



Summary and Outlook

Martin Fischer, Ph.D.

Associate Professor of Civil and Environmental Engineering and
(by Courtesy) Computer Science, Stanford University

<http://www.stanford.edu/~fischer>

Director, Center for Integrated Facility Engineering (CIFE),
Stanford Univ.

<http://cife.stanford.edu>





Some takeaways

- Owner value
- Company survival
- Contract issues
- Many different levels of detail
- Learning
- Business drivers
- \$\$\$?
- Personal and organizational skills and competencies

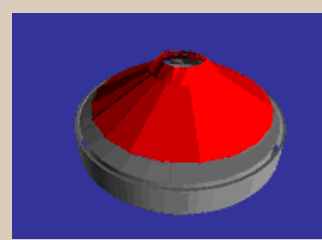
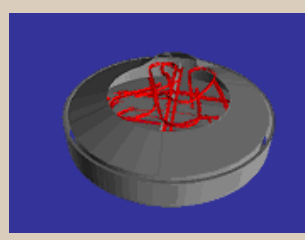
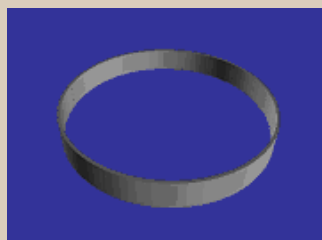
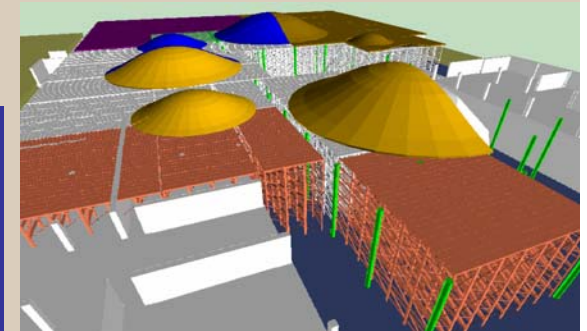
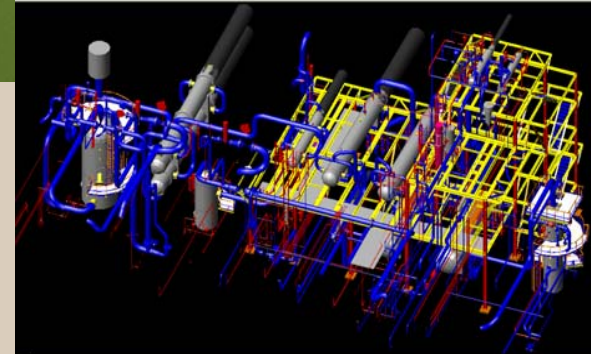
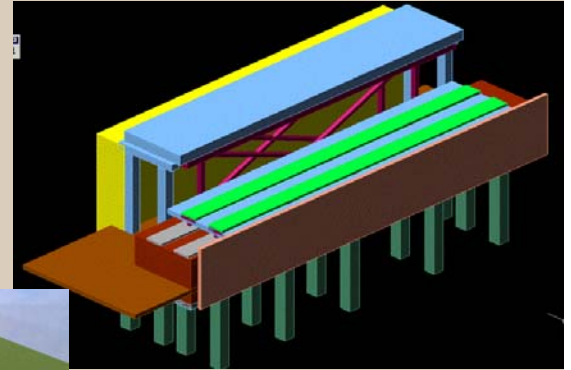


Examples of VDC Research in the Field

- Fulton Street Transit Center (Parsons Brinckerhoff)
- Office of the Chief Architect (GSA)
- El Camino Hospital (DPR)
- California Academy of Science (Webcor)
- Etc.

Stanford class CEE 243 "Virtual Design and Construction" with mini-internships

- Obayashi
 - Tokyo main train station track move
- Swinerton
 - Template hospital
- CCC
 - Ammonia Plant
- Webcor
 - Roof construction for new Renzo Piano Academy of Sciences building
- Walt Disney Imagineering
 - Demolish, rebuild Space Mountain

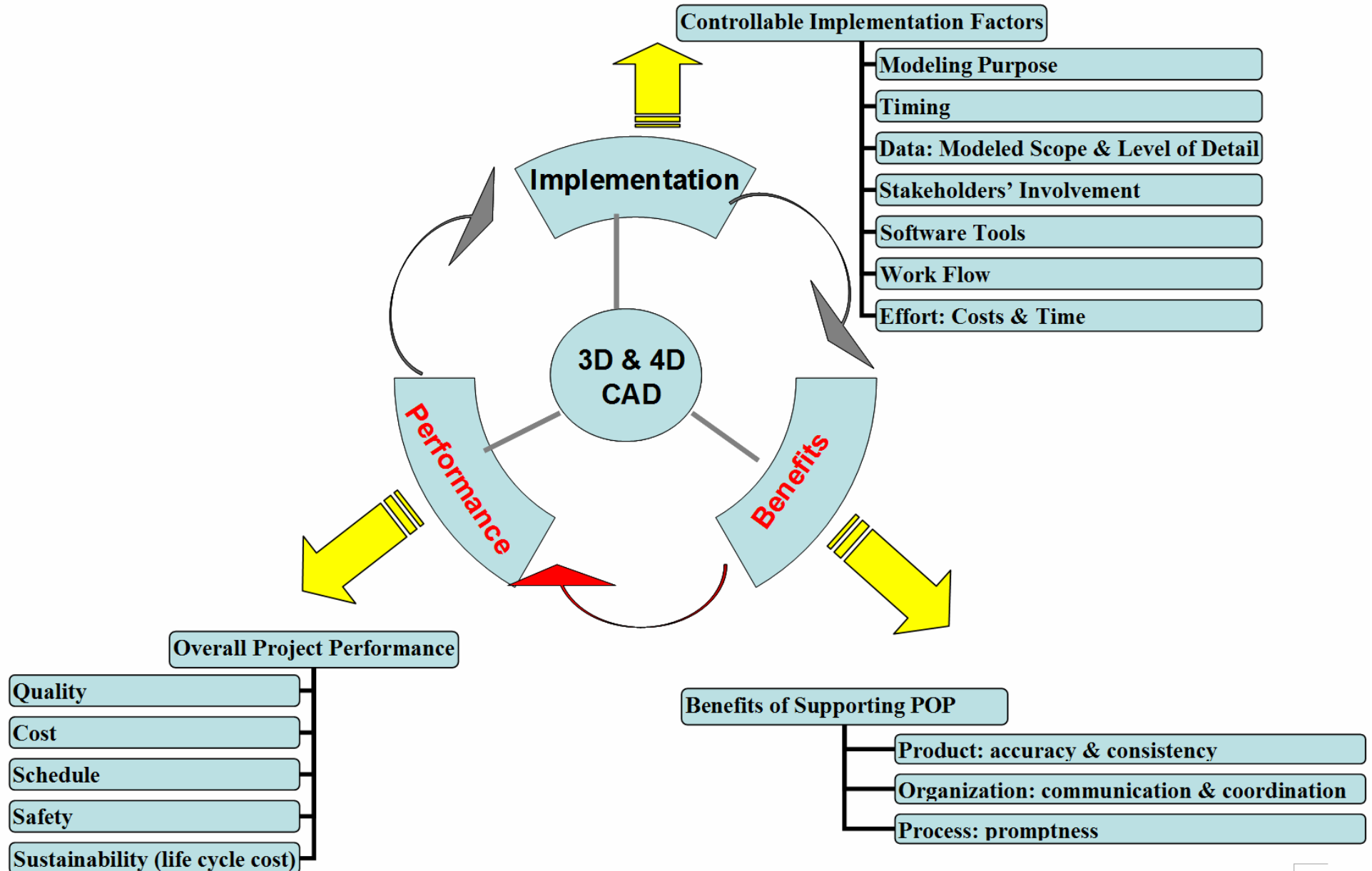




Some VB Axioms

- The truth is in the eye of the beholder (e.g., cost)
- Embed as little information as possible, link as much information as possible
- Enter detail as late as possible (but as early as needed)
- When possible, calculate!
- Involve builders and operators in VB effort

3D & 4D Modeling Framework



How will you work in 2015?



Some upcoming events:

- **VDC Implementation Workshop** at the CIFE Summer Program in the week of June 20, 2005
- Exceptional Building Value, CIFE-GSA, Sept. 14, DC
- ASC Competition, Reno, NV, Feb. '06
- AISC NASCC e-Commerce Strategies Workshop, Feb. '06