



Who Benefits from a Green Warehouse?

Prologis evaluates triple bottom line (TBL) return on International Park of Commerce



Challenge: How can Prologis prove — to all affected stakeholders — the true benefits of their green building investments?

Prologis, the largest global industrial real estate firm, serves some of the world's most successful supply chains. With clients on razor-thin margins and no room for supply chain disruption, Prologis must provide the best warehousing possible to maintain a competitive edge. To do so, they make efforts to design their warehouses beyond what local building codes require. But what is that actually worth, in dollar terms, to the bottom line – for the company, their investors, and their prospective tenants?

In 2016, Prologis set out to quantify that value. Using the International Park of Commerce Building 6 in Tracy, California, as a pilot study, they gathered input from their contractors, ME Group and Big-D, to identify six categories where Prologis designs exceeded code:

- Indoor Water Use Reduction
- Energy Usage
- Indoor Environmental Quality
- Outdoor Water Use Reduction
- Regional Materials
- Recreation Space

How could Prologis put a dollar value on the benefits from each category over the 25-year lifespan of the facility and associate these benefits correctly to each stakeholder group?

Solution: Autocase cloud-based software delivering TBL-CBA

The Triple Bottom Line (TBL)-Cost Benefit Analysis (CBA) delivered by Autocase provided the supporting data and analysis to

- quantify the full life cycle costs of these investments,
- quantify their additional social and environmental impacts, and
- assign a dollar value to those impacts

In a way that would allow them to align investments to benefits for three stakeholder groups – Prologis, the tenants, and society as a whole.

“Prologis proactively seeks out tools and methodologies that help us go beyond theory to quantify the contributions we can make—to people who use our facilities and the planet we all share, in addition to the careful eye we keep on our profits. Autocase is exactly this kind of tool — it systematically calculates the dollar values of financial, social and environmental impact. We encourage all our designers and engineers to incorporate TBL-CBA in the business case for every project.”

Jeannie Renné-Malone — Vice President, Sustainability, Prologis

Results: The International Park of Commerce tenants are the biggest winners.

The risk-adjusted cost-benefit NPV results demonstrated that the investments would have a positive value for all stakeholders. Prologis benefits from an increase in occupancy rates that will outweigh their capital expenditures, but the tenants are the largest beneficiaries as a result of savings on their electric bills.

Cost/Benefit Category	Present Values (\$)	
Social Value of Saving Streamflow	\$ 4,100	Social and Environmental
Value of Reduced Trucking*	\$ 33,300	
Social Value of Reduced CAC's*	\$ 36,100	
Social Value of Reduced GHG's*	\$ 69,600	
Recreational Use Value	\$ 19,000	
Flood Risk Mitigated	\$ 2,600	
Change in Heat Stress Mortality	\$ 30	
Change in Property Values	\$ 600	
Value of Improved IEQ	\$ 88,800	
Change in O&M Costs	\$ 41,600	
Change in Water Costs	\$ 99,600	
Asset Life Extension Benefit	\$ 163,200	
Change in Electricity Costs	\$ 521,000	
Prologis Benefit from Increased Occupancy	\$ 955,100	Prologis
Value of Energy Subsidies	\$ 16,100	
Capital Expenditures	-\$ 477,600	
Prologis' Value	\$ 493,600	Tenant
Tenant's Value	\$ 914,200	
Social & Environmental Value	\$ 165,330	
Total Project Value	\$ 1,557,030	

*Note: The reduced GHG's and CAC's due to reduced trucking are not included in the reduced trucking benefit, but are instead included in the Social Value of Reduced GHG's and the Social Value of Reduced CAC's, respectively.

Prologis has since expanded their application of Autocase for TBL-CBA to their entire North American real estate portfolio. They intend to use it to define and refine their design-build specifications for both existing and future facilities and use the social and environmental results to demonstrate their good citizenship locally. They also have incorporated the results in their annual disclosure to investors through the GRESB disclosure platform.

Autocase: Making the business case for high performing and sustainable buildings.



Autocase for Buildings is a software tool that models the environmental and social dollar values of building designs and, together with financial costs, evaluates their net, triple bottom line (TBL) benefit over the life of a project using a rigorous cost-benefit analysis (CBA) framework. With Autocase, the cost and time required to compare design alternatives at any stage of a project is a fraction of today's custom studies. As a result, design firms can easily evaluate and justify different approaches and, in so doing, contribute to the future economic, social, and environmental success of every project.

For more information about how TBL-CBA would assist your project, go to www.autocase.com