

# Collaboratively Implementing 'Improvement Science' to Accelerate School and District Improvement

David B. Smith, Ed.D.  
EVSC Superintendent

Chad R. Lochmiller, Ph.D.  
Assistant Professor, Educational Leadership

**Indiana SBOE Best Practice Presented By:  
Evansville Vanderburgh School Corporation and Indiana University Bloomington**

# Overview

Within this presentation, we discuss . . .

- The current challenges facing school districts seeking to engage in sustained, continuous improvement
- Networked Improvement Science as a best practice to accelerate systemic improvement
- Collaborative efforts underway between EVSC and IU to develop, test, and expand the use of this model in partnership with the Carnegie Foundation for the Advancement of Teaching
- Opportunities for Indiana to be a leader in using Networked Improvement Science



***“If we really want to get better, we have to make getting better matter again and this is really a way to do it.”***

*EVSC School Administrator  
Focus Group Conducted on January 2019*

# Challenges Facing Indiana School Corporations

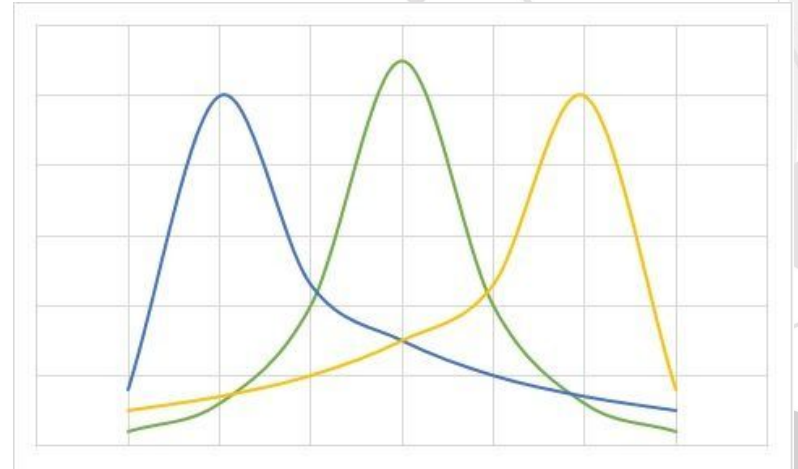
- The underlying causes of the challenges facing Indiana School Corporations are more complex than we have traditionally approached in education. We must be evolving organizations with a belief we are not where we should be.
- To achieve our desired results, we have to do the hard work of creating a culture of continuous improvement that functions in short, agile cycles.
- Beliefs drive actions. So do systems. Leaders have to do the hard work of aligning work systems to drive the improvement culture necessary to scale and sustain improvement process for years to come.
- We have to empower and train individuals in our enterprise to question the way things have “always been done,” identify problems, root causes, create aims and tackle change ideas to achieve them.
- We do not have a systemic way to learn from one another and build upon each others' work as part of a larger ecosystem.
- Educator training does not typically involve this type of preparation (systems thinking).
- Continuous improvement takes time to become embedded in the culture.

***There is an opportunity to think differently about improvement in Indiana.***

# Reframing Improvement

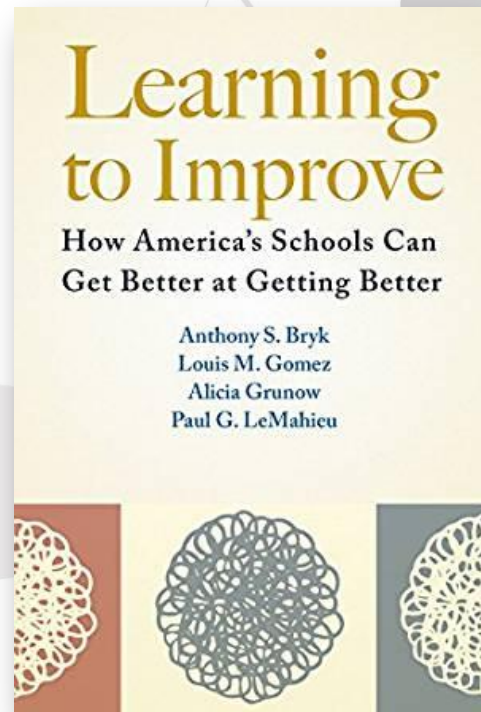
**We need to reframe improvement-related conversations so that they focus on...**

- Learning how to implement complex ideas effectively, reliably, and at scale
- Developing capacity within the education system to learn and improve
- Moving from fidelity of implementation to integrity of implementation
- Expanding our ability to manage variability



# Networked Improvement Science

- Networked Improvement Science integrates two proven methods of process improvement into educational organizations
  - An approach to problem identification, solution design, and testing conducted within the context of a **Plan-Do-Study-Act (PDSA) Cycle**
  - An approach to **social learning, communication, and networking** that facilitates the rapid identification of the most plausible and effective change ideas, which is called a Networked Improvement Community
- These methods are orchestrated by a “hub” which seeks to coordinate, sustain, and develop this process within and across organizations
- The intention is to create a system that **thinks, acts, and interacts** in an aligned manner on issues of continuous improvement







# Improvement Questions

What's the problem we are trying to solve?

How will we know whether our change represents an improvement?

What change can we make to achieve the aim/goal we set?

# Four Key Improvement Tools

<b>Fishbone Diagram</b> 	<b>Driver Diagram</b> 	<b>PDSA Cycle</b> 	<b>Networked Improvement Communities</b> 
<p><i>Assists users in identifying the underlying causes of a particular problem or performance concern.</i></p>	<p><i>Assists users in unpacking the causal connections between a change idea and the performance goal or aim.</i></p>	<p><i>Assists users in testing, adopting, refining, or abandoning change ideas.</i></p>	<p><i>Assists users at different levels of the system in sharing information about what's working to support the particular aim.</i></p>



# Rethinking Measurement

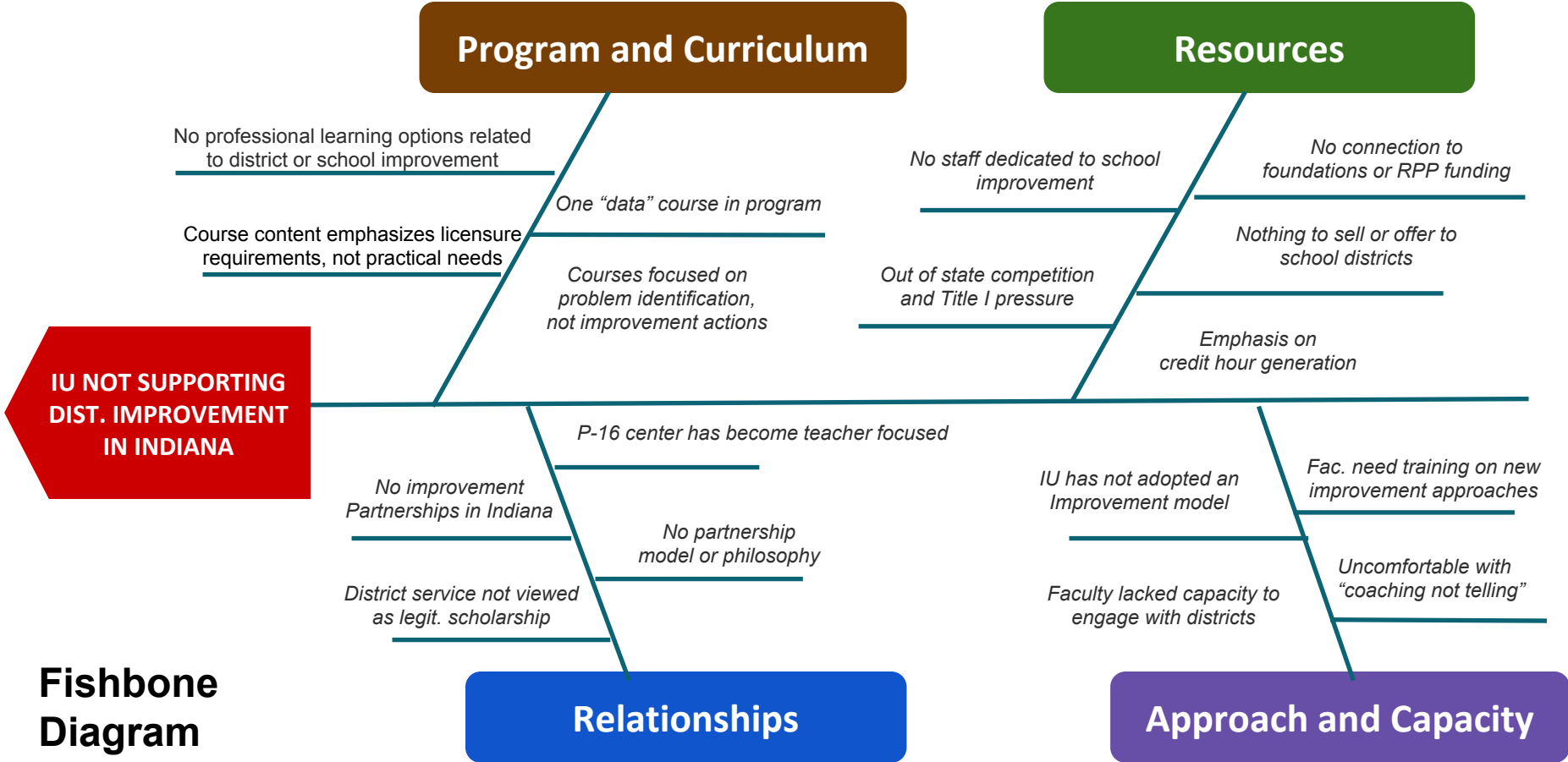
- Instead of waiting for the data to arrive, improvement science encourages users to identify measures that are relevant to immediate performance outcomes
- The intent of measurement becomes “encourages deeper learning” - it creates accountability by placing the onus of improvement on the individual user.



***“If I care about the issue enough to identify it as a problem, I will work harder to improve it.”*** - EVSC Teacher, Focus Group, January 2019

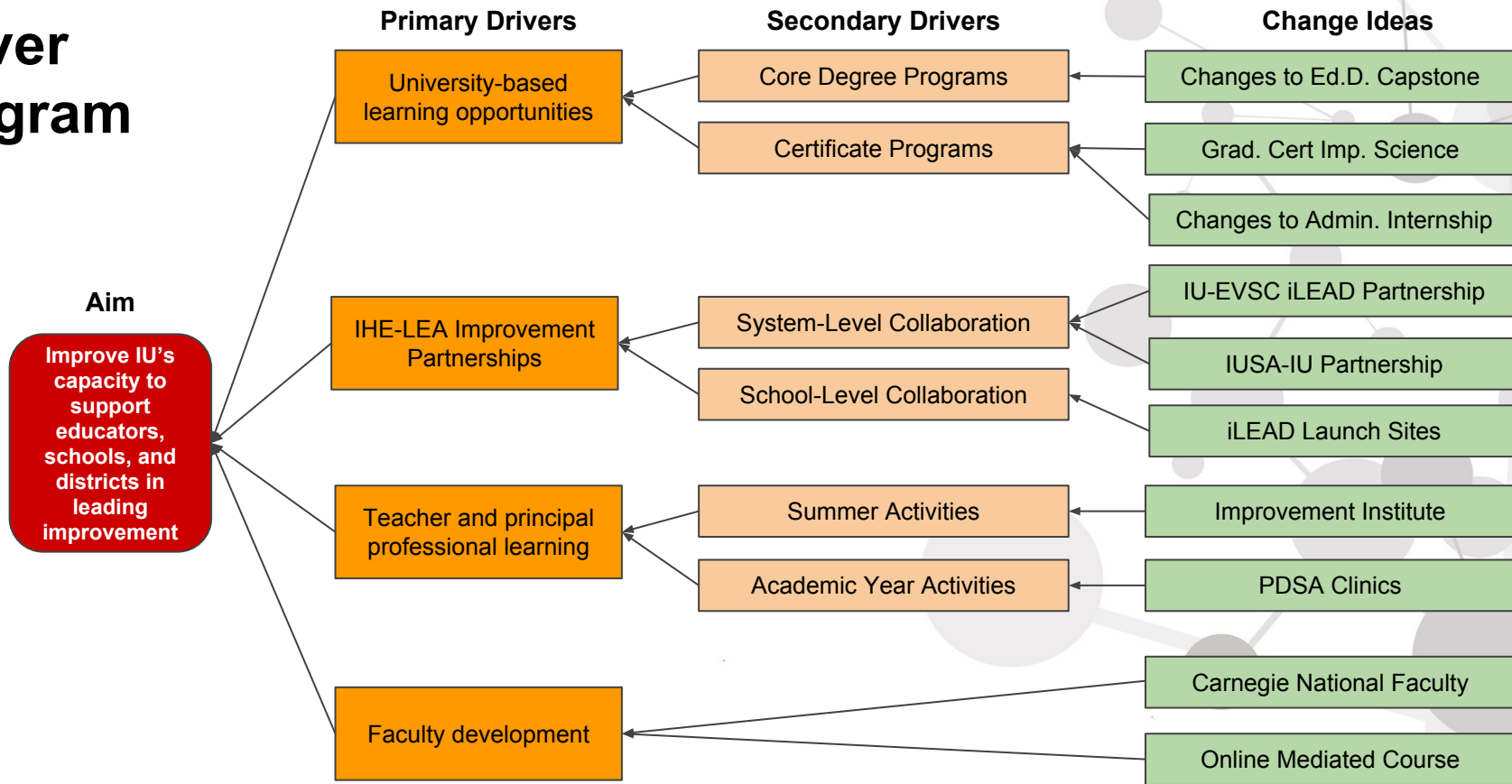
# What's the problem IU was trying to solve?

IU School of Education was not adequately supporting educators and engaging with school corporations across the state on issues of continuous educational improvement.



**Fishbone Diagram**

# Driver Diagram



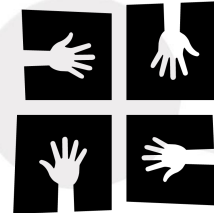
# EVSC+IU Partnership

EVSC+IU Partnership aims to . . .

- Began in 2015 with a 25-member principal leadership cohort and expanded in 2017 with an Ed.D. partnership
- Partnership selected by Carnegie Foundation for the Advancement of Teaching in 2017 as one of 11 teams
- Partnership aims to develop, test, and expand the use of improvement science both within EVSC and between EVSC and IU
- Partners strive to think, act, and interact in an aligned manner on issues of improvement such that the capacities of K-12 and higher education are fully leveraged
- Long-term objective: powerful, equitable teaching and learning for every student



**Carnegie Foundation**  
for the Advancement of Teaching



**iLEAD**  
IMPROVEMENT LEADERSHIP  
EDUCATION AND DEVELOPMENT

# Early Outcomes

After four months, we are already beginning to see positive outcomes in schools:

- In two elementary classrooms, teachers used improvement to recover 3 hours of instructional time per week and are now repurposing that time for more rigorous, productive instruction
- In one classroom, a teacher has since observed an increase in the number of students passing the summative math assessment and higher levels of student engagement
- In one school, teachers across different grade levels have begun collaborating regularly (despite not having formalized vertical PLC time)
- Across our launch sites, principals are spending more time in classrooms and offering more feedback to teachers that aligns with the PDSA the teachers are working on



***“Getting good at getting better necessitates shifting from thinking of improvement as an intention to investing in formal methods to actually achieve it.”***

- Carnegie Foundation