US AI Roadmap Process

- ## W1: Integrated Intelligence
  - *Chairs: Marie desJardins and Ken Forbus*
  - Understanding the mind
  - Composing intelligent capabilities
  - Open repositories of knowledge
- ## W2: Interaction (Jan 8-9)
  - *Chairs: Kathy McKeown and Dan Weld*
  - Interactions that matter
  - Trust and responsibility
  - People interacting online

- ## W3: Learning and Robotics (Jan 17-18)
  - *Chairs: Tom Dietterich and Fei-Fei Li*
  - Deeper learning
  - Integrating statistical learning and symbolic representations
  - Diversified learning modalities
- ## AAAI Town Hall (Jan 28)
- ## Draft of final report ready for reviews and feedback (February)

Societal Drivers

1. **Boost Health and Quality of Life:** Prevention of illness and elderly ailments, mental/behavioral health, reducing cost (25+% feasible) while improving care, remote patient care.

2. **Lifelong education and training:** Personalized, scalable education support. Improve the AI knowledge and skills of people who will lose jobs

3. **Reinvent Business Innovation:** Evidence-driven companies, which would increase productivity and value and open new sectors/products. **Lead in Competitiveness -- Keep US #1 in Information Technology:** Training next generation of AI specialists, data scientists, and software engineers (difficult race with China)

4. **Accelerate Scientific Discovery and Technological Innovation:** Biomedical, environmental, new materials, personalized services, robotics, self-driving cars, etc.

5. **Transform Cyber Defense and Security:** AI driven systems can compensate for a relatively small cyber defense workforce, adversarial reasoning

Other Topics To Be Mentioned in the Report

- What is AI
- Who should speak for AI (too many so-called experts who have little expertise/credibility)
- Overview of AI strategies/investments in other countries
- The need for sustained investments to attack core AI challenges
  - Past US government investments in AI have payed off
- AI ethics
  - AI automation and the future of jobs
  - AI safety
- Workforce training
  - Meeting the needs for AI experts (industry, government)
  - Creating capability at universities

Reference Documents

- US National AI R&D Strategic Plan, 2016
  - https://www.nitrd.gov/news/national_ai_rd_strategic_plan.aspx
- CCC Robotics Roadmap, revised 2016:
  - https://cra.org/ccc/wp-content/uploads/sites/2/2016/11/roadmap3-final-rs-1.pdf
- 100 year study of AI, 2016 report:
  - https://ai100.stanford.edu/sites/default/files/ai100report10032016fnl_singles.pdf
- AI strategies/investments abroad:
  - https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd