

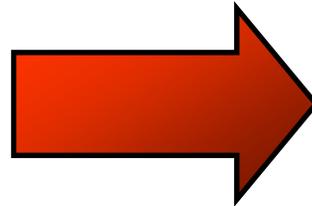
Design By Disaster

100 Years of Fire Disasters and Egress Regulation

Jason D. Averill
Richard D. Peacock
Building and Fire Research Laboratory



1903



2003

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Technology Administration, U.S. Department of Commerce



“Design By Disaster”

“What we do with risk management is more like a political knee jerk response to what’s on television and in pictures on the front pages of newspapers. This approach to risk management is not based on reason, it is not based on science, it is not based on knowledge, it is political.”

- Prof. Dennis Mileti, 2005



Landmark Business Fires

- 1911 Triangle Shirtwaist Fire, New York City
 - 146 fatalities, mostly young women (500)
- 2001 World Trade Center Attacks, New York City
 - 2,749 Fatalities (~17,400 +)
- 2003 Cooke County Admin. Building fire, Chicago, IL
 - 6 Fatalities (~500)



Landmark Hotel Fires

- 1946 Winecoff Hotel, Atlanta, GA
 - 119 Fatalities (280)
 - 1946 La Salle Hotel fire, Chicago (61 fatalities)
 - 1946 Baker Hotel fire, Texas (10 fatalities)
 - 1946 Canfield Hotel fire, Iowa (19 fatalities)
- 1980 MGM Grand Hotel fire, Las Vegas, NV
 - 84 fatalities (~5,000)
 - 1981 Las Vegas Hilton: 8 fatalities, 198 injured
 - 1986 Dupont Plaza: 97 fatalities



Landmark Board and Care Fires

- Golden Age Nursing Home, Fitchville, OH
(November 23, 1963 *)
 - 63 Fatalities (84)
- Eight other fires in board and care facilities between 1970 and 1973 killed 112 people.



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Landmark School Fires

- 1937 New London School Explosion, New London, TX
 - Over 300 Fatalities (~640)
- 1958 Our Lady of the Angels School Fire, Chicago, IL
 - 93 Fatalities (~1,600)



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Landmark Assembly Fires

- 1903 Iroquois Theater Fire, Chicago, IL
 - 602 Fatalities (~1,900)
- 1942 Cocoanut Grove, Boston, MA
 - 492 Fatalities (~1,000)
- 1977 Beverly Hills Supper Club, Southgate, KY
 - 165 Fatalities (~2,500)
- 2003 Station Nightclub fire, West Warwick, RI
 - 100 fatalities (~300)



Beverly Hills Supper Club

Beverly Hills Supper Club, Southgate, KY

- 165 Fatalities (~2,500)
- Cause
 - Antiquated wiring, product toxicity
- Egress Issues
 - No evacuation plan
 - Delayed evacuation notification and action (comedy act, perception)
 - One exit, 6 units short of exit capacity
 - Inadequate inspections
 - Overcrowding (536 vs 1,360)
 - No alarm, sprinklers



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Beverly Hills Supper Club

- Meritocracy established at reorganized and re-staffed state inspections
- New Kentucky building code adopted
- Retroactive alarm and sprinkler requirements
- Pioneering use of class action, mass tort lawsuit on product liability (\$50M total)
- Improved product flammability performance (wire/cable and foam rubber)



Investigations (NCST)

“Those who cannot remember the past
are condemned to repeat it.”

George Santayana, author and philosopher

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Dedicated Research

“Through careful and systematic research, science will be ready when the precipitating event comes calling.”

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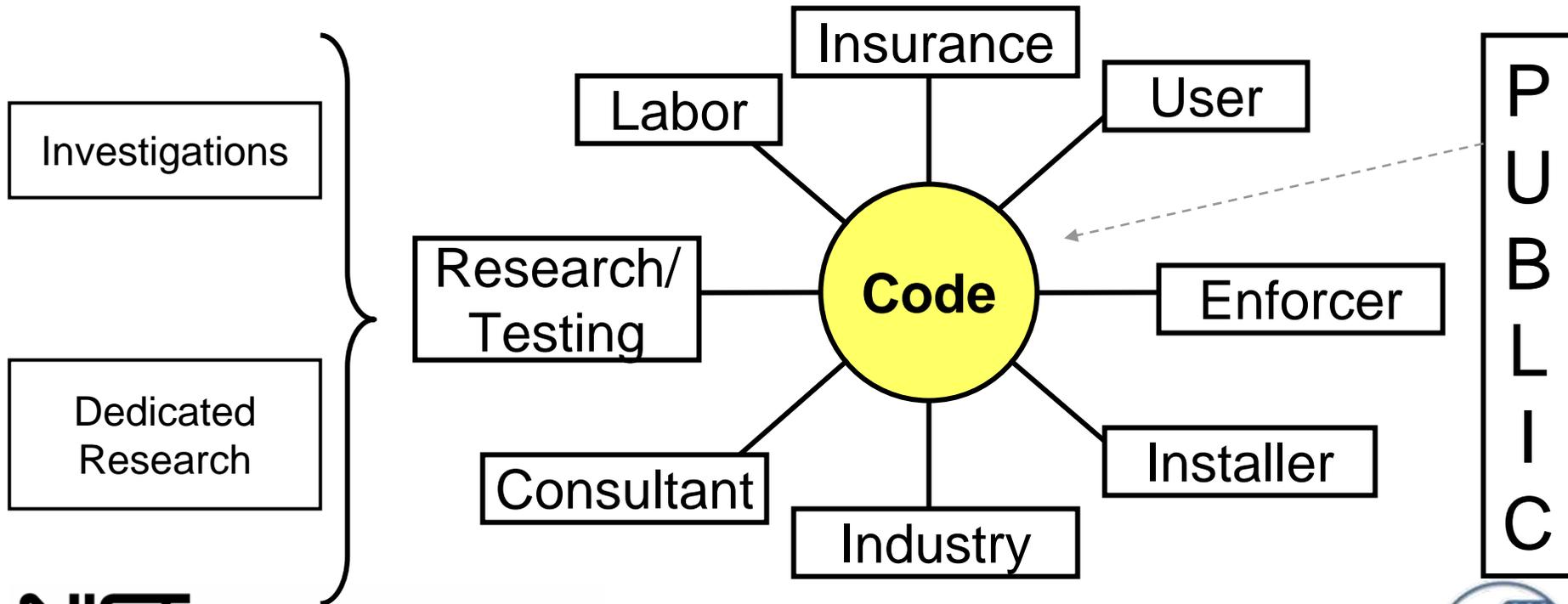
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Codes and Standards

“Laws are like sausages. It's better not to see them being made.”

Otto von Bismarck



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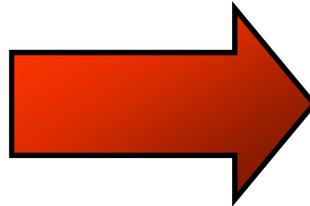
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