A key driver of success for process industry companies is the effectiveness of their capital projects. Successful projects rely on making the correct technical decisions to maximise the business benefit and to optimise the scope of the project.

Understanding the cost implications of a wide range of engineering choices is essential to achieve these aims.

The concept of ‘front end loading’ is well understood and accepted. The decisions made during the conceptual development of any project will have the biggest effect on the overall success of the project. This makes the ability to accurately and quickly estimate project costs during conceptual development a key factor for defining and delivering successful projects.

A lack of reliable conceptual estimates can lead to a lot of wasted engineering effort, developing engineering definitions for options that are later rejected. Operating companies with good conceptual estimates are also better prepared for engaging EPC contractors in a more positive way and controlling costs throughout the project.

The tool is very efficient in comparison to other methods of estimating at this stage of a project. ABB uses this software to prepare conceptual estimates.

The use of a good software tool is important, but not sufficient to provide reliable and useful estimates. The estimator using the tool should be knowledgeable about project engineering, project control and value engineering techniques to construct a comprehensive and useable estimate. The structure and the presentation of the estimate must make the estimate understandable and transparent.

The engineering assumptions underpinning the conceptual design must be understood and substantiated. A robust process is also important to ensure consistency between packages and, for the longer term, between projects.

The Aspen Capital Cost Estimator software, from AspenTech, is the industry leading conceptual estimating tool and the only tool focussed on the process industries. The software generates accurate budgets from conceptual definitions, and helps to optimise control, power, and piping as well as support project relocation and scaling based on plant size.
What we offer

ABB offers comprehensive estimating services, centred on capital cost estimates at the conceptual development / feasibility stage of capital projects.

The services include:

- Developing reliable estimates from conceptual process definitions using Aspen Capital Cost Estimator
- Presenting estimates in a clear and transparent way to aid decision making by the project manager and other stakeholders
- Comparative estimating over a wide range of engineering options to help select the most beneficial options
- Preparing the necessary cost estimates and also facilitating value analysis studies of projects
- Supporting clients in generating project proposals to gain approval and funding
- Comparative estimating of various project execution strategies
- Validating the scope and basic assumptions behind conceptual estimates done by 3rd parties (often EPCs)
- Cost monitoring and change management services throughout the project lifecycle

Benefits

There are many benefits from efficiently developing reliable and consistent conceptual cost estimates with ABB, most of which help individual projects. However some of the greatest gains come when working across a range of projects. The benefits include:

- Helping to optimise capital projects by selecting the best options and making the right decisions
- Providing more confidence in the accuracy of estimates to help financial planning
- Reducing the amount of wasted engineering effort and cost pursuing non-beneficial options
- Reducing the time of costs of producing estimates over other methods
- Easier analysis and comparison of EPC prepared estimates
- Providing a good structure for cost management throughout the project
- Having more confidence in a true comparison between projects, due to consistency
- Improving accuracy and efficiency with use, as data is customised on your projects

Why ABB?

ABB works with a wide range of process industry customers, supporting project development and providing conceptual estimates. Some of the reasons that people work with us are:

- ABB acts independently of any EPC contractor, so we see success of the project only in client terms
- We have very broad specialist functional engineering to analyse estimating assumptions
- Our estimators have engineering backgrounds and understand projects
- We structure and present estimates in a transparent way that enable Value Engineering studies to easily be carried out (which we can also facilitate)
- We help clients to specify how their EPC contractor should prepare estimates to allow accurate comparisons
- We provide cost effective use of the leading industry estimating tool without licensing or training barriers