NIOSH Translation Research Roadmap and Implementation

Paul A. Schulte, Ph.D.

Centers for Disease Control and Prevention
National Institute for Occupational Safety and Health

CDC Workplace Safety and Health

NIOSH

Workgroup

- Fred Blosser
- Chia-Chia Chang
- Pietra Check
- Thomas Cunningham
- Donald Eggerth
- Sarah A. Felknor
- Michael Flynn
- Christy Forrester
- Rebecca Guerin

- David Hard
- Heidi Hudson
- Jennifer Lincoln
- Lauralynn Taylor McKernan
- Leslie Nickels
- Preethi Lakshmi Rao Pratap
- Paul A. Schulte*
- Carol Merry Stephenson*
- Donna Van Bogaert

*Denotes Co-Chairs

In the last 20-30 years: new emphasis in science

- "Science could no longer be regarded as an autonomous space clearly demarcated from the 'others' of society, culture, commerce" (Nowotny et al 1996)

Mode-2 Science

Science generated in the context of application
(Gibbons et al 1994)

New emphasis in government

1993 Government Performance and Results Act (GPRA)

2003 Program Assessment Rating Tool (PART)

2010 GPRA Modernization Act (GPRAMA)

New emphasis in NIOSH

1994 Intervention Effectiveness Research Conference

1996 National Occupational Research Agenda (NORA)

1996 Intervention Effectiveness Research (NORA focus)

2004 Research-to-Practice (R2P)

2006 Second Decade of NORA

2011 Translation research program established in EID

2013 BNI workgroup—"impact science"

NIOSH Research to Practice (r2p) Program

Initiative focused on transfer and translation of knowledge, intervention, and technologies

into

effective practices and products which are adopted in the workplace.
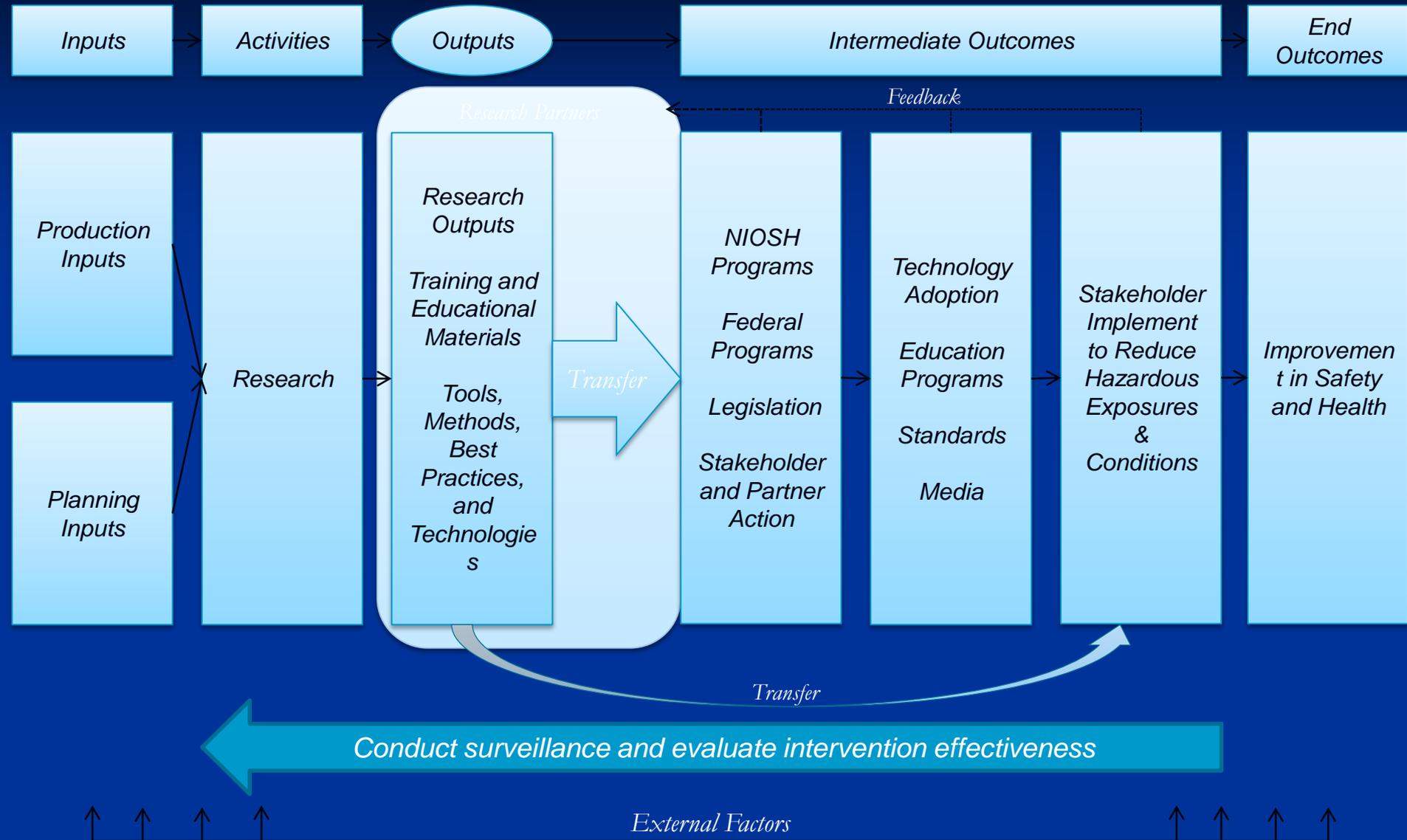
Goal:

Reduce injury and illness by increasing use of NIOSH outputs.

r2p drives impact

National Academies NIOSH Logic Model

Mission: To provide national and world leadership to prevent work-related illness and injuries

Inputs	Activities	Outputs	Intermediate Outcomes	End Outcomes

Research Partners

Feedback

Production Inputs						
Planning Inputs	Research	Research Outputs Training and Educational Materials Tools, Methods, Best Practices, and Technologies	*Transfer* →	NIOSH Programs Federal Programs Legislation Stakeholder and Partner Action	Technology Adoption Education Programs Standards Media	Stakeholder Implement to Reduce Hazardous Exposures & Conditions

Improvement in Safety and Health

Transfer

Conduct surveillance and evaluate intervention effectiveness

External Factors

REVIEWS OF
RESEARCH PROGRAMS OF
THE NATIONAL INSTITUTE
FOR OCCUPATIONAL
SAFETY AND HEALTH

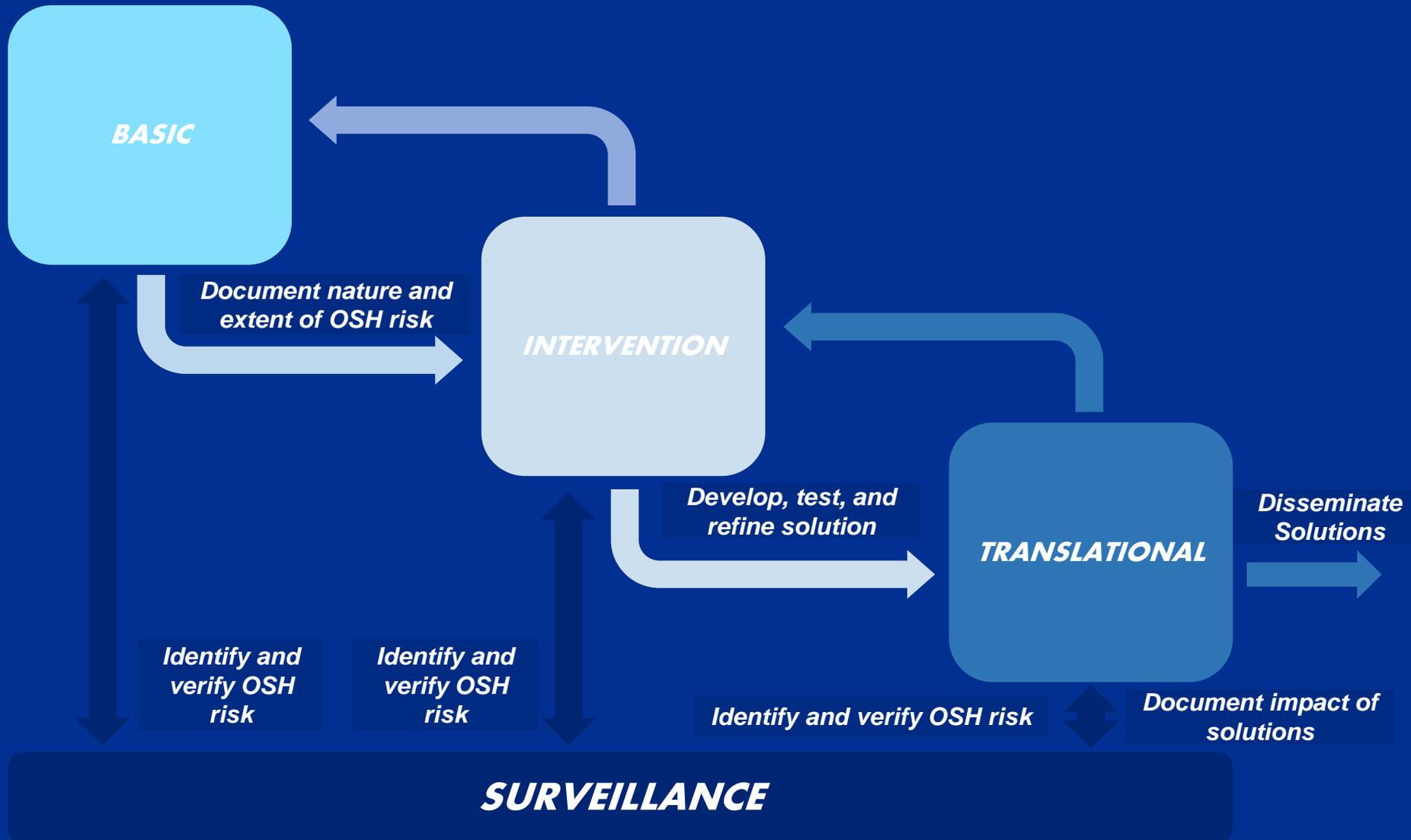# Evaluating Occupational Health and Safety Research Programs

FRAMEWORK AND NEXT STEPS

INSTITUTE OF MEDICINE and
NATIONAL RESEARCH COUNCIL
OF THE NATIONAL ACADEMIES

Continue to bolster research translation efforts

- "Much remains to be learned about <u>how to improve the likelihood that research translation</u> efforts will positively impact worksites."

- "Continued contribution by NIOSH to <u>research on improving the effectiveness of translation</u> efforts will ensure consideration of the dynamics that characterize occupational safety and health."

NAS 2009

NIOSH Research Continuum

BASIC

Document nature and extent of OSH risk

INTERVENTION

Develop, test, and refine solution

TRANSLATIONAL

Disseminate Solutions

Identify and verify OSH risk

Identify and verify OSH risk

Identify and verify OSH risk

Document impact of solutions
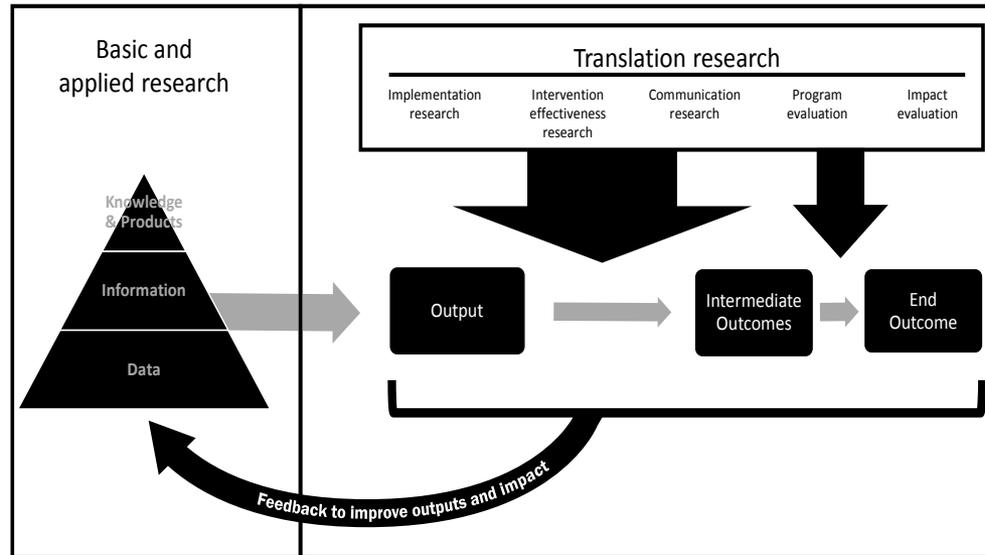
SURVEILLANCE

STPI 2013

What is Translation Research

- Study of the processes, drivers and barriers that affect the relationship between research outputs and downstream outcomes.
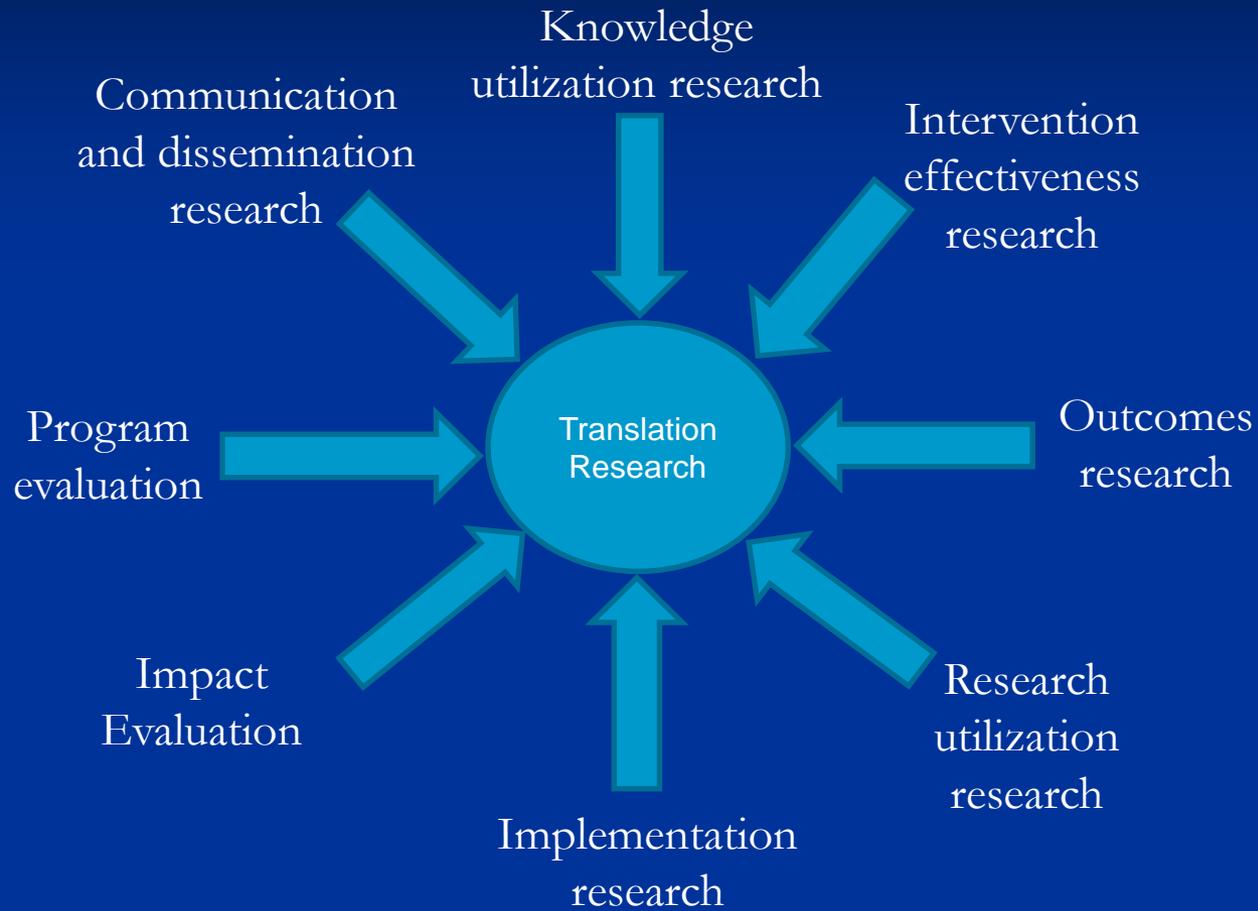
Translation Research is <u>not:</u>

- r2p

- Translation

Rather <u>it is</u> the study of those activities

Overview of translation research for occupational safety and health

Current emphasis on translation research

- NIH model (2003)
    - "bench-to-beside"
    - 4 phases:T1—T4
    - Characterized by moving findings to a larger scale
- Trying to determine how best to make those transitions

NIOSH emphasis on translation research

- Builds on NIH model but instead of emphasizing the movement of research findings:

The NIOSH emphasis is on the study of:
  - How to do it (translation)
  - How to do it well
  - What hinders it
  - The impact of it

Phase 1 Translation Research

- Study the movement of a basic laboratory discovery, case report, field or pilot study or findings about risk factors into a candidate application with more potential to make an impact

Phase 2 Translation Research

- Assess potential value of a new finding for a target health or intermediate outcome
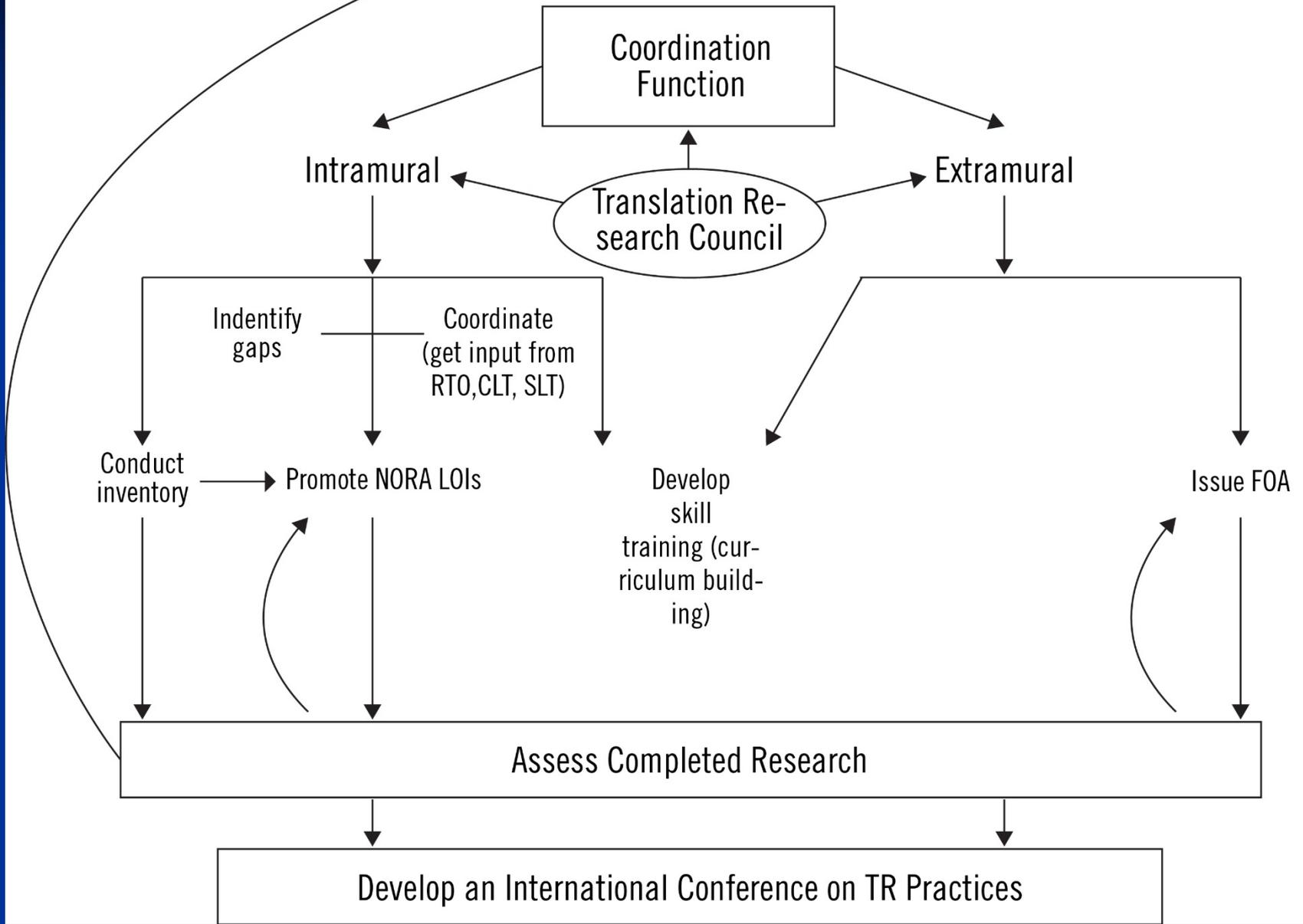 - Focus on internal validity by conducting efficacy research.

Phase 3 Translation Research

- Study the movement of evidence based technology and recommendations into well accepted OSH practice

Phase 4 Translation Research

- Instigate large-scale use of NIOSH and other OSH organizations outputs and their impact

Translation Research (TR) Roadmap

Nomenclature issues

- Translation research vs translational research
- Selected translation research because it connotes the study of translation

Other recommendations

- Change name of "Research Translation Office" to something like "Research-to-Practice Office"

- Begin to follow the roadmap

Next Steps in Implementation the Translation Research Program Include:

- Continued activity through June 2016 by the Translation Roadmap work group. This includes conduct of an inventory of current NIOSH translation research.

- Establishment of a coordination center in EID (July 2016).

- Development of a Translation Research website and posting of the translation research roadmap (July 2016).

Implementation Continued

- The Coordination Center will then solicit membership on the Translation Research Council. The Council will develop a plan to:
  - Nurture Translation Research in NIOSH by promoting the development of LOI starting in the 2017 NORA competition:

Implementation Continued

- Develop Funding Opportunity Announcement (FOA) for the extramural community.

- Foster intramural-extramural collaboration.

- Foster in-house capacity-building through training dedicated to translation research components such as the transtheoretical model, the health belief model and other approaches to evaluation and impact research.

Implementation Continued

- The Translation Research program will be a core and specialty program within NIOSH. As such its function will be to promote Translation Research and coordinate activities related to it across NIOSH. Actual Translation Research will be conducted by investigators in DLOs and be managed therein.