The Auditor's Office developed a white paper sharing the criteria we use when evaluating cost analyses.

The white paper includes:
- guidance elements that should be documented by the agency, and
- principles that are best practices in comparing alternatives

This document provides a visual description of those principles.
Principle 1: Analysis should include all of the estimated cash flows associated with each alternative over the estimated useful lives of the alternatives.

Year 10 | Year 20 | Year 30
---|---|---
Alternative #1 | | |
Alternative #2 | | |
Alternative #3 | | |

Principle 2: If the alternatives require full or partial financing, the model inputs should include the cash flows related to financing and debt service.

Cash Flows Over Time

Principle 3: Cash flows for future years must be discounted to reflect the time-value of money.

$0.10 Past | $1.00 Current NPV | $10.00 Future
Discount to address time-value of money
Principle 4
The time-value of when benefits are achieved should also be taken into account.

Alternative #1

Alternative #2

Project costs are similar, but Alternative #2 reaches benefit much earlier than Alternative #1.

Principle 5
When summing net present values that have been calculated in different years, the net present values should be expressed in the same year or current year dollars by adjusting them by inflation, not by the discount rate.

Project A 10 years old

Project B Today

Inflate to common NPV

Common Year NPV

Common Year NPV

Total Benefit

Total Benefit

Remember: inflate, don’t discount

Principle 6
If the alternatives analyzed have different expected useful lives, a suitable methodology must be used for making a fair comparison.

Year 10 | Year 20 | Year 30 | Year 40
---|---|---|---
Alternative #1 40 year life

Alternative #2 30 year life

Don’t ignore the value of the longer life of an alternative...

...but also don’t ignore the need for the service or function
Principle 7

If costs and benefits are subject to different inflation rates, the analysis should be based on inflated cash flows and use the nominal discount rate.

Principle 8

If analysis or analytical models are constructed using the real discount rate, analysis should also be done using the nominal discount rate.

Principle 9

Reporting the outcome of the economic analysis should show the results of conducting sensitivity analysis on all major assumptions.

Analysis and reporting must include sensitivity of:
- economic assumptions
- cost assumptions
- anticipated benefits
- other project assumptions

Questions? Comments? Please contact the King County Auditor’s Office at (206) 477-1033