asset management
the role of green buildings

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Outline

• NZGBC vision & mission etc.
• Value case for green building
• Advent and role of rating tools in NZ
• The sustainability context
• Procurement process
• Whole of life costing
• Questions
Vision: That New Zealanders work and live in healthy, efficient, productive and environmentally sustainable buildings, today and into the future.

Mission: To accelerate the development and adoption of market based green building practices.
WORLDWIDE, BUILDINGS ACCOUNT FOR:

17% of fresh water consumption
25% of wood harvest
33% of CO₂ emissions
30-40% of energy use
40-50% of raw materials used

CO₂ EMISSIONS BY SECTOR:

Buildings are an important part of the solution to climate change.
Carbon and buildings in New Zealand

• The built environment contributes 17% to New Zealand’s overall emissions profile

• New Zealand’s Emissions Trading Scheme (ETS) does not directly include the built environment, the industry will be subject to flow-on costs

• Opportunities for emissions reduction in the built environment are at negative cost
Marginal abatement cost curve

Role of rating schemes

- Developing a common language
- Setting voluntary targets
- Recognising and rewarding leaders of best practice
- Robust certification process
- Gaining value chain alignment
- Materiality approach
- Not prescriptive
Green Star

Green Star is a comprehensive, national, voluntary environmental rating scheme that evaluates the environmental attributes and performance of New Zealand’s buildings using a suite of rating tool kits developed to be applicable to each building type and function.

A Green Star NZ Certification represents commitment and leadership to green building practices and environmental performance.
Rewarding best practice

NZ Building Code

Green Star NZ

Innovators & leaders

Best practice – green buildings

No. buildings
Key projects
Building components considered

- Paint
- Sealants
- Engineered Wood
- Furniture
- PVC
- Insulation
- Timber
- Façade
- Structure
- Concrete
- Steel
- Floor Coverings
- Walls Partitions Joinery
- Ceilings
- Landscaping Materials

Office 2009 Category Weightings

- Materials: 10%
- Energy: 25%
- Transport: 10%
- Water: 10%
- Land Use & Ecology: 10%
- Emissions: 5%
- IEQ: 18%
- IEQ Materials Recognition: 2%
- Management: 10%
- Office 2009 Category Weightings: 10%
Issues addressed

- Reuse
- Recycled content
- Durability
- Demountable
- Product Stewardship
- Volatile Organic Compounds
- Minimisation
- Ozone Depletion Potential (ODP)
- Third party certification:
  - Recognised ecolabel
  - ISO14001 or Enviromark
  - Chain of Custody
Investors

- Increased return on investment (ROI)
- Enhanced marketability
- Lower risk assets as they are built to last

“Rated assets deliver better returns on performance than non-rated assets, consistent across various market segments.”
PCA/IPD Green Investment Index

**Property asset valuation data**
- Returns
- Cap rate
- Capital value
- Vacancy rates
- Rents

**Property asset rating tool data**
- Green Star (mainly new new assets)
- NABERS (performance)

**GREEN INDEX**
- Market type
- Quality type
- Regional market type

- Measures investment returns for buildings
- Tangible metrics
- Benchmark analysis
- Transparency in the market
Developers and owners

- Compressed schedules
- Increased sales prices
- Access to capital
- Asset protection
- Lower operating costs
- Tenant attraction/retention
- Higher lease rates
- Reduced liability and risk
Whole of life costing

“Total cost of ownership over life of asset”

- Improved awareness of total costs
- More accurate forecasting profiles
- Performance trade off against capital cost
Unanticipated costs

- Energy price rises
- Earthquake losses
- Increased labour costs
- Consumer awareness
- Resource cost increases
- Change management and staff costs
- Business disruption
- Disposal
Opportunity costs

Typical Project Stages

- Briefing
- Feasibility
- Outline Design
- Detail Design
- Implementation

ABILITY TO CHANGE

COST OF CHANGE and LOSS OF PRODUCTIVITY

Integrated Design Team Appointed:
- Architect
- Engineers
- Commissioning Agent
- Contractor
- Tenant
- QS
- PM
- FM
- others

Optimum productivity point

Business as Usual appoint main contractor
Strategy to address whole of life costing

• Integrated design
• Value management engineering
• Analyse future trends
• Set targets and track performance
• Report
Next steps

• *Predict carbon output in design/performance* - calculate a carbon footprint
• *Factor the cost of carbon into all decision-making*
• *Consider whole of life costing*
• *Incentives/programs to bring forward investment in existing stock*
• *Streamline internal sustainable procurement practices*
• *Enhance understanding of prospective tenants*
• *Target, measure and report – Performance tool*
Thank you

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