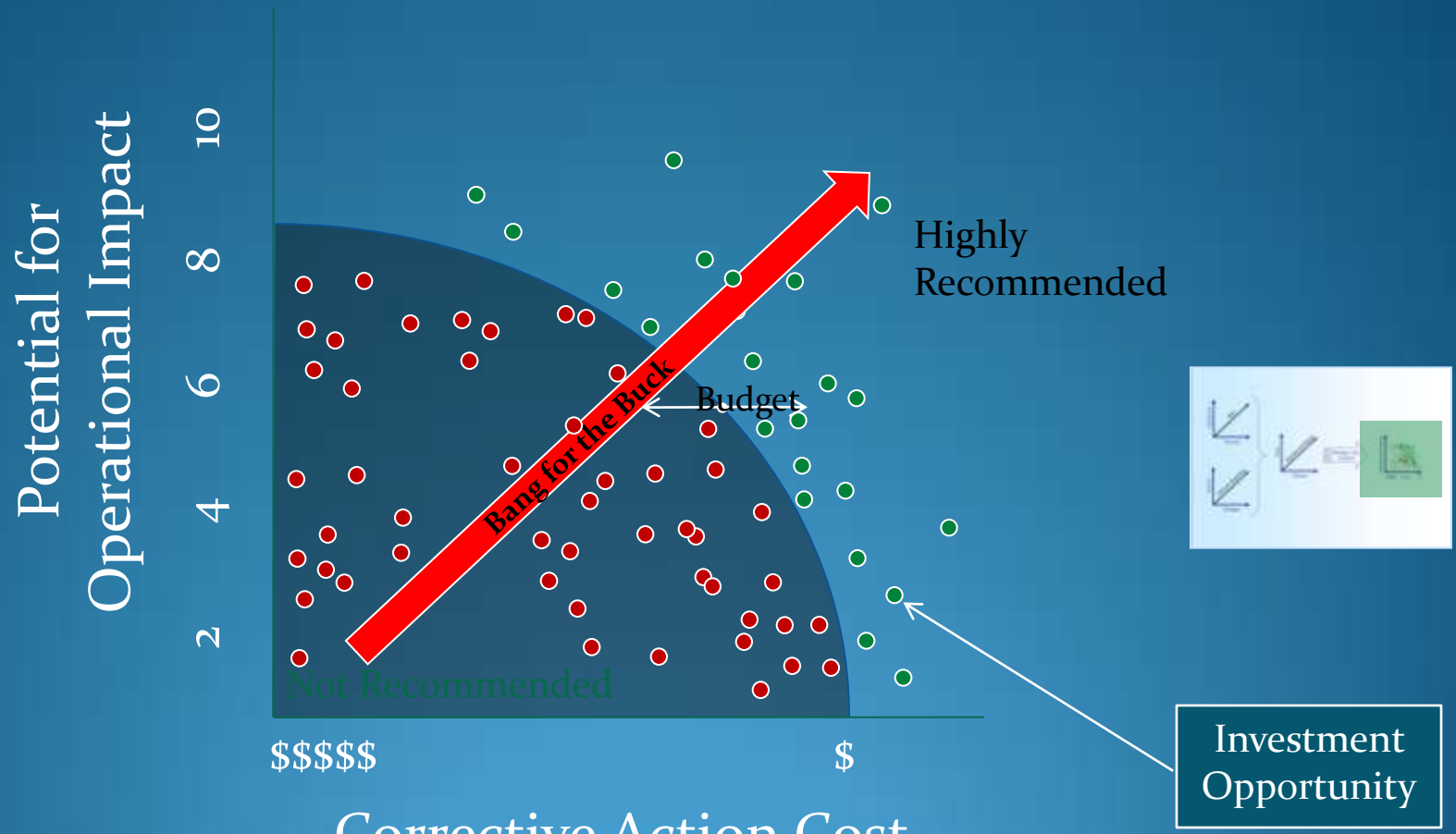
Maturity Pyramid:
Port of Melbourne Australia



Application of Risk: Risk to Mission Analysis



Risk to Mission—Business Case



Summary

- Today's volatile political and business climate, combined with aging infrastructure and capital shortfalls, create a receptive environment for Strategic Asset Management utilizing the principles of ERM