



**Canberra  
Conference on  
Research  
Integration and  
Implementation**



**UNC**

FPG CHILD DEVELOPMENT INSTITUTE

# **Applied Implementation Science**

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**Melissa Van Dyke, Allison Metz**

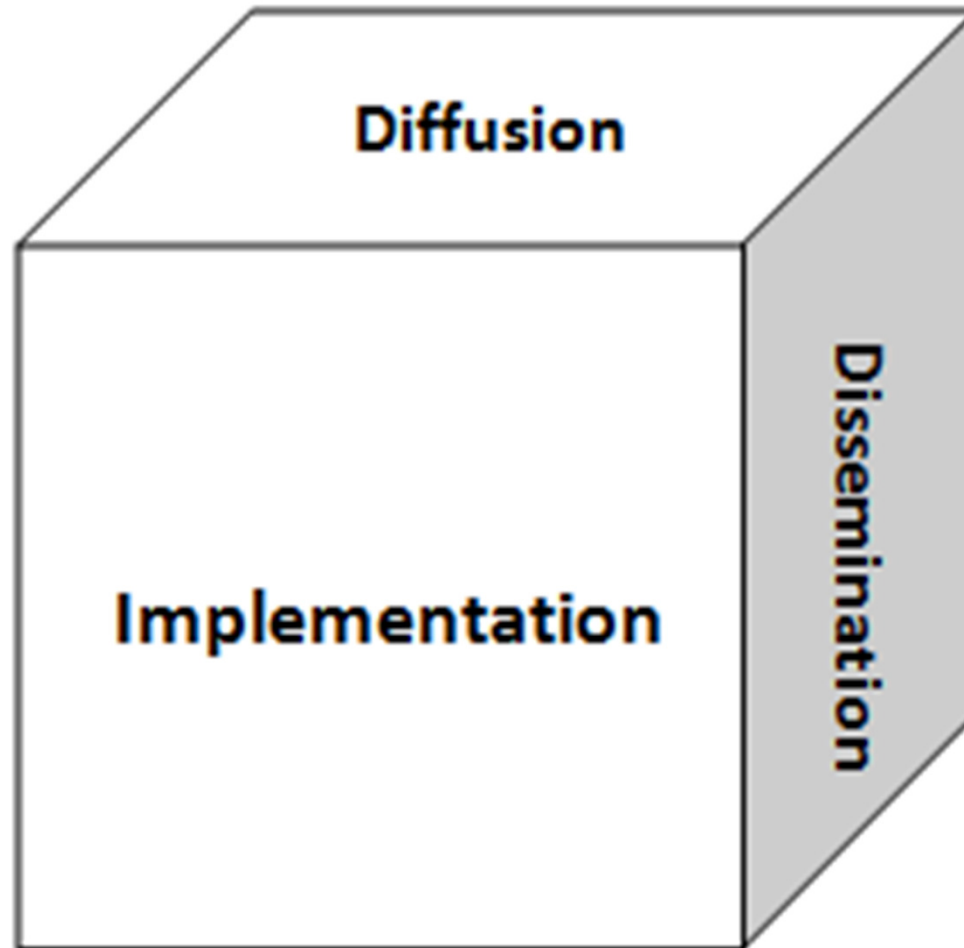
**National Implementation Research Network**

**FPG Child Development Institute**

**University of North Carolina at Chapel Hill**



# Implementation Science



# Implementation Science

- Letting it happen
  - Diffusion; networking; communication
- Helping it happen
  - Dissemination; manuals; websites
- Making it happen
  - Purposeful and proactive use of implementation practice and science

Based on Hall & Hord (1987); Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004); Fixsen, Blase, Duda, Naoom, & Van Dyke (2010)

**Basic Research**

**Applied Research**

**Interest-Driven**

**Mission-Driven**

**Internal Validity  
(Rigor)**

**External Validity  
(Relevance)**

**Eventually Useful**

**Immediately Useful**

**Contribute to Knowledge Base and  
Theory**

# Implementation Science

- **Fairweather, Sanders, & Tornatzky (1974)**
  - Purposeful approaches to use of Lodges in random samples of hospitals
  - Dissemination of manuals plus telephone consultation produced little impact
  - Face-to-face “action consultation” was more effective – lots of communication to resolve conceptual, structural, and policy issues *en route* to using the Lodges

# Implementation Science

- Fairweather, G. W., Sanders, D., Maynard, H., & Cressler, D. (1969). *Community life for the mentally ill*. Chicago: Aldine Publishing.
- Tornatzky, L. G., Fergus, E. O., Avellar, J. W., Fairweather, G. W., & Fleischer, M. (1980). *Innovation and social process: A national experiment in implementing social technology*. New York: Pergamon Press.
- Beard, J. H., Propst, R. N., & Malamud, T. J. (1982). The Fountain House model of rehabilitation. *Psychosocial Rehabilitation Journal*, 5, 47-53.
- Propst, R. (1992). Standards for clubhouse programs: Why and how they were developed. *Psychosocial Rehabilitation Journal*, 16, 25-30.
- Onaga, E. E. (1994). The Fairweather lodge as a psychosocial program in the 1990's. In The Publications Committee of IAPSRS (Ed.), *An Introduction to Psychiatric Rehabilitation*. Columbia, MD
- Onaga, E. E., & Smith, B. A. (2000). Reinvention of the Lodge Program: A case study of program changes to promote full-time employment. *Psychiatric Rehabilitation Skills*.
- Lucca, A. M. (2000). A Clubhouse **Fidelity Index** Preliminary Reliability and Validity Results. *Mental Health Services Research*, 2(2), 89-94.
- Macias, C., Propst, R., Rodican, C., & Boyd, J. (2001). Strategic Planning for ICCD **Clubhouse Implementation**: Development of the Clubhouse Research and Evaluation Screening Survey (CRESS). *Mental Health Services Research*, 3(3), 155-167.

**Mission-Driven process of research and development (30+ Yrs)**

# Implementation Science

- Accumulation of data
- Summaries of the literature on diffusion and dissemination
- Synthesis of the implementation evaluation literature

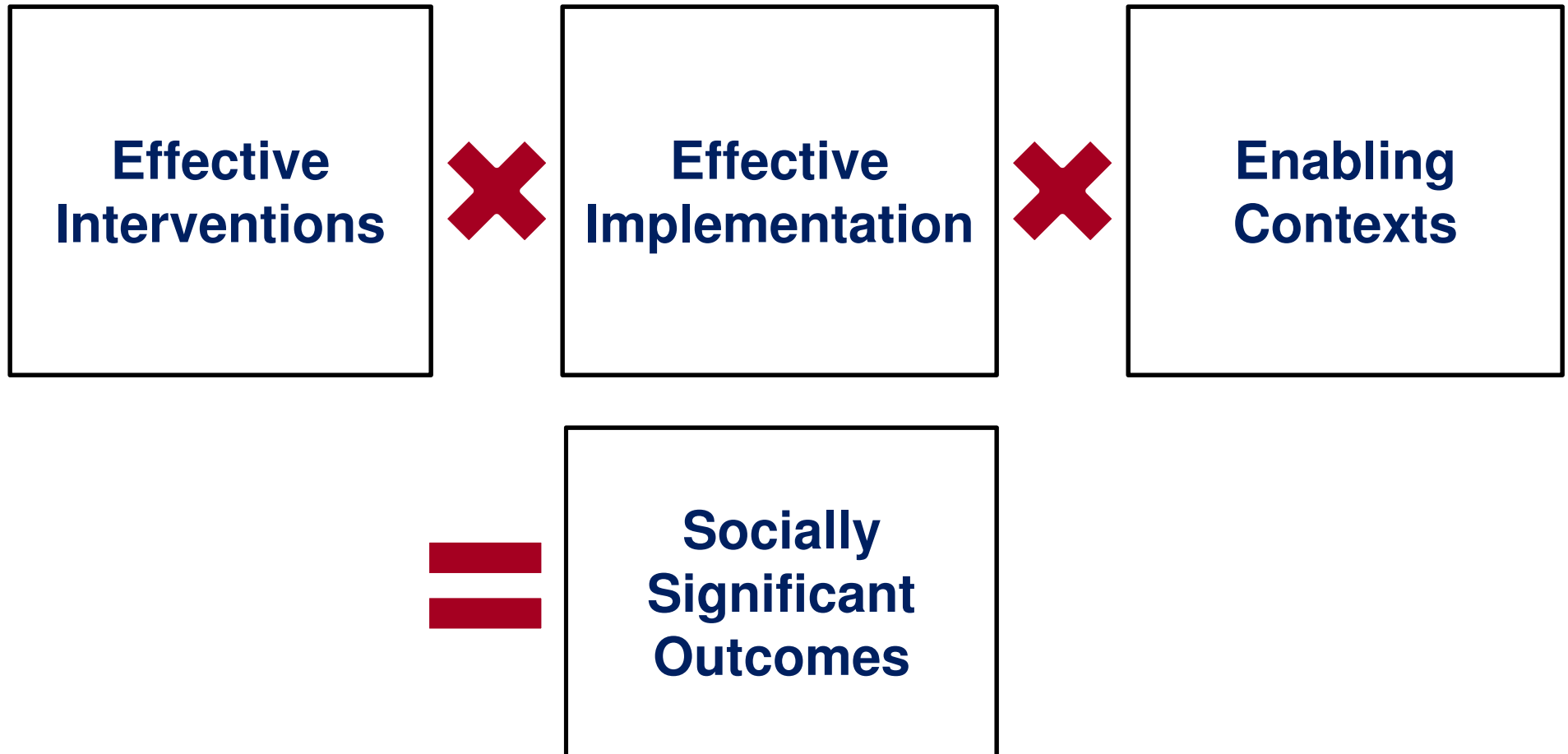
**Poised for more evidence-informed  
implementation of EBPs and  
other innovations**

# Implementation Science

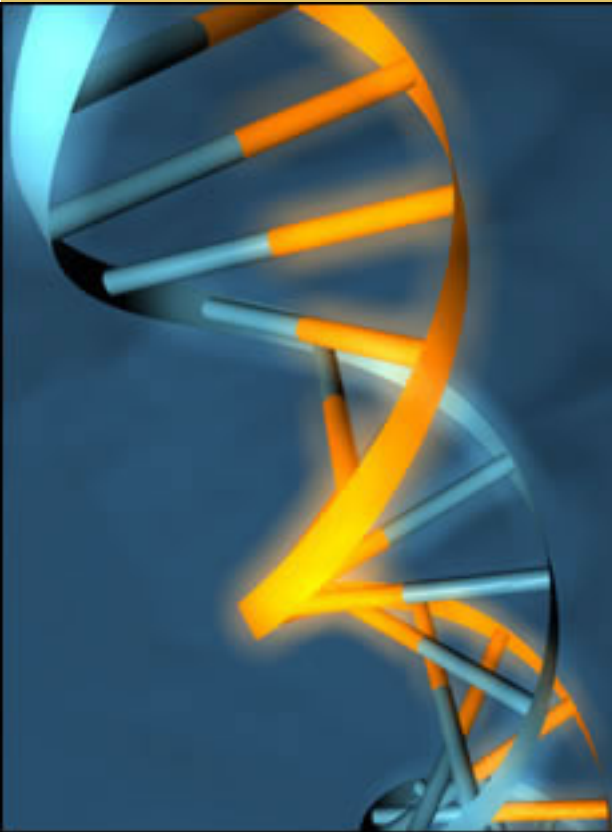
- Sufficient data to move from making lists (facilitators & barriers) to making sense
  - Frameworks to guide implementation work
    - Meyers, Durlak, and Wandersman (2012) comparison of 25 implementation frameworks
    - Tabak, Khoong, Chambers, & Brownson (2012) reviewed 61 models for diffusion, dissemination, and implementation



# Formula: Applied Implementation

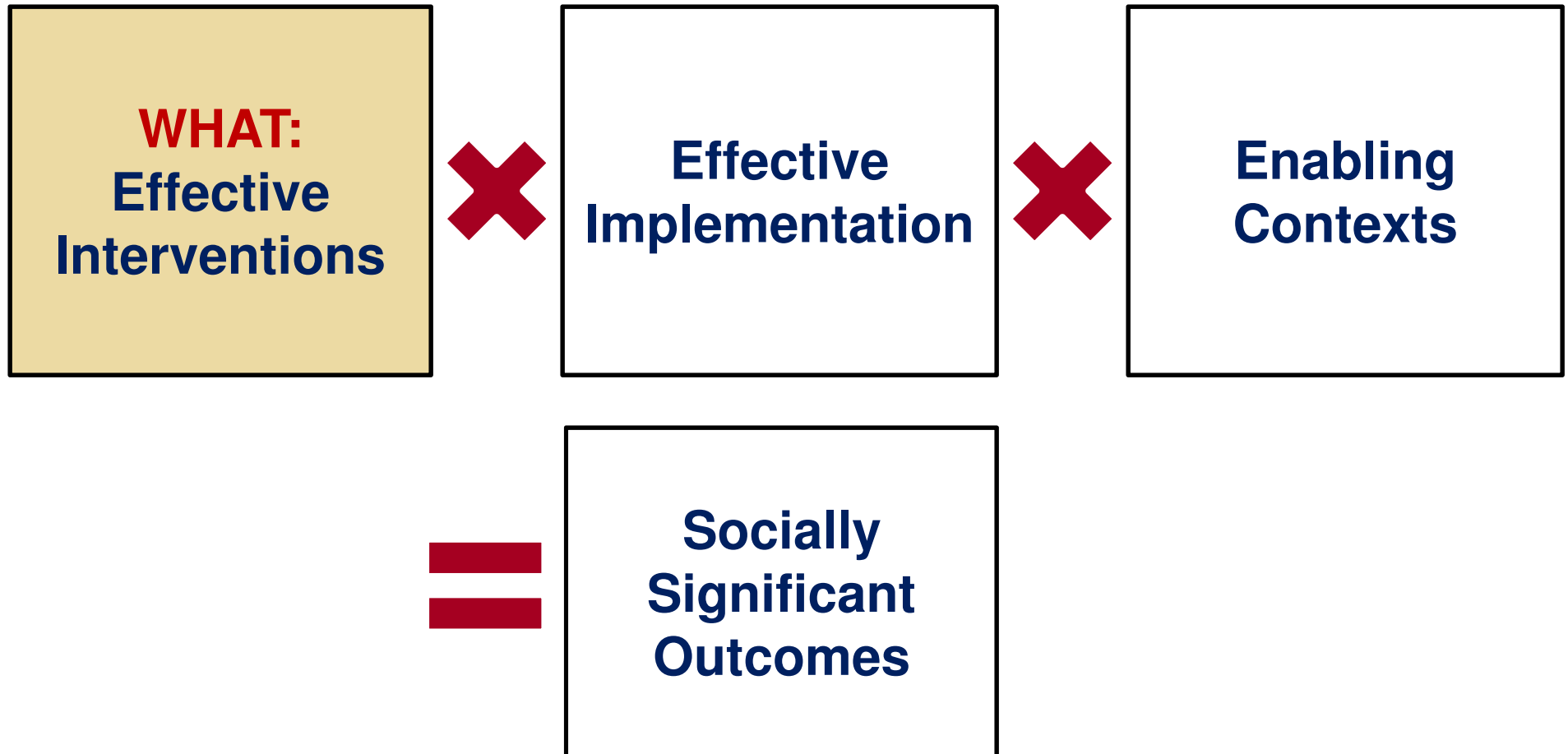


# APPLIED Implementation Science: Active Implementation Frameworks



- ✓ Usable Interventions
- ✓ Implementation Stages
- ✓ Implementation Drivers
- ✓ Improvement Cycles
- ✓ Implementation Teams

# Applied Implementation

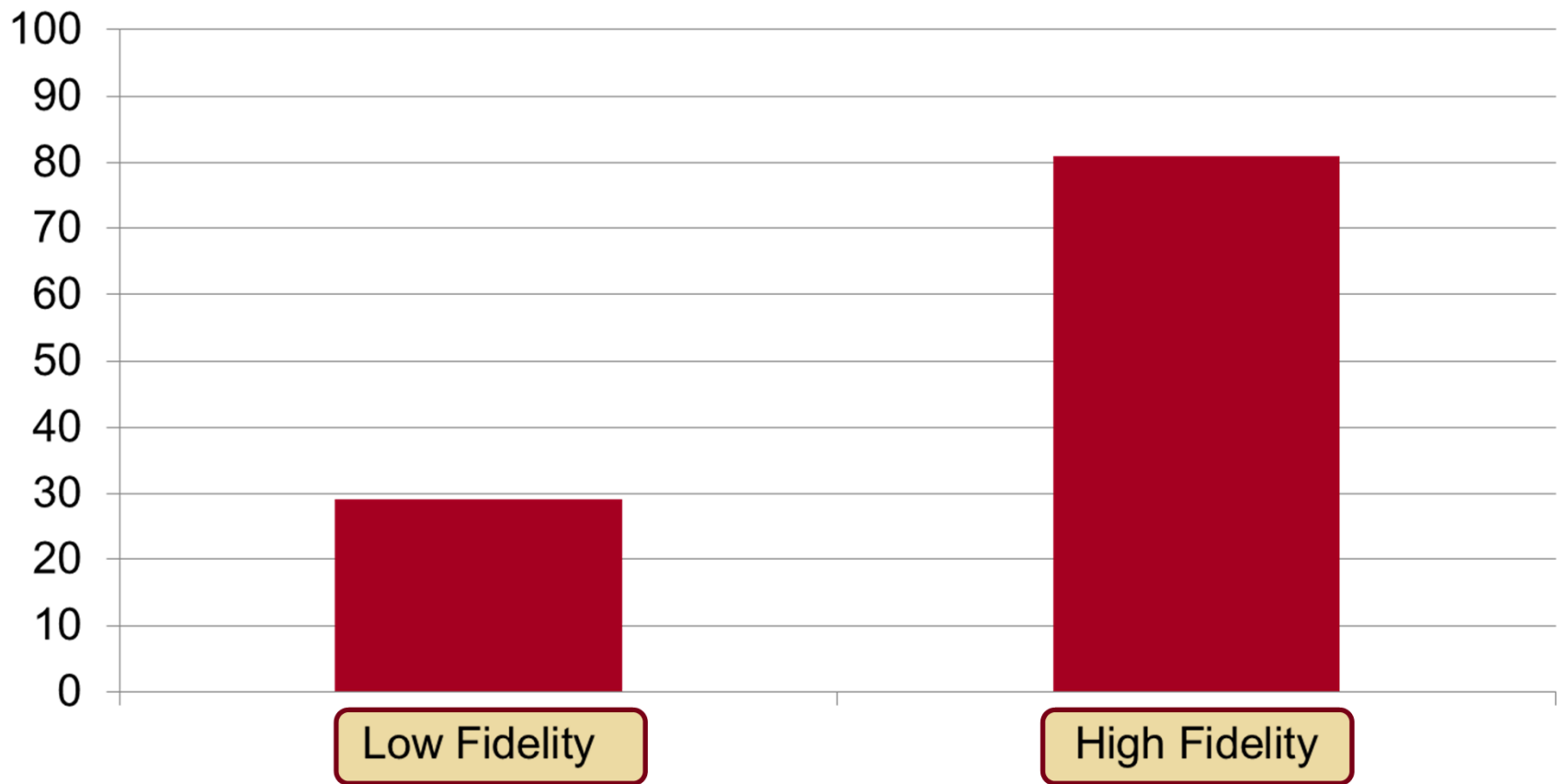


# Usable Intervention Criteria

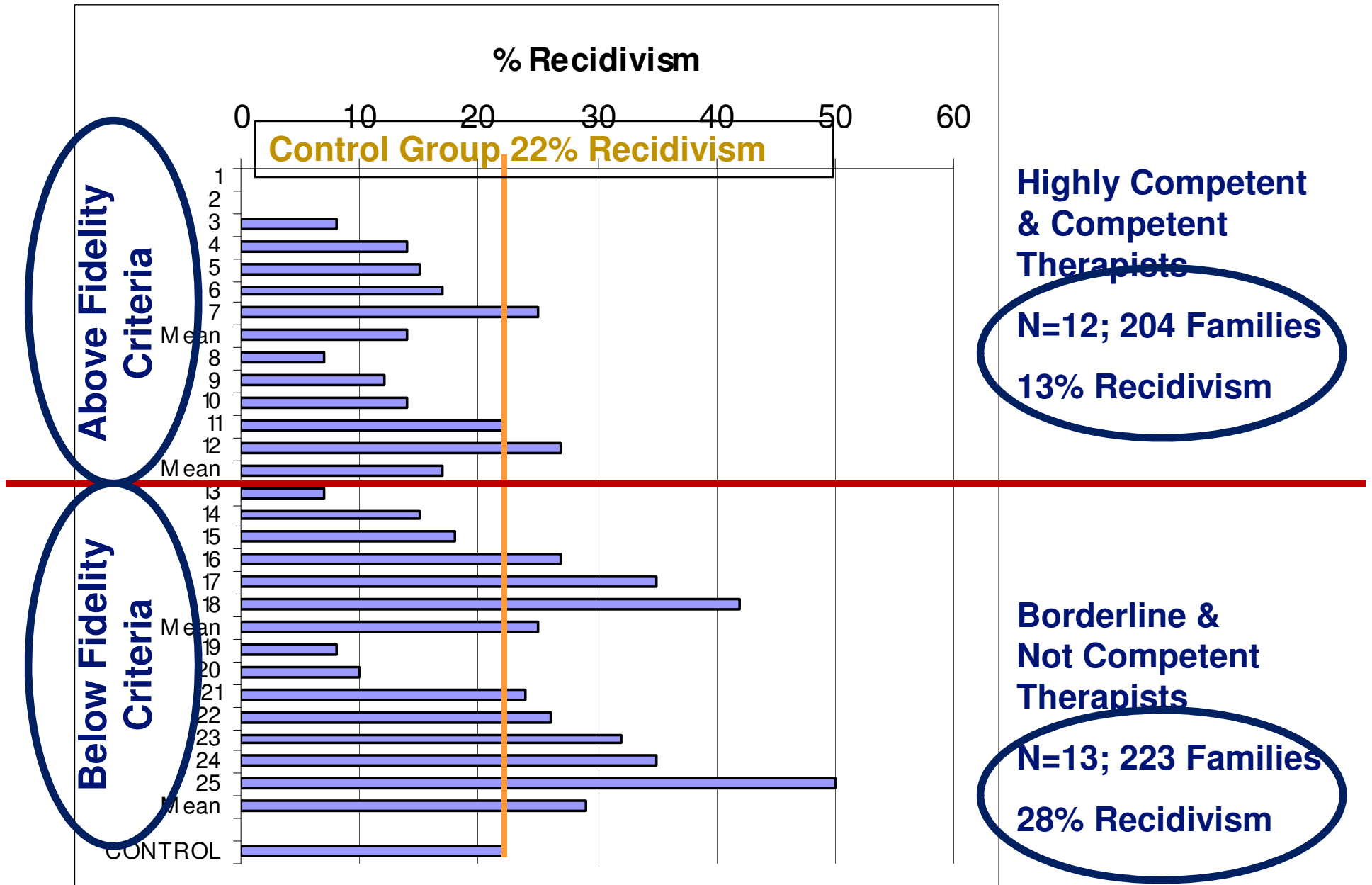
- ▶ **Clear description of the program**
  - ▶ Philosophy, values, principles (guidance)
  - ▶ Inclusion – exclusion criteria (beneficiaries)
- ▶ **Clear essential functions that define the program (core components)**
- ▶ **Operational definitions of essential functions (practice profiles; do, say)**
- ▶ **Practical performance assessment**
  - ▶ Highly correlated (0.70+) with desired outcomes

# DBT

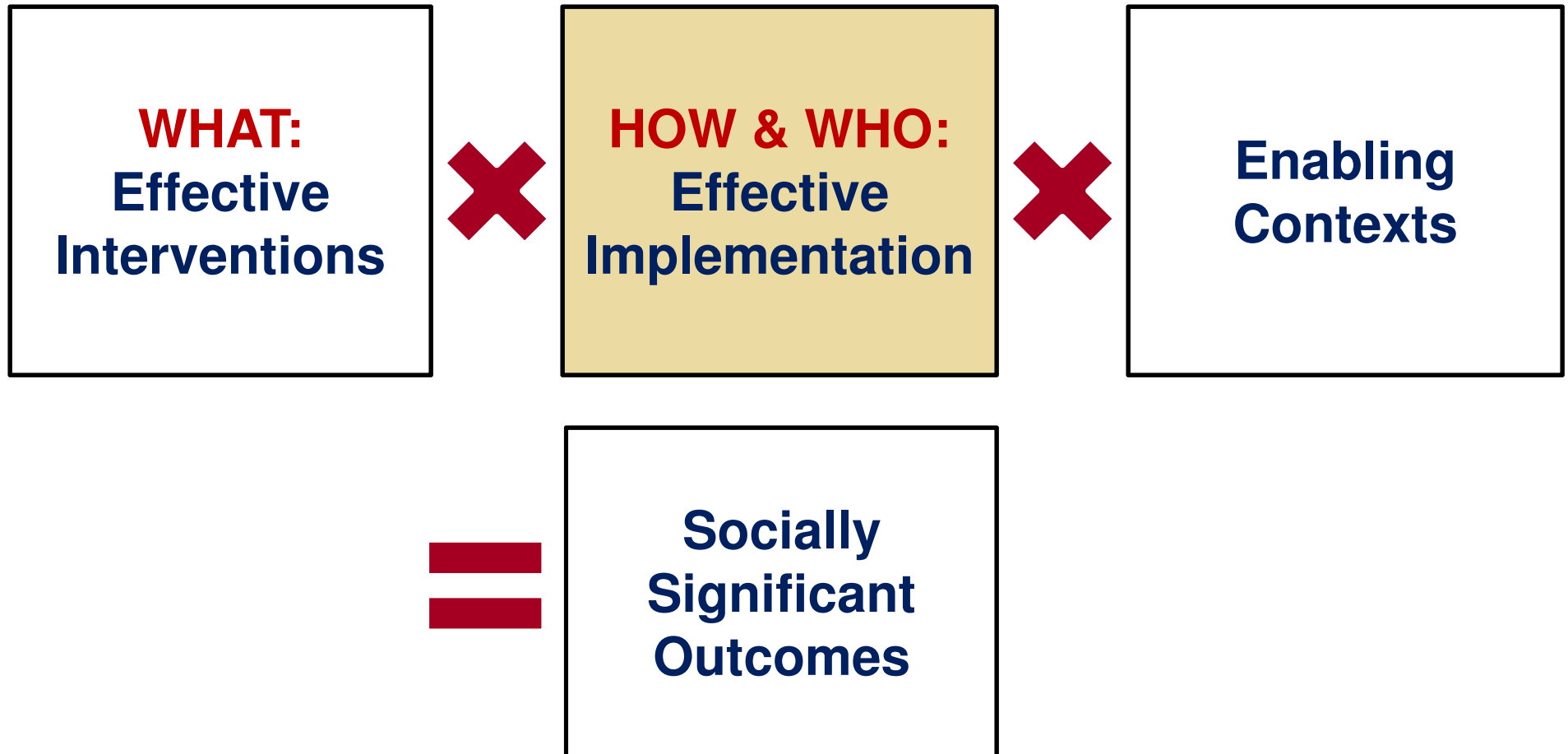
% Clean UAs

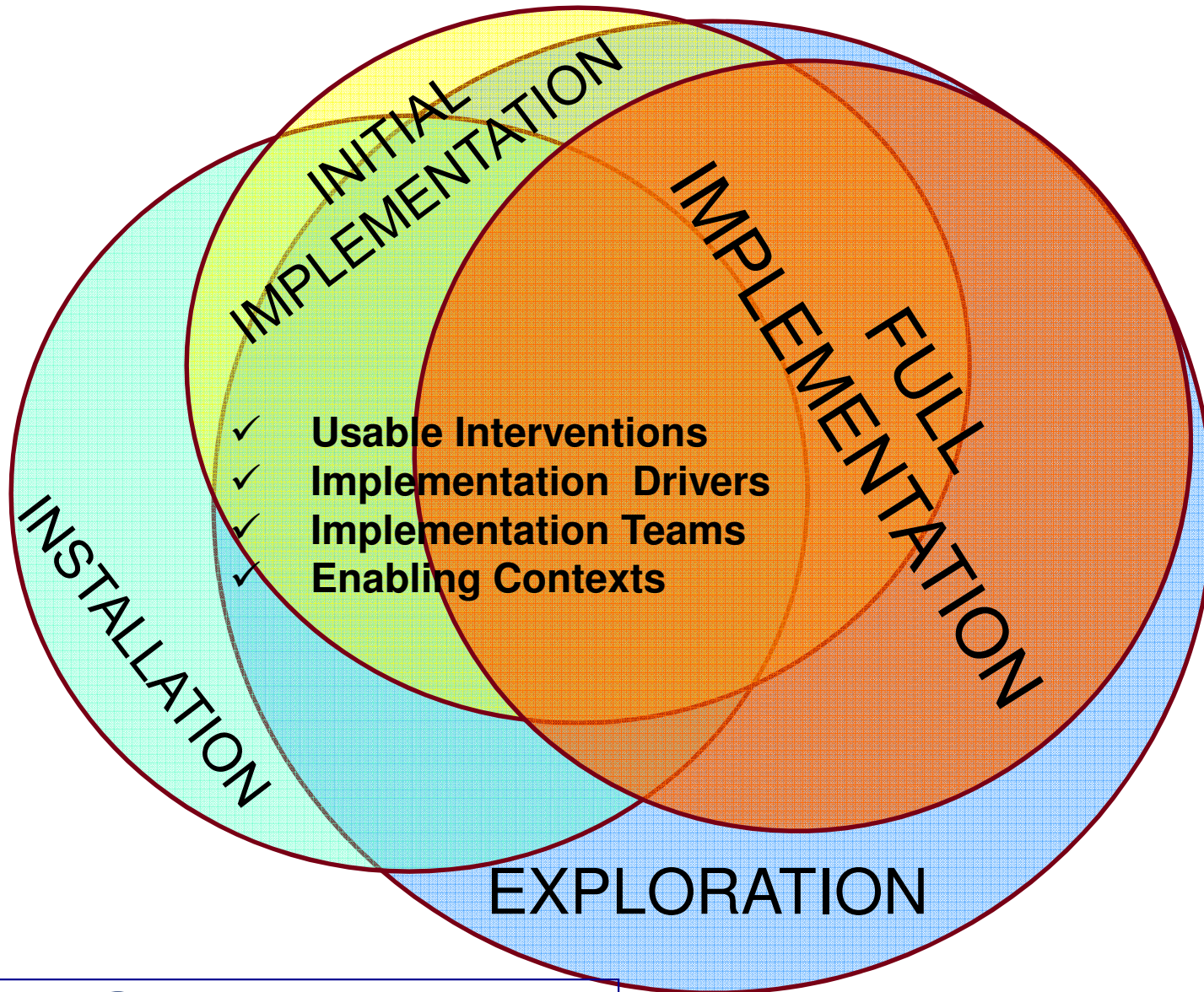


# Functional Family Therapists (WSIPP)



# Applied Implementation



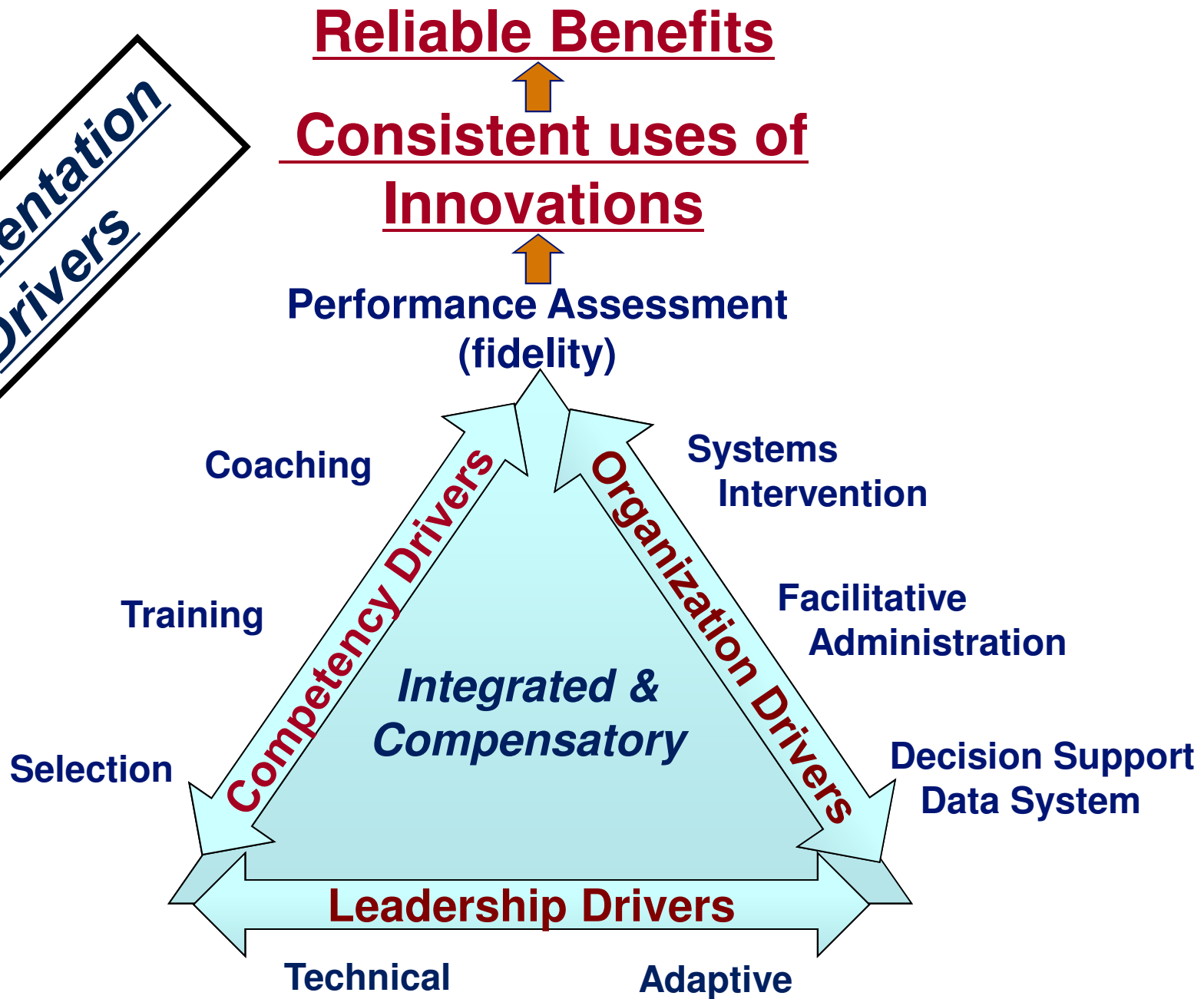


## Stages of Implementation

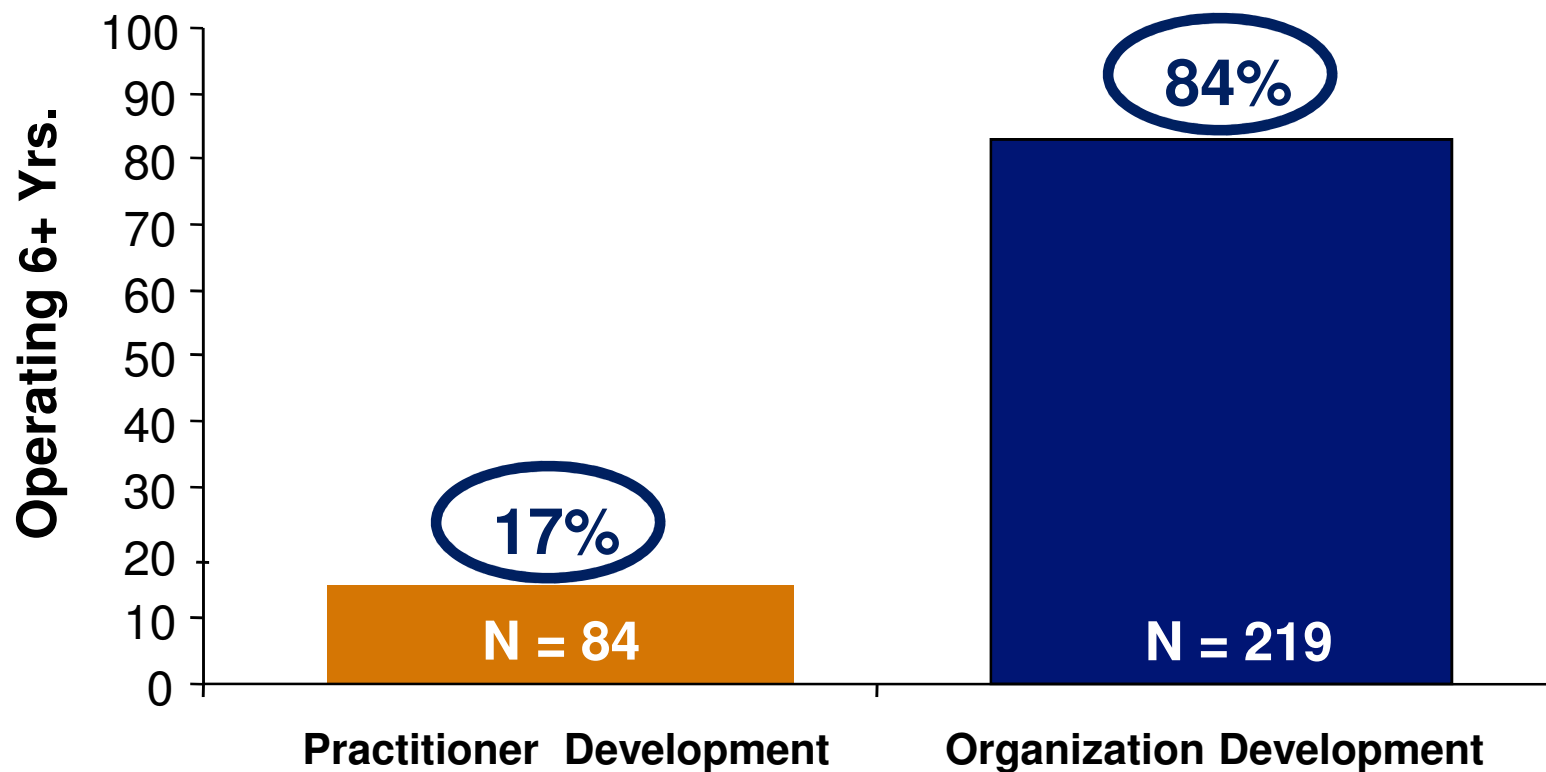
Fixsen, Naoom, Blase, Friedman, & Wallace, 2005



**Implementation Drivers**



# Organization & Leadership Drivers



Fixsen, Blase, Timbers, & Wolf (2001)

# Improvement Cycles

## **Rapid cycle (PDSA) problem solving**

 Shewhart (1931); Deming (1986)

## **Usability testing**

 Rubin (1994); Nielsen (2000)

## **Practice-policy communication loop**

 Fixsen, Blase, Metz, & Van Dyke (2013)

# Implementation Team

▶ Minimum of three people (four or more preferred) with expertise in:

▶ Innovations

▶ Implementation

▶ Organization change

▶ Tolerate turnover; teams are sustainable even when the players come and go (Higgins, Weiner, & Young, 2012; Klest & Patras, 2011)

# Implementation Team

Implementation Drivers	T1	T2	T3
Selection	1.44	2.00*	1.89*
Training	1.33	1.50*	1.10
Coaching	1.27	1.73*	1.83*
Perf. Assessment	0.78	1.34	2.00*
DSDS	0.18	1.36	2.00*
Fac. Administration	1.38	2.00*	2.00*
Systems Intervention	1.29	1.86*	2.00*
<u>Average Composite Score</u>	1.1	1.68*	1.83*
<u>Fidelity</u> (% of cases)	18%	83%	83%

2 = Fully in Place  
 1 = Partially in Place  
 0 = Not in Place

Metz et al. (2013)

# Implementation Team

		IMPLEMENTATION	
		Expert Impl. Team	NO Impl. Team
INTERVENTION	Effective	80%, 3 Yrs	14%, 17 Yrs
		Effective use of Implementation Science & Practice	Letting it Happen Helping it Happen

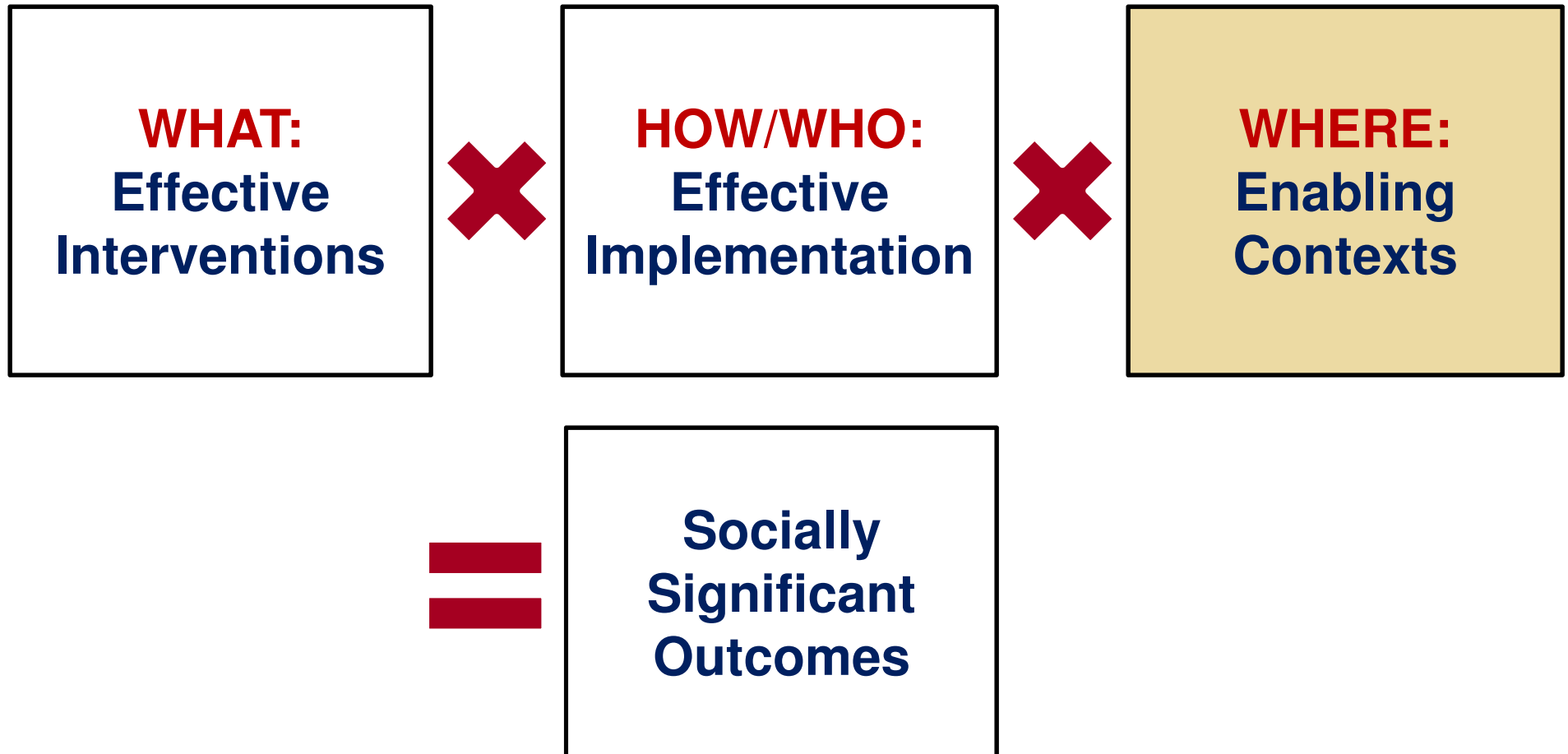
Fixsen, Blase,  
Timbers, & Wolf, 2001

Saldana &  
Chamberlain, 2012

Balas & Boren, 2000

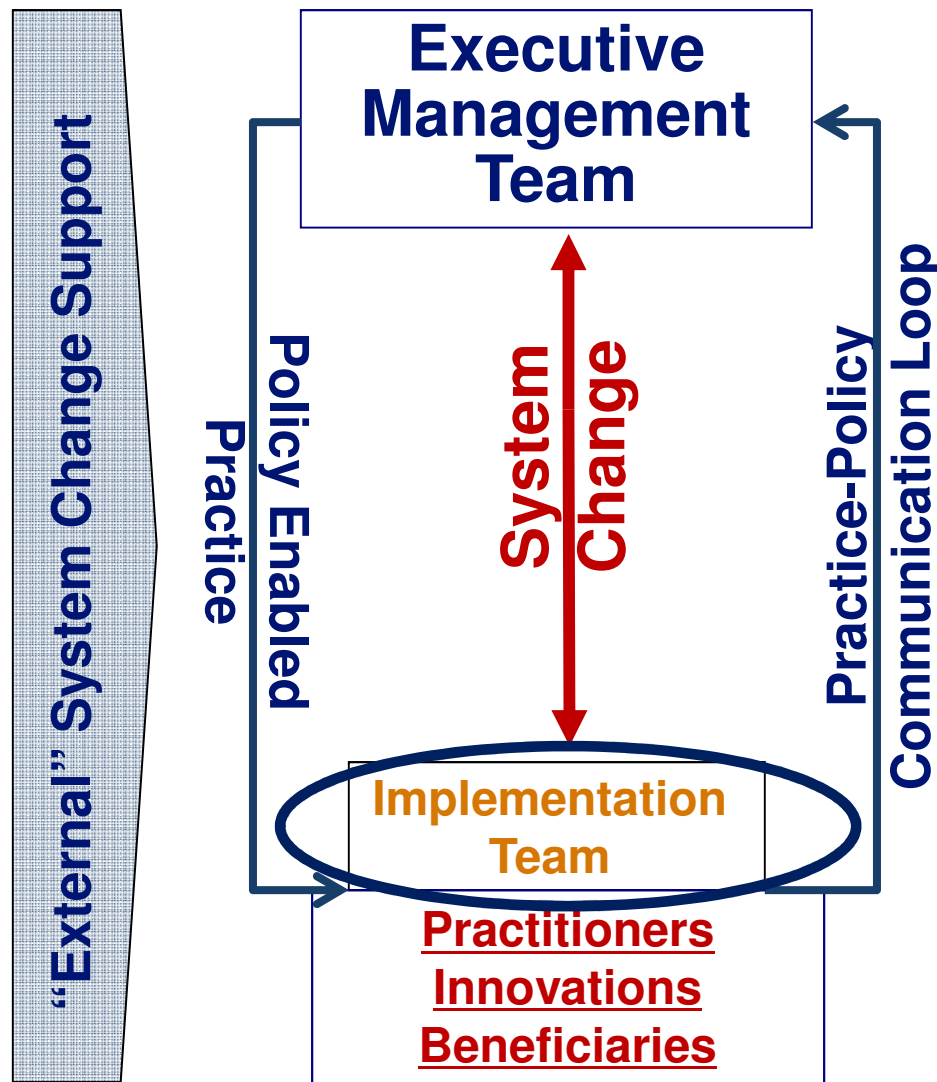
Green, 2008

# Applied Implementation



# Creating Enabling Contexts

“The fault cannot lie in the part responsible for the repair.”  
Ashby (1956)



## Adaptive Challenges

- Duplication
- Fragmentation
- Hiring criteria
- Salaries
- Credentialing
- Licensing
- Time/ scheduling
- Union contracts
- RFP methods
- Laws & regulations



# Implementation Science

## A fundamental truth:

- People cannot benefit from innovations they do not experience

## Effective Innovations

- If we cannot use them as designed
- They will not produce desired outcomes

# APPLIED Implementation Science: Implementation Science

**Active implementation frameworks are not an end point, but a new beginning for rapid expansion of knowledge related to implementation best practices, science, and policy.**

- Interventions
- Implementation Stages
- Implementation Drivers
- Improvement Cycles
- ✓ Implementation Teams

# For More Information

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[www.scalingup.org](http://www.scalingup.org)  
[www.globalimplementation.org](http://www.globalimplementation.org)



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# Implementation Science

## *Implementation Research: A Synthesis of the Literature*



Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). *Implementation Research: A Synthesis of the Literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).



[HTTP://NIRN.FPG.UNC.EDU](http://NIRN.FPG.UNC.EDU)



# Get Connected!

**[www.scalingup.org](http://www.scalingup.org)**



**For more on Implementation Science**

**<http://nirn.fpg.unc.edu>**

**[www.globalimplementation.org](http://www.globalimplementation.org)**

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# Thank You for Your Support

- **Annie E. Casey Foundation (EBPs and Cultural Competence)**
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- **Centers for Disease Control & Prevention (Implementation Research)**
- **National Institute of Mental Health (Research And Training Grants)**
- **Juvenile Justice and Delinquency Prevention (Program Development And Evaluation Grants)**
- **Office of Special Education Programs (Scaling up and Capacity Development Center)**
- **Administration for Children and Families (Child Welfare Leadership; Capacity Development Center)**
- **Duke Endowment (Child Welfare Reform)**

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