A Talk with the Owners

Philip J. Wirdzek
President and Executive Director
International Institute for Sustainable Laboratories (I²SL)
I²SL

• Champion
  – A non-governmental organization to help promote sustainability objectives with and beyond former Labs21 federal program

• Vision
  – To engage a global network of collaborators to move laboratories and other high-technology facilities into balance with the natural world.

• Mission
  – Educate, share, and promote the development of sustainable, high-technology facilities through worldwide partnerships.
My Agenda

- Why Labs?
- BIM - a Life Cycle Owners Tool
- Half-a Story
- A Parallel World
- Getting Stakeholders Educated
- Standardization
- Who Owns BIM Anyhow?
Why Labs

• High-tech buildings, such as laboratories, data centers, cleanrooms, and hospitals are resource intensive.
• On a square-foot basis, labs alone often consume four to six times as much energy as a typical office building.
• They are more costly to build and maintain.
• Involve more regulatory oversight, including health and safety, hazardous materials management, etc.
• Often require non-stop operations.
• Contain specialized equipment, maintain unique processes, and often require a level of higher security.
• Are highly influenced by evolving technologies.
Life Cycle Tool

- Many labs and other high technology facilities are not speculative buildings, but long-term investments.
- Labs embody, both in program and technology, the spirit and culture of the age.
- Labs attract some of the greatest intellectual and economic resources of a society.
- Beyond evolving technologies, labs are highly influenced by the activities of the users.
- Unlike automobiles, labs have many “drivers” and hands on the controls but none have a “dashboard” making these facilities unpredictable in performance.
- I²SL believes BIM can offer the “dashboard”
Parallel World

Twinkle, Twinkle, Little Star

very easy arrangements
created and edited by
Fabrizio Ferrari

W. A. Mozart (1756-1791)

Allegretto

G D E D C B

A G D C B A

D C B A G D

E D C B A G

www.virtualsheetmusic.com
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Parallel Worlds
Education – Not Just The Early Few
But All Stakeholders
Education in All Aspects
For Performance at All Times
Delivering Life-Cycle Performance

BIM Lifecycle View

- Laws and regulations
  - Building regulations
  - Building specifications
- CAD software
  - Drawings, calculations
  - Architect, engineer, ...
- VRML
  - Visualization, 3D models
- Simulations
  - Comfort
  - Ventilation, heating
  - Life cycle cost
  - Light, sound
  - Insulation
  - Fire, usage
  - Environment
  - Life time predictions
- Specifications
  - Specification sheets
  - Classification standards
  - Estimates, accounting
- Procurement
  - Product databases
  - Price databases
- Construction management
  - Scheduling
  - Logistics, 4D
- Facility management
  - Letting, sale, operations
  - Maintenance
  - Guarantees
- Demolition, refurbishment
  - Rebuild
  - Demolition
  - Restoration
- Knowledge databases
  - Best practise knowledge
  - Own practice

Building Information Model

Courtesy of Deke Smith, Executive Director
Standardization
For Whom Do We Create!

• Who is our customer?
• What is our product?
• Will Performance endure?
Investor/Owner?

Nutricap Labs President and Founder, Jason Provenzano was featured in today’s Executive Suite column of Newsday.
These?
Or These!
Our Customer
Thank You

If I can be of further service please contact me:

Phil Wirdzek
President and Executive Director
International Institute for Sustainable Laboratories (I²SL)

Email: Philwirdzek@i2sl.org
Phone: (703) 425-1259
or Info@i2sl.org