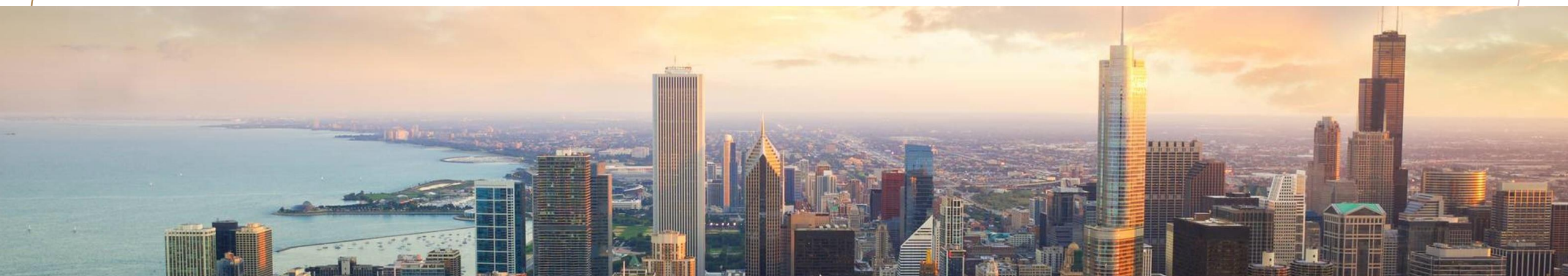
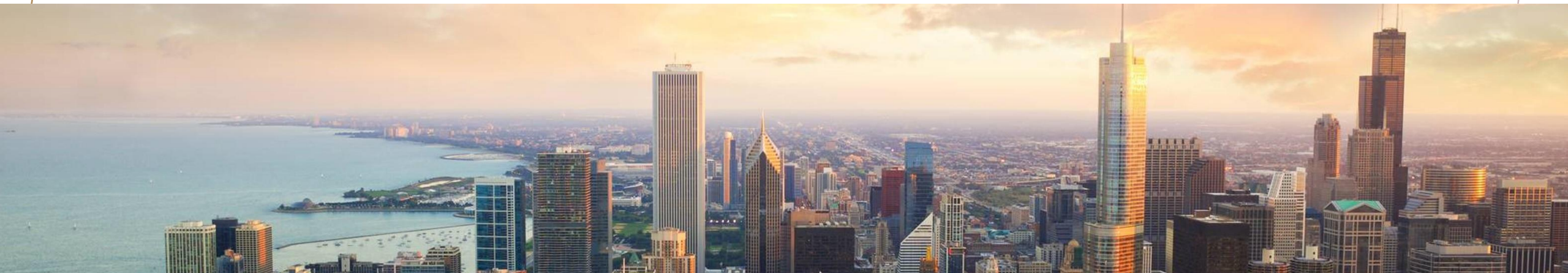


MNBC 2025
FOR
EARTHQUAKE RESISTANT BUILDINGS
(29TH JULY 2025)



ငလျင်ဒဏ်ခံ အဆောက်အဦများ တည်ဆောက်ဖို့
MNBC 2025 ကို ဘယ်လိုသုံးကြမလဲ

(၂၀၂၅ ခုနှစ် ဇူလိုင်လ ၂၉ ရက်)



EARTHQUAKE

Magnitude

Intensity

IMPACT

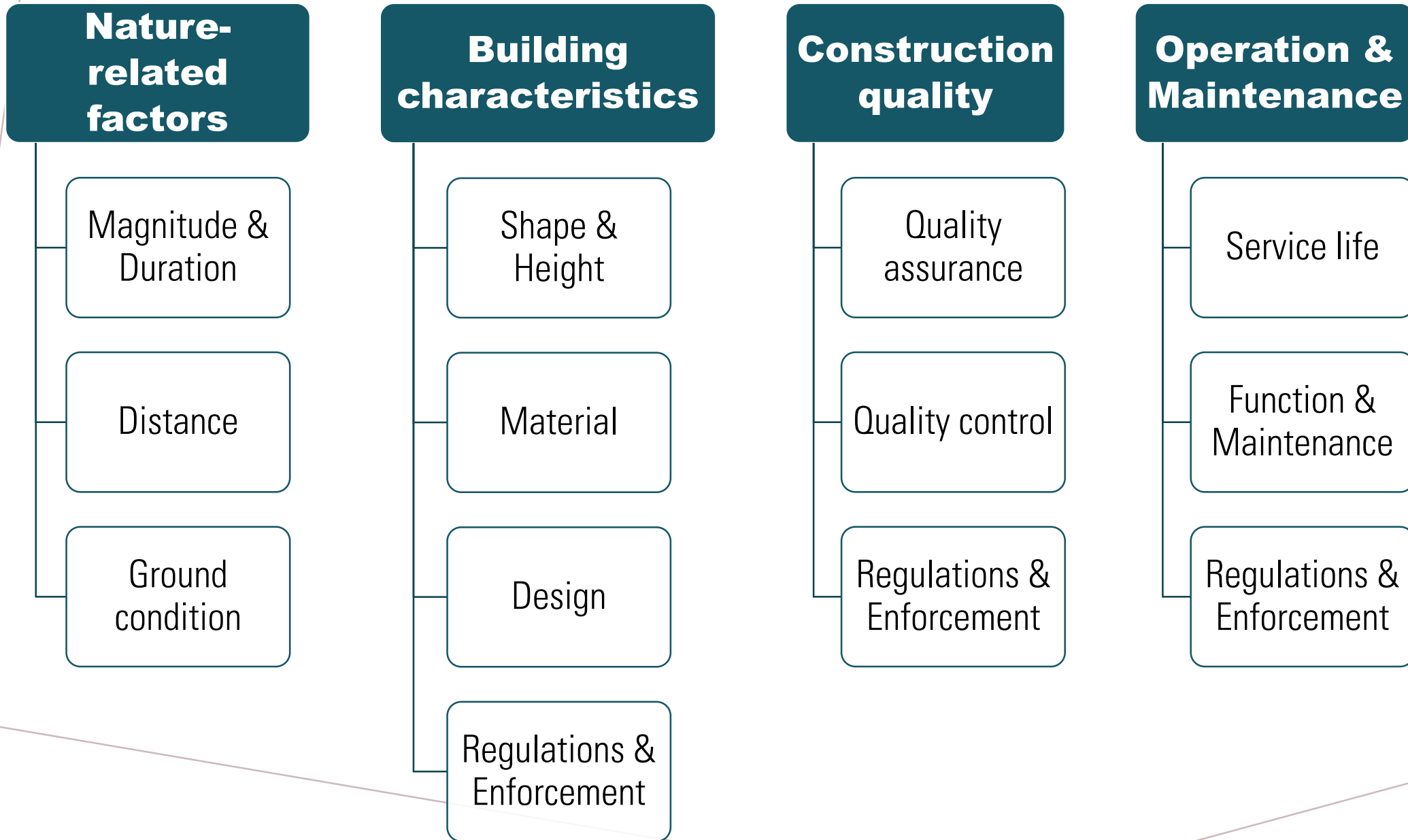
Mitigation for better RESILIENCE

Awareness

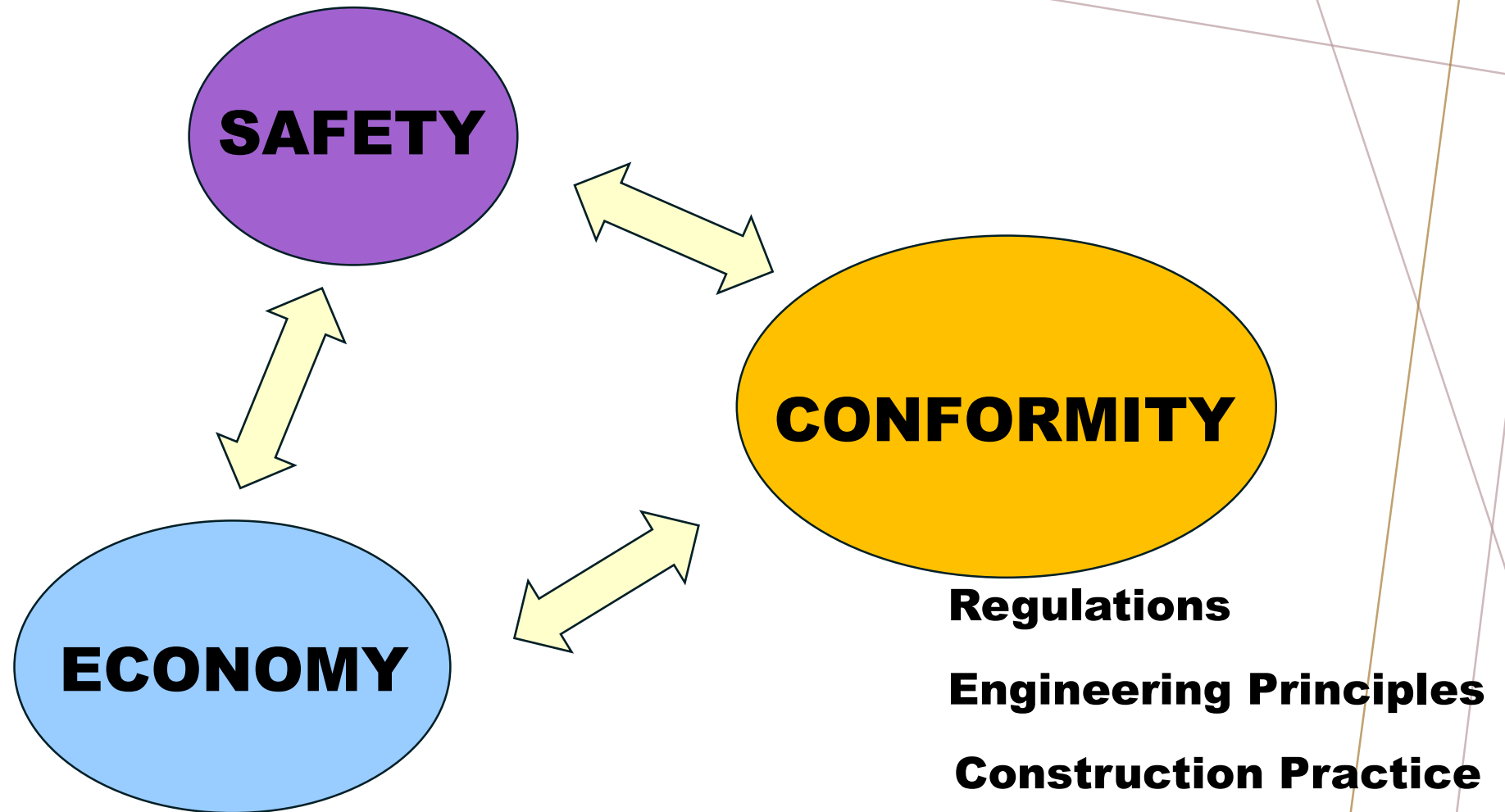
**Regulation
&
Enforcement**

**Capacity
Building**

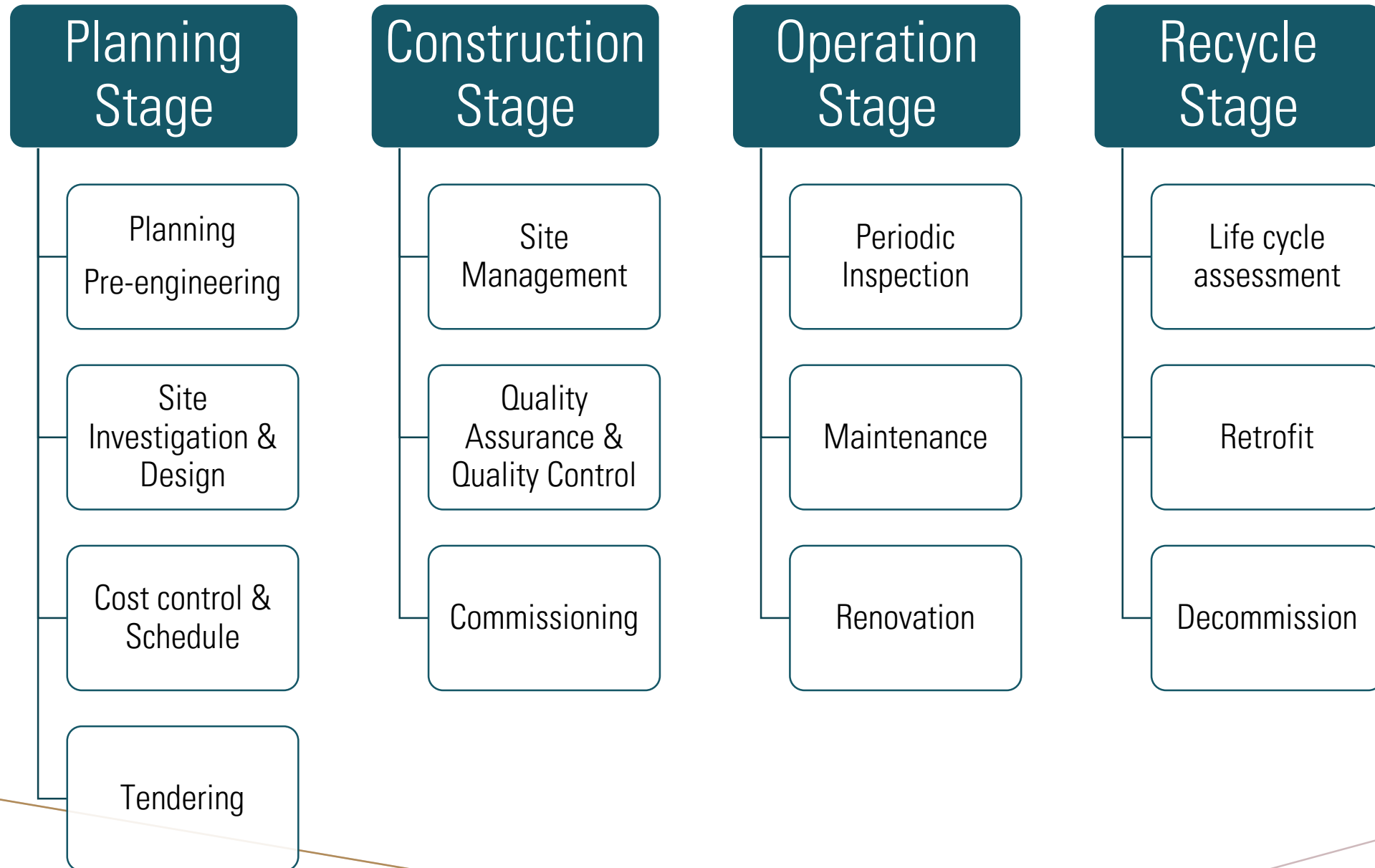
INFLUENCING FACTORS ON INTENSITY & IMPACT



FUNDAMENTAL REQUIREMENTS



CONSTRUCTION PROJECTS



CONSTRUCTION PROJECT

Construction Type	Occupancy Category	Hazard level	Risk-based Objectives
Temporary	Type I Temporary	Frequent	Operational
New	Type II Low	Occasional	Immediate occupancy
Renovation	Type III High	Rare	Life safety
Retrofit	Type IV Essential	Very rare	Collapse prevention

SAFETY & ECONOMY

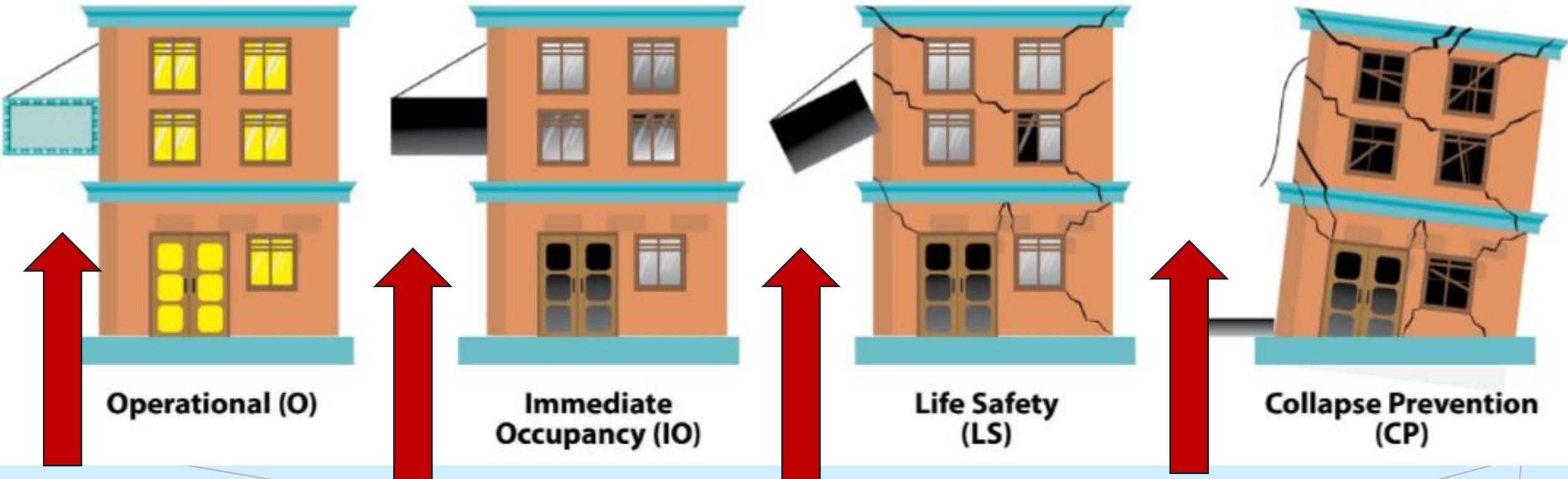
Both structural & nonstructural performances must be considered in building performance

1-A
S-1 & N-A

1-B
S-1 & N-B

3-C
S-3 & N-C

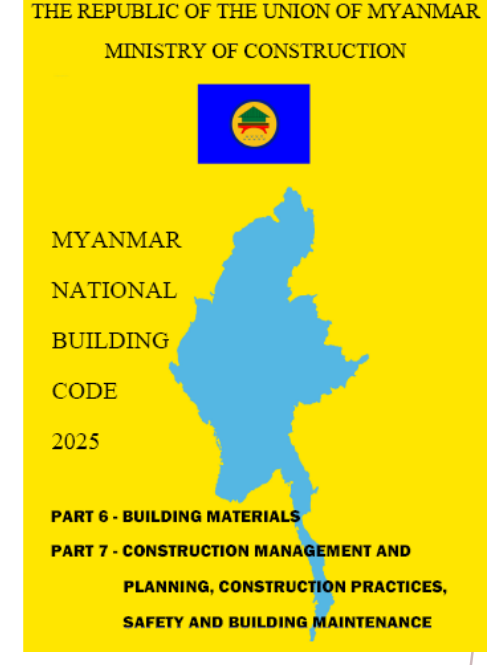
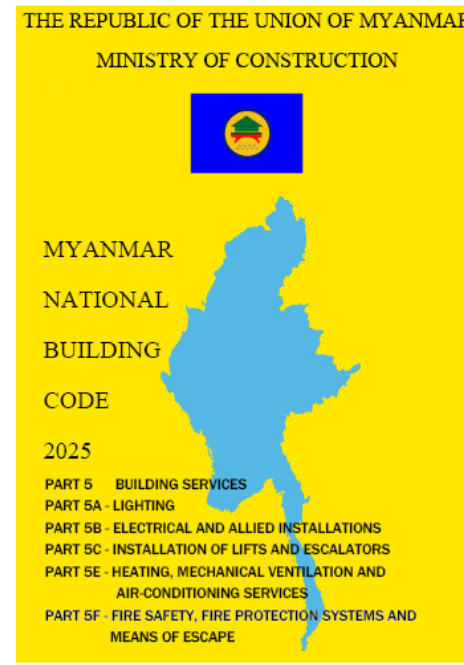
5-D
S-5 & N-D



TARGET BUILDING PERFORMANCE LEVELS

CONFORMITY

Regulations & Enforcement



MNBC 2025

CONFORMITY

Engineering Principles

Construction Practice

Awareness

Capacity Building

General Public

- **Public seminars**
- **Discussions**
- **Media outreach**
- **Publications**
- **Demonstrations**
- **Trainings**

Academic Competence

- **Certificates/Diplomas**
- **Bachelors**
- **Postgraduate Diplomas**
- **Master/Doctorate**

Professional Competence

- **Technical seminars**
- **Technical trainings**
- **Technical discussions**
- **Publications**
- **Professional Licensing**

ASCE STANDARD

ASCE/SEI

41-17

Seismic Evaluation and Retrofit of Existing Buildings

ASCE
AMERICAN SOCIETY OF CIVIL ENGINEERS



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ASCE 41-17

STRUCTURAL PERFORMANCE LEVELS & RANGES

LEVELS	Immediate Occupancy Structural Performance Level	S-1	Retains pre-earthquake strength & stiffness	Enhanced Safety Structural Performance Range	RANGES
	Damage Control Structural Performance Level	S-2	Halfway between S-1 & S-3		
	Life Safety Structural Performance Level	S-3	Retains a margin of safety against partial or total collapse		
	Limited Safety Structural Performance Level	S-4	Halfway between S-3 & S-5	Limited Safety Structural Performance Range	
	Collapse Prevention Structural Performance Level	S-5	Continues to support gravity loads but retains no margin against collapse		
	Structural Performance Not Considered	S-6			

NONSTRUCTURAL PERFORMANCE LEVELS

LEVELS

Operational
Nonstructural
Performance Level

N-A

- * Able to provide pre-earthquake functions
- * Achieve requirements of ASCE 7, Chapter 13 ($I_p = 1.5$)

Position Retention
Nonstructural
Performance Level

N-B

- * No immediate functions but secured in place
- * Building access & Life Safety Systems are operable
- * Achieve requirements of ASCE 7, Chapter 13

Life Safety
Nonstructural
Performance Level

N-C

- * Damaged but no life-safety threat by consequential damage
- * Achieve requirements of ASCE 7, Chapter 13

Hazards Reduced
Nonstructural
Performance Level

N-D

- * Potentially create falling hazards, but high-hazard nonstructural components identified in Chapter 13, Table 13-1 are secured to prevent falling into areas of public assembly

Nonstructural
Performance
Not Considered

N-E

TARGET BUILDING PERFORMANCE LEVELS

LEVELS

Operational
Building
Performance Level

1-A

- * Immediate Occupancy Structural Performance Level, S-1
- * Operational Nonstructural Performance Level, N-A

Immediate
Occupancy Building
Performance Level

1-B

- * Immediate Occupancy Structural Performance Level, S-1
- * Position Retention Nonstructural Performance Level, N-B

Life Safety Building
Performance Level

3-C

- * Life Safety Structural Performance Level, S-3
- * Life Safety Nonstructural Performance Level, N-C

Collapse
Prevention Building
Performance Level

5-D

- * Collapse Prevention Structural Performance Level, S-5
- * Hazards Reduced Nonstructural Performance Level, N-D



THANK YOU

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