



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



Implementation Science

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Department of Health, Clinical Effectiveness Unit
Implementation Workshop,
Thursday April 7th 2016

Objectives of workshop

- **Define implementation and implementation science**
- **Give you an understanding of the key themes in the implementation science literature**

- Stages of implementation
- Enablers of / barriers to implementation
- Implementation context

Give you an understanding of implementation theory

- **Have an opportunity to reflect / work in groups on:**

- Stages of implementation
- Enablers of / barriers to implementation

Using a project/ initiative you have worked on, in your work



Implementation Science Background and Definition



Implementation Science

Over the past decade implementation and implementation science has received increasing attention from researchers in describing and understanding implementation processes

No definitive theory of implementation or no single framework commonly accepted in the field – but there is commonality in the messages emerging from the research on implementation

- These are referred to as the **core concepts of implementation science**



Implementation Science (2)

Important to recognise the significant body of knowledge and theory available on management, change management, organisational development and policy development cycle that is useful to consider when implementing an innovation

- All of these fields have informed the development of implementation science



Defining Implementation (1/2)

At its simplest, implementation can be described as the carrying out of a plan for doing something. It focuses on **operationalising the plan** – it is about **the *How*, as well as the *What***.

CES Introductory Guide to Implementation (2012)

Implementation refers to **the art and science of incorporating innovations into typical service settings to benefit clients** (children, families, adults and communities)

NIRN Implementation Brief (2009)

Implementation refers to a set of planned, **intentional activities** that aim **to put into practice evidence-informed policies and practices in real-world services**. The goal of effective implementation is to benefit end-users of services – children, youth, adults, families, and communities.

European Implementation Collaborative (EIC) www.implementation.eu



Defining implementation (2/2)

Implementation is **an ongoing process**, not a one-time event

Implementation is part of a diffusion-dissemination-implementation continuum (Nilsen, 2015):

- **Diffusion** is the passive, untargeted and unplanned spread of new practices
- **Dissemination** is the active spread of new practices to the target audience using planned strategies
- **Implementation** is the process of putting to use or integrating new practices within a setting

Implementation can be described as **‘making it happen’** rather than ‘letting it happen’ or ‘helping it happen’ (Greenhalgh et al, 2004)



Defining Implementation Science

Implementation science is the study of implementation

Implementation science... is the **scientific study of methods** to promote the **systematic uptake** of research findings and other **evidence based practices** into *routine* practice to improve the quality and effectiveness of health services and care

Eccles, Mittman (2006)

Implementation science is the **study of the process of implementing programmes and practices that have some evidence from the research field** to suggest they are worth replicating. It is the study of how a practice that is evidence-based or evidence-informed **gets translated to different, more diverse contexts in the real world.**

Metz et al (2015)

Many references in the Implementation Science literature to evidence-based practices and evidence-based programmes

- **Practices** are often considered to be simple procedures that can be adopted for use by individual practitioners
- **Programmes** are collections of practices which are standardised and may integrate several intervention practices



Implementation Science

Different terms or language often used to describe very similar ideas

Similar themes recur

Many overlaps in different theories and models

Several frameworks and theories are based on reviewing and synthesising the literature (e.g. Consolidated Framework for Implementation Research)

Recurring messages across fields (e.g. public health, mental health, children's services, social work) and implementation level (policy, practice)



Implementation: A universal challenge

Agriculture and forestry



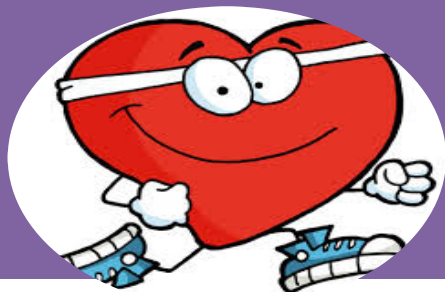
Education and Training



Manufacturing and engineering



All encounter similar implementation issues and opportunities!



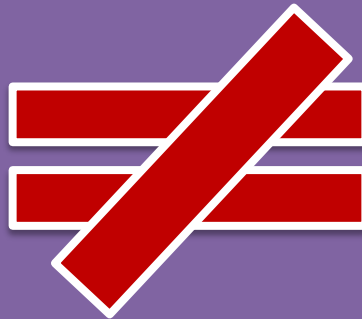
Health



Business and I.T.and many more

Why implementation matters

Effective Innovation
ALONE



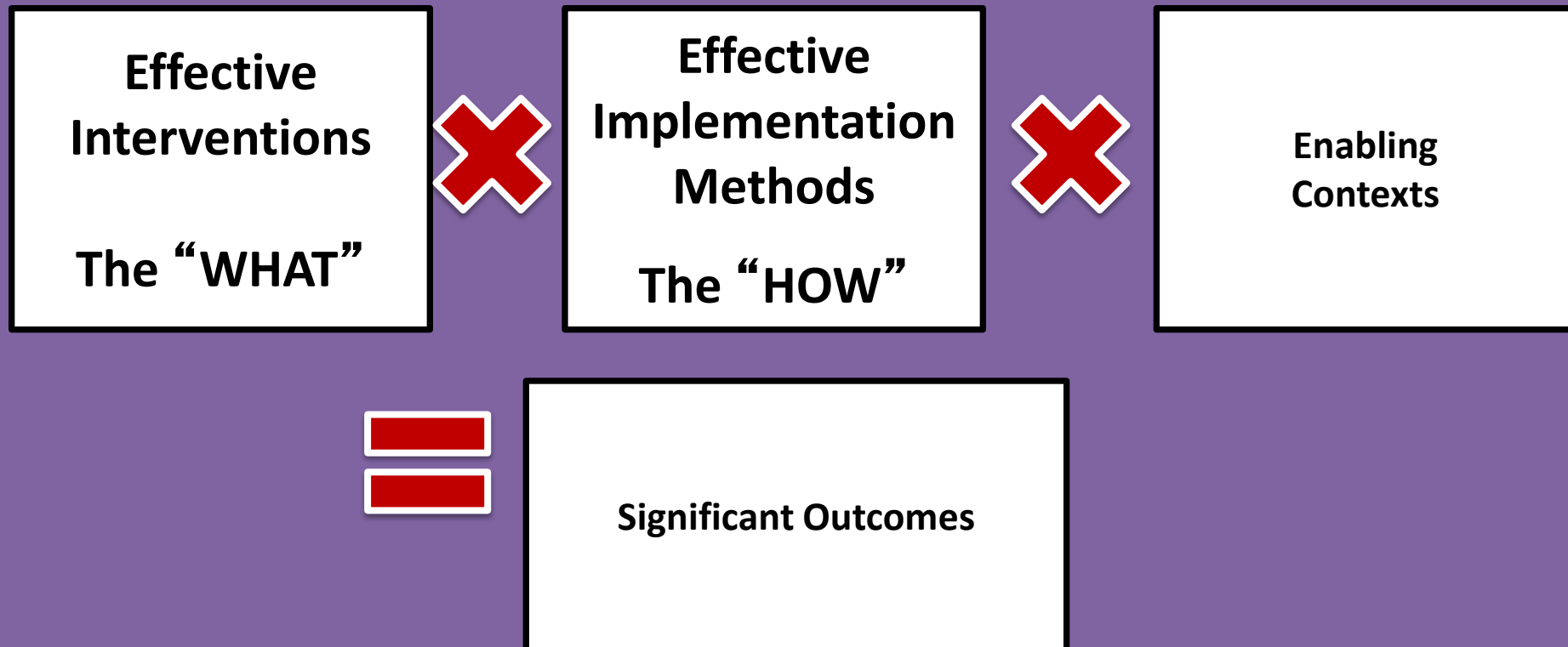
Positive Outcomes for
Clients

We use the term **innovation** to refer to any **evidence-informed policy, practice, service or programme** being implemented, be it a change to an *existing* policy, practice, service or programme, or a *new* innovation

Outcomes are changes that occur in a person, group, organisation or population, which come about as a result of something else having changed or been provided (e.g. an intervention, a service or an initiative). They can be short-term, medium-term or long-term.

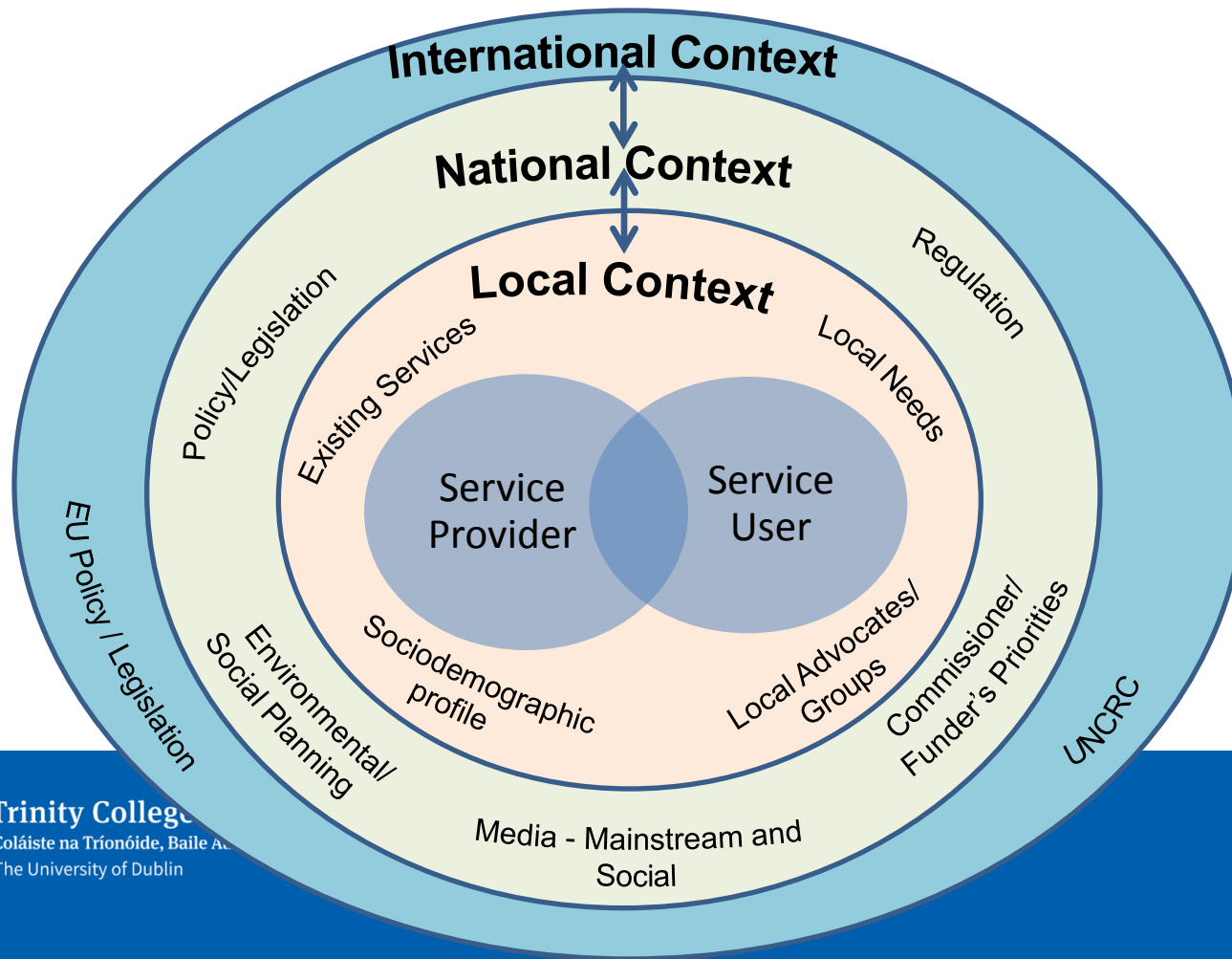
- Over the past decades, diffusion and dissemination strategies have resulted in about 14% use of evidence-based programmes, after about 17 years (Balas & Boren, 2000; Green, 2008)

Why implementation matters



Enabling context for implementation

Context is generally understood as the conditions or surroundings in which something exists or occurs (Nilsen, 2015)



Key themes in the Implementation Literature

There are stages of the implementation process, each requiring different activities and facilitated by distinct conditions. Research indicates four stages.

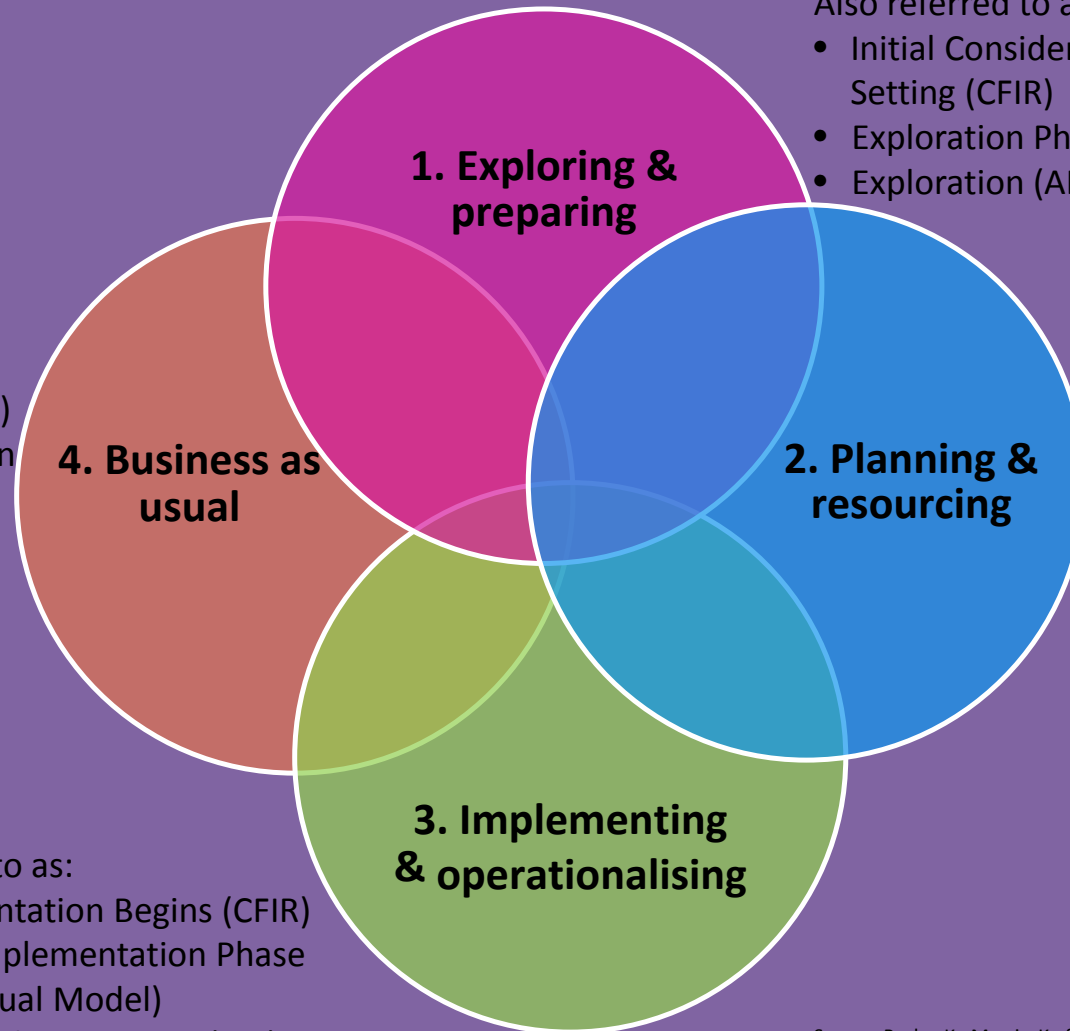
Each stage has a set of enablers, also known as *facilitators, drivers, core components*

Implementation takes time, typically 2-4 years

Implementation requires multi-disciplinary team working



4 Stages of Implementation



Also referred to as:

- Initial Considerations Regarding the Host Setting (CFIR)
- Exploration Phase (Conceptual Model)
- Exploration (AIF)

Also referred to as:

- Creating a Structure for Implementation (CFIR)
- Adoption Decision/Preparation Phase (Conceptual Model)
- Installation (AIF)

Also referred to as:

- Improving Future Applications (CFIR)
- Sustainment Phase (Conceptual Model)
- Full Implementation (AIF)

Also referred to as:

- Implementation Begins (CFIR)
- Active Implementation Phase (Conceptual Model)
- Initial Implementation (AIF)

Source: Burke, K., Morris, K., & Leona McGarrigle. (2012). An Introductory Guide to Implementation: Terms, Concepts and Frameworks. Centre for Effective Services.

1st Stage: Exploration and Preparation

During the exploration and preparation stage an organisation or government department makes the decision to implement a new programme or policy. This process involves a number of activities and enablers that are consistent across the implementation literature.

- **Key activities at this stage include:**

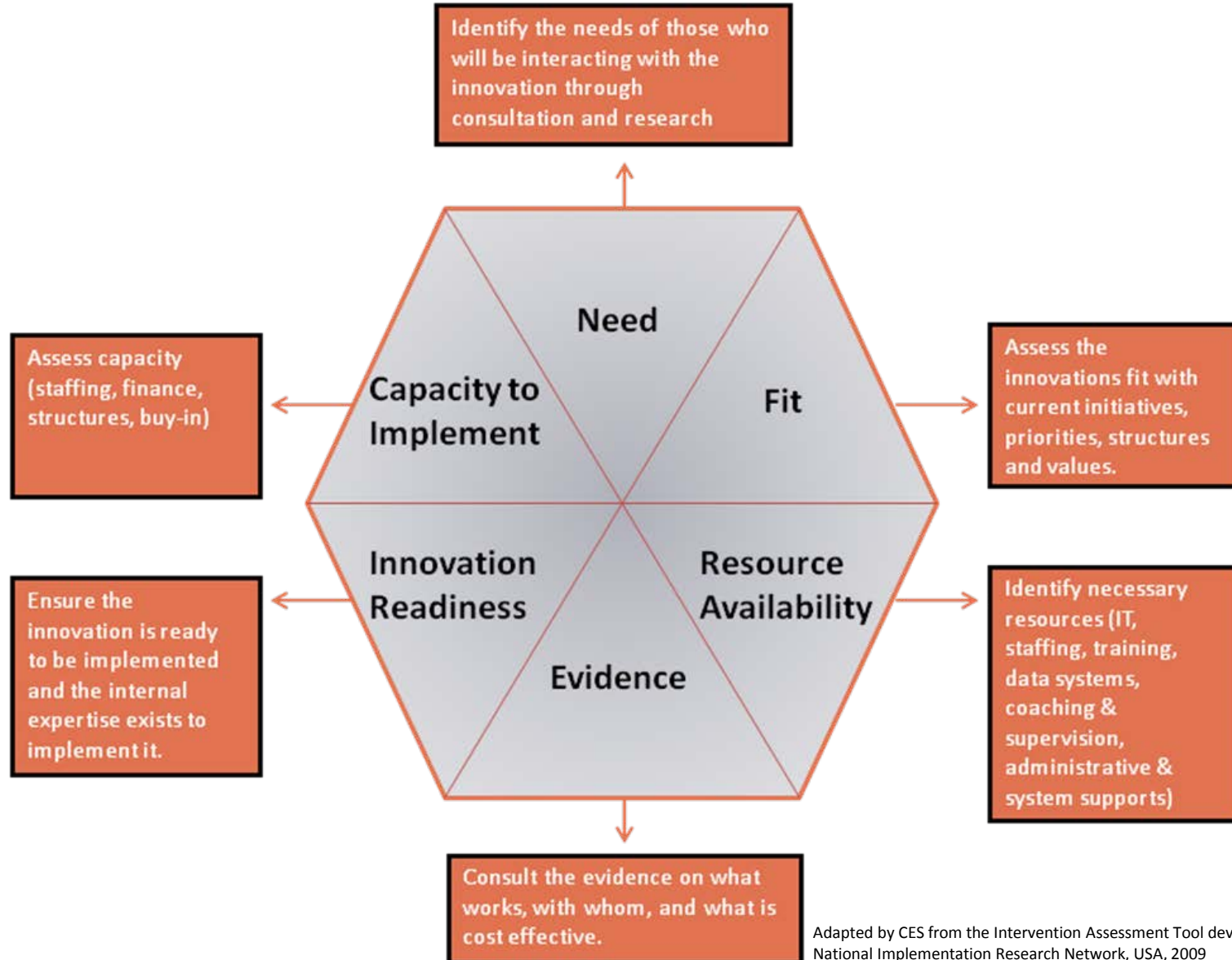
- Assessing need of the target population
- Assessing the fit and feasibility of an innovation
- Selecting or designing an innovation
- The decision to implement an innovation

- **Key enablers at this stage are:**

- Stakeholder consultation and buy-in
- Leadership
- Resources



Factors that need to be assessed before adopting and implementing an innovation



2nd Stage: Planning and Resourcing

The planning and resourcing stage should result in:

A clear implementation plan

A core group of experienced professionals to oversee the implementation process (implementation team).

This stage should lay the foundation for the effective implementation of an innovation.

In addition to ongoing stakeholder consultation and buy-in, leadership and resources, key enablers at this stage are:

- Implementation teams
- Implementation plan
- Staff capacity
- Organisation support
- Supportive organisational culture
- Communication



3rd Stage: Implementing and Operationalising

At this stage the innovation is implemented for the first time.

May initially be as a small-scale or pilot delivery.

• **Key activities at this stage include:**

- Providing on-going coaching and assistance to staff
- Monitoring on-going implementation
- Changing systems / culture, as necessary
- Explaining and communicating why the innovation is necessary and what it will look like when implemented.
- Creating feedback mechanisms to inform future actions

• **The enablers from previous stages are still important during implementing and operationalising. In addition, key enablers at this stage are:**

- Monitoring and evaluation
- Learning from experience



4th Stage: Business as Usual

The final stage of implementation – the innovation is fully operational and integrated, is used consistently and supported by structures and resources, and outcomes are ready to be evaluated.

Successful ‘business as’ usual requires all of the enablers identified as important in the previous stages of implementation:

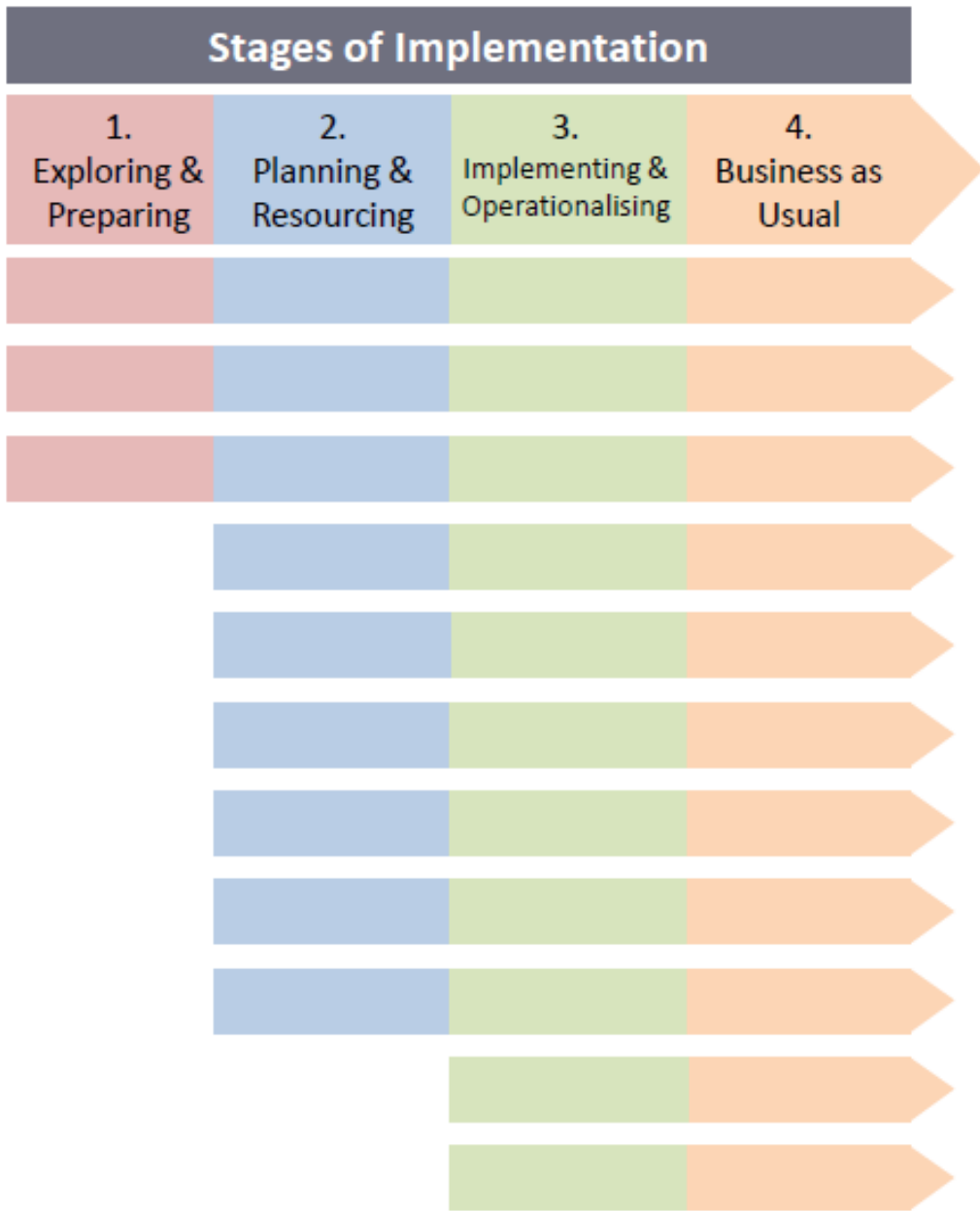
- Stakeholder consultation and buy-in
- Leadership
- Resources
- Implementation teams
- Implementation plan
- Staff capacity
- Organisational support
- Supportive organisation culture
- Communication
- Monitoring and evaluation
- Learning from experience



Enablers of implementation



Implementation Enablers
Stakeholder consultation and buy-in
Leadership
Resources
Implementation teams
Implementation plan
Staff capacity
Organisational support
Supportive organisational culture
Communication
Monitoring and evaluation
Learning from experience



Barriers to implementation



Barriers to Implementation (1)

External environment

The external environment may hinder implementation if existing structures and processes are not in line with the implementation of the innovation.

Policy cycles are relatively short in nature, and are often out of kilter with the longer implementation process. This can make it difficult to maintain the impetus for implementation.

Existing research, theories and practices can also influence implementation.

Resistance to change

Implementers may meet resistance from those delivering the innovation.

Resistance can be caused by leaders making changes before stakeholders are ready, and before the innovation and organisational culture are fully aligned. If this occurs, some stakeholders may perceive the change initiative as social coercion or control by leaders.

Leaders can create readiness by consulting all stakeholders in the decision-making process, by giving clear direction on the change, and by acknowledging and validating concerns stakeholders may have.



Barriers to Implementation(2)

Vested interests

The interests of those involved in delivering an innovation, including, for example, staff, managers, lobby groups, trade unions and professional bodies, can sometimes negatively affect its implementation. This can occur when the vested interests of these stakeholders are incongruent with the innovation.

Having a vested interest involved in implementation can also act as a barrier, if it brings it in a new direction. This can occur when politicians attempt to influence the innovation in favour of their own constituency.



What does implementation failure look like

<https://youtu.be/zG2DVoRP86g>

Introducing implementation frameworks



What are implementation frameworks?

- **Implementation frameworks provide an overview of the practices which guide the implementation process. A range of perspectives on implementation exist, each with competing theories on the key components, barriers and facilitators relating to effective implementation (Burke, Morris & McGarrigle)**
- **Most frameworks describe implementation in relation to evidence-based programmes, practices and policies and they may be generalised or focus on specific contexts (e.g. policy, organisation) or sectors (e.g. child welfare, public health)**



Why are implementation frameworks important?

Frameworks can provide a conceptual guide to *planning*, *executing* and *evaluating* the implementation of innovations, practices and policies

“In some instances they can provide guidance to researchers and practitioners by describing specific steps to include in the planning and/or execution of implementation efforts, and they can also highlight pitfalls or mistakes that should be avoided” (Meyers, Durlak and Wandersman, 2012)



Increasing interest in implementation frameworks among researchers and practitioners

Growing interest in use of theoretical approaches (theories, models, frameworks) to provide a better understanding and explanation of how and why implementation succeeds or fails

Theories, models and frameworks are distinct concepts, but the terms are often used interchangeably in IS

Currently, more than 90 implementation frameworks and models

A number of implementation researchers have categorised the many implementation frameworks and models



Types of implementation frameworks & models

Per Nilsen (Imp Science, 2015):

5 **categories** of theories, models and frameworks used in implementation science:

1. **Process models**, e.g. Quality Implementation Framework
2. **Determinant frameworks**, e.g. PARIHS, AIF, CFIR
3. **Classic theories**, e.g. Theory of Diffusion, social network theories
4. **Implementation theories**, e.g. Organisational readiness, COM-B
5. **Evaluation frameworks**, e.g. RE-AIM

3 **types** of implementation frameworks and models:

1. **Process** - Explains the *process* of implementation – to inform planning, activities, and/or evaluation
2. **Descriptive** - *Describes* how change occurs, and the facilitators and barriers to effective implementation
3. **Mixed** - Many implementation theories have both process and descriptive features

What matters most is that..

- **The frameworks and models differ in terms of their assumptions, aims and other characteristics, which has implications for their use**
- **There are many common factors across the different frameworks and models**
- **How the frameworks are labelled or categorised is not so important**



Group Exercise

Individually (5 minutes)

- 1. Think of a project/ initiative you have worked on, in your work**
- 2. Describe (write down) the project in no more than 3-4 sentences**
 1. What was the aim/desired outcome for the project?
 2. Who was the target population?
 3. What was the intervention?
- 3. Describe (write down) the stage of implementation the project is at, and how you know it is at this stage**

As a small group (15 minutes)

1. Each individual to describe their project (briefly)
2. Collectively discuss the stages your projects are at
3. Describe any enablers and barriers you have in common

As a class (10 minutes)

1. Each small group to share their reflections on the discussion



Resources

[Centre for Effective Services. An Introductory Guide to Implementation.](http://www.effectiveservices.org/images/uploads/file/publications/Guide%20to%20implementation%20concepts%20and%20frameworks%20Final%20for%20web%20v2)

[http://www.effectiveservices.org/images/uploads/file/publications/Guide%20to%20implementation%20concepts%20and%20frameworks%20Final%20for%20web%20v2.](http://www.effectiveservices.org/images/uploads/file/publications/Guide%20to%20implementation%20concepts%20and%20frameworks%20Final%20for%20web%20v2)

European Implementation Collaborative (EIC) www.implementation.eu

National Implementation Research Network. <http://nirn.fpg.unc.edu>

Implementation Science. www.implementationscience.com.

Nilsen P. (2015). Making sense of Implementation, theories, models and frameworks. Implementation Science, 10:53.

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. Milbank Quarterly, 82(4), 581-629.

Greenhalgh, T., Howick,, J, Maskrey, N. (2014). Evidence based medicine: a movement in crisis? BMJ;348:g3725.





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Thank You

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