PROJECT:

CITY OF SPOKANE
INTEGRATED INFRASTRUCTURE STRATEGY

TOPIC:

EVALUATION MATRIX DISCUSSION

LOCATION:

SPOKANE, WASHINGTON USA

DATE:

MARCH 3, 2015

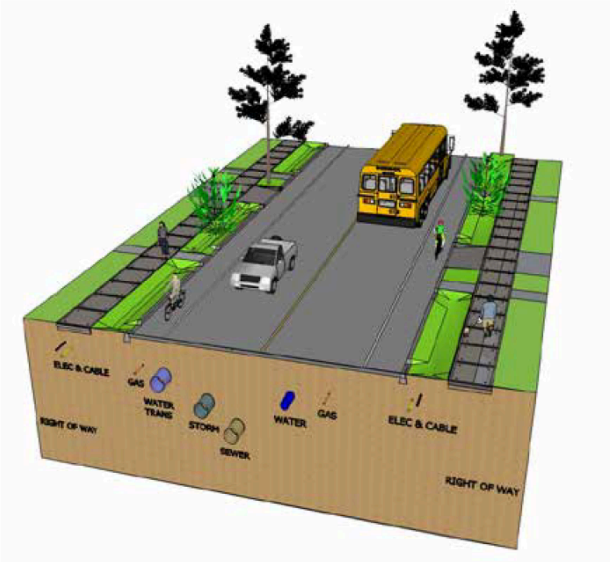
AGENDA

1. Context & Meeting Objectives
   - LINK Spokane
   - Constraints -
2. Integrated Infrastructure Planning
   - Framework Development and Use
   - Need for Project Selection Criteria
3. Transportation Planning
   - Draft Project Evaluation Categories
4. Utility Planning
   - Need for Project Selection Criteria
5. Project Selection Criteria Development
   - Refine LINK Spokane Project Evaluation Categories
   - Evaluation Criteria
   - Qualitative & Quantitative Metrics
6. Work Plan

CONTEXT

It's All About Integration!

- Integrated Streets consider:
  - Pavement condition
  - Multi-modal transportation components—bike lanes, pedestrian improvements, mass transit
  - Storm water management
  - Public & private utility infrastructure
  - Economic Development opportunities
- Comes together in Comp Plan update: **Link Spokane**



3-Dimensional View of Streets

VISION 2020 | Safer Stronger Smarter

CONTEXT

New Streets Funding Strategy Uses

Rehab

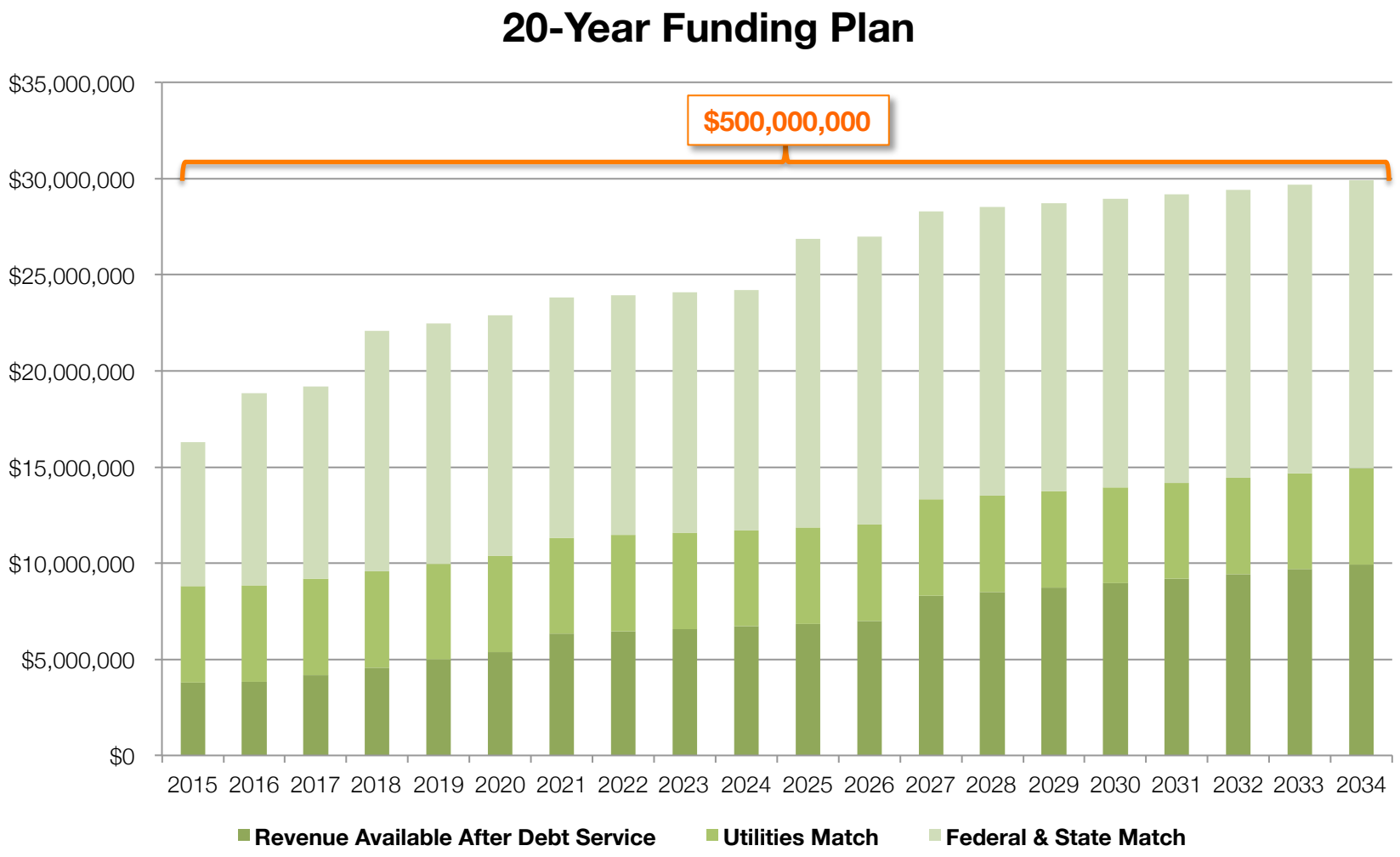
Maintenance

New Construction

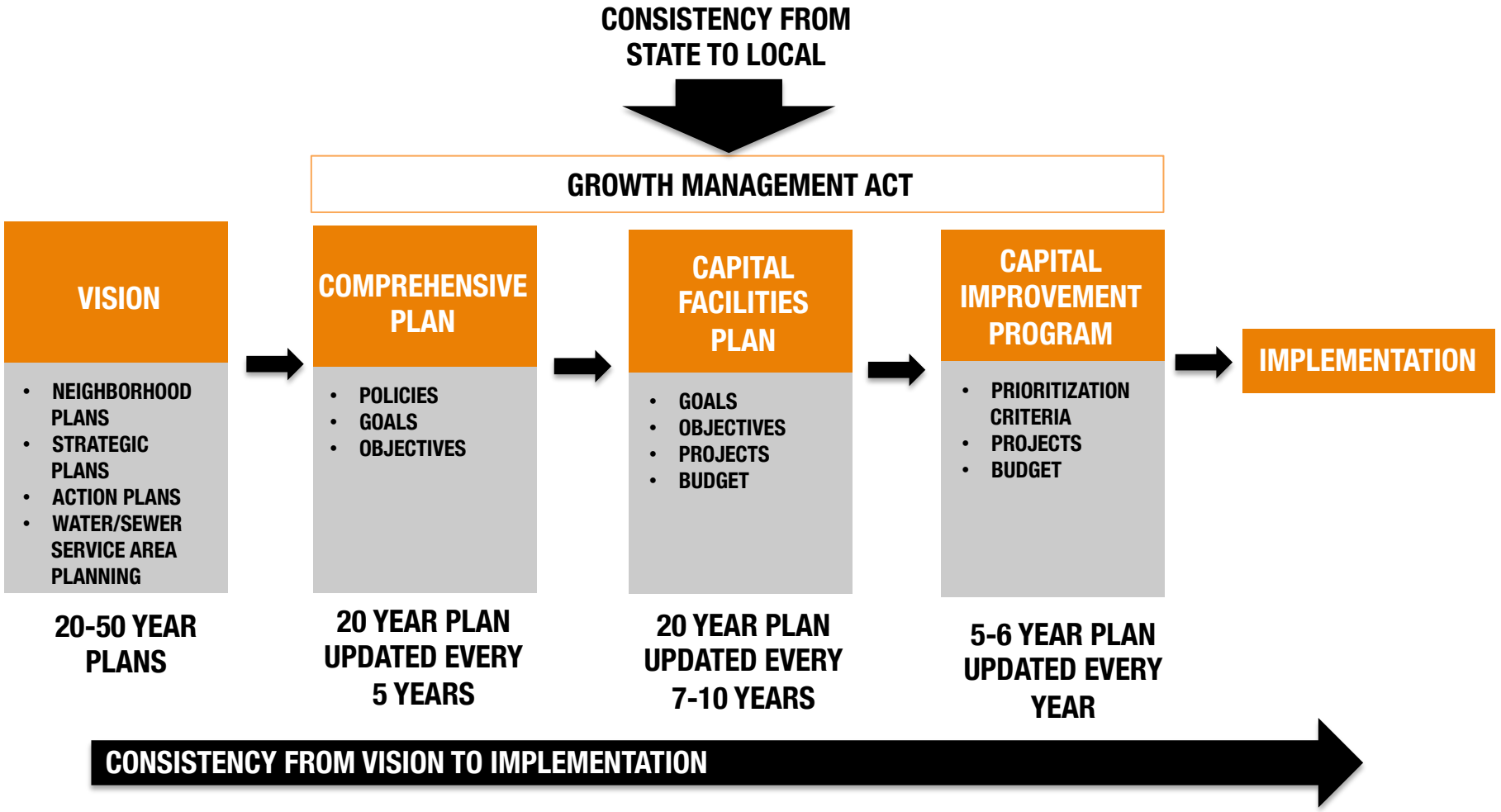
Commitment to improving overall street system

- **Arterial Focus:** More than 90% of miles traveled
- **Upgrade:** All arterials & maintain them during 20 years
  - Promise to bring arterials up to a “70” or “good” pavement rating
- **Integrate:** Multi modal, utilities, stormwater (i.e. Go in Once)
- **Funding:** Pay as you go - no additional debt; Reliance on match

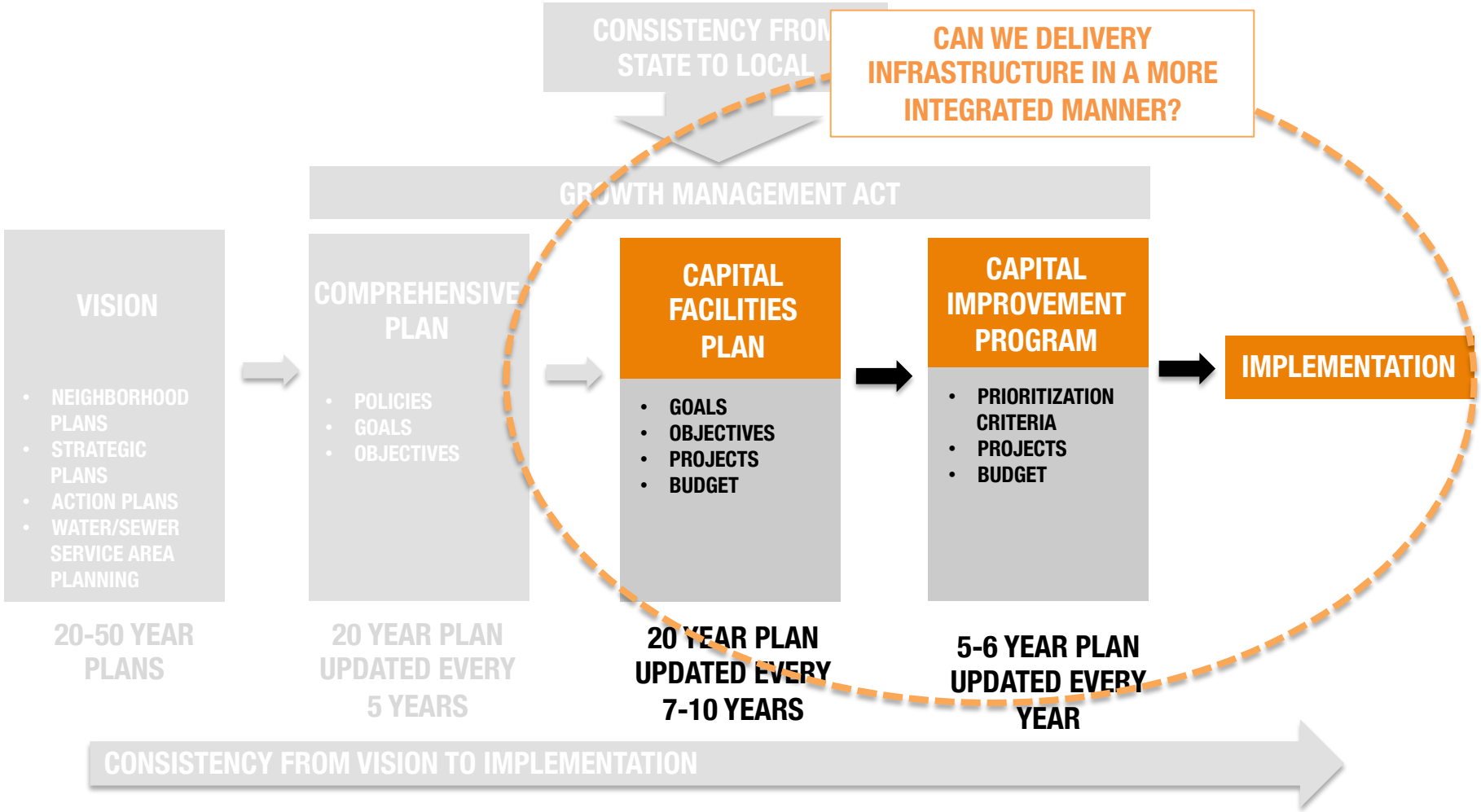
CONTEXT


20-Year Funding Plan
$35,000,000
$30,000,000
$25,000,000
$20,000,000
$15,000,000
$10,000,000
$5,000,000
$0
$500,000,000
2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034
Revenue Available After Debt Service
Utilities Match
Federal & State Match

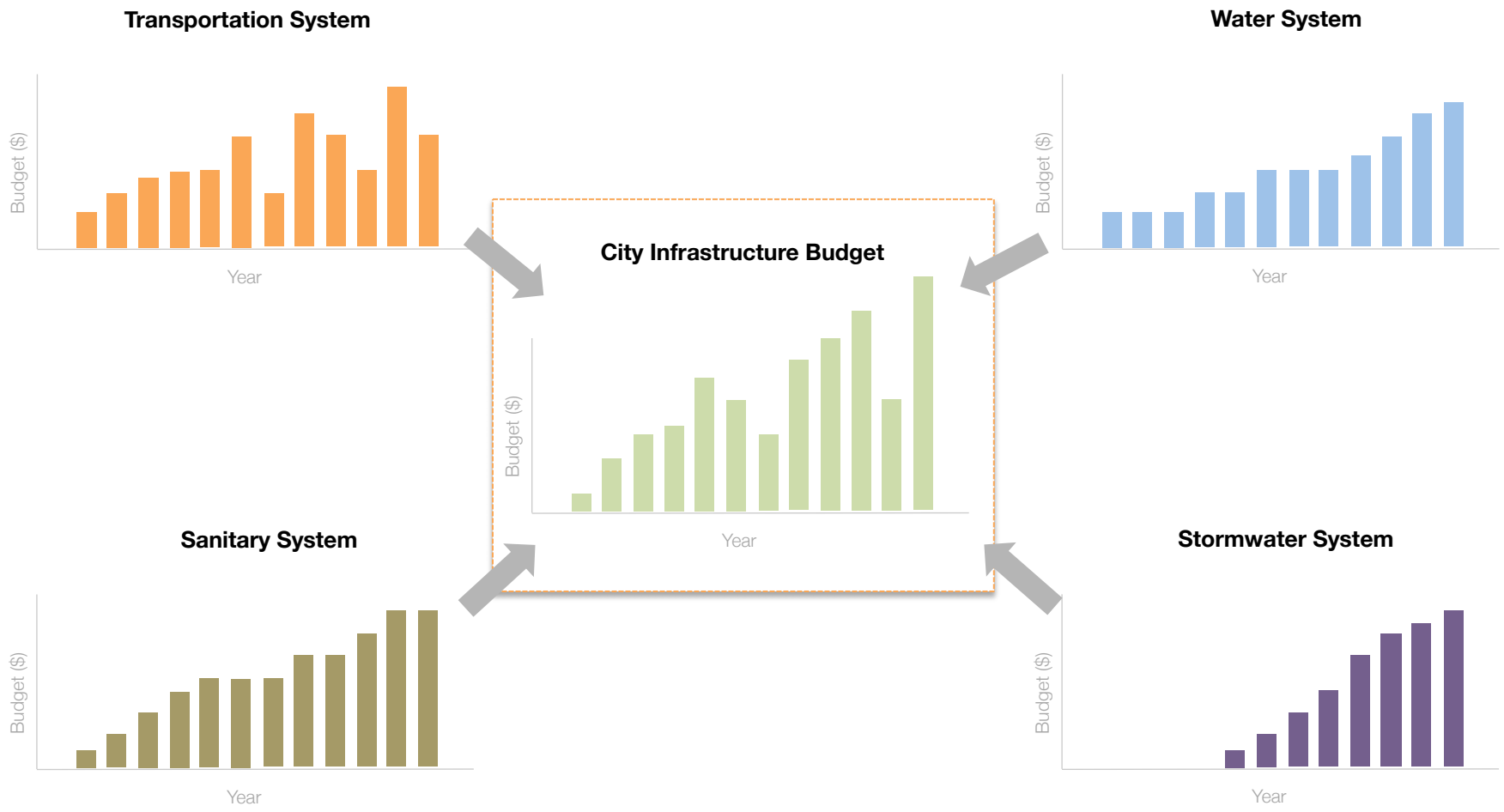
INFRASTRUCTURE PLANNING CONTEXT



INFRASTRUCTURE PLANNING CONTEXT



INFRASTRUCTURE PLANNING



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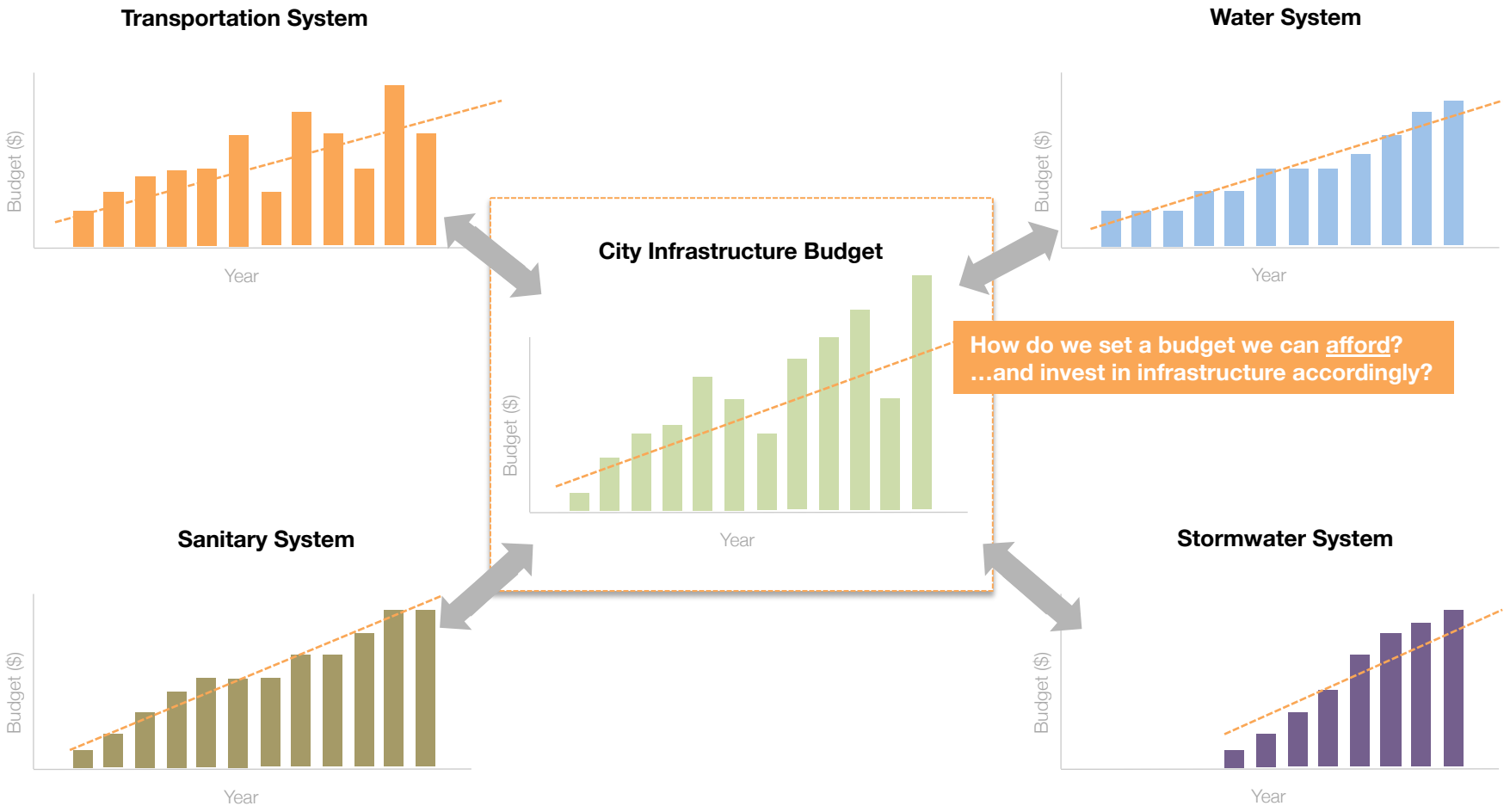
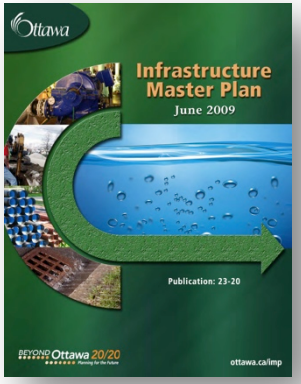
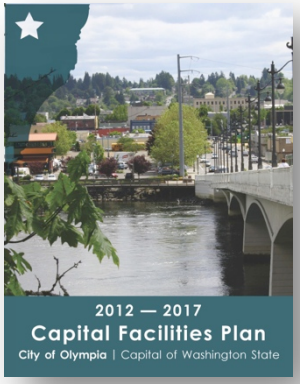
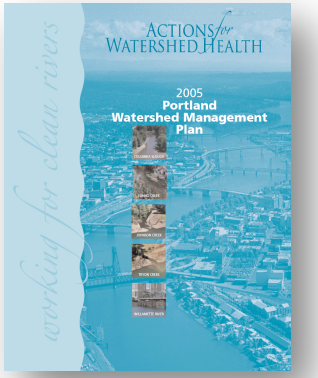
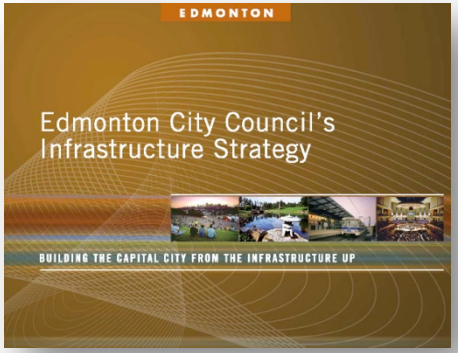


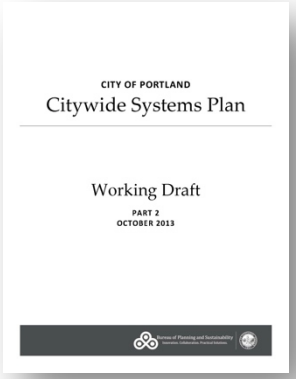
CASE STUDIES

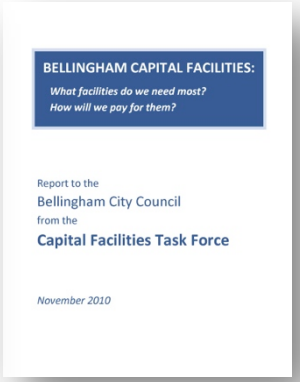


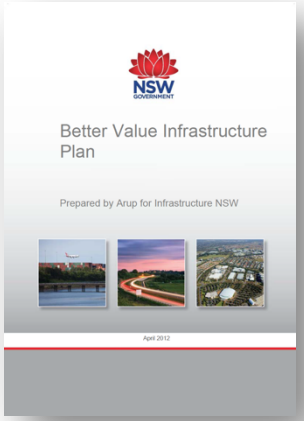


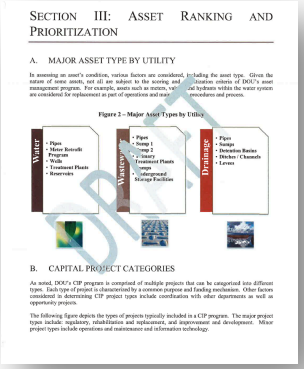




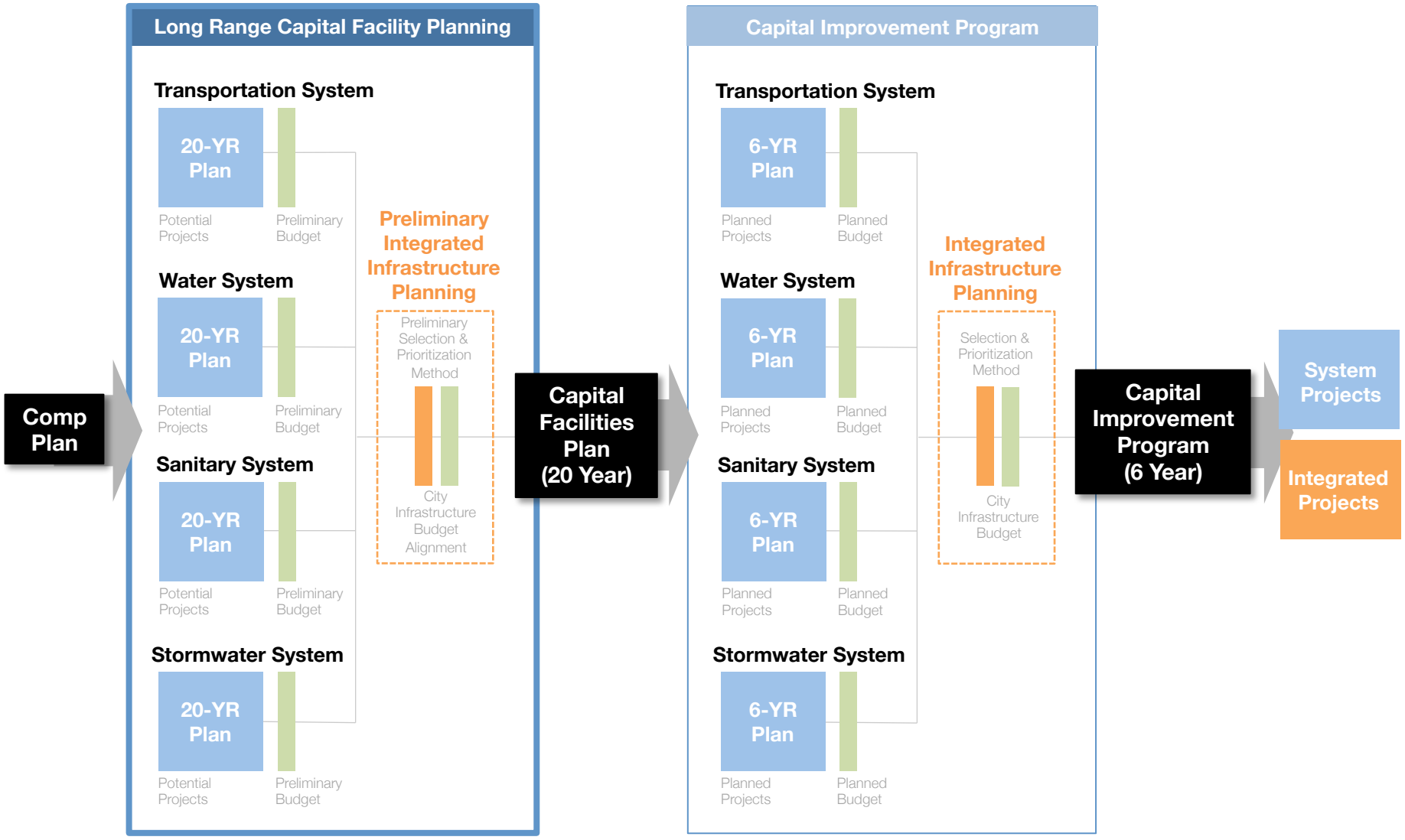




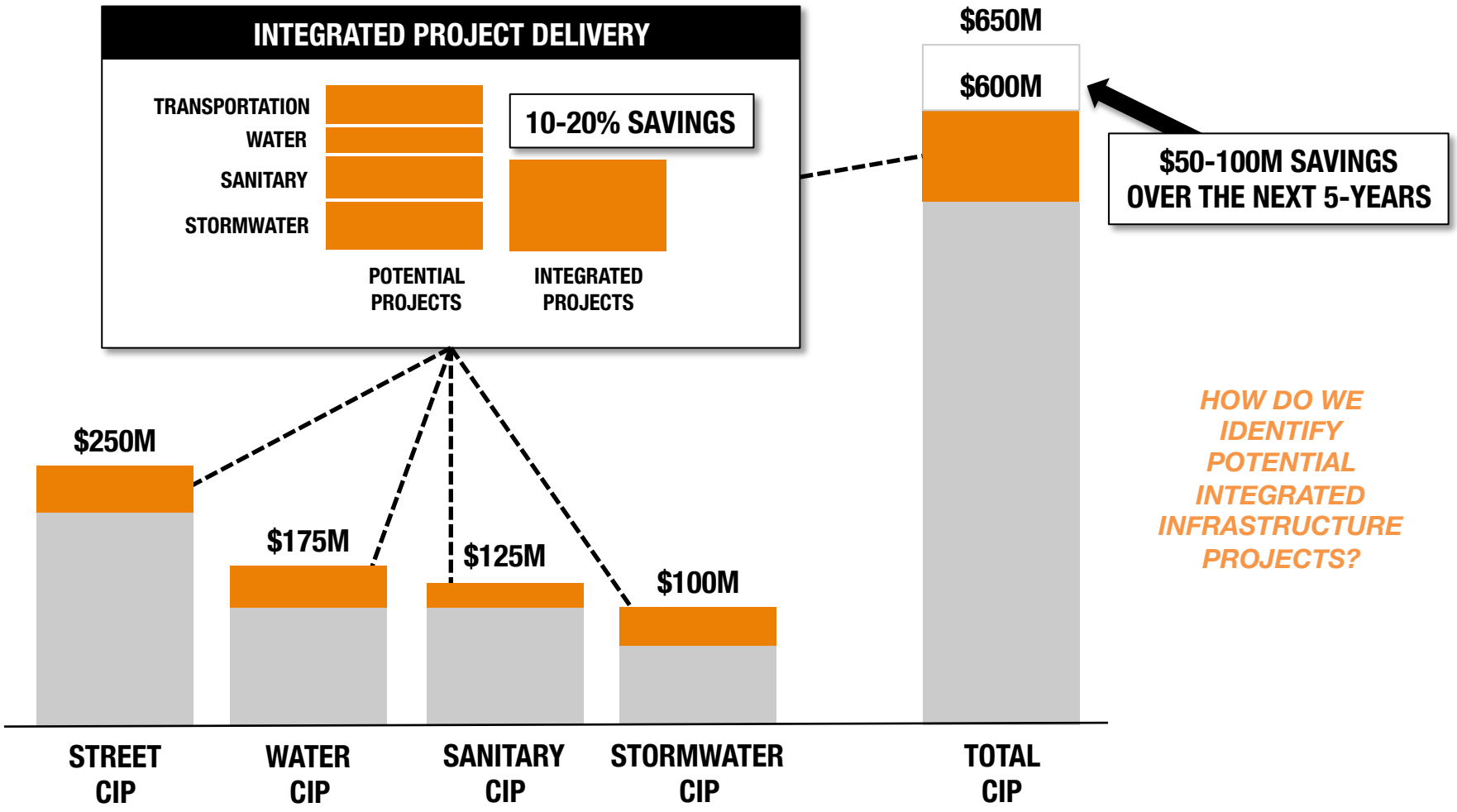




INTEGRATED INFRASTRUCTURE FRAMEWORK



WHY INTEGRATED INFRASTRUCTURE?

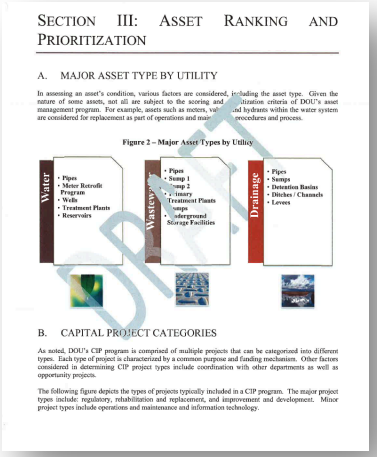


HOW DO WE IDENTIFY POTENTIAL INTEGRATED INFRASTRUCTURE PROJECTS?

WHY INTEGRATED INFRASTRUCTURE?

- Cost savings
- Leverage resources
- More efficient use of existing infrastructure
- Better able to achieve citywide objectives
- Meet multiple mandates through a coordinated effort
- Manage the “infrastructure gap”
- Reduce community disruption and improve public trust

PROJECT SELECTION & PRIORITIZATION METHOD



SECTION III: ASSET RANKING AND PRIORITIZATION

A. MAJOR ASSET TYPE BY UTILITY

In assessing an asset's condition, various factors are considered, including the asset type. Given the nature of some assets, not all are subject to the scoring and prioritization criteria of DOU's asset management program. For example, assets such as meters, valves and hydrants within the water system are considered for replacement as part of operations and maintenance procedures and process.

Figure 2 – Major Asset Types by Utility

B. CAPITAL PROJECT CATEGORIES

As noted, DOU's CIP program is comprised of multiple projects that can be categorized into different types. Each type of project is characterized by a common purpose and funding mechanism. Other factors considered in determining CIP project types include coordination with other departments as well as opportunity projects.

The following figure depicts the types of projects typically included in a CIP program. The major project types include: regulatory, rehabilitation and replacement, and improvement and development. Minor project types include operations and maintenance and information technology.

Table 1 - Category Summary

Type	Key Characteristics	Prioritization Factors	Weighting Factors
Regulatory Requirements	Regulatory and health standard compliance	Mandates and consequences	Always a high priority
Rehabilitation & Replacement (R&R)	Maintaining existing infrastructure	Asset management (likelihood of failure, consequence of failure)	Core service metrics Coordination with other departments Business opportunities Focus CIP
Improvement & Development	Provide new infrastructure or serve new developments Coordination with other departments Cost sharing Business opportunity	Master planning Development opportunities Timeliness	Frequently outweigh rehabilitation projects because of time-limited business or coordination opportunities May not need to be ranked if externally funded Focus CIP
Operations & Maintenance	Special smaller projects to support O&M	Crucial to daily operations and performance goals	Core service metrics Coordination with other departments
Information Technology	Technology needs for the next 5 to 7 years	Based on the Integrated Technology Master Plan	Mid to high priority

Table 2. Organizational Categories for Criticality Assessment

- **Objective 1:** Reliable, high-quality customer service (rated based on severity of service interruptions).
- **Objective 2:** Compliance with regulations and environmental impacts (rated based on violations of state and federal regulations).
- **Objective 3:** Health and safety of public and employees (rated based on severity of injury or illness to public or employees).
- **Objective 4:** Economic impact (rated based on impact to local businesses and cost to repair the asset).
- **Objective 5:** Ability to restore asset (rated based on how many hours it would take to restore the asset).
- **Objective 6:** Location/critical facility impact (rated based on what type of development would be affected by the failure).

Table 3 - Criticality Scoring Matrix for Water

SEVERITY LEVELS BY POSSIBLE IMPACT					WATER
	Organizational Objective	Negligible = 1	Moderate = 4	Critical = 7	Catastrophic = 10
1	Reliable, High Quality Customer Service	Pressure > 30 psi, isolated service interruptions; No effect on fire protection	Pressure 25-30 psi; several customers affected. Minimal effect on fire protection	Service interruption affecting several customers; pressure 20-25 psi; considerable impact on fire protection	Service interruption over widespread area affecting numerous customers, pressure <20 psi; and significantly impacting fire protection
2	Compliance With Regulations and Environmental Impact	Considered only a technical violation of permit or regs; no environmental impact	Violation must be reported but no enforcement action taken; violation of Tier 3 regulations	Violation brings strong warning from regulatory agency; violation of Tier 2 regulations	Significant non-compliance resulting in administrative or consent orders; violation of Tier 1 regulations
3	Health & Safety of the Public and Employees	No adverse health affect on the public or employees	Minor injury to public or employees; no illness among citizens	Severe injury or illness affecting a few citizens or employees	Any loss of life; severe injury or illness affecting numerous citizens or employees
4	Economic Impact (Community and Utility)	No economic impact on the businesses or the community; utility's expense covered by budgeted contingency funds	Short-term economic impact on a few businesses; no adverse impact on economic vitality of community; utility's expense covered by reallocating within existing budget	Short-term economic impact on several businesses; no adverse impact on economic vitality of community; significant expense by the utility, requiring budget modification or allocation of reserves	Long-term or area-wide economic impact on numerous businesses; adverse impact on economic vitality of community; major unplanned expense by the utility, requiring allocation of reserves or borrowing
5	Ability to Restore Asset to Design LOS	Asset restored in less than 4 hours not including disinfection	Asset restored 4 to 12 hours not including disinfection	Asset restored between 12 to 24 hours not including disinfection	Not able to restore asset for >24 hours
6	Location/Critical Facility Impact	No occupied areas; open space, streets	Area of few residences and commercial establishments	Residential areas; extensive commercial areas (malls); industrial complexes	High density residential (large apt complexes); schools, hospitals, and high profile buildings (e.g. Capitol); wholesale customers

** **Tier 1** - Any time a situation occurs where there is the potential for human health to be immediately impacted. **Tier 2** - Any time a water system provides water with levels of a contaminant that exceed federal or state standards or that hasn't been treated properly, but that doesn't pose an immediate risk to human health. **Tier 3** - When a water system violates a drinking water standard that does not have a direct impact on human health*

TRANSPORTATION VISION STATEMENT

"Citizens of Spokane will have a variety of transportation choices that allow easy access and mobility throughout the region and that respect property and the environment"


Existing Goals
Evaluation Categories
1:Overall Transportation
2:Transportation Options
3:Transportation and Land Use
4:Efficient + Safe Mobility
5:Neighborhood Protection
6:Environmental Protection
7:Sense of Place
8:Regional Planning
9:Equitable Funding
10:The Future
Transportation choices
Economic opportunity
Public health and safety
Neighborhood assets
Natural assets
Access to regional destinations
Fiscal responsibility
Integrated investments

Link Spokane Draft Evaluation Categories

- Provide transportation choices
- Accommodate access to daily needs & regional destinations
- Promote economic opportunity
- Respect natural and neighborhood assets
- Enhance public health and safety
- Maximize public benefits and fiscal responsibility with integrated public investments

PROJECT SELECTION CRITERIA

Evaluation Category	Evaluation Criteria	Description
Provide Transportation Choices	Person Capacity	Travel Time to Key Centers vs. Baseline (Mode Neutral)
	Network Connectivity	Provision of New Travel Options
	Other:	
Accommodate Access to Daily Needs and Regional Destinations	Neighborhood Accessibility	Access to Nearby Key Centers (City Only)
	Regional Accessibility	Access to All Key Centers (Full Region)
	Disadvantaged Accessibility	Project Benefit to Vulnerable Populations
	Other:	
Promote Economic Opportunity	Development/Redevelopment Potential	Location in Key Centers
	Freight/Goods Movement	Improvement to Identified Freight Route
Respect Natural and Neighborhood Assets	Air Quality	VMT
	Water Quality	LID Components
	Neighborhood Support	Identified in Neighborhood Plan
	Other:	
Enhance Public Health and Safety	Operational Safety	Addresses Known Safety Issue or Has Clear Safety Benefit
	Bike Safety	Separated Bike Facility
	Pedestrian Safety	Accessibility or Pedestrian Safety Project
	Other:	
Maximize Public Benefits and Fiscal Responsibility with Integrated Public Investments	Innovative or Leveraged Financing	Attachment to Unique Funding Source
	Integration	Improvement to Stormwater Runoff
	Maintenance and Facility Condition	Project That Addresses Life-Cycle Need
	Other:	

UTILITY PLANNING

1. Does LINK Spokane Project Evaluation Criteria Adequately Address Utility Planning Needs?

2. If Not, How Should They Be Refined?

PROJECT SELECTION CRITERIA DISCUSSION

Evaluation Category	Evaluation Criteria	Description
Provide Transportation Choices	Person Capacity	Travel Time to Key Centers vs. Baseline (Mode Neutral)
	Network Connectivity	Provision of New Travel Options
	Other:	
Accommodate Access to Daily Needs and Regional Destinations	Neighborhood Accessibility	Access to Nearby Key Centers (City Only)
	Regional Accessibility	Access to All Key Centers (Full Region)
	Disadvantaged Accessibility	Project Benefit to Vulnerable Populations
	Other:	
Promote Economic Opportunity	Development/Redevelopment Potential	Location in Key Centers
	Freight/Goods Movement	Improvement to Identified Freight Route
Respect Natural and Neighborhood Assets	Air Quality	VMT
	Water Quality	LID Components
	Neighborhood Support	Identified in Neighborhood Plan
	Other:	
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	Bike Safety	Separated Bike Facility
	Pedestrian Safety	Accessibility or Pedestrian Safety Project
	Other:	
Maximize Public Benefits and Fiscal Responsibility with Integrated Public Investments	Innovative or Leveraged Financing	Attachment to Unique Funding Source
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	Maintenance and Facility Condition	Project That Addresses Life-Cycle Need
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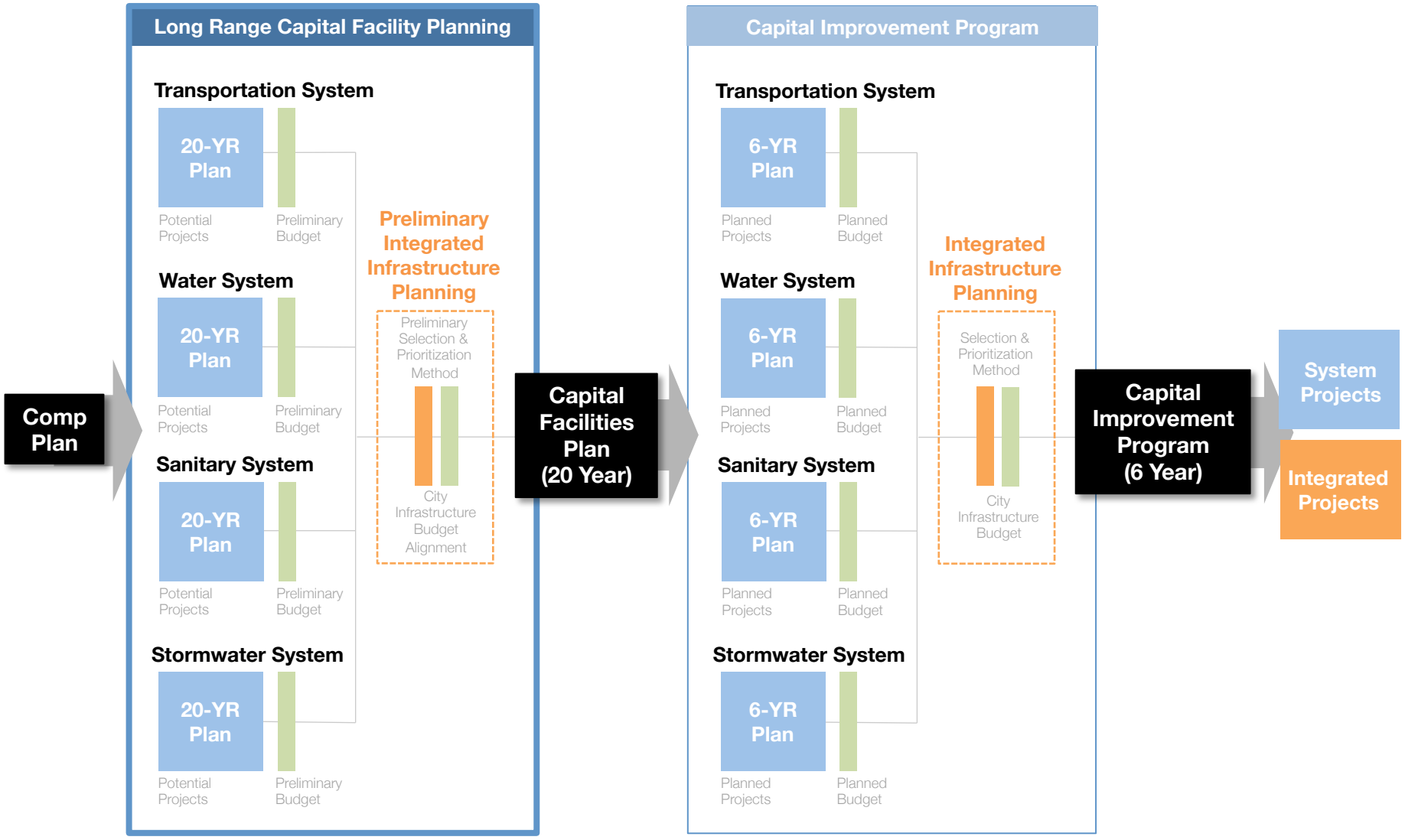

WORK PLAN

1. Project Selection Criteria Development
   - Preliminary Criteria
   - Review #1
   - Draft Criteria
   - Review #2
   - Final Criteria
   - Review #3 (if needed…)
2. Project Selection Tool
3. Integrated Infrastructure Investment Model
   - Integrated Funding Sources
4. Integrated Infrastructure Planning Framework
   - Framework
   - Project Selection (evaluation criteria)
   - Investment Model