

The definitive guide to scenario planning

*Managing risk for capital
programs in uncertain times*



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Introduction

Planning for large capital programs involves significant forecasting. Scheduling and budgeting across many moving parts require making assumptions about timelines and costs within a reasonable margin of variability.

Over the past two decades, however, accurate forecasting has become much more difficult. The era of stable, predictable construction costs has largely ended. Beginning with the Great Recession in 2008, [construction costs have fluctuated](#) dramatically. Since then, global events, including a pandemic and its resulting supply chain disruptions, geopolitical instability, rising demand, and [tariffs on imported materials](#), have made price forecasting increasingly complex.

Historical averages alone are no longer sufficient for comprehensive capital planning. This is especially true for public infrastructure agencies, such as state departments of transportation and local public works departments, which depend on public funding and manage long, multiyear project life cycles. Without a reliable way to account for ongoing volatility, agencies risk cost overruns, delayed timelines, procurement challenges, and misalignment with funding cycles. These risks not

only affect program outcomes but can also erode public trust and reduce long-term value of capital investments.

Incorporating scenario planning early in the capital planning process is critical because it sets the trajectory for everything that follows—funding strategies, project prioritization, and public accountability. It allows agencies to model multiple plausible futures, anticipate challenges, and proactively prepare mitigation strategies. Beyond risk management, scenario planning supports

stronger prioritization, more intelligent funding allocation, and more transparent communication with stakeholders. Starting with tested assumptions rather than single-point forecasts gives leadership the strategic foresight to align capital programs with the agency's mission and long-term policy goals. It also enables leader to make defensible trade-offs under uncertainty and strengthen trust with oversight boards and taxpayers.

This guide equips government agencies with practical strategies to integrate scenario planning into their capital programs from inception, enabling them to navigate uncertainty with greater control, resilience, and confidence.

What is scenario planning?



Scenario planning is the process of visualizing various possible outcomes to be prepared for any eventuality. Rather than focusing on a single forecast, this approach helps agencies explore a range of possible futures and understand how different conditions could affect their capital programs. It compels planning teams to move beyond the most likely case and consider both upside and downside possibilities, allowing them to respond with greater foresight and flexibility.

Volatility in capital programs can stem from a range of factors, including shifting material costs, labor shortages, legislative changes, and global market disruptions. Scenario planning helps agencies anticipate how these forces might influence revenues, costs, staffing, and schedules.

Certain conditions may create opportunities to expand a program—for instance, if revenues exceed projections, costs come in lower than

expected, or large projects are deprioritized. Conversely, reduced staffing, escalating costs, revenue shortfalls, new regulatory requirements, or changes in agency mission may require scaling back. Other disruptions, such as emerging priorities or schedule delays, can push projects further into the planning horizon, forcing difficult trade-offs.

Conducting this type of what-if analysis is critical to program success during times of uncertainty.

When external conditions are in flux, available budgets may change significantly, even within a single fiscal year, making it risky to rely on fixed projections. By using scenario planning, agencies can identify potential risks and opportunities in advance and develop mitigation strategies before budgets are finalized, rather than reacting after cost overruns or delays have already occurred.

What are the benefits of scenario planning?

For leaders, scenario planning is more than a risk management exercise—it is a governance tool. It provides a defensible framework for aligning capital investments with strategic policy objectives, balancing competing priorities across the program portfolio, and demonstrating transparent stewardship of public funds. By conducting early stress-testing of funding and delivery plans against a range of potential futures, leadership can make confident, accountable decisions before resources are committed.





Risk mitigation and improved resilience

Scenario planning enables agencies the ability to recognize and address potential risks before they arise. When disruptions occur after a program is underway, contingency plans are already in place, helping to avoid delays and added costs. Planning for a range of possible outcomes also strengthens program resilience. It allows agencies to provide greater certainty around procurement timing and delivery schedules, which in turn benefits partner suppliers. More transparent communication and increased predictability help build stronger, more trusted relationships with external stakeholders.



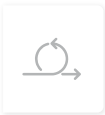
Strategic decision-making informed by analytics

Scenario planning requires more than an understanding of project delivery. It also demands financial analysis, policy setting, and critical thinking. Planning for multiple potential outcomes helps agencies make strategic choices and prepare for the future. With the aid of technology, analytical tools enhance how scenarios are modeled and presented to decision-makers, enabling them to prioritize capital and operating investments across the portfolio as needs evolve.



Improved stakeholder alignment

Exploring different planning paths often requires extended conversations across a diverse group of stakeholders. While obtaining consensus can be difficult, these discussions help clarify shared priorities and deepen mutual understanding. This is particularly critical in the public sector, where scenario planning promotes transparency and communication while supporting the delivery of long-term services.



Adapting quickly to change

Capital planning involves many stakeholders, so revisiting every decision when things go wrong can be time-consuming and disruptive. However, agencies can quickly pivot when they have considered multiple pathways from the outset, adjusting direction without losing momentum.



How scenario planning helps avoid common program pitfalls



Performance in capital programs can falter for many reasons. Scenario planning serves as a critical risk mitigation tool, helping agencies avoid common missteps and respond more effectively when conditions change. It enables teams to:

- 1

Assess project performance early to avoid continued investment in decisions or directions that no longer reflect current realities
- 2

Encourage diversity of thought and broader input to reduce the risk of narrow, one-track thinking that can undermine outcomes
- 3

Make more informed decisions during sudden revenue shifts, rather than relying on reactive or rushed choices that may not serve long-term goals
- 4

Minimize delays when faced with unexpected events by having alternate paths already mapped out rather than starting from scratch
- 5

Anticipate fluctuations in resource needs to help avoid procurement bottlenecks and staffing shortfalls
- 6

Strengthen overall budgeting by building contingency plans rooted in probabilities and a deeper understanding of potential outcomes
- 7

Control scope changes proactively by understanding which elements of the program are essential versus those that are optional under different funding scenarios
- 8

Prepare for policy and regulatory shifts that may introduce new requirements or force mid-course project adjustments
- 9

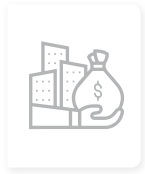
Create a clear decision history to improve transparency and accountability for boards, auditors, and oversight bodies

Beyond risk mitigation, scenario planning can drive better outcomes by encouraging innovation in delivery methods, supporting value engineering to reduce costs, and giving an agency a broader perspective for more effective decision-making.

How to approach scenario planning

5





Determine factors that can affect revenues and expenditure

Scenario planning can apply to projects, programs, and other initiatives within an organization. For purposes of this discussion, the focus is on capital infrastructure programs comprised of revenues and expenditures. Those programs have input from both inside and outside of the owner's control that impacts revenues and spending to varying degrees. Scenario planning can begin by first identifying external influences, forecasting economic trends, modeling revenues by source, or determining a bonding strategy. Internal factors may include staffing capacity, budget constraints, or administrative priorities. Consider what factors might change revenues over time, such as fluctuating property taxes, a downturn in gas sales, or a change in government

priorities, and contemplate securing funding from other agencies to help buffer revenue sources.

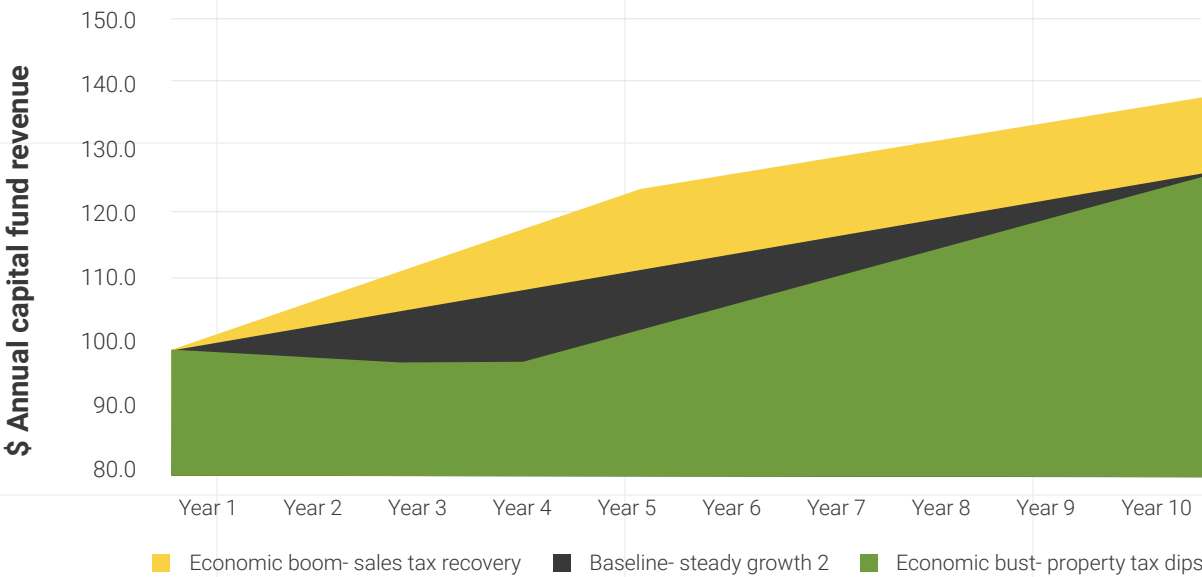
Next, identify internal constraints that will impact the program, such as staff availability, the difficulty of obtaining permits, and the agency's capacity to oversee the work effectively. Solicit input on the projects that have been selected and attempt to anticipate legislative or administrative changes that could alter the program's trajectory.

By identifying these drivers early, agencies can better understand how and why different scenarios might unfold and begin preparing responses in advance.

1 Capital program revenues forecast

This chart models hypothetical baseline, boom, and bust scenarios over a 10-year horizon based on property and sales tax trends. It represents a municipal government agency that, prior to Year 1, experienced a reduction in sales tax revenues and must now contemplate futures in which the economy recovers, the economy worsens, or the economy remains on course. It demonstrates how capital funding can vary significantly depending on economic conditions and why planning for a range of revenue possibilities is essential.

10-year capital fund revenues with economic boom or bust



The **baseline scenario** assumes economic trends continue, leading to slow but steady growth in the capital fund. In the **economic boom scenario**, sales tax revenues rebound over the next four years and then stabilize, generating significantly higher total revenues over the planning period. In contrast, the **economic bust scenario** reflects a failure to recover, compounded by a decline in property tax collections, resulting in a long-term funding shortfall.

These contrasting revenue paths highlight why scenario planning is critical. Each path demands a different set of decisions around project timing, prioritization, and scope. In a boom, the agency might accelerate timelines or fund additional projects. In a bust, it may need to defer major work, reduce program size, or reallocate limited funds more strategically. By visualizing these outcomes early, the agency can develop flexible

Key variables that impact revenues

Factor	Impact on revenues
Economic trends	Affects tax income and consumer activity
Property & sales tax shifts	Alters capital funding availability
Fuel tax decline	Lowers transportation program revenues
Federal/state funding	Can fluctuate based on policy and grant cycles
Bonding capacity	Influences how much funding can be borrowed
Legislative changes	May redirect or restrict available funds

funding strategies that align with varying economic realities, rather than reacting after the fact.

Once the agency has modeled funding scenarios, the next step is to examine how expenditures align

with each revenue outlook. These costs rarely follow a flat pattern; they typically ramp up during design and construction and taper off as projects close out. Understanding how external disruptions impact these cost flows is critical for maintaining delivery momentum and adjusting priorities when needed. That is where scenario modeling of expenditures becomes especially valuable.

Once revenue scenarios are understood, the next critical step is determining how and when those funds can be spent across the program. Capital programs require sequencing, and disruptions to available funding or project readiness can have ripple effects on cash flow and delivery timelines.

2 Capital program expenditures

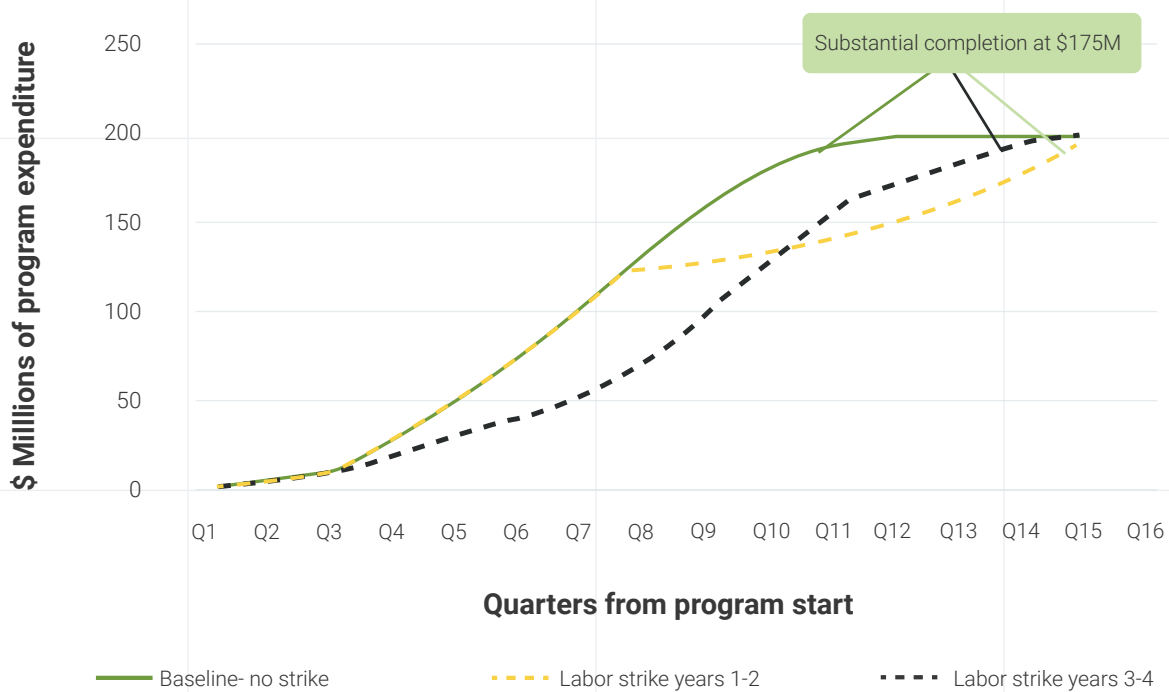
Once an agency has developed funding scenarios, it must assess how it will manage spending across the program. Capital expenditures typically follow an *S-curve* cash flow pattern—ramping up during design and construction, peaking at delivery, and tapering off at closeout—though other types of cash flow curves may also exist depending on the timing and nature of specific project activities. However, external events, such as a labor strike or permit delay, can disrupt this pattern.

Modeling multiple expenditure trajectories helps agencies understand how disruptions, such as a labor strike, can affect delivery timing, cost flow, and program completion. In scenario planning, this allows decision-makers

Key variables that impact expenditure

Factor	Impact on spending
Labor disruptions	Delays project schedules and increases costs
Material price spikes	Raises construction and procurement expenses
Permit delays	Push back start dates and shift cash flow
Staffing constraints	Slows down project delivery or oversight
Project readiness	Affects the timing of expenditure
Delivery sequencing	Impacts when and how fast funds are spent

Capital program scenarios with looming labor strike



to evaluate whether the program can absorb the impact or whether changes to sequencing or resourcing are needed. In the **baseline scenario**, expenditures ramp up steadily as large projects move into construction and taper off as they conclude. The **early labor disruption scenario** supposes that the delay occurs during design, allowing construction to catch up once the disruption ends, pushing completion slightly beyond the baseline. The disruption hits during peak construction years in the **worst-case scenario**, derailing progress and delaying substantial completion well beyond the planned timeline.

By visualizing these alternative paths, agencies can plan how to adjust schedules, reassign resources, or reprioritize work if disruptions occur. Scenario planning enables not only the anticipation of such risks but also the design of adaptive strategies, ensuring that delivery momentum can be maintained even in adverse conditions.



Analyze scenarios

Once factors and revenue or expenditure paths are mapped, the agency can begin actively analyzing the implications and overlaying expenditures on revenues. This step connects strategic choices, such as project timing and funding allocations, to scenario-based constraints and tradeoffs. After identifying the relevant factors, the agency can determine priorities that it can manage within these constraints. First, agree on baseline funding sources and establish the variables most likely to impact the program. Develop a process for prioritizing these factors based on the likelihood of their occurrence and the effect they would have on the project. For instance, a global environmental disaster could destroy supply chains, dramatically impact revenues, and

reprioritize projects, but that would not be a key focus in the context of a single project.

The agency should review the various projects to ensure that applicable funding is appropriately matched with each one, then prioritize the projects and work to create a project schedule that aligns with program goals and priorities. It should also determine the likelihood of various revenue scenarios and assess the viability of projects that align with these revenues. Can they all be delivered? If one project is delayed, will another be ready to take its place? If revenues fall short, do we know which projects to cut? If there is an unforeseen, low-probability impact on the program, how will the agency be able to adjust project schedules, staff assignments, and public communication? By modeling these questions up front, teams are better prepared to respond quickly and decisively rather than scrambling to adjust when disruptions occur.



Identifying scenarios for strategic alignment

Once the full range of conditions is explored, the agency can begin narrowing the list to a core set of scenarios for executive decision-making and public presentation. Each scenario should tell a coherent story, supported by data and rationale. This approach prevents the team from having to reprioritize every time a single input changes. Instead, the team can quickly put pre-approved plans into action.

Teams should define the best-case, worst-case, and most likely conditions and model how each would affect project scope, timeline, staffing, and external communication. Other scenarios may reflect changes in administration, regulatory shifts, or new public priorities. In each case, the agency should determine what outcomes would result and what operational adjustments would be required.

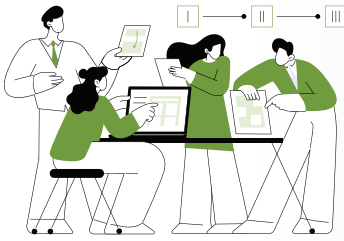
This process may be internal or open to broader public input. It may take place over weeks or many months, depending on who is involved and how decisions are made. It may be dictated by federal or other regulatory policy or improvised and adjusted from year to year and program to program. Regardless of the process, the team should document all assumptions and decisions clearly. By establishing a preferred baseline and a set of alternative paths, agencies can build flexibility into their capital programs, improving their ability to navigate uncertainty while continuing to deliver on long-term objectives.

Scenario planning blueprint: From input to action



The full scenario planning process can be summarized in the following high-level framework:

Scenario planning process



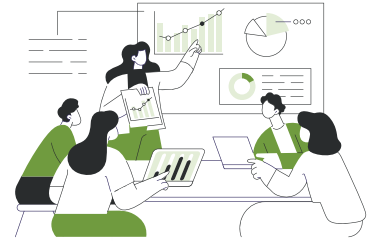
Internal and external input

- Forecast economic trends
- Model revenues by source
- Determine bonding strategy
- Consider funding from other agencies
- Solicit input on project lists
- Anticipate legislative/administration changes
- Assess agency delivery capacity
- Consider other program constraints
- Run Monte Carlo analysis (advanced)



Scenario analysis

- Agree to baseline sources and uses
- Adjust for most likely variables
- Align uses to sources; ensure eligible spending (e.g., projects are funded with capital fund revenues)
- Prioritize projects and other uses
- Optimize project schedules and other spending forecasts



Scenario output

- Select limited of scenarios to best inform decision making
- Test scenario outcomes with executive decision makers, the public, and other stakeholders
- Choose baseline and one to four alternatives
- Document decisions, assumptions and actions to be taken under alternative scenarios

This diagram highlights how each phase of scenario planning builds on the last to translate uncertainty into clear, data-driven decisions.

Each phase supports more confident and proactive capital planning:

- **Input** helps uncover what could change, such as revenues, regulations, and resource availability.
- **Analysis** turns those possibilities into structured tradeoffs, timelines, and priorities.
- **Output** helps leadership choose a clear path forward, supported by tested alternatives and documented rationale.

This process is iterative. As new information emerges, such as updated cost indices, legislative shifts, or internal changes, agencies can revisit the process to update assumptions, refine scenarios, and maintain alignment across teams.

Real-world example: Fiscal impacts from the California Water Plan



To illustrate how scenario planning can be applied in a real-world setting, the California Department of Water Resources conducted a fiscal impact analysis as part of its [2018 California Water Plan Update](#). This analysis modeled the potential long-term funding implications of various capital investment strategies, particularly those involving the use of General Obligation (GO) bonds. While the study was based on simplified assumptions and would require further refinement to guide policy, it provides a powerful example of how different funding scenarios can translate into vastly different fiscal outcomes.



Assumptions and methodology

The scenario analysis assumed the issuance of State GO bonds under a standard repayment structure:

5% interest rate

30-year repayment term

**Annual debt service
beginning with hypothetical
bond issuance schedules**

The evaluation compared a range of funding strategies (Scenarios A through E), each reflecting a different balance of borrowing, general fund use, and accelerated infrastructure investment.

The following table summarizes the **annual cost to the public** under each scenario using multiple metrics: cost per household, per capita, parcel, per assessed value, and per acre. These figures help demonstrate the broad implications of different funding mechanisms.

Funding scenario analysis:

Annual fiscal impacts of funding scenarios (Dollars/Year)

Scenario	Alternative metrics for current mechanisms: General Fund and General Obligation Bond		Alternative metrics for novel mechanisms				
	Cost per ^{a,b,c} household (85% pays)	Cost per ^{b,d} capita (85% pays)	Cost per ^{a,b,c} household (85% pays)	Cost per ^{b,d} capita (85% pays)	Cost per parcel	Cost per \$100 assessed value ^f	Cost per acre ^f
Scenario A: Reliance on borrowing	\$168	\$57					
Scenario B: Reliance on General Fund	\$163	\$55					
Scenario C: Utilize current mechanisms at maximum historical levels with novel	\$71	\$24	\$94	\$32	\$92	\$.02	\$23
Scenario D: Utilize State General Fund to replace need for novel mechanisms	\$165	\$56					
Scenario E: Accelerate funding	\$215	\$73	\$94	\$32	\$92	\$.02	\$23

Source: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/SupportingDocs/Funding-Scenario-Analysis.pdf>

Notes:

GO = General Obligation

The cumulative fiscal impact of each scenario is the sum of one of the current mechanism metrics and one of the novel mechanism metrics.

This table represents hypothetical implications and is not intended to signal a specific funding mechanism or an actual distribution of costs among Californians, and does not include local or federal funding needed to complement State funding and meet all water management needs.

^b Number of households (13,307,614) and persons per household (2.79) are from California Department of Finance County/State population and housing estimates, 1/1/2017 (<http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-1/>).

^c Number of households under the federal poverty level are from California Public Utilities commission *Needs Assessment for the Energy Savings Assistance and the California Alternate Rates for Energy Programs* (<http://lob.cpuc.ca.gov/Docs/2016%20LINA%20Final%20Report%20-%20Volume%201%20of%202.pdf>).

^d Number of households and persons under the poverty level are from the American Community Survey, percentage of families and people whose income in the past 12 months is below the poverty level (<http://www.dof.ca.gov/Reports/Demographic Reports/American Community Survey>).

^e Population estimates are from California Department of Finance State/County Population Estimates with Annual Percent Change (<http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-10>).

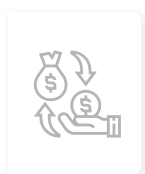
Number of parcels (11,649,442) and net assessed valuation (\$4,604,886,582,000) are based on Fiscal Year 2014-2015 Secured Local Tax Rolls..

^f Private land ownership in California (46,103,707 acres) was estimated based on public/private ownership maps from CALFire California Multi-Source Land Ownership (<http://frap.fire.ca.gov/data/frapgisdata-sw-ownership13.2/download>) and total California acreage (99,698,701 acres) from U.S. Census Bureau Quickfacts California (<https://www.census.gov/quickfacts/CA>).

^g Taxpayer refers to all taxes (income tax payers, corporate taxes, sales and use taxes) and revenue sources for the State General Fund. Ratepayer refers to water users or other relevant ratepayers (urban and/or agricultural) or other identified beneficiaries.

Key insights from the table include:

- Scenarios A, B, and D have **similar household-level impacts**: \$160–\$168 per year.
- Scenario C, which limits reliance on borrowing, shows the lowest cost impact: \$71 per household annually.
- Scenario E, which assumes accelerated funding through larger bond issuances, leads to the highest cost impact: \$215 per household per year.



Debt service projections

The accompanying chart illustrates how total debt service, both principal and interest, would evolve over time under each scenario. Scenario E's aggressive funding strategy leads to a steep climb in annual debt service, peaking at over \$7 billion per year.

This chart visualizes the debt burden across multiple decades and scenarios, providing insight into the long-term affordability of different funding strategies.

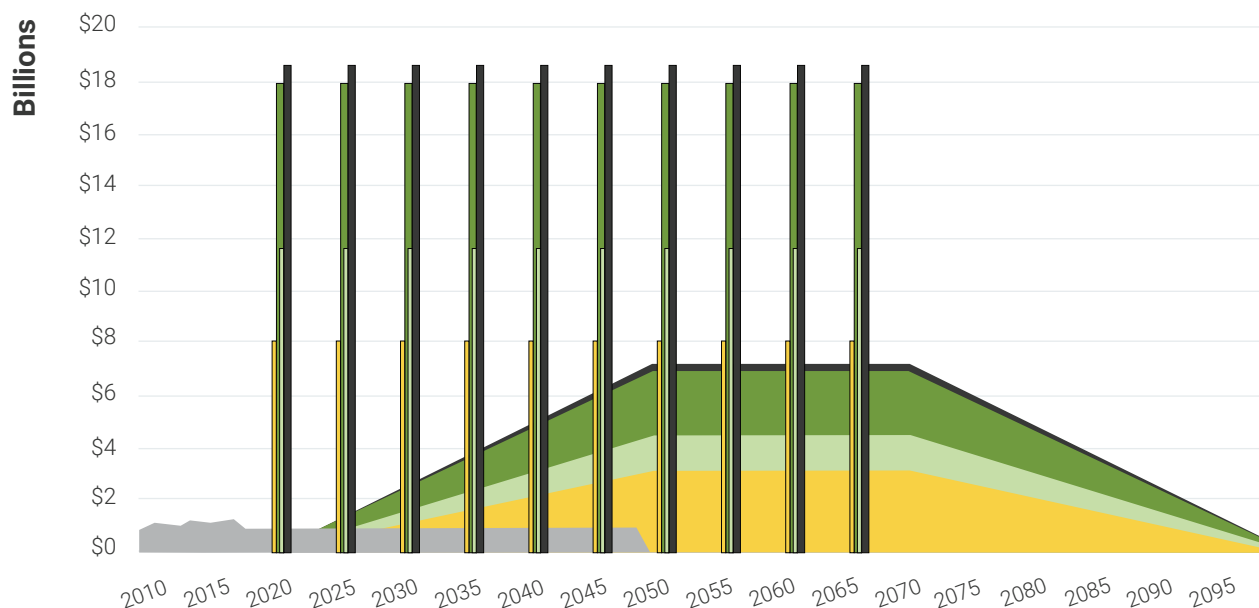


Figure 2- Historical repayment, projected remaining repayments, and future scenario bond passing and reayments

- Current trends and scenario B bonds: \$1.6B/year or \$8B every 5 years (displayed)
- Current trends and scenario B bonds debt service (principal and interest)

- Scenario A bonds: \$3.5B/year or \$17.5B every 5 years (displayed)
- Scenario A bonds debt service (principal and interest)

- Scenarios C and D bonds: \$2.3B/year or \$11.5B every 5 years (displayed)
- Scenarios C and D bonds debt service (principal and interest)

- Scenario E bonds: \$3.7B/year or \$18.5B bond every 5 years (displayed)
- Scenario E bonds debt service (principal and interest)

- Past repayments and remaining debt service on historic bonds

Source: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/California-Water-Plan/Docs/Update2018/Final/SupportingDocs/Funding-Scenario-Analysis.pdf>

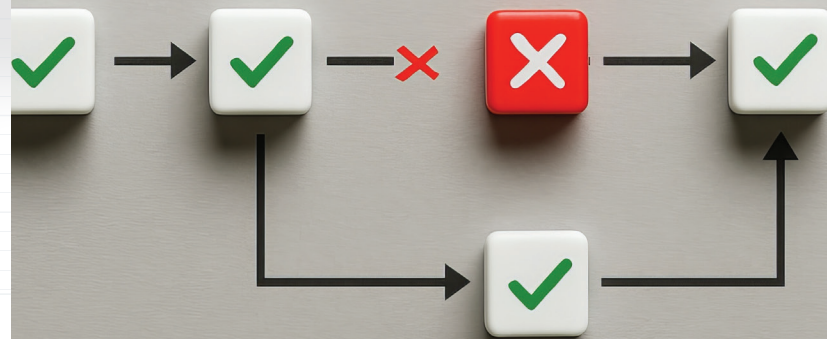
This example underscores the value of fiscal scenario modeling as part of long-range capital planning. By visualizing not just capital costs, but also the long-term debt impacts on the public, planners can:

- Test assumptions across a range of realistic conditions
- Reveal cost burdens across different funding strategies
- Inform decision-makers and the public about trade-offs
- Prepare for stakeholder discussions based on tested projections

This type of structured, data-informed analysis empowers agencies to make more resilient funding decisions before they commit to obligations.

Mistakes to avoid in scenario planning

Agencies should approach scenario planning carefully to ensure they reap their full benefits. If left unchecked, several common pitfalls can undermine the process.





Underestimating the effort required

Scenario planning takes time, and it can feel daunting when multiple plausible outcomes require detailed modeling. However, compromising the process is rarely the right choice. 'Wait-and-see' strategies offer little protection, and planning for only a single scenario leaves programs exposed to change. That said, not every potential scenario deserves equal attention. The 'baseline', or most probable outcome, should receive the most detailed analysis to support sound project and program planning.



Overlooking objectivity in planning

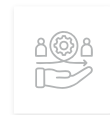
Stakeholders inevitably bring their own ideas and preferences. The loudest voice in the room is not always the most accurate predictor of future conditions. Scenario planning should be grounded in data, logic, and collaborative input, not in validating a single agenda. Teams should also avoid over-investing in scenarios that are clearly unrealistic or outside acceptable bounds, as this diverts resources from more viable planning paths.



Assuming history will repeat

Many agencies start by modeling future scenarios based on historical data. Although past performance

can provide valuable insight, relying too heavily on historical patterns risks overlooking emerging trends or novel disruptions. Sometimes, the most effective exercise is to build scenarios from scratch, free from assumptions that the future will mirror the past.



Feeling all-powerful

Scenario planning is a powerful tool, but it is still a planning exercise, not a guarantee of control. The process should aim to improve the management of uncertainty, not eliminate it. Teams must recognize that their models can influence outcomes but cannot predict or dictate them. Remaining adaptable is critical.



Leaning too heavily on a single scenario

It's natural for a 'preferred' scenario to emerge as planning progresses. While this focus can streamline decision-making, it's also essential to document alternative scenarios and their rationale. Conditions can shift midstream, and an alternate path may suddenly become the most relevant. Capture supporting details early so teams don't risk losing critical context when staff changes or program conditions evolve.

Building resilience: Strategies and technology for scenario planning

Scenario planning equips teams to expect the unexpected. Agencies that go a step further can build additional resilience into their programs by integrating the following strategies and leveraging technology to maximize their impact.



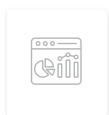


Design and material choice flexibility

Incorporate flexibility early in the design phase by identifying alternative materials and construction methods that can substitute if primary options become prohibitively expensive or unavailable. Proactive value engineering ensures that changes can be made without that derail the project when conditions shift.

How technology can help:

Capital planning platforms can integrate material cost indices and supply chain data in real time, allowing teams to compare alternative design options and assess the impact of switching materials on overall budgets and schedules instantly.

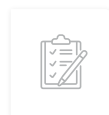


Active market monitoring

Continuously track key indicators such as the Producer Price Index (PPI), construction cost indices, and supply chain data for critical materials and labor markets. Monitor geopolitical developments and trade trends that may affect pricing or availability. Updating scenarios with this information in real time allows teams to change course quickly when market conditions change.

How technology can help:

Modern software can automate the retrieval of up-to-date market and cost data, flag anomalies, and trigger updates to scenarios immediately. Dashboards visualize price trends, helping leadership make faster, data-driven adjustments to procurement and budgets.



Sophisticated procurement and contracting

Develop procurement strategies that protect the program from volatility. Where possible, secure early ordering, bulk purchasing, and material price locking. Use contract clauses such as tailored escalation provisions and risk-sharing mechanisms to distribute risk fairly between parties. Planning ahead for known areas of volatility, such as long-lead materials, can prevent disruptions from cascading into significant schedule delays.

How technology can help:

Scenario modeling tools can simulate different procurement timelines and contract terms, highlighting potential bottlenecks and cost impacts. Platforms can also track contract escalation clauses across the portfolio to monitor and manage exposure to price fluctuations.



Labor planning and engagement

Collaborate early with trade unions and contractors to understand labor availability forecasts.

Incorporate negotiated wage rates and assess the impact of federal, state, and local labor regulations.

Factoring in workforce development initiatives ensures more accurate labor planning and reduces the risk of shortages derailing schedules.

How technology can help:

Integrated capital planning systems can link labor forecasts, wage trends, and project schedules, automatically highlighting potential conflicts between labor availability and delivery timelines. This allows agencies to adjust sequencing or resourcing proactively.



Risk-based contingency

Identify the key drivers of change during the scenario planning process and align contingency funds to those specific risks.

Allocating resources to modeled risks, such as a potential steel tariff or fuel price spike, provides a more targeted and effective buffer than generic contingency percentages.

How technology can help:

Capital planning software can embed risk-weighted contingency allocations directly into scenarios and monitor their use across the portfolio. Interactive dashboards help clearly demonstrate to leadership and oversight boards how contingency funds align with specific, modeled risks. Solutions like Aurigo's **Masterworks Capital Planning** build on these capabilities with AI-powered scenario planning that models and compares project financials, available funds, cash flow, budget ranges, score ranges, and timelines—enabling agencies to assess potential risks in context and allocate contingencies with greater accuracy.

Advancing scenario planning in your organization

10



Volatility is here to stay. Agencies can no longer assume that project inputs will remain stable, even over short periods of time. Scenario planning provides a structured way for capital program managers to anticipate and prepare for changes in costs, regulations, labor availability, and other critical factors. By modeling multiple plausible outcomes and planning responses in advance, agencies can pivot quickly when conditions shift, avoiding costly delays and maintaining program momentum.

When incorporated into the first phase of capital planning, scenario planning enables agencies to navigate volatility proactively and build resilience into their entire portfolio. It creates a data-driven framework for funding strategies, supports transparent stewardship of taxpayer funds, and equips leadership to make defensible choices under uncertain conditions.

Agencies can move beyond simply mitigating risk. They can use scenario planning as a strategic advantage in delivering sustainable capital programs by aligning investments with long-term policy goals and adapting as economic, regulatory, or operational conditions evolve.

Capital planning software, such as Aurigo Masterworks, strengthens this process further, enabling real-time adjustments, reducing bias, and maintaining a clear record of decisions and assumptions. By integrating technology with scenario planning, agencies can turn potential disruption into an opportunity for proactive, data-driven leadership.



About Aurigo Software

Aurigo builds software that helps build the world. Aurigo is an AI-native company that helps capital owners connect planning, construction, and operations in a single environment, improving decision-making and execution. Trusted by over 300 organizations across infrastructure and facilities, Aurigo manages more than \$450 billion in capital programs, with over 40,000 projects throughout North America. Aurigo is a privately held U.S. corporation headquartered in Austin, Texas, with global offices in Canada, South Africa, and India.

Learn more at www.aurigo.com

Schedule a demo

Schedule your demo today to learn how Aurigo Masterworks can help your organization streamline information, accurately track, forecast, and prioritize projects and help you save time and money.

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