Managing Capital Assets

The importance of lifecycle assessments

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Government provides assets to deliver public value and public good through both public and private entities. All the programs and interactions involved in providing services for a community depend on public assets. Basic public infrastructure like roads, water, drainage, schools, parks, libraries, public safety facilities, and other vital assets are maintained by all levels of government.

In accomplishing their mission, governments often expand their roles and provide other categories of capital assets such as performing arts centers, convention centers, sports facilities and stadiums, economic development projects, airports, golf courses, and other major projects. These assets carry significant operational and capital costs, which may be fully or partially offset by revenues generated by the asset. Before undertaking these projects, governments should thoughtfully and fully evaluate the financial viability of new capital assets to determine if they are the most appropriate and efficient ways to deliver intended services.

This article provides overall guidance and recommends a thoughtful introspection into governments' abilities to manage and oversee a capital asset—which is best done through lifecycle assessment of the asset over 20 to 30 years minimum. This review can be done for both new capital assets and existing assets that are nearing the end of their useful lives.

Conduct a full assessment

Governments should consider their ability to manage a major capital asset before acquiring it. The assessment should include:

1. **Defining the purpose, goals, and objectives of the capital asset.** This review should include determining the level of service provided and governments' objectives for the asset. Governments should also communicate the objectives and benefits of operating and owning the asset to the community.

2. **Determining whether the capital asset is relevant to the government's mission, core competency, and/or line of business.**

EXHIBIT 1 | **Lifecycle scenarios for a sample stadium**

Options	LCC $	EACF $	Additional Funding Need—Carrying Volume of Immediate Issues	2024 Health	2034 Health	2054 Health	Overall LoS
Option 1	$21.3m	$0.71m pa	Additional $500K allocated for immediate issues over 5-10 years	2.60	2.82	3.39	
Option 2	$34.8m	$1.16m pa	Additional $500K allocated for immediate issues over 3-5 years	2.60	2.01	2.13	
Option 3	$40.6m	$1.35m pa	Additional $500K allocated for immediate issues over 3-5 years	2.60	1.96	2.01	
Option 4	$103.0m	$3.43m pa	N/A	2.60	1.87	1.93	

Notes:

- **LCC** = Life Cycle Cost which is sum of all capital and maintenance expenditure over a 30 year time frame.
- **EACF** = Equivalent Annualized Cashflow which is Life Cycle Cost divided by 30 years.
- **30 Years** = Notional time frame based on average life of short to medium life components of a Stadium based on IIMM useful lives.
- **Immediate Issues** = Identified as urgent usability and loss of service issues in the 2024 facility audit. These are major maintenance type issues and not capital in nature and are additional funds required in addition to the funding required per intervention level.
  - **Option 1** assumes immediate issues under current affordability may take 5-10 years to resolve.
  - **Option 2** and **Option 3** care more resolve and address these issues over 3-5 years.

Condition 1.00–1.99 and Level of Service is 5 Star
Condition 2.00–2.99 and Level of Service is 4 Star
Condition 3.00–3.49 and Level of Service is 3 Star
Condition 3.50–5.00 and Level of Service is 1-2 Star

The evaluation should include determining if the asset provides a necessary, valued, and/or desired product or service to the government's citizens, customers, and/or population. This review should consider the priority of the asset to the community.

3 **Evaluating whether to use existing assets.** Governments should also evaluate the possibility of using existing assets to provide the desired product or service. As much as possible, governments should consider repurposing underutilized assets to provide new services. Furthermore, consider whether this asset is likely to affect existing assets (such as, is there opportunity to rationalize or justify existing assets?).

Consider a stadium as an example. The stadium is more than 50 years old and hosts multiple teams and state sport events; it could also potentially attract national-level competition and increased patronage. The stadium therefore undertook scenario analysis to engage with its stakeholders. Four scenarios were analyzed using a lifecycle cost versus predicted service-level model. These scenarios will enable the city to make informed decisions about whether to reutilize the current asset as is (business as usual), or to undertake risk-based upgrades only while continuing to operate, versus conducting a major refurbishment contained within existing perimeters, versus the ultimate scenario of building a new facility with modern functionality that is future-proofed for at least 30 years.

Exhibit 1 shows the lifecycle scenarios compared with the annual average cash-flow required and communicate the results in a very simple manner; these types of analyses are enabling asset owners to communicate their story to their customers and to justify/raise investment funding for a new facility.

4 **Evaluating governments' ability to operate and financially manage the capital asset.** This evaluation should include a lifecycle cost analysis to consider the entire cost of owning the asset over its useful life, including sustaining the asset in a condition necessary to provide expected service levels.

The evaluation of operations should include the expected service and staffing levels, including operating hours. It should also evaluate the government's ability to efficiently manage the asset with in-house staff or an external party (for example, outsourcing). If governments are expanding outside of their core line of business, they should consider having outside experts assist in managing or overseeing the asset. The evaluation should include the ongoing requirements of reporting and oversight of the asset's performance measures. Governments must have sufficient capability to oversee and report the asset's performance to the public, stakeholders, and investors.

The financial evaluation should include understanding the proposed operating expenditures, including personnel, supplies, contractual, capital replacement, and debt service costs and the means to fund them.

Governments should consider undertaking a whole of lifecycle cost analysis over the life of the asset to determine if the asset's future costs can be funded through taxes, tolls, fees, or

rates and charges (including a test of affordability). New assets should include an asset management plan with an analysis of the cost of annual maintenance and the cost of ongoing renewal and replacement. The purpose of this analysis is to consider the cost of an adequate and appropriate ongoing maintenance program to ensure that the intended asset life is obtained, as well as providing the cost for timely asset renewal to ensure that service levels never fall below acceptable minimum standards.

5 **Communicating the results to the governing body and public.** The governing body and public should see the results of the evaluation, so they fully understand all costs of the project before taking it on. This is ideally done in the form of a report or a story board presentation that is easy for the community and stakeholders to understand (see Exhibits 2 and 3). The storyboards must link a customer outcome to the long-term capital plan.

Fully costing out a new asset

The following example provides a case study for a new asset—whole of lifecycle planning that provides a fully costed lifecycle plan.

A major city—with a population of more than 300,000 that is expected to grow to 500,000 residents by 2043—recently completed a major central downtown precinct and public domain. It is surrounded by office towers, a new library, and amenities including a digital river, indigenous pavers, and local artefacts. The build cost was approximately $45 million. The city used lifecycle planning to determine the future funding that would be required for operations, maintenance, and capital to continue delivering a desired level of service—consequently enabling deliberation about the rates and charges that would be needed to offset this future expenditure. Exhibit 2 shows a scenario-based analysis of financial and community viability.

EXHIBIT 2 | **Simulated lifecycle model comparing 20-year asset health for four possible funding levels**

CLoS Performance				Option 1	Option 2	Option 3	Option 4
Average Annualized Renewal Cost Over 20 Years				$2.46M p.a.	$1.08M p.a.	$2.05M p.a.	$0.68M p.a.
CLoS	**Measure**	**Standard**					
Safety (Risk)	Percentage of assets with a very high-risk rating	Red	15%<100% in very high risk				
		Amber	2%<15% in very high risk				
		Green	0<2% in very high risk				
Reliability	Asset health (intervention levels met, measure as average % remaining useful life)	Red	Average remaining useful life 0<40%				
		Amber	Average remaining useful life 40%<75%				
		Green	Average remaining useful life 75%<100%				
Responsiveness (Asset Liability)	Value of Assets in PVP as a % of Replacement Value	Red	25%<100%				
		Amber	10%<25%				
		Green	0%-10%				
Comfort (Asset Condition)	% in Poor and Very Poor (PVP) Condition	Red	20%<100%				
		Amber	5%<20%				
		Green	0%-5%				

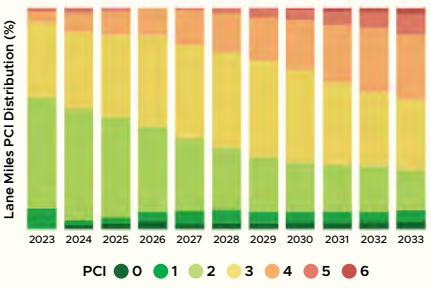
CLoS = Measuring Community Level of Service over 20 years

EXHIBIT 3 | **Road and street infrastructure whole of planning**

City's Simulated Average Pavement Condition Index (PCI)

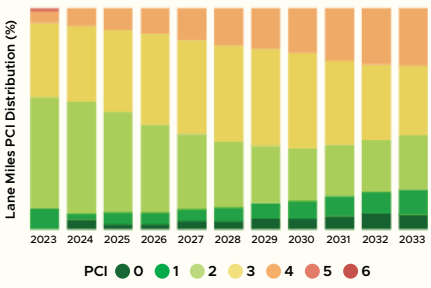
Simulation	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
Option 1—Tax Removed	2.39	2.54	2.56	2.55	2.66	2.75	2.85	2.94	3.04	3.10	3.19
Option 2—Tax Retained	2.39	2.40	2.47	2.55	2.59	2.64	2.65	2.67	2.65	2.61	2.59

Simulated PCI distribution if Tax Removed



Outcome: Significant lane miles are simulated to be in poor condition in 2033 if road tax is removed

Simulated PCI distribution if Tax Retained



Outcome: 0 lane miles are simulated to be in poor condition in 2033 if road tax is retained

Using scenario planning, the city was able to undertake an evidence-based decision making process about the ongoing viability of this asset—which provides significant community benefit from tourism, entertainment, and a sense of place-making. Lifecycle asset plans such as this can also help with credit rating for investment bond reliability where needed.

Optimizing tax revenue for prolonging the life of existing assets is particularly important because it demonstrates that the city is in control of long-term operations, renewal, and maintenance of existing assets. It means a higher probability of a better risk rating (making the city look more reliable to rating agencies) for bond revenue to build new assets.

Whole of life planning of road and street infrastructure

Another city demonstrated through whole of life planning of its road and street infrastructure that abolishing its five-cent road tax would have severe consequences over a ten-year period. The city presented the scenarios to its constituents through storytelling, which convinced the city council that keeping the road tax would be financially prudent.

The evaluation should also include the additional demand placed on support and administrative staff within the organization, and it should determine if governments have the expertise and staff capacity to properly oversee and account for the asset. Will governments need additional support staff in areas such as Human Resources, Information Technology, Legal, and more, to support the operations of the asset? The evaluation should be thorough enough to determine the direct and indirect costs of adding the capital asset.

Conclusion

This article provides guidance governments can use to consider their ability to manage a capital asset that may be out of their core competency. This assessment will help governments thoroughly understand the costs and benefits of the asset prior to undertaking the project. Additionally, this evaluation could lead to identifying external partners, repurposing existing underutilized capital assets, and strengthen long term (multi-year planning) planning.

These actions will demonstrate governments' long term-financial prudence (for example, avoid investing in a capital asset to only find it doesn't have the ability to properly oversee, manage, and operate). Governments may potentially also save money by delivering the service through a partner to plan, deliver, or manage a capital asset (or in some cases may even repurpose existing capital assets). These actions enable governments to have a long-term financial plan for the asset that is sustainable and delivers the desired level of service.

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