

Systems Analysis: The Role of Scientists, Engineers, and other Technical Fields in Policy Making

Jason Reinhardt and Todd West



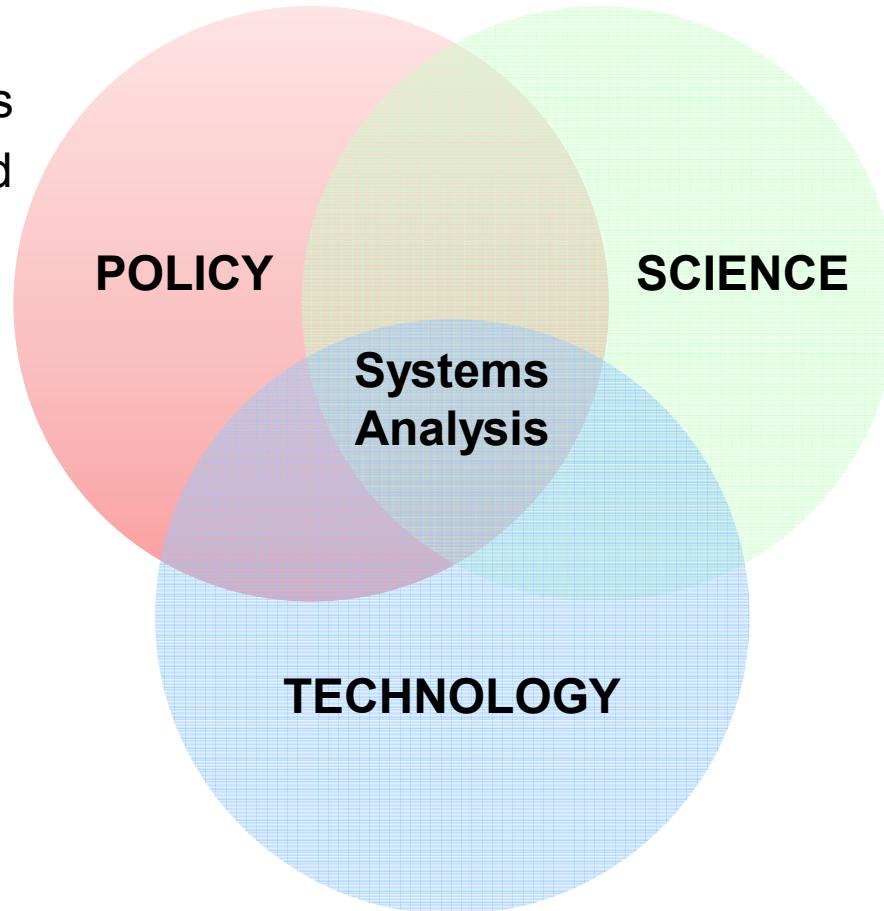
*Exceptional
service
in the
national
interest*



Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000. SAND NO. 2011-XXXX

Systems Analysis is an analytical approach for understanding complex problems, typically at the intersection of science, technology, and policy

- Complex, multi-dimensional problems
- Mushy, poorly defined
- Communication with non-technical people essential
- *Actionable* insights



- Sound scientific and engineering cornerstone for decisions
- Multi-disciplinary

- 'System' typically has technology component
- Need to understand all the salient elements, not just technology

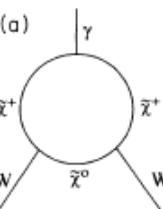
I became a systems analyst largely because I wanted to branch out to new areas and see the impact of my work

College/PhD: Learn more and more about less and less

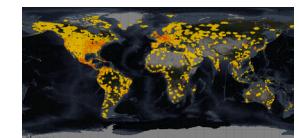
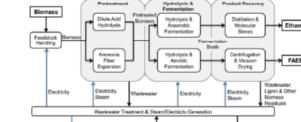
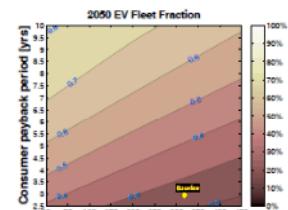
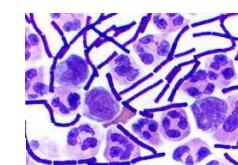
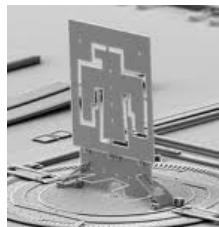


B.S. Physics

Caltech



PhD Particle Physics UT Austin



What makes a good analyst?

- Willingness to question assumptions and determination to change things for the better
- Desire for tangible impact
- Willingness and enthusiasm for taking on ill-formed questions
- Willingness to take on new challenges
- Ability and desire to come up to speed quickly in new areas and regularly climb learning curves
- Persistence and tenacity in pursuit of good ideas
- Thick skin
- Inquisitiveness
- Unique or individualized approach to solving problems
- Passion and interest
- Integrity and honesty, especially with stakeholders
- Initiative
- Strong technical background

What steps can students take to get into the field?

- Demonstrate diversity of interest
- Take classes outside of your field of study
- Find topics you are passionate about and pursue these
- Talk to us:

Jason Reinhardt
jcreinh@sandia.gov

Todd West
thwest@sandia.gov