



Models of Infectious Disease Agent Study (MIDAS) Evaluation

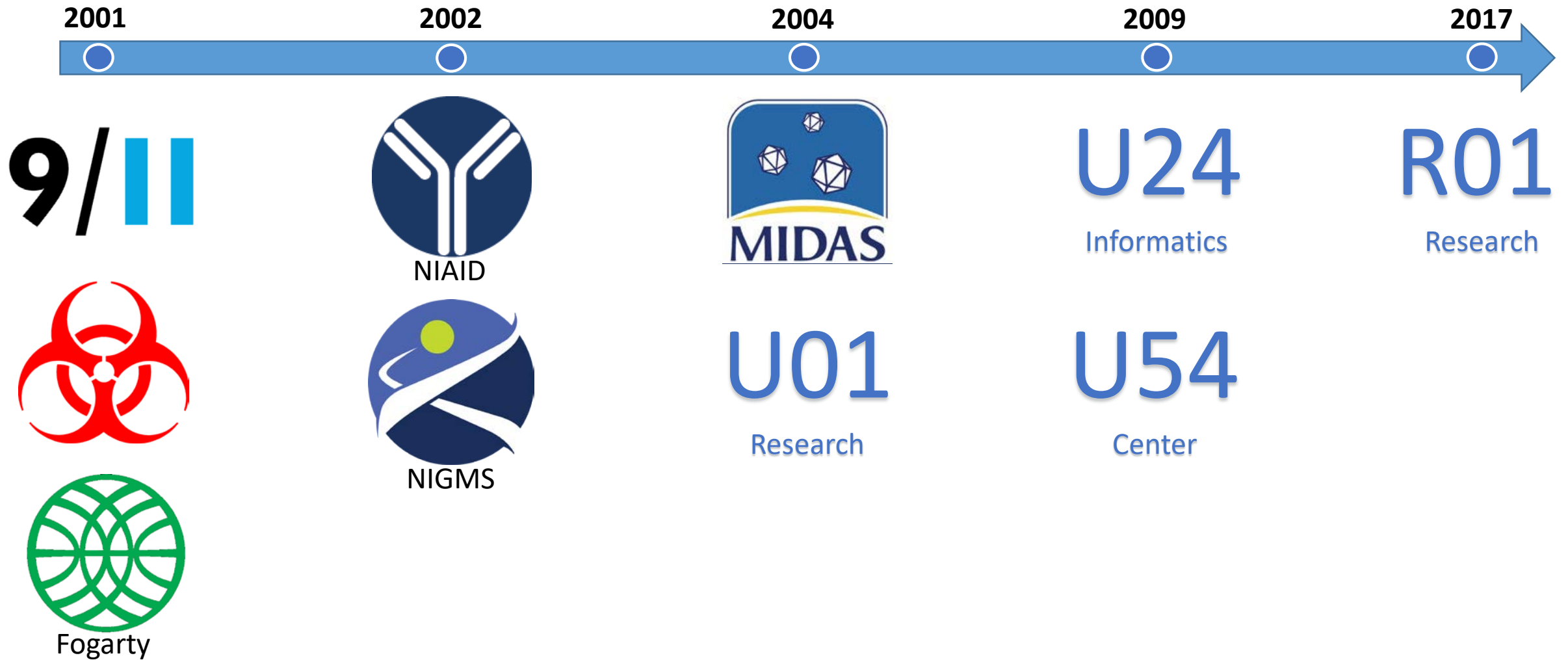


Nathan Moore, Ph.D.

Office of Program Planning, Analysis, and Evaluation



MIDAS Timeline



MIDAS Mission and Structure

- MIDAS has a three-component mission:
 - Research
 - Education, Training, and Outreach
 - Policy and Decision Support
- MIDAS Administration (2004-2014)
 - Steering Committee
 - Executive Committee
- MIDAS Network (2004-2014)
 - Centers of Excellence (U54s; ≈\$5.5M)
 - Informatics Resource (U24; ≈\$2M)
 - Research Projects (U01s; ≈\$5M)



MIDAS Evaluation



National Institute of
General Medical Sciences

IDA

SCIENCE AND
TECHNOLOGY
POLICY INSTITUTE

- In May of 2015, NIGMS contracted IDA STPI to do an evaluation of MIDAS as it existed from 2004 to 2014.
 - Research Outcomes
 - Infrastructure Outcomes
 - Education, Training, and Outreach Outcomes
 - Policy Outcomes
- MIDAS had existed for over 10 years at a cost of over 10 million dollars per year.
- The Office of Program Planning, Analysis, and Evaluation (OPAE) was very small.



Research Outcomes

- 885 MIDAS publications and 375 non-MIDAS NIH publications.
- Bibliometric Analysis
 - U54s were as productive as, and more impactful than, U01s and non-MIDAS NIH awards.
 - U01s were as productive and impactful as non-MIDAS R01s.
- Topic Modeling
 - 10 topics were identified as differentiating MIDAS research from non-MIDAS research.
 - 2 of these 10 topics were deemed particularly novel by an expert panel.
 - Disease modeling using serotype immunity data
 - Epidemic forecasting using non-traditional data sources



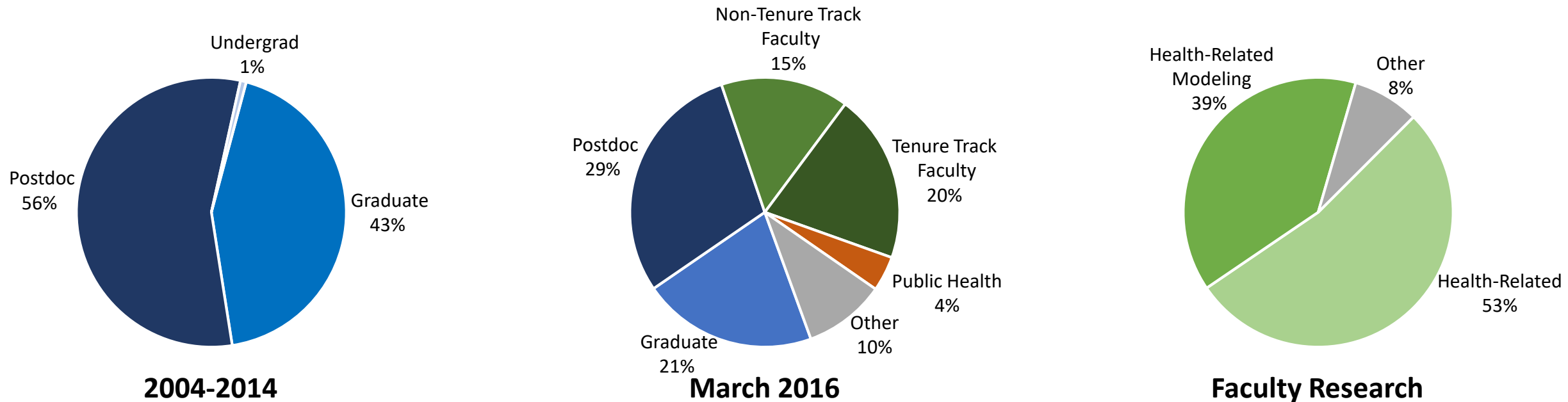
Infrastructure Outcomes

- A major MIDAS objective is the development and refinement of models, tools and other resources for infectious disease modeling.
- From 2004-2007 the focus was on supercomputing resources.
- From 2008 onward the focus has been on collection and sharing within the MIDAS network.
 - www.epimodels.org
- MIDAS resources are largely decentralized.
 - Data sharing is highly valued.
 - Models and tools sharing is not so highly valued.



Education, Training, and Outreach Outcomes

- 143 of the 151 students and postdocs involved in the MIDAS program from 2004 to 2014 were tracked through March of 2016.



- Outreach activities were inconsistently reported.
 - Over half were presentations and exhibit booths at conferences.



Policy Outcomes

- MIDAS network designed to aid in policy and decision making, especially in the event of a disease outbreak.
- MIDAS worked with various public policy officials from places such as CDC, BARDA, DoD, NIAID, state and local public health departments.
- 60 instances of policy-related activities were identified, half of which were publications authored by MIDAS PIs and public policy officials.
- Difficulties in accessing public health data due to data-sharing restrictions.
- “End-to-end data to decision support” needed over ad-hoc.



Summary of Findings

- The MIDAS program has produced high quality research of infectious disease modeling.
- MIDAS resources are shared within the network, but in a suboptimal and decentralized way.
- MIDAS has produced impressive education and training outcomes, but outreach outcomes were difficult to assess.
- A fine-tuned data to decision making paradigm is necessary to fully incorporate modeling into the policy arena.



MIDAS Will Return in September Council...

- Dr. Susan Gregurick will discuss future MIDAS FOAs.
 - The current U01, U24, and U54 MIDAS mechanisms will expire in 2019.
- Questions?

