

The EcoPlan™ — Generating Performance Metrics for Construction Projects.

Preconstruction professionals utilize the EcoPlan software to anticipate and measure how construction projects impact their client's goals. The EcoPlan program provides a project approach, protocols and data, an evaluation and scoring tool and a cutting edge communication dashboard.

The EcoPlan is used in four phases:

Phase 1: **Identify** project goals and establish priorities

Phase 2: **Measure** design, supplier and contractor impacts

Phase 3: **Evaluate** and score project options

Phase 4: **Communicate** project performance and opportunities

Phase 1: Identify project goals, establish priorities

The process begins with the user's selection of five economic, environmental and social goals. The EcoPlan's goal menu includes:

Goals:	Performance Metrics:
Low Price	US Dollars
Increased Local Economic Stimulus	US Dollars of Local Direct / Indirect / Induced Spending
Increased Local Job Creation / Retention	Number of Local Jobs Saved / Retained
Reduced Environmental Impacts	Metric Tons Greenhouse Gas Emissions (Co2e)
Reduced Transportation Impacts	Vehicle Miles Traveled
Increased Target Contractor Participation	% of Contract Spent with Target Contractors

After the project goals have been identified, users prioritize each goal. These priorities are used to define data collection requirements and to calculate the project EcoScore, a single number that communicates alignment with project priorities.

Phase 2: Measure design, supplier and contractor impacts

During the planning and design phases, the EcoPlan software is utilized to estimate the impacts that potential materials and designs would create. When the project is ready to bid, the EcoPlan is utilized to gather impact data from prospective suppliers and contractors. The EcoPlan then converts this impact data into performance metrics using established protocols and peer-reviewed data sources.

Technology Spotlight:

Collecting Impact Data in the Procurement Phase

The EcoPlan™ includes a bidding application called "Good, Better, Best". This application generates project-specific bid forms to collect impact data from major suppliers and contractors. These forms ask bidders questions about their bid's materials, supply chains and installation assumptions. For each question, bidders select the answer that most closely matches their bid. The answers are labeled "Good, Better or Best". The EcoPlan then calculates reliable performance metrics based on these answers.



Good, Better, Best 2.0 MATERIAL / SUBCONTRACTOR BID FORM

Trade: Structural Steel Bidder: ABC Steel Fab, Inc. City Hall & Community Center

Criteria	Emissions Driver	Good (30 points each)	Better (20 points each)	Best (10 points each)	n/a	Comments
Material Inputs	Recycled Content	Up to 25%	20% - 24%	Over 75%	<input type="checkbox"/>	18%
Manufacturing Location	% Domestic	100% USA	100% USA	100% USA	<input type="checkbox"/>	Gary, IN
Material Transport	Transportation Type	100% Rail	100% Rail	100% Rail	<input type="checkbox"/>	
Worker Transport	Ride Sharing / Mass T	100% Participation	75% - 99% Part	100% Participation	<input type="checkbox"/>	
Temporary Power	Energy Source	Renewable Power	Line Voltage	Renewable Power	<input checked="" type="checkbox"/>	By G.C.
Material Handling	Fuel Type	100% Electric	100% Electric	100% Electric	<input type="checkbox"/>	

Base Bid: \$213,095.00
Value of Materials: \$160,000.00
Efficiency Factor: \$2,130

Good, Better, Best Bidding application

The format of this bid form causes bidders and suppliers to recognize that they will be evaluated according to their first cost as well as their impact on the client's economic, environmental and social goals. Bidders are motivated to commit to local supply chains and efficient transportation options while still providing their most competitive price.

Phase 3: Evaluate and score project impacts

Now that performance metrics have been calculated, the EcoPlan's Real Cost Evaluator and the EcoScore are used to evaluate how supplier and contractor selections would impact project goals. The Real Cost Evaluator enables our clients to examine the impacts of various design and sourcing options in real time. Once the ideal mix of costs and benefits is achieved, the Real Cost Evaluator outputs this information into your EcoPlan Performance Dashboard.



Real Cost evaluator application

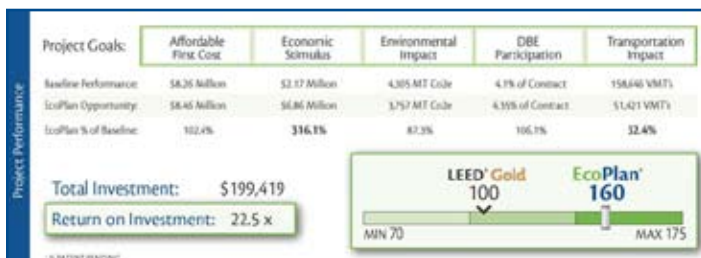
Technology Spotlight: Evaluating Goal Performance and Opportunities

It is not uncommon for major projects to attract a hundred or more bids from prospective material suppliers and contractors. Since our data collection phase captured information about each bidder's price, their materials and supply chains, this information can now be used to evaluate how each bidder would impact project goal performance. Each bidder's information is loaded into the EcoPlan database and converted into performance metrics. Clients use these performance metrics and the EcoScore feature to locate an ideal balance between price and goal performance.

The EcoPlan software sorts each contractor, supplier and material option according to their performance on project goals. When a client wants to evaluate the effect of increasing performance on local construction spending, they simply grab the knob for Economic Stimulus and slide it to the right. When the knob is released, the software finds the combination of suppliers and contractors that would increase local construction spending. The Real Cost Evaluator then re-calculates the effect of this change on the other four goal criteria.

Phase 4: Communicate project performance and opportunities

After the user has located the project options that provide the ideal balance between price and goal performance, they are ready to define the content of their EcoPlan Performance Dashboard. This dashboard displays a baseline measurement for the project and quantifies opportunities that would improve goal performance.



EcoPlan Performance Dashboard detail

Technology Spotlight: Communicating Goal Performance, Opportunities

The EcoPlan™ Performance Dashboard enables decision makers to finally answer important questions that have eluded them in the past: *How effective are current practices addressing our priorities? Which strategies are most cost-effective at increasing local economic stimulus? How much environmental impact can be avoided while still keeping within the project budget?*

The EcoPlan Performance Dashboard is the first tool to effectively communicate project-level goal performance. This software output and the EcoScore feature provide a fresh lens for policy makers and administrators to better communicate the costs and benefits that their projects create.

Clients that utilize the EcoPlan integrate their priorities into project decisions throughout the entire preconstruction process. When the ideal balance of costs and benefits is achieved, clients and project managers can easily communicate the benefits that their projects provide.

Contact us today to find out more about how we can work together to improve construction project outcomes.