Performance measures: how do we know what we’ve got?

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“feedback”

- Workplace performance – how workers are affected by and respond to features of their physical work environment
- Building performance –
  - 1. operating costs,
  - 2. effect on building users
- Employee performance - evaluations
- Portfolio performance – asset management
Satisfaction surveys?

- Likes and dislikes
- Personal preferences
- Opinion poll
- Built environment as a service
Functional comfort: support for tasks

- Link to task requirements
- Tools and access to tools part of physical environment
- Minimizes individual differences
- Connects environment with productivity
OCCUPANT COMFORT ...... user-building interface

- Physical Comfort
  - +

- Psychological Comfort
  - +

- Functional Comfort
  - = occupant well-being / ‘flow’
MEASURING PHYSICAL COMFORT

• Responsible design decisions
• Quality construction standards, code requirements
• Good base building decisions
• Making sure everything works (elevators, bathrooms, parking)
MEASURING FUNCTIONAL COMFORT

- Environment designed to support the performance of work
- Not oriented to users’ likes and dislikes
- Needs analysis focused on tasks
- Environmental competence of users
Measuring functional comfort

• BIU Assessment developed in 1980’s, tested in N.America, Australia, Europe
• Self-administered questionnaire – now on-line
• Results computed into scores on functional comfort dimensions
• Scores compared to database scores (norms) based on + 100 buildings
• Deviations from norms provide diagnostic profile of user comfort
• Quantitative basis for follow-up action to increase functional comfort
Dimensions of functional comfort:

BUILDING SYSTEMS
- Air quality
- Thermal comfort
- Building noise

BUILDING INTERIOR
- Spatial/workstation comfort
- Privacy
- People noise
- Lighting quality
- Daylighting

BUILDING MANAGEMENT
- Cleaning/maintenance
- Safety
- Appearance
FUNCTIONAL COMFORT:

energy out

STRESS

energy in

COMFORT
**-E = sustained STRESS**

**+E = sustained COMFORT**

- **ENERGY OUT!**
  - Longer time and more effort for task performance
  - Fatigue
  - Stress
  - Illness
  - Absenteeism

- **ENERGY IN!**
  - All energy focussed on work
  - Efficient task performance
  - More ideas, creativity
  - Good fit between environmental demands and psychological control
About the tool:

• Standardised questionnaire
• Depends on self-assessment
• Reflects users experience
• So what? question – importance of norms, or reference baseline
• Links with building performance measures
• Managing occupant expectations