



CEU accredited presentation sponsored by S. Rose Company and Haworth

## Modular Interiors and the Environment

In this program participants will:

- Examine how and why the use of modular interiors results in a smaller overall footprint, a shorter construction schedule, facility flexibility and energy savings.
- Learn how renovating with moveable walls, modular furniture and zone technology substantially saves money and time without the mess of conventional remodeling.
- Discover how to give client's insight to their bottom line using design and environmentally friendly products.

*Ken Kirk has been involved in the architectural interiors industry for 29 years. Employed by Haworth since 1988, his background allows him to assist facility professionals, design teams, contractors, and others to address the issues of ergonomics, custom requirements, flexible interiors, and high performance real estate.*

**Thursday, January 19, 2006**

\*3 Sessions available:

8:00—9:30 AM

11:30—1:00 PM

5:15—6:45 PM

*\*30 minute registration/networking at the beginning. Come early to meet other designers, architects, and real estate professionals in and around Cleveland.*

**Where:**

S. Rose Company  
1213 Prospect Avenue  
Cleveland, OH 44115  
216.781.8200

**RSVP by January 12:**

Joanna Barrett 216.658.5113

*Seating is limited so register early!*

CEU Forms Provided

0.1 CEU ASID/IDC/IDEC/IIDA #4727

AIA Course #HAW527 INCLUDING HSW



**HAWORTH®**  
change by design

Modular Interiors and the Environment  
By Ken Kirk

**Course Information**

**Course Title:** Modular Interiors and the Environment

**Subject Code Index:** 5. *Technical Knowledge – 3. Building Construction & Materials*  
Secondary: 2. *Interior Design – 4. Sustainable Design*

**Use of Course:** CEU Manual

**Instructors**

**Instructor:** Ken Kirk

**Instructor's Profile:**

Ken Kirk has been involved in the contract furniture industry for 29 years and has worked for a variety of companies that includes Stow Davis, Atelier International, Smed and Haworth, Inc. Ken has been with Haworth A.I. (formerly Smed) since 1988 in a number of positions which include sales, seating development, sales management and architectural specialist and architectural director. Ken's primary focus since 1998 has been the introduction of the constructive solutions concept to the marketplace. Ken has presented the concept of high performance interiors across the country.

"Modular Interiors and the Environment" provides an introduction and overview to the environmental waste produced by commercial office interiors. The course then looks at the sustainable and economically viable method of modular interior construction. Attendees will learn that modular interiors can give designers, architects and builders excellent opportunities to create unique spaces that provide clients with real bottom-line benefits.

**Materials for Review**

**Content Outline:**

- I. Introduction -  
What role do commercial office interiors play on the environment? Material waste, energy use, interior air quality, greenhouse gasses and urban sprawl are covered.
- II. The main body of the presentation then deals with the opportunities to mitigate those issues by creating an adaptable interior that requires less energy and uses less (but comfortable) space through moveable walls, raised access flooring, user controlled lighting and modular furniture.
- III. The Role of Design  
This approach to interior construction in no way negates or lessens the impact of the design team. In fact they are able to not only provide a completely unique project, but give the client and auditable return on investment (ROI).
- IV. Q & A

**Course Description:**

Attendees will delve into the economic and design viability of creating a sustainable commercial office interior by using architectural interiors and furniture. This presentation demonstrates that this approach not only encourages good design, but helps give clients insight on how design can help their bottom-line and create an environmentally sustainable interior now and going forward.

# Environmental Impact of Buildings



- 65.2% of total U.S. electricity consumption
- 30% of total U.S. greenhouse gas emissions
- 136 million tons of construction and demolition waste in the U.S. (approx. 2.8 lbs/person/day)
- 12% of potable water in the U.S.
- 40% (3 billion tons annually) of raw materials use globally



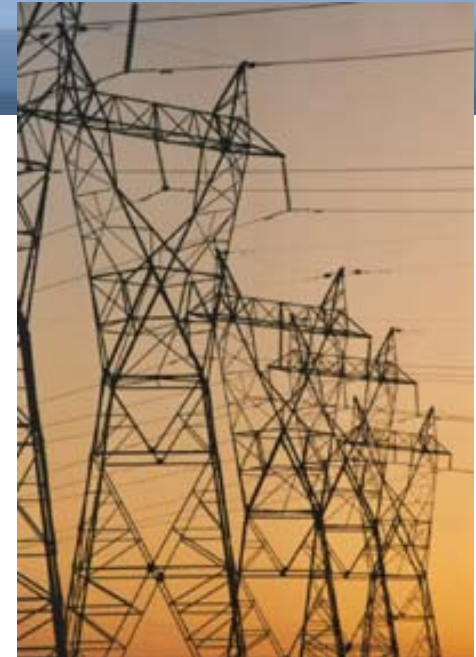
# Environmental Impact of Buildings

Power generated for lighting releases **16%** of all greenhouse gasses.

Lighting consumes **26%** of all power produced.  
Over **50%** of that power is coal generated.

Power consumption used for lighting costs **\$37 Billion** per year in the U.S alone. (D.O.E.)

80% of all energy supplied to lighting  
generates **HEAT**



# Environmental Impact of Buildings

22 - 33% of landfill in N. America is from construction, renovation and demolition

Drywall makes up 10 - 15% of the waste stream



# Facility Performance

Buildings have a major impact on the environment.

- 40% of total raw material use globally.
- 65% of total electricity consumption.
- Cooling and Lighting make up over 48% of the typical commercial building energy costs.



# Facility Performance

How?

By helping to create workspaces that:

- Use less real estate.
- Generate less waste during construction.
- Reduce construction schedule.
- Adaptable and re-useable to eliminate future material use and waste.
- Conserve resources – fewer materials, energy, etc.



**TAKE**

**Less**

**MAKE**

**Less**

**RE-USE**

# WHAT DOES THIS MEAN FOR OUR BUSINESSES AND OUR PEOPLE?

\$15 billion in direct medical costs per annum due to indoor air quality

60 million lost working days lost per annum due to air quality

pollution levels inside buildings are 2-5 times higher than outside - In some buildings this has been measured 100 times higher

20 – 40% of the US population has genetic risk of allergies or asthma

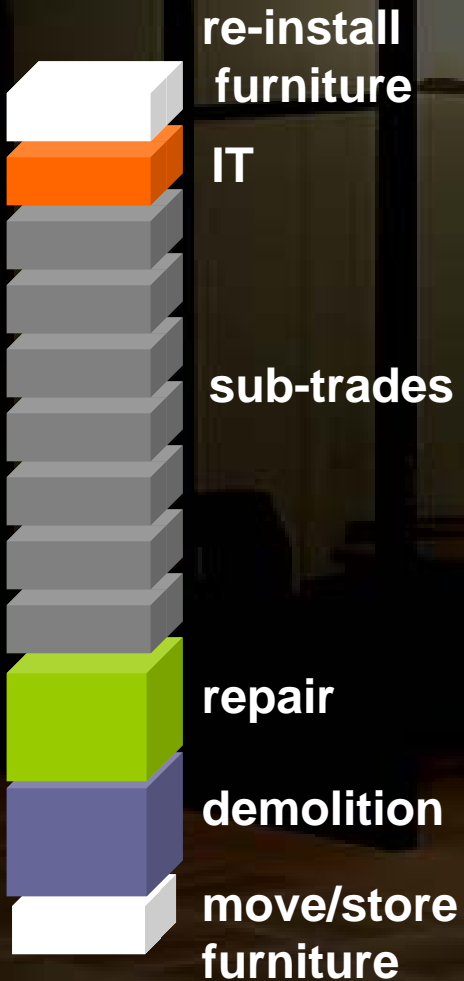
cost of IT moves adds and changes - \$13 billion per annum

workplace has 24% influence on job satisfaction

2 – 3 times a person's salary to replace them

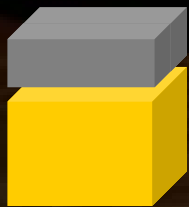
65% of senior executives at Fortune 1000 do not measure ROI related to facilities or productivity

# ease of reconfiguration



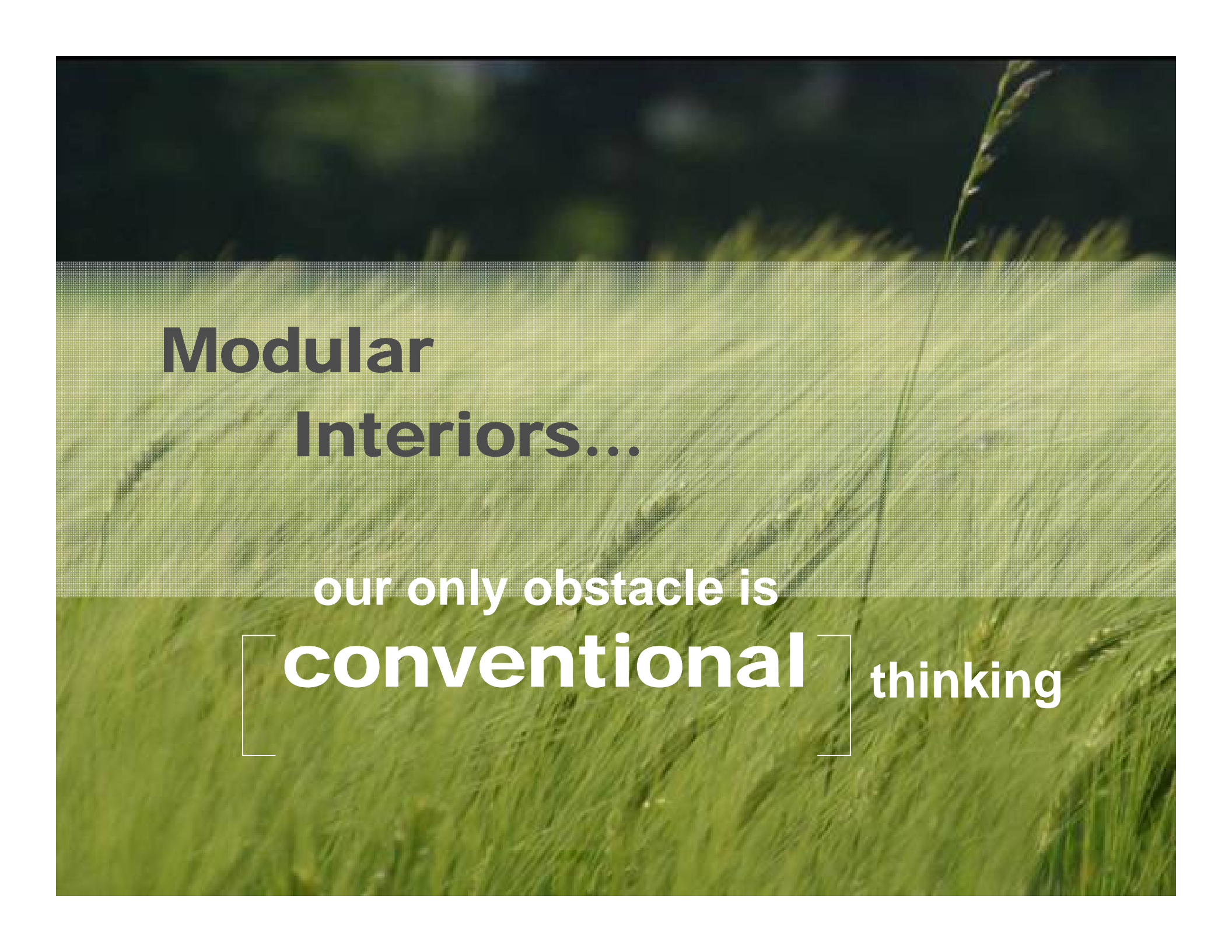
# ease of reconfiguration

- rapid reconfiguration
- minimum components
- non-marring
- no disruption



**sub-trades**

**relocation of LifeSPACE™  
& furniture c/w power & data**



Modular  
Interiors...

our only obstacle is  
[conventional] thinking