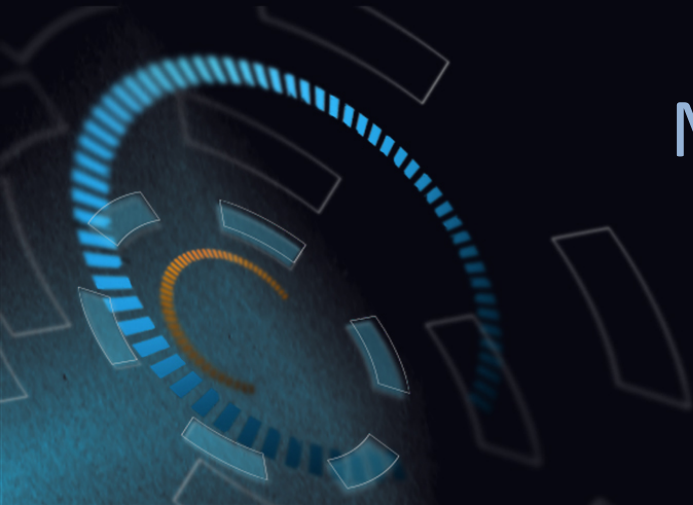


Managing Uncertainty through Human-Computer Collaboration

Missy Cummings

Duke University

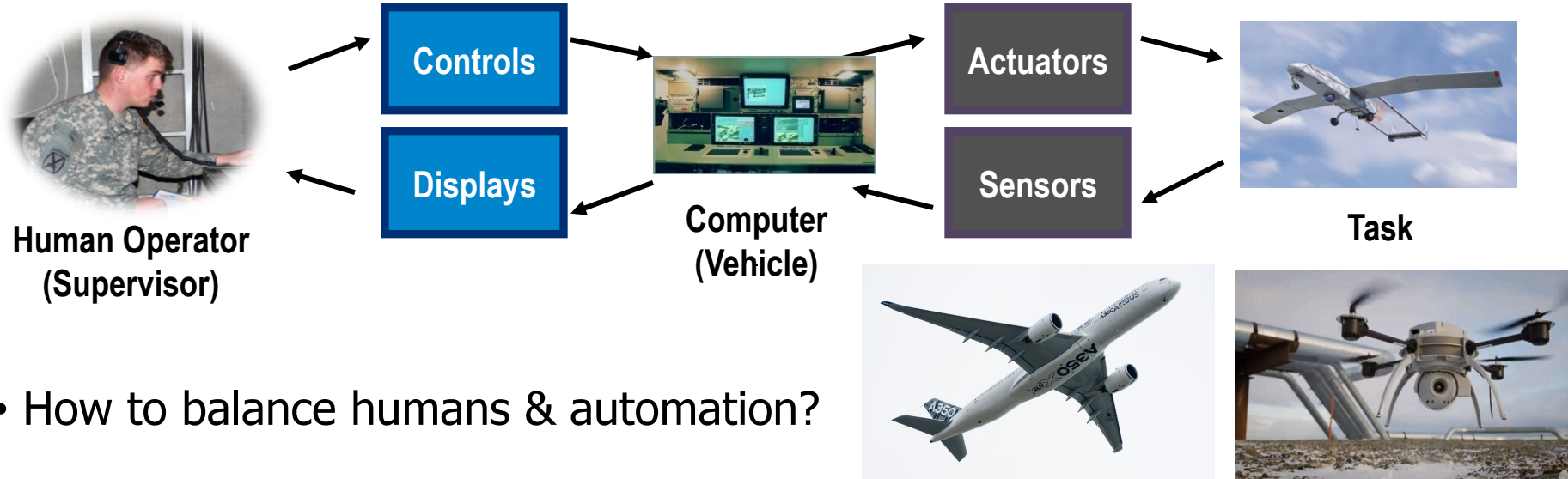


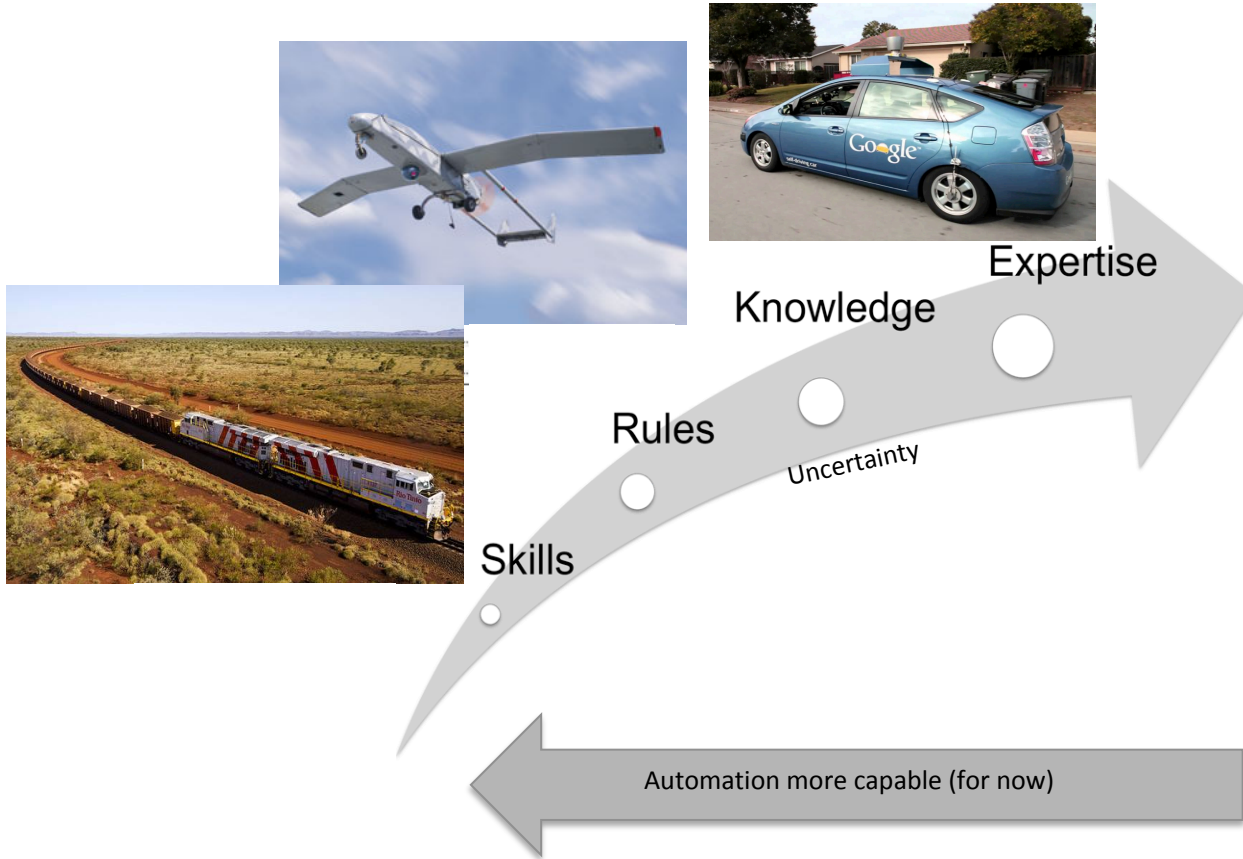


HAL

Human Supervisory Control

- Complex, time-pressured, high risk domains
- Systems require embedded automation/autonomy with human supervision





Understanding human strengths and limitations



Understanding AI strengths and limitations



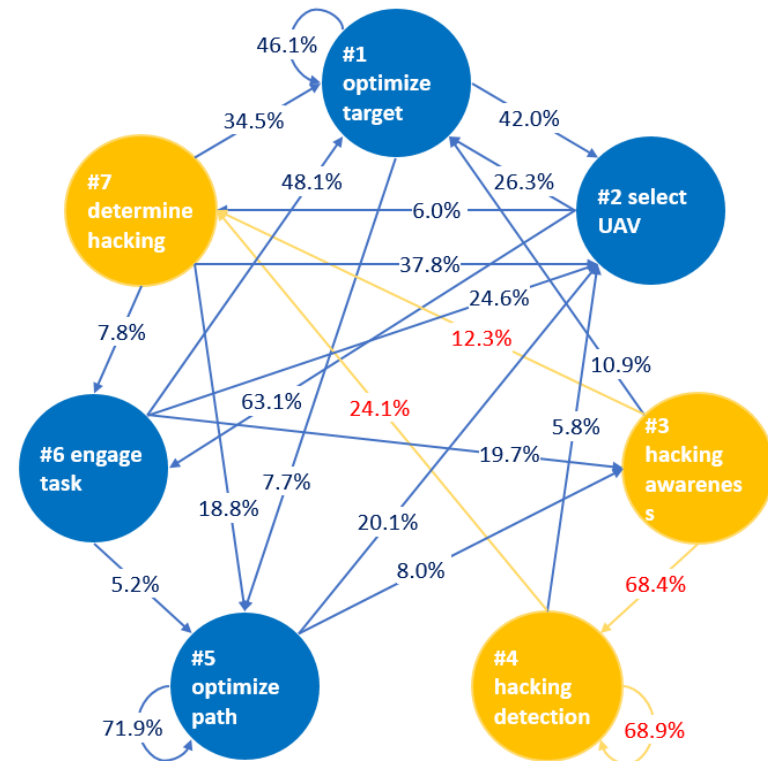
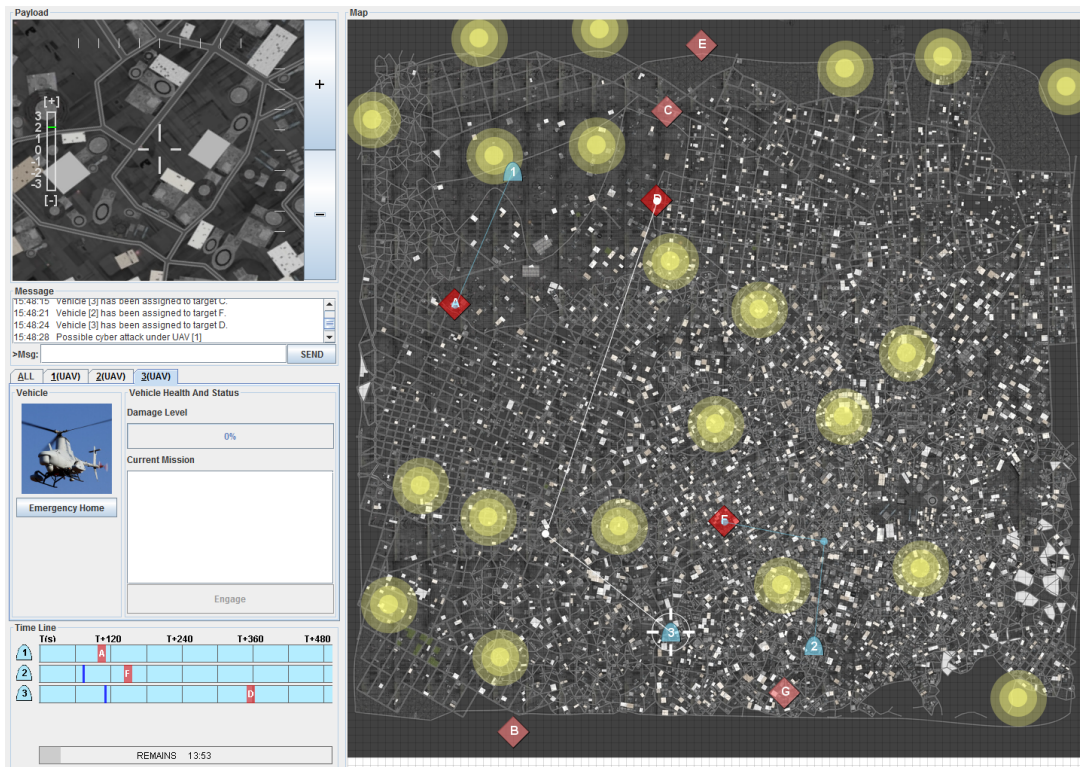
Understanding AI strengths and limitations



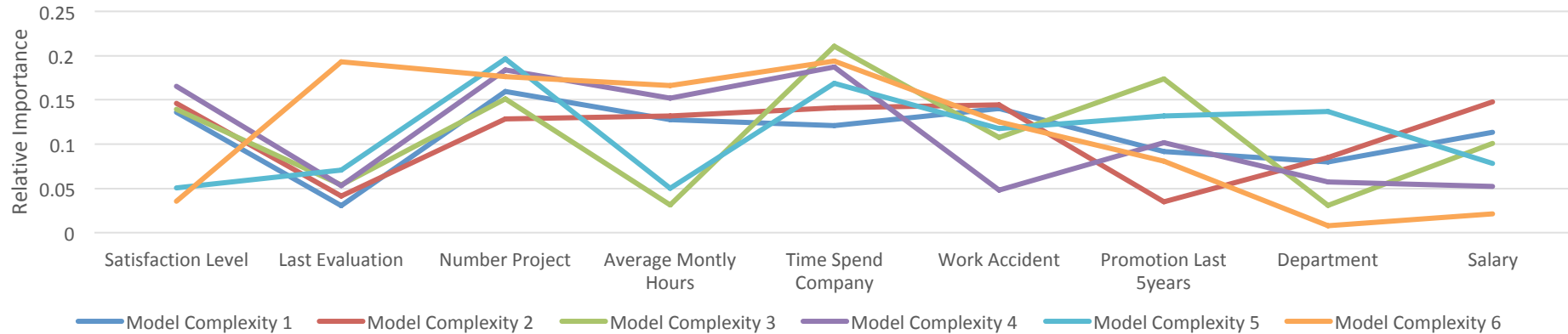
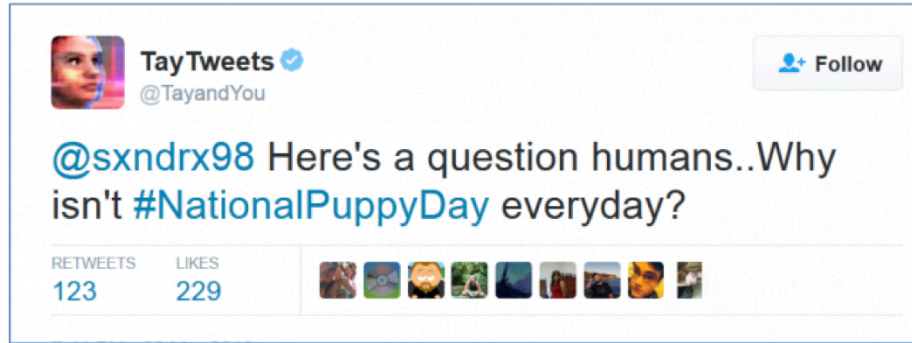
Moving towards joint AI-human systems



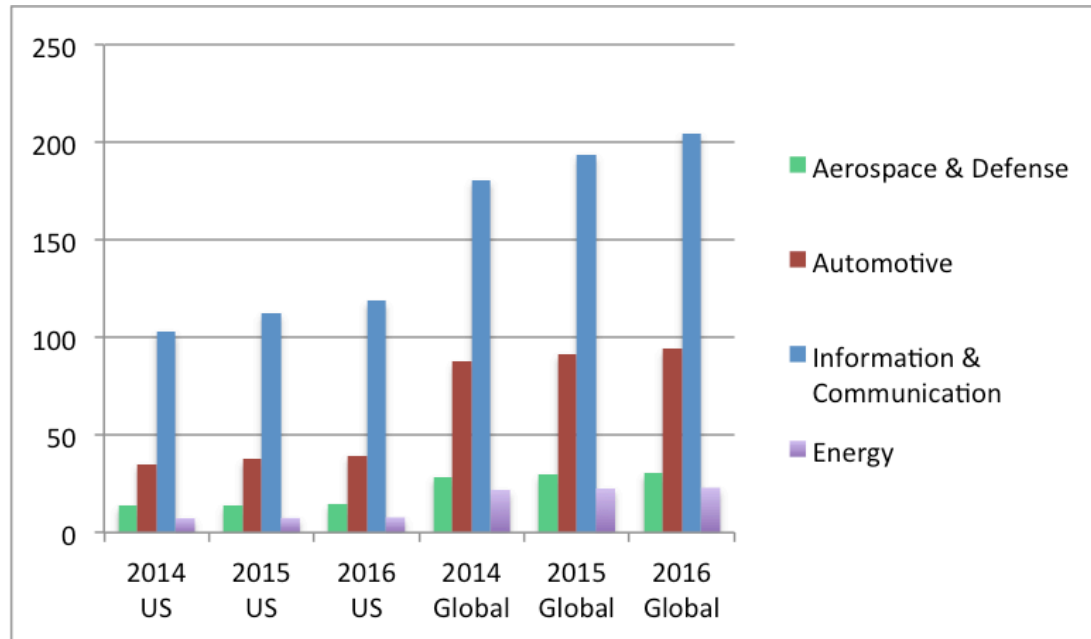
The need for better human models



The need for explainable AI



- The need for independent testing and evaluation of safety-critical systems
- Government R&D funding
- People, people, people



Thank You!