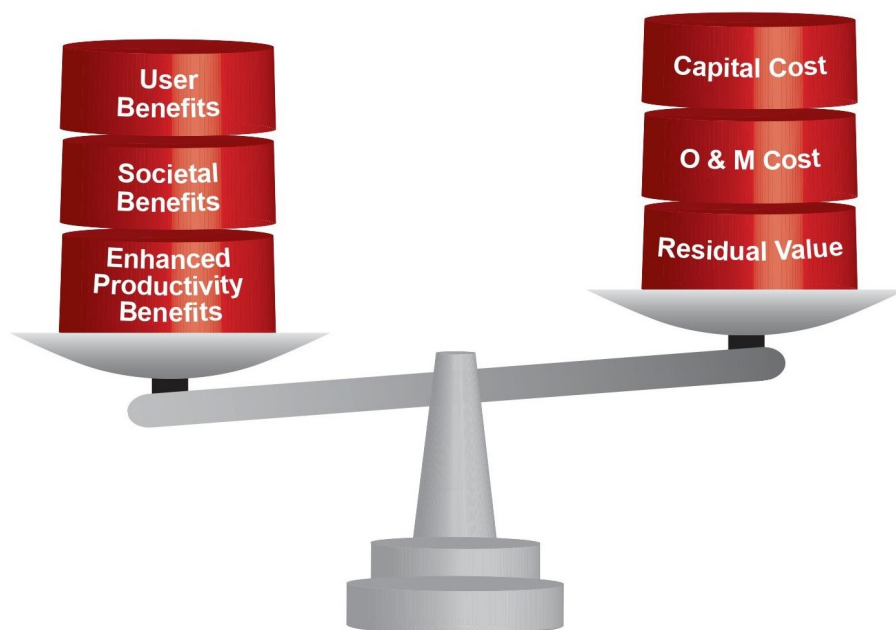


# Benefit-Cost Analysis

**Benefit-Cost Analysis (BCA)**— also called CBA or cost benefit analysis outside of North America — is a methodology for evaluating the overall efficiency of public or private sector investments. BCA provides a means for aggregating monetizable project benefits and costs — over time, and across areas and elements of society and the economy — and rolling them up to show a single measure of net benefit, rate of return, or benefit/cost ratio.

BCA is an important economic analysis tool for investment decision-making, alongside the assessment of the wider economic impacts of projects made through an Economic Impact Analysis (EIA). BCA is also regularly applied to public policy or regulatory actions. While the techniques of BCA and EIA approach economic impacts somewhat differently, they are both powerful tools for decision-making when used together.

EBP is a leader in the application of BCA across North America and abroad, particularly as it relates to the benefits of transportation, energy and other infrastructure projects, environmental policies, economic development programs and urban development investments. Our methods and models portray, from multiple perspectives:



- Public and private capital and operating costs.
- Benefits to project users, such as travel time and reliability savings for passengers, vehicle operating cost savings for drivers or trucks, or reduced freight supply chain costs.
- Wider social and environmental benefits for non-users, such as reduced air emissions, reduced vehicle crashes.
- Enhanced productivity of workers, businesses, and land.
- Distributional effects on specific industries and populations.

A core area of our BCA practice is to support applications for discretionary grant programs run by various international, federal, state, and local agencies. Our clients for discretionary funds include a wide range of planning and operating agencies (ranging from state DOTs to local transit operators) as well as cities, MPOs, port authorities and private operators. Besides a wide range of multimodal surface transportation grants covering roads, transit lines, and bike routes, we also support mode-specific grant program applications such as capital grants for airports, railroads, and maritime ports.

A hallmark of our BCA service has been our ability to measure the widest possible range of benefit categories, and then communicate findings in straightforward ways that matter to stakeholders and decision-makers. Our recently completed APTA/AASHTO study, [“Assessing the Business Case ROI for Intercity Passenger Rail Corridor Investment: Guide for Decision Makers”](#) is a hallmark in the development of a broadly inclusive return on investment methodology and analysis tool. Our BCA work is not only cutting edge, but it makes a difference: we have supported many successful grant applications that have been awarded a total of over \$290 million since the inception of the discretionary grant programs in 2009.

From the broadest perspective, BCA comprises an important element of multi-criteria project evaluation. Multi-criteria analysis (MCA) encompasses strategic economic, social, and environmental goals and financial feasibility.