PHMSA R&D FORUM AUGUST 2014

Legacy Pipelines Session

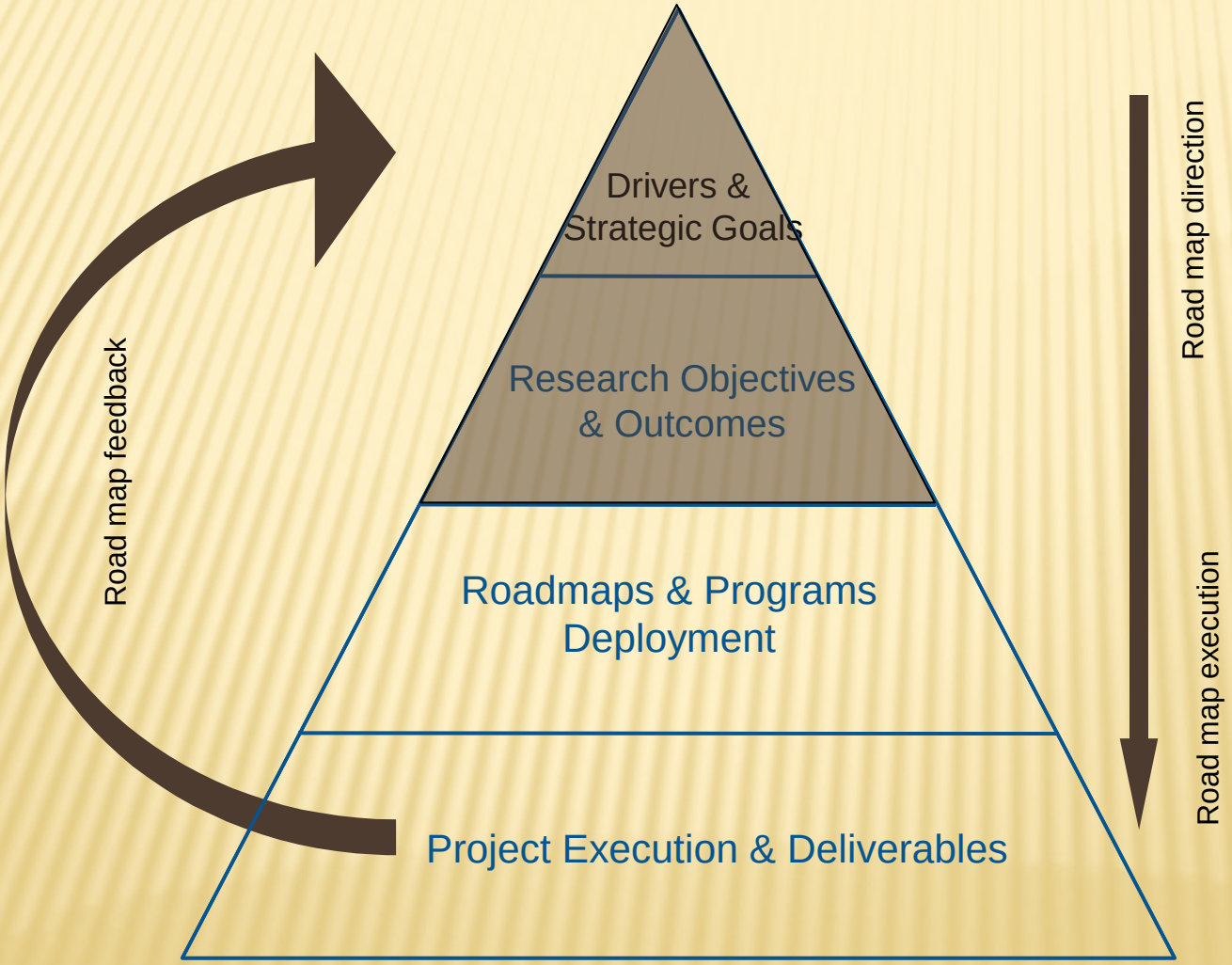
OVERVIEW

- The process
- Condition Assessment
- Determination of Material Properties

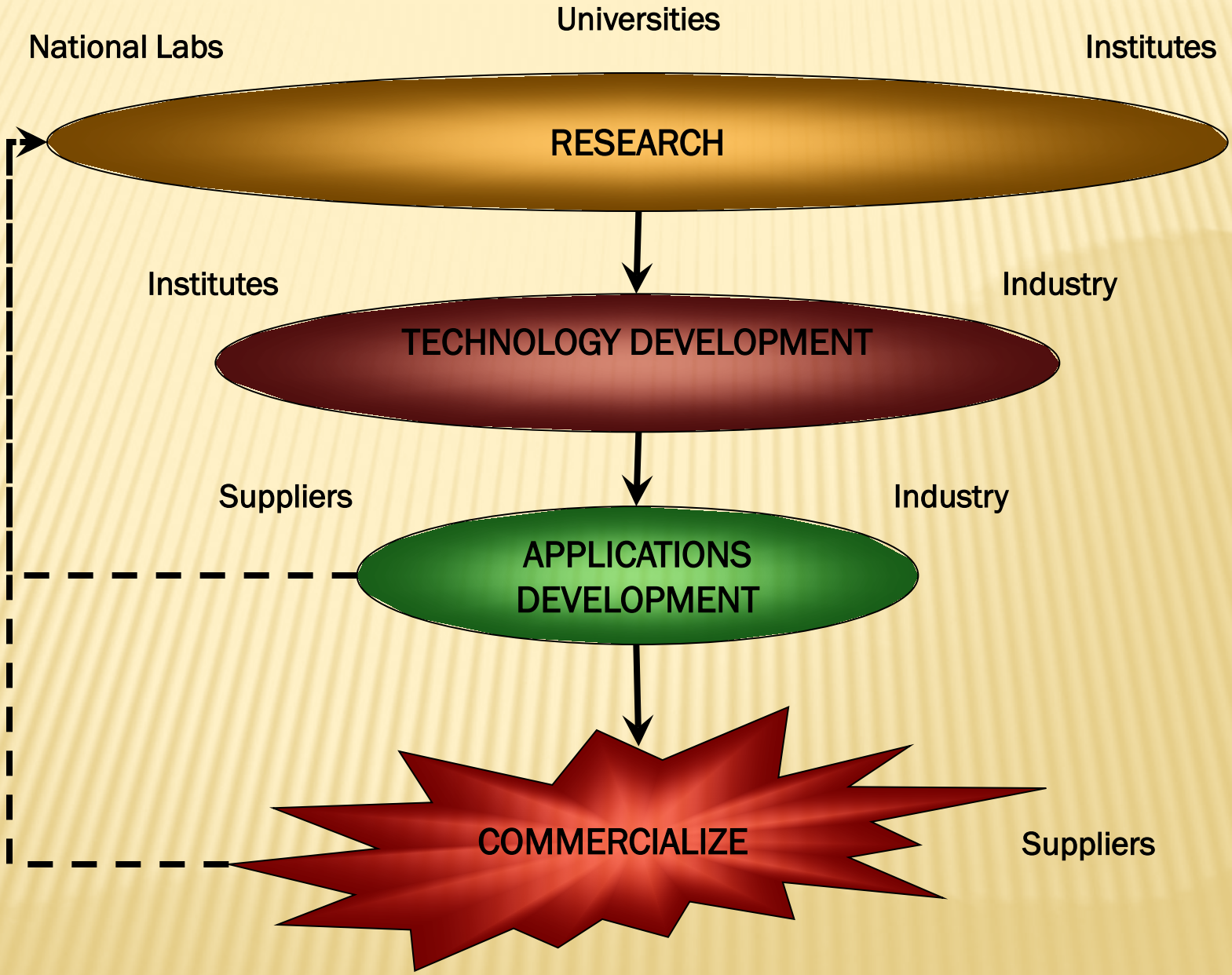
R&D RIGHT SIDE UP

- Perform research
- Develop an industry standard
- Integrate and transfer the technology
- Promulgate new regulations

R&D PROCESS



R&D Pyramid – integrating and aligning strategic and tactical requirements


Universities
National Labs
Institutes
RESEARCH
Institutes
Industry
TECHNOLOGY DEVELOPMENT
Suppliers
Industry
APPLICATIONS DEVELOPMENT
COMMERCIALIZE
Suppliers

CONDITION ASSESSMENT

- Is the pipe good or not?
- The IM process
  - Collect and validate data
  - Prevent
  - Assess
  - Respond and Mitigate

IMP PROCESS DETAILS

- What is it?
- Where is it? (environment)
- How does it operate?

DETECT, CHARACTERIZE AND MITIGATE

- Pipeline Threats
  - Mechanical damage (let's not talk about this)
  - Metal Loss
  - Crack Like / Planar

- *Pipe Body*
- *Pipe Seam*
- *Pipe Connections (GirthWeld)*

Following Slides Are One Man's Opinion!

METAL LOSS

- Detect – good
- Characterize – good
- Mitigate - good

PLANAR DEFECT IN PIPE BODY

- Detect – Fair to good , getting better
- Characterize –
  - ILI – fair to good
  - In Ditch – fair to good
- Mitigate
  - Single feature – good
  - Colony or complex feature - fair

PLANAR DEFECT IN PIPE SEAM

- Detect – Poor to Fair, getting better
- Characterize –
  - ILI –poor getting better
  - In Ditch – fair to good
- Mitigate
  - Single feature – seam properties critical
  - Colony or complex feature – seam properties critical

GIRTH WELDS

- What about girth welds?
  - Either you do or you don't

- Oxy / acetylene
- Bare stick
- Early generation shielded
- Couplings

DETERMINATION OF MATERIAL PROPERTIES

- Lab / records / centralized database
- In the ditch
- By ILI

- Strength – good getting real good
- Toughness – poor getting ….
- How gooder does it need to be?