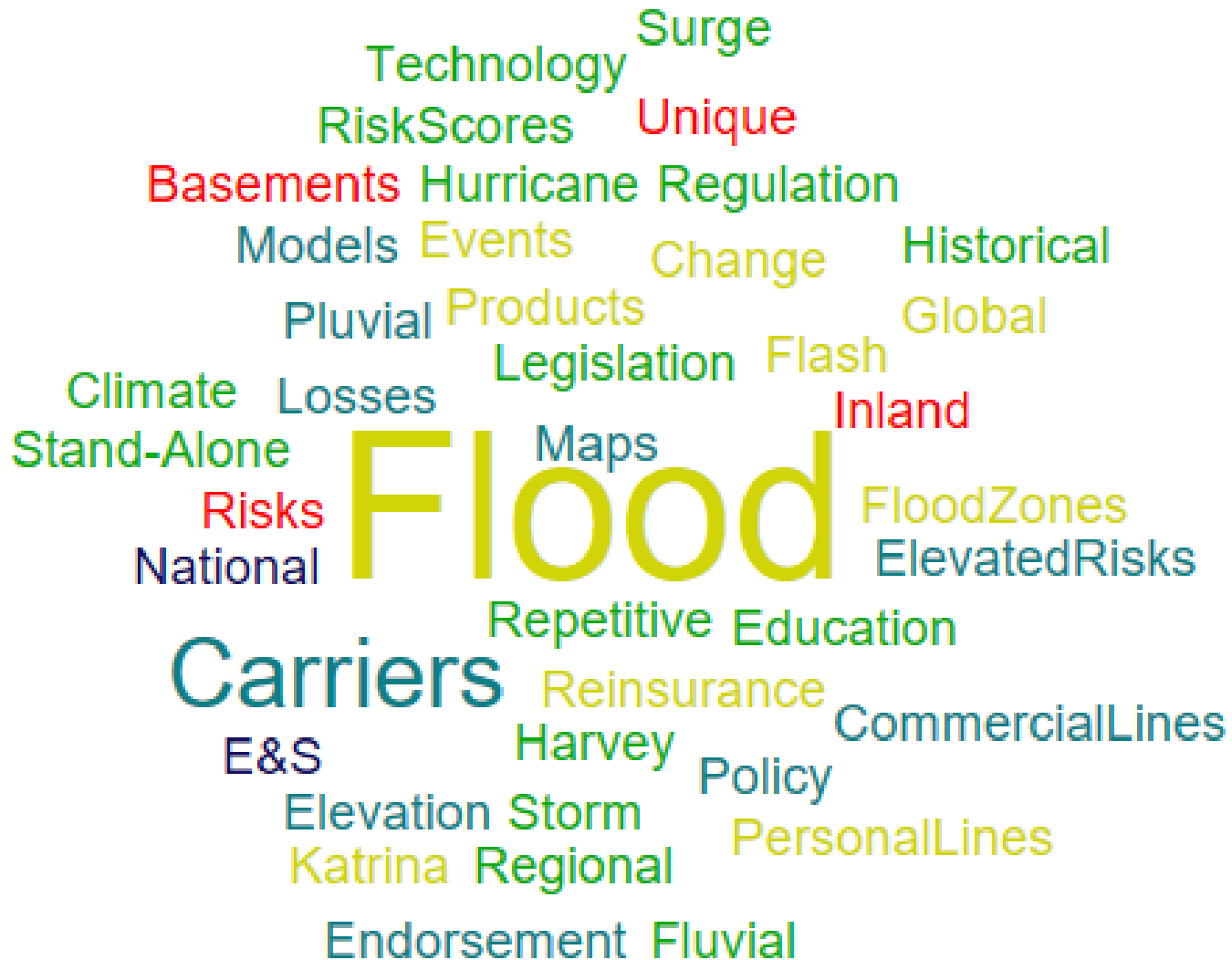


# The Future of the Private Flood Insurance Market in Louisiana

John Hageman, March 2020



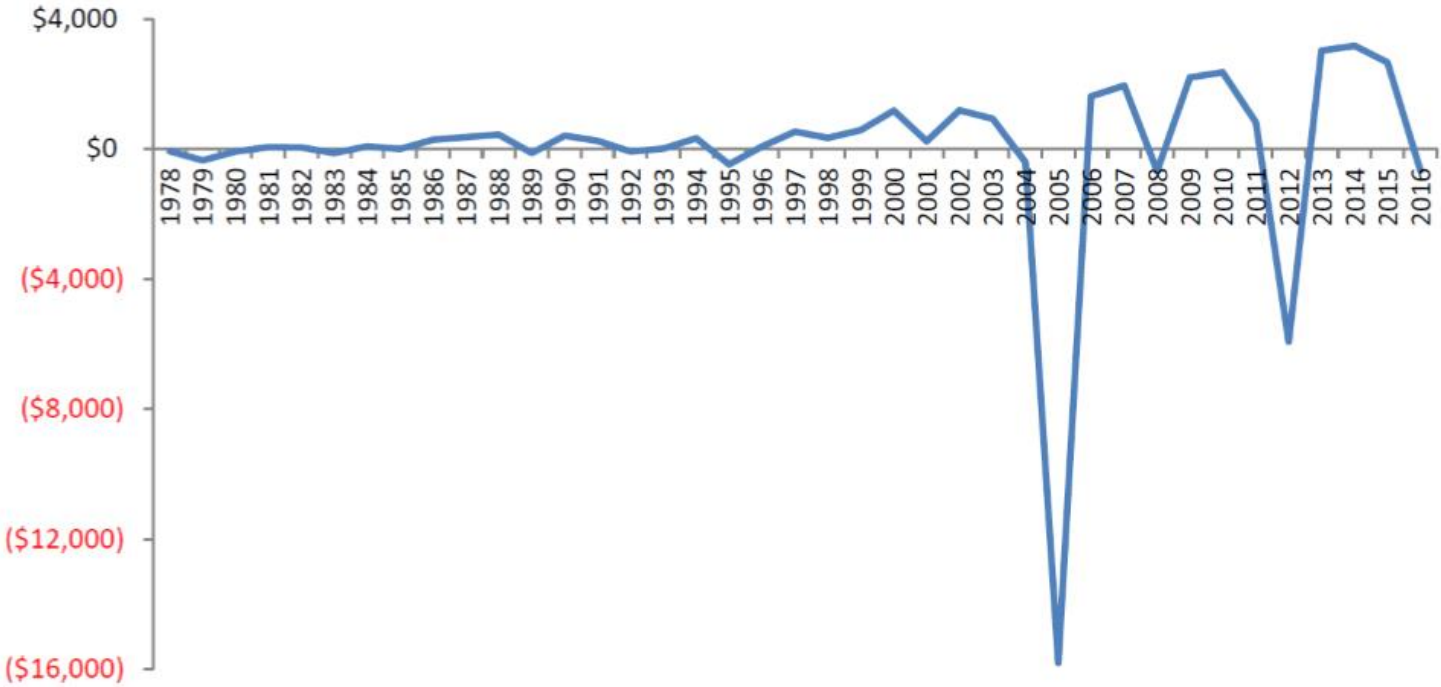
# Future of Private Flood Insurance



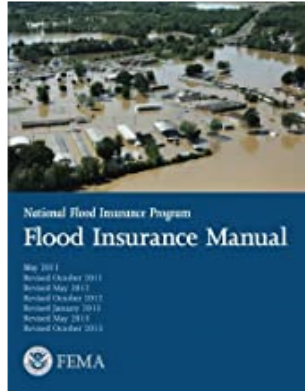
# Private Flood Insurance – Start with NFIP

Difference Between Earned Premium and Claims Paid by NFIP By Year  
(1978–2015 in \$Millions)

Sources: FEMA



# Private Flood Insurance – Start with NFIP



## Flood Insurance Manual: National Flood Insurance Program

by U.S. Department of Homeland Security and Federal Emergency Management Agency | Sep 26, 2013

★☆☆☆☆ v 1

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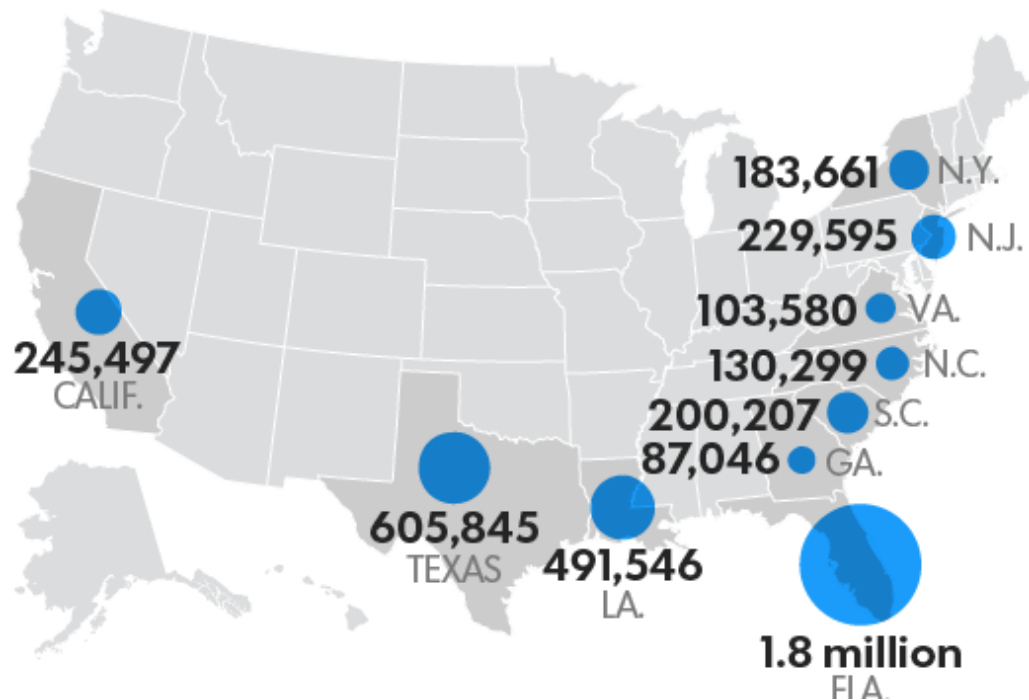
### FIRM ZONES A, AE, A1-A30, AO, AH, D<sup>4</sup>

	OCCUPANCY	SINGLE FAMILY		2-4 FAMILY		OTHER RESIDENTIAL		NON-RESIDENTIAL BUSINESS <sup>5</sup>		OTHER NON-RESIDENTIAL <sup>5</sup>	
		Building	Contents	Building	Contents	Building	Contents	Building	Contents	Building	Contents
BUILDING TYPE	No Basement/Enclosure	1.12 / 1.03	1.41 / 1.84	1.12 / 1.03		1.12 / 2.16		2.36 / 4.43		1.22 / 2.26	
	With Basement	1.20 / 1.51	1.41 / 1.55	1.20 / 1.51		1.12 / 1.80		2.49 / 4.32		1.28 / 2.22	
	With Enclosure <sup>6</sup>	1.20 / 1.81	1.41 / 1.84	1.20 / 1.81		1.20 / 2.24		2.49 / 5.47		1.28 / 2.79	
	Elevated on Crawlpace	1.12 / 1.03	1.41 / 1.84	1.12 / 1.03		1.12 / 2.16		2.36 / 4.43		1.22 / 2.26	
	Non-Elevated with Subgrade Crawlpace	1.12 / 1.03	1.41 / 1.55	1.12 / 1.03		1.12 / 2.16		2.36 / 4.43		1.22 / 2.26	
	Manufactured (Mobile) Home <sup>7</sup>	1.12 / 1.03	1.41 / 1.84					2.36 / 4.43		1.22 / 2.26	
	CONTENTS LOCATION	Basement & Above <sup>8</sup>			1.41 / 1.55		1.41 / 1.55		4.68 / 7.42		2.39 / 3.78
Enclosure & Above <sup>9</sup>				1.41 / 1.84		1.41 / 1.84		4.68 / 8.90		2.39 / 4.52	
Lowest Floor Only – Above Ground Level				1.41 / 1.84		1.41 / 1.84		4.68 / 3.89		2.39 / 1.99	
Lowest Floor Above Ground Level and Higher Floors				1.41 / 1.28		1.41 / 1.28		4.68 / 3.31		2.39 / 1.71	
Above Ground Level – More Than 1 Full Floor				.35 / .12		.35 / .12		.24 / .12		.24 / .12	
Manufactured (Mobile) Home <sup>7</sup>								4.68 / 3.89		2.39 / 1.99	

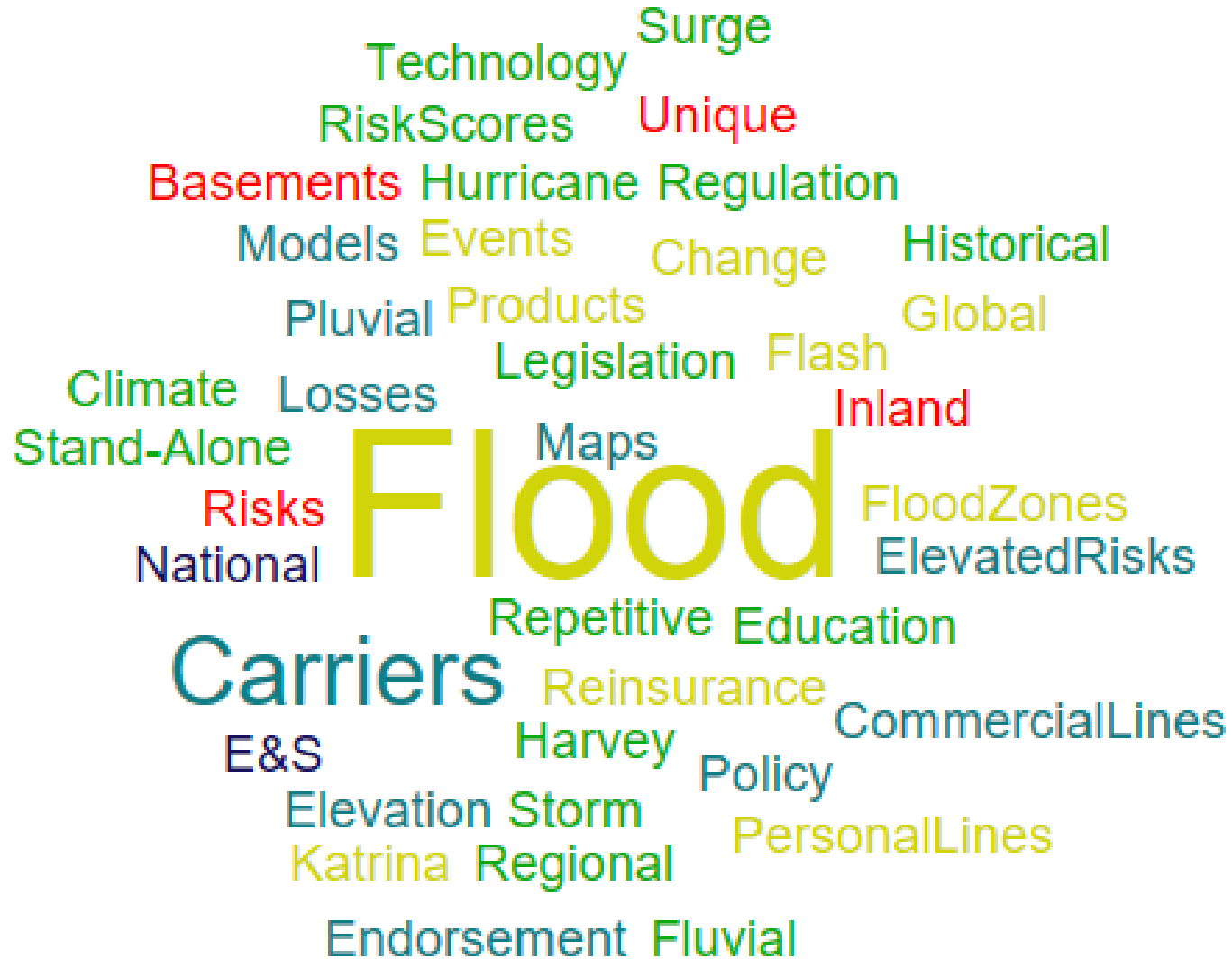
# Private Flood Insurance – Start with NFIP

## 10 STATES DOMINATE FLOOD PROGRAM

Of the nearly 5 million homes and businesses covered by the National Flood Insurance Program, about 80 percent are in 10 states.

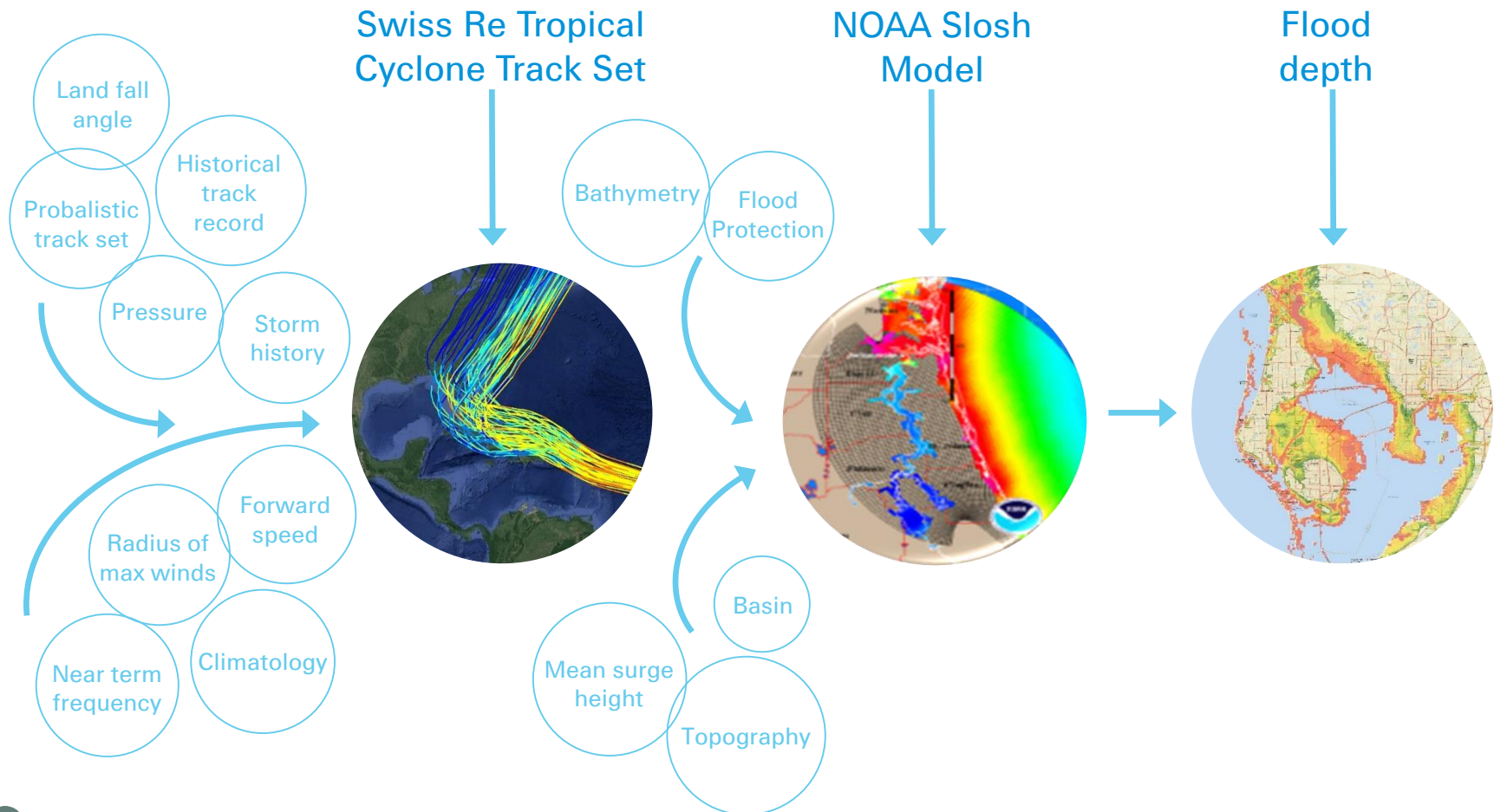


# Future of Private Flood Insurance

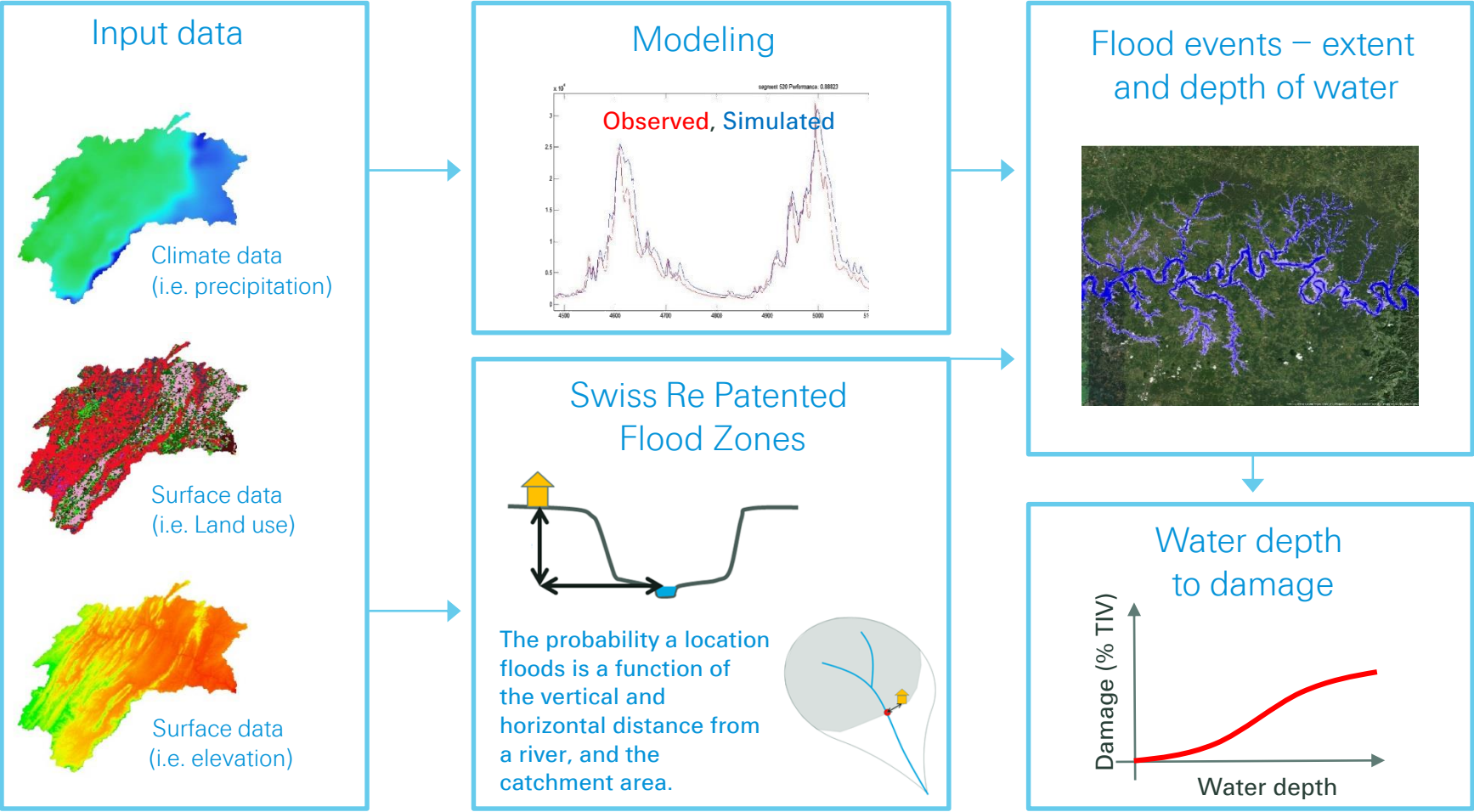




# US storm surge modeling



# Inland flood modeling





# Hurricane Harvey

2011 Land use data

## • Man Made Impacts – Importance of local data

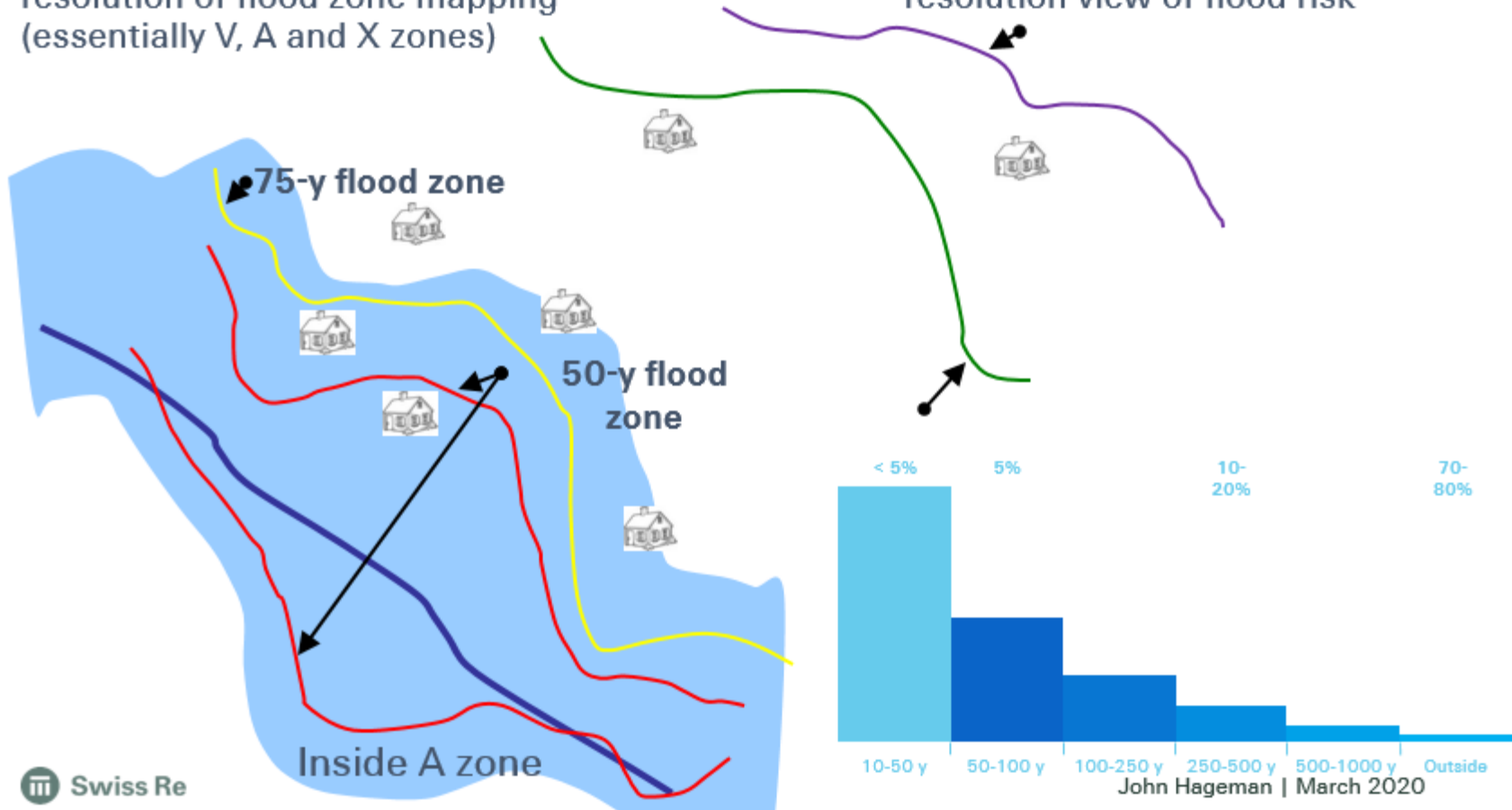
- Largest city in the US without zoning laws.
- Urban development has decreased the lands ability to absorb water.
- Between 1992 and 2010, around 30% of wetland area was lost to development.
- Significant development up to and around flood control dams.



# Inland flood: managing adverse selection

NFIP rates are based on a lower resolution of flood zone mapping (essentially V, A and X zones)

Swiss Re models provide a high resolution view of flood risk



# Swiss Re flood toolkit

Supported by a reinsurance partner with superior financial strength



**Education**



**Regulatory**



**Rate Making**

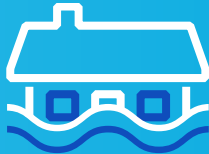
More than ten years of R&D yielding a patented, fully probabilistic flood model including both storm surge & inland flood across the US



**Marketing**



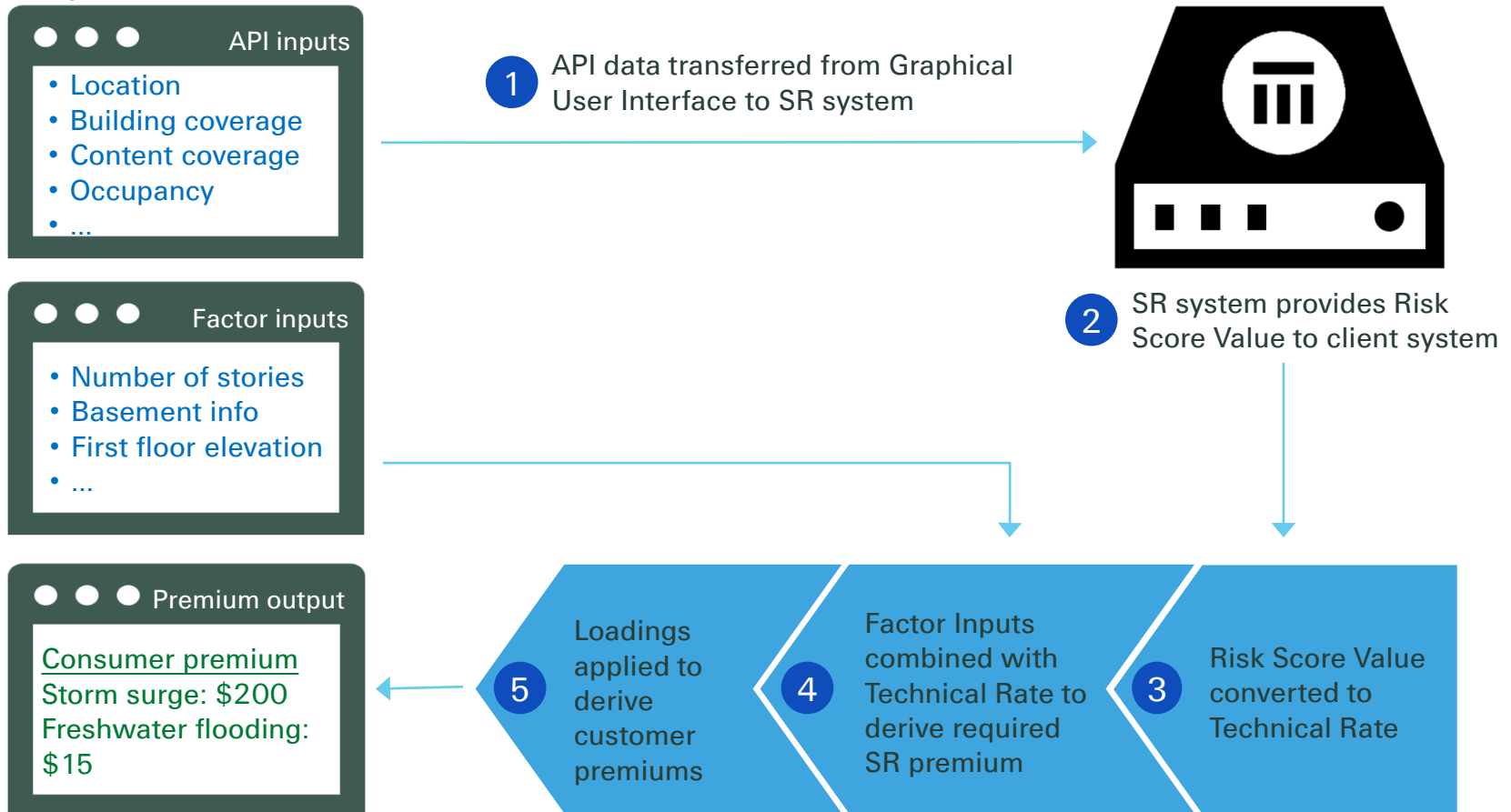
**Claims**



**Underwriting**

# Swiss Re - Risk scoring setup

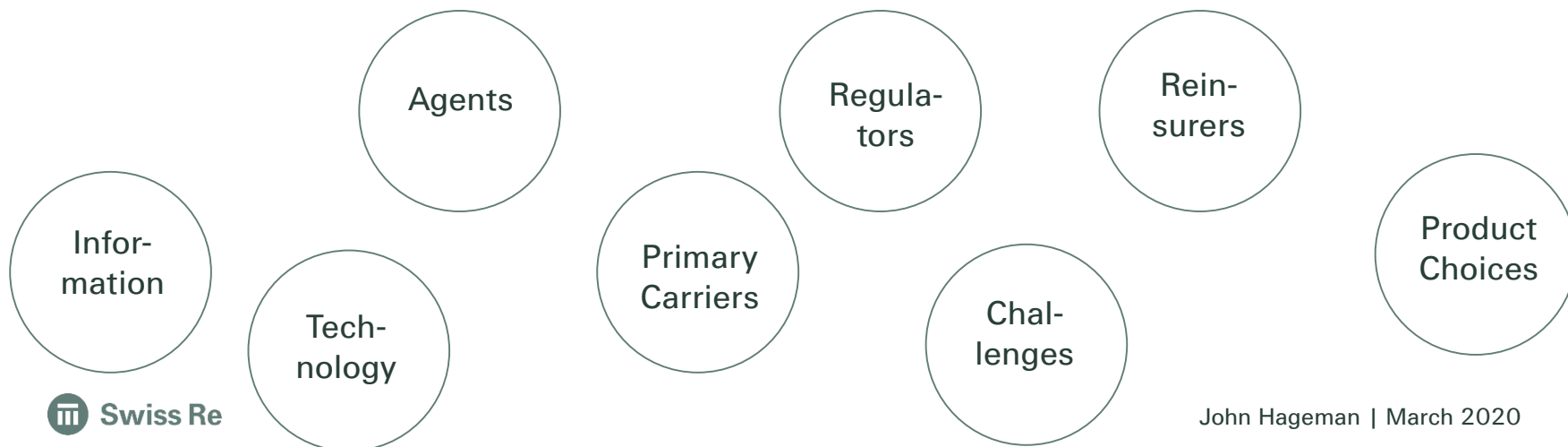
## Graphical User Interface



# Future of Private Flood Insurance

## Homeowners v Commercial

Global Carriers	"National" Homeowners Carriers	Regional Carriers	E&S Market	NFIP
Strong participant in Commercial Flood. Exploration of Personal Lines Flood, but yet to make a significant impact.	Hesitant to enter the flood market.	Interested and willing to participate in flood, but frequently lack the capital.	Strong participant in Commercial market. The E&S Market consists of creative and nimble solutions.	NFIP will continue to play an important role in flood even with new private flood options



# Future of Private Flood Insurance – Primary Carriers & Product Choices (Important for LA)

- Risk selection & Rating Plan: Homogeneous v Heterogeneous portfolio?
- Policy Type: Stand-Alone or Endorsement
- Opt-in v Opt-out
- Limit and Deductible
- Minimum Premium
- UW Manual
- Risk retention
- Accumulations





# Future of Private Flood Insurance – Reinsurance, Regulators, Agents

## **Reinsurance:**

- Reinsurer and Primary Carrier co-develop the product
- Primary carrier develops the product – Syndicated Treaty
- Reinsurer education: work in progress

## **Regulators:**

- Flood Rating & UW vs. Other Perils: They are not same.
- Standards vary by State

## **Agents:**

- Important stakeholder
- Accumulations
- MGAs

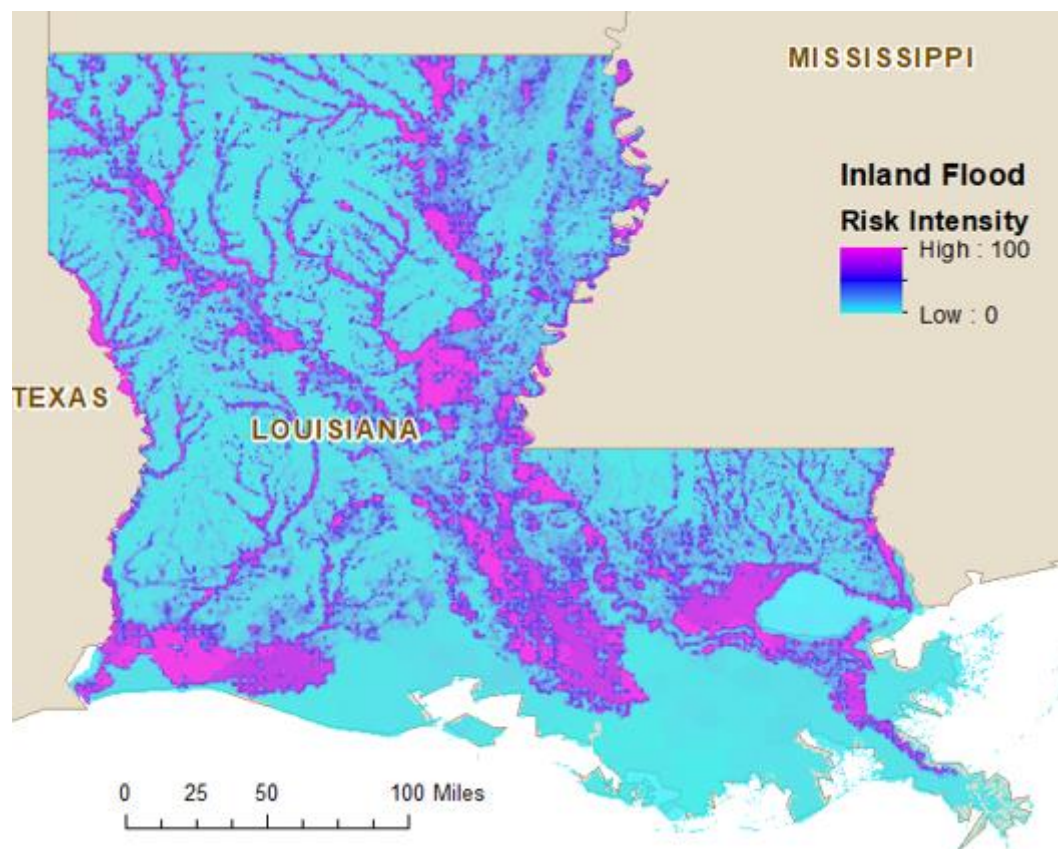
# Future of Private Flood Insurance – Technology, Information & Challenges

## Technology

- First Floor Elevation
- Satellite Technology
- Insure-Tech
- Product Set-up

## Information & Challenges:

- Detailed claims information
- Repetitive / Unique Risks
- Climate Change
- Evolving Models / Incorporating Technology
- Legislation / Regulatory Differences by Region
- Financial Institutions / Lender Requirements



”

We applaud Louisiana for their work with Protection Gap and we encourage continued efforts to ensure flood coverage for all.



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