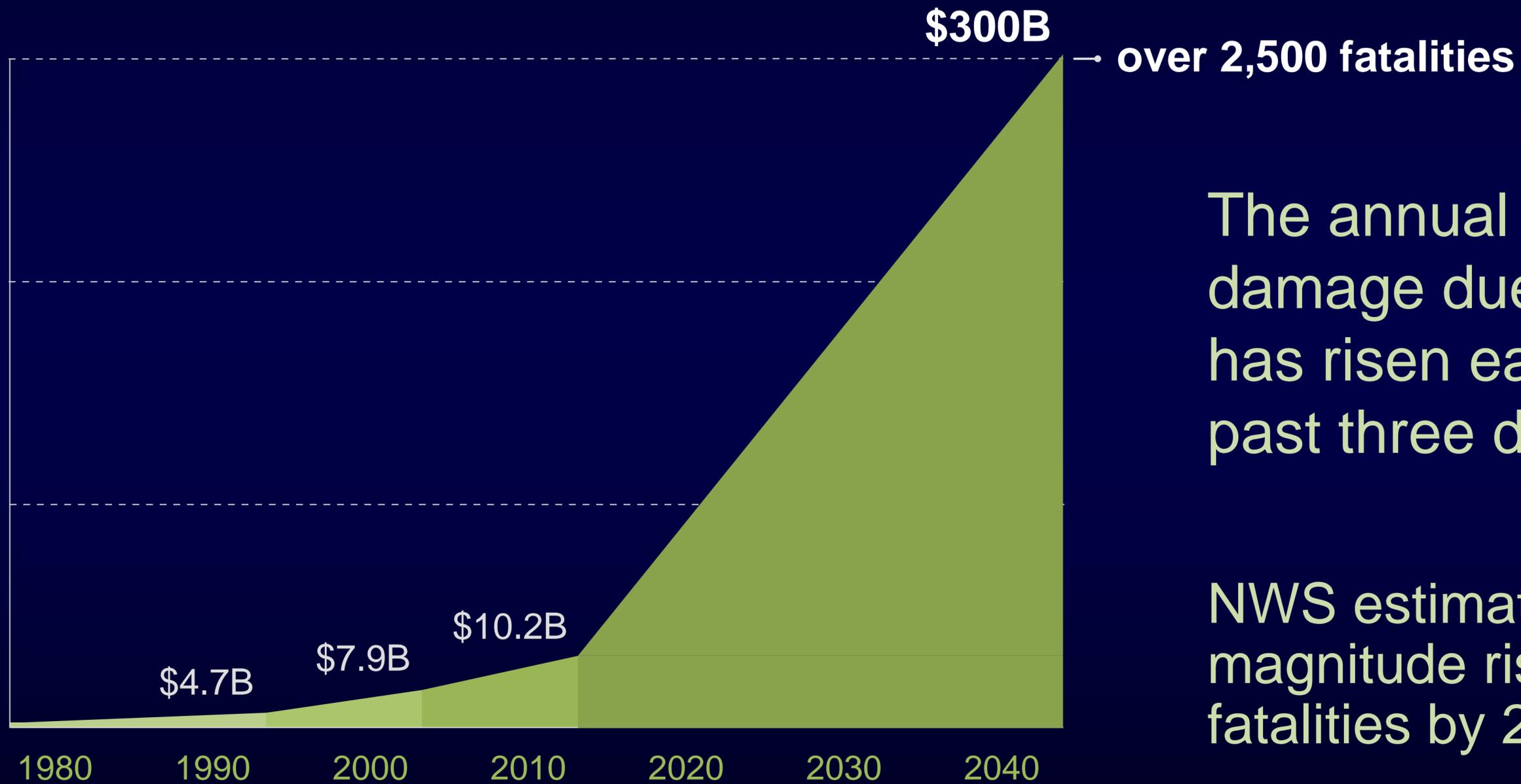




FLASH FLOOD FACTS



The annual average damage due to flooding has risen each of the past three decades.

NWS estimates > order of magnitude rise in \$ and fatalities by 2040



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



Heavy Rain



Debris Flow



Ice Jam



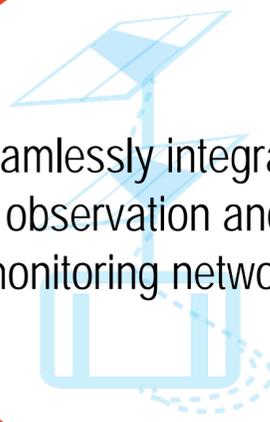
Dam Break/
Levee Failure



Urban Flooding

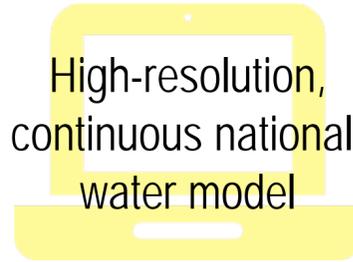
OBSERVATION & MONITORING

Seamlessly integrated observation and monitoring networks



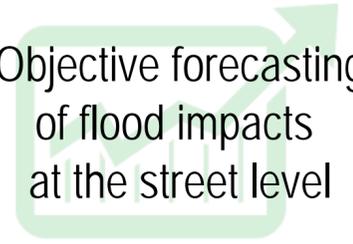
MODELING

High-resolution, continuous national water model



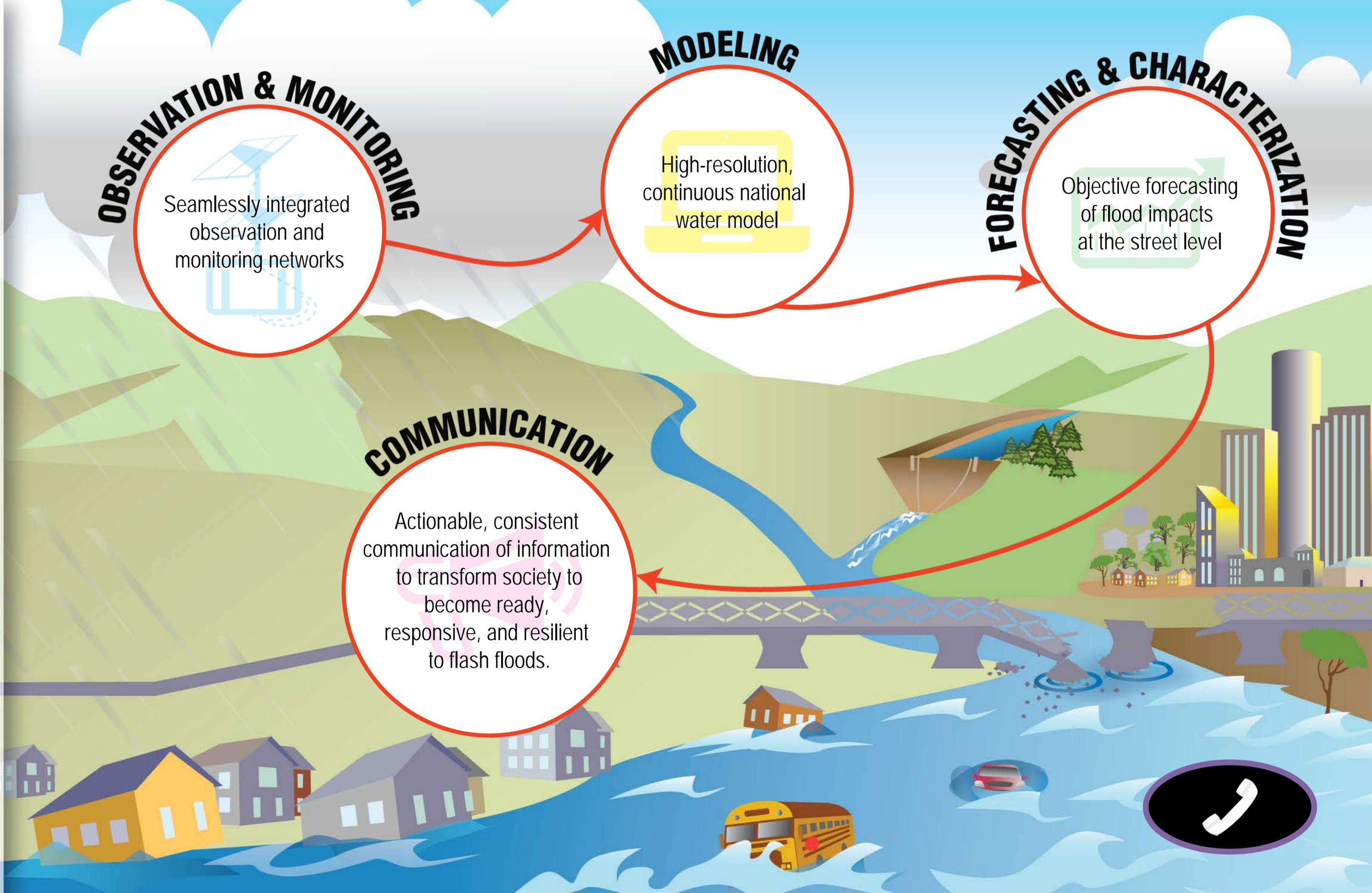
FORECASTING & CHARACTERIZATION

Objective forecasting of flood impacts at the street level



COMMUNICATION

Actionable, consistent communication of information to transform society to become ready, responsive, and resilient to flash floods.





Heavy Rain



Debris Flow



Ice Jam



Dam Break/
Levee Failure



Urban Flooding

OBSERVATION & MONITORING

Seamlessly integrated observation and monitoring networks

MODELING

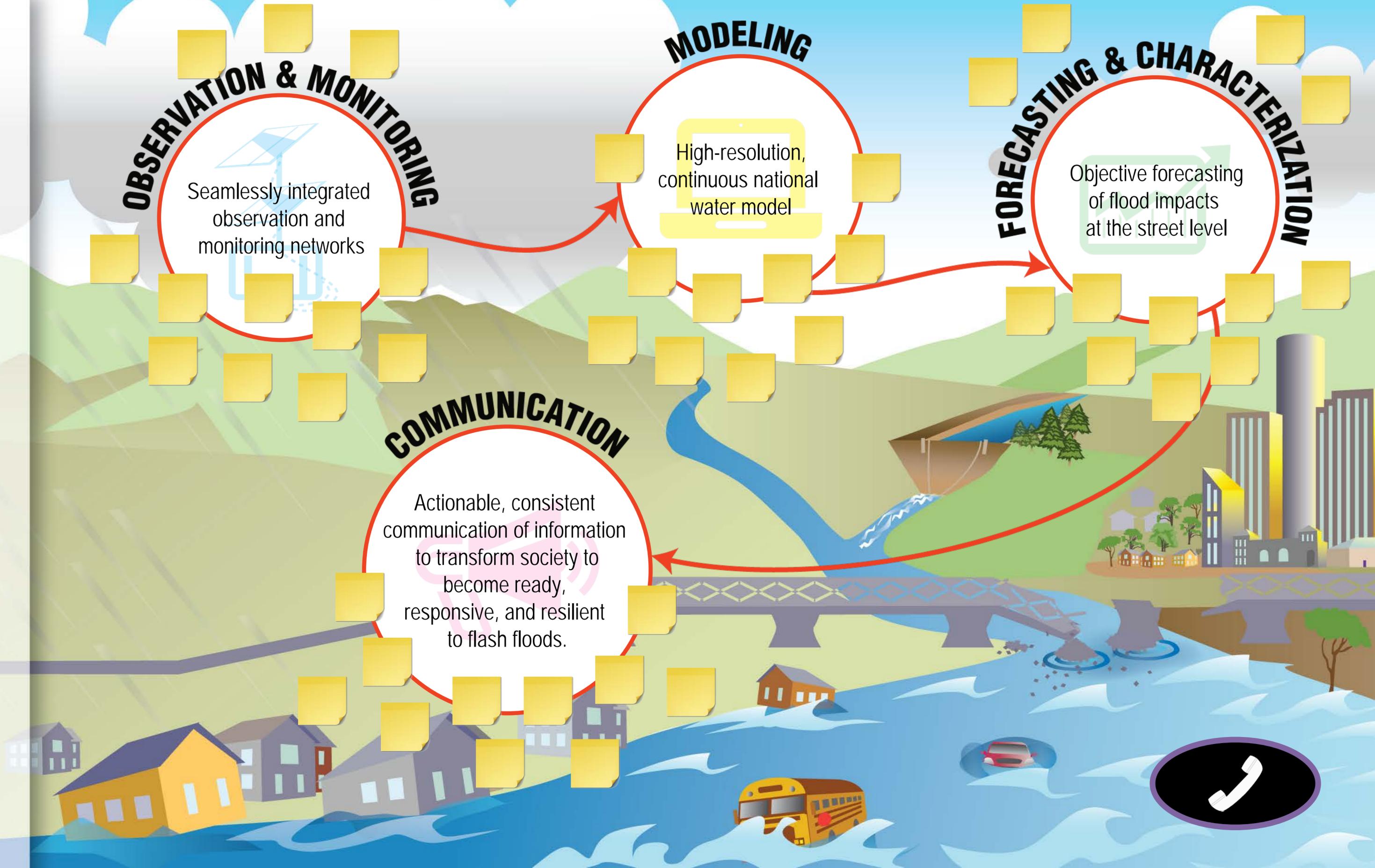
High-resolution, continuous national water model

FORECASTING & CHARACTERIZATION

Objective forecasting of flood impacts at the street level

COMMUNICATION

Actionable, consistent communication of information to transform society to become ready, responsive, and resilient to flash floods.





50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



Heavy Rain



Debris Flow



Ice Jam



Dam Break/
Levee Failure



Urban Flooding

OBSERVATION & MONITORING

- Comprehensive cross-agency database
- Robust observation network
- Uniform data formatting

MODELING

- High-res, spatial-temporal ensemble model
- Incorporate observational data
- Verification ability

FORECASTING & CHARACTERIZATION

- Criteria for debris flow
- Tools for forecasting natural
- Hazard impacts

COMMUNICATION



50:50



Heavy Rain



Debris Flow



Ice Jam



Dam Break/
Levee Failure



Urban Flooding

OBSERVATION & MONITORING

- Comprehensive cross-agency database
- Robust obs network
- Uniform data formatting

MODELING

COMMUNICATION

- Ongoing, research-supported, effective outreach and education
- Mine real-time data to synthesize and communicate impacts
- Define and develop research-supported, effective delivery mechanisms
- Identify and develop effective event-scale risk communication content

FORECASTING & CHARACTERIZATION

- Criteria for debris flow
- Tools for forecasting natural
- Hazard impacts



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



Heavy Rain



Debris Flow



Ice Jam



Dam Break/
Levee Failure



Urban Flooding

OBSERVATION & MONITORING

Seamlessly integrated observation and monitoring networks

MODELING

High-resolution, continuous national water model

FORECASTING & CHARACTERIZATION

Objective forecasting of flood impacts at the street level

COMMUNICATION

Actionable, consistent communication of information to transform society to become ready, responsive, and resilient to flash floods.

- Ongoing, research-supported, effective outreach and education
- Mine real-time data to synthesize and communicate impacts
- Define and develop research-supported, effective delivery mechanisms
- Identify and develop effective event-scale risk communication content

Focus Groups were held in:

- Austin, Texas
- Boulder, Colorado
- Binghamton, New York
- Chicago, Illinois
- Mobile, Alabama

communication of information to transform society to become ready, responsive, and resilient to flash floods.



AND THE AUDIENCE SAID...

- ▶ Improve graphics – Streets, not polygons!
- ▶ Provide historical context – Reference past event people remember!
- ▶ Convey actionable information – Safe routes not just flooded ones!
- ▶ Mobile devices – Need to reach people in vehicles!
- ▶ Personalize the message – Use familiar voice during event!
- ▶ Use words based on how people perceive risk – Rethink the current system of advisory/watch/warning! It's not working....



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



50:50



How can the NWS most effectively communicate flash flood risks?

A: Advisory

B: Watch

C: Warning

D: None of the Above



50:50



Did we take their advice?

A: Yes

B: No

C: Maybe

D: Thought about it



50:50



Did we take their advice?

A: Yes

B: No

C: Maybe

D: Thought about it

YES!

- ▶ Simplify flash flooding messaging (e.g., rethink watch/warning system) and disseminate actionable information via ways people obtain it (apps, mobile devices, social media).
- ▶ Increase specificity on the “when, where and how much” flooding by improving modeling capacity to create for higher resolution products.
- ▶ Continue to foster and cultivate strong WFO-local partner relationships.

