



Building for the 21st Century

Making the Business Case for Green Building

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PNC Financial Services Group

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National Building Museum

Washington, D.C.

Successful Innovation Can Be Simple





“My husband always maintained that if he had enough enlightened businessmen for clients he could change the face of the nation, build beautiful buildings for all types of purposes, and thereby make human life more meaningful for the people who live and work in them.”

Leading with Vision

PNC was first to...

- Largest corporate LEED certified green building in the world, PNC Firstside Center (650,000 sq. ft.)
- First LEED certified building in Delaware, J. Richard Carnall Center (112,000 sq. ft.)
- First green bank branches in the United States located in New Jersey, Ohio, Pennsylvania, Delaware, Kentucky, and Virginia
- 50 Green Buildings built as of April, 2008
- First Green deconstruction, Pittsburgh Public Safety Building. Recycled 97.95% and 2,850 tons of the building. The amount of reused material was 2,500 tons of concrete equivalent to 10 miles of sidewalk, 350 tons of steel equivalent to approximately 350 automobiles and 9 tons of aluminum window frames. The energy saved from the recycled aluminum alone would equal the electricity used by a single family home for 90 years.
- PNC helped to create USGBC's portfolio certification program.



Pittsburgh



Pittsburgh - Perception



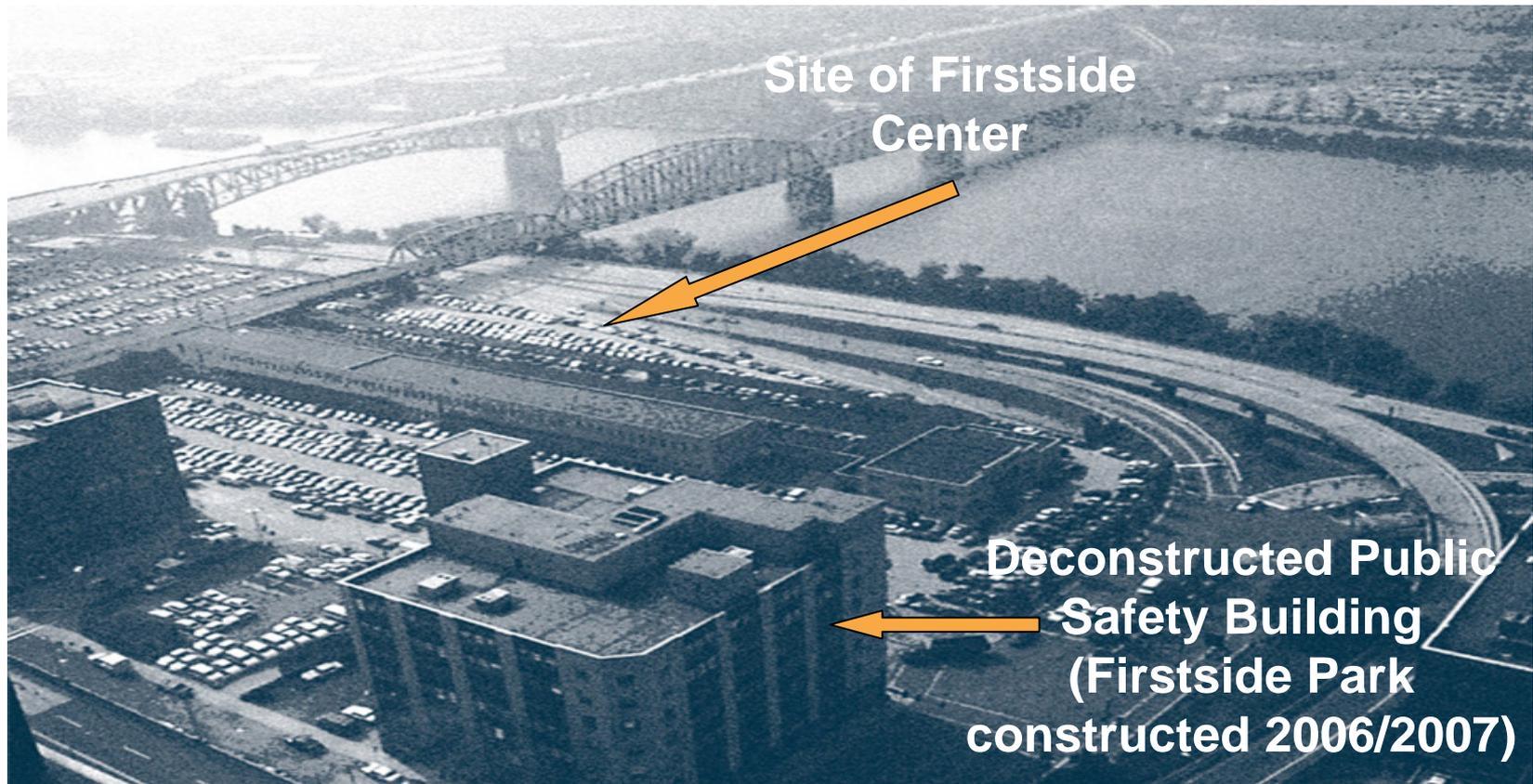
Pittsburgh – Reality

- Ongoing renaissance started in 50's and 60's
- Reclaiming our rivers
- Bike trails and parks
- Visitors are amazed at Pittsburgh's beauty

PNC has a covenant with the City of Pittsburgh and the region to support economic growth



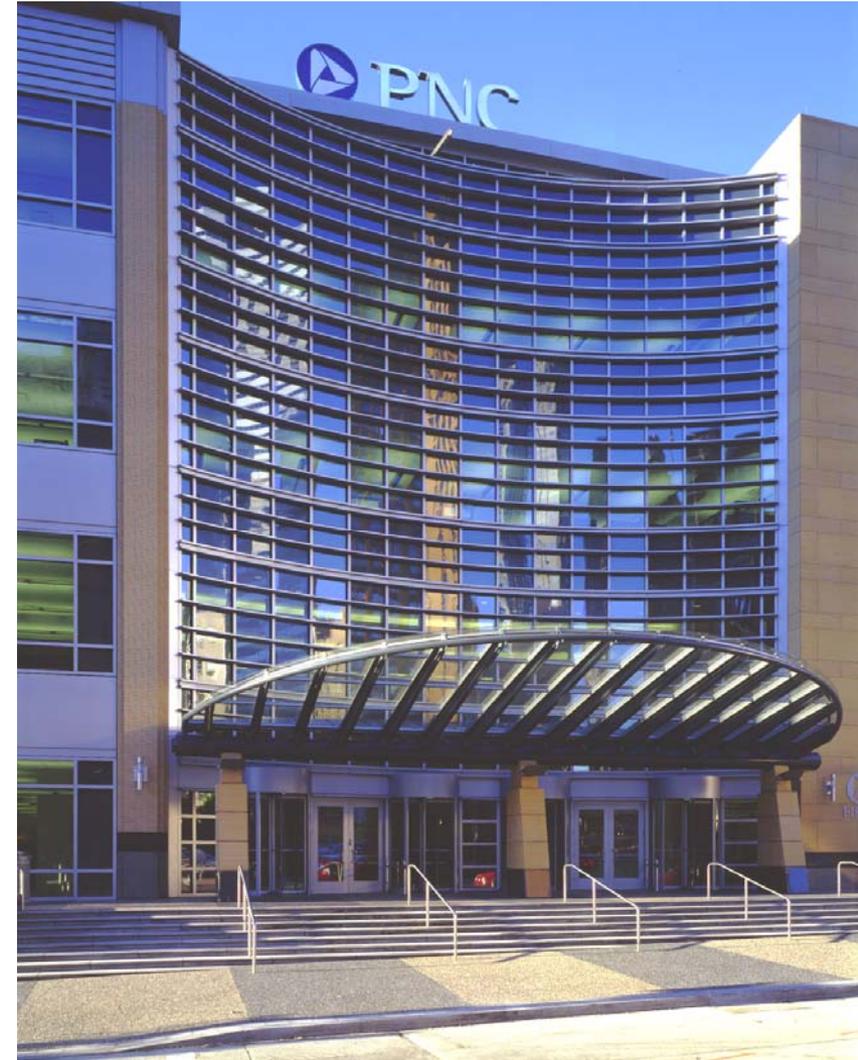
Urban Linkages



Brownfield redevelopment

- **Former rail station classified as brownfield – mitigated by PNC**
- **Land owner removed existing structures**
- **PNC performed hazmat abatement prior to PNC building program**

PNC Firstside Center



Firstside Park



Local / Regional materials

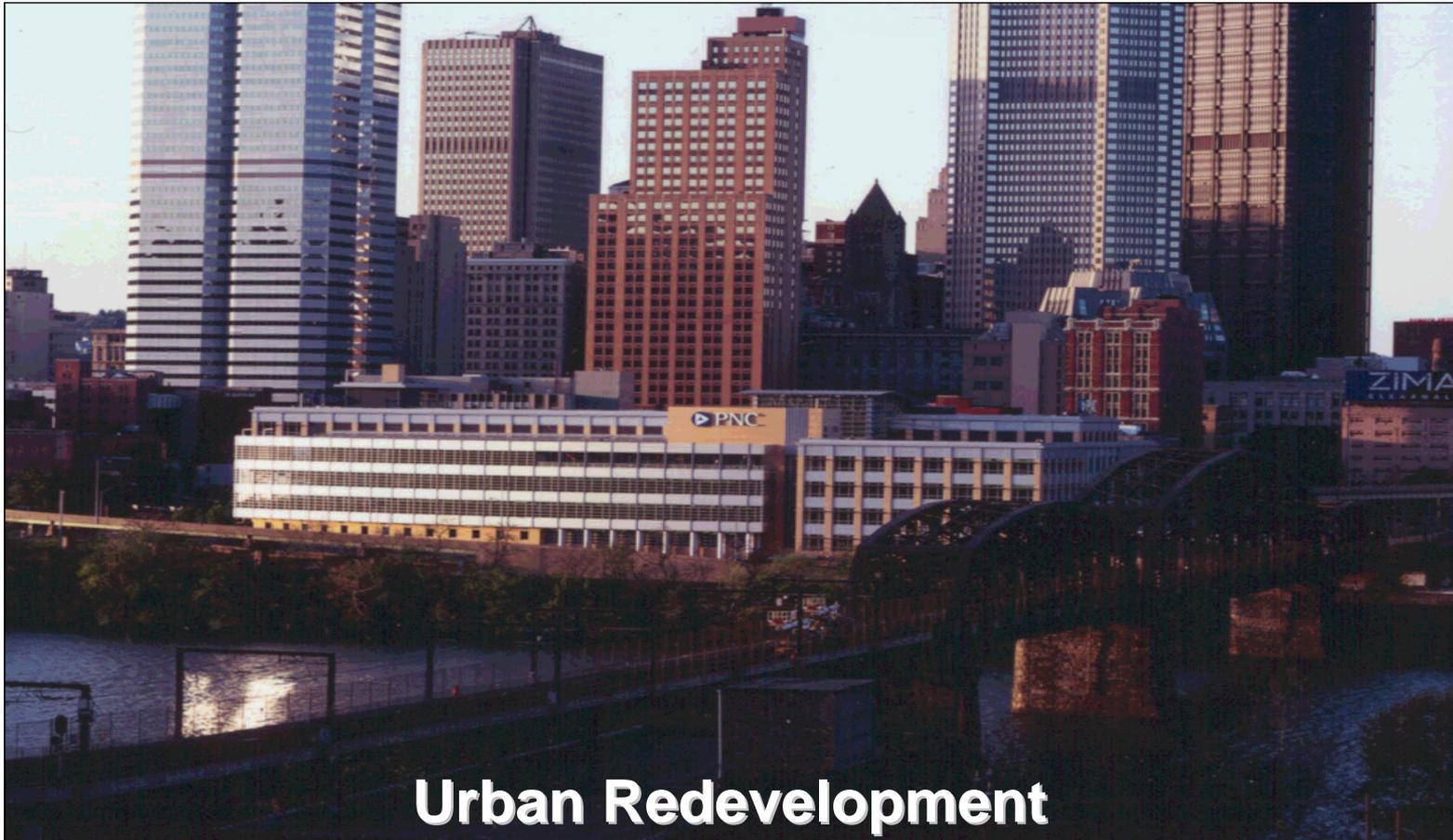


Many of the materials used were manufactured and extracted locally (500 mile radius) – steel, curtainwall, concrete components, brick.

Largest LEED Certified building at time of opening in November, 2000



PNC has a covenant with employees to provide a healthy, comfortable, and pleasant workplace



Urban Redevelopment

- Recovered industrial site adjacent to a city bikeway and a new light-rail commuter transit station in the historic firstside district
- No staff parking has been provided on the 4.66-acre building site
- By comparison, a similar building located in a typical suburban “greenfield” location would have required at least 20 additional acres for parking, buffers and the less buildable slopes typical of Western Pennsylvania
- Architecturally, the building responded to the context of the existing urban fabric in part by breaking down a very large building into smaller components



Pittsburgh Parking Authority Garage

- **Pittsburgh Parking Authority agreed to locate municipal garage next to PNC Firstside at edge of Pittsburgh downtown, based on PNC's encouragement**
- **1/2 mile to rail to existing transit lines**
- **1/4 mile to 2 bus lines – PNC Firstside close to at least 20**
- **New rail station is directly adjacent to Firstside**



Eliza Furnace bike and walking trail

City of Pittsburgh desired extension of the “Eliza Furnace” bike – walking trail. PNC donated planting and paving surfaces, extended trail through the Firstside property

Firstside Light Rail station



Port Authority of Allegheny County agreed to build the Firstside Light Rail station based on anticipated ridership due to PNC Firstside employees and surrounding businesses

Delaware's First LEED Building



PFPC Worldwide Headquarters

- PFPC is the nation's largest full-service mutual fund transfer agent and second largest provider of mutual fund accounting and administration services
- PFPC is a leading provider of retirement, custody, subaccounting and alternative investment services
- 112,000 square foot office
- LEED Gold Certification
- First certified building in the state of Delaware

How Do You Begin The Innovation Process?

Eco-Charette

Vision: Set goals and establish a clear process

Talent: Knowledgeable, creative and enthusiastic team

Culture: Opportunities to brainstorm and evaluate ideas

Sense of Urgency: Be the best

Implementation: Comprehensive plan; holistic yet flexible
(change within innovation)

PNC Realty Services Mission For Buildings

To create buildings that respect and protect the ecological environment in which we live;

Increase efficiency and productivity; and

Make a positive contribution to the communities in which we do business.

Design Process for PNC Green Branch[®]

Creating **consistent** and **memorable** customer experiences is the best way to maintain loyalty, influence decisions, and ensure repeat business.

An Approach to Innovative Building



Dream Big...

- 🔍 Question every component – Why does a bank branch need a 60–80 gallon water heater?
- 🔍 Photovoltaic
- 🔍 Geothermal
- 🔍 Water reclamation
- 🔍 Energy Positive
- 🔍 Energy Neutral
- 🔍 Carbon Neutral

...Then Validate

- ④ Cost Benefit Analysis on Equipment
- ④ Commissioning Process
- ④ Utility Monitoring
- ④ Occupancy Studies
- ④ High efficiency glazing system
- ④ High efficiency mechanical units
- ④ Daylighting
- ④ Building Management System
- ④ Native Landscaping
- ④ Drive-Thru canopy motion sensor lights



PNC

our Green Branch[®]

The first LEED Certified Bank branch
in the country

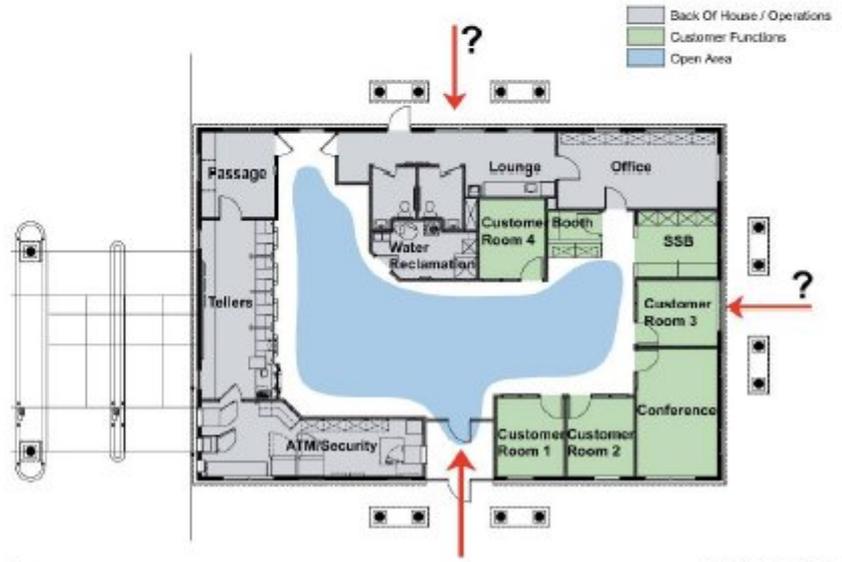
Design Challenges Present Opportunities Thru Innovation

There are 4,608 different combinations of site factors for Green Branch[®] design!

- 8 different floor plans
- 4 possible climate zones
- 12 possible orientations
- 12 different wind orientations



Green Branch[®] Vs. Legacy Branch



Completed Construction



Completed Construction



PNC's Commitment to the Planet

50 Green Buildings

34% Energy Savings (34,175,250 kWh)	=	enough energy annually to power 100 American households per year.
29% Water Savings	=	enough water to provide drinking water to 1,722 Americans.
FSC Forested Wood	=	equivalent of over 1,209,500 board feet of wood, equal to preserving 161 acres of forest habitat, or about the area of 121 football fields.
1,300 tons of Construction Waste	=	equivalent to the amount of lifetime waste generated by 17 Americans.

What effect does sustainability have for Employees?

To PNC Sustainability Is:

-  An approach to business
-  An approach to the community and its environment
-  An approach to appropriate architecture
-  An approach to reduce operating and maintenance costs over the *life* of our buildings
-  Employee satisfaction with higher retention rates, reduced absenteeism, and increased productivity
-  Maintaining a work environment where employees can thrive that reduces turnover thus, increased customer service performance

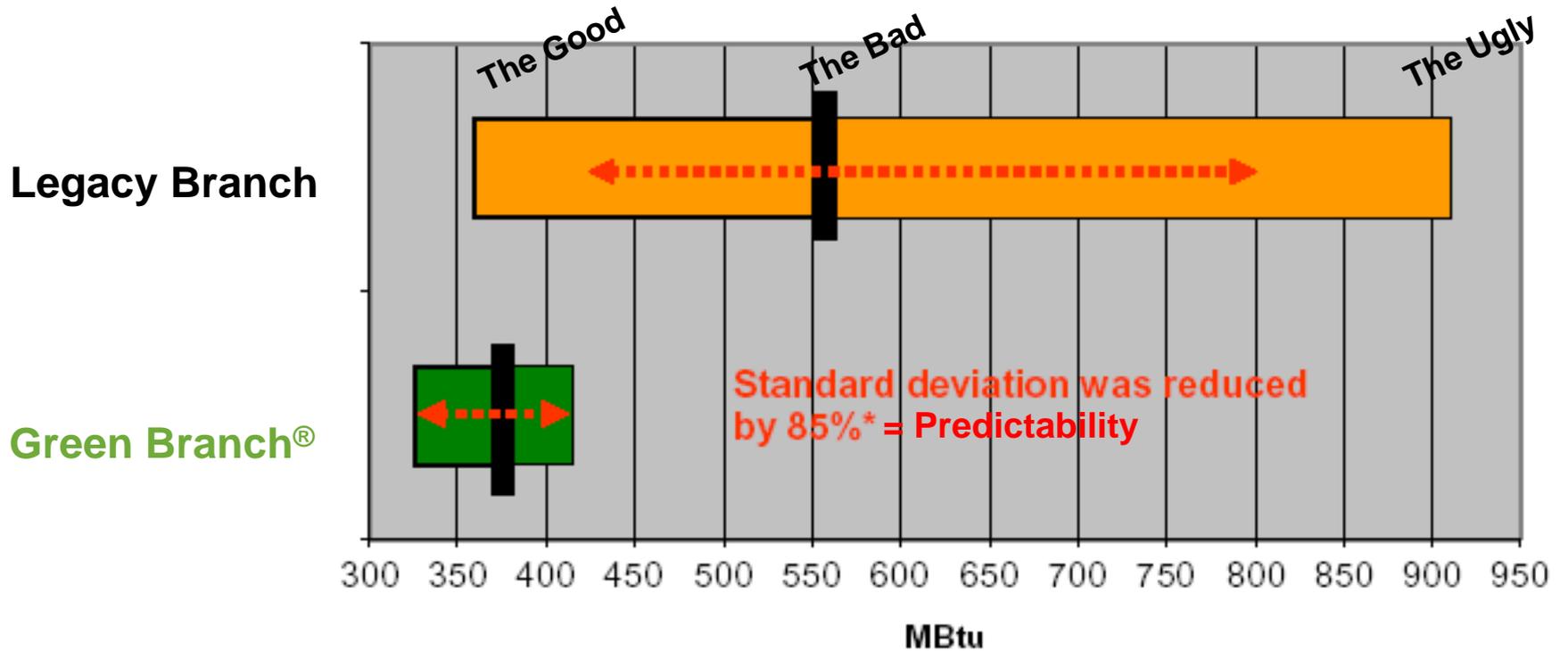
PNC Post Occupancy Performance Evaluation

Isn't it About Results?

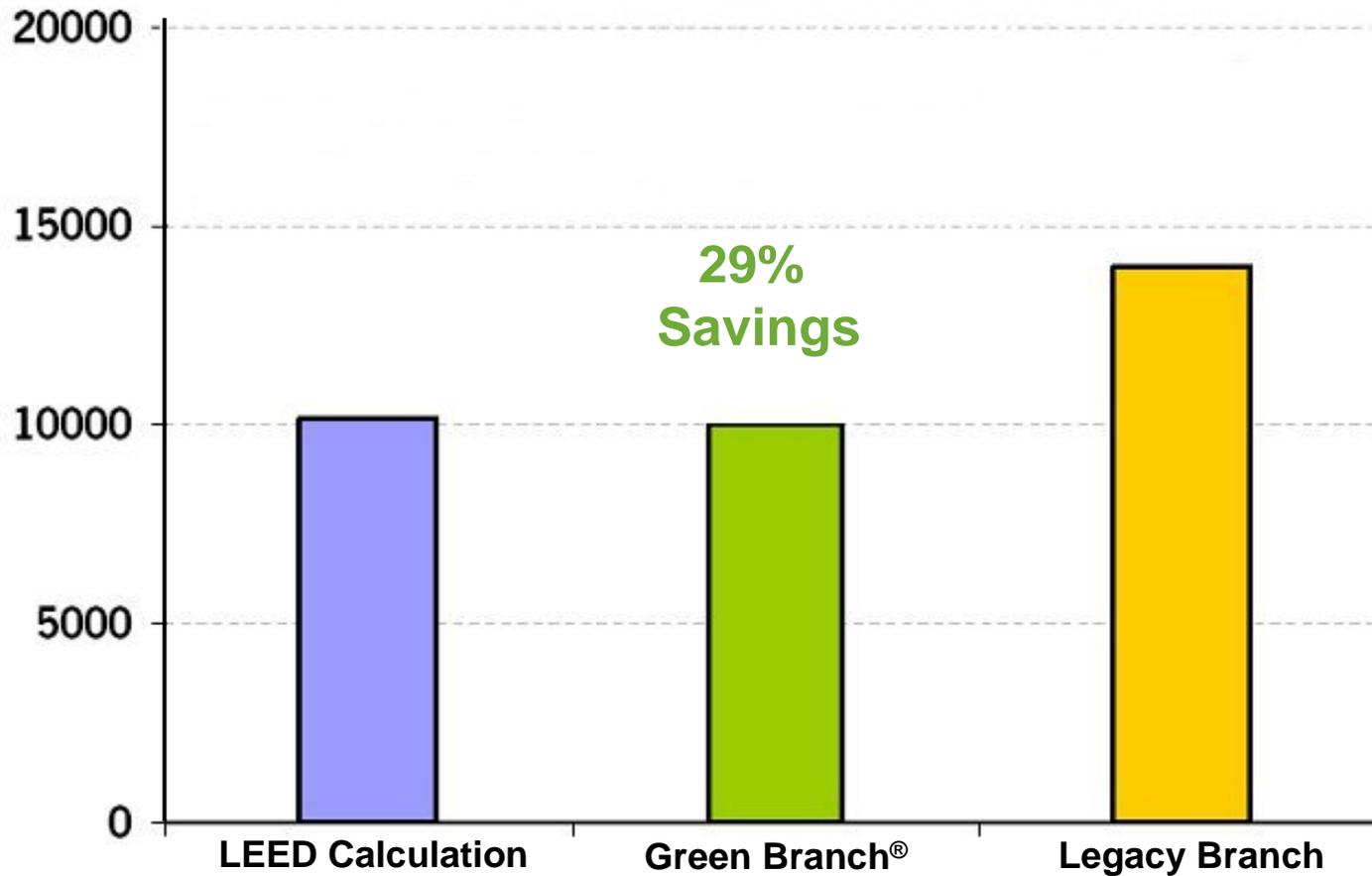
Has the Green Branch[®] increased performance, predictability, & occupant satisfaction?

-  Paired 10 Non Green & 10 Green Buildings to eliminate impact of climate for utility data & normalized for SF & number of employees
-  Engaged the University of California Berkeley Center for the Built Environment to utilize their web-based post occupancy evaluation to survey occupants

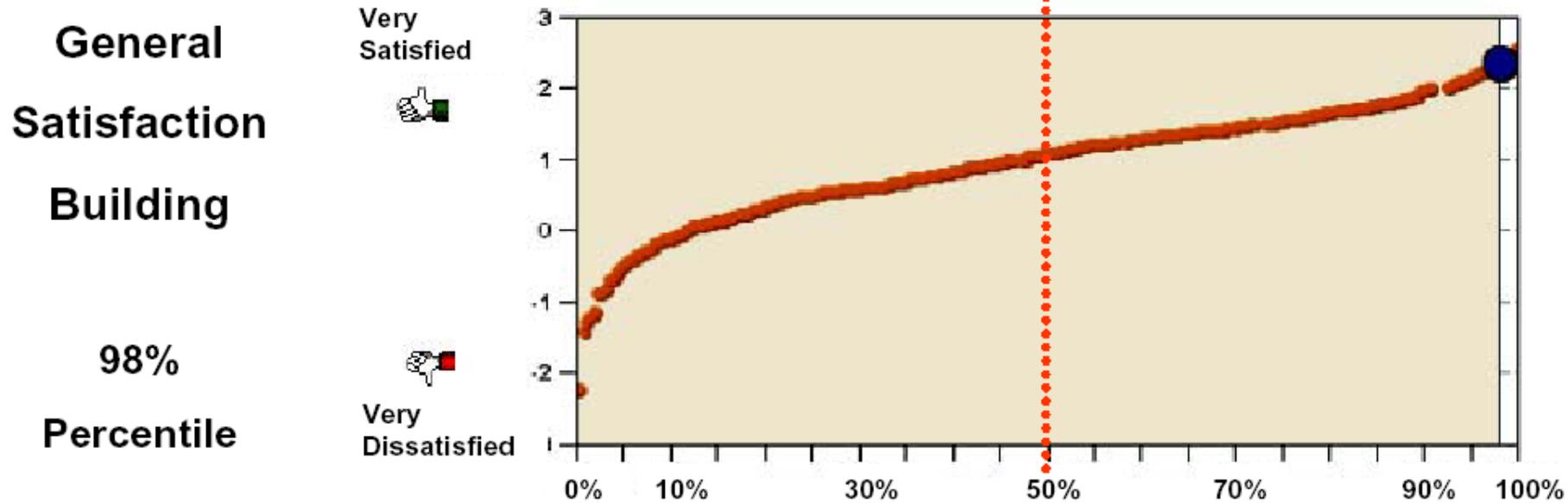
Annual Energy Consumption



Annual Water Consumption



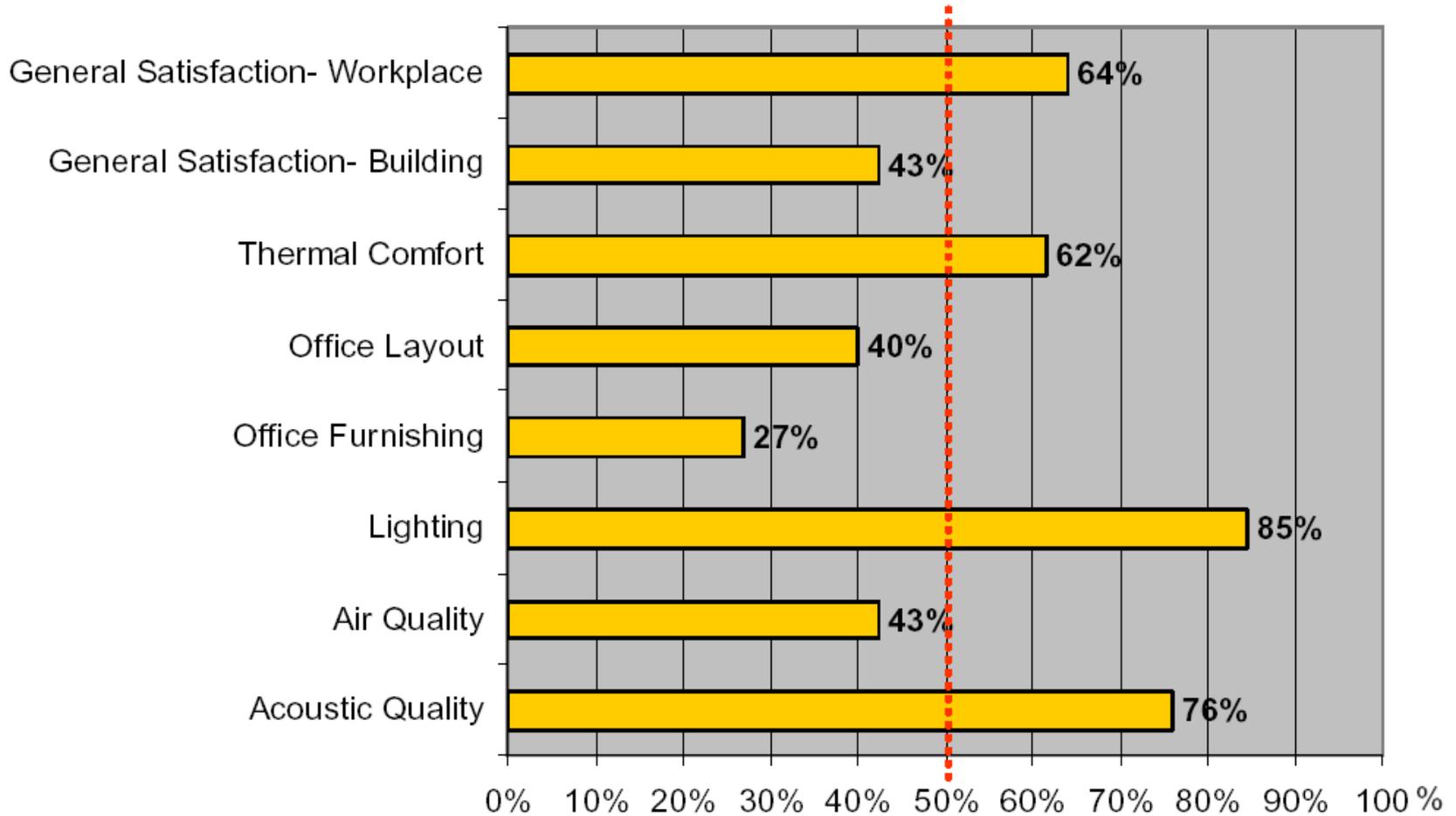
Center for the Built Environment at the University of California Berkeley Post Occupancy Evaluation Analysis



Median Building: Valley Square

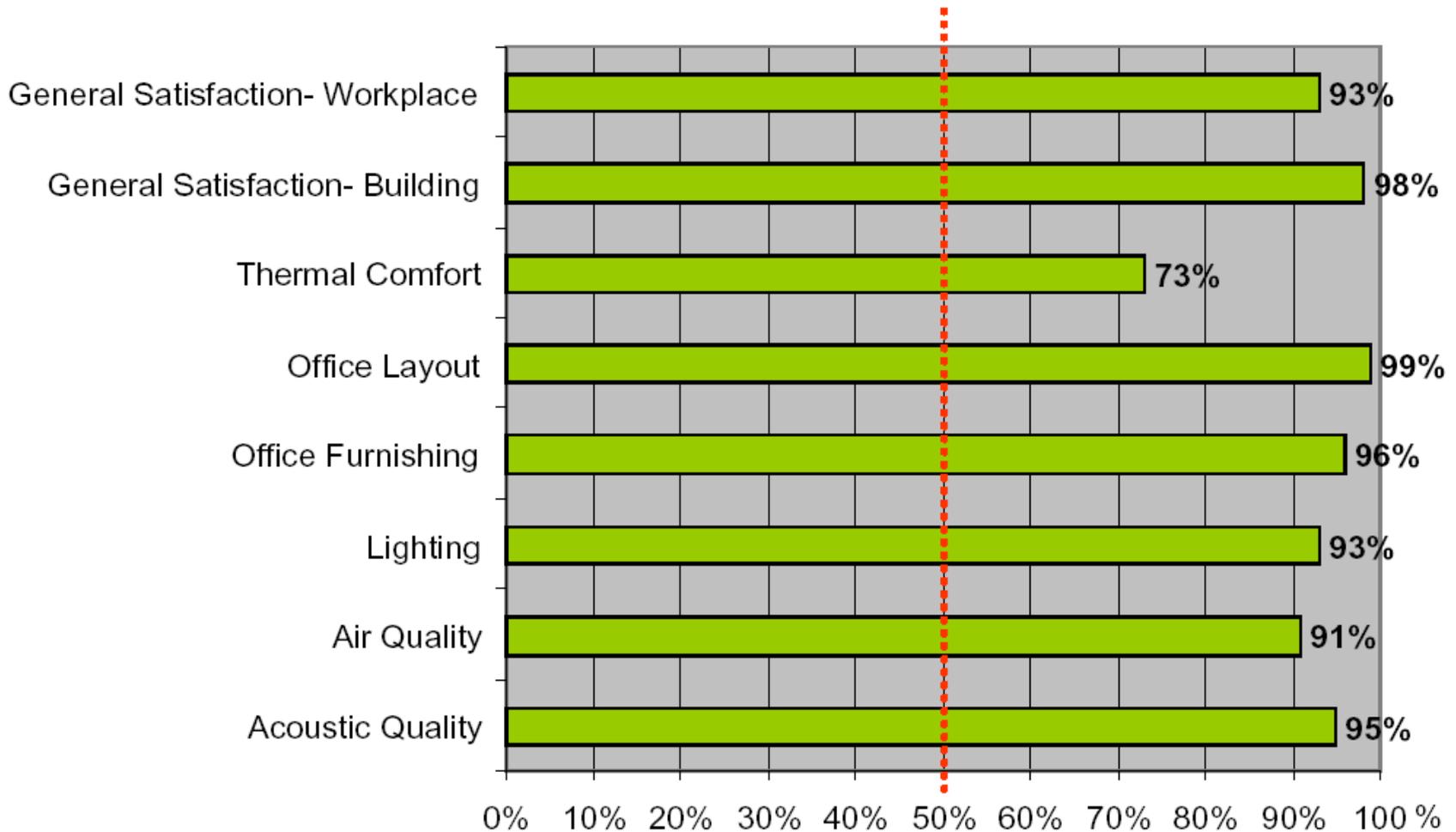
CBE Database contains more than 350 projects, with the majority being non LEED rated projects

Legacy Branch Median Response



Center for the Built Environment at the University of California Berkeley Database Percentile

Green Branch[®] Median Response



Center for the Built Environment at the University of California Berkeley Database Percentile



More Aspirations

Three PNC Plaza - Overview

- Owner – PNC Financial Services Group
- Developer – Oxford Development Company
- Architectural Design
 - **Gensler**
 - ASTORINO
- A total of 1.27 acres of developable land
- Revitalize the Fifth & Forbes corridor
- Construction to begin in the summer with an anticipated completion date, late 2009
- \$200 million budget

Three PNC Plaza

- 360,000 sf office tower
- 185 room *Fairmont* hotel
- 28 unit condominium
“The Residences at the
Fairmont”
- Street level retail
- A LEED Certified Hotel



Three PNC LEED Certification

Condo Shell
and Core

LEED SC
Astorino

Reed Smith
LEED CI

PNC LEED CI
Paladino
Associates

Three PNC
Shell & Core

LEED SC Astorino

Fairmont
Hotel

LEED CI
Paladino
Associates

Retail
Space

LEED CI
Paladino
Associates



PNC Washington, D.C. Regional Headquarters

800 17th Street
“PNC Place”

