Hazus Tsunami Methodology Development

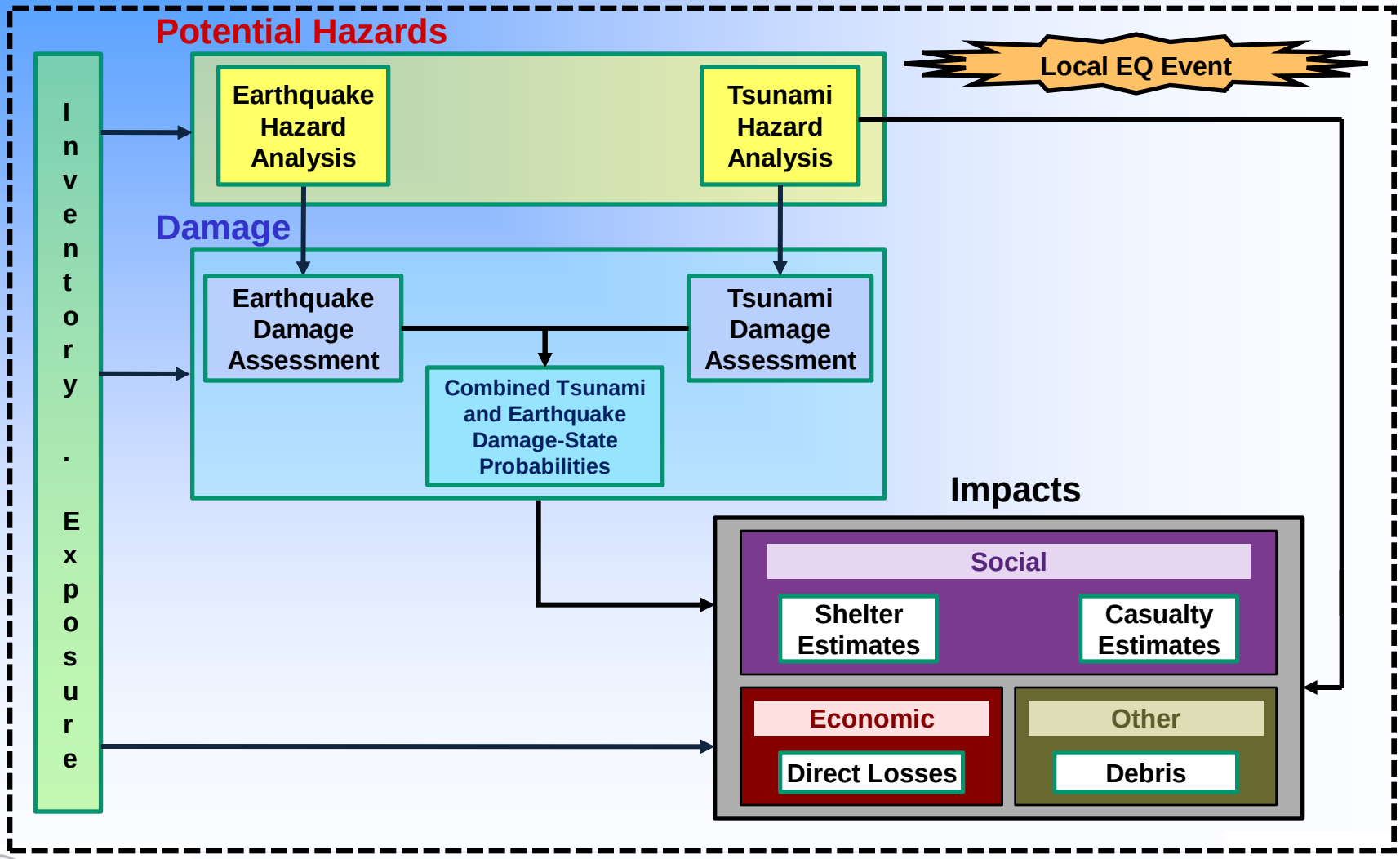
Update

July 26, 2012

Outline

- Methodology overview
- Key features and highlights
- Project schedule
- Current status and key milestones
- Prototype approach

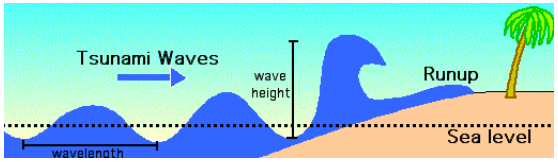
Methodology Overview



Key Features and Highlights

- Hazard ➔ characterized by inundation depth, velocity, and momentum flux and to be compatible with NOAA's SIFT output
- Damage ➔ performance-based engineering approach that uses all hazard parameters
- Debris ➔ transport model that predicts final position of all debris (cars, trucks, shipping containers, boats, building debris)
- Casualties ➔model reflects warning time, time of day and time of year, evacuation conditions (e.g., rainy and nighttime), community characteristics and preparedness, slope of terrain, age, and gender
- Shelter ➔ model reflects those seeking shelter because of damaged homes, flooded roadways, or being ordered to evacuate
- Probabilistic approach for combining tsunami and earthquake damage

Project Schedule



	2011			2012												2013			
	October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April
Project Management																			
Monthly reports	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦
Technical Oversight Committee																			
Meeting 1 - Review of model specs																			
Teleconference 1 - Progress update																			
Teleconference 2 - Progress update																			
Meeting 2 - Methodology & software prototype																			
Meeting 3 - Review of pilot results																			
Meeting 4 - Review of final model and sign-0ff																			
Methodology Development																			
Review of hazard models: NOAA MOST, SIFT																			
Model specs																			
Draft methodology & software protype																			
Benchmarking, validation, and calibration (BVC)																			
Methodology & prototype finalization																			
Final release																			

Current status and Key Milestones

Current status

- 75% draft methodology document ➔ delivered on July 10th, 2012
- MOU between FEMA and NOAA not in place yet
- Benchmarking: In process of collecting data for Crescent City (CA), Chile, and Japan
- Data model under development ➔ about 60% done
- Software prototype under development ➔ about 40% done

Key milestones

- 100% draft methodology document ➔ to be delivered by 9/10/2012
- Meeting # 2: Prototype preview ➔ September 28, 2012
- Benchmarking wrapped by end January 2013
- Meeting # 3: review of results ➔ End of January 2013
- Meeting # 4: Sign-off and model release ➔ Early April 2013