Transforming the Design and Construction Industry

Greg Gidez
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Consider the momentous event in architecture when the wall parted and the column became

Lois Kahn
The Duomo, Florence
Innovation in design engineering and Construction
1436
Brooklyn Bridge
Innovation in design engineering and Construction
1883
Disney Concert Hall
Innovation in design engineering and Construction
2003
For all the innovation in design, engineering and construction the process has not changed
The design and construction industry is the most dysfunctional major industry in our economy and the only industry that has lost productivity in the last 30 years.

NIST
The industry has fallen behind all other industries except agriculture in its investment in and implementation of technology.
The Status Quo

Does not facilitate the optimized use of technology

Does not balance risk and reward

Does not encourage best behavior

Encourages siloing, inefficiency, waste, conflict, and litigation
Nothing is as dangerous in Architecture as dealing with separated problems

Alvar Aalto
US buildings consume:

- 12 percent of total water consumption
- 68 percent of total electricity consumption
- 38% of total carbon dioxide emissions
- 12% of the potable water
- 40% of the primary energy
- 70% of the electricity in the U.S
- 60% of all raw materials used in the U.S. economy
Buildings account for 39% of US carbon emissions.

Equaling Japan, the United Kingdom and France combined.
The World is moving in a new direction
Between now and 2015 roughly half of the world's new building construction will take place in China

World Bank
By the year 2030 50% of the built environment will have been built in the 21st century
Stimulus for Transformation
Advent of the global economy
Increased populations and a shrinking world
Competition for energy and natural resources
Sustainability
Financial turmoil
Tipping point?
The successful transition from the status quo to optimized high-performance buildings will require the integrated expertise of a wide variety of disciplines including those who design, manufacture, construct, use, maintain, refurbish, finance and insure our built environment.
No one knows as much as everyone

Anonymous
An exponential technological transformation of processes within the construction industry
The **BIM** Transformation will

- Drive innovation in process
- Enhance communication between organizations
- Increase profits for the design and construction industry
- Better design, Better value
- For the owner
The future is nothing but some present rushing to meet us

Frederic Dard
We Can Do It!
Strategic investments in resources and information technology
New thinking on education
New thinking on the workforce
Collaboration on establishing a model protocol that supports all design and construction and operations
The public sector needs flexibility in order to innovate.
The private sector needs incentives to innovate to take the necessary risks.
Distribution of risk and reward must reflect the new paradigm
New Contracts
New fee structures
New behavior
You must be the change you wish to see in the world

Gandhi

Thank You.

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