



Dissemination and Implementation Science  
Immersive Training

# How can we use D&I?

## Theories, Models, and Frameworks



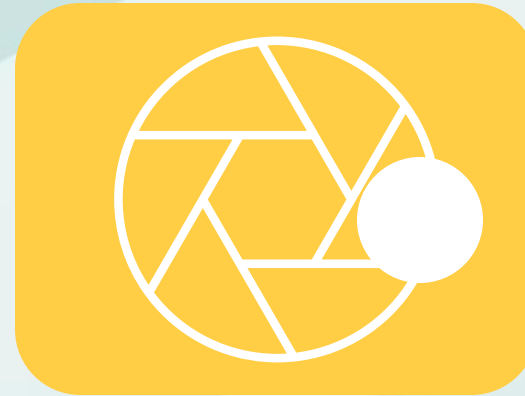
Module 3

*Laura Balis, PhD*

# Learning Objectives



**Describe a range of  
D&I T, M, F**



**Identify existing  
D&I resources**

# Theories, Models, and Frameworks



**Theories:** clear explanation of how and why specific relationships lead to specific events



**Models:** description of a phenomenon or a specific aspect of a phenomenon



**Frameworks:** describe empirical phenomena by fitting them into a set of categories

# D&I Theories, Models, and Frameworks



Describe/guide the process of translating research into practice

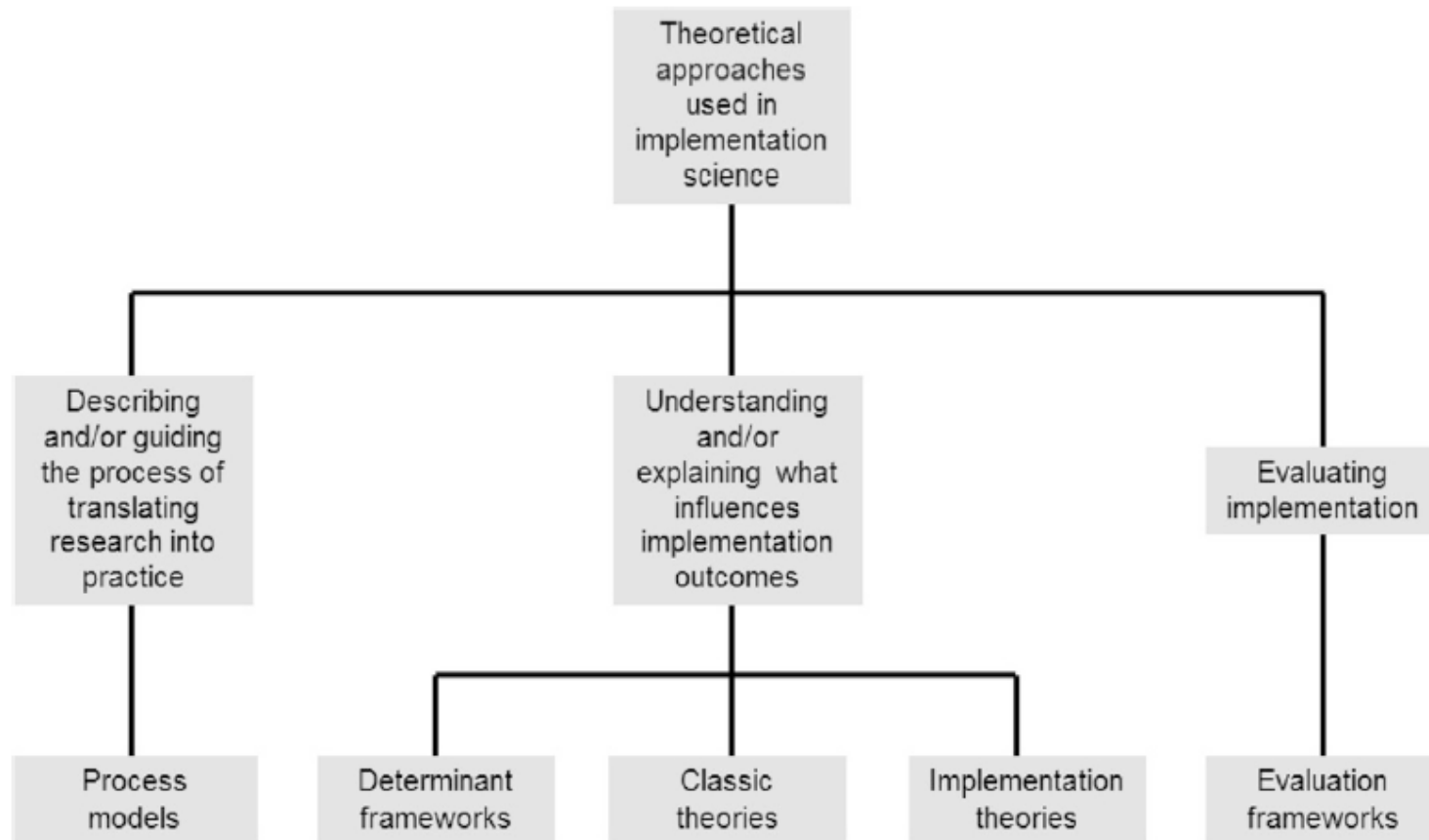


Understand/explain what influences implementation outcomes



Evaluate implementation

# Categories of D&I TMF



**Figure 1** Three aims of the use of theoretical approaches in implementation science and the five categories of theories, models and frameworks.

# Categories of D&I TMF

**Constructs** <sup>i</sup>

<input type="checkbox"/> Acceptability/feasibility	<input type="checkbox"/> Adaptation and evolution	<input type="checkbox"/> Adopter/implementer/decision maker characteristics	<input type="checkbox"/> Adoption
<input type="checkbox"/> Awareness	<input type="checkbox"/> Barriers and facilitators	<input type="checkbox"/> Champion/field agent	<input type="checkbox"/> Communication
<input type="checkbox"/> Communication channels	<input type="checkbox"/> Compatibility	<input type="checkbox"/> Complexity	<input type="checkbox"/> Context
<input type="checkbox"/> Context - Inner setting	<input type="checkbox"/> Context - Outer setting	<input type="checkbox"/> Cost	<input type="checkbox"/> Development of an Intervention
<input type="checkbox"/> Dissemination	<input type="checkbox"/> Dose	<input type="checkbox"/> Engagement	<input type="checkbox"/> Evaluation
<input type="checkbox"/> External Validity/Generalizability	<input type="checkbox"/> Fidelity	<input type="checkbox"/> Fit	<input type="checkbox"/> Goals
<input type="checkbox"/> Health Equity	<input type="checkbox"/> Identification	<input type="checkbox"/> Implementation	<input type="checkbox"/> Innovation characteristics
<input type="checkbox"/> Knowledge and Knowledge Synthesis	<input type="checkbox"/> Maintenance and Sustainability	<input type="checkbox"/> Observability	<input type="checkbox"/> Outcomes
<input type="checkbox"/> Outcomes - Health/QOL/Satisfaction/Clinical	<input type="checkbox"/> Outcomes - Implementation	<input type="checkbox"/> Outcomes - Quality Improvement/Practice or Policy Change	<input type="checkbox"/> Patient/target audience characteristics and needs
<input type="checkbox"/> Pre-implementation	<input type="checkbox"/> Process	<input type="checkbox"/> Reach	<input type="checkbox"/> Readiness
<input type="checkbox"/> Relative advantage	<input type="checkbox"/> Stakeholders	<input type="checkbox"/> Strategies	<input type="checkbox"/> Translation
<input type="checkbox"/> Trialability	<input checked="" type="checkbox"/> All		

## Key D&I T, M, F

- Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM)
- Consolidated Framework for Implementation Research (CFIR)
- Exploration, Preparation, Implementation, Sustainment (EPIS)
- Diffusion of Innovations (DOI)
- Interactive Systems Framework (ISF)

# Key D&I T, M, F

**Table 4.**

Characteristics of NCI-funded DIRH grants, 2006–2019.

	Number (%) of grants
Characteristics <sup>a</sup>	(N = 71)
Theories, models, frameworks used	
RE-AIM	30 (42)
Diffusion of Innovations	19 (27)
CFIR	13 (18)
Organizational readiness for change	4 (6)
PARIHS	2 (3)
Interactive systems framework	2 (3)
Other	11 (15)
None	18 (25)

[View All D&I Models](#)[Search D&I Models](#)[Select](#)[Adapt](#)[Integrate](#)[Measure constructs](#)

User Name

Password

[Login](#)[Register](#)

## View All D&I Models

The list of all D&I Models and their characteristics. You can compare up to five models by selecting the check box next to the model name. Additional information on each model can be found by clicking on the Description link under each Model name.

[Compare Models](#)

	Sort	Sort	Sort	Socio-Ecological Levels					Sort	Sort	
	Model	D &/or I	Construct Flexibility	Individual	Organization	Community	System	Policy	Field of Origin	# Times Cited	Rating
<input type="checkbox"/>	Consolidated Framework for Implementation Research <a href="#">Description</a>	I-Only	4		O	C			Health services	91	
<input type="checkbox"/>	Diffusion of Innovation <a href="#">Description</a>	D-Only	1	I	O	C			Agriculture	39,364	
<input type="checkbox"/>	Interactive Systems Framework <a href="#">Description</a>	D=I	2	I	O	C	S		Violence prevention	116	
<input type="checkbox"/>	RE-AIM Framework <a href="#">Description</a>	D=I	4	I	O	C			Public Health	728	

[Compare Models](#)[Restore Full List](#)

# Where to find D&I models

[www.dissemination-implementation.org](http://www.dissemination-implementation.org)

# Breakout Room Prompts



Search [dissemination-implementation.org](https://www.dissemination-implementation.org) for a TMF you might use in a project.

Which TMF did you choose? Why is it applicable to your project?

# Consolidated Framework for Implementation Research (CFIR)

A comprehensive framework to promote consistent use of constructs, terminology, and definitions

Consolidates existing models and frameworks

Comprehensive in scope

Can tailor use to each project

# The CFIR:



Provides a pragmatic structure for evaluating complex implementations



Helps to organize findings across disparate implementations



Paves the way for cross-study synthesis

# CFIR: Five Domains

## Intervention Characteristics

8 Constructs (e.g., evidence strength & quality, complexity)

## Outer Setting

7 Constructs (e.g., patient needs & resources)

## Inner Setting

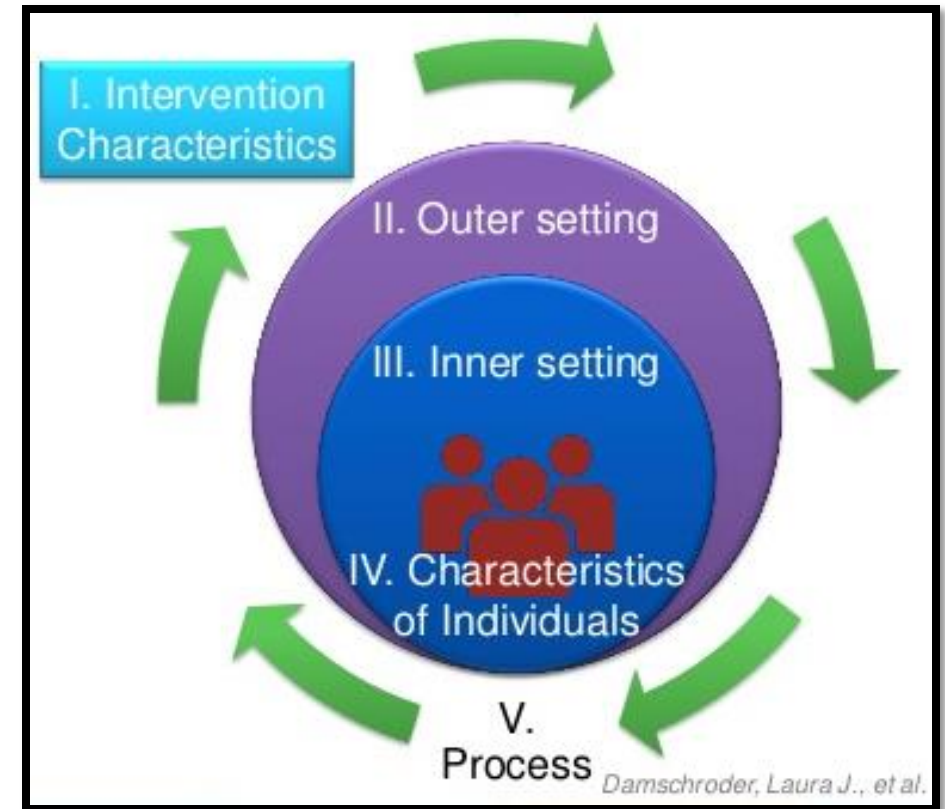
11 constructs (e.g., leadership engagement, available resources)

## Characteristics of Individuals

13 Constructs (e.g., knowledge, self-efficacy)

## Process

9 Constructs (e.g., plan, engage, champions)



<b>I. INNOVATION DOMAIN</b>	<p>Perceptions of the Innovation itself, e.g., a new clinical treatment, educational program, or city service.</p> <p>Define the Innovation: [Insert description of the innovation being implemented, e.g., innovation type, innovation components (including core versus adaptable components), and distinguish the innovation (activities that continue when implementation is complete) from the implementation process (activities that end after implementation is complete).]</p>
<b>Construct Name</b>	<p><b>Construct Definition:</b></p> <p><i>Perceptions of the degree to which...</i></p>
A. Innovation Source	The group that developed and/or visibly sponsored use of the innovation is reputable, credible, and/or trustable.
B. Innovation Evidence-Base	The innovation has robust evidence supporting its effectiveness.
C. Innovation Relative Advantage	The innovation is better than other available innovations or current practice.
D. Innovation Adaptability	The innovation can be modified, tailored, or refined to fit local context or needs.
E. Innovation Trialability	The innovation can be tested or piloted on a small scale and undone.
F. Innovation Complexity	The innovation is complicated, which may be reflected by its scope and/or the nature and number of connections and steps.
G. Innovation Design	The innovation is well designed and packaged, including how it is assembled, bundled, and presented.
H. Innovation Cost	The innovation purchase and operating costs are expensive.

<b>IV. INDIVIDUALS DOMAIN</b>	Perceptions about Individuals, including their roles and characteristics. Note: These may be self-perceptions for some roles.
<b>ROLES SUBDOMAIN</b>	Define Roles: [Insert description of roles applicable to the project and their location in the Inner or Outer Setting.]
<b>Construct Name</b>	<b>Construct Definition:</b>  <i>Perceptions of...</i>
A. High-Level Leaders	Individuals with a high level of authority, including key decision-makers, executive leaders, or directors.
B. Mid-level Leaders	Individuals with a moderate level of authority, including leaders supervised by a high-level leader who supervise others.
C. Opinion Leaders	Individuals with informal influence on the attitudes and behaviors of others (24,25).
D. Implementation Facilitators	Individuals with subject matter expertise who assist, coach, or support implementation.
E. Implementation Leads	Individuals who lead efforts to implement the innovation.
F. Implementation Team Members	Individuals who collaborate with and support the Implementation Leads to implement the innovation, ideally including Innovation Deliverers and Recipients.
G. Other Implementation Support	Individuals who support the Implementation Leads and/or Implementation Team Members to implement the innovation.
H. Innovation Deliverers	Individuals who are directly or indirectly involved with delivering the innovation.
I. Innovation Recipients	Individuals who are directly or indirectly receiving the innovation.

# Application of the CFIR



Not all constructs apply to every study



Decide a priori which constructs to include



Develop tools based on key constructs



## Consolidated Framework for Implementation Research

[Home](#)[Constructs](#)[Evaluation Design ▾](#)[Strategy Design](#)[Articles & Highlights](#)[Tools ▾](#)[Contact Us](#)

You have come to the right place if you are looking for more information about the Consolidated Framework for Implementation Research (CFIR) that was originally published in Implementation Science in 2009. This site is created for individuals considering using the CFIR to evaluate an implementation or design an implementation study.

Supported Web Browsers: Google Chrome, Mozilla Firefox, Safari

[+ What is the CFIR?](#)[+ Benefits of Using the CFIR](#)[+ Published Citations of the CFIR](#)



## Qualitative Data

### — Data Collection

#### Interview Guide

Qualitative data can be collected through semi-structured interviews with stakeholders. An interview guide based on CFIR constructs can be used. Explore the online [interview guide tool](#) that you can use to create your guide. It allows you to select constructs and questions from a menu of options and then produces an editable interview guide.

#### Observation Template

Site visits often generate qualitative data that you can analyze using the CFIR. The Microsoft Excel [observation template](#) can facilitate taking notes organized by CFIR construct. This can be an efficient approach to provide [rapid feedback](#) to stakeholders.

#### Meeting Notes Template

If regular meetings are held with stakeholders that generate meeting notes, these notes may be analyzed as data. The Microsoft Excel [meeting notes template](#) can facilitate taking notes organized by CFIR construct. Similar to the observation template, this can be an efficient way to provide [rapid feedback](#) to stakeholders.

# Breakout Room Prompts



Explore [cfirguide.org](https://cfirguide.org)

Use the Interview Guide Tool to select constructs and produce an interview guide.

# Exploration, Preparation, Implementation, Sustainment (EPIS) Framework



**Exploration:** consider priority population needs, identify best EBI, decide whether to adopt



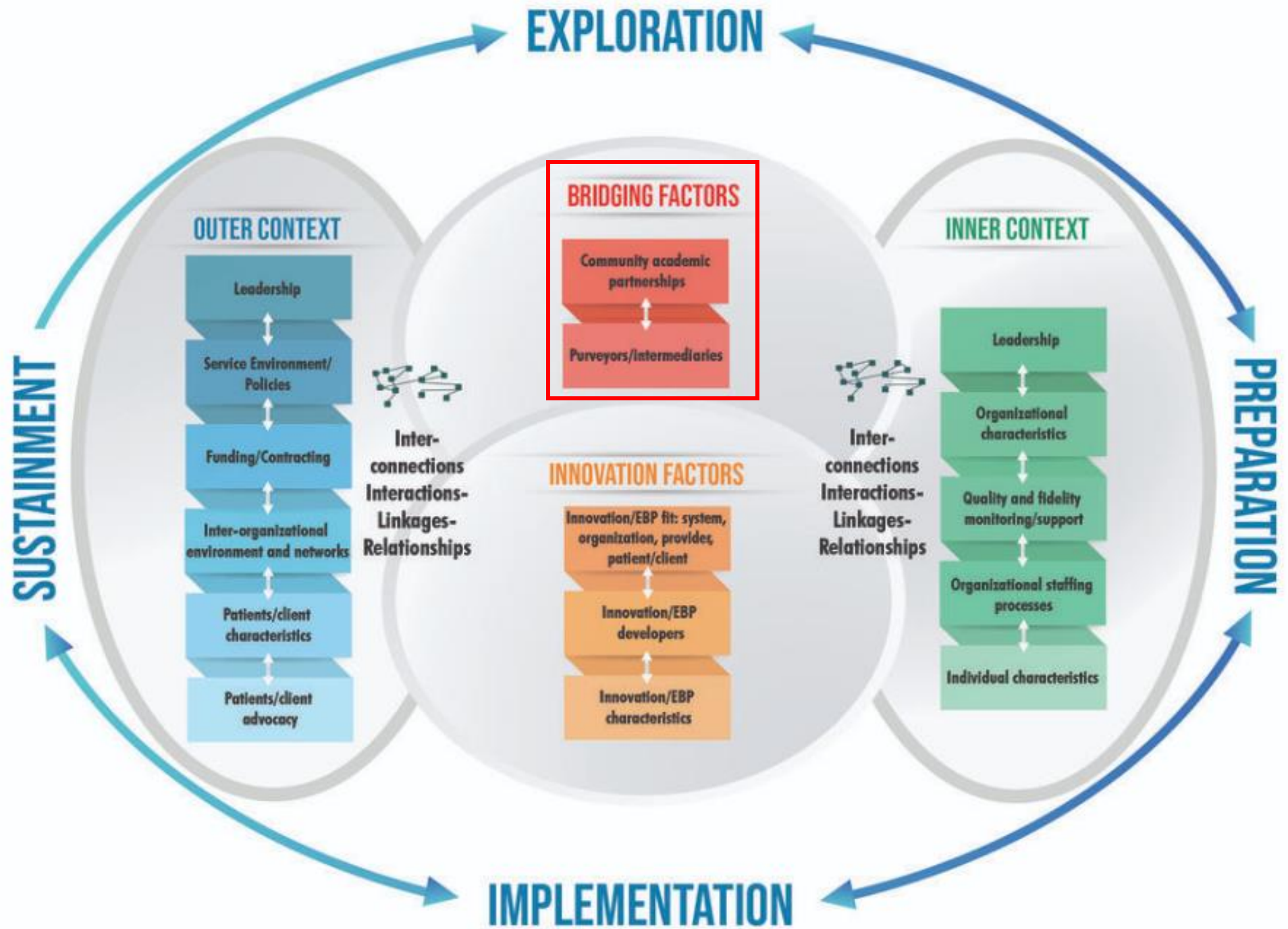
**Preparation:** identify potential barriers and facilitators, assess needs for adaptation, develop a plan



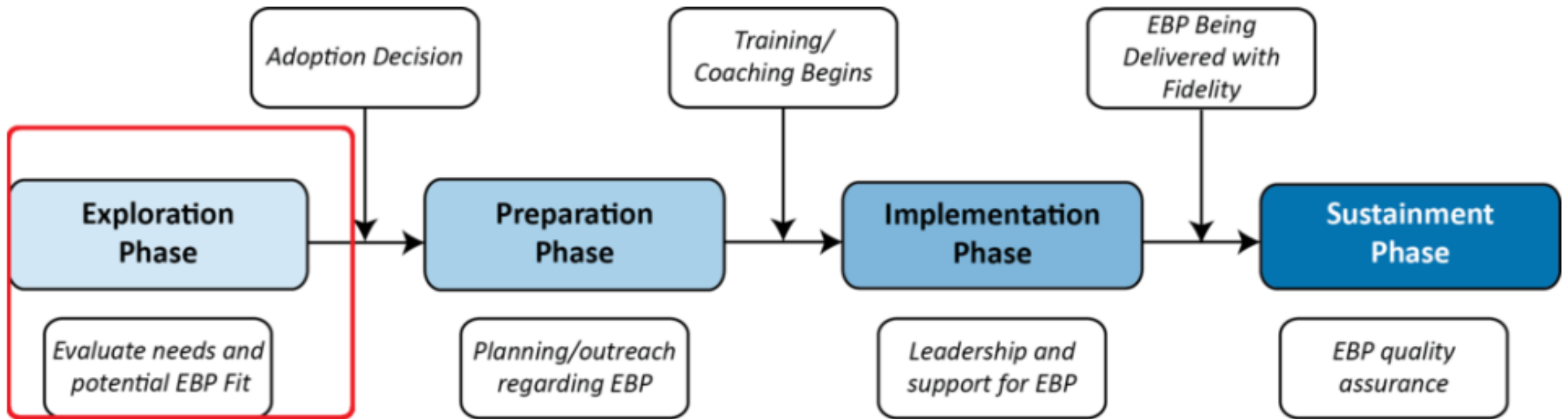
**Implementation:** EBI use is initiated in the organization



**Sustainment:** outer/inner setting structures, processes, & supports are ongoing as EBI delivery continues



# Exploration, Preparation, Implementation, Sustainment (EPIS) Framework



EPIS website:  
[episframework.com](https://episframework.com)

## RESOURCES TO FACILITATE THE EXPLORATION PHASE

Click on the resource to view a description and to add it to your cart to download for free in PDF format.

[Considerations when Contracting Services](#)

[The critical Role of Implementation Teams & their Evolution through EPIS](#)

[Data sources to Consider](#)

[EPIS Exploration Worksheet \(Fillable\)](#)

[Identifying and Clarifying the Problem \(Fillable\)](#)

[Identifying Potential Solutions Fillable](#)

[Implementation Team Membership Tracking Tool](#)

[Selection Guide Worksheet](#)

[Template Exploration Summary Report](#)

EPIS website:  
episframework.com



The California Evidence-Based  
Clearinghouse for Child Welfare

CEBC

### Identifying and Clarifying the Problem

Note: A PDF version that can be typed into and saved is available on the CEBC website:  
<http://www.cebc4cw.org/implementing-programs/tools/technical-assistance-materials/>

What is the primary problem? (2-3 sentences)

What data do you have to help understand the problem and its causes?

What do you think the main factors are that drive it?

What are you currently doing to address the problem?

Using the existing data, review the following areas:

Target Population

1) Who is affected?

# EPIS website: [episframework.com](http://episframework.com)

## BRIDGING FACTORS

Below are qualitative and quantitative approaches to assess and better understand some of the constructs in Bridging Factors

### Collaboration

- **Partnership Synergy tool/assessment:** (Weiss, Anderson, & Lasker, 2002)
- **Collaborative activities in contracting:** (Amirkhanyan, 2008)
- **Implementation Readiness Questionnaire** (measure development in process)

### Communication

- **Communication tools**

# Diffusion of Innovations theory (DOI)



The **innovation**, idea, practice, or object that is intended to be spread



**Communication** or the exchange of messages

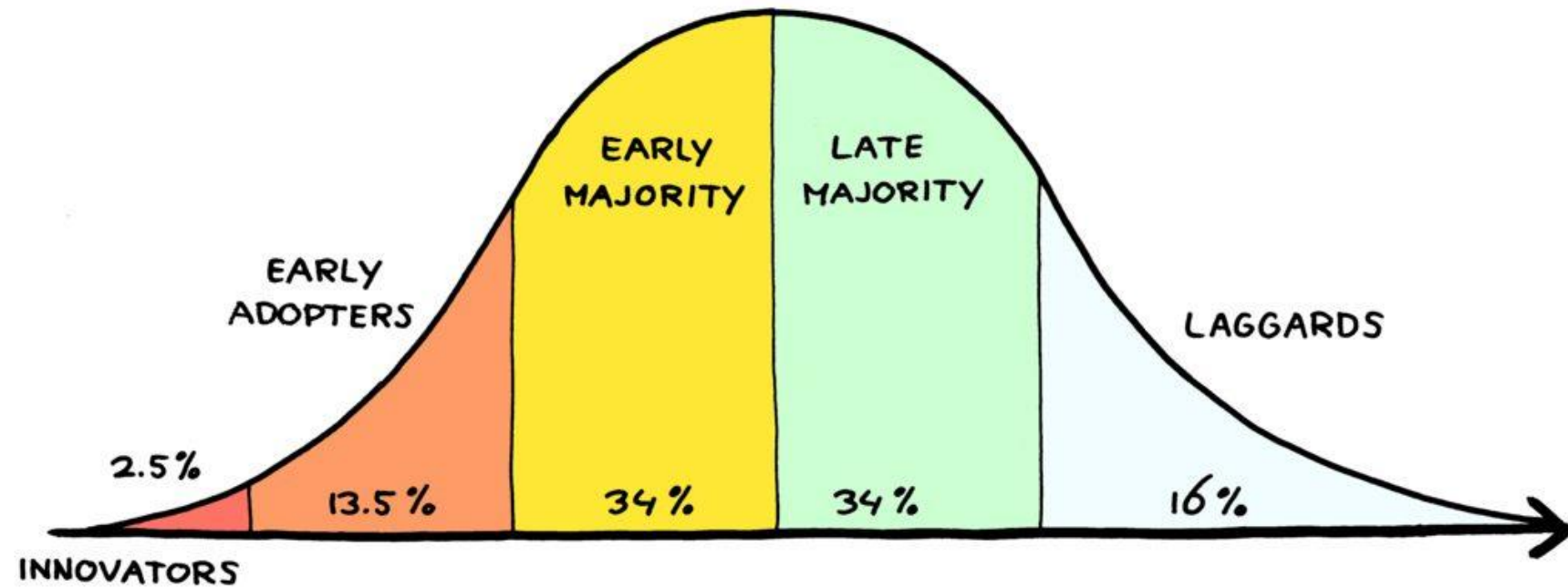


**Social system**, structure, or group of individuals that interact



A process of dissemination or diffusion that occurs over **time**

# Characteristics of adopters



# Characteristics of the innovation

Table 2. Key Attributes Affecting the Speed and Extent of an Innovation's Diffusion

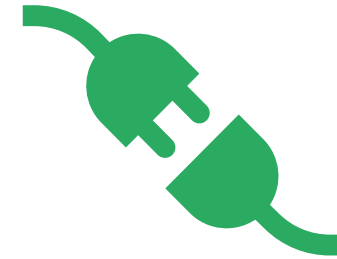
Constructs	Definition
Relative advantage	Is the innovation better than what it will replace?
Compatibility	Does the innovation fit with the intended audience?
Complexity	Is the innovation easy to use?
Testability	Can you test the innovation before deciding to adopt?
Observability	Are the results of the innovation observable and easily measurable?

# Interactive Systems Framework (ISF)



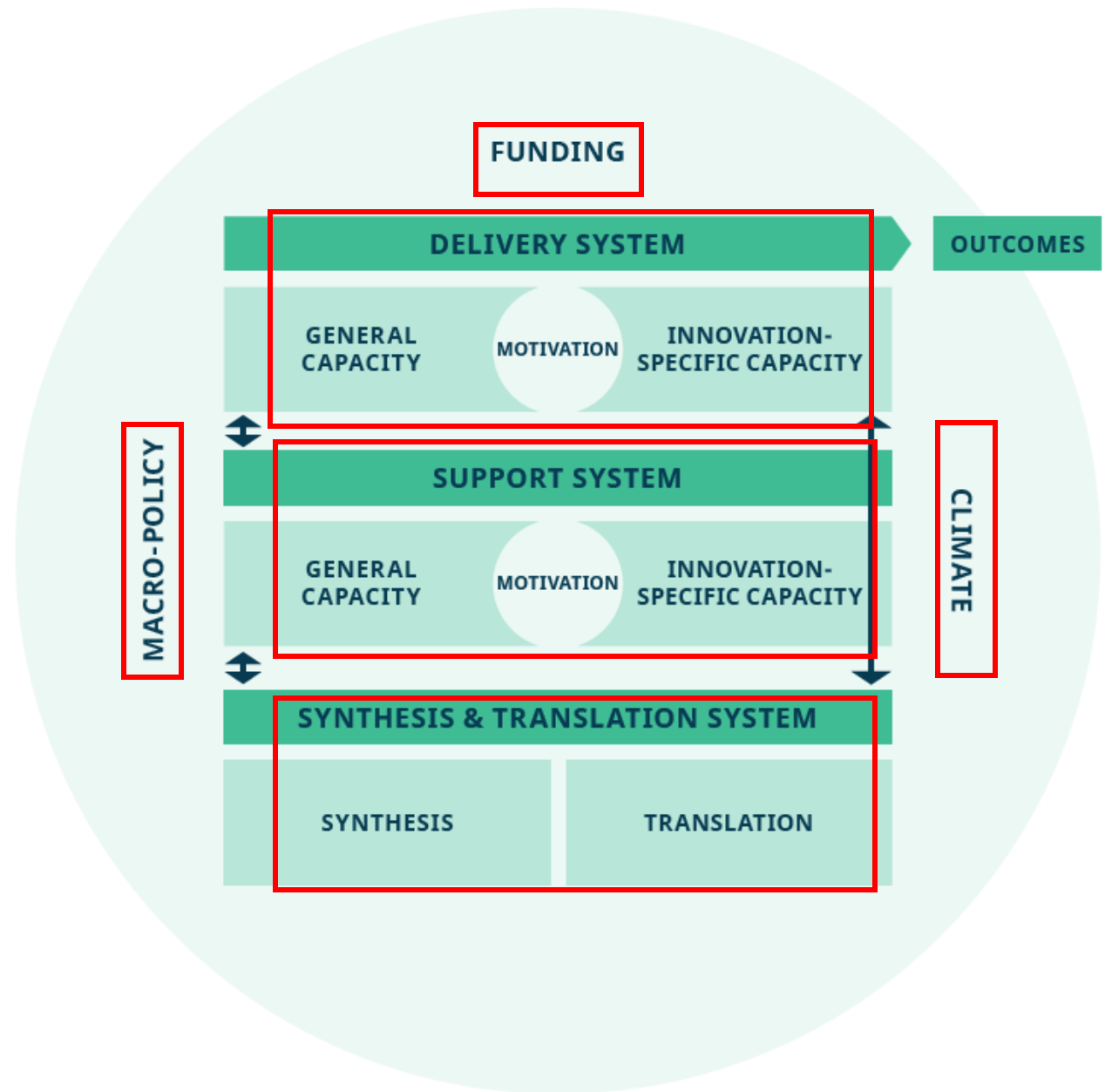
Addresses the how-to gap between determining what works and moving knowledge into the field

Connects three systems to work together for successful D&I

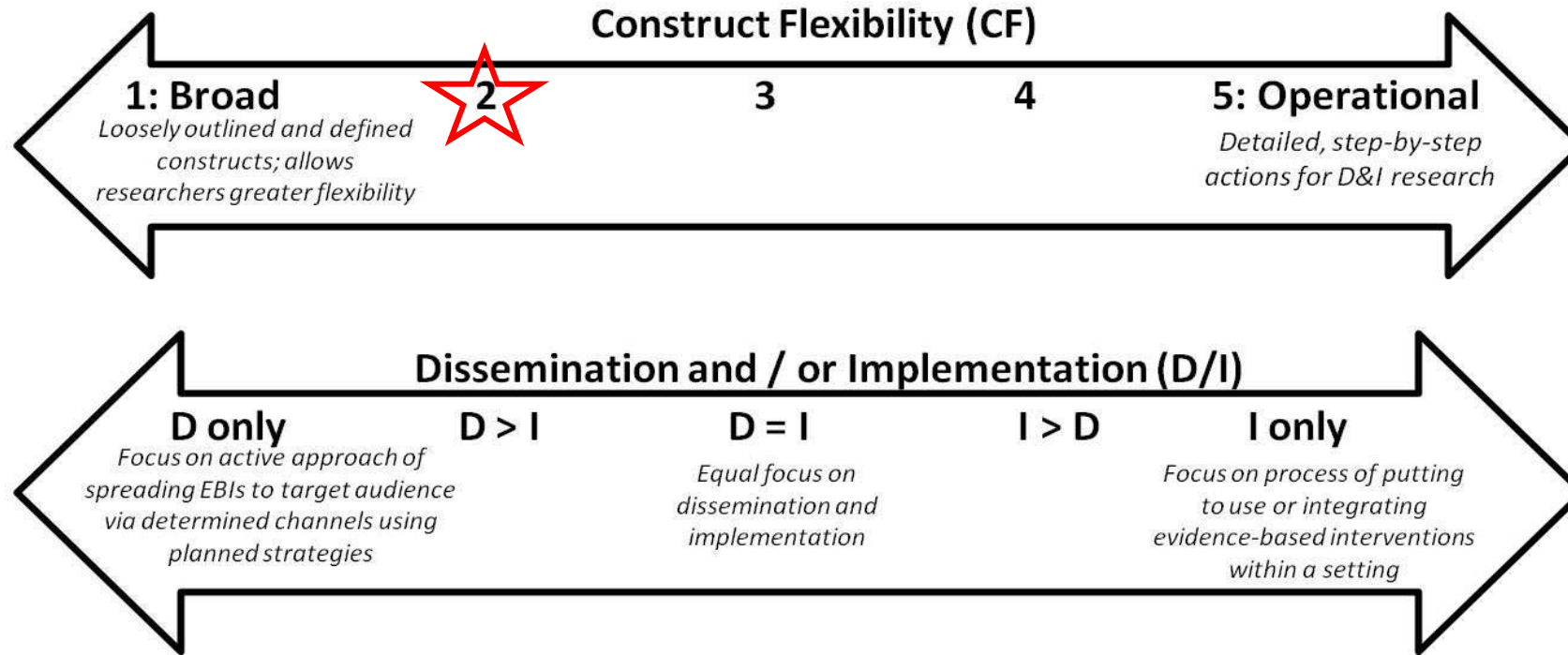


Includes underlying context that influences decision making and adaptation

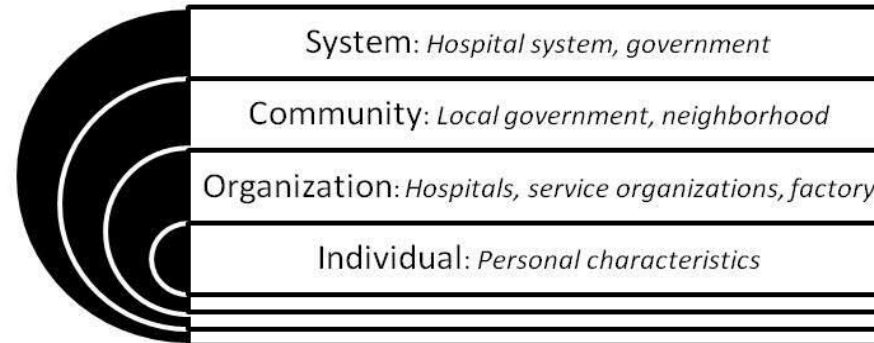
# Interactive Systems Framework (ISF)



# Model Categories



## Socio-ecological Framework (SEF)





Questions?