Shaping Research
It Begins with an Idea

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Where do good ideas come from?
How can we generate good ideas that will have an impact?
Think 1
Break Patterns

Question 2
Challenge Assumptions

Relate 3
Why is this so important
Complete the Shape...
Pattern Thinking

Based on:

• Repetitive Actions
• Commonly Accessed Knowledge
Pattern Thinking Advantages

- Quick
- Consistent
- Reduces Re-learning
Complete the Shape...
Complete the Shape…
Complete the Shape…
Creativity is infinite even for items that appear well defined.
So how do we break the pattern?
Good ideas start with good questions.
Think

Question

Relate

Why does this take forever?

What’s the roadblock here?

Could this get any worse?

Challenge Assumptions

Rephrase the Problem

Think in Reverse
Think
Question
Relate

☑ Needs, problems & insights

LISTEN
UNDERSTAND
ACT
Why is more important than what
In ways that show you understand your user.
Shape a Research Problem Statement

Think

Question

Relate

Idea
Idea Generation is not a Linear Process
Internal Research Staff
Pooled Fund Studies

Transportation Planning

Multi State Effort

Pavement Materials

Maintenance

TRANSPORTATION POOLED FUND PROGRAM

North Dakota Department of Transportation
National NCHRP NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

TRANSPORTATION RESEARCH BOARD

National Road Research Alliance
Research Advisory Committee

**Divisions**
- Materials & Research: Matt Linneman
- Materials & Research: Clayton Schumaker
- Bridge: Jason Thorenson
- Construction: Jeff Jirava
- Design: Derek Pfeifer
- ETS: Justin Ramsey
- Local Government: Bryon Fuchs
- Maintenance: Brad Darr
- Planning: Scott Zainhofsky
- Programming: Logan Beise
- IT: Carey Schreiner

**Districts**
- Bismarck: Tyler Wollmuth
- Devils Lake: Wyatt Hanson
- Dickinson: Belinda Urlacher
- Fargo: Duane Carlstrom
- Grand Forks: Curt Dunn
- Minot: Greg Olson
- Valley City: Jay Praska
- Williston: Beth Skabo
Tell me your Ideas!

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Thank You