



**INTERNATIONAL
CODE COUNCIL®**

People Helping People Build a Safer World™

International Fire Code

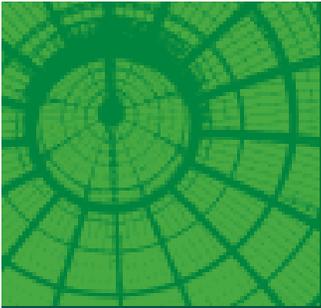
NFPA – 1

NFPA – 101

What's the Difference?

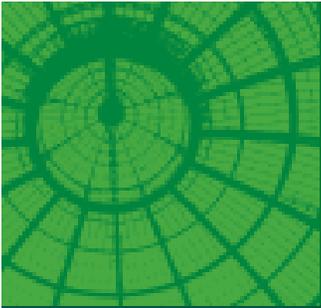
Jim Tidwell

International Code Council



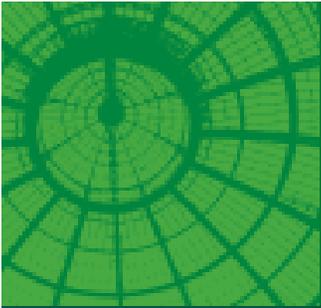
Risk Based Decisions

- Protection Scheme Based Upon Risks:
 - Number of People
 - Condition of People
 - Contents of Building
 - Activities being conducted in Building



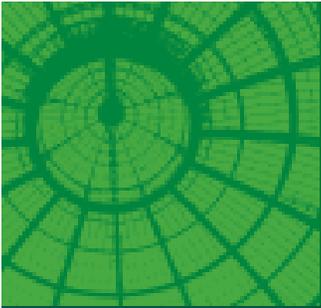
What's the Difference?

- Are there similarities in the codes?
- Are there differences between the codes?
- What is important.....



Scope

- Similar in both Fire Codes
- Address the hazards of fires and other emergencies
- Provide adequate and efficient egress in new construction and throughout life of building
- Firefighter safety
- Storage and use of hazardous materials

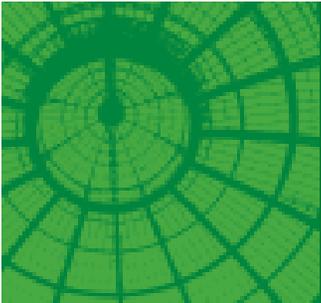


Scope

- NFPA 101: What it isn't:

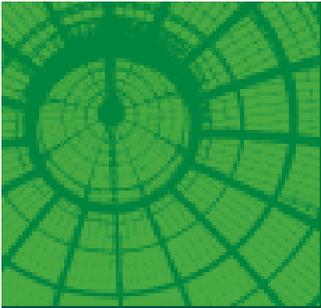
1.1.6 Areas Not Addressed. The *Code* does not address the following:

- (1) General fire prevention or building construction features that are normally a function of fire prevention codes and building codes
- (2) Prevention of injury incurred by an individual due to that individual's failure to use reasonable care
- (3) Preservation of property from loss by fire



Intent - IFC

- 101.3. The purpose of this code is to establish the minimum requirements consistent with nationally recognized good practice for providing a reasonable level of life safety and property protection from the hazards of fire, explosion or dangerous conditions in new and existing buildings, structures and premises and to provide safety to fire fighters and emergency responders during emergency operations.



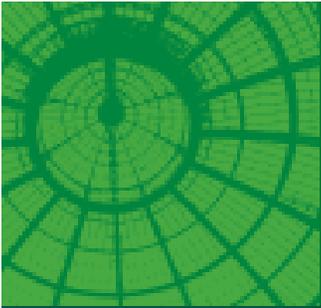
Purpose – NFPA 1

- 1.2. The purpose of this code is to prescribe minimum requirements necessary to establish a reasonable level of fire and life safety and property protection from the hazards created by fire, explosion, and dangerous conditions.



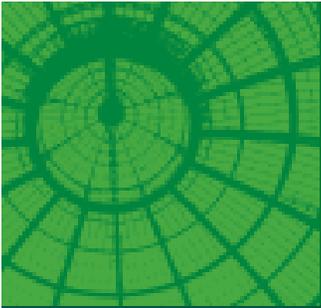
Purpose: NFPA 101

- **1.2* Purpose.** The purpose of this *Code* is to provide minimum requirements, with due regard to function, for the design, operation, and maintenance of buildings and structures for safety to life from fire. Its provisions will also aid life safety in similar emergencies.



Similarities of the Codes

- Water Supply
 - Both codes require water supply for fire fighting
 - Both codes provide guidelines for determining fire flow based on construction type
 - Both codes have requirements or references for hydrant spacing, etc.



Similarities of the Codes

- The IFC and the NFPA-1 have similar requirements for:
 - Emergency Plans
 - Fire Department Access
 - Open Fires
 - Shaftway Markings
 - Outside Storage
 - Etc. Etc. Etc.



What about the differences?

- The IBC references the IFC 122 times
- The NFPA 101 references NFPA 5000
- The NFPA 1 references NFPA 5000
- NFPA 1: “Where a building code has been adopted, all new construction shall comply with this *Code* and with the building code. ”
- The IBC references the IMC for smoke dampers, etc.
- The NFPA 101 references other NFPA standards for similar (but different) criteria for smoke dampers, etc.

Occupancy Classifications

Use	IBC/IFC	NFPA 1
Restaurant	A-2	Assembly
Church	A-3	Assembly
Theater	A-1	Assembly
Educational	E Educational rooms not at place of worship	Educational Only if used >4 hrs/day, or >12 hrs/week
Auto repair garage	S-1	Major Repair Garage Minor Repair Garage

Occupancy Classifications

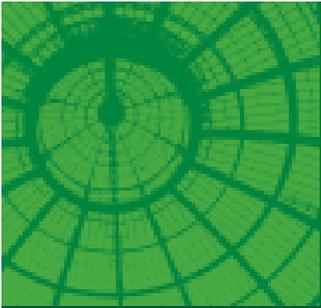
Use	IBC/IFC	NFPA 1
Day Care	E Day Care I-4 (if <2½ yrs old)	Day Care (4 or more)
Day Care Home	R-3 (≤5)	Day Care Home (≤12)
Adult Day Care	R-3 (≤5) I-4 Day Care (>5 and need assistance) A-3 (>5, but no assistance)	Day Care (4 or more)

Occupancy Classifications

Use	IBC/IFC	NFPA 1
Mercantile	M	Class A mercantile, Class B mercantile, Class C mercantile
Industrial	F-1 (moderate hazard) F-2 (low hazard)	Industrial
Detention	I-3 (>5)	Detention and Correctional (1 or more)
Board and Care	R-4 (6 to 16) I-1 (>16)	Residential Board and Care (>4)

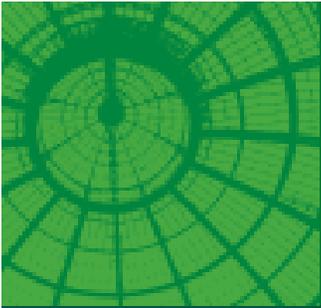
Occupancy Classifications

Use	IBC/IFC	NFPA 1
Lodging House or Dormitory	R-1 (transient stay) R-2 (non-transient)	Lodging House (≤ 16) Dormitory (> 16)
Hotel/Motel	R-1 (transient stay)	Lodging House (≤ 16) Hotel (> 16)
Out-patient facility	B (1 or more)	Ambulatory Health Care (≥ 4)
Storage facility	S-1 (moderate hazard) S-2 (low hazard)	Storage Mini-storage



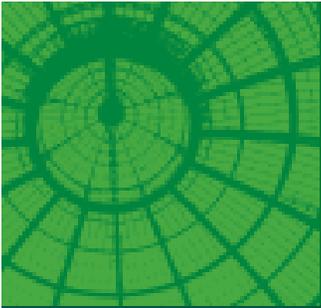
Definitions

Defined Term	IBC/IFC	NFPA 1
Corrosive	Only affects living tissue	Affects any material
Container	Vessel up to 60 gal	Vessel up to 119 gal



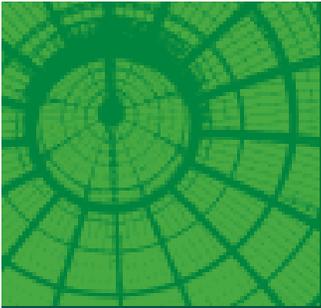
Correlation with Standards

- Each Code references many standards
- Code requirements takes precedence over the standard requirements
- IFC references and provides amendments to the standards
 - NFPA 32 – IFC adds sprinklers in dry cleaning
 - NFPA 13R – IFC adds sprinklers on balconies
 - NFPA 58 – IFC prohibits LPG on rooftop
 - UL 793 – IFC adds smoke/heat vent manual operation



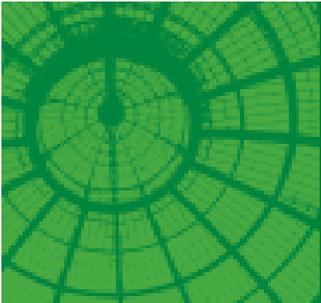
Fire Codes and New Construction

- Fire Codes contain a number of requirements for new construction, including:
 - Fire Alarm Requirements
 - Special Requirements for High Piled Stock (IFC)
 - Sprinkler Requirements (included in IBC, reprinted in IFC, extracted from NFPA 101 into 1)
 - Access provisions



Compatibility

- All International Codes are developed and maintained to be compatible and free of conflict
- All NFPA standards are developed and maintained to be compatible and free of conflict
- The degree of success is good for both organizations
- Neither is intended to necessarily be compatible with other regulations

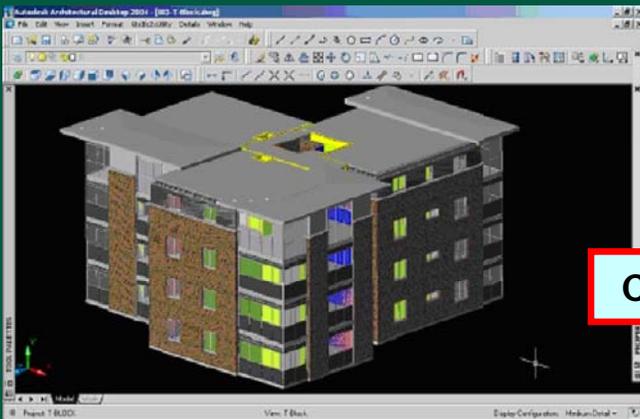


Support Infrastructure

- Certification
- Training
- SMARTcodes
- Plan Review
- Interpretations
- International Evaluation Services
- International Accreditation Services
- Support Products

Automated Code Checking SMARTcodes

Building Information Model



Report

Active Regulations Document



Check Model against Regulations

Building Model (exported from CAD)

Regulations (computer interpretable regulations)

Relationships

Entities

Choices

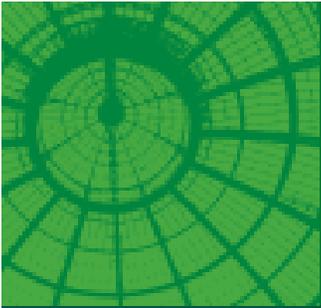
Metrics

*In which wall is the door?
What is the adjacent space?*

*'Things' in a building
e.g. Walls, Doors,
Windows, Spaces,
Ducts, Cables*

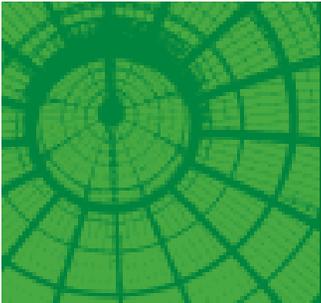
Regulations that apply

Pass/fail criteria?



Code Interpretations

- Consultation available over the phone
- Informal interpretations
- Formal interpretations



Questions???

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aka *iccsafe.org*