

DIGITAL HEALTH

Empower ADRD prevention/treatment at scale

**The Good, the Bad, and
the Future**

Diane J. Cook

Regents Professor
School of Electrical Engineering
& Computer Science
Washington State University

Washington State University

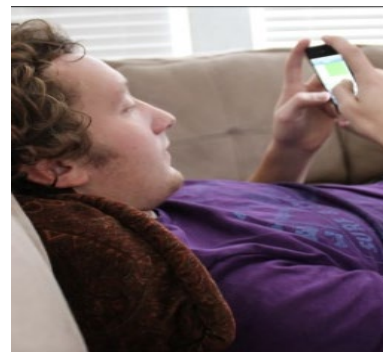
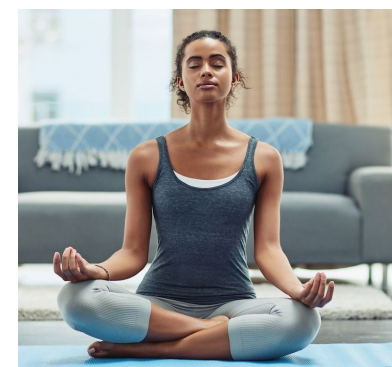
djcook@wsu.edu
casas.wsu.edu

Assessment

- **The Good**
 - Clinical measures and diagnostic categories
 - Cross-sectional, longitudinal, controlled (scripted in lab), semi-controlled (scripted in home)



- **The Need**
 - In the wild

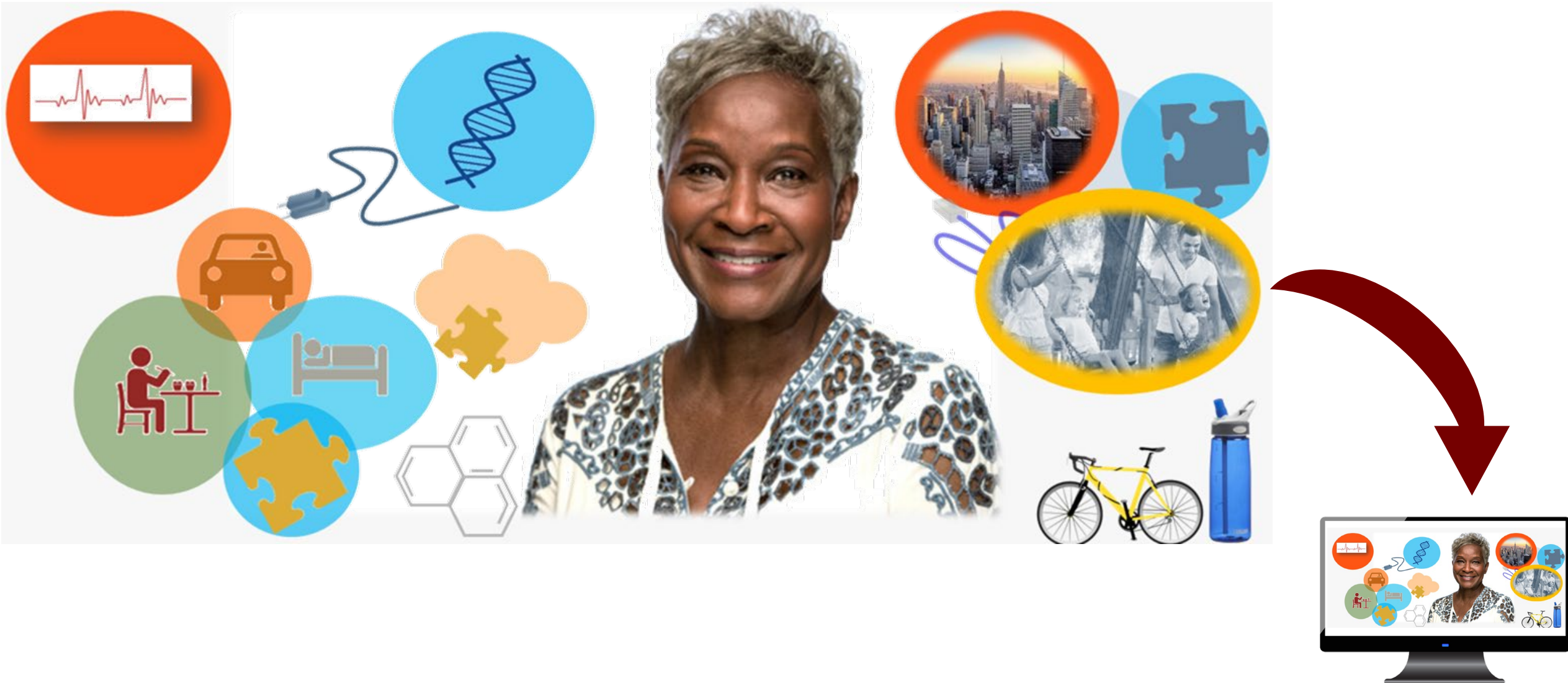


Ground Truth

- Traditional laboratory measures
- **The Good**
 - Recreate in mobile format
- **The Need**
 - Think outside the box



Digital Twin



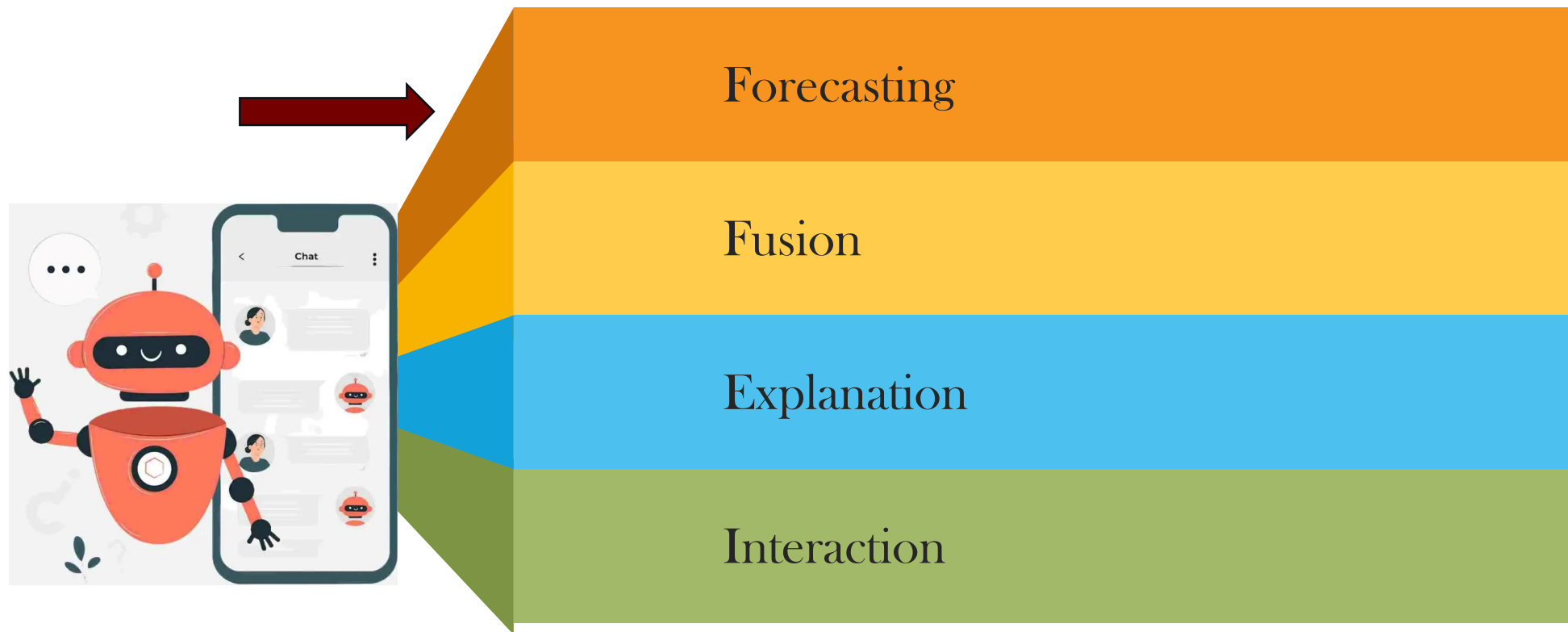
Personalized Intervention

From observation
and
assessment



To behavior-aware
intervention
and
evaluation

LLMs



Summary: EMPoWer at Scale

- **E**xpand ground truth assessment
- **M**odel digital twin in the wild
- **P**ersonalize context-aware interventions
- **W**ield LLM transformer architectures

