



REBOOT/

EXISTING BUILDING Services : Maximize The Potential of Your Assets

EXISTING BUILDING (EB) services

Strategies to retool your facility for increased financial performance, productivity and building efficiency.

People, assets and competitive advantage – these are key to success in any economy and are primary motives for making a capital investment in buildings of all kinds. Green building has become the standard for good design, but also the foundation for strategies that increase the value of your property. Sustainable improvements to existing buildings realize quick paybacks resulting from reduced utility costs, decreased waste, increased productivity and improved social and corporate equity. With a holistic approach to optimizing your greatest assets – people, property and image – BNIM's **EXISTING BUILDING** services stimulate the success of your business with retrofits that can also qualify for tax incentives, stimulus funding or grants.

EB/ goals



Expand Human Capacity

Enable the intellectual capacity and potential of your most important asset – your people. BNIM can integrate solutions into your built environment that maximize user productivity, learning, interaction and health by targeting strategies that increase effectiveness and user comfort.



Increase Fiscal Performance

Buildings are capital investments. BNIM identifies and implements the tools and strategies that create a more valuable asset and sustainable economic future. We customize solutions based on each client's needs by looking at energy efficiency, reduced resource consumption, decreased waste and renewable energy.



Improve Building Efficiency

Buildings are a crucial, impactful and inevitable part of our global ecosystem. Introduce systems and processes to lessen impact and resource consumption. Transform your company into a business model and community leader.

KANSAS CITY POWER & LIGHT HEADQUARTERS

BNIM's design for KCP&L demonstrates the ability to introduce high performance, integrated design into an existing office tower. The move into 230,000 square feet of existing downtown office space serves as a powerful example to other building and business owners. The design decisions made at KCP&L will also make the space more cost effective to operate. The strategies focus heavily on optimal HVAC and workstation configuration.

PROJECTED ANNUAL ENERGY SAVINGS DUE TO
KCP&L'S ENERGY REDUCTION STRATEGIES*

27%

*This results in a savings of 1,612 metric tons of CO₂ emissions per year. 1612 metric tons is equivalent to CO₂ emissions from 183,014 gallons of gasoline consumed or from the electricity use of 224 homes for one year or from 67,181 propane cylinders used for home barbecues or from burning 8.4 railcars worth of coal.

GSA BANNISTER FEDERAL BUILDING

The Bannister Federal Building has long provided warehouse space for government services. BNIM's adaptive reuse of a portion of this space from warehouse into office space incorporates a skylight atrium and circulation corridor, which provides light to a shared conferencing center and the offices of the Federal Supply Service. The FSS reports that employees from other parts of the building are seeking out the amenity of the atrium and its own employees have increased capacity.

NEW ORDERS ARE BEING FULFILLED
60% FASTER. REDUCTION IN BACK
ORDER PROCESSING

80%

EB/ methods & strategies

When considering EB Building Integration and Green retrofitting, individual strategies are a good start. However, great things happens when the strategies are **integrated** into a holistic concept for the building, multiplying the potential impact. BNIM's job is to understand and investigate the possible strategies to create synergy and demonstrate the benefits and ROI. The strategies fall under five basic categories:

Mechanical

Modifications, upgrades, monitoring, and careful maintenance of a building's mechanical systems offers significant energy cost savings, while minimizing environmental impacts. These strategies often yield the fiscal benefits from increased human health and productivity through thermal comfort improvements.

STRATEGIES EQUIPMENT AND CONTROLS UPGRADES / MEASUREMENT AND VERIFICATION / RETRO-COMMISSIONING

Electrical

Savings are usually relative to the mechanical system, as the reduced cooling load from less heat-generating lamp types place less demand on the HVAC system.

STRATEGIES LAMP RETROFIT / LIGHTING CONTROLS (OCCUPANCY AND PHOTO-SENSOR) / REDUCED PLUG LOADS

Waste

Buildings produce waste products in forms such as water, biological, paper, plastics, metals, and exhaust (GHG's). The increased efficiencies gained from these strategies will consequently reduce a building's contribution to the waste stream; further reductions can be realized through streamlining processes, thereby reducing costs.

STRATEGIES GREEN CLEANING & PURCHASING, RECYCLING PROGRAMS, MATERIAL REUSE

Building Envelope

A significant amount of heat (and energy expenditure) is lost through the skin of a building. Strategies include a new, high performance envelope or changes to tighten the performance of the existing shell.

STRATEGIES RE-SEALING OPENINGS, RE-INSULATE, SHADING DEVICES, GREEN ROOF SYSTEM

Water

Water is an endangered resource on a global scale. Methods aimed at reduced consumption, reclamation, and on-site water treatment systems reduce costs and work towards resource independence.

STRATEGIES RAINWATER HARVESTING (REUSE) / GREYWATER REUSE / RETROFIT LOW-FLOW PLUMBING FIXTURES

EB/ facts & figures



A 1% increase in productivity can save employers \$600 - \$700 per worker per year¹



Employees who work in green buildings are taking 45% fewer sick days²



In green buildings, energy can be reduced from 30 - 50% and water usage decreased by 30% or more³

Research shows that many times green building projects, including LEED projects, can be constructed with a 0-2% increase over a standard budget⁴

1 cdn.thestreet.com/story/10440217/1/green-retrofits-more-than-pay-for-themselves.html

2 Green Buildings and Productivity, Draft: August 19, 2009, Forthcoming in the Journal of Sustainable Real Estate, Vol. 1, No. 1, Fall 2009 see www.josre.org

3 edcmag.com/Articles/Leed/2eba4d6efa697010VgnVCM100000f932a8c0____ | A Blueprint for Green Building Economics, David Gottfried, July 11, 2003

4 Costing Green: A Comprehensive Cost Database and Budgeting Methodology, July 2004, Lisa Fay Matthiessen and Peter Morris, DAVIS LANGDON

Additional Resources

Database of Renewable Incentives and Renewable Energy dsireusa.org / Environmental Protection Agency (EPA) epa.gov/cleanenergy/energy-programs/state-and-local/recovery.html / Department of Energy (DOE) eecbg.energy.gov/financialopportunities/default.html / Housing & Urban Development (HUD) portal.hud.gov/portal/page/portal/RECOVERY/programs/GREEN / Tax Incentive Assistance energytaxincentives.org

ABOUT BNIM

BNIM is ranked* as number 3 among the top U.S. firms that are role models of green and sustainable design.

BNIM is one of the most significant design firms working to redefine practice in the realm of green architecture today. As early pioneers in the arena of sustainable design, BNIM continues to shape the national and global agenda for responsible architecture and design excellence. Established in 1970, the firm has emerged nationally as a leading resource for established methodologies, innovative technologies and cutting-edge research in architecture, planning, landscape and workplace design. Our process is deeply rooted in the concept of integration, where clients and collaborators work together to create buildings and spaces that embrace the Triple Bottom Line— a balance of people, planet and prosperity.

* DesignIntelligence Sustainable Design Survey

BNIM people. innovation. design.

Kansas City | Houston | Des Moines | San Diego | Los Angeles | bnim.com | 866.894.2646
© 2009 berkebile nelson immenschuh mcdowell Inc.

BNIM