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2009 CEEFA

**Spring Meeting &
Technical Session**

**College of Engineering
University of Michigan**

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Green Risks & Insurance Issues for the Design and Construction Teams

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AGENDA

- Background
- Green Forum Feedback
- Insurance Market Feedback
- Risk Management Solutions



BACKGROUND

MARSH GREEN BUILDING TEAM

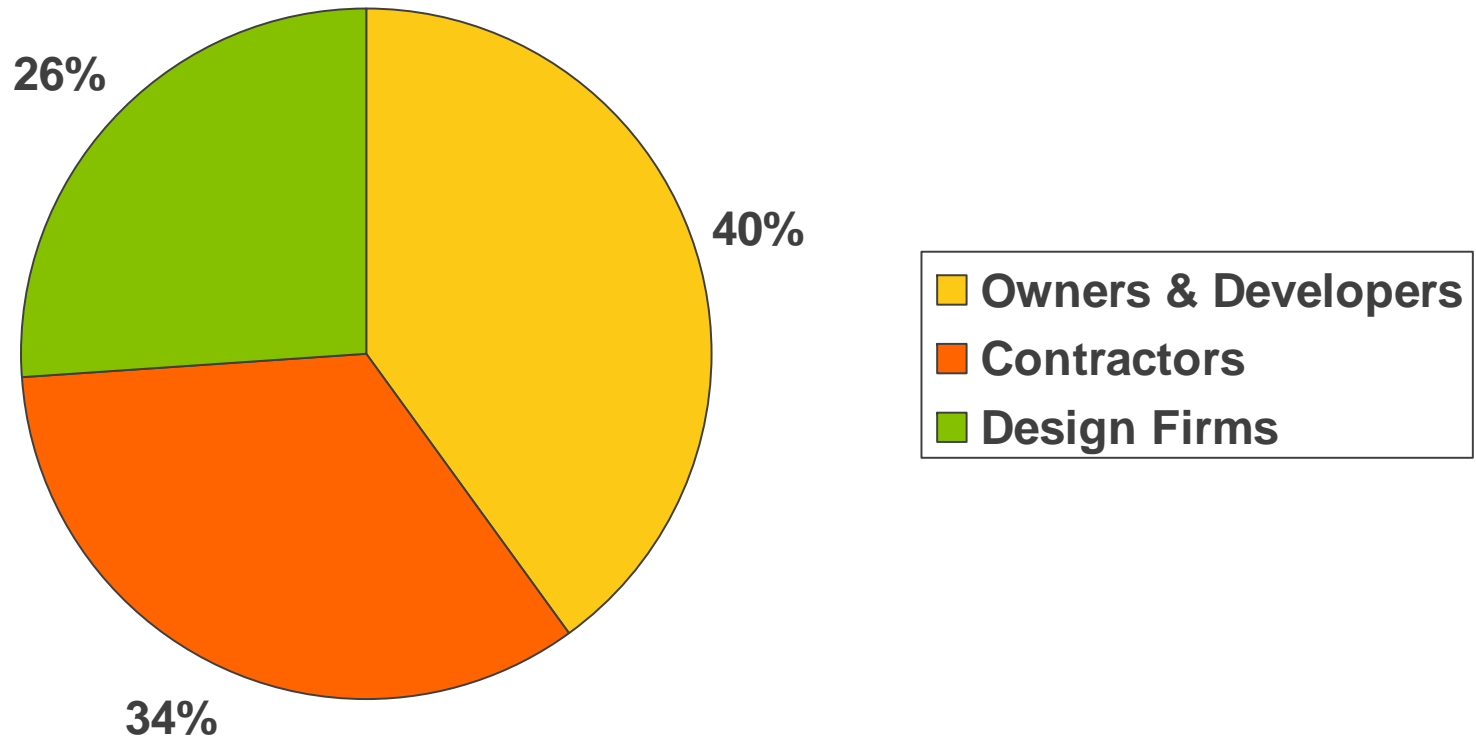
- Focus is on the U.S. Green Built Environment
- Composed of colleagues from multiple MARSH Practices – Construction, Real Estate, Environmental and others
- Our Mission
 - How the insurance marketplace addresses “green” risks
 - Develop risk management tools to help the green built industry

GREEN FORUM FEEDBACK

MARSH GREEN BUILT FORUMS

- Chicago – June 2008
- Washington, DC – September 2008
- San Francisco – December 2008
- New York City – January 2009

GREEN BUILT FORUM DEMOGRAPHICS

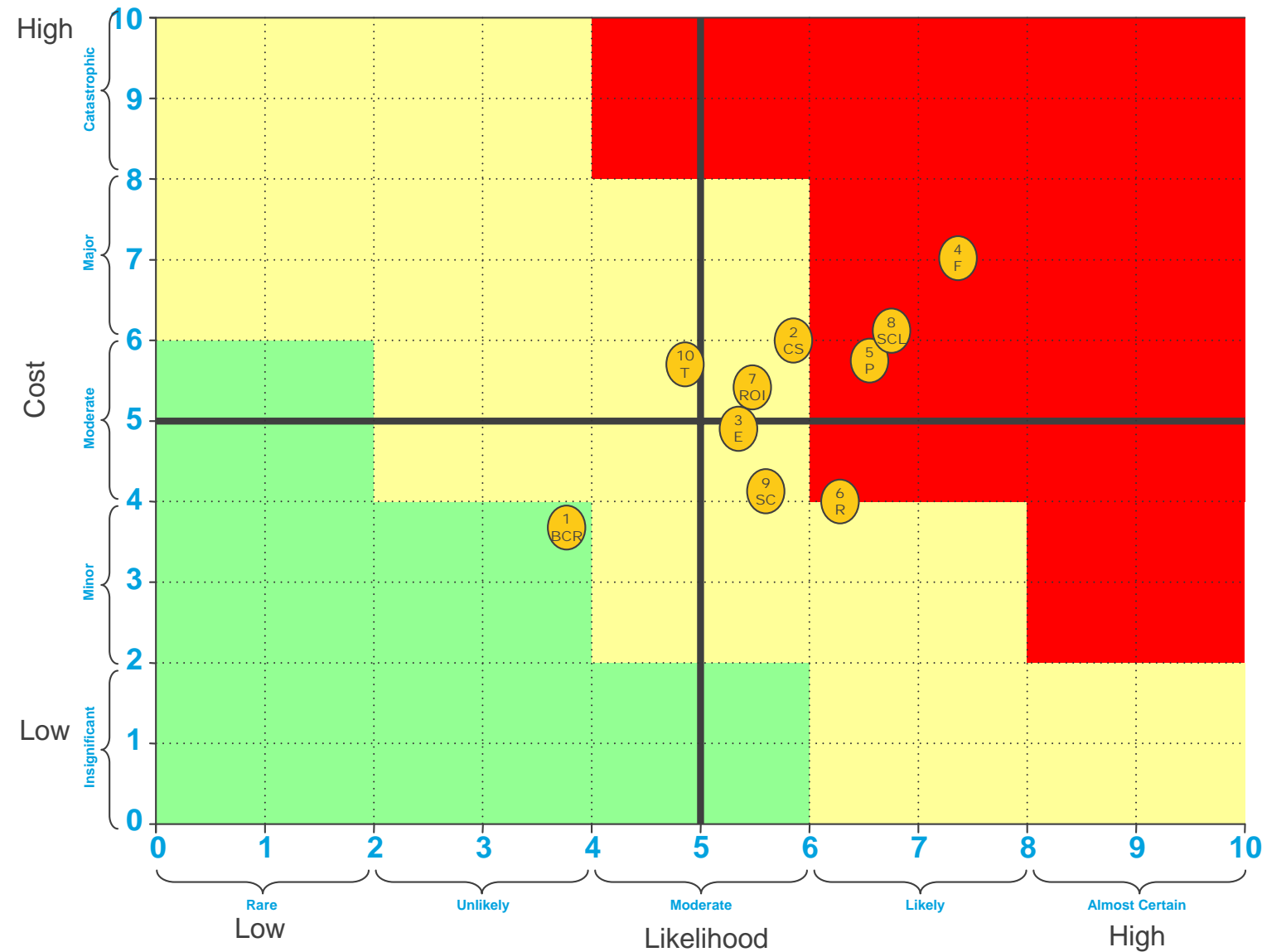


RISK INVENTORY CATEGORIES

- Brand and Competitive Edge/Reputation
- Consultants/Subs
- Education
- Financial
- Performance
- Regulatory
- Return on Investment
- Standard of Care/Legal
- Supply Chain
- Technology

Consolidated Risk Map – 1/30/2009

■ = Low Risk
■ = Moderate Risk
■ = High Risk



#	Risk
1	Brand and Competitive Edge/Reputation
2	Consultants/Subs
3	Education
4	Financial
5	Performance
6	Regulatory
7	Return on Investment
8	Standard of Care/Legal
9	Supply Chain
10	Technology



TOP FIVE RISK CATEGORIES

- Financial
- Standard of Care/Legal
- Performance
- Consultants/Sub-consultants
- Regulatory

DESIGN FIRM RISKS

- **Evolving Standard of Care**
 - AIA documents and Canons of Ethics
 - Local, state, federal requirements
 - Green is no longer always voluntary
- **Contractual Warranties and Guarantees**
 - LEED certification
 - LEED letter templates
 - Performance guarantees
- **Green Washing**
 - Material specifications
 - Material substitutions
- **Lack of qualifications and experience**
- **Architect vs. commissioning agent**

CONTRACTORS' RISKS

- **Managing Expectations**
- **Design vs. Performance Specifications**
- **Schedule Impact**
 - Ex: Flushing Out HVAC
- **Budget Impact**
 - Ex: Bid Packages
- **New Products/Systems**
- **Lack of qualifications/experience**
 - Construction Subs
 - O&M Team



THE INSURANCE MARKET'S PERSPECTIVE

PROFESSIONAL LIABILITY UNDERWRITING CONCERNS

- **Coverage**
 - Negligent design and related services
- **Concerns**
 - Lack of experience
 - Standard of care
 - New technologies
 - Material specifications
 - Emerging professional risks – LEED AP and Commissioning Agents
- **Claims**
 - Product non-performance
 - Building did not achieve certification

GENERAL LIABILITY & SURETY UNDERWRITING CONCERNS

- **Coverage**
 - General Liability & Surety
- **Concerns**
 - Lack of experienced subcontractors
 - Contractual warranties/guarantees
 - Durability/longevity of new, untested products and technologies
 - Leaks/water intrusion/mold
 - Improper O&M
- **Claims**
 - Product non-performance
 - Failure to achieve LEED certification (loss of tax benefits)



RISK MANAGEMENT SOLUTIONS

RISK MANAGEMENT SOLUTIONS – Design Firms – *A Sampling*

▪ **Contractual**

- Avoid warranties and guarantees
- Scope tied to compensation
- Clear scope re: LEED credits
- Commissioning agent vs. architect

▪ **Operational**

- Due diligence in specifying materials, products, and design solutions
- Understand existing legislation, regulations, codes, and possible tax incentives
- Avoid signing letter templates
- Communication to O&M staff

RISK MANAGEMENT SOLUTIONS – Contractors – *A Sampling*

- **Contractual**

- Fair/Equitable Risk Allocation
- Clear scope re: LEED Credits
- Avoid unknowingly guaranteeing performance attributes
- Mutual waivers of consequential damages
- Liquidated damage clauses

RISK MANAGEMENT SOLUTIONS – Contractors – *A Sampling*

▪ Operational

- Understand existing legislation, regulations, codes and possible tax incentives.
- Sub-contractor pre-qualification process
- Training for subs and O&M staff
- Due diligence in specifying materials, products and design solutions.
- Schedule – LEED Time
- Budget
- Document Control
 - QC/QA Assurance Plan
 - LEED Accreditation Plan
 - Credit Management Spreadsheet



Q&A



Thank you for attending!



PRESENTED BY:

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