CARNEGIE FOUNDATION SUMMIT on IMPROVEMENT IN EDUCATION 2021 VIRTUAL

5A. Engaging With the Evidence for Improvement Framework

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The session will begin shortly.

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Objectives

- ✔ Understand problem-space EFI framework aims to address
- ✔ Understand the 3-level model
- ✔ Understand role of analytic partners
- ✔ Develop preliminary understanding of the EFI Inventory Tool

Norms

- Be fully present for our time
- Take care of yourself and your “co-workers”
- Ask when you need to
- Make space, take space
- Stay open to discovery
- Seek to celebrate before critique

Welcome & warm ups

In the chat, please share your NAME, ORGANIZATION, ROLE and an ANSWER

Which substance is represented by the letters HIJKLMNO?

More warm ups (Lateral Thinking)

A horse is tied to a 10-foot rope, so how does it reach the bale of hay 15 feet away?

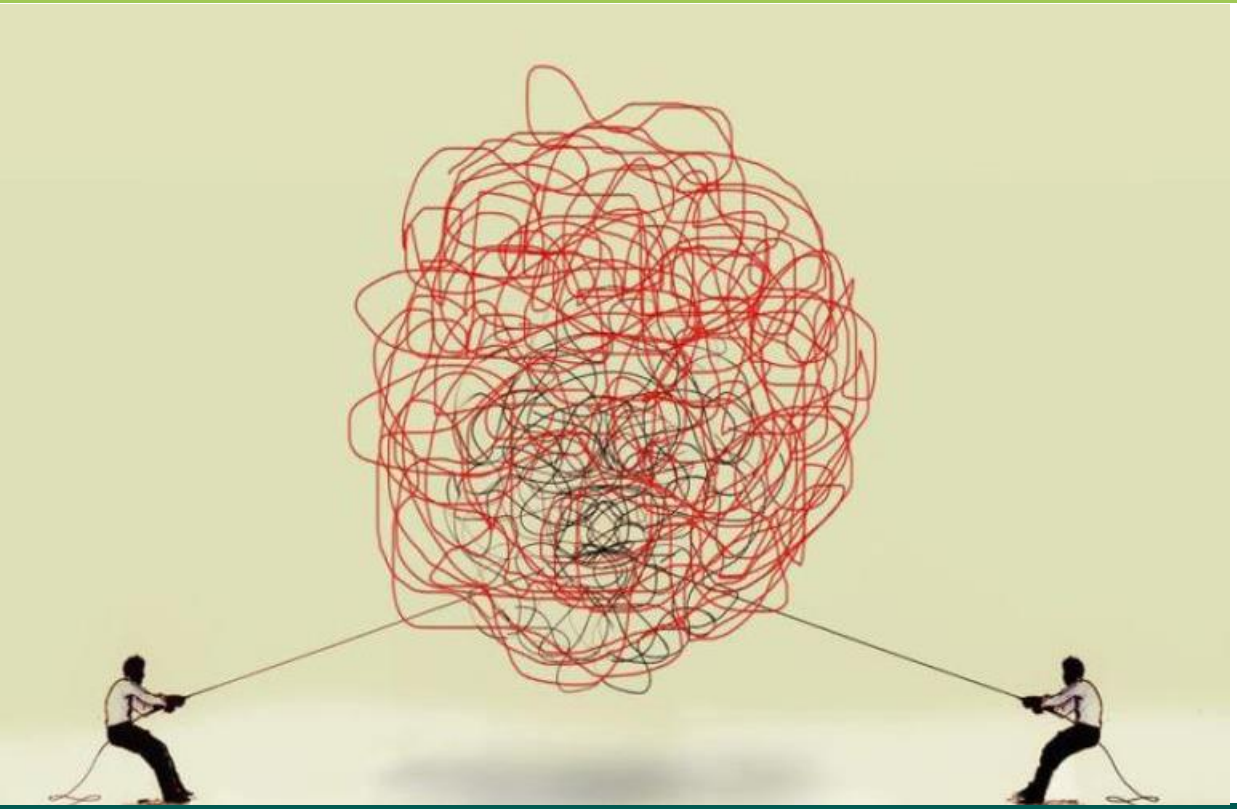
Mode of transport crashed in Nepal

Improvement networks are:

1. Becoming increasingly common

2. Seen as a way to tackle wicked problems in education

Wicked vs. Tame Problems



Wicked Problems

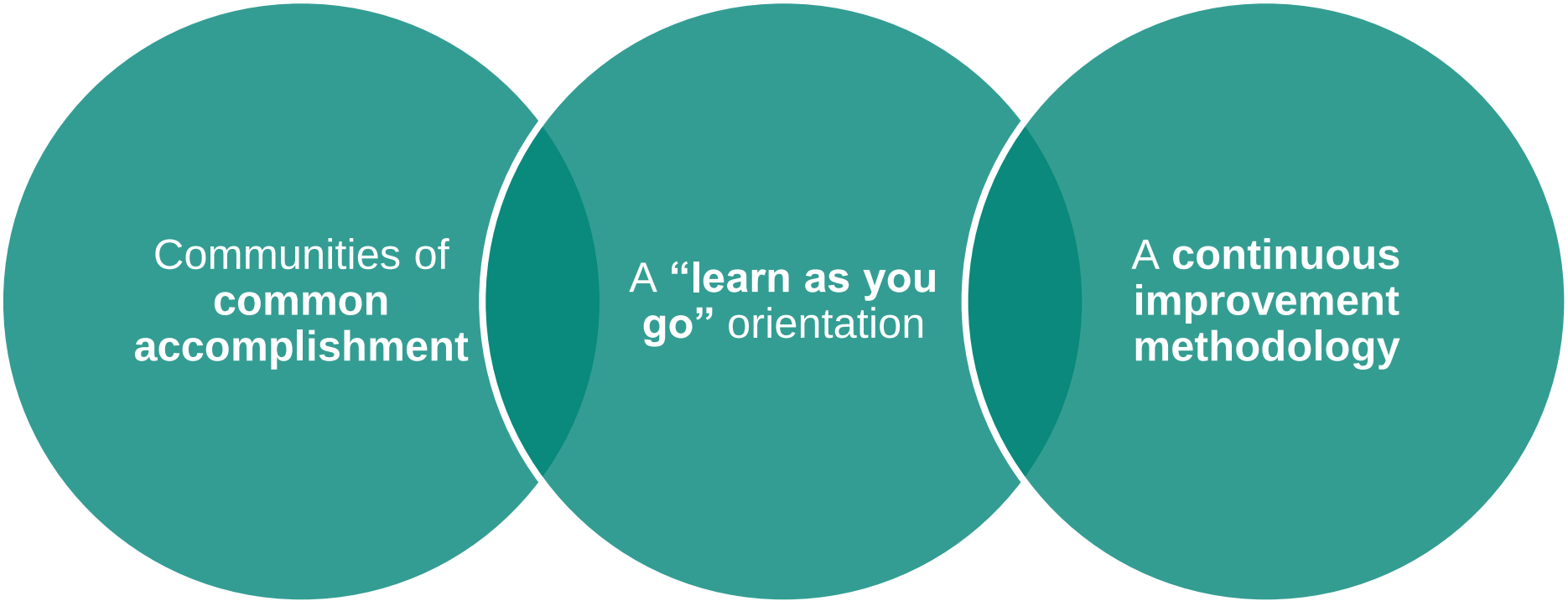
- Difficult to define with clarity
- Interdependencies abound
- No clear or easy solutions

Tame Problems

- Not necessarily easy
- Solutions are known and complicated

Gomez, et al. (2016). The right network for the right problem. *Phi Delta Kappan.*

Improvement networks have three core characteristics:



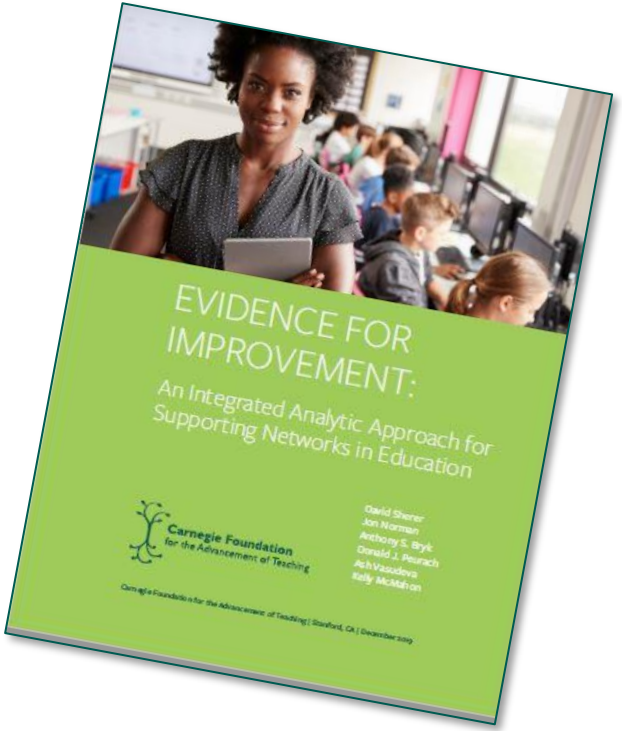
Network leaders have challenging jobs

How do we learn about improvement while doing it?

How do we learn to adapt, innovate, and continuously improve improvement networks?

What do leaders need to move forward?

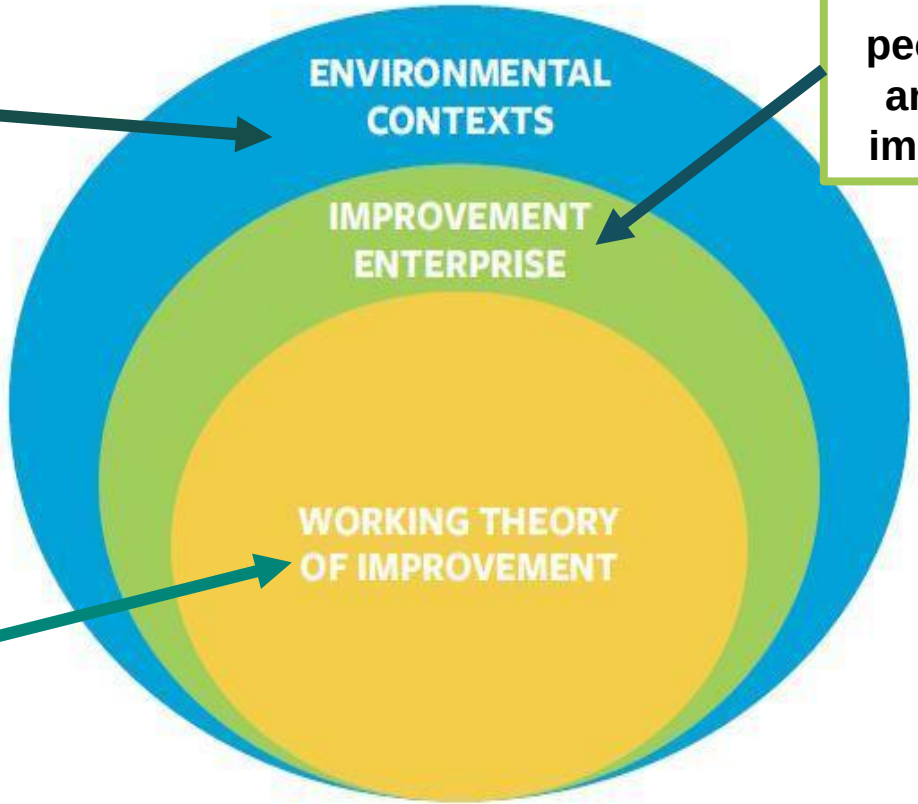
EFI is an **integrated approach** to developing supports for learning journeys



A three level conceptual model of improvement networks

The political, organizational, and funding dynamics that surround the network

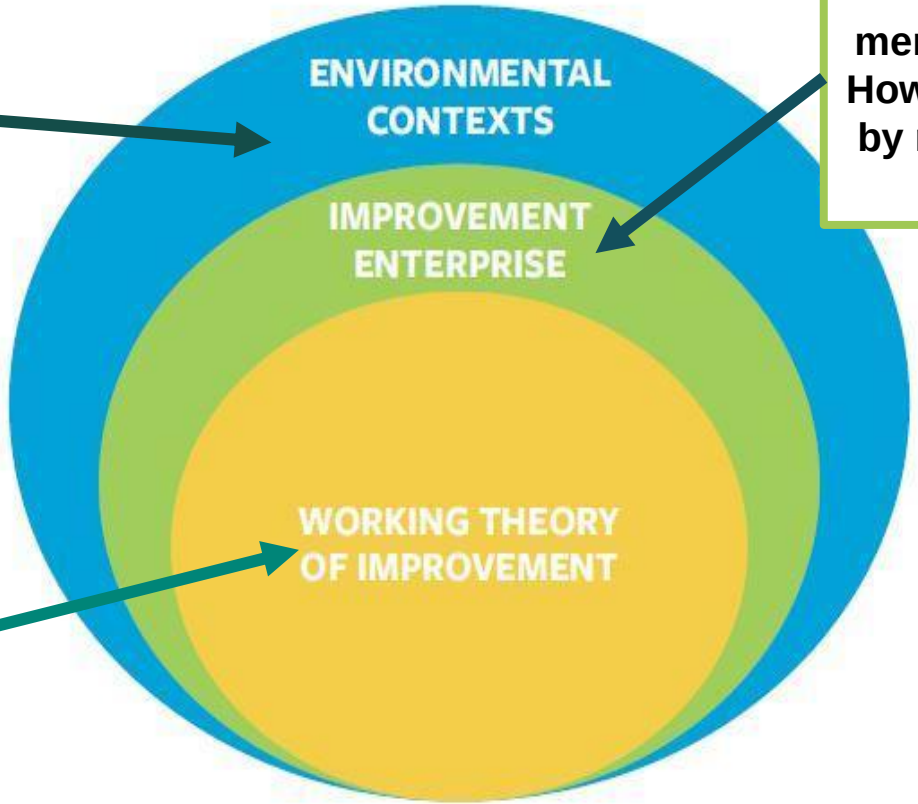
The collection of people, organizations, and processes in an improvement network



A network's best current ideas about how to accomplish its aims

A three level conceptual model of improvement networks

How is the environment influencing work in the network?



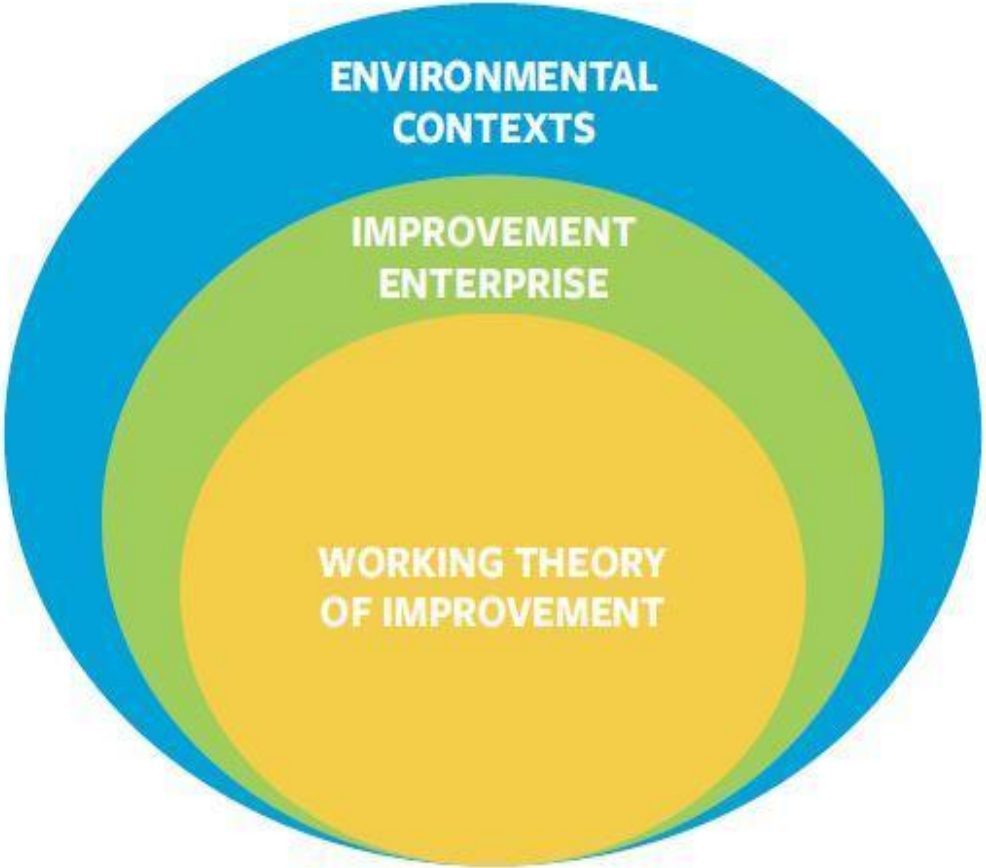
How are network members collaborating? How is learning managed by network? What is the network culture?

How is the "intervention" working?

Analytic partner may be…

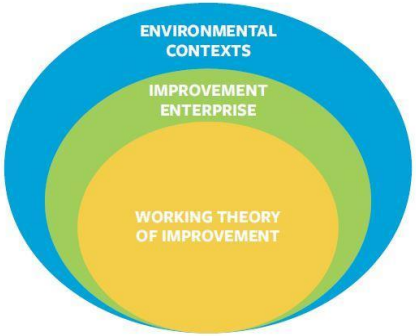
- in network
- external to network
- evaluator using EFI

But, **definitely** invested in **network's success**.

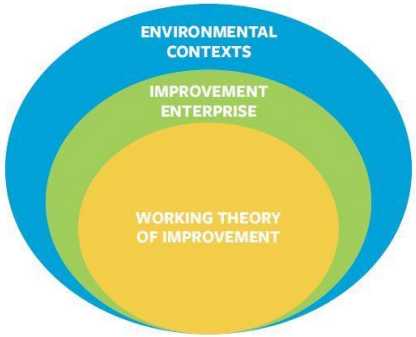


EFI Approach
Network leaders + analytic partners working to advance productive improvement using the 3-level model

Inventory Tool



	Analytic activities	Learning questions	Plans	
	Engage in system analysis to understand problem and continue to use disciplined inquiry to develop a theory to achieve aim	What do we know about our problem? How do we know? What are we trying to accomplish? What are the causal links we think influence the outcomes we seek?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Engage in theory-based learning; collect evidence to know changes are improvements	How do we know our changes are, or will be, improvements? How do we adapt based on what we are learning?	Who is responsible for making sure this analytic activity goes well?	When should analytic activity happen for us?
	Assessing quality of leading networked improvement community	How effectively are our network members collaborating? To what extent do people feel connected to the network and energized by their participation?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Understanding extent and quality of social learning is occurring in the network	What strategies have we put in place to share learning across the network? How do the leaders identify and respond to the network members' learning needs?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Learning from attempts to scale interventions in multiple contexts	Where are our interventions working well? Where are they failing? Why?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Inquiring about complex, interdependent environments we are in (ie, nested systems of state, district, school, classrooms)	What have we done to assess threats and opportunities in our environment? What else could we do?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?



Level 1: Working theory of improvement

	Analytic activities	Learning questions	Plans	
	Engage in system analysis to understand problem and continue to use disciplined inquiry to develop a theory to achieve aim	What do we know about our problem? How do we know? What are we trying to accomplish? What are the causal links we think influence the outcomes we seek?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
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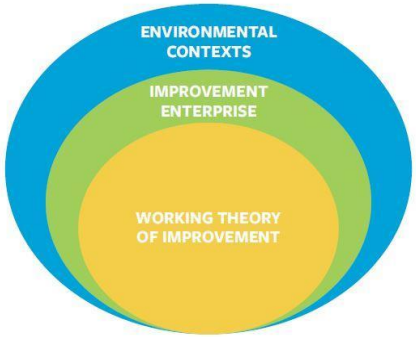
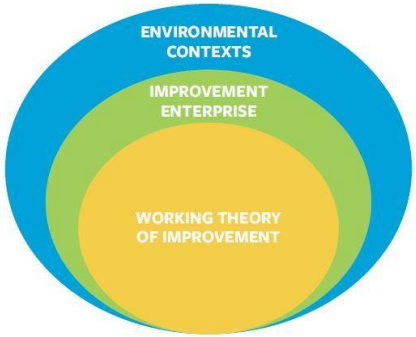


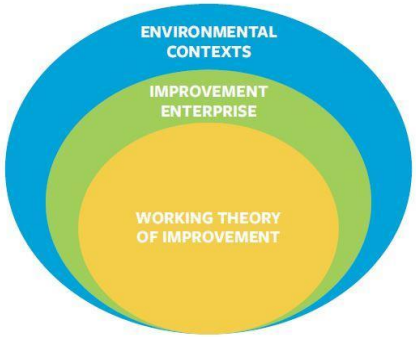
Level 2: Improvement enterprise

	Analytic activities	Learning questions	Plans	
	Assessing quality of leading networked improvement community	How effectively are our network members collaborating? To what extent do people feel connected to the network and energized by their participation?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Understanding extent and quality of social learning is occurring in the network	What strategies have we put in place to share learning across the network? How do the leaders identify and respond to the network members' learning needs?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?

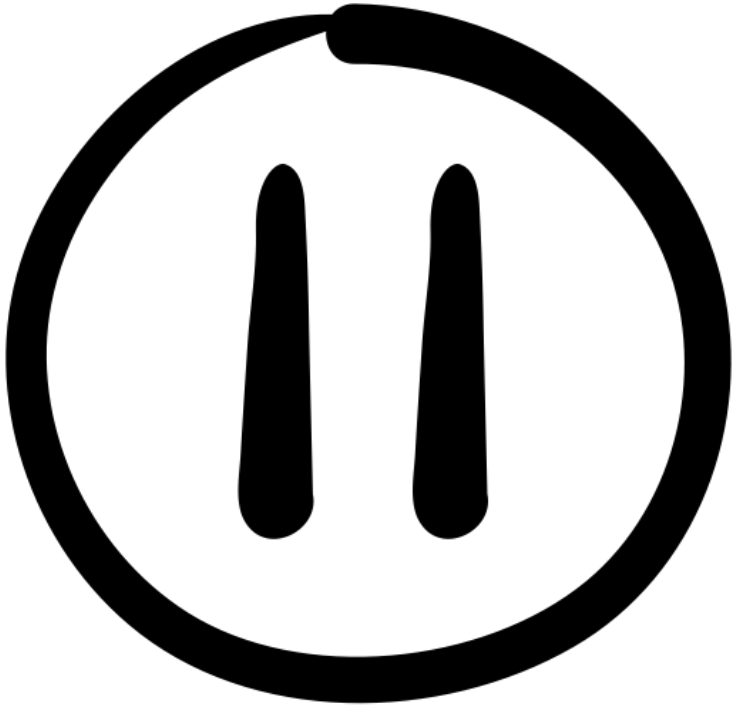


Level 3: Environmental contexts

	Analytic activities	Learning questions	Plans	
	Learning from attempts to scale interventions in multiple contexts	Where are our interventions working well? Where are they failing? Why?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?
	Inquiring about complex, interdependent environments we are in (ie, nested systems of state, district, school, classrooms)	What have we done to assess threats and opportunities in our environment? What else could we do?	Who is responsible for making sure this analytic activity goes well?	When should this analytic activity happen for us?



Analytic and social learning tools at each level		
Level 1: Working theory of improvement	**Level 2: Improvement enterprise**	**Level 3: Environmental contexts**
Systems maps, root-cause (fishbone diagrams), empathy journey maps, process maps, driver diagrams, practical measurement system, run charts, research and expertise scans	Social learning routines, communication plans, membership profiles, organizational portraits, network health assessments, network knowledge management systems	Policy and funding trackers, implementation plans, SWOT analysis



Questions?

	Analytic activities	Learning questions	Plans	
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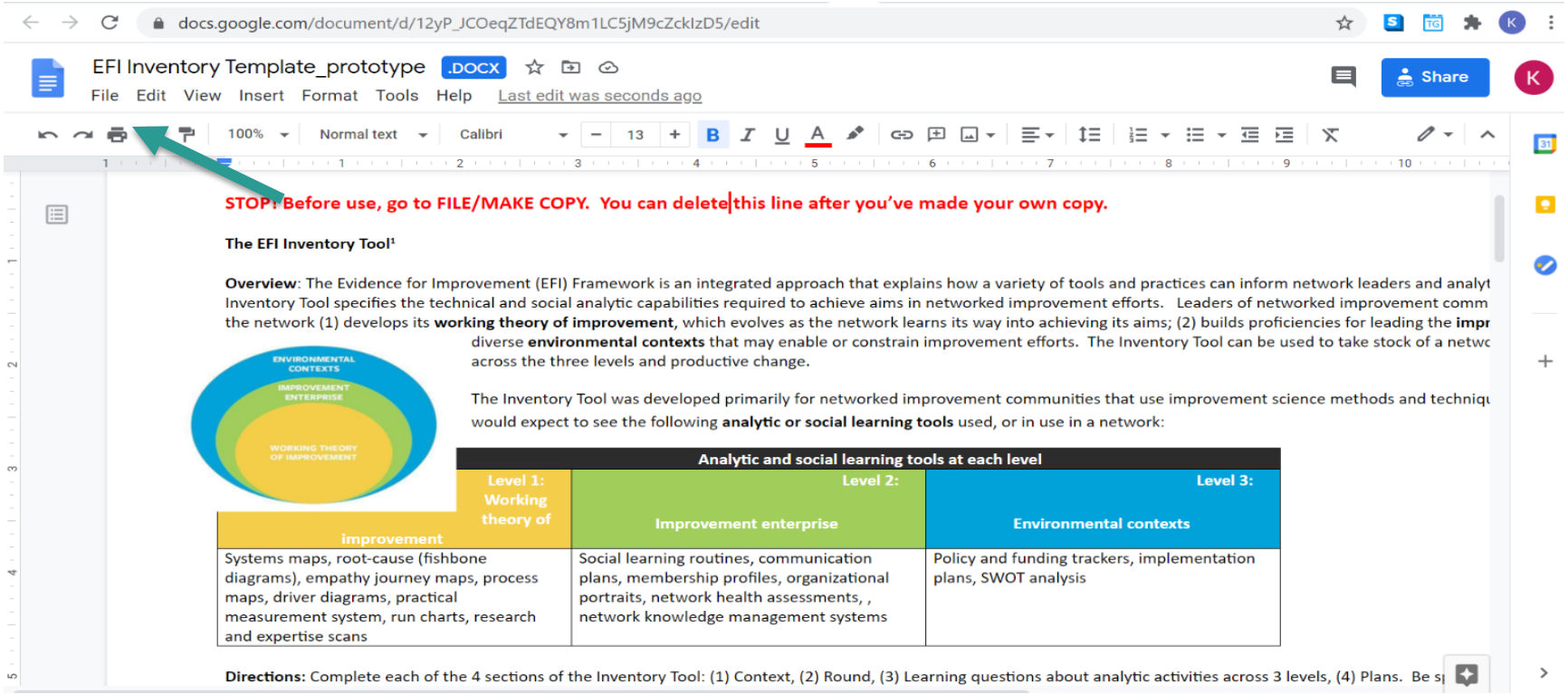
Pick **one row from each level** and try to fill it in for your work with either

A) Current improvement work

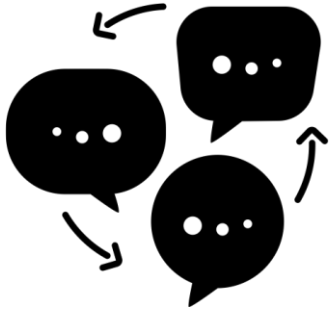
A) Aspiring improvement work



Your own copy of an Inventory Tool

You try Inventory Tool

BREAKOUT



I worked on _____

I was surprised to notice _____

I wonder if this means _____

It would be game-changing to _____

Integrating *Indian Education for All* and *Computer Science for All* in Wyoming Elementary Schools

This project is funded under NSF Award #1923375

AIR®
AMERICAN INSTITUTES FOR RESEARCH®

Leads research and facilitates the networked improvement community

Fremont County School District #38

WYOMING INDIAN Schools

Recruits stakeholders for strengths-based assessment and educators to pilot lessons.

Wyoming WDE

Coordinates with districts, schools, and teachers

BootUp Professional Development™

Develops curriculum and educator PD.

PARTNERTOIMPROVE

Conducts the external evaluation of the project

Integrating *Indian Education for All* and *Computer Science for All* in Wyoming Elementary Schools

Increase teachers' pedagogical and content knowledge related to both integrating the CS curriculum with other subjects and teaching CS standards.

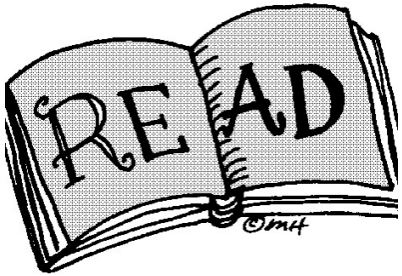
Increase teachers' self-efficacy for teaching CS standards.

Write, pilot, and refine two curriculum units that integrate computer science education standards with *Indian Education for All* standards.

Produce student mastery of Grade 3-5 CS standards, as evidenced by high-quality work samples.

This project is funded under NSF Award #1923375

Case of Wind River: Analytic Partner Activities



- Read the EFI Paper
- Shared the paper with the leadership team
- Compared with existing frameworks

- Prepared “sacrificial offering” using knowledge from grant proposal and leadership team meetings
- Emailed to PIs on project and scheduled meeting to discuss

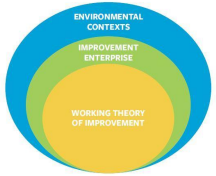
- Audio recorded 30 minute meeting with PI
  - Made adjustments to tool based on conversation
  - Shared with leadership team

- Revise the evaluation plan to reflect the analytic plans detailed through this process
- Revisit quarterly and document processes that are not yet clearly defined

Evidence for Improvement Framework

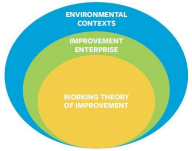
Analytic Activities to Develop and Iterate on the Working Theory of Improvement

- Strength-based community assessments
- Teachers in the NIC participate in PDSA cycles using the curriculum between NIC convenings.
- In between the PDSA cycles, classroom observations will be conducted, student work will be collected, and teachers will be interviewed.



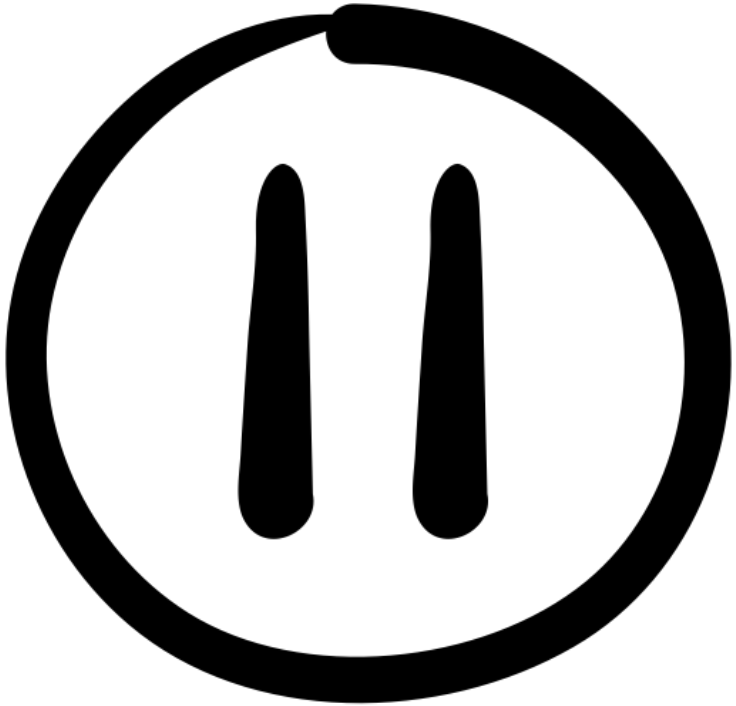
Level 1: Working theory of improvement

	Analytic activities	Learning questions	Plans	
	Engage in system analysis to understand the problem and use disciplined inquiry to develop and iterate a theory to achieve the aim	**What do we know about our problem? How do we know? What are we trying to accomplish? What do we think needs to happen in order to accomplish the aim?**	**Who is responsible for making sure this analytic activity goes well?**	**When should this analytic activity happen for us?**
	Problem: Need to advance CS education while simultaneously strengthening cultural identities and traditions of Native Americans on the Wind River Reservation Analytic activities: Understand the Native American community and educational system	Beginning stage to understand the system: Conducted strength-based assessments through focus groups held with teachers, family members, tribal leaders, and other community members. During curriculum implementation: Hold network convenings with curriculum developers, researchers, teachers and Wyoming educators to inform revisions to the curriculum and inform upcoming professional development and coaching activities.	AIR	Clarify problem and plans to address the problem: Proposal writing and beginning of grant Strength-based assessments: Beginning of grant Network convenings: throughout the second and third years of the grant



Level 1: Working theory of improvement

	Analytic activities	Learning questions	Plans	
	Engage in theory-based learning; collect evidence to know changes are improvements	**How do we know our changes are, or will be, improvements? How do we adapt based on what we are learning?**	**Who is responsible for making sure this analytic activity goes well?**	**When should this analytic activity happen for us?**
	PDSA Cycles to study the implementation of the curriculum	To improve the implementation of the curriculum: 1) Teachers in the NIC will participate in PDSA cycles using the curriculum between NIC convenings. Artifacts will be collected from PDSA cycles. 2) In between the PDSA cycles, classroom observations will be conducted, student work will be collected, and teachers will be interviewed.	AIR	Network convenings, classroom observations, collection of student work, and teacher interviews: throughout the second and third years of the grant



Comments or questions about EFI Inventory of Wind River NIC?

“Academics and practitioners alike may find it hard to embrace the idea that working theories of improvement are *incomplete by design.”*

“Possibly wrong, definitely incomplete”

“Critical gaps in initial thinking will become apparent, **but often the only way to discover these gaps and begin to fill them is to get started on the learning journey**.”

Bryk et al. (2015) *Learning to Improve*, pg.176

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Help us improve!

Access the evaluation link in the session's description in the Summit web platform.

I’m walking out thinking about....

Thank you.

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Kelly McMahon mcmahon@carnegiefoundation.org

Dave Sherer sherer@carnegiefoundation.org

How much are we learning
at this moment
about our three-levels?