

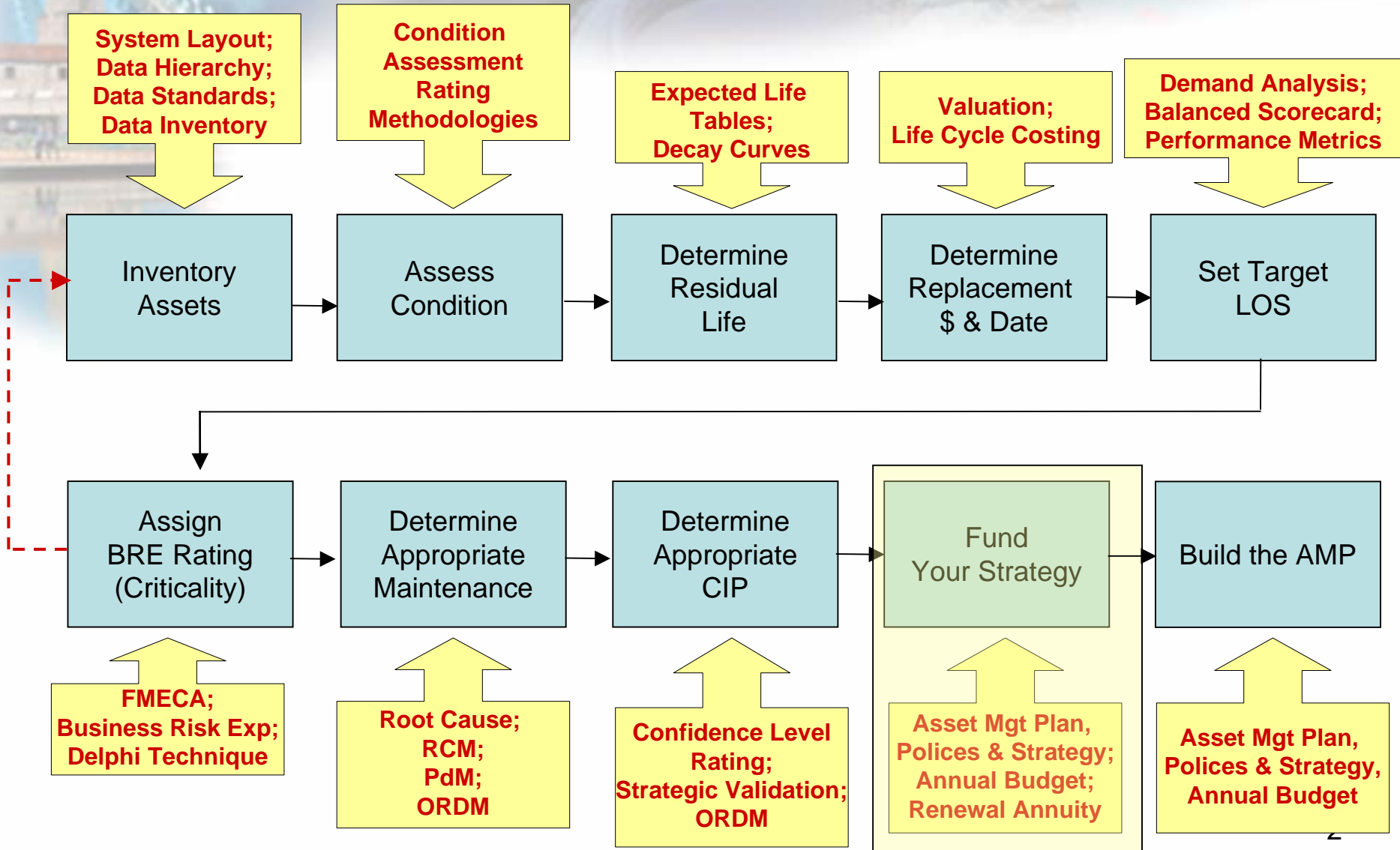
The background of the slide features a composite image. On the left, there is a bridge with a prominent tower, possibly the Bixby Creek Bridge. In the center and right, there are circular structures that look like water treatment tanks or ponds. The overall scene is somewhat faded and serves as a backdrop for the text.

Q5 What Is My Best Long-Term Funding Strategy?

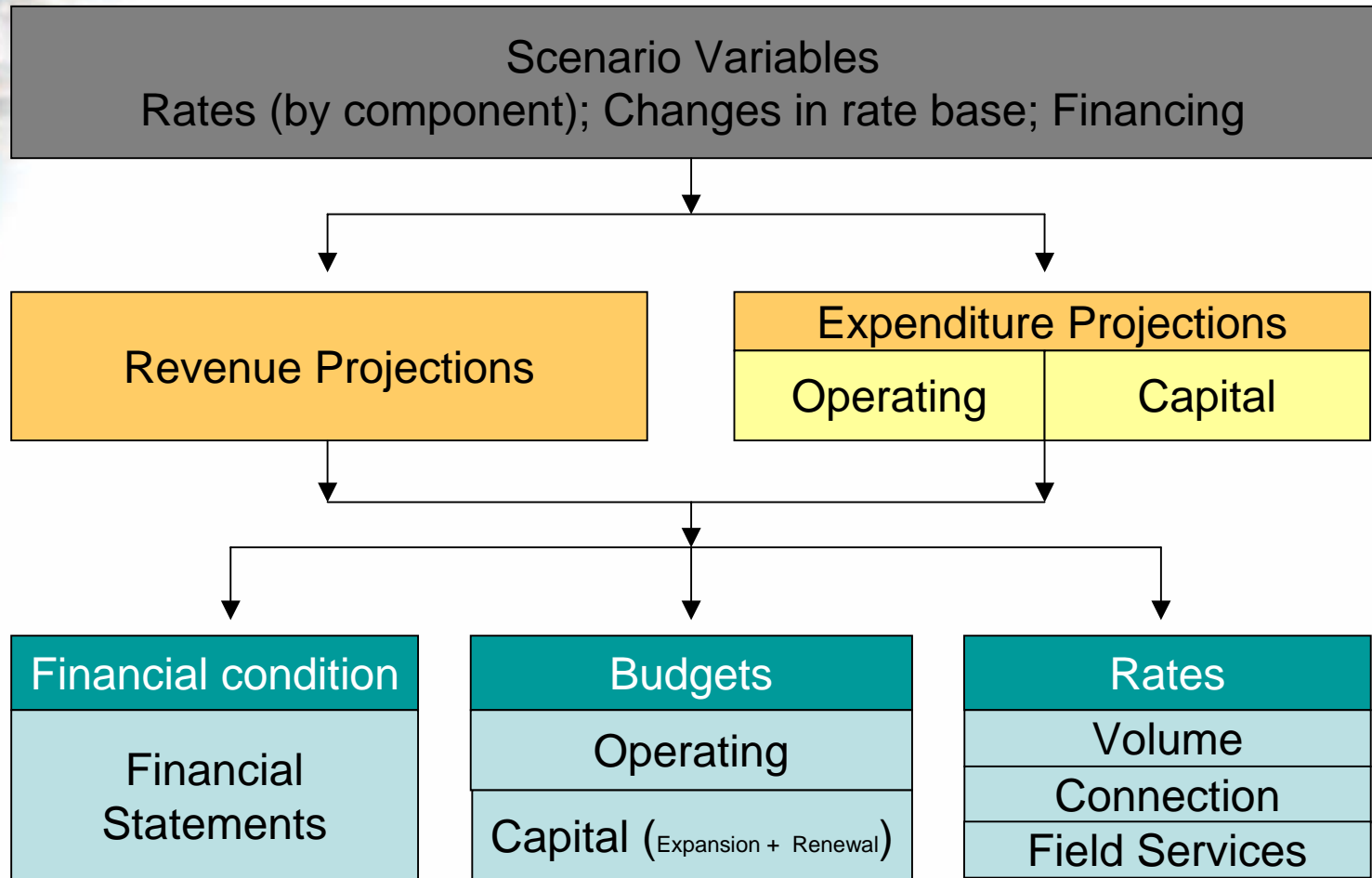
AMPLE

**Asset Management Program
Learning Environment**

Core AAM Program Process Tools



The Financial Model



NOI/Cash Generation Projections

Microsoft Excel - 2003 CIP Cash-NOI Projections-Bill.xls

File Edit View Insert Format Tools Data Window Help

Type a question for help

Arial 14

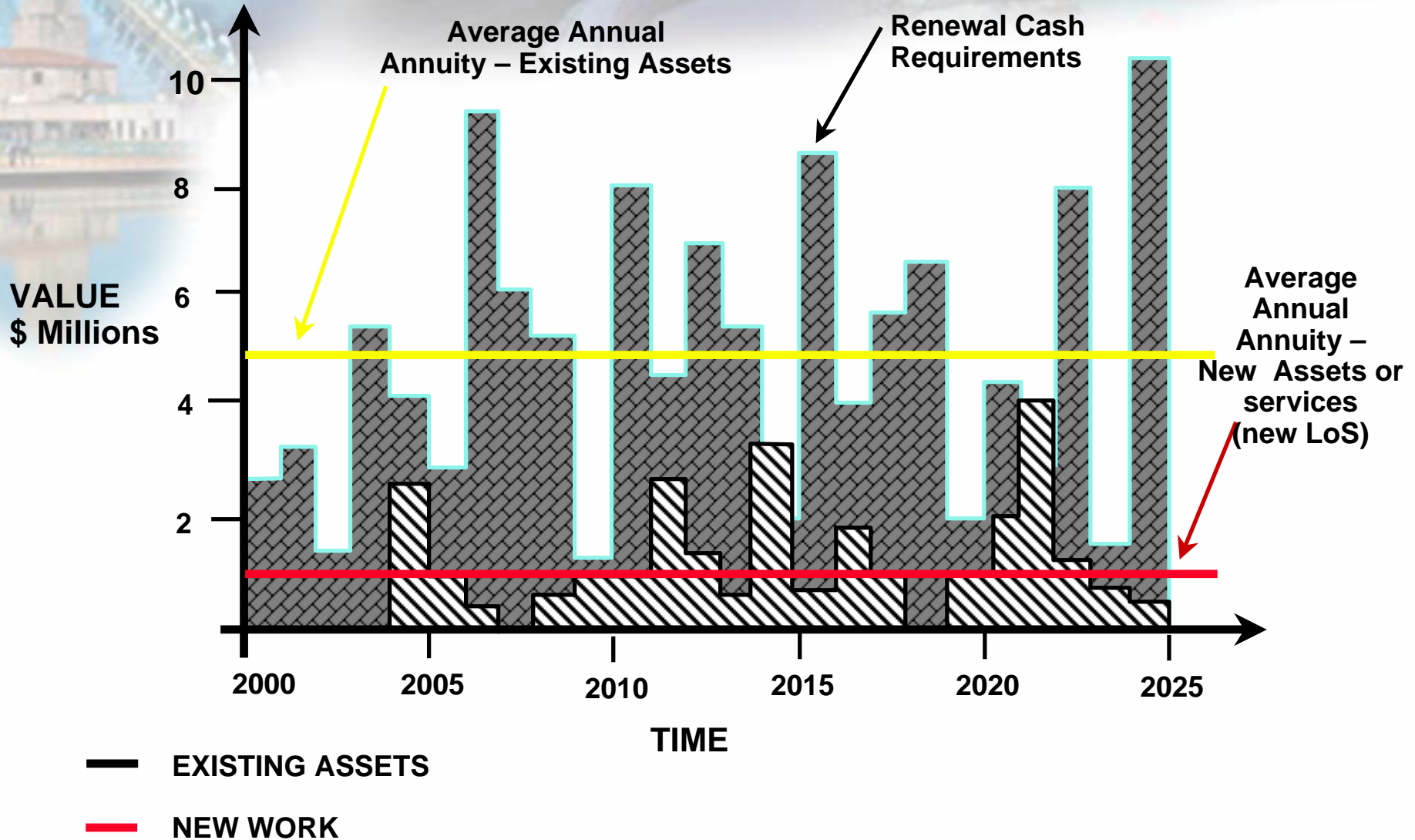
	2001	2002	2003	2004	2005	2006	2007	2008	2009
Water and Sewer CIP-based NOI Projections									
Fund 201 revenues									
Fund 201 subtotal	\$88,482,397	\$95,049,326	\$95,662,617	\$99,584,413	\$103,666,988	\$107,916,933	\$112,341,109	\$125,125,161	\$130,254,841
Fund 203 revenues									
subtotal 203 revenues	\$7,538,877	\$5,674,403	\$6,429,081	\$7,856,104	\$7,931,148	\$8,131,593	\$8,277,656	\$8,429,561	\$8,387,543
subtotal interest income	\$9,822,418	\$6,056,600	\$3,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Total 201 and 203 revenues	\$105,843,692	\$106,780,929	\$105,091,698	\$109,440,517	\$113,658,136	\$118,048,526	\$122,618,765	\$135,554,722	\$140,642,384
<LESS> TOTAL PROJECTED EXPENSES	\$74,802,839	\$77,319,840	\$82,626,226	\$90,619,705	\$95,605,227	\$97,771,069	\$100,319,584	\$114,059,922	\$116,468,325
<LESS> MANDATORY BOND COVERAGE RESERVE	\$2,445,205	\$2,445,205	\$2,445,300	\$2,445,300	\$2,445,500	\$2,445,500	\$2,445,200	\$2,445,000	\$2,445,400
<LESS> Contingency			\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000
Revenue Overage / Shortfall	33,486,088	27,015,854	18,020,172	14,375,513	13,607,408	15,832,957	17,853,581	17,049,800	18,728,658
New Debt Service Impact - Scenario 1 - NRI									
Additional Debt Service				\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425	\$15,376,425
Additional Bond Coverage Reserve Requirement				\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643	\$1,537,643
<ADD> Total New (additional) Disbursements				\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068	\$16,914,068
Revised Coverage/Shortfall (reserve drawdown)	33,486,088	27,015,854	18,020,172	\$2,538,555	\$3,366,658	\$1,681,111	\$535,514	\$135,733	\$2,814,591
New Debt Service Impact - Scenario 2 - ALL CIP									
Additional Debt Service				\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000	\$47,800,000
Additional Bond Coverage Reserve Requirement				\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000	\$4,780,000
<ADD> Total New (additional) Disbursements				\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000	\$52,580,000
Revised Coverage/Shortfall (reserve drawdown)	33,486,088	27,015,854	18,020,172	\$38,204,467	\$38,572,591	\$36,747,043	\$34,726,615	\$35,536,200	\$32,651,342
New Debt Service Impact - Scenario 3 - Staged DS									
Additional Debt Service				\$9,375,000	\$9,375,000	\$9,375,000	\$17,879,564	\$17,879,564	\$17,879,564
Additional Bond Coverage Reserve Requirement				\$937,500	\$937,500	\$937,500	\$1,787,956	\$1,787,956	\$1,787,956
<ADD> Total New (additional) Disbursements				\$10,312,500	\$10,312,500	\$10,312,500	\$19,667,520	\$19,667,520	\$19,667,520
Revised Coverage/Shortfall (reserve drawdown)	33,486,088	27,015,854	18,020,172	\$4,663,613	\$3,294,505	\$5,526,457	\$1,813,535	\$2,617,920	\$61,138
Parameters:									
Growth in customer-base									
Sewer		2.5%	3.0%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Water		4.0%	4.5%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Connection fee rate increase			100.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%
Rate Increase Assumptions									
Sewer				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Water				0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
South Fulton water Purchase in 2008							125%		
Cauley creek Reuse revenue is based on Cont									

Charts W-WW Revs & Totals Debt Service Calculator W-WW Expenses Cash Flow

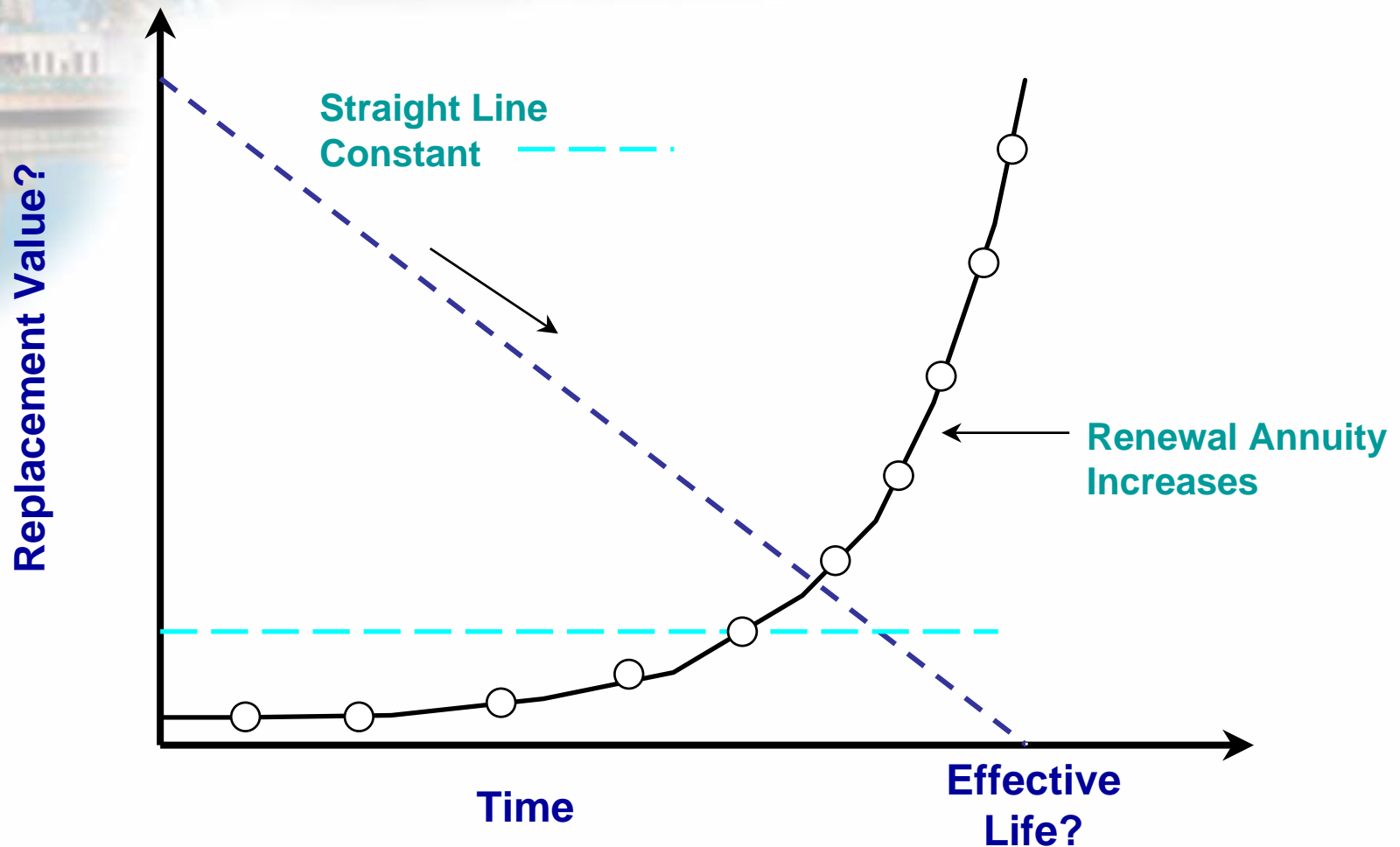
Ready

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Renewal Programs

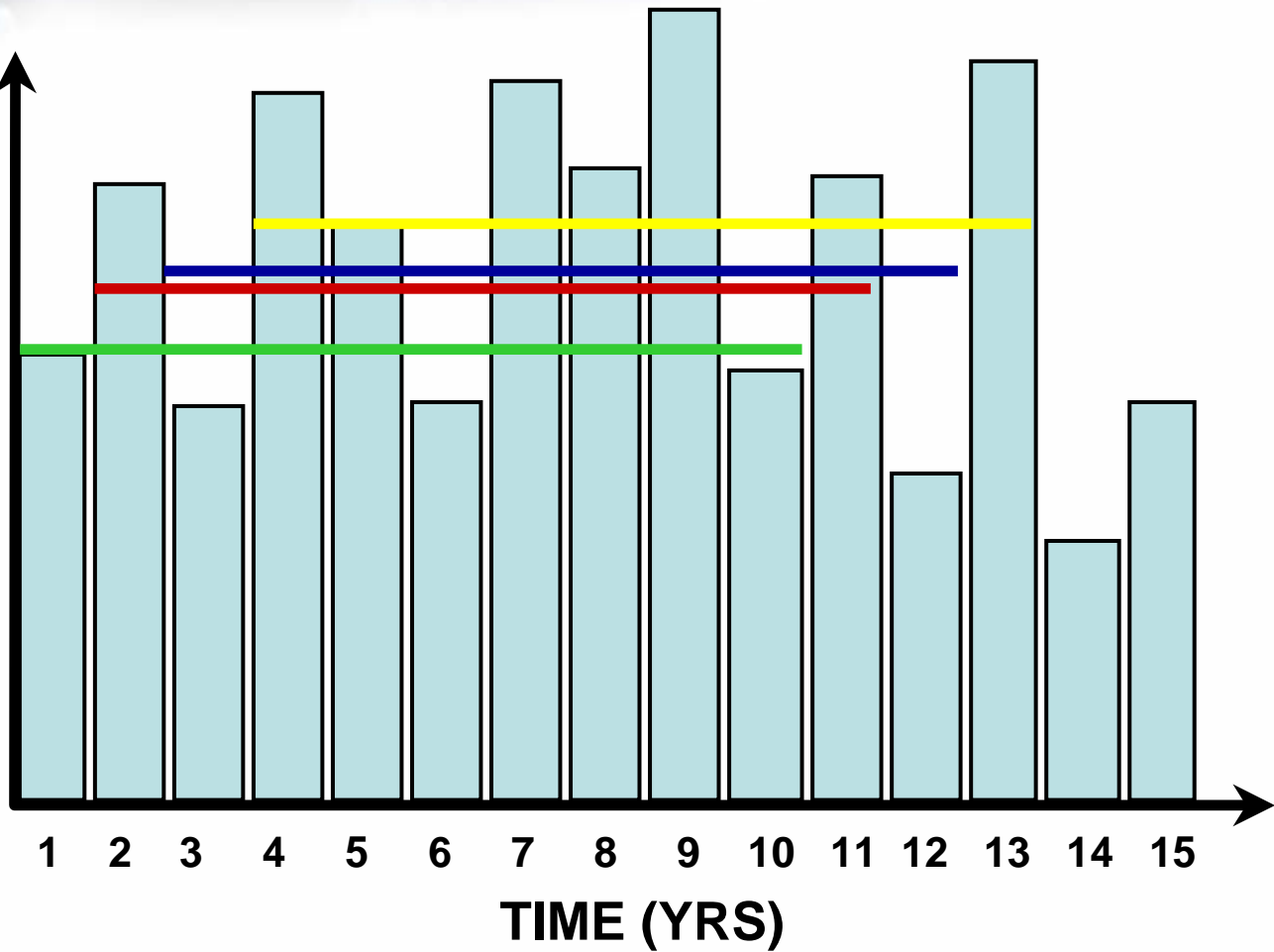


Annuity Requirement Increases as Funding is Deferred

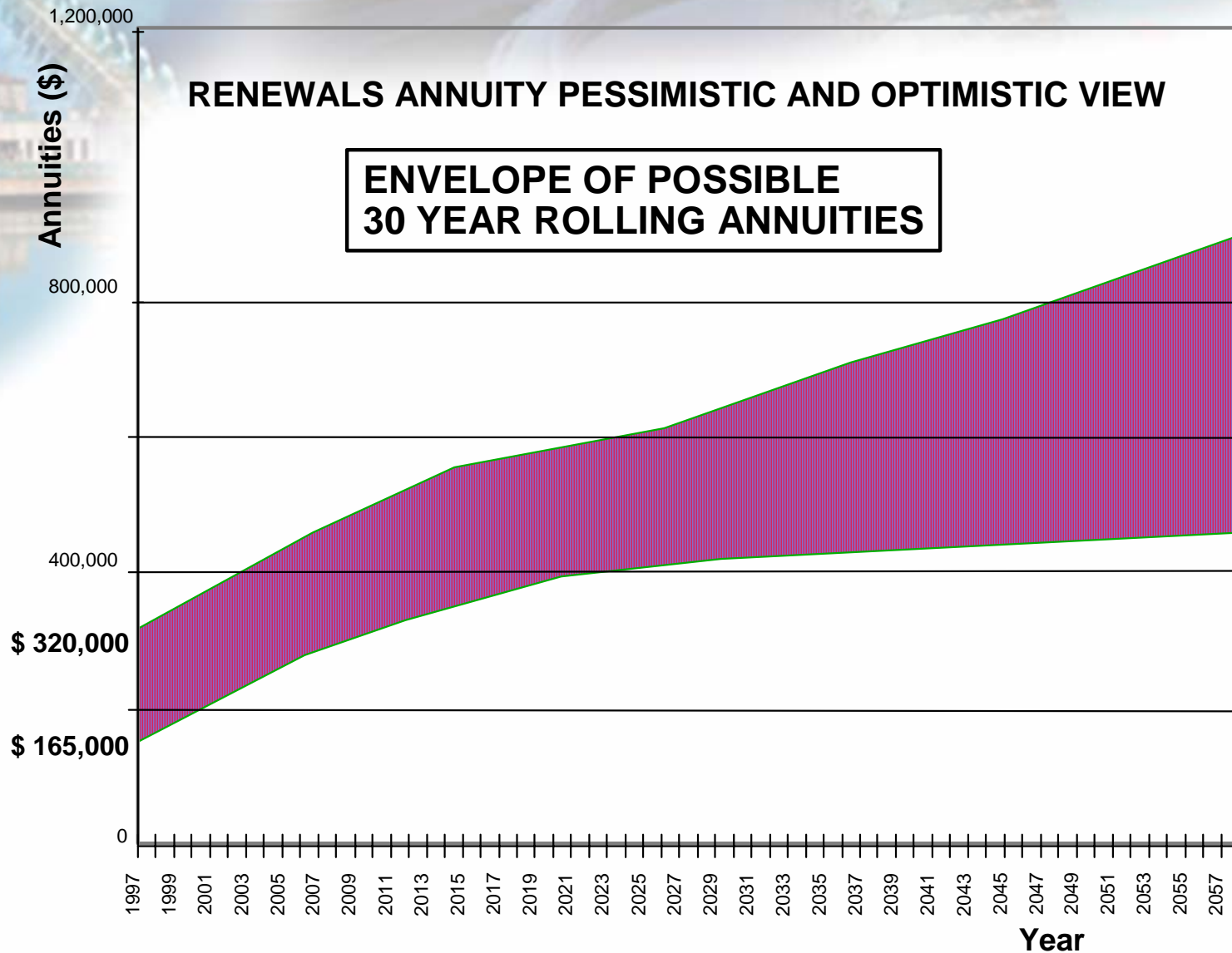


Rolling Annuities

RENEWAL
VALUE \$



Understanding Asset Renewals



The background of the slide features a blurred image of a suspension bridge on the left and a large, classical-style building with a dome on the right, both reflected in water. The overall scene is bright and somewhat hazy.

Funding Annuity Exercise

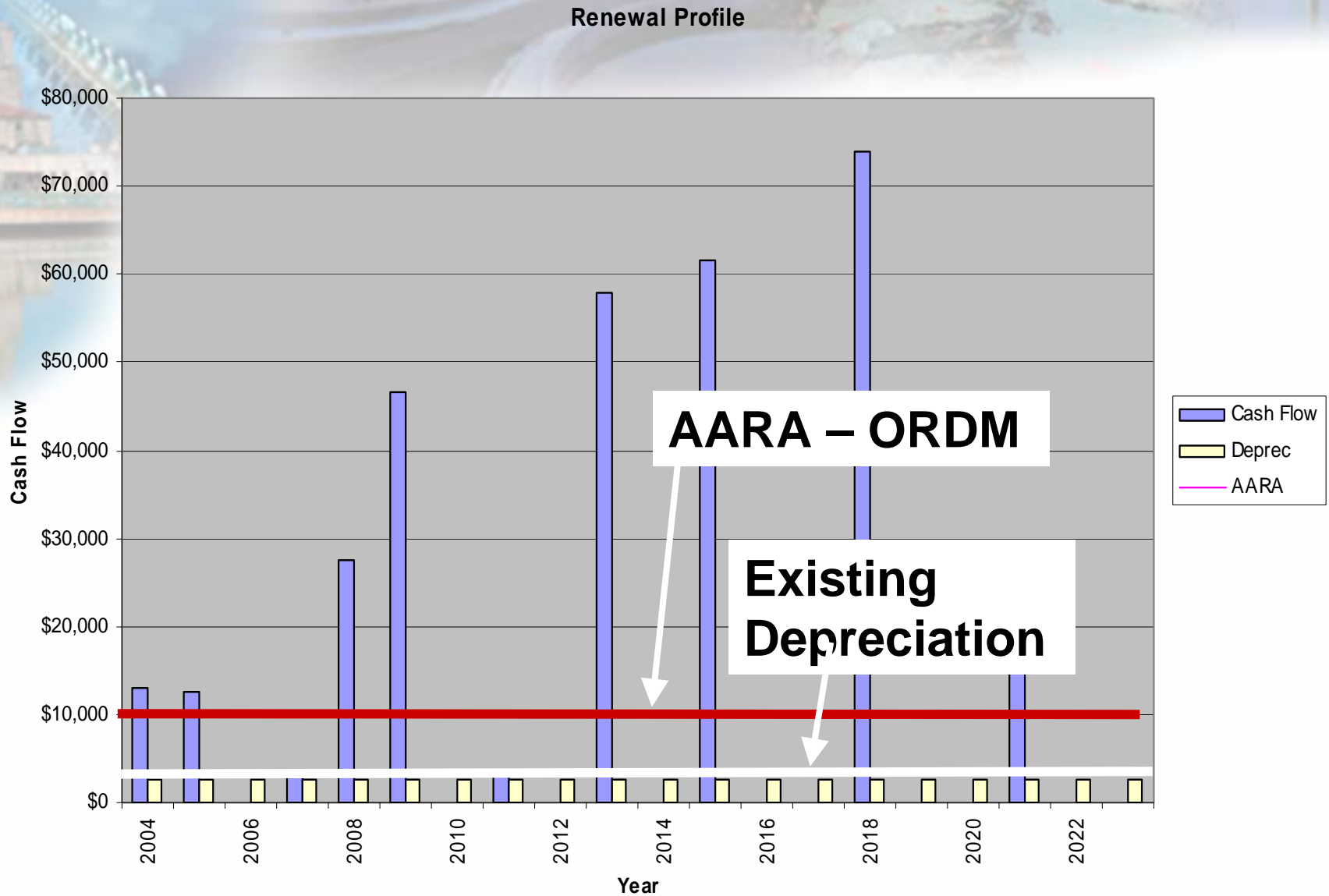
Tom needs to determine a renewal funding level for his “problem” pump station.

Philosophy of Confidence Levels



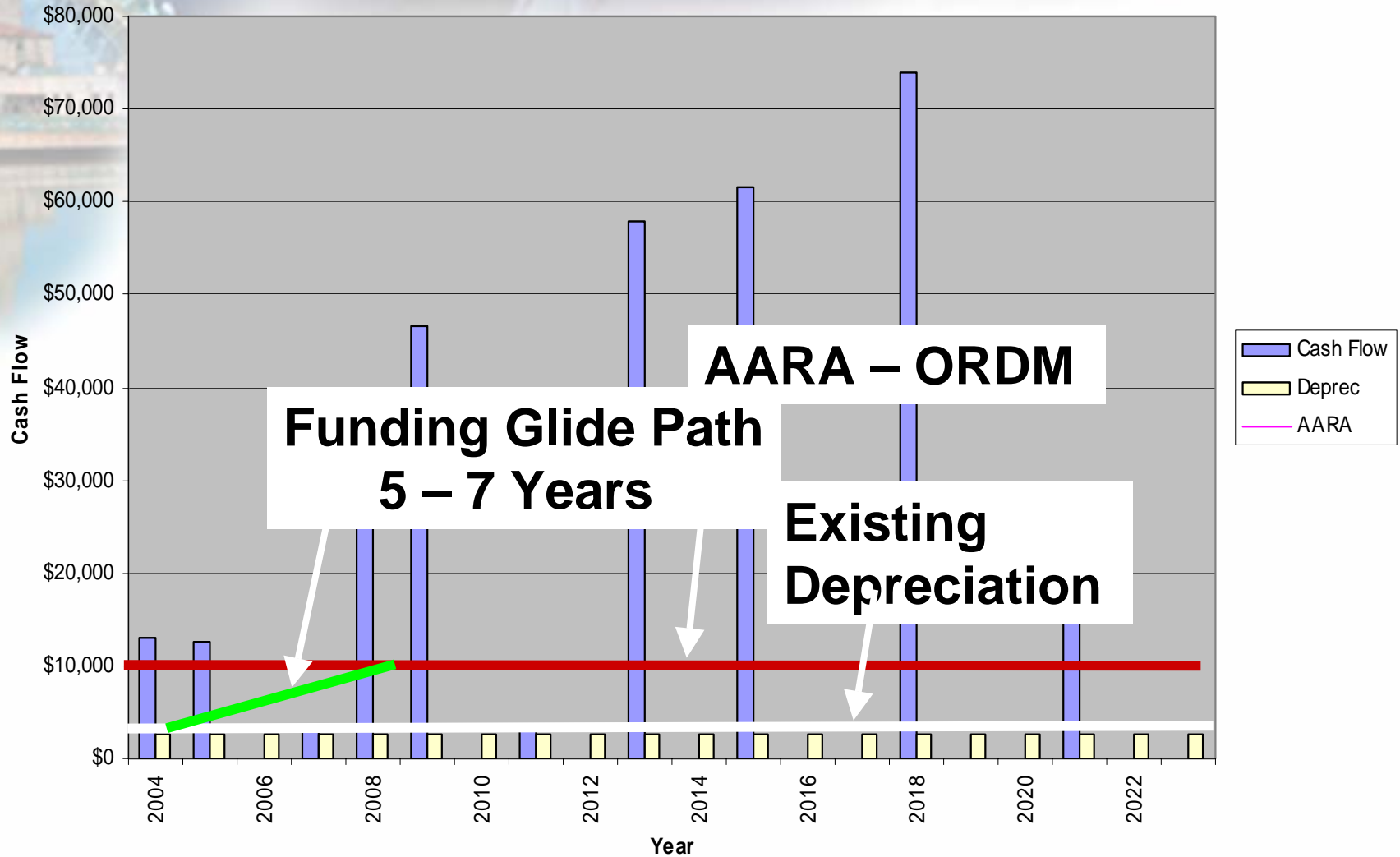
- * Note : 1. Best Appropriate Practice varies from Basic AM to Sophisticated AM
- 2. The numbers are averaged

How Much Money Does Tom Need ?

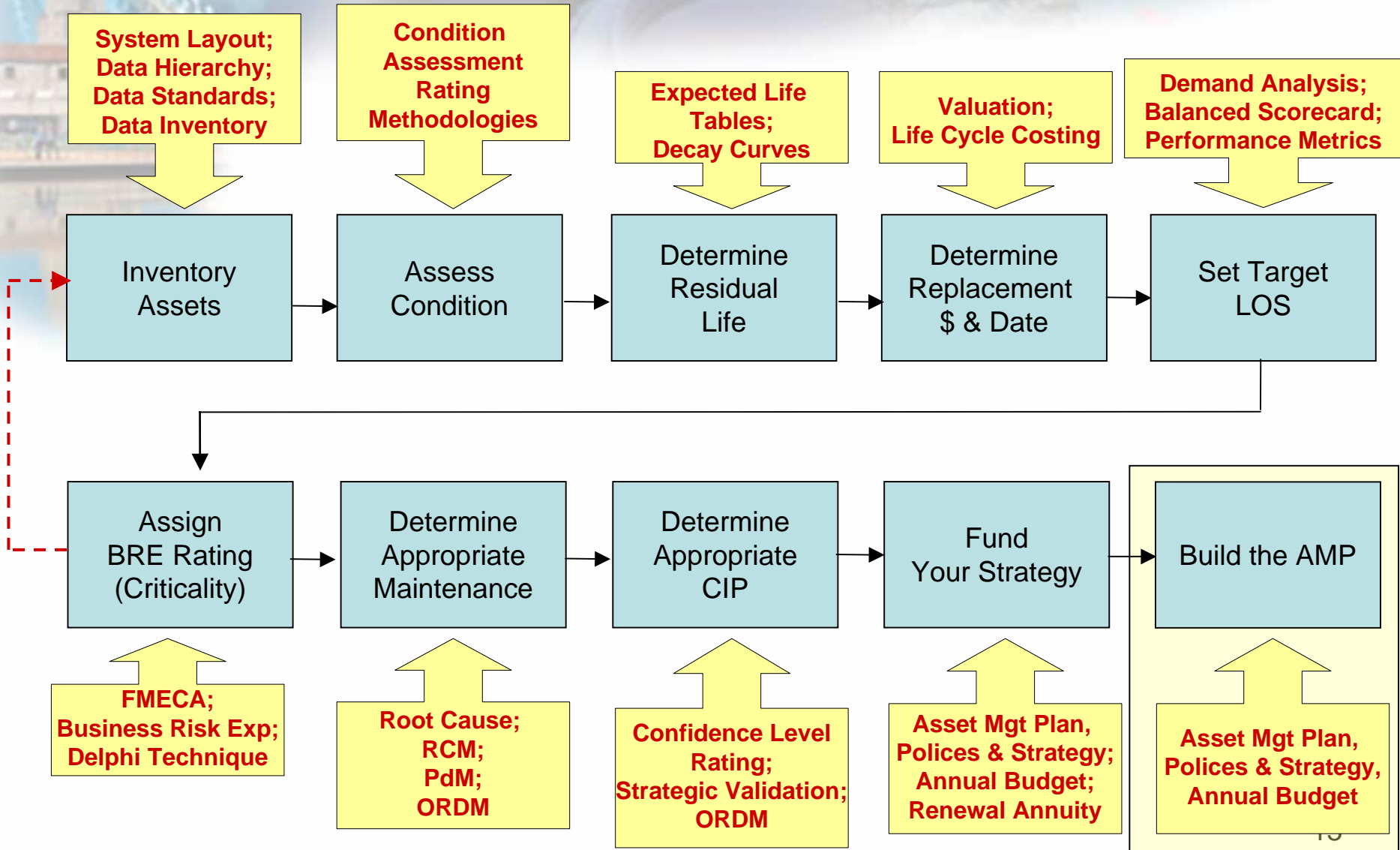


How Much Money Does Tom Need ?

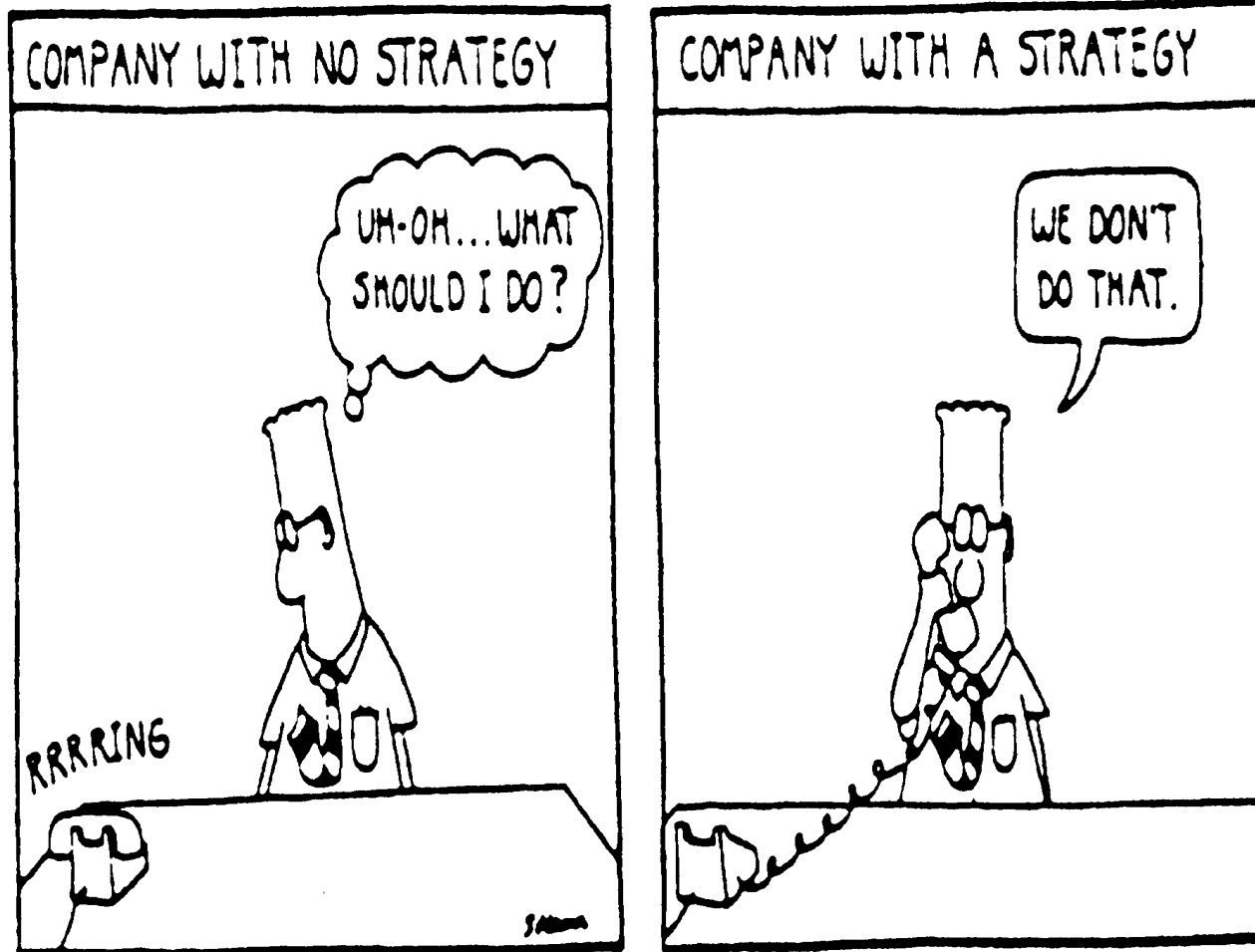
Renewal Profile



Core AAM Program Process Tools



Asset Management Plans



BUILD A BETTER LIFE BY STEALING OFFICE SUPPLIES *Doan's Big Book of Business* 101

The Asset Decision Framework

Repair? Renew? Replace? Augment?

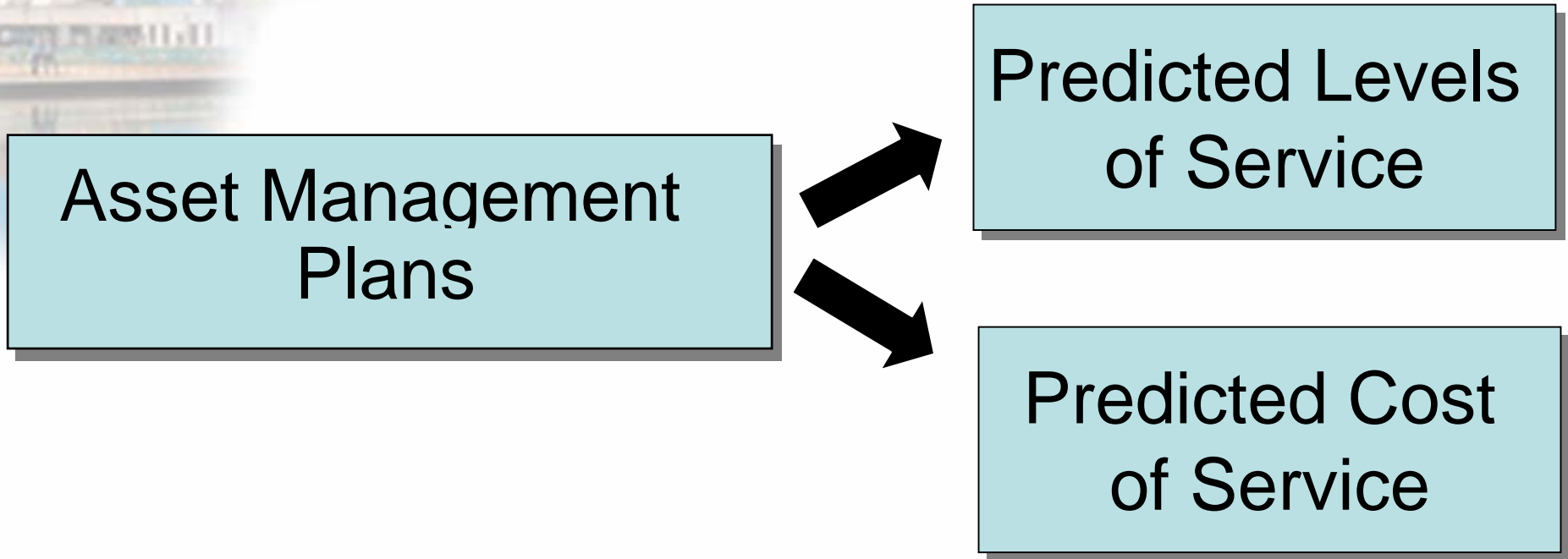
The Big Picture

- “Whole portfolio” perspective
 - Annual Report
- Policy framework
 - AM “Charter”
 - AM Program Initiatives
- Budget arena
 - Annual budgets

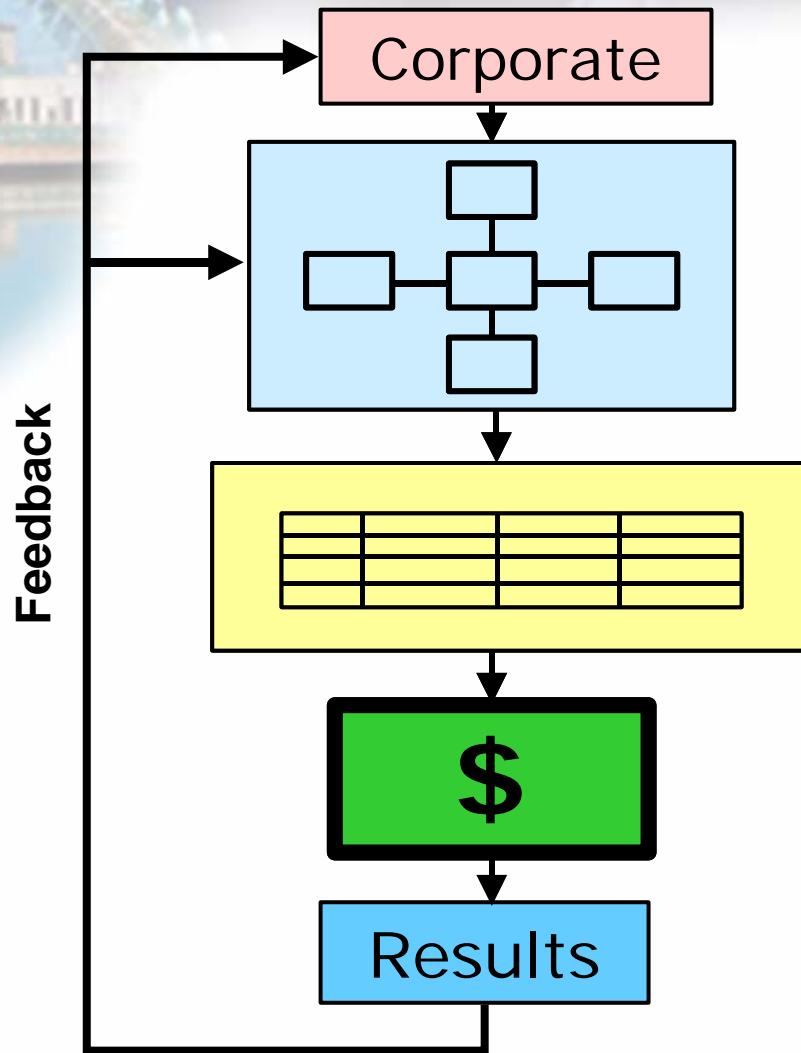
The Micro View

- Specific asset focus
- Event-based
- Case-by-case decision points
 - Individual AM plans
 - AAM techniques
 - FMECA/Root cause
 - Remaining useful life
 - Valuation
 - Risk consequence
 - Etc.

Asset Management Plans



The Government Management Model



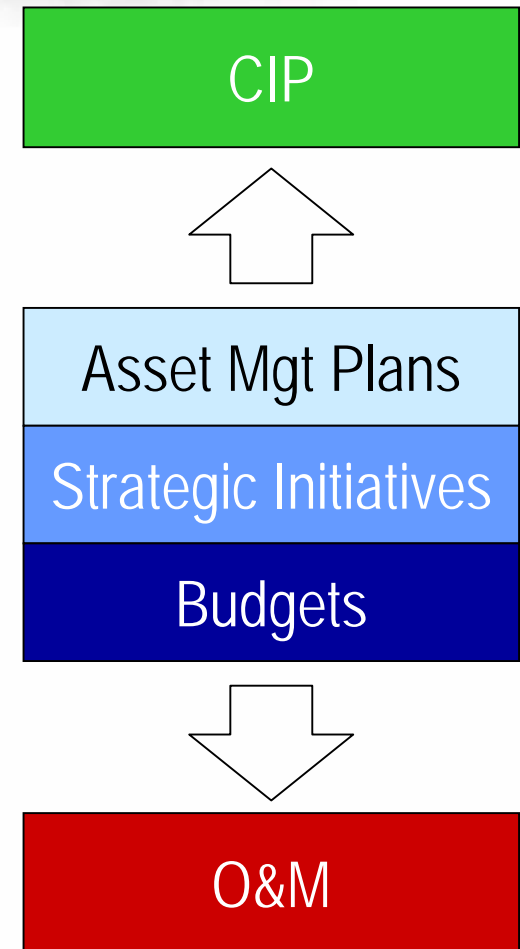
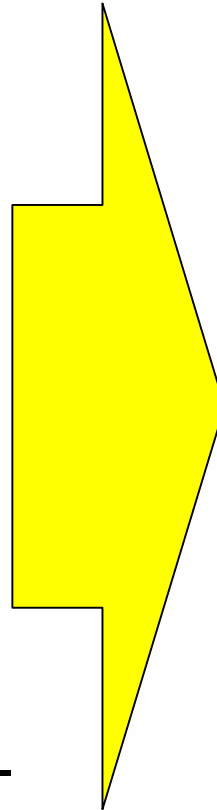
- **Mission**
- **Vision**
- **Strategic themes**
- **Perspectives**
- **Objectives**
- **Measures**
- **Targets**
- **Initiatives**
- **Capital plan**
- **Operating budget**
- **Special projects**
- **Analysis**

Mapping Strategic Action

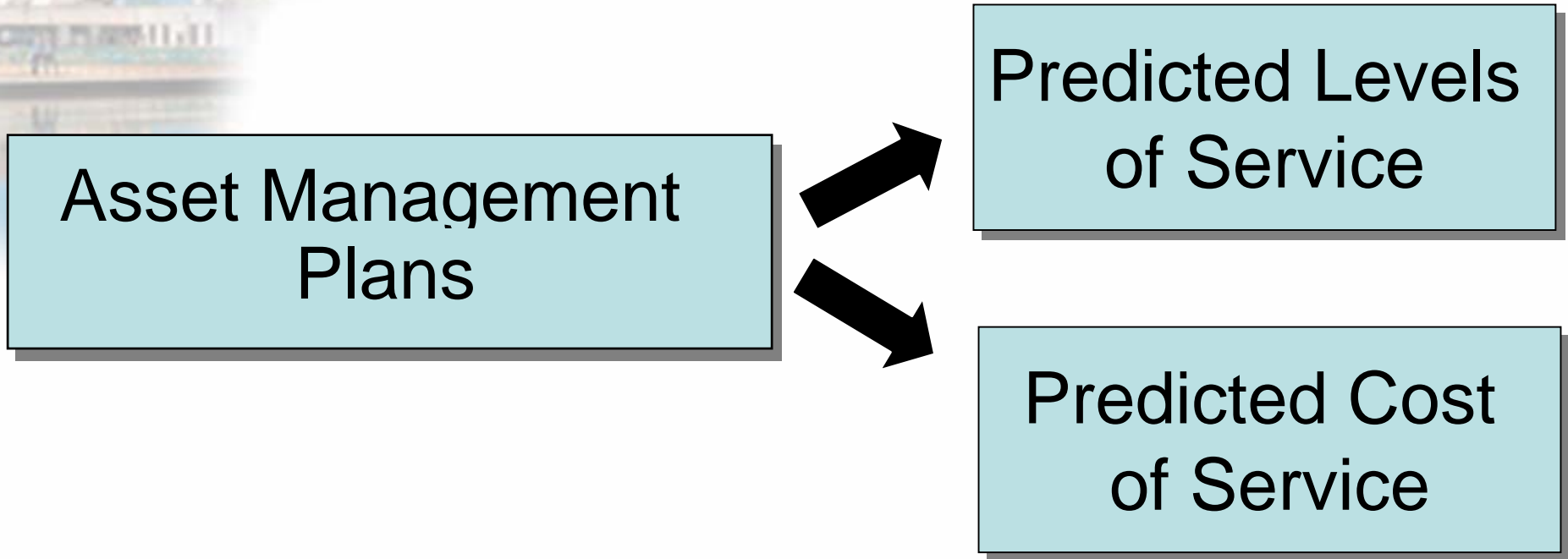
Strategy Map	Metrics	Targets	Strategic Initiatives
	<p>→</p> <p>Customer approval rating</p>	<p>→</p>	<p>→</p> <ul style="list-style-type: none"> ● ● <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px; margin: 5px 0;"> <p>Each Strategic Initiative Plan contains:</p> <ul style="list-style-type: none"> • Sponsor • Schedule • Resources • Budget </div> <ul style="list-style-type: none"> ● ●
	<p>Cycle time reduction</p>		
	<p>% strategic skills available</p>		

The Nine Fundamental “Building Blocks” of AAM

1. Definition
2. The asset life-cycle
3. How assets fail
4. Risk-consequence
5. Cost/valuation
6. Asset demand
7. Level of service
8. Business risk
9. Confidence in decision-making



Asset Management Plans



Steps In Developing Your AMP

1

Existing Levels of Service:

- *Regulatory*
- *Customer related*
- *Internal operations*

2

Assess Existing Assets:

- *Physical Details*
- *Condition/Remaining Life*
- *Performance*
- *Capacity (Current / Ultimate)*

3

Predict Demand / Levels of Service:

- *Capacity / Demands*
- *Levels of Service*
- *Performance / Risk*

4

Predict Mode of Failure

- *Capacity (Due to Growth)*
- *Performance / Reliability*
- *Condition (Age) Integrity*
- *Cost of Service*

Steps In Developing Your AMP

5

Predict Capital Program :

- *Growth / augmentation*
- *Renewal / Reliability*
- *New levels of service*
- *Business Efficiency*

6

Predict Operations & Maintenance

- *Growth (additional flows)*
- *New assets Levels of Service*
- *Age of overall portfolio*

7

Predict Future Expenditure Model

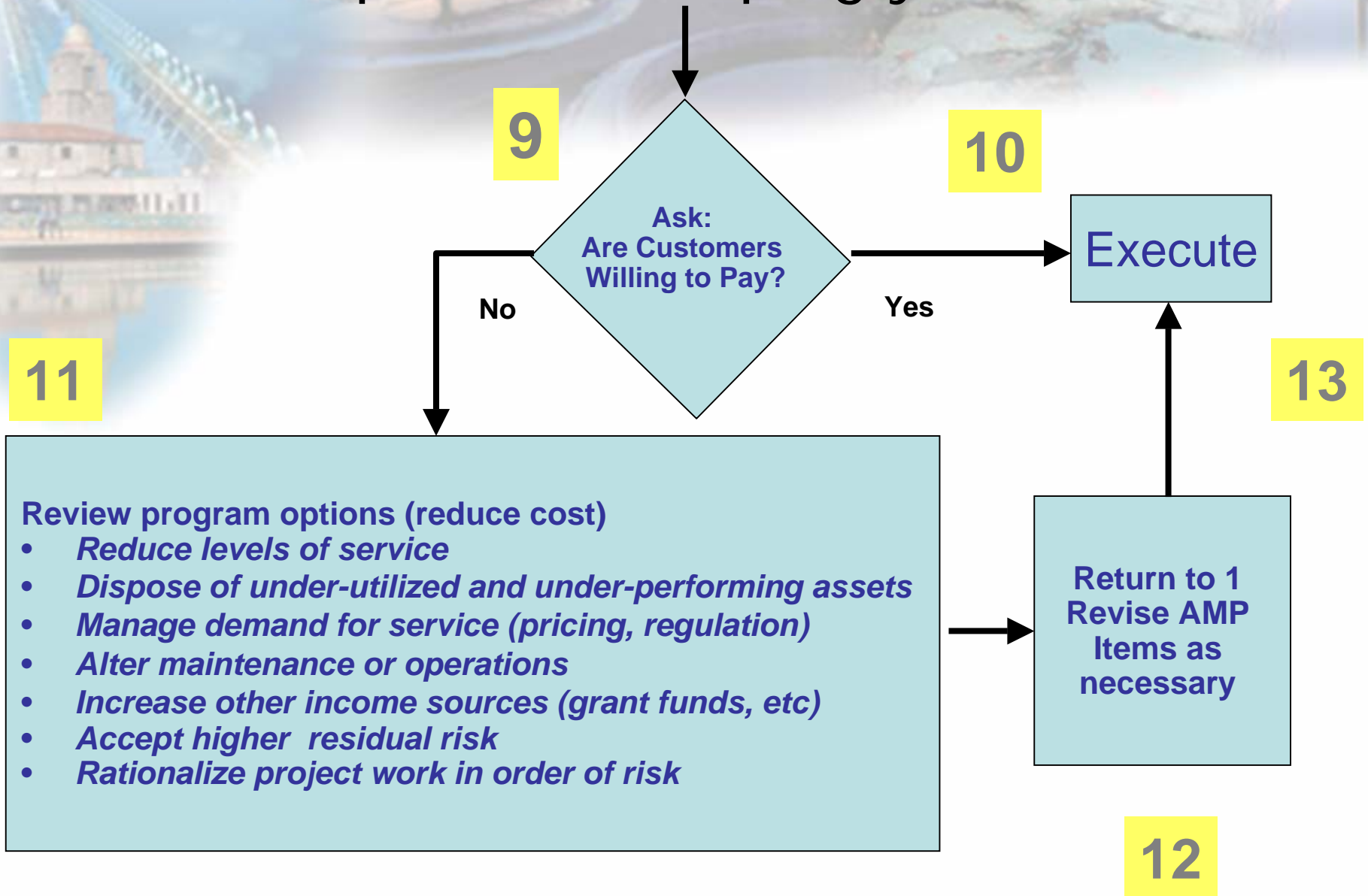
- *Capital*
- *Operations*
- *Maintenance*
- *Administration*

8

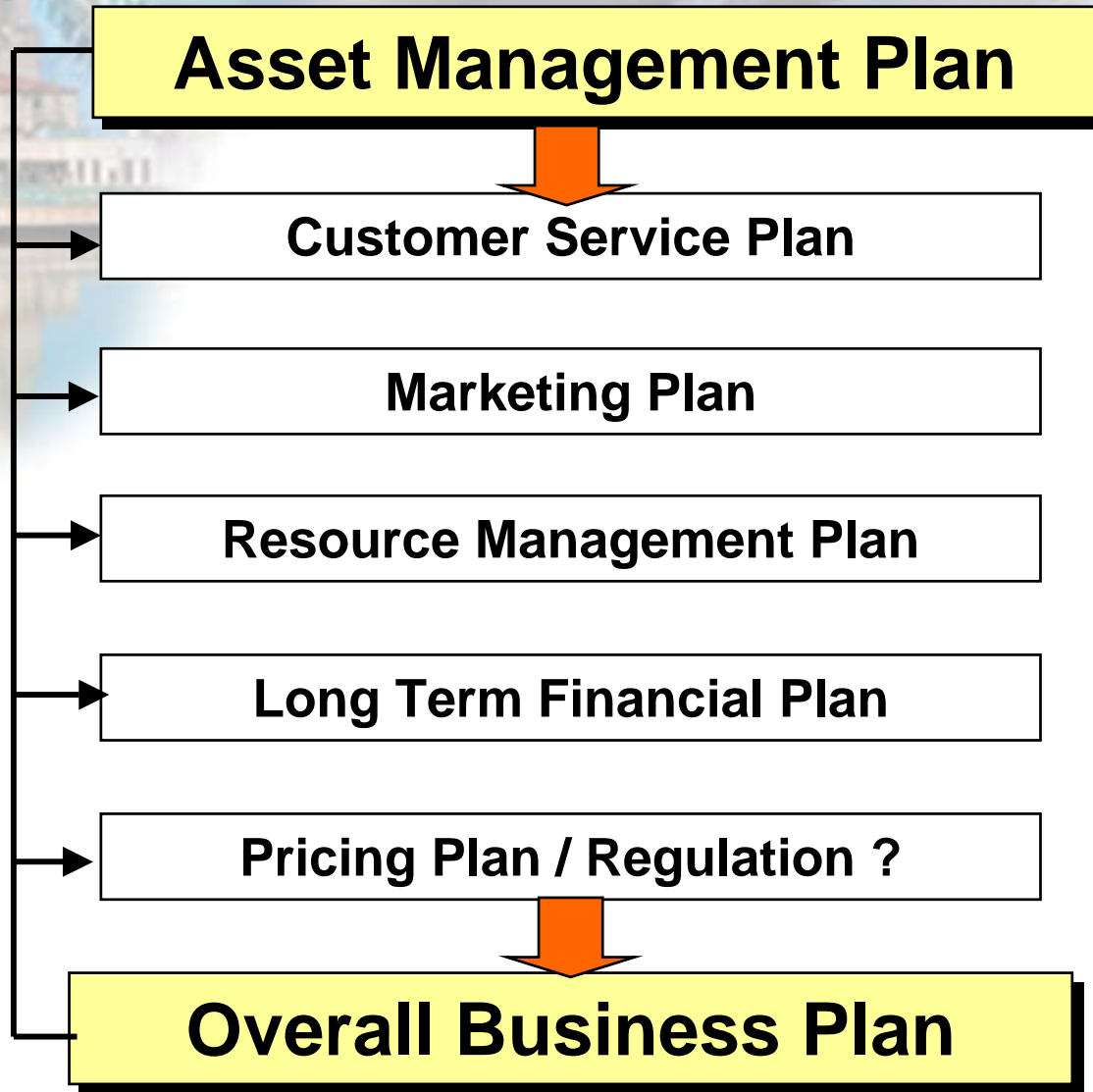
Predict Future Income Model

- *Rates*
- *Charges*
- *Other sources*
- *Total*

Steps In Developing your AMP



Role of the AM Plan



Key Outputs:

- Costs
- Performance

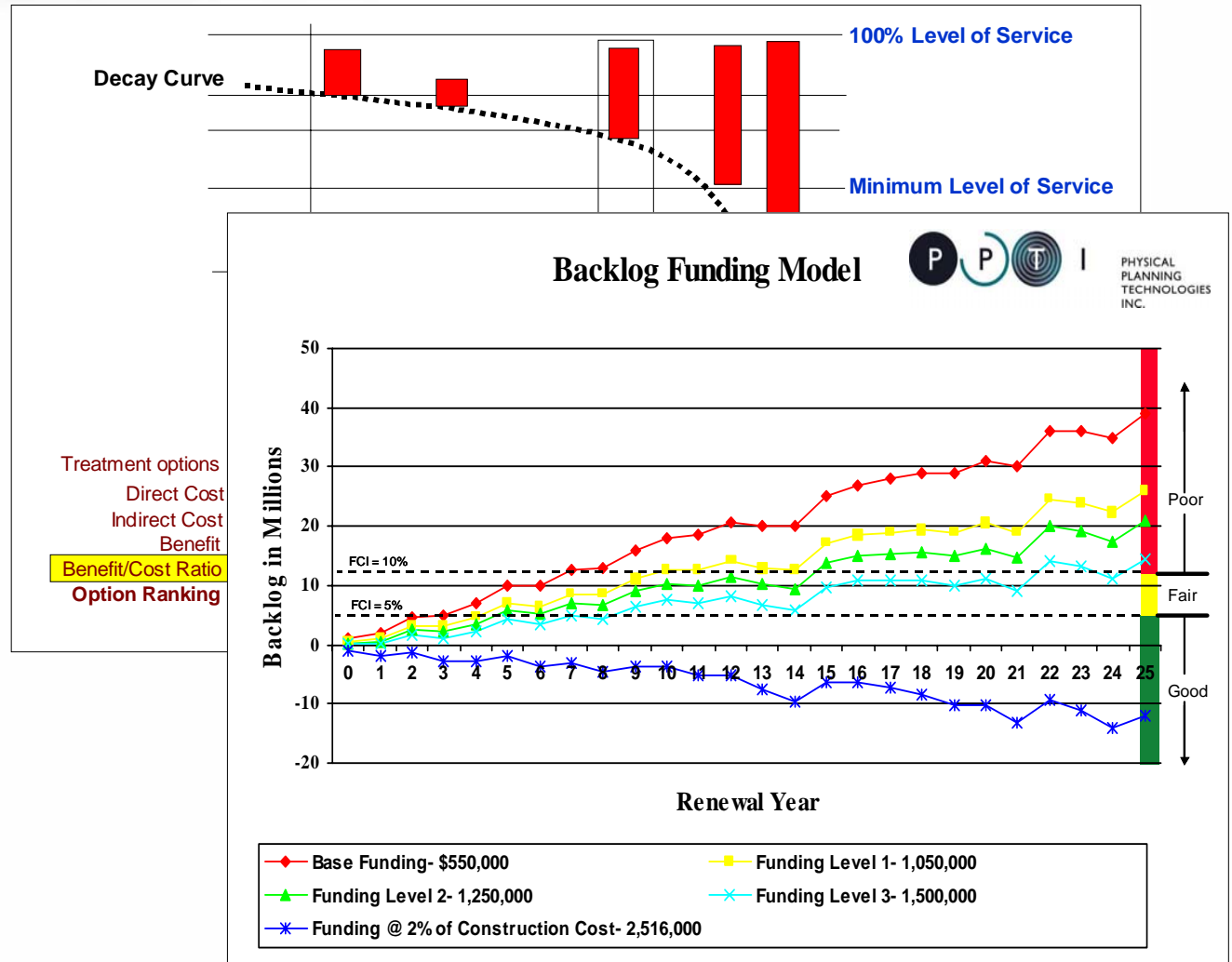
Example – AMP Table of Contents

Section	Content
Introduction Section 1	Explains the background to the AM plan and the structure and scope of the plan.
Statement of Services Section 2	Identifies the categories of service and the standards to which these services will be provided (i.e. target standards). The performance measures for assessing the achievement of the target standards are also defined.
Future Demand Section 3	Section 3 identifies key demand factors for the wastewater system, predicts their effect on long-term capital investment needs and states demand management strategies to be implemented by HCC.
Asset Description Section 4	<p>Describes the assets used in the delivery of wastewater services. This includes asset condition, performance (measured against the target standards), criticality and remaining life.</p> <p>Identifies level of service gaps and links with the asset development required to close gaps (Section 5).</p>
Risk & Investment Strategies Section 5	<p>This section identifies the strategic risk and investment policies implemented by HCC for delivering water services. Significant and high business risks identified in the risk management plan are addressed in this AM plan.</p> <p>Critical assets and management issues identified in the application of the risk process, and the adopted risk treatment, are detailed in Section 5. The investment policies are applied to justify and prioritize the operational, maintenance and capital programs specified in Section 5.</p>
Lifecycle Asset Management Section 6	This Section contains the analysis of asset information in Section 4, details the Council's strategies for maintaining the service potential of the assets and close service standards gaps and identifies the management actions and physical works programs to be implemented.
Financial Forecast Section 7	Provides information on financial processes, policies, and funding and expenditure programs.
Improvement Planning Section 8	<p>Describes the strengths and weaknesses of current asset management practice, and actions planned to enhance them.</p> <p>Also describes processes for monitoring the effectiveness of the plan and outlines the QA initiatives undertaken by HCC.</p>

Telling the AM Story

Confidence
in decision
making

Effective
presentation



Over-Arching Total Enterprise Asset Management Principles

Our Asset Management Charter

- **Asset Inventory.** We will know the assets that we own, or for which we have legal responsibility, and will maintain an accurate computerized asset register developed around an asset hierarchy that supports advanced asset management functions.
- **Condition Assessment.** We will gather, record, and analyze condition assessment data, store and analyze it using user-friendly computerized systems, design those systems to support high confidence level asset related decision making, and create a comprehensive and dynamic condition index.
- **Maintenance.** We will retain a detailed maintenance policy, and operate a user-friendly, accurate, and comprehensive enterprise asset management system (that includes a Computerized Maintenance Management System) to ensure that the assets, facilities, and systems perform to their design criteria and meet their design lives.
- **Information Technology and Analytics Knowledge.** We will store and analyze our data and knowledge in integrated or interconnected, user-friendly, efficient, and effective computerized business information systems that support our total organization and our TCEAM Program responsibilities, vision, and goals.
- **Lifecycle Service Levels.** We will thoroughly understand and record our current levels of service, including customer service elements, and will report our performance in meeting those in annual asset management plans. These plans will include service level options and costs, and likely future LOS requirements necessary to sustained performance. We will assess the impact or analytical cost impacts of inadequate asset condition or performance on our customers and the community in terms of the economic consequences of failing to meet our established levels of service.
- **Financial Options.** We will understand the value and costs of our assets and the financial resources needed to appropriately sustain them (short and long term). We will make our decisions based on total Life Cycle costs, and will have appropriate pricing and funding strategies that match our business needs and targeted levels of service. We will measure and report full economic costs of our activities and apply them to the relevant service. We will link the condition index to our customer's expectations, financial capacity, and our levels of service goals.
- **Capital and Annual Budget Funding Processes and Procedures.** We will have uniform processes across our whole organization for the evaluation of our investments in capital projects, maintenance, or operations. These processes will include risk and benefit costs, impact on levels of service, and asset management decision making quality confidence levels. We will make our funding decisions about individual projects when all service programs within the business have completed their capital and annual operating budgets, and the impacts of our decisions on levels of service, asset and service sustainability, and risks are known. We will link our organizational goals to our investment and infrastructure plans.
- **Capital Investment Decisions.** We will only approve capital for new assets or services with an understanding and commitment to the required O&M funding necessary to sustain them. We will plan our infrastructure asset investments to meet current and forecasted demands within the expected life of the assets.
- **TCEAM Reporting.** We will report our overall performance in financial, asset, environmental, and technical terms in an annual total enterprise asset management report.
- **TCEAM Risk Management.** We will monitor, understand, and manage the risks involved in our business activities and ensure that our policies, processes, and practices reflect this commitment.
- **TCEAM System Management.** We agree that to do life cycle asset management efficiently and effectively, we need to apply Real-Appropriate Life Cycle Processes and Practices to our valuable community assets, acquire and maintain the necessary data and knowledge needed for those processes, store the data and knowledge in the most appropriate Asset Management Information Systems (AMIS) and prepare an Asset Management Plan so that the strategy is consistent with appropriate life, for services provided.
- **TCEAM System Use Accountability Measures.** We believe that only when we can confidently claim that all of the above assets O&M are in use will Real-Appropriate Practices (RAP) in TCEAM have been achieved for the benefit of our O&M customers and stakeholders.

The AM "Charter"

The AM Charter

- **Asset Inventory.** We will know the assets that we own, or for which we have legal responsibility, and will maintain an accurate computerized asset register developed around an asset hierarchy that supports advanced asset management functions.

The AM Charter

- **Condition Assessment**. We will gather, record, and analyze condition assessment data; store and analyze it using user friendly computerized systems; design these systems to support high confidence level asset related decision making; and create a comprehensive and dynamic condition index.

The AM Charter

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The AM Charter

- **Information Technologies and Analysis and Evaluation.** We will store and analyze our data and knowledge in integrated or interconnected, user friendly, efficient, and effective computerized business information systems that support our total organization and our TEAM Program responsibilities, vision, and goals.

