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Sustainability

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Integrated Process: An approach to a successful and sustainable capital project

How to get the most amount of value within your T3 Goals

By Michelle Cottrell, IIDA, LEED AP and Scott Chrisner, LEED AP

One major difference between LEED and traditional building practices is the level of integration called for between professionals. LEED creates a new approach to the dynamics of a building team by compelling a higher level of collaboration between project team members. This raises the bar, demands a higher level of performance, but also provides a greater measure of mutual support and reduced risk.

Integrated Process is a procedure whereby; the main stakeholders who affect the economics, performance and character of a project, collaborate, starting from the Pro-forma stage. The end goal is to integrate methodologies and building systems into a cohesive and holistic product. In following the concepts behind Integrated Process, each aspect of the project lifecycle (such as financing expenditures, pre-development costs, design fees, and construction costs) is added as a line item in the project budget. As one line item increases, as a result of a increasing the project's Triple Bottom Line (T3) goals (i.e., economic, environmental and social), another one must decrease in order to have a positive impact on the budget, building, and the community the project resides in.

T3 goals are defined by assessing the economic, environmental, and social goals of each project for each owner, developer, and company.

The economic goals are driven by the project's upfront costs versus the life cycle costs. If we look at the green giants of today, as leaders for environmental and integrated design, the financial institutions have proven to us it is possible to save on capital budgets, energy and operational costs, increase productivity, while, from a maintenance standpoint, produce a high performance building with efficient, low maintenance products. Some of the most experienced asset or portfolio managers have discovered it is possible to build a property for less, while producing a higher performing building, by incorporating integrated design into their sustainable projects.

The environmental goals for each project and owner will affect the natural environment in a multitude of capacities; the largest impact being energy consumption. As good stewards, we should look at alternative means to rely on for our energy needs and requirements. By changing, or diversifying, the source of our energy supply, companies will see a positive impact on their economic bottom line.

T3 goals are defined by assessing the economic, environmental, and social goals of each project for each owner, developer, and company.

Social goals relate to people and for most companies, people equal money, because as a business owner, your largest expense is your payroll. By using integrated design and implementing LEED, you will create an environment that is beneficial to the health and well-being of your employees. Therefore, with cleaner indoor air quality and a healthier staff, you can decrease turnover and absenteeism while increasing productivity, your return on investment has then increased tenfold.

When evaluating the T3 goals during the Pro-forma stage, since it is a new process, it is challenging not to turn back to the simple economic return on investment (ROI) calculation. With Integrated Process, there is a new and stimulating means to calculating the ROI.

Traditionally, ROI has been a simple economic calculation but, with Integrated Process and sustainable practices, we can now approach ROI in a dynamically new fashion. We now can move past "How can I build this project for the least amount?" to thinking "How can this project have the greatest impact and still be within the T3 goals?" This change in approach and thinking, at the conception of an endeavor, will allow a greater means of return and equity, increased performance and reduced risk.

Implementing LEED practices and integrated design will allow developers, owners, and individual companies to seize opportunities to a benefit their employees, the environment and their economic bottom line. The overall goal for integrated design is to increase the performance, while remaining within the means of the T3 budget. Although incorporating integrated process into the business model requires fundamental changes, the end results are great for the environment, and the return on investments becomes a driving force for a bigger business bottom line.

Michelle Cottrell, IIDA, LEED AP, is the founding principal of *Design Management Services*, a strategic partner of *Chrisner Group*. *Design Management Services*, is a certified SBE focusing on interior design, project management and LEED consulting services.

Chrisner Group is a green building solution provider specializing in LEED consulting for assessments, design side and construction side services.

As consultants and practitioners of the "integrated design approach," we make green building rating systems work for architects, builders, non-profits, townships, and municipalities as an independent, third-party consultant affecting process.

Chrisner Group project list includes Commercial projects, Institutional projects, Higher Education and K-12 schools. Building types include new and existing commercial office buildings, historic preservation, municipal industrial facilities, as well as, classroom buildings and recreation centers.

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ECO-DESIGN TERMS

ASHRAE
The American Society of Heating, Refrigerating and Air Conditioning Engineers is an international technical society for all individuals and organizations interested in heating, ventilation, air-conditioning, and refrigeration (HVAC&R), and was founded in 1894 at a meeting of like-minded engineers in New York City. (Examples of some ASHRAE Standards are: Standard 62.2 - Ventilation and Acceptable Indoor Air Quality in Low-Rise Residential Buildings and Standard 90.1 - Energy Standard for Buildings Except Low-Rise Residential Buildings.)

C2C
Cradle to Cradle is phrase coined by Walter R. Stahel in the 1970s and popularized by William McDonough and Michael Braungart in their 2002 book Cradle to Cradle: Remaking the Way We Make Things. This framework seeks to create production techniques that are not just efficient but are essentially waste free. In cradle to cradle production all material inputs and outputs are seen either as technical or biological nutrients. Technical nutrients can be recycled or reused with no loss of quality and biological nutrients composted or consumed. By contrast cradle to grave refers to a company taking responsibility for the disposal of goods it has produced, but not necessarily putting products' constituent components back into service.

LEED
The Leadership in Energy and Environmental Design Green Building Rating System, developed by the U.S. Green Building Council, provides a framework for assessing building performance and meeting sustainability goals. LEED standards are currently available or under development for commercial buildings, homes and neighborhood developments. Since its inception in 1998, LEED has grown to encompass over 14,000 projects in 50 US States and 30 countries covering 1.062 billion square feet of development area.

LEED AP
Individuals recognized for their knowledge of the LEED rating system are permitted to use the LEED Accredited Professional (AP) acronym after their name, indicating they have passed the accreditation exam given by the USGBC.

USGBC
The U.S. Green Building Council is a non-profit organization devoted to shifting the building industry towards sustainability, targeting how buildings are designed, built and operated. The USGBC is best known for the development of the Leadership in Energy and Environmental Design (LEED) rating system and Greenbuild, a green building conference.

VOCs
Volatile organic compounds are organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere. VOCs are sometimes accidentally released into the environment, where they can damage soil and groundwater. Vapors of VOCs escaping into the air contribute to air pollution.