

Building Community: Putting People First in an Era of Environmental Extremes



Lori Peek, Ph.D.
Professor, Department of Sociology and
Director, Natural Hazards Center and CONVERGE
University of Colorado Boulder



Natural Hazards Center

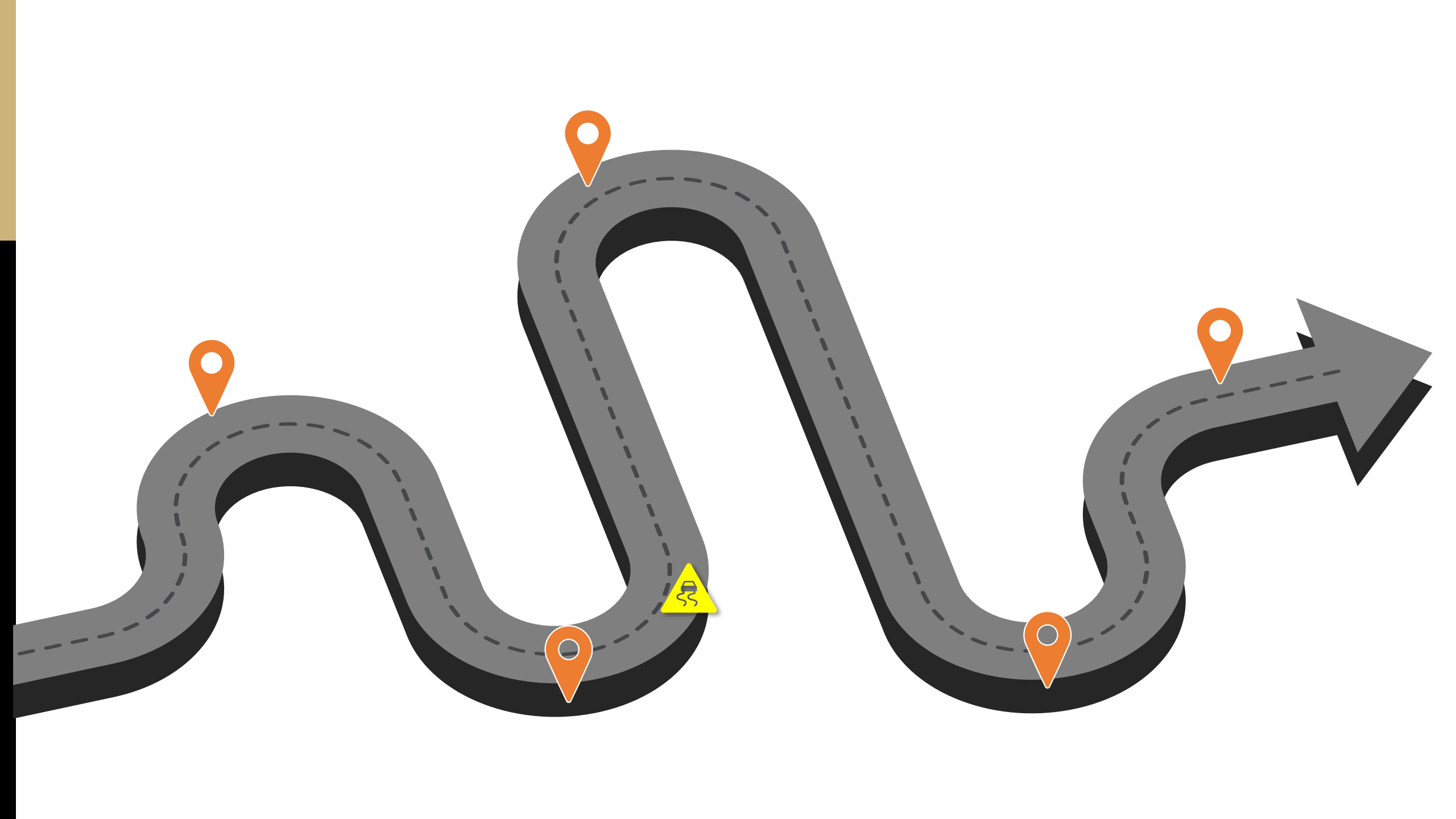


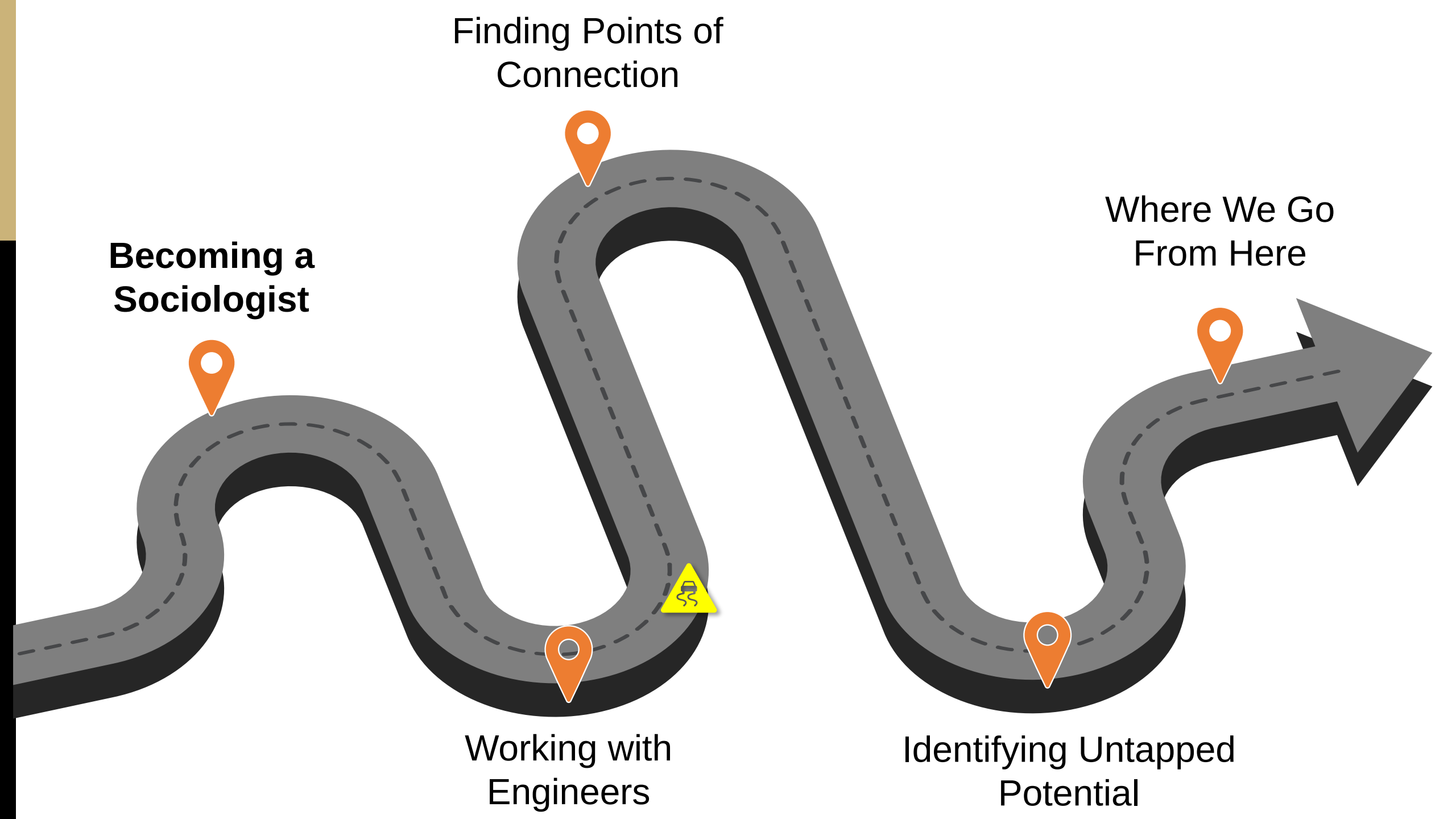
CONVERGE

If we are going to
**build safer, more disaster
resilient communities,**
we must put **people first.**

This will require **consistent
collaboration** between social
scientists and structural
engineers.











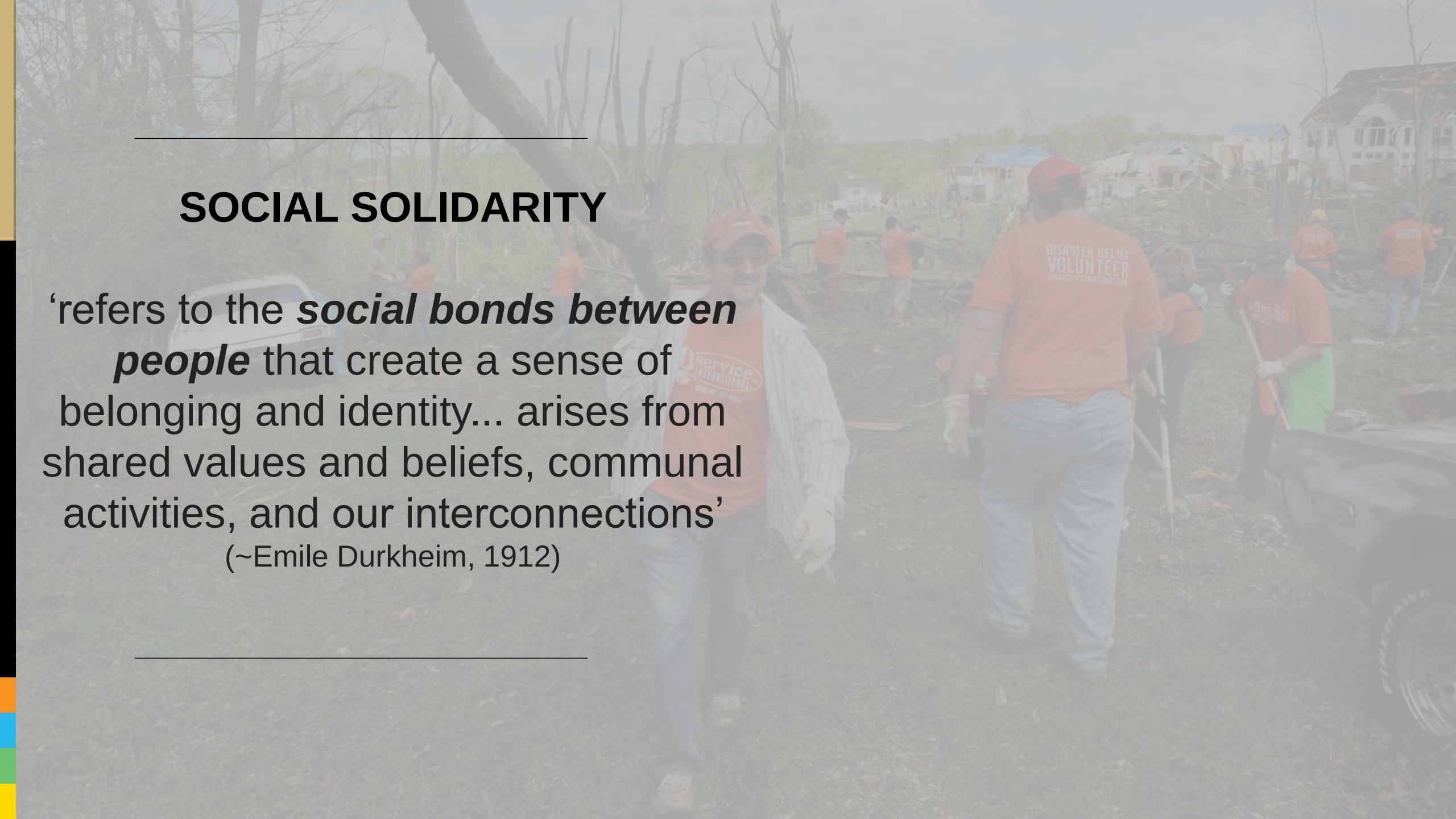


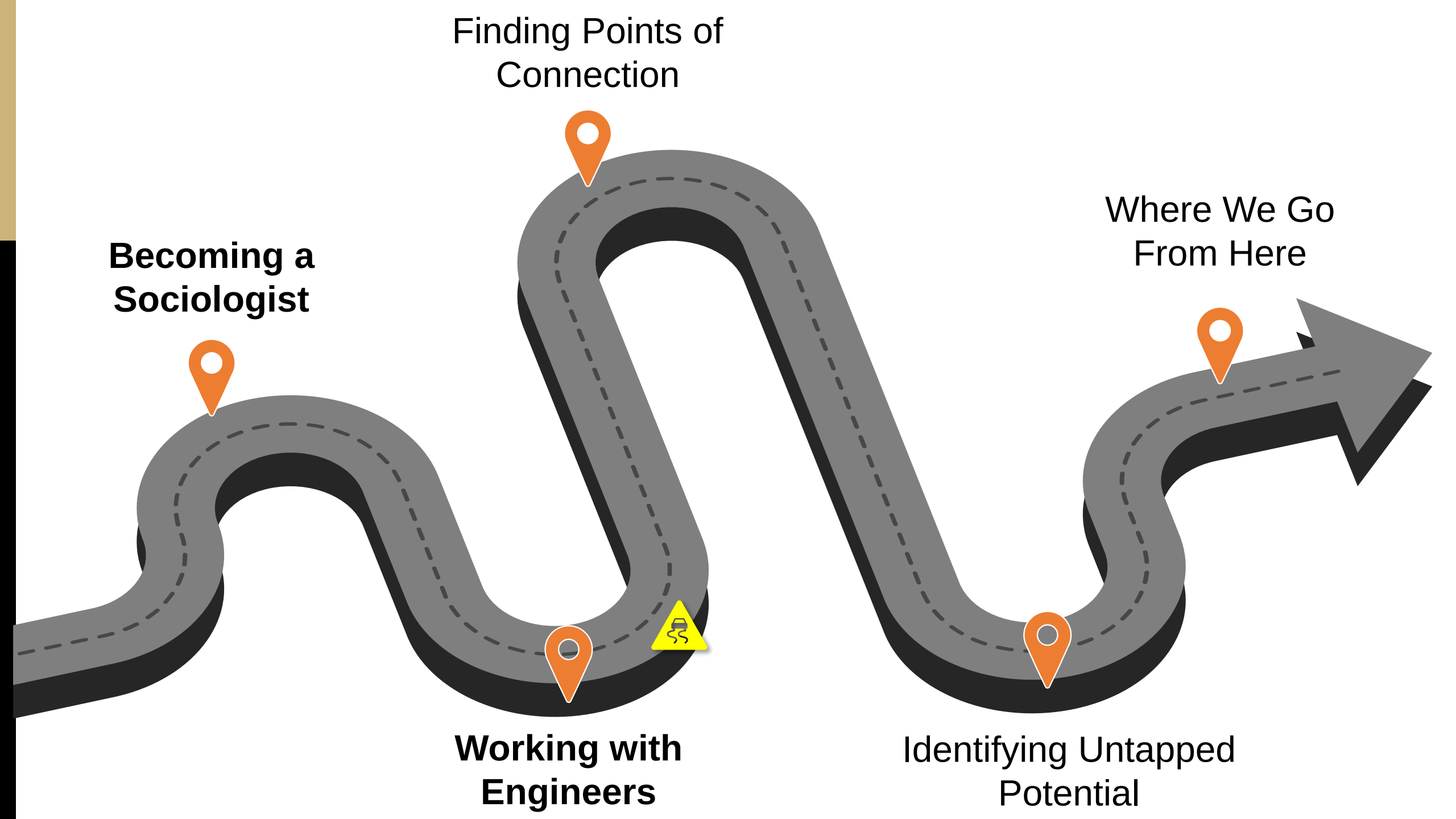


SOCIAL SOLIDARITY

‘refers to the ***social bonds between people*** that create a sense of belonging and identity... arises from shared values and beliefs, communal activities, and our interconnections’

(~Emile Durkheim, 1912)





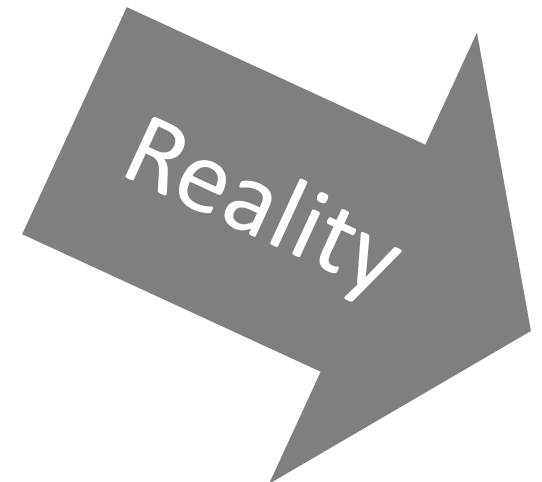


START

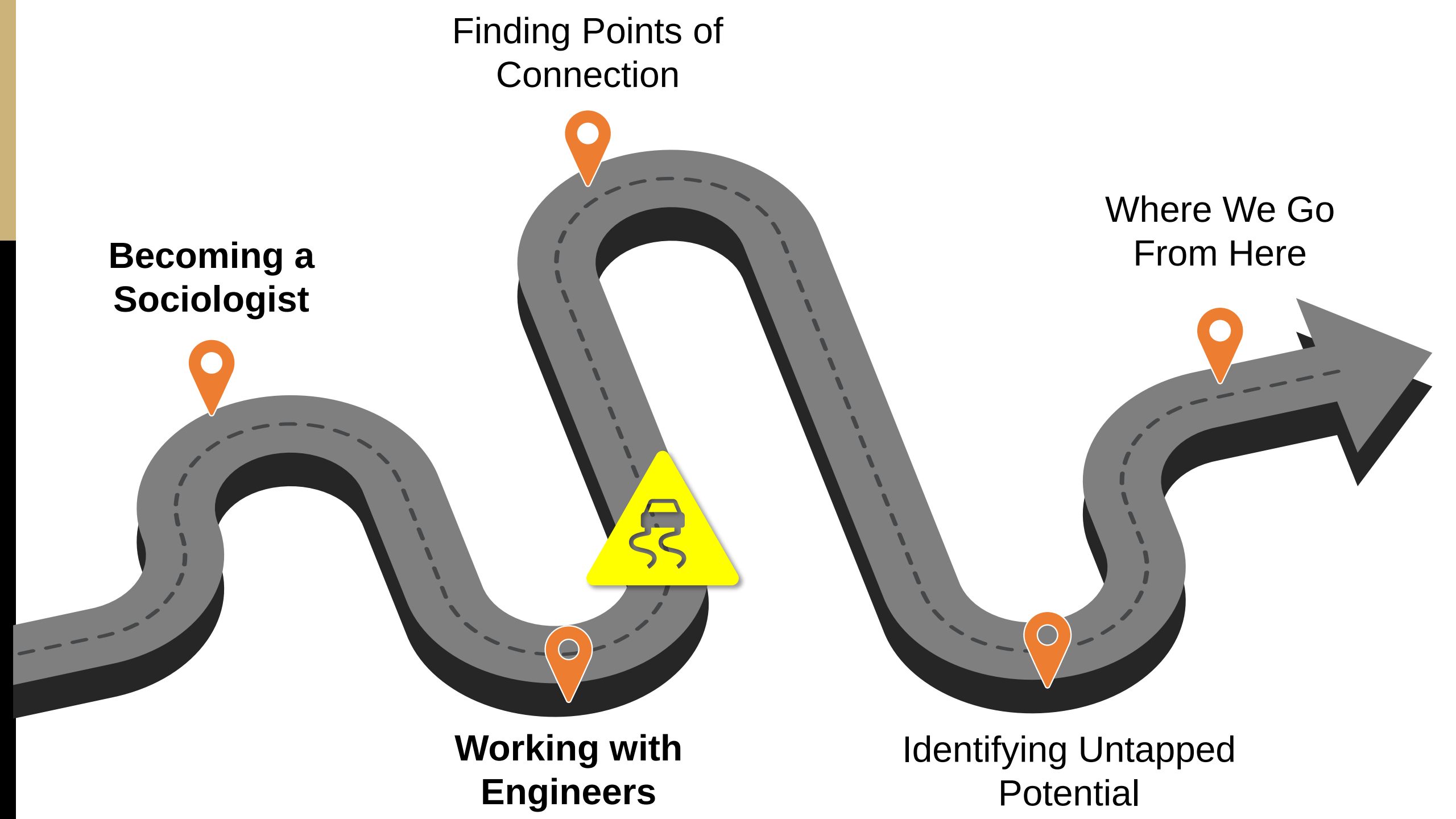


Founding Statement: The *Natural Hazards Review* stands on the realization that... disaster losses result from interactions between the **physical world, the constructed environment, and the character of the societies and people** who occupy them. The journal is dedicated to **bringing together the physical, social, and behavioral sciences; engineering; and regulatory and policy environments** to provide a forum for... **cross-disciplinary approaches** to natural hazards loss and cost reduction.

THANK YOU **ASCE** !







Finding Points of Connection

Where We Go From Here

Becoming a Sociologist

Working with Engineers

Identifying Untapped Potential

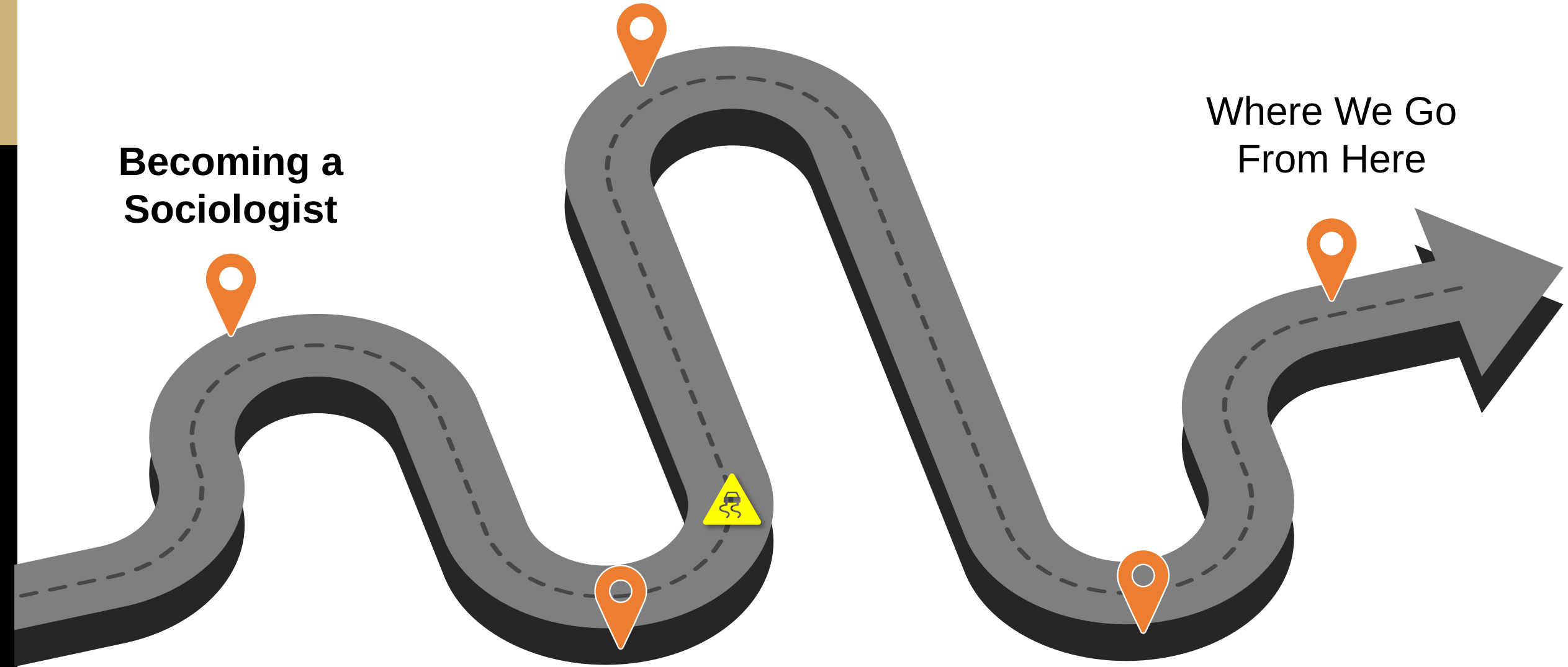
**Finding Points of
Connection**

**Becoming a
Sociologist**

**Where We Go
From Here**

**Working with
Engineers**

**Identifying Untapped
Potential**



**“Engineering isn’t
just about what we
build—it’s about
who we build it for.”**

—Professor Keith Molenaar,
2025



- **People** are at the center of the work that **we** do.
- **Ethical principles** demand that **we** work with integrity to protect the **safety, health, and welfare** of **people**.
- We **identify and solve problems** to benefit **society**.



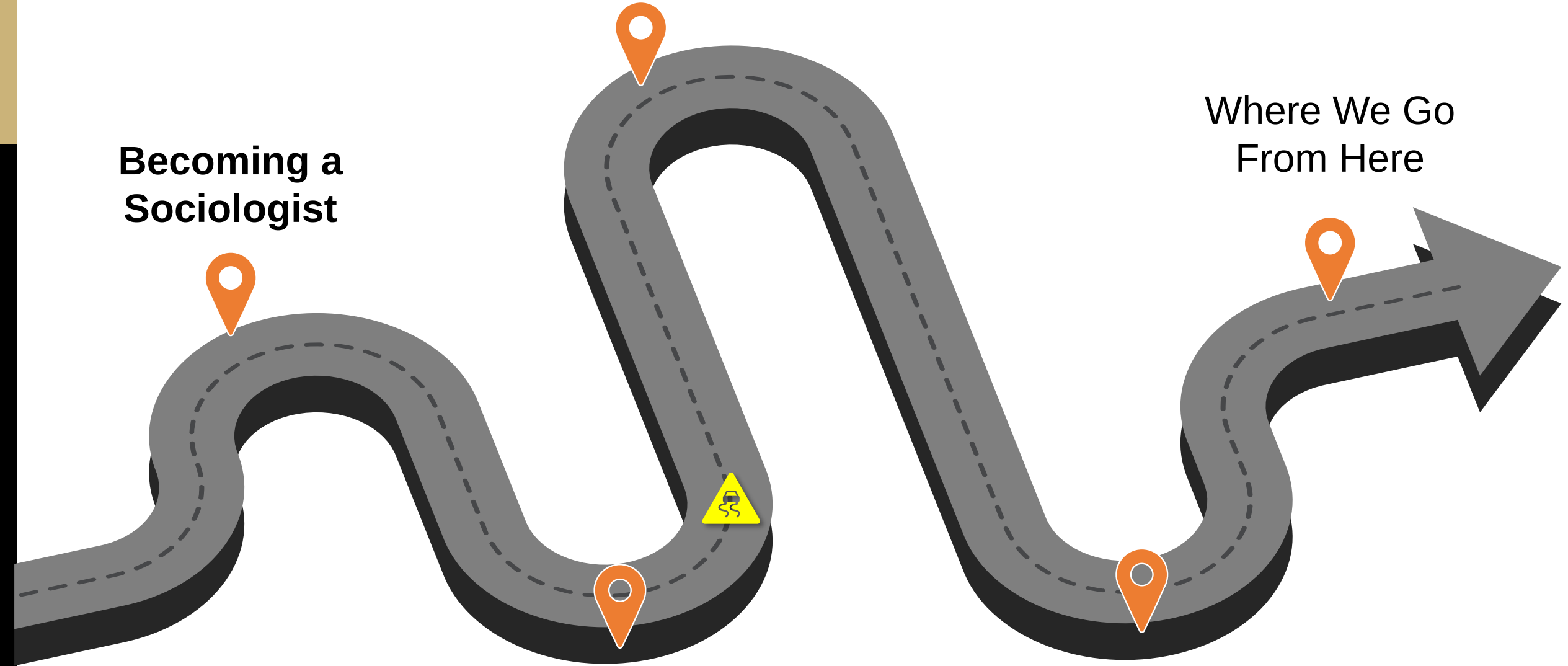
**Finding Points of
Connection**

**Becoming a
Sociologist**

**Where We Go
From Here**

**Working with
Engineers**

**Identifying Untapped
Potential**





1. SOCIAL SCIENCE METHODS

INTERVIEWS



OBSERVATIONS



FOCUS GROUPS

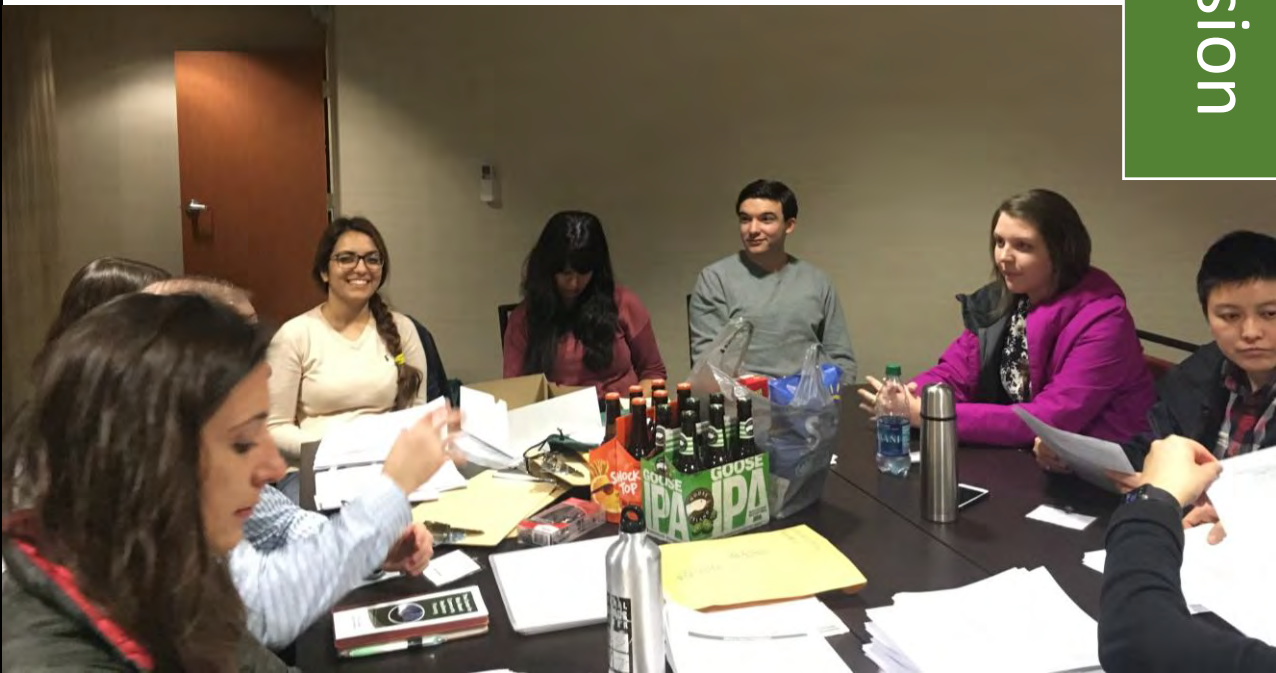


SURVEYS



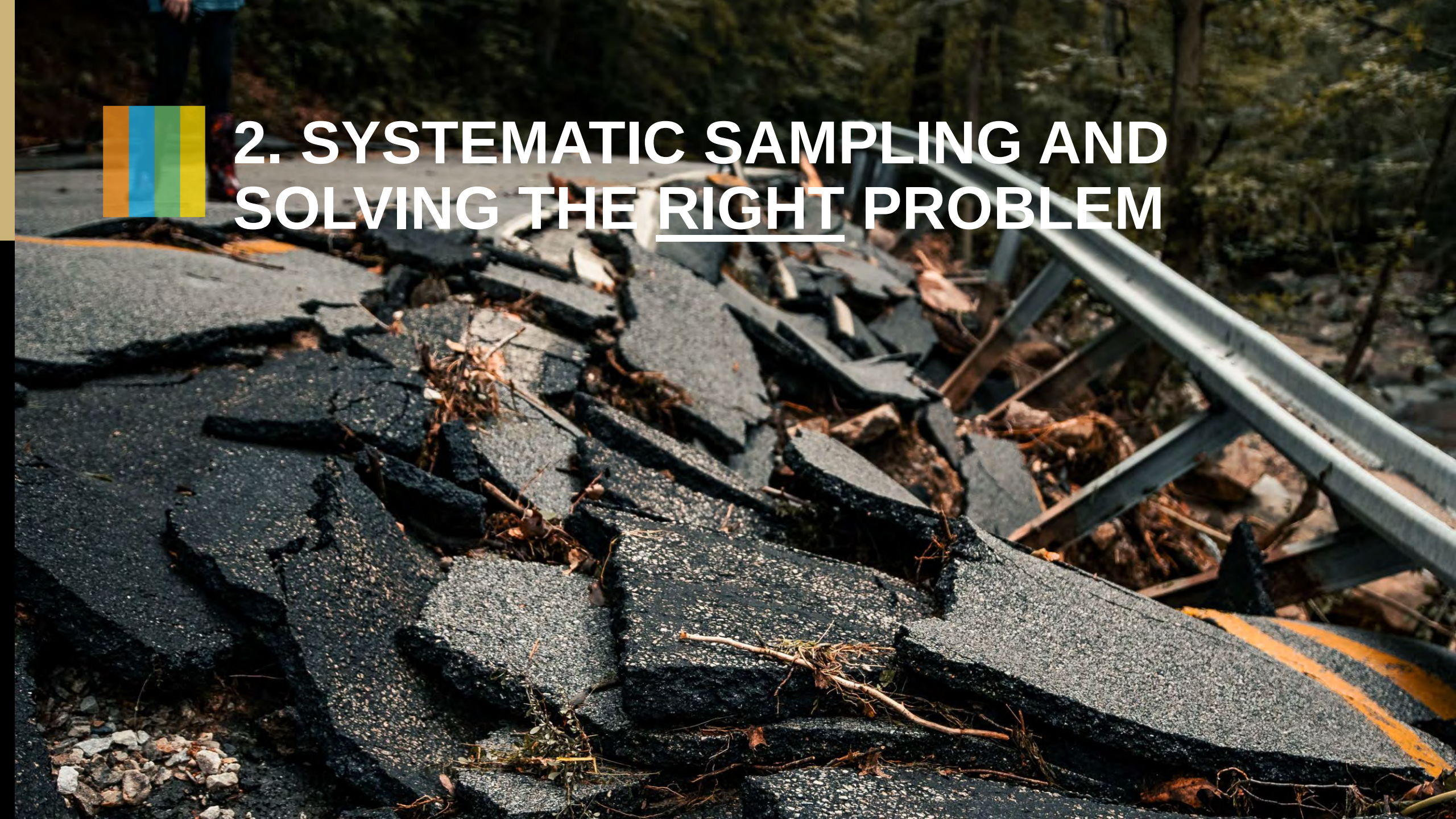
Vision

Reality





2. SYSTEMATIC SAMPLING AND SOLVING THE RIGHT PROBLEM







StEER
STRUCTURAL
EXTREME EVENTS
RECONNAISSANCE

Field Assessment Structural Team (FAST) Handbook
Version 1.2

Released August 27, 2019

Authored by:

Tracy Kijewski-Correa, University of Notre Dame, StEER Director

Khalid Mosalam, University of California, Berkeley, StEER Associate Director for Seismic Hazards

David O. Prevatt, University of Florida, Associate Director for Wind Hazards

Ian Robertson, University of Hawai'i at Manoa, Associate Director for Coastal Hazards

David Roueche, Auburn University, Associate Director for Data Standards

Note that StEER is responding to events while its policies, protocols and membership are still in active development. All policies, procedures and protocols in this handbook should be considered preliminary and will be refined with community input as part of StEER's operationalization throughout 2019.

“Detailed assessments will typically be easier to perform on heavily damaged structures (since the structural system is more easily visible), but to avoid **biased sampling**, any detailed assessment of a heavily damaged building should be followed up by a detailed assessment, as best as possible, of a nearby building with less damage if present.”

Disaster Footprint = Study Area

Census Block Footprint

14,803 Census Blocks
834 Census Block Groups

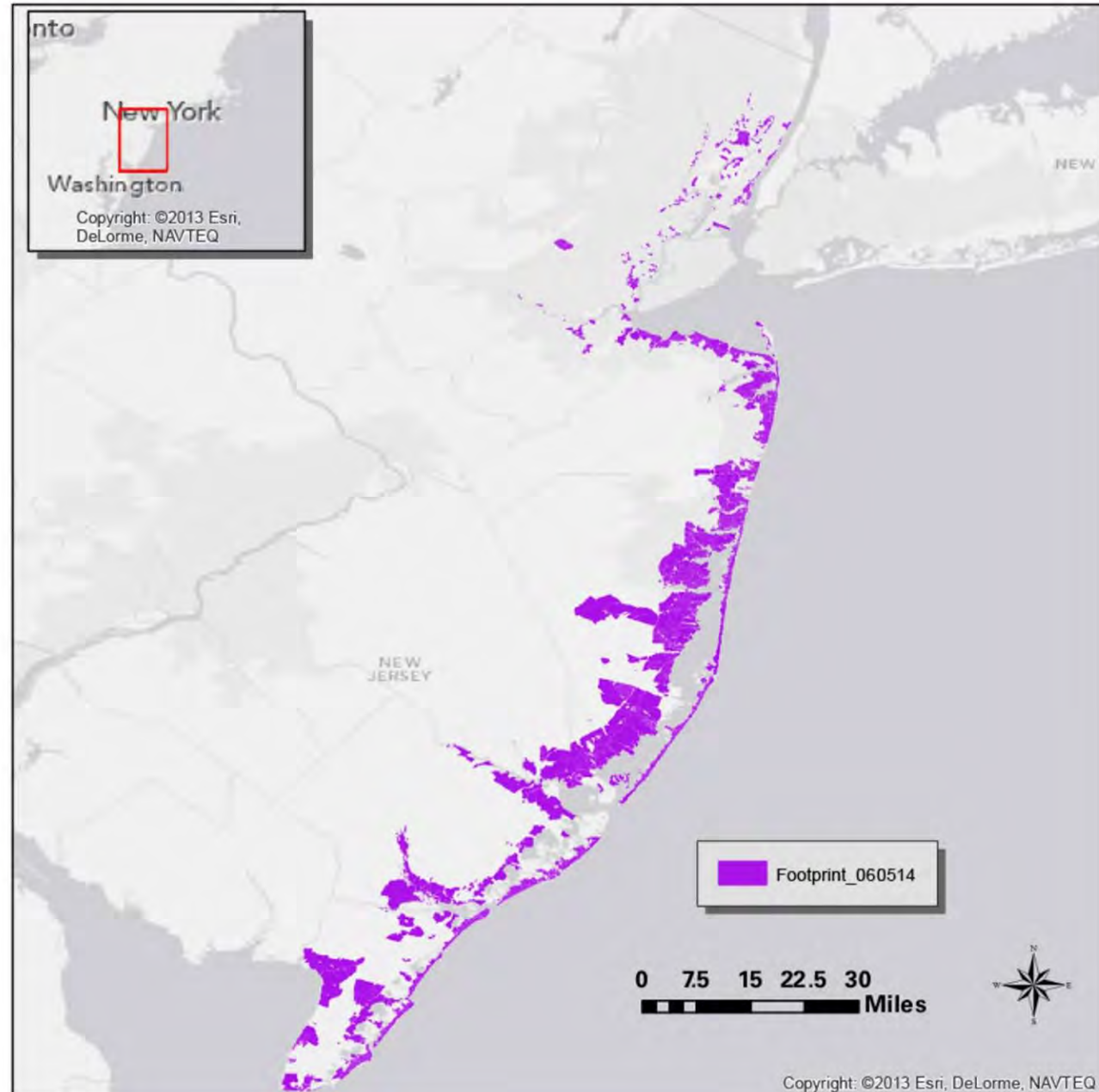
Composed of:

723,833 Individuals
292,441 Households
425,628 Housing Units

A **housing unit** is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.

A **household** consists of all the people who occupy a housing unit. A house, an apartment or other group of rooms, or a single room, is regarded as a housing unit when it is occupied or intended for occupancy as separate living quarters; that is, when the occupants do not live with any other persons in the structure and there is direct access from the outside or through a common hall.

A household includes the related family members and all the unrelated people, if any, such as lodgers, foster children, wards, or employees who share the housing unit. A person living alone in a housing unit, or a group of unrelated people sharing a housing unit such as partners or roomers, is also counted as a household. The count of households excludes group quarters. There are two major categories of households, 'family' and 'non-family'.





SANDY'S IMPACT

KEITH
JONES

JACQUELINE
LONDON

 **10**
82° 5:54

SYSTEMATIC SAMPLING AND SOLVING THE RIGHT PROBLEM

National Center for
Disaster Preparedness
EARTH INSTITUTE | COLUMBIA UNIVERSITY

 **NYU**

COLLEGE OF GLOBAL
PUBLIC HEALTH

RUTGERS
School of Social Work

DISASTER EXPOSURE,
HEALTH IMPACTS,
ECONOMIC BURDEN,
AND SOCIAL
WELL-BEING



PERSON REPORT

The Sandy Child & Family Health Study

BRIEFING REPORT NO.2, APRIL 2015
PLACE - PERSON - PROBLEMS - PROGRESS

National Center for
Disaster Preparedness
EARTH INSTITUTE | COLUMBIA UNIVERSITY

 **NYU**

COLLEGE OF GLOBAL
PUBLIC HEALTH

RUTGERS
School of Social Work

EVACUATION
DECISIONS,
HOUSING ISSUES,
AND SENSE OF
COMMUNITY



PLACE REPORT

The Sandy Child & Family Health Study

BRIEFING REPORT NO.1, APRIL 2015
PLACE - PERSON - PROBLEMS - PROGRESS



3. COMMUNICATING COMPLEX INFORMATION



NEWS

Floodplain Building Regulations Adopted At Contentious City Council Meeting

City Council members passed the new building rules after hours of debate

[Davis Land](#) | April 4, 2018, 1:12 PM (Last Updated: April 4, 2018, 4:19 PM)





- Engineers often receive **little or no training** in how to work with or communicate with communities.
- This must change. The knowledge you hold is of **great importance to the public** and their **health, safety, and economic vitality**.
- Know your audience.
- Build diverse “coalitions of the concerned.”
- Communicate clearly, consistently, and through trusted messengers.
- Your expertise matters! But remember that statistics can overwhelm people. Stories are what stick.



4. RECOGNIZING THE EMOTIONAL CHALLENGES OF THE WORK





- Disasters wreak havoc on communities and can make research / structural engineering response in these settings emotionally challenging.
- This is *not* just a “social science issue” – engineers and physical scientists are often first on the scene after a disaster and may be witness to death and destruction.
- There are **strategies** to help prepare and cope with emotionally challenging research



Broader Ethical Considerations for Hazards and Disaster Researchers

Collecting and Sharing Perishable Data

Conducting Emotionally Challenging Research

Cultural Competence in Hazards and Disaster Research

Disaster Mental Health

Indigenous Sovereignty in Disaster Research

Institutional Review Board (IRB) Procedures and Extreme Events Research

Positionality in Hazards and Disaster Research and Practice

Public Health Implications of Hazards and Disaster Research

Reciprocity in Hazards and Disaster Research

Social Vulnerability and Disasters

Understanding and Ending Gender-Based Violence in Fieldwork

CONVERGE Training Modules

converge.colorado.edu/resources/training-modules/

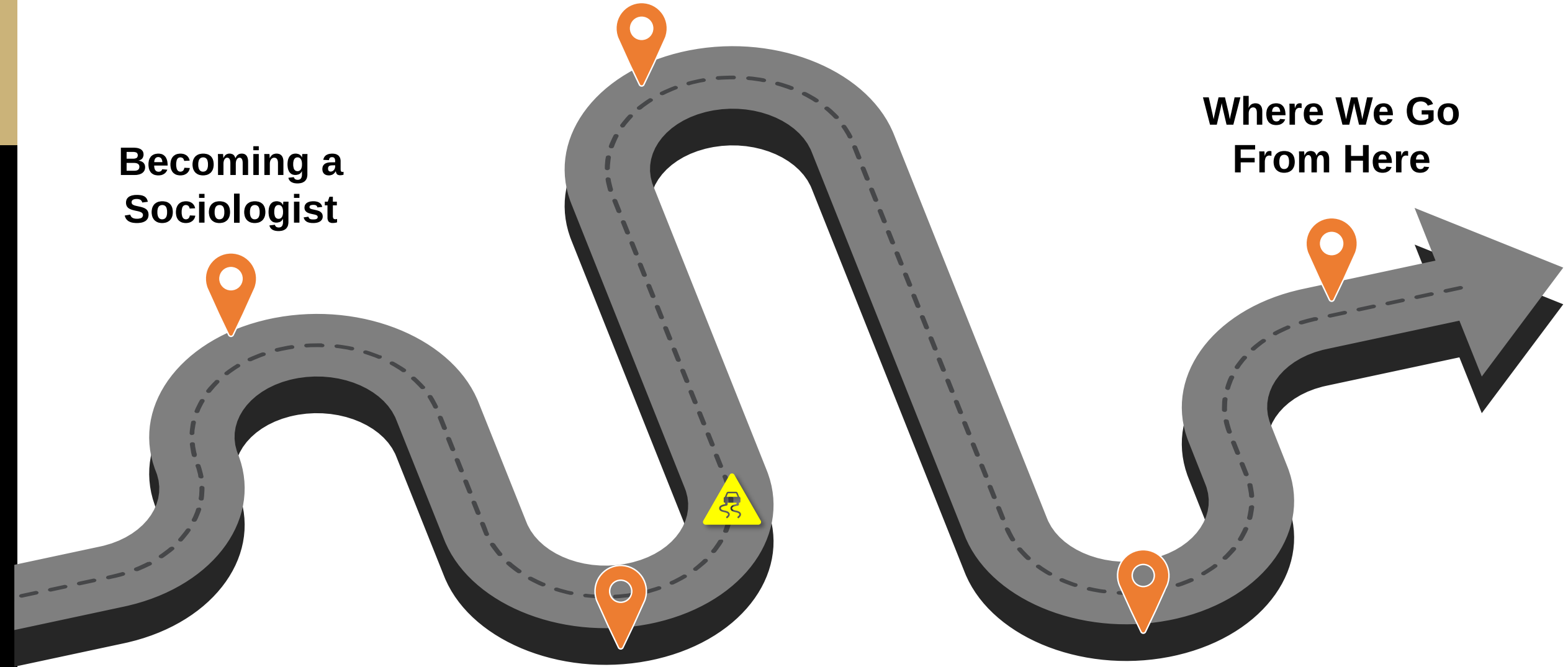
**Finding Points of
Connection**

**Becoming a
Sociologist**

**Where We Go
From Here**

**Working with
Engineers**

**Identifying Untapped
Potential**





University of Colorado **Boulder**

THANK YOU



Questions? Contact:
Lori Peek, Ph.D.
Lori.Peek@Colorado.edu

hazards.colorado.edu
converge.colorado.edu

Subscribe Now



NSF Award #1635593 and #1841338



Natural Hazards Center



CONVERGE