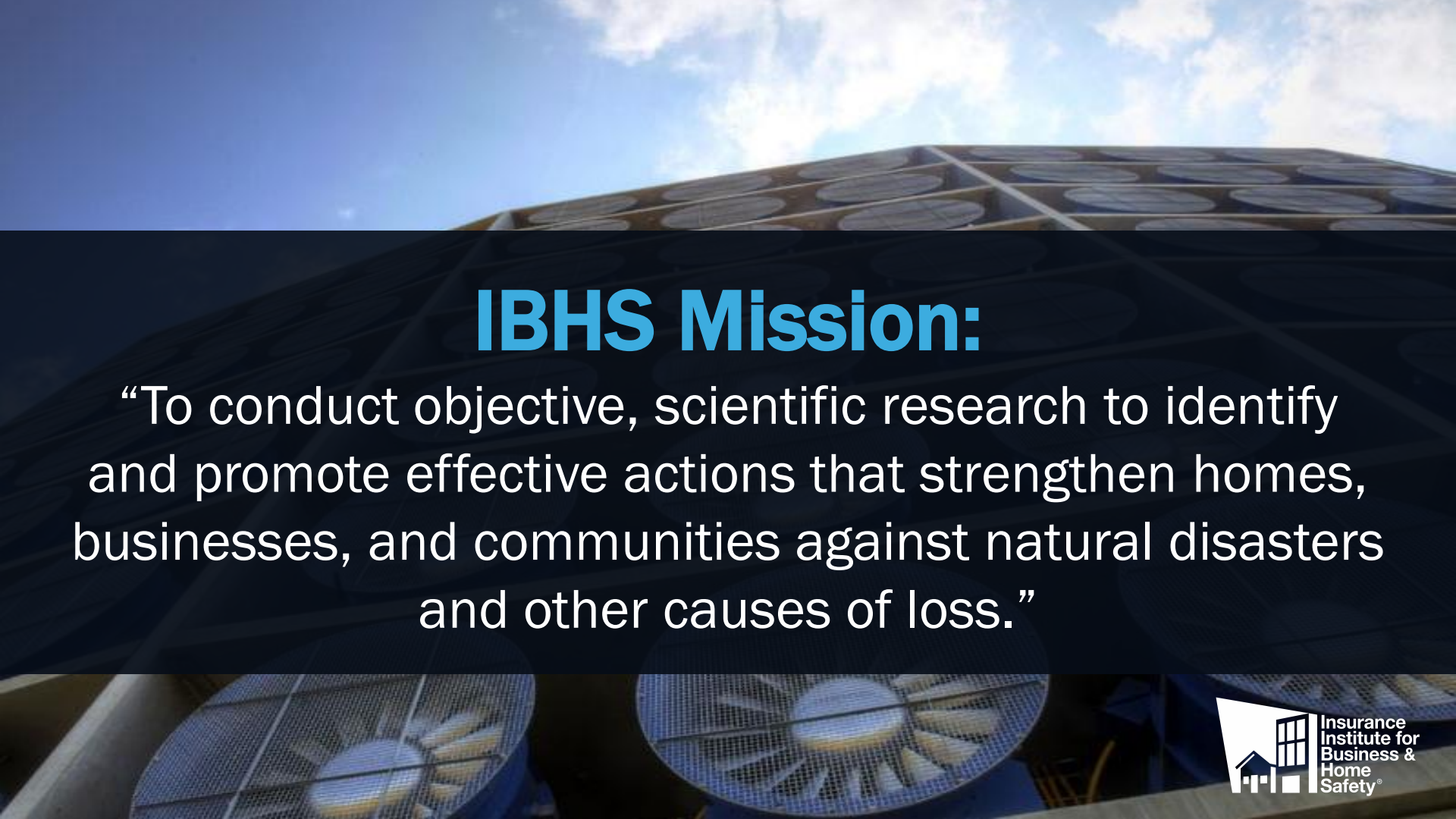
The Future of Property Insurance Risk: An IBHS Perspective

November 2015


© Insurance Institute for Business & Home Safety

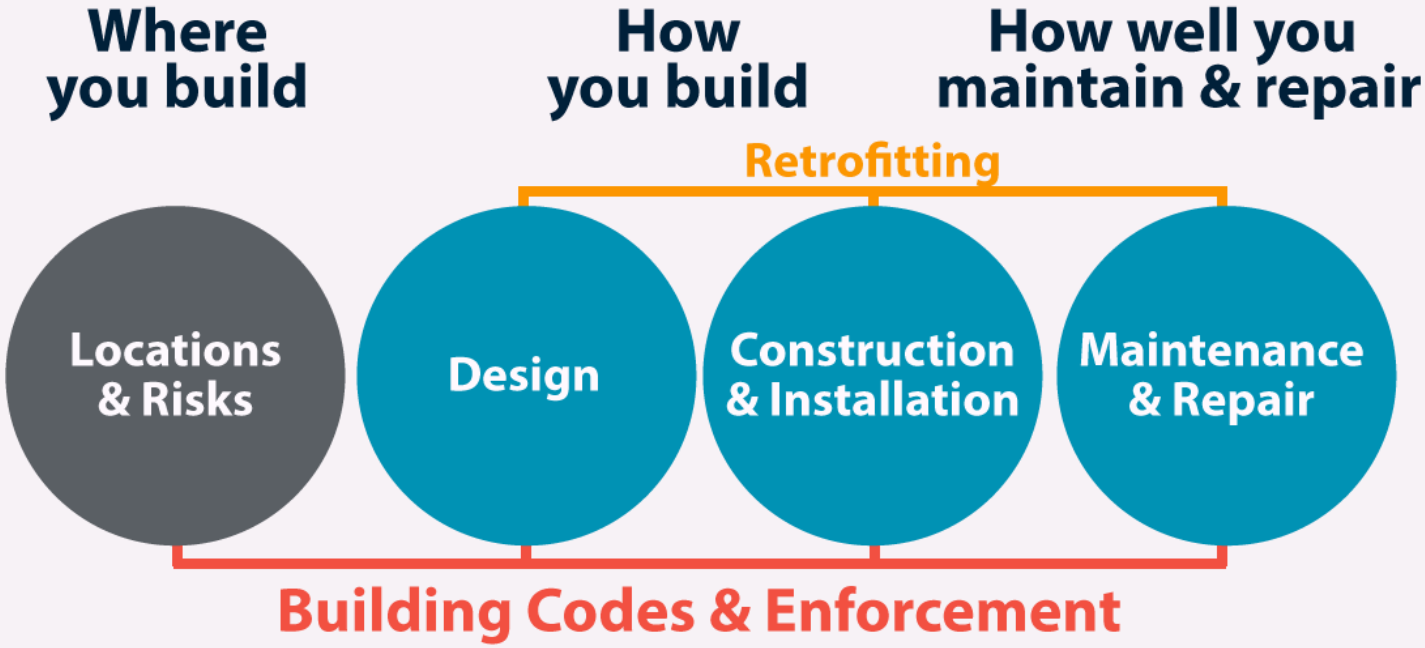


IBHS Mission:

"To conduct objective, scientific research to identify and promote effective actions that strengthen homes, businesses, and communities against natural disasters and other causes of loss."

Insurance Institute for Business & Home Safety®

Building Performance Chain



IBHS Covers it All.

Insurance Institute for Business & Home Safety®

What Does the Public Think About Property Risk?

- It won't happen to me. If it does, someone else will pay for it.
- I would rather invest in granite countertops than a strong roof.
- A 1/100 year event means nothing bad will happen for 99 more years.
- Insurance costs too much.

Insurance Institute for Business & Home Safety®

Factors Affecting Property Risk

- Population Effects
- Weather and Climate
- Design and Construction
- Maintenance
- Global and Political Issues

Insurance Institute for Business & Home Safety®

Population Effects

- Increasing population density and property values in coastal and wildfire zones.
- Mobile population causes unfamiliarity with new location's natural hazards.
- Aging population and financial challenges affect maintenance, vulnerability, evacuation.
- Government risk subsidies (insurance and post-disaster) also encourage building in risky areas.

Weather Trends

- Extreme precipitation: 9 of top 10 annual rain totals = since 1990; frequency/intensity of heavy rain expected to increase.
- No significant hurricane landfalls since 2005.
- Sea level rise contributes to stronger hurricane storm surge.
- Pervasive, long-term drought in West exacerbates wildfires.
- Environment supports more prevalent tornados and hail; impossible to separate weather changes from improved data reporting.

Insurance Institute for Business & Home Safety®

Climate

- Climate is changing – with uncertain, complex effect on hurricanes, convective storms, wildfire, winter weather.
- Short-term losses driven more by populations trends than climate.
- Long-term changes will not be known for many years.
- “No regrets” strategies focusing on adaptation are beneficial today and in the future.

Insurance Institute for Business & Home Safety®

Design and Construction (Urban)

- Impervious surfaces → more runoff/flooding following hurricanes or extreme precipitation.
- Urban heat islands create stress on human health and the power grid.
- Aging infrastructure and utilities contribute to losses and undermine disaster response and recovery.

Design and Construction (Structures)

- Aging residential and commercial buildings and components cause higher claim frequency/severity.
- Buildings exist in communities where the weakest link can cause wider damage.
- Retrofitting is complex concept that is harder to assess than new construction.

Design and Construction (“Green”)

- Sustainability has captured public attention; must be consistent with disaster resistance.
  - Wind and fire risk may increase from solar panels, green roofs, and certain insulation products—all must be installed in a hazard-appropriate way.
  - After 9/11, Lower Manhattan buildings designed to reduce environmental impacts did not respond well to the impacts of the environment (e.g., Hurricane Sandy).
- Push synergy through “Going Green and Building Strong” to promote overall resiliency .

Insurance Institute for Business & Home Safety®

Design and Construction (Tech)

- “Smart Homes” can identify and help prevent problems, but create new risks if they fail or are hacked.
- New building materials may be cheaper or better for some applications, but can pose risks.
- Panelized/Modular construction reduces site-specific errors, but raises possibility of repeated failures.
- Building codes and standards must better recognize both good and bad new technologies.

Design and Construction (Fire)

- Large, open floor plans allow interior fire to move more quickly from room to room.
- Synthetic upholstery exacerbates flashover.
- Fire propagates faster due to engineered I-joint floor systems, modern windows and doors, and other lightweight, synthetic construction materials.
  - According to UL and NIST, overall effect is 8X faster flashover times, posing risks to occupants, firefighters, and property.

Insurance Institute for Business & Home Safety®

Maintenance Issues

- Aging of roofs and other building components increases claim frequency and severity – research will add clarity.
- Maintenance lapses are implicated in wide range of preventable interior fire and water losses.
- Exterior maintenance issues include intrusive trees, dry vegetation, clogged and damaged gutters, etc.
- Attitudinal issues have large impact (“no time,” “no money,” “no ability,” and “no personal responsibility”).

Global Issues

- Cascading failures (Sandy, Fukushima, wildfire/mud slides) greatly increase scope and scale of losses.
- Supply chain fragility transforms remote events into immediate operational problems.
- Cost of capital in a global economy influences overall health of property insurance system.

Political Issues

- Political gridlock (especially in Congress) prevents even consensus legislation from advancing.
- Budget rules and short-term outlooks prevent spending $ today to save $$$$ in the future and value post-disaster aid over pre-disaster mitigation.
- Pre- and post-disaster aid processes are inefficient.
- It is politically easier to suppress insurance rates than reduce property risk.
- Home builders and realtors are more directly politically engaged than insurers and mitigation allies.

Insurance Institute for Business & Home Safety®

Solving the Property Puzzle(s)

- Accelerate and expand research that provides clarity into vulnerabilities.
- Create actionable solutions (including new technologies) for both new and existing buildings.
- Properly align public and market (dis)incentives to encourage action “while the sun shines.”

Insurance Institute for Business & Home Safety®


© Insurance Institute for Business & Home Safety

Mitigation Research Affecting Property Risk

- Lower loss exceedance curve
- Accurately assess weather/built environment interaction
- Better understand design, construction, and materials vulnerabilities
- Monitor effects of aging and repair versus replace results
- Promote “Going Green and Building Strong”
- Evaluate benefits and risks of new technologies and innovations

Insurance Institute for Business & Home Safety®

WIND

WILDFIRE

HAIL

RAIN

Improving Product Performance

Understanding Vulnerability

Effects of Aging

Going Green and Building Strong

Moving forward…

- Leaders can galvanize public attitudes toward property risk
- Clear, consistent messages needed for public education
- We must understand benefits/risks of new technologies
- Relationship between natural & built environment influences risk
- Focus on “no regrets” strategies for mitigation and insurance

Insurance Institute for Business & Home Safety®

Please visit DisasterSafety.org