

# Pathways to Ingenuity



## National STIC Network Meeting

April 11, 2019 at 2:00 pm – 3:00 pm (Eastern)

a.k.a.

***“What we Heard at the EDC-5 Summits”***  
*(Research to Practice)*



# Organizational Models exist, can use them for Research to Practice pipeline



- **EDC model reduces risk** for DOTs
- Promote **Build a Better Mouse Trap** program beyond LTAP community
- Expand/promote **Peer Exchanges**.
- Use **focus groups** to solicit ideas, include industry and universities.
- Allow creativity with **20% matching funds shared between states**; use a pooled funds concept
- **Value Engineering** available to solve challenges
- Alternative Technical Concept, coupled w/ transparency - **contractors learn from each other**
- Increase use of **Design/Build procurement model**; forms shared-risk environment



# STIC Network is established,

can use to grow the  
Research to Practice  
Pipeline



- STIC **communication** goals can help drive expectations
- **Work closer with** stakeholders outside the State DOT such as **academia and industry**
- Actively promote **periodic meetings** with industry
- Create **regional STIC exchanges**.
- Create “STIC Network-like” model between **small and large municipalities**
  - can learn and teach each other via peer exchange atmosphere
  - promote through conferences (face to face, experiential learning)



# Risk can be Controlled



- Use **local road** network (low AADT) as **testing ground** for experimental products
- **Can NOT risk public safety**
- Important to have more R&D when it comes to the public's safety, **consider benefits and life cycle.**
- Natural fear of deviating from established standards; adopting new things. Keep established standards that have been **vetted by professional community.**
- Important when taking a risk, that the **benefits are considered alongside the risk**
- **Conducting due diligence**, investigating, researching, finding the best product at best price, along with national standards is still role of DOT and FHWA



# Attitude Matters

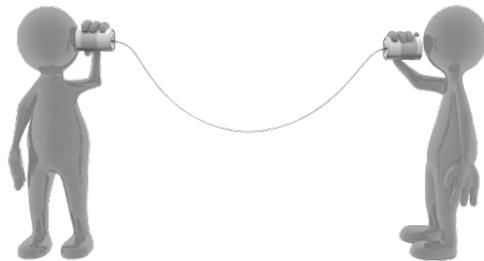


- Change stigma of failure. **Learning requires failure**
- FHWA **Divisions are key to bridging DOT and HQ** in the “supply and demand chain” of need and knowledge.
- Strongest partnership for pushing an innovation into practice is a **DOT champ & knowledgeable advocate from FHWA.**
- Messaging and **support from upper management is imperative** to atmosphere
- When people feel **empowered by their management**, they naturally use ingenuity to make their work place and work better.
- **Incentives help generate ideas** from staff; management is listening, taking action, expressing gratitude
- When **innovation is part of the DOTs mission statement**, it can direct behavior



# Communication is Key

- Having a way to **collect ideas from all levels** within an organization is valuable
- Ideas come from **all sources** – don't overlook the “small” ideas
- **Ideas for change range** from big challenges on big projects to small changes within work life environments.
- **Communication is a challenge**, especially messaging to public and getting newsworthy information to local governments.
- Having an **informed public and elected officials** alleviates angst for a DOT to try something new. However, gaining that support relies on **accurate information** to the public and elected officials.



# Be Nimble



- Operating in a nimble environment - whether it is **quickly addressing funding challenges** for research/innovation on a project or how to **expeditiously communicate to the right people** up the chain – is necessary.
- Being nimble is **not a traditional trait of DOTs, thus is a challenge**. Specifications change at a very slow pace
- **Offering different types of procurement methods** (ex. design/build) helps support a culture of innovation. Procurement methods to quickly contract with universities would be helpful
- Lack of staff stymies innovation at DOTs. Recognition that some states use universities and consultants to carry out research as compared to internal DOT staff.
- **Research** is currently in a reactive mode. It can, or should be, **out in front of issues**



# What changes did you implement after the Summits?

- different ways to share /get feedback?
- adjustments to your STIC structure?
- other changes?

