

The background of the image features a large, light blue, stylized logo of the United Nations, which is a world map composed of curved segments. Centered on this background is the acronym "NORDP" in a bold, dark blue, sans-serif font. The letter "O" is replaced by a dark blue icon of a globe with white latitude and longitude lines and a small satellite or probe orbiting it.

NORDP

National Organization of
Research Development Professionals

Employing Tactical and Strategic Approaches to Help Faculty Maximize Broader Impacts

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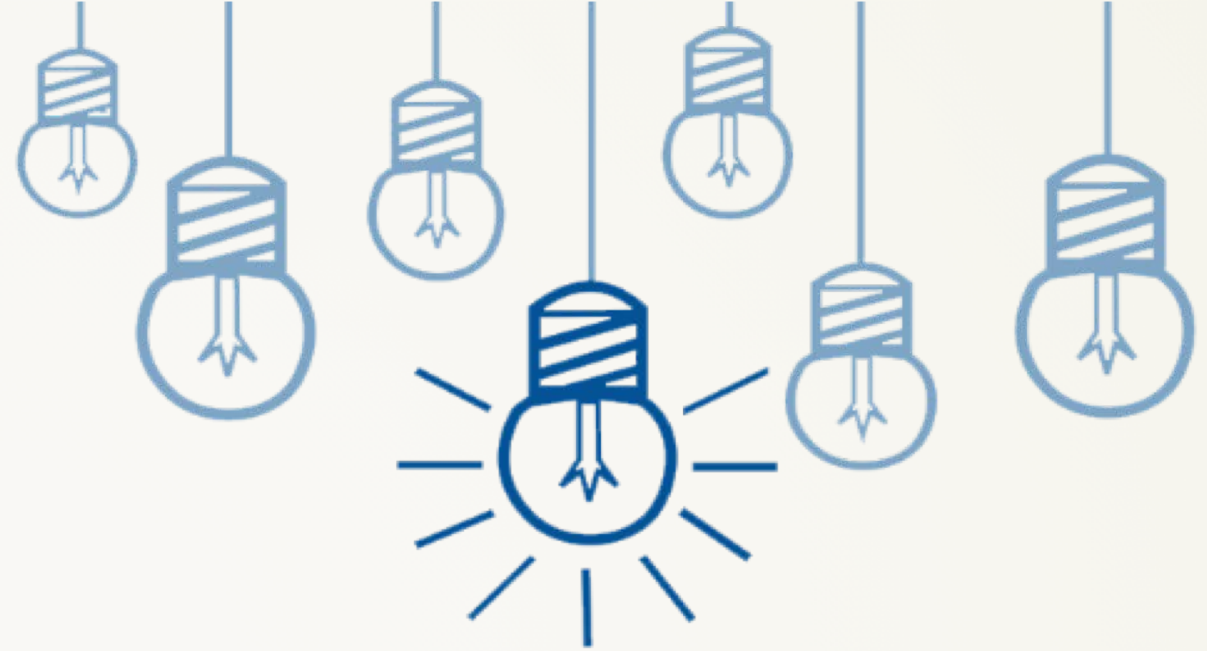
Director of Proposal Development, University of Nebraska-Lincoln

Setting The Stage

- **Explore how different types of institutions support Broader Impacts**
- **Share ways to help individuals conceptualize and develop compelling Broader Impacts plans**
- **Consider how institutional capacity and structure yields different resource offerings**

What are Broader Impacts?

Activities associated with sponsored research that benefit society, our nation, and our world.



Full participation of women, persons with disabilities, and underrepresented minorities in STEM

Improved well-being of individuals in society

Enhanced infrastructure for research and education

How to Accomplish Broader Impacts

Through:

- **The research/project itself**
- **Activities directly related to the research/project**
- **Activities complementary to the research/project**

Describing Impact

National Leadership Grants:
Does the project address current needs of the museum field and/or have the potential to advance practice in the profession?

**Institute of Museum
and Library Services**

R25 Education Projects:
Used in a wide variety of ways to promote an appreciation for and interest in biomedical research, provide additional training in specific areas, and/or to develop ways to disseminate scientific discovery into public health and community applications.

**National
Institutes for**

#NORDP2019

Providence, RI

April 29 – May 1, 2019

NIFA:
The integration of research, education, and extension speeds up the process of generating, translating, and transferring new technology and knowledge into practical applications for adoption by a wide range of producers and the general public.

**US Department
of Agriculture**



AMERICAN MUSEUM OF NATURAL HISTORY



Making Intra-Institutional Connections to Maximize Broader Impacts

#NORDP2019

Providence, RI

April 29 – May 1, 2019



Organizational Overview

- 5 million annual visitors
- 200+ scientists
- 34+ million specimens in collections
- Confers Master in Arts of Teaching and PhD
- \$36m in scientific research expenditures

Supported Programs Administration

- Grants, Institutional Advancement, Government Relations, Finance, and Budget



AMERICAN MUSEUM OF NATURAL HISTORY

Mission-Driven Work

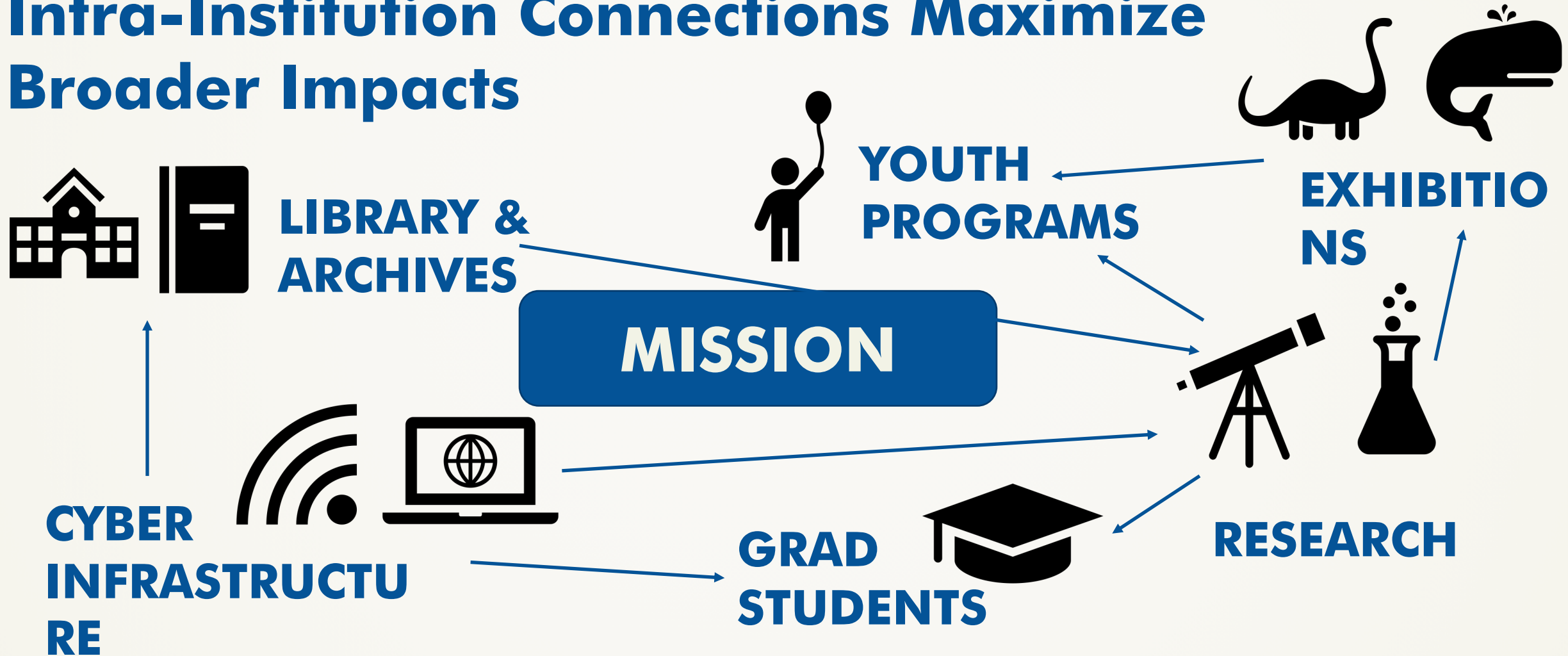
To discover, interpret, and disseminate --
through scientific research and education --
knowledge about human cultures, the natural
world, and the universe.





AMERICAN MUSEUM OF NATURAL HISTORY

Intra-Institution Connections Maximize Broader Impacts





AMERICAN MUSEUM OF NATURAL HISTORY

Case Study

**PI in Earth and
Planetary Sciences**

**New MAT
Graduates**

NYC Students



Takeaways and Lessons Learned

- **Create and support interdisciplinary partnerships**
- **Leverage other departmental efforts to support new Broader Impact activities**
- **Develop Broader Impact activities that are replicable and scalable**



Creating a Center
to address
Broader Impacts



Organizational overview



University of Michigan

#1 in research volume among U.S. public universities for NSF

\$1.55B in annual research expenditures overall

No central research development office...yet!

School of Education

One of 19 Schools and Colleges at U-M

Ranked #14 by U.S. News & World Report

Research Development Manager, Foundation Relations representative

CEDER

Seven full time staff and two faculty

#NORDP2019 Providence, RI April 29 – May 1, 2019



**The Center for Education Design, Evaluation,
and Research (CEDER) advances equity and
excellence in education by providing access to
high quality design, evaluation, and research
services through collaborations with university,
school, and community partners**



DESIGN SERVICES

- Curriculum development and alignment consultation
- Develop teacher training programs
- Provide professional development programs for teachers



EVALUATION SERVICES

- Qualitative & quantitative data analysis
- Logic modeling and theory development
- Survey and interview protocol design



RESEARCH DEVELOPMENT

- Strategic research advancement
- Facilitation of collaborations between investigators
- Communication of research and research opportunities



Proposal Stage

Available to think through and consult about broader impacts that are possible in the K-12 environment



Project Stage

Provide curriculum and instructional resource development services

Consult on teacher training programs

Create professional development programs for teachers



Dissemination Stage

Building online learning opportunities like Massive Open Online Courses (MOOCs)

Benefits of a CEDER Collaboration



Pls realize that a lot goes into thinking about Broader Impacts, regardless of K-12 involvement

CEDER consultation introduces thinking of the how, when, and the what can be taught

Broader Impact becomes the impact on teachers and students who now have access to high-quality, research-based resources on a high-demand topic

Evaluation services are available for Broader Impacts and other portions of proposals

CEDER was founded with support from the provost but expenses have shifted to sponsored projects, outside contracts, and other internal sources

Received hundreds of inquiries since 2014

Addition of RD professional in 2017

Next challenge is communicating our services to campus community

University of Nebraska-Lincoln

All-**N**

on Broader Impacts:

Supporting faculty success through local to global approaches

Tisha Mullen, Director of Proposal Development
University of Nebraska-Lincoln

Nathan Meier, Director of Research Development
University of Alabama at Birmingham

**Previously/soon-to-be Assistant Vice Chancellor for Research, University of Nebraska-Lincoln*

University of Nebraska-Lincoln

Organizational Overview

Comprehensive Research, Land-Grant University

- **Student Body: 26,079**
- **Faculty and Staff: 6,513**
- **Total Research Expenditures: \$308M**
- **Carnegie Classification: R1 Doctoral Universities, Highest Research Activity**
- **Affiliations: Association of Public and Land-grant Universities, Big Ten Academic Alliance, Big Ten Conference, EPSCoR**

Research Development (RD) at Nebraska

- **Centralized within the Office of Research and Economic Development (ORED)**
- **Team of seven RD professionals**

University of Nebraska-Lincoln

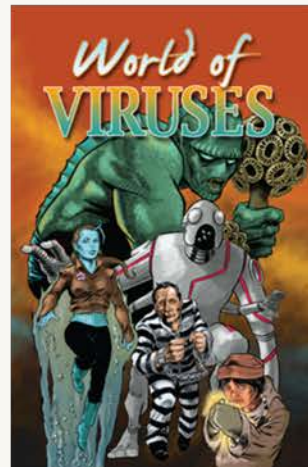
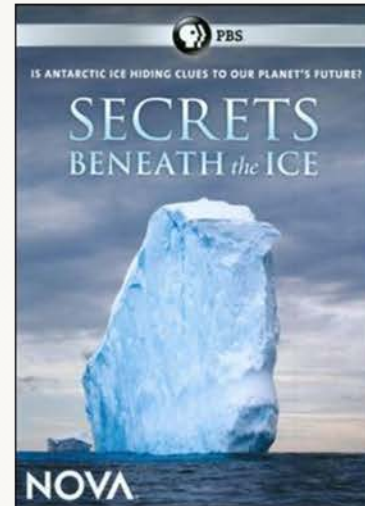
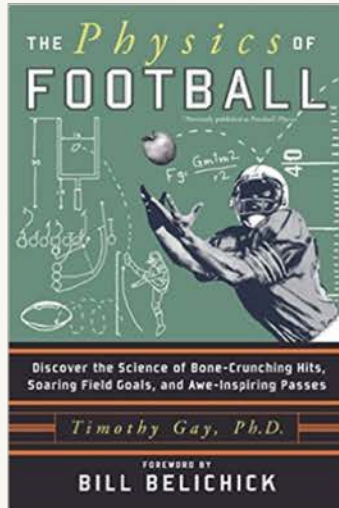
A matrix approach toward Broader Impacts support provides something for nearly everyone: Pre-K to gray, formal and informal, local to global.



The literature illustrates that single free-choice science education activities...have few significant effects. But recognizing that individuals select from these resources as if they were a smorgasbord and tailor their menus to their own interests and needs provides an important analytic and programming insight into free-choice science education.

– J.D. Miller, 2001

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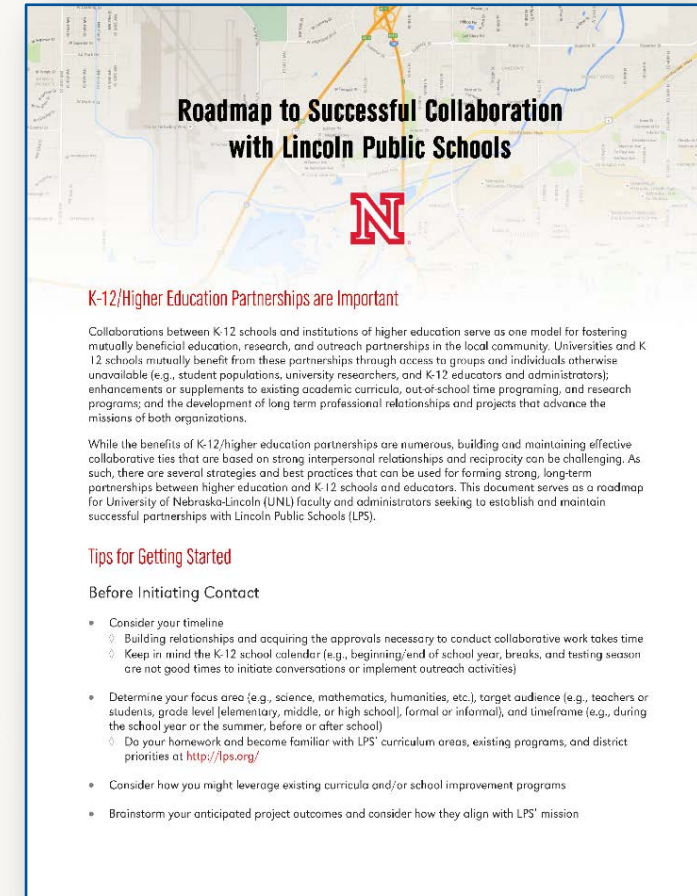


Purpose: Provide focused networking around Broader Impacts partnership opportunities

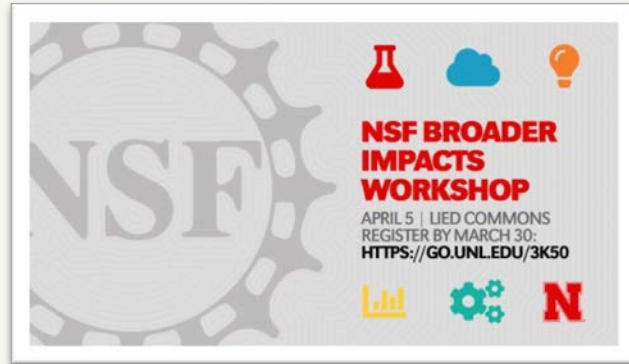
Audience: Community organizations, UNL faculty and staff

Format: Case study and panel presentations, breakout sessions, structured and unstructured networking

Partners: >40 local non-profits, Lincoln Public Schools, ORED



University of Nebraska-Lincoln



Purpose: Provide focused networking around Broader Impacts partnership opportunities

Audience: UNL faculty and staff

Format: Full- and half-day interactive training workshops, faculty panels

Partners: National Alliance for Broader Impacts, ORED



University of Nebraska-Lincoln

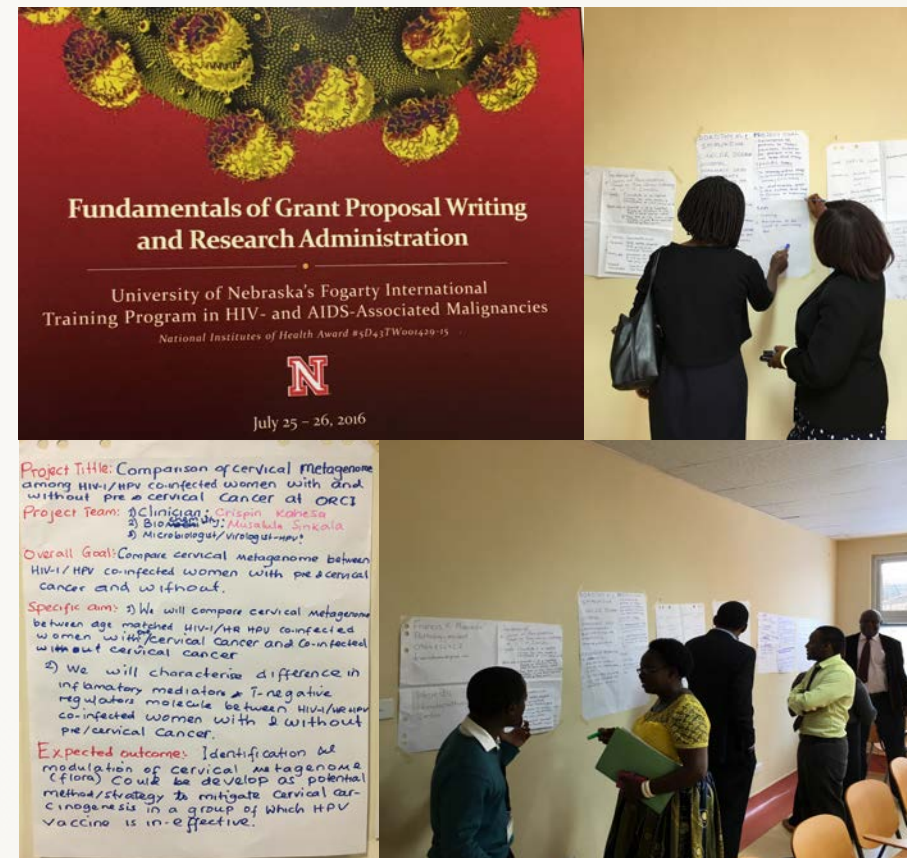
International Proposal Writing Workshops

Purpose: Share proven strategies to conceptualize project concepts and write winning proposals

Audience: Faculty and graduate students from Sub-Saharan Africa, Argentina

Format: Half-day to multi-day workshops

Partners: Fogarty International Center, National Cancer Institute, Nebraska Center for Virology, Ocean Road Cancer Institute, University of Zambia, ORED



University of Nebraska-Lincoln

Lessons Learned

- **There are no cookie-cutter approaches that guarantee success**
- **Leverage existing partnerships and infrastructure**
- **Help faculty explore opportunities in their field, focus on their passion(s), and develop Broader Impact plans accordingly**
- **Budget for Broader Impact activities (including evaluation) or explain extremely well why such costs are not included**
- **Make activities evidence-based**

Questions?

