

Prioritizing transportation projects in an age of funding constraints

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FORESIGHT

A Global Infrastructure Perspective



If governments are to meet their 21st century transport needs, they should meticulously evaluate and select the right capital projects, using highly objective, data-driven procedures.

Transportation infrastructures around the world have suffered from years of neglect and under-investment, with population increases and urbanization putting ever-greater pressure on roads, highways and bridges. Alternative financing – such as public-private partnerships – cannot fully compensate for shrinking budgets, so governments must find ways to make their money go further.

Many transportation agencies lack robust protocols for identifying, evaluating and selecting those capital projects that can deliver the greatest value. Although they have much of the data they need, what is often missing is a standardized framework, with clearly defined criteria and weightings. The decision-making process is frequently subjective, with insufficient understanding of the existing estate, and too much emphasis upon short-term goals. Existing controls are routinely ignored or circumvented, while planners also fail to consider limitations in human resources and commodities.

In establishing a consistent approach to project prioritization, project owners need to consider their longer-term strategies, asset management and planning frameworks.

Long range planning

This complex process requires input from all levels of the agency including senior executives, planners and administrators, as well as external stakeholders such as national and local government, communities, and other public and private transportation groups.

With a minimum 20-year horizon, plans should be consistent with the agency's overall mission, which calls for close coordination with transportation planning at other levels of government.

Among the key components are clearly defined goals, demographic and environmental trends impacting transport, and a full inventory showing any deficiencies in existing assets. And by including a breakdown of potential projects, major investments and any budget constraints, planners have the fullest possible information, enabling them to prioritize effectively.

Asset management

A capital plan must present a clear picture of the current asset portfolio, enabling ongoing tracking and optimal use of these assets throughout their lifecycles. Strong asset management gives agencies a real-time view of assets, so that the project screening and selection is geared towards those parts of the infrastructure that deliver the greatest benefit to the transport system and the wider economy.

Agencies can call upon a number of recognized asset management frameworks (most notably ISO 55000), while a centralized asset management database ensures that data is accurate, up-to-date and easily accessible. Assets should be evaluated using objective criteria, and planners need to manage the various stages of the asset lifecycle: planning, development, use, monitoring, maintenance and decommissioning.

“ Almost three-quarters of engineering and construction executives see budget deficits and the public funding crisis as the number one barrier to progress.¹ ”

Capital planning framework

Project prioritization framework

Project pool	100%	Project identification
	50–80%	Project screening
	40–60%	Project prioritization
	35 to 50%	Project selection and budgeting

Source: KPMG in the US, 2014

Project identification: projects are recommended for a number of reasons. Existing assets may be in need of repair or upgrade, or current capacity could be insufficient to meet existing or future demand. Parts of the infrastructure may not conform to sustainability, safety or other regulatory requirements, while government funding schemes sometimes provide unexpected opportunities. Decision-making is aided by:

- placing projects into major programs or categories (e.g. preservation and repair, modernization or expansion) for comparison against peer projects
- a reliable asset management database
- software and tools to capture the range of projects
- a documented project identification process
- complete and consistent project information for all options (such as rationale, budget and target completion date).

Project screening: it is vital to make screening as objective and quantitative as possible, with standard scoring criteria. Evaluators can then carry out a financial analysis (including return on investment), risk analysis and quantitative analysis, and assess the resource constraints. They should also factor in subjective issues such as local opposition, environmental concerns and land purchase requirements.

Project prioritization: this is the most critical, challenging and time-consuming part of the selection process. There is no standard scoring criteria that works across all agencies, but the approach needs to be consistent and repeatable, including:

- a capital planning team with personnel from various disciplines and organizational departments (e.g. executive, planning, design, construction, finance and operations)
- a tiered approach (e.g. tier 1 = high priority, tier 3 = low priority) to add greater focus
- continual assessment of lower-tiered projects for future consideration or cancellation.

Project selection and budgeting: with the aid of scored, tiered options, an oversight or capital planning committee is now in a position to review and approve projects. Face-to-face meetings play an important role, involving committee members, project advocates and capital planning specialists. Financial viability should not be underestimated, to ensure adequate funding is in place, along with contingent sources of capital.

Keeping a flexible outlook

Even with the most rigorous planning, unexpected or emergency projects inevitably surface, so agencies have to be flexible enough to accommodate such demands. These new options require the same thorough considerations as the initial selection process, in order to assess their feasibility and their impact on existing projects in terms of funding and personnel.

Many transportation agencies establish a contingency fund for unexpected projects, based on historical data and adjusted each year to assess the potential impact on the overall budget. These funds can also be used for cost overruns on approved projects. As with any good contingency management process, approvals should be subject to strong controls.

A strong transport infrastructure can have a hugely positive impact upon economic growth, productivity, land values, energy efficiency, public health and manufacturing.² With demand changing rapidly, agencies have to be smarter than ever to get the very most out of limited funding. A tightly-administered, professional capital planning framework eases project prioritization and gives stakeholders confidence in the final choices.

Key questions for project owners:

- Do we understand the state of our existing asset portfolio?
- How do we balance routine maintenance against capacity increases?
- Can we justify projects from past capital plans?
- Do we have a framework for prioritizing and selecting projects?
- How do we screen projects to identify those delivering the greatest benefits?
- Are we factoring return on investment into our decisions?
- Are we confident in our budgeting and forecasting processes?

¹ Ready for the next big wave? KPMG's 2013 Global Construction Survey, 2013.

² A New Economic Analysis Of Infrastructure Investment, Report Prepared by the Department of the Treasury with the Council of Economic Advisers (March 23, 2012).

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