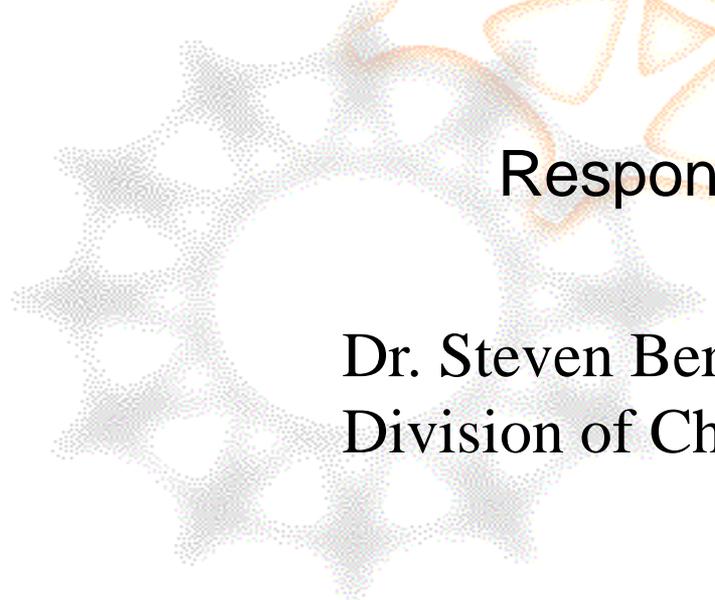




Food Systems Report

Response and Discussion



Dr. Steven Bernasek, Division Director
Division of Chemistry

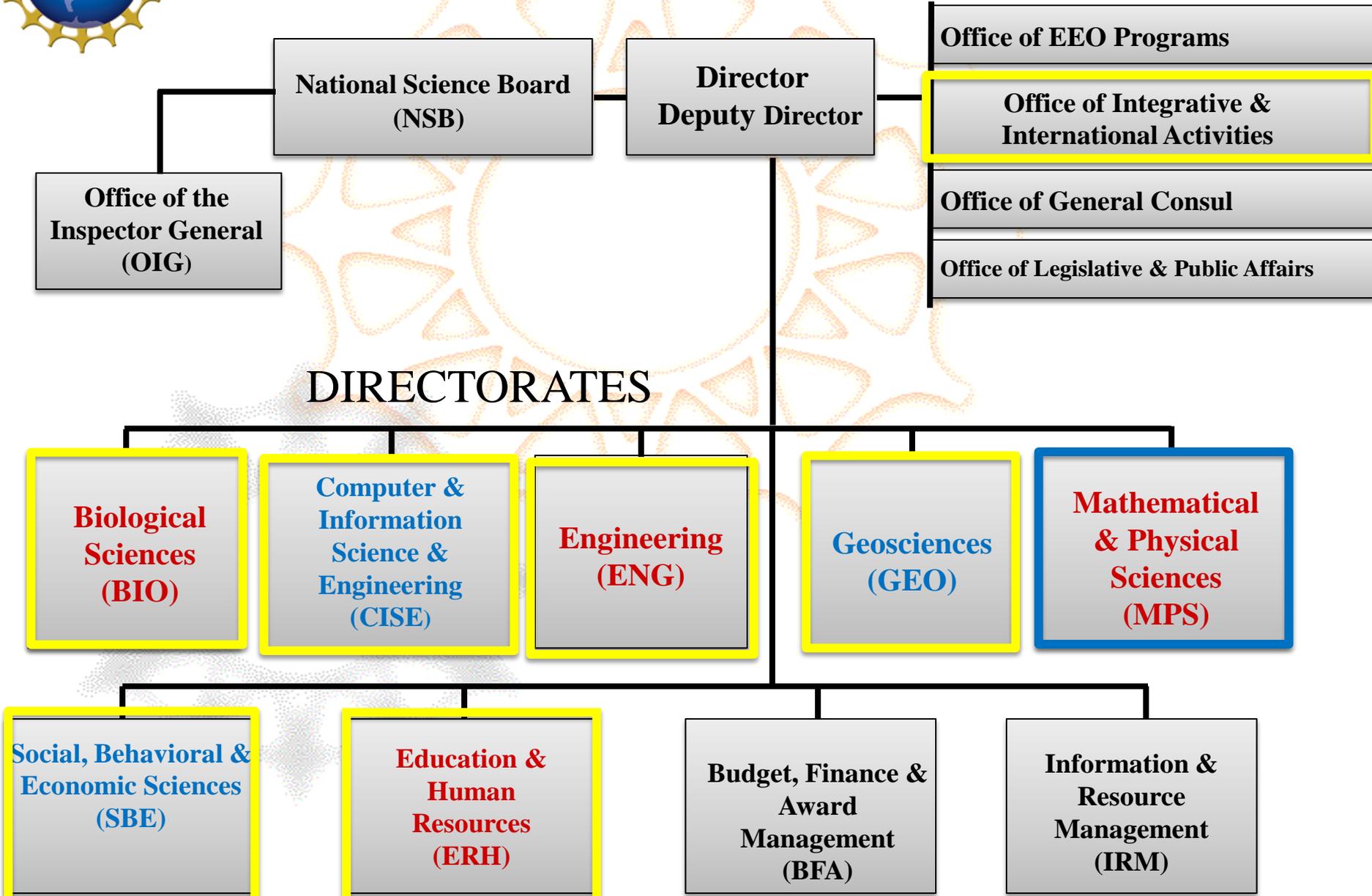


Food, Energy, Water

- Solutions require an integrative approach
- Foundation-wide interest, aligned with issues of systems and complexity (BIO/GEO/ENG/CISE)
- EROEI analysis
- MPS obviously, but also SBE



National Science Foundation





Report of the MPSAC Subcommittee

- ➔ Report July 24, 2014 (somewhat chemistry-centric)
- ➔ Identified 6 “bottleneck areas”
 - 1) Ensuring a sustainable water supply for agriculture
 - 2) Closing the loop for nutrient life cycles
 - 3) Crop protection
 - 4) Innovations to prevent waste of food and energy
 - 5) Sensors for food security and safety
 - 6) Maximizing biomass conversion to fuels, chemicals, food, and materials



Cross-cutting themes in MPS

- New catalyst materials and catalytic processes
- Chemical separations
- Interfacial science
- New materials and processes (food, energy, water)
- New sensors and analysis methods
- Renewable energy
- Computational science
- Education and training



Underway in FY15

- Foundation-wide DCL (systems emphasis)
- CHE DCL (focus on fundamental science addressing cross cutting areas)
- Supplements
- Workshops
- EAGER proposals
- Planning grants, Idea Lab?

Colby Foss, Division of Chemistry,
MPS rep for FEW



Advice from the AC?

