Incentivizing Pre-Disaster Mitigation

Philip Schneider, AIA, MMC Director

Leanne Tobias, CFIRE Chair

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a council of the National Institute of Building Sciences

Council on Finance, Insurance and Real Estate
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Part 1 – Incentivization Overview

Philip Schneider, AIA

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What is Incentivization?

For achieving resilience:

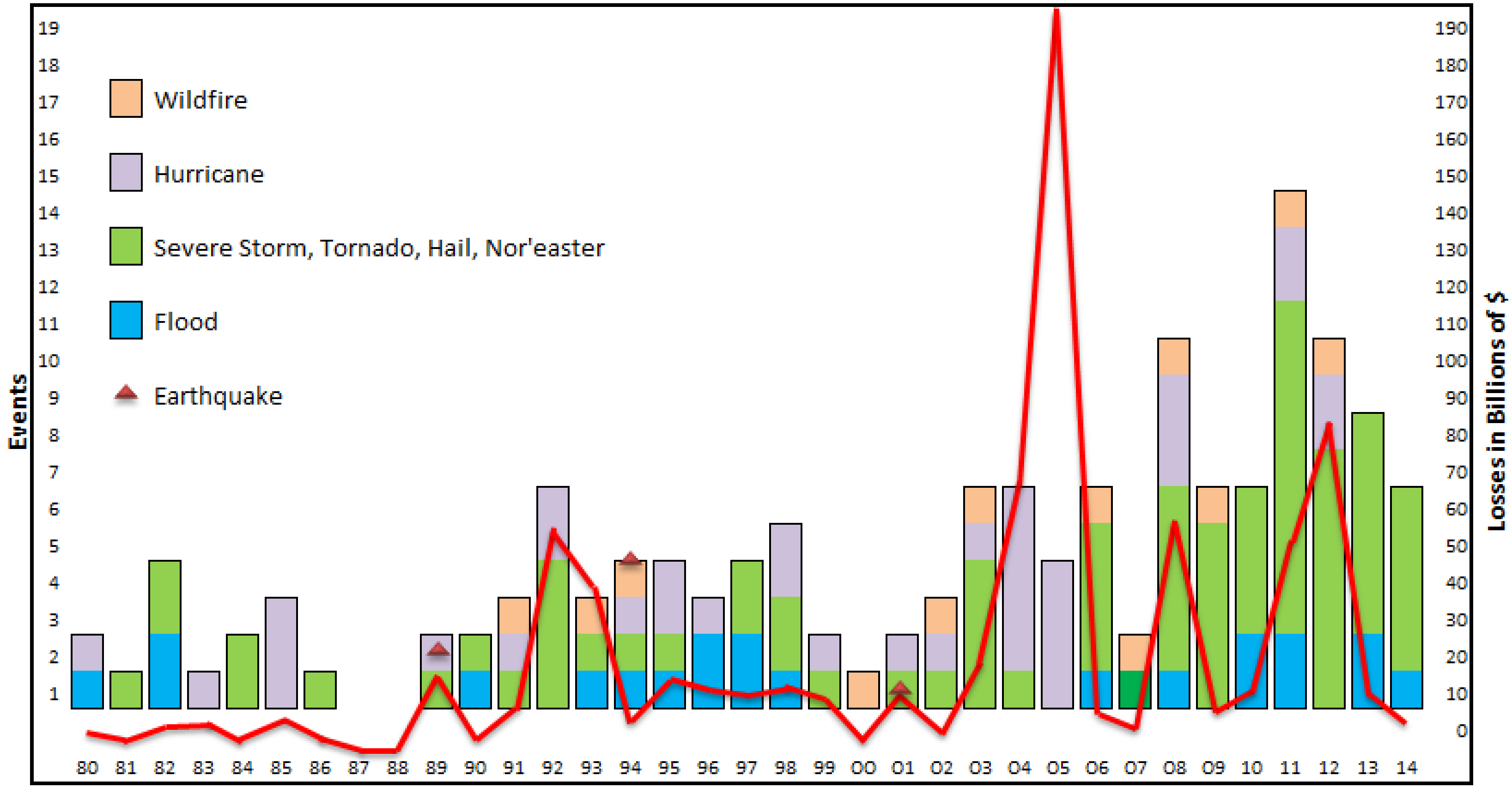
An integrated set of public, private and hybrid programs based on capturing opportunities available through mortgages and loans, insurance, finance, tax incentives and credits, grants, regulations and enhanced building codes and their application.

Why Incentivization?

Current methods for incentivizing investment in resilience strategies:

- Federal grant programs (with some support from private foundations).
- Insurance premium discounts for implementing measures to reduce vulnerability.
- Political will of communities.

The Result



Billion Dollar + Extreme Weather Events Increasing in Frequency and Losses from 1980-2014 (Earthquakes Losses Included)

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Stakeholders - Offerers

Entity, such as an insurance or mortgage company, that with a high degree of certainty offsets the offerer's potential liability if a resilience measure is undertaken, or reduces the uncertainty associated with the benefit of the resilience measure to the offerer.

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Stakeholders - Offerers

- *Insurance companies* - Premiums concomitant with insurable risk based on achieved resilience.
- *Banks and other lenders* - Support mortgage and business loans, and loan servicing.
- *Bond rating companies* - Assign ratings to appropriately reflect asset resiliency and the ability of bond issuers to support payment of interest following a disaster.

Stakeholders - Offerers

- *Investment companies* - Long term fiduciary duty to their members to safeguard capital and investments in companies, states and municipalities.
- *Private foundations* - Support focused mitigation efforts.
- *Communities*, as providers of incentives - Alleviate regional social and economic losses.
- *Federal and state agencies* - Stretch grant and emergency fund resources for mitigation before and after disasters.

Stakeholders - Decision Makers

A homeowner, business, utility or community, that undertakes the resilience measure that enhances the benefit to the decision maker, or else reduces the uncertainty associated with the benefit of the resilience measure.

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Stakeholders – Decision Makers

- *Home-owners* - Protect their families and their homes, as their most significant asset, and possessions.
- *Businesses and utilities* - Attenuate interruptions that cut into operating resources, profits, and the trust of their customers and of the public.
- *Communities*, as recipients of incentives - Maximize preparation for disasters, minimize disaster recovery, and preserve their economies.

Incentivization

Cost effective implementation of incentives-based resilience strategies requires input and action from the spectrum of stakeholder organizations (both offerers and decision-makers) that represent key intervention points and are positioned to either capture or provide value.

Incentivization - Approach

- Make resilience in the built environment part of each stakeholder's approach to asset management, and conducting business and community operations.
- Provide a level of confidence to stakeholders that implementing actions will justify participation in resilience programs, investments, underwriting, and loan and grant programs.

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Incentivization - Approach

- Incorporate expanded benefits and co-benefits of resilience:
  - Supporting emergency response.
  - Reducing negative supply-chain reactions.
  - Reducing uncertainty to promote economic growth and stability.
  - Enhancing a brand.
  - Protecting the most vulnerable elements of the population.
- Move beyond the current metrics and indices to create stakeholder tools and guidance to assist in using incentives to support resilience.

Incentivization Programs

- *Optimal Resilience Measures:* Those not currently required by law or custom.
- *Flexibility:* Tailor according to hazard, risk, locality, business size and the value of resilience strategies.
- *Coordination:* Individual strategies will not work - incentives and mandates should be an integrated set of solutions.
- *Facilitation:* Defined entry points and streamlined processes that can be easily understood and applied to ensure widespread usage and effectiveness.

Incentivization Tools

- *Valuations* - A recognized and standardized methodology of assessing the dollar value of loss reductions based on implementing resilience strategies for property assessments, insurance underwriting, loans, investments, and bond valuations.
- *Data* - Enhanced for identifying localities with the highest risk and where levels of building codes and incentives would be most effective.

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Incentivization - Tools

- *Software tools*, user-friendly and publicly-available, for property appraisers, underwriters, and financial institutions to readily assess and verify loss reductions to support valuations for losses avoided.
- *Flow of Information* essential to stakeholder offerers and decision-makers for implementation of mitigation strategies.

Enhanced Incentivization

- Combine private sector incentivizing for hazard resilience with incentivization for energy savings to enhance community security.
- Concomitant strategies:
  - Mortgage lenders can use both energy saving and potential loss reduction to add property value as a basis for upgrading their assessment of loan security or providing additional capital for a project.
  - The tax breaks that exist for installing energy saving techniques can be similarly used for mitigation to enhance a comprehensive approach to security.

Part 2 – Incentivization Strategies

Leanne Tobias

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Lending & Investment Standards (Residential, Commercial, Government)

Strategy: Document value-add of resiliency in loan and investment underwriting for commercial, government and residential properties. Use ratio and (for commercial and government projects) discounted cash flow (DCF) analysis.

- **Added resilience increases real estate values by improving cash flows.**
  - Increases revenues (reduces potential business interruption.)
  - Reduces expenses (maintenance, energy costs, insurance premium expense.)
  - Reduces capital replacement expenditures over time.
  - Reduces investment risk and discount rates.
  - All other factors being equal, increases cash flows (commercial and government buildings) and sales prices (commercial and residential properties).

Hypothetical ratio analysis

<u>Loan to value ratio (LVR)</u>

Example: 75% loan to value ratio required by lender or bondholders

No resilience: Project valued at $100 million / Residential: $100,000

Loan amount at 75% LVR = $75 million / Residential= $75,000

Resilience: Project value increases 10% = $110 million / Residential: $110,000

Loan amount at 75% LVR= $82.5 million / Residential: $82,500

Borrower benefits; can get more debt financing

OR

Loan remains at $75 million / Residential: $75,000 = 68.2% LVR (permanent lender has more security)

<u>Debt coverage ratio (DCR) (commercial and government projects only)</u>

Example: 1.25x debt coverage ratio required by lender or bondholders.

Annual loan payment = $1 million

No resilience: Project cash flow is $1.25 million. DCR= 1.25x

Resilience: increases cash flow by 10% = $1.375 million DCR=1.375x (better permanent lender security)

OR

DCR= 1.25x = $1.1 million loan payment (borrower benefits; can get more debt financing)

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Lending and Investment Standards: Who Benefits?

Who benefits?

- **Building owners** (higher cash flows or buyer demand, higher building value = additional debt financing; higher sale price)
- **Permanent lenders** (financial institution; bond holders) = better security at a given level of debt

Requirements

-**Actionable resiliency standard/s.** (LEED for resiliency.)

-**Industry/consumer education.** (Banking/finance; commercial real estate; banking; public finance; homeowners.)

-**Valuation methodologies to measure impact of resiliency.**

A)Commercial & residential buildings: appraisal standards.

(Appraisal Foundation, Appraisal Institute, RICS, Appraisal Subcommittee of FFIEC)

B)Government Projects: Buy in from the bond rating agencies (Moody's, Standard & Poor's, Fitch)

Insurance Industry Incentives (Residential, Commercial & Government Buildings)

- **Commercial/government prototype:**

A)Green building insurance since 2006 (Fireman's Fund). Insures rebuilding to LEED or other green standard with premium discount. Now offered by most major carriers.

- **Residential prototypes:**

A)Legislatively required insurance discounts for retrofitted homes

FL: Wind storm resistance (up to 42% discount)

CA: 5% discount for EQ retrofits

B)Discounts for resilience certified homes: Fortified Standard (AL, MS, NC, SC)

C)Carrier based program: State Farm: premium discount for hail resistant roofing (27 states)

Strategy: expand and mainstream use of insurance incentives (discounts, credits) for residential (property insurance) and commercial buildings (property and business interruption insurance).

Requires:

-Actionable resiliency standard/s.

-Education programs for insurers, insurance regulators, owners of homes, commercial property and government facilities.

-Buy-in from insurance community and property owners.

Fireman's Fund® Insurance Company

FM Global®

CHUBB

ZURICH

FORTIFIED HOME

MARSH

Lexington INSURANCE Member of AIG

Liberty Mutual. INSURANCE

NAIC National Association of Insurance Commissioners

TRAVELERS

insured.

RAA REINSURANCE ASSOCIATION OF AMERICA

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Fannie Mae/ Freddie Mac Incentives (Residential)

- **Prototype, Single-Family**: Fannie Mae Home Style Renovation Loan (HSR); Freddie Mac Renovation Mortgage
- **Prototype, Multi-Family**: Fannie Mae 10 basis point reduction on interest rates for green-certified projects.
- **Strategy:**

(1)Explicitly incorporate resiliency strategies in Fannie Mae and Freddie Mac renovation loan programs.

(2)Extend Fannie Mae multi-family interest rate reductions to projects meeting resiliency strategies.

- **Requires:**

Actionable resiliency standard/s for single-family and multi-family housing.

Resiliency education and buy-in from Fannie Mae, Freddie Mac, participating lenders, multi-family property owners and homeowners.

FannieMae®

Freddie Mac

PACE: Property Assessed Clean Energy (Residential & Small Commercial Buildings)

- **Prototype: voluntary state/local programs for energy-efficient/green retrofits of residential and commercial property.**
- Authorized in 31 states and the District of Columbia
- Add retrofit loan costs to property tax bill and repay loans through tax collection process. Default on retrofit loan creates superior tax lien (first in collection priority). Improves lender security.
- Loans supplied by government entity or participating lender.
- Requires state enabling legislation and creation of state or local program.
- **Strategy: Resiliency based PACE programs** (consider extending current PACE initiatives to include additional resiliency strategies)
- **Requires:**

-Actionable resilience standards for commercial and residential buildings.

-Education of state and local officials and private lenders

- Amendment or passage of state enabling legislation and expansion or creation of local programs and financing partnerships.

PROPERTY ASSESSED CLEAN ENERGY

PACENow Financing Energy Efficiency

PACE

Contractor Based Financing (Residential & Smaller Commercial Buildings)

- "Master" contractor or finance company develops retrofit financing program that is executed through partner subcontractors.
- **Prototype: Residential home improvement market**

--Financing company partners with contractor to offer financing through unsecured loans (widespread)

- **Prototype: small commercial energy retrofit market**

--Joule Assets ($270 million program for smaller commercial retrofits; $90 million initial deployment)

- **Requires:**

-Actionable resiliency standards (residential and small commercial)

-Education and buy-in from contractors, master contractors and financing companies.

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Small Business Administration (SBA) Programs (Small Commercial Buildings)

- **SBA loan guarantee programs** for commercial real estate: $300 billion through Q4 2013
- Major SBA loan guarantees for real estate:

-7(a): ~$20 billion/year. Working capital loans to small businesses. Can be used for building construction and retrofit.

-CDC/504: ~$4 billion/year. Fixed asset loans for land, buildings, equipment, including construction and retrofit. Implemented through CDCs (community development corporations).

- **Strategy: Expand SBA loan guarantee programs to incorporate resiliency retrofits.**
- **Requires:**

-Actionable resiliency standards for small commercial buildings.

-Buy in from SBA, SBA lenders and small business owners.

-Desirable: Upward adjustment of SBA loan guarantee authority by Congress. (Small Business and Appropriations Committees.)

-Note: NIBS has also recommended that these programs incorporate energy retrofit lending in a January 2015 report:

https://www.nibs.org/news/209198/Small-Commercial-Buildings-Offer-Huge-Energy-Efficiency-Retrofit-Opportunities.htm

U.S. Small Business Administration
SBA
Your Small Business Resource

Corporate Bond Ratings
(Large Businesses/Commercial Facilities)

- **Higher corporate bond ratings for corporations that use resiliency strategies for leased and owned property.**
- Applies largely to companies whose facilities are concentrated in a high risk geographic area or region.
- **Requires**:

-Actionable resiliency standard/s for commercial real estate.

-Resiliency implementation by corporations.

-Use of resiliency information by corporate bond rating agencies.

Resilience-Based REITs (Large Commercial Buildings)

- REITs (real estate investment trusts): publicly-traded real estate funds with $1.8 trillion in assets– principally commercial real estate– under management.
- REITs: leaders in energy efficiency to reduce ongoing operating expenses, improve rental performance and earn higher returns.
- The mainstreaming of resilience strategies for commercial properties would allow REITs to improve cash flows and yields by increasing revenues (higher tenant demand) and reducing expenses (maintenance, capital replacement, insurance).
- **Strategy:** encourage REIT investment in resiliency.
- **Requires:**

  -Actionable resiliency standard/s for commercial buildings.

  -Demonstrated case studies showing that resiliency improves operating performance.

  -Education of REIT sponsors.
- Strategy can also be used by private equity real estate funds.

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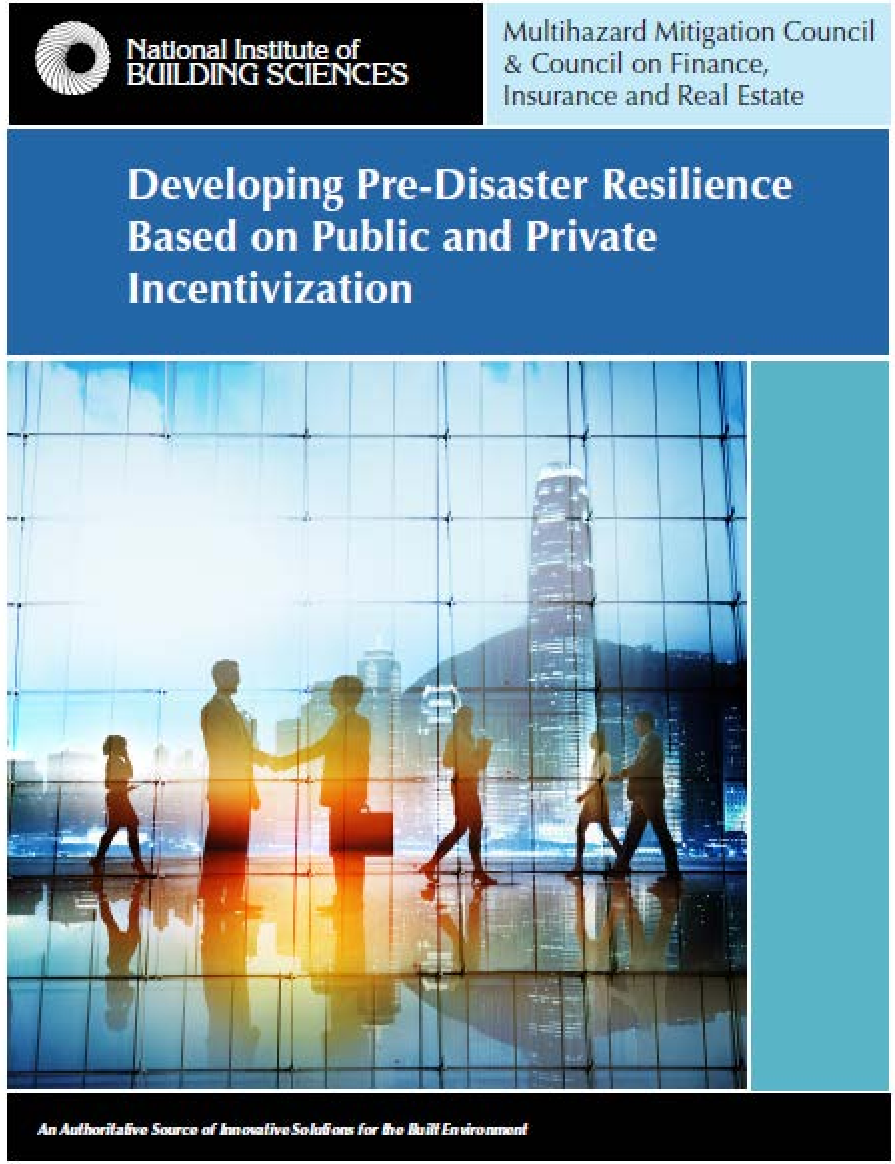
Incentivization Strategy Requirements

- **Actionable resiliency standards** for residential and commercial properties across the U.S. (Expand Fortified standard?)
- **Valuation and underwriting standards** for resiliency
- **Differentiation by real estate sector**
  - Residential
  - Small commercial buildings
  - Large/investment grade commercial
  - Government facilities
- **Industry and consumer education and buy in**
  - Early adaptors: example projects
  - Mainstreaming follows
- **Desirable: Adoption of resiliency standards in building codes**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Developing Pre-Disaster Resilience Based on Public and Private Incentivization

An Authoritative Source of Innovative Solutions for the Built Environment

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Incentivization Conference

- The National Institute of Building Sciences Annual Conference and Expo “Building Innovation 2016” - January 11-15, 2016 in Washington, DC
- TRACK TWO: Preparation & Performance – *Realizing Resilience through Incentives* - two day event
- Facility Performance and Sustainability Symposium - *Realizing Resilience: Incentives for Owners and Operators* on January 13
- Security & Disaster Preparedness Symposium – *Realizing Resilience: Incentives for Local Leaders and Lifelines* on January 14.

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Contact Information

Neil C. Blais
Chair, Multihazard Mitigation Council
nblais@blaisassoc.com
(469) 579-5905

Leanne Tobias
Chair, Council for Finance, Insurance and Real Estate
leanne.tobias@malachitellc.com
(202) 355-5270

Philip Schneider
Director, Multihazard Mitigation Council
pschneider@nibs.org
(202) 289-7800

Ryan Colker
Director, Council for Finance, Insurance and Real Estate
rcolker@nibs.org
(202) 289-7800

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Questions?

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