National Institute of BUILDING SCIENCES™

Webinar: Resilience Incentivization Roadmap 2.0

October 18, 2023 | Session Overview

Panel

Dr. Keith Porter, Chief Engineer, Institute for Catastrophic Loss Reduction

Sean Kevelighan, President & CEO, Insurance Information Institute

Jeff Dunsavage, Senior Research Analyst, Insurance Information Institute

Dr. Sean Becketti, Principal, Elliott Bay Analytics

Dr. Jiqiu (JQ) Yuan, Vice President, Engineering, National Institute of Building Sciences

Moderator

Mira Papinova, Project Manager, National Institute of Building Sciences

Resilience Incentivization Roadmap 2.0 Overview

The NIBS Multi-Hazard Mitigation Council's Committee on Finance, Insurance, and Real Estate (CFIRE) published A Roadmap to Resilience Incentivization in 2020, calling for public and private incentives that allow owners of buildings and other infrastructure to facilitate the upgrade of existing infrastructure and better design of new infrastructure.

The goal: To have stronger and safer buildings and resilient communities by catalyzing collaboration across the building science, finance, insurance, and real estate industries and increase mitigation investment and develop coordinated resilience guidelines and tools for community implementation.

NIBS and Fannie Mae unveiled the Resilience Incentivization Roadmap 2.0 in September during NIBS' annual meeting, Building Innovation 2023. The new roadmap is a continuation of the 2020 study.

The project team worked with experts from building science, lending, insurance, developer, owner, real estate, appraiser, and public assistance to understand (1) the actors, who can promote, participate in, or resist incentivization, and what drives their decisions, and (2) how to carve the economy at the joints (Example: How to group stakeholders so each incentive template best serves a large class). The study mainly focuses on residential buildings subject to flood and leaves language and procedures flexible to deal with other perils, occupancies, and locales.

On October 18, 2023, the National Institute of Building Sciences hosted a webinar to discuss the Resilience Incentivization Roadmap 2.0.

The panel included Dr. Keith Porter, Chief Engineer, Institute for Catastrophic Loss Reduction; Sean Kevelighan,

President & CEO, Insurance Information Institute; Jeff Dunsavage, Senior Research Analyst, Insurance Information Institute; Dr. Sean Becketti, Principal, Elliott Bay Analytics; and Dr. Jiqiu (JQ) Yuan, Vice President, Engineering, National Institute of Building Sciences. Mira Papinova, Project Manager with the National Institute of Building Sciences, served as moderator.

Closing the Resilience Investment Gap

Natural hazards are growing in severity and getting more expensive. To date, disasters annually cost the nation an average of $120 billion. The cost doubles every 12 years, growing 10 times faster than the population.

According to Dr. Keith Porter, Chief Engineer with the Institute for Catastrophic Loss Reduction, this essentially is like wiping out four weeks of construction value each year.

“That four weeks will get longer and longer,” Porter said. “It is unsustainable.”

Porter said the mission of the Resilience Incentivization Roadmap 2.0 is to “help close the resilience investment gap partly by leveraging private investment funds.”

He then pointed to several key finds in the Resilience Incentivization Roadmap 2.0:

- Mitigation saves, but it does so unequally, often with the owner or developer bearing the cost while others enjoy the benefits.
- Co-beneficiaries rarely collaborate to help pay for resilience, so they lose the opportunity to share billions of dollars of potential savings and increased market value.
- Public-private coordination is essential for society to realize most of the benefits that better buildings could deliver.

Site reference:

- Report: Resilience Incentivization Roadmap 2.0

Externalities Contribute to Underinvestment in Resilience

The problem is that several factors contribute to underinvestment in resilience.

Homeowners or developers typically bear the cost of resilience investments, but others share in the benefits.

The Resilience Incentivization Roadmap 2.0 focuses on the example of flood risk, but lessons learned can be applied to any natural disaster risk.

Dr. Sean Becketti, Principal with Elliott Bay Analytics, said the goal of the study was to come up with win-win incentives that co-beneficiaries can offer homeowners and developers to increase resilience investment. Potential co-beneficiaries could include insurers, lenders, securitizers, real estate investors, real estate agents, communities, and government.

“We wanted to make sure these just weren’t giveaways or tax incentives,” Becketti said. “That was the goal.”

The project team learned many lessons, including challenges for homeowners.

Among them: Modest financial incentives from multiple co-beneficiaries may not have the same impact as a single significant incentive. Additionally, homeowner uncertainty was huge – uncertainty about the actual risk of a flood, how long a homeowner may own their property, knowledge of appropriate resilience investment or information regarding best devices and materials, and whether they would work with competent installers. With this much uncertainty, homeowners tend to not take action.

On the developer side, many developers believe home buyers are unwilling to pay for above-code resilience investments.

Incentive Proposals: A Hybrid Approach

The project team came up with a hybrid approach to incentives.

The top three financial incentive proposals include:

- New construction. Communities with elevated flood risk negotiate a reduction in development impact fees in exchange for inclusion of resilience investments in new homes.
- Retrofitting. Government-sponsored enterprises (GSEs) purchase home equity loans that finance resilience investments.
- Overall. Government tax incentives for resilience investments.

Non-financial incentive proposals include stakeholders designing a certification program for flood resilience investments and public awareness programs to increase homeowner awareness of existing flood risk and reduce uncertainty about appropriate resilience investments.

Insurers Are Motivated

With the changing climate, catastrophes are changing and more than 90 percent still involve flooding, said Sean Kevelighan, President & CEO of the Insurance Information Institute.

From an insurance perspective, Kevelighan said homeowners don't understand that flood is not covered in a traditional homeowners' insurance policy.

"If the mortgage lender doesn't require flood insurance, the homeowner doesn't really think about it," he said.

Consumer and community education on flood risk and the role of mitigation in insurance pricing is key to driving flood insurance availability and affordability.

"Price of insurance is the effect, not the cause of risk," Kevelighan said. "Insurance pricing must reflect risk."

Along with the pricing of risk, we also need to consider affordability.

Existing models promoting flood resilience include the Federal Emergency Management Agency's Community Rating System and some local, nontraditional initiatives. One nontraditional program in New York City incorporates parametric insurance and supports resilience by quickly getting money into citizens' hands. Models focused on perils other than flood are Strengthen Alabama Homes, Louisiana Fortify Homes, and the California Earthquake Authority's Brace and Bolt program, all of which provide grants to assist property owners with resilience-related retrofits and offer insurance discounts that accurately reflect the resulting change in the property's risk profile.

Kevelighan said the templates and insurance tools exist. What's needed is consumer understanding of flood risk, programs that measurably reduce flood risk, and greater private insurer involvement in demonstration projects.

TurboGrants™: Moving the Needle

Dr. Jiqiu (JQ) Yuan, Vice President of Engineering with the National Institute of Building Sciences, covered the chapter breakdown of the Resilience Incentivization Roadmap 2.0. He focused on Chapter 8: Government, Public Assistance, and Policy.

The chief motivation for government to be involved includes the protection of citizens, response cost is lowered, stabilization of the economy and tax base, and the creation of jobs.

The mechanisms are plentiful with mitigation grants, tax incentives, and development impact fees.

But the process is not simple. Most cities and communities don't know where to begin to look for mitigation funds, the grants process is complicated, and under-resources communities are at a great disadvantage.

"We need to streamline this process," Yuan said.

NIBS is developing a platform called TurboGrants™ to simplify the process, allowing for grants matches through a simple search and technical assistance, if needed.

What's Next

Yuan said a logical next step would involve a pilot study, using a real-world example.

The Institute for Catastrophic Loss Reduction's Porter said a good candidate for this real-world example would

be a mid-sized community that already offers one kind of incentive or grants.

“The organization funding those grants could be the channel for additional incentives,” Porter said. “This would be a community who has a good relationship with one kind of incentive offerer, maybe a local insurer.”

Kevelighan, with the Insurance Information Institute, added: “When the community gets behind the program – this is where we’ve seen success.”

View the Resilience Incentivization Roadmap 2.0.