CONSORTIUM ON EDUCATIONAL RESEARCH & IMPROVEMENT

CERI

DALLAS INDEPENDENT SCHOOL DISTRICT

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Inaugural Mini-Conference

Pegasus Park

SMU

Research and Evaluation at the West Dallas STEM School (WDSS)

Karen Pierce, Annie Wright, Jessica Murillo
Southern Methodist University

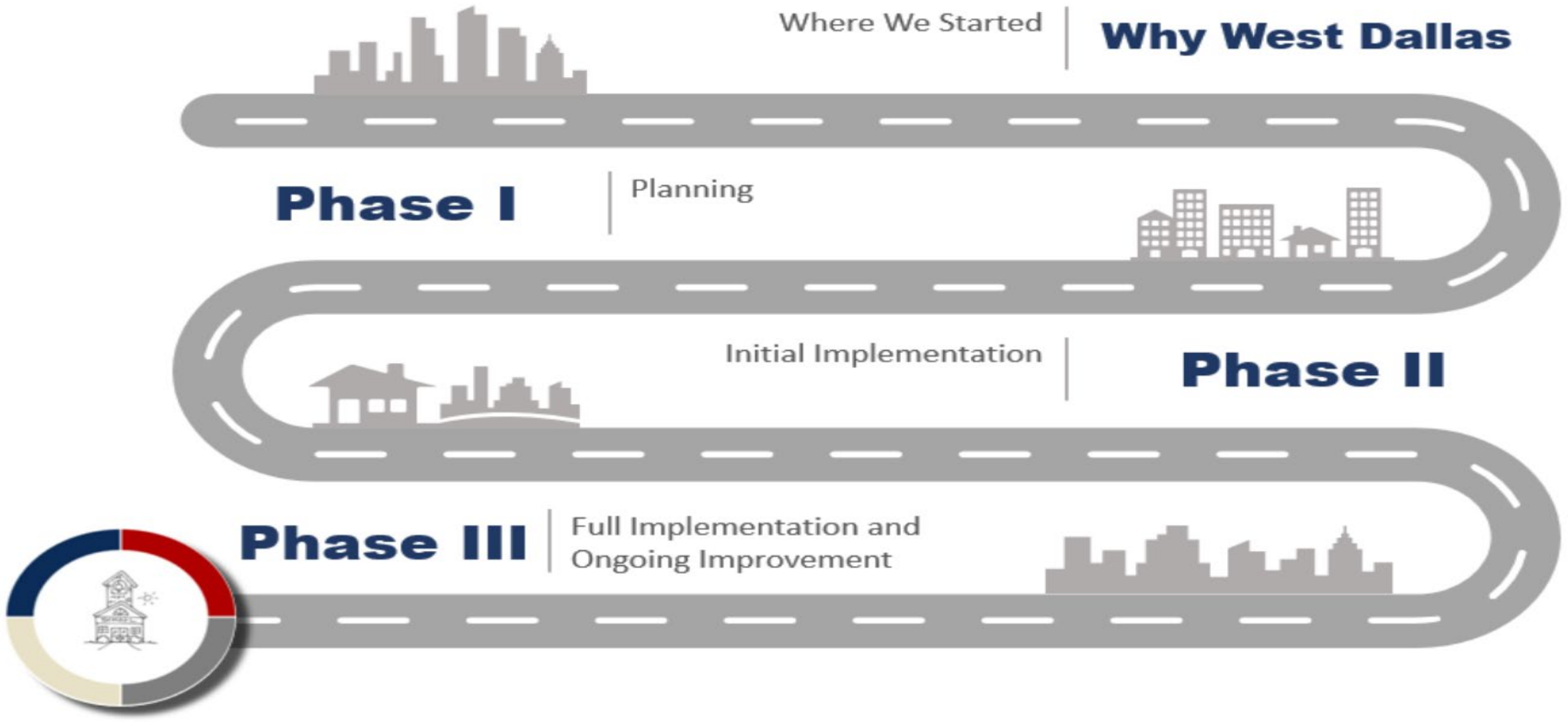
Presentation Overview:

- Project Overview
- Project Evaluation
- Research Substudies

Project Overview

- SMU serves as the backbone for research and evaluation of the WDSS project.
- The project focuses on research to practice, replicable model development, and continuous improvement.
- The project team learns from both successes and failures.
- Alignment of stakeholder goals with community needs is integral at the WDSS.





Where We Started
Why West Dallas
Phase I
Planning
Initial Implementation
Phase II
Phase III
Full Implementation and
Ongoing Improvement

Driving Possibilities

TOYOTA USA FOUNDATION
Investing in a smarter tomorrow.

- The WDSS is the inaugural STEM school supported by the Toyota USA Foundation.
- Special focus is given to replicating and documenting success.
- Toyota has announced expansion to nine replication sites nationwide.

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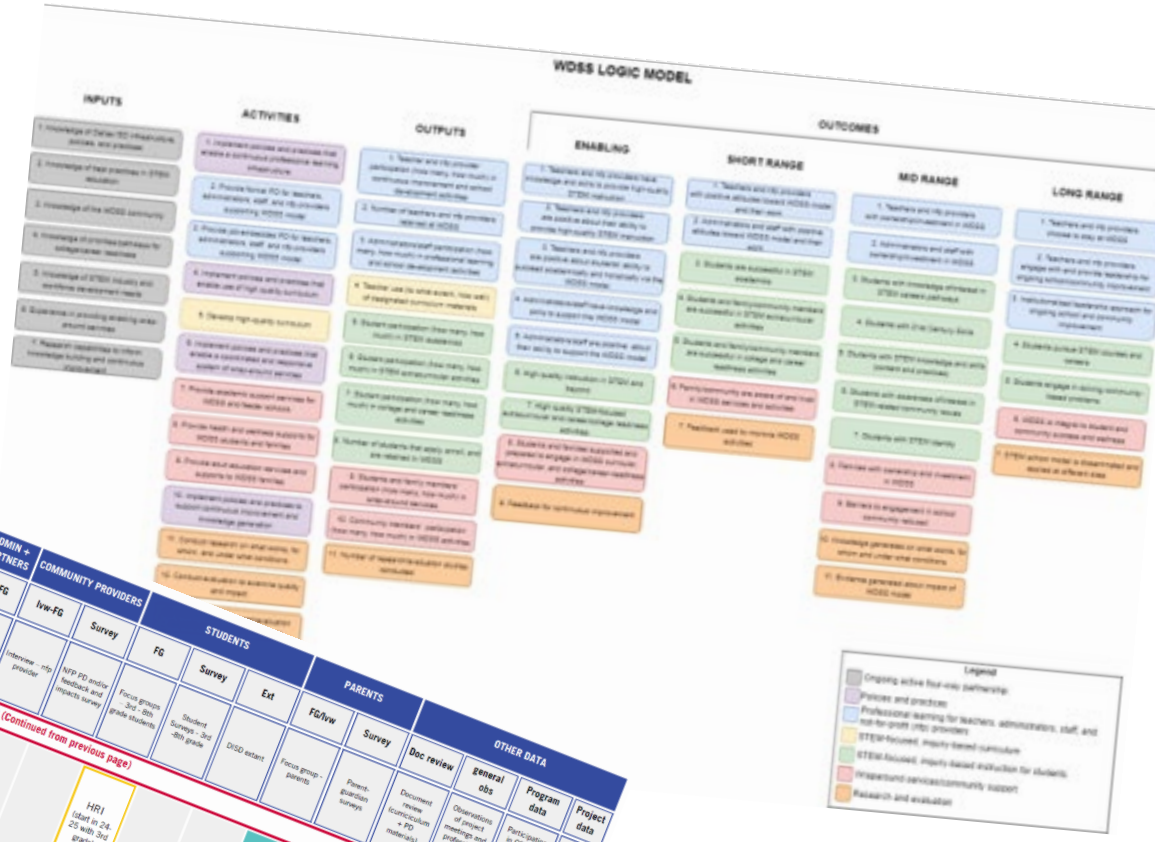
Key Project Components

- **STEM Curriculum**
  - Interdisciplinary learning, inquiry- and project-based learning, technology integration, inclusivity and accessibility
- **Wraparound Services**
  - Basic needs, academic support, enrichment, community engagement, adapting to local context and evolving needs
- **Professional Learning**
  - Cross-team and organizational collaboration, professional development for inquiry, alignment to the WDSS instructional vision
- **Research and Evaluation**
  - Generate educational knowledge, link implementation to outcomes, identify implementation driver, iterative improvement
- **Ongoing Partnership**
  - Collaborative problem solving, testing project components to ensure scalability, efficiency and targeted expertise

Project Evaluation

- Logic Model
- Theory of Action
- Data Matrix



Project Evaluation

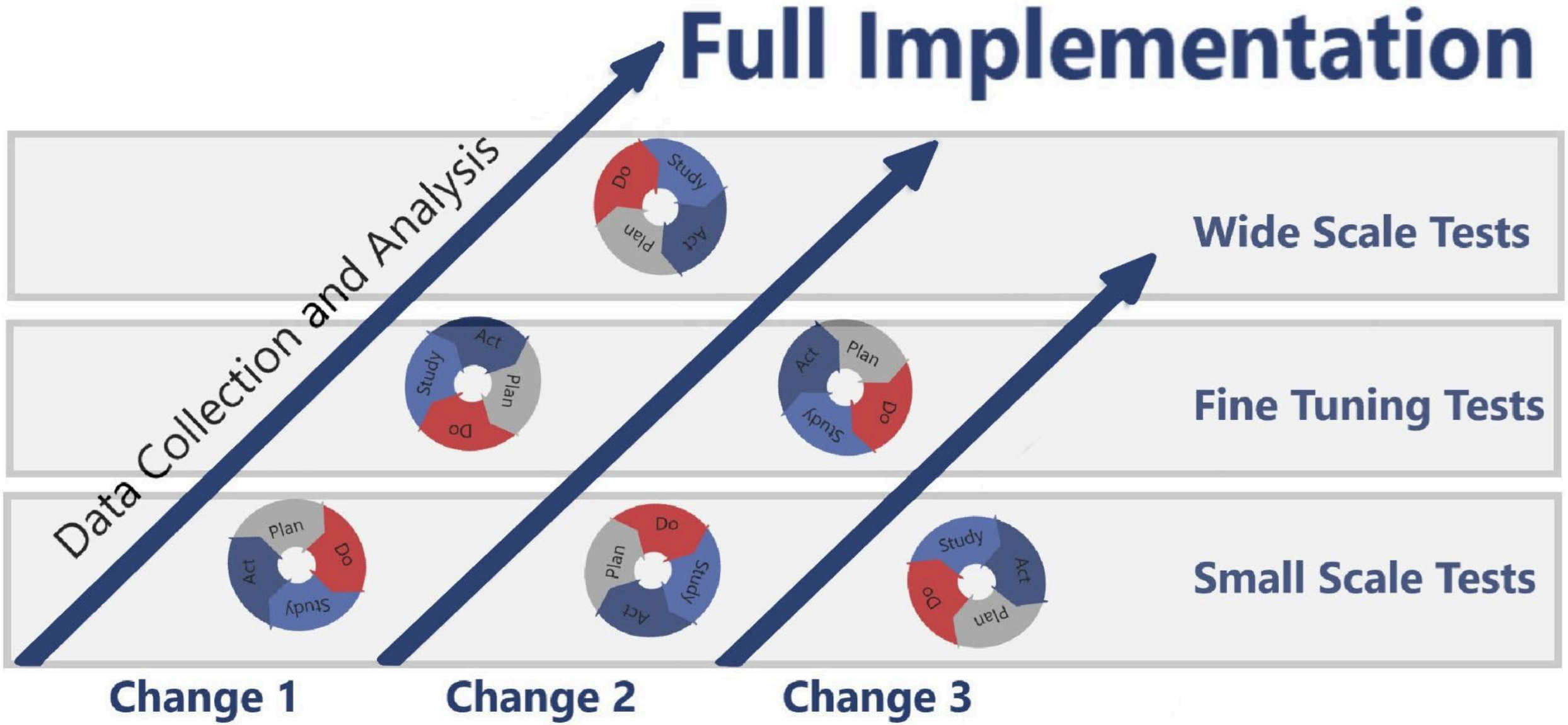
- **Focus Area 1:** To what extent is the WDSS model likely to lead to improvement and equity in its outcomes? (Inputs and Activities)
- **Focus Area 2:** To what extent is WDSS making progress toward its enabling and short-range outcomes?
- **Focus Area 3:** To what extent is WDSS making progress toward its mid- and long-range outcomes?

Learning from Success and Failure

- If innovative projects work, replication often remains a challenge.
- If they don't, projects are abandoned without learning from failures.

Successes (↑)	Failures (↓)
↑ High expectation for all students	↓ Low overall alignment to instructional vision
↑ Connection to prior knowledge	↓ Connecting, Elaborating, and Reflecting was only observed once
↑ Progress in collegial working relationships	↓ Sensemaking is generally lacking

Continuous Improvement



Research Substudies

- Consent processes
- Alignment of research to practice
- Higher education institute and district collaborations
- Contributions to the field of education
- Action research

Research Substudies

- Student STEM Discourse
- Interactive Physics Simulations
- Science PLC Practices and Efficacy
- STEM Instructional Coaching Analysis
- Research on Integrated STEM Efficacy
- School-University-Community Research
- Operationalizing Professional Development
- Learning Through Gaming Augmented Reality Literacy

Key Takeaways

- SMU's backbone role provides stability and resources.
- The WDSS model focuses on documenting processes and learning from all outcomes.
- Continuous improvement and understanding local contexts are key to success.

Karen Pierce, karenp@smu.edu
Annie Wright, anniew@smu.edu
Jessica Murillo, murilloj@smu.edu

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