THE SOCIETY FOR IMPLEMENTATION SCIENCE IN NUTRITION

Addressing the Double Burden of Malnutrition: Applying Implementation Science and Knowledge Brokering to Accelerate Progress

Isabelle Michaud-Létourneau, PhD, MPH, RD

Work based on collaborations with

David Pelletier, Emeritus Professor of Nutrition Policy, Cornell University

Marion Gayard, Research and Evaluation Specialist

Double burden of malnutrition – Double duty actions

1. **Antenatal care** with a focus on **dietary interventions** to promote healthy diet
2. Protection and promotion of **optimal breastfeeding practices**
3. **Complementary feeding** that also foods to be avoided
4. **Growth monitoring and promotion** programmes that also include the detection of overweight
5. **Treatment of severe acure malnutrition** with criteria and management of potential long-term risks
6. **Social safety programmes** that can also enhance diets, education and resources for nutrition
7. **School-based programmes** that provide health school meals and nutrition education
8. **Agricultural development programmes** that promote nutritious diets
9. **Research on how agriculture and food systems policies** can incentivise larger scale shifts
10. **Research on policies that reduce the availability and appeal** of foods, snacks, and beverages high in energy, sugar, fat and/or salt

Source: Hawkes, C., et al., *Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.* The Lancet, 2020. **395**(10218): p. 142-155.

Double burden of malnutrition – Double duty actions

1. **Antenatal care** with a focus on **dietary interventions** to promote healthy diet
2. Protection and
3. **Complementa**
4. **Growth monit** ction of overweight
5. **Treatment of** otential long-term risks
6. **Social safety p** rces for nutrition
7. **School-based** ducation
8. **Agricultural d**
9. **Research on h** er scale shifts
10. **Research on po** cks, and beverages high in energy, sugar, fat and/or salt

Two central sets of challenges

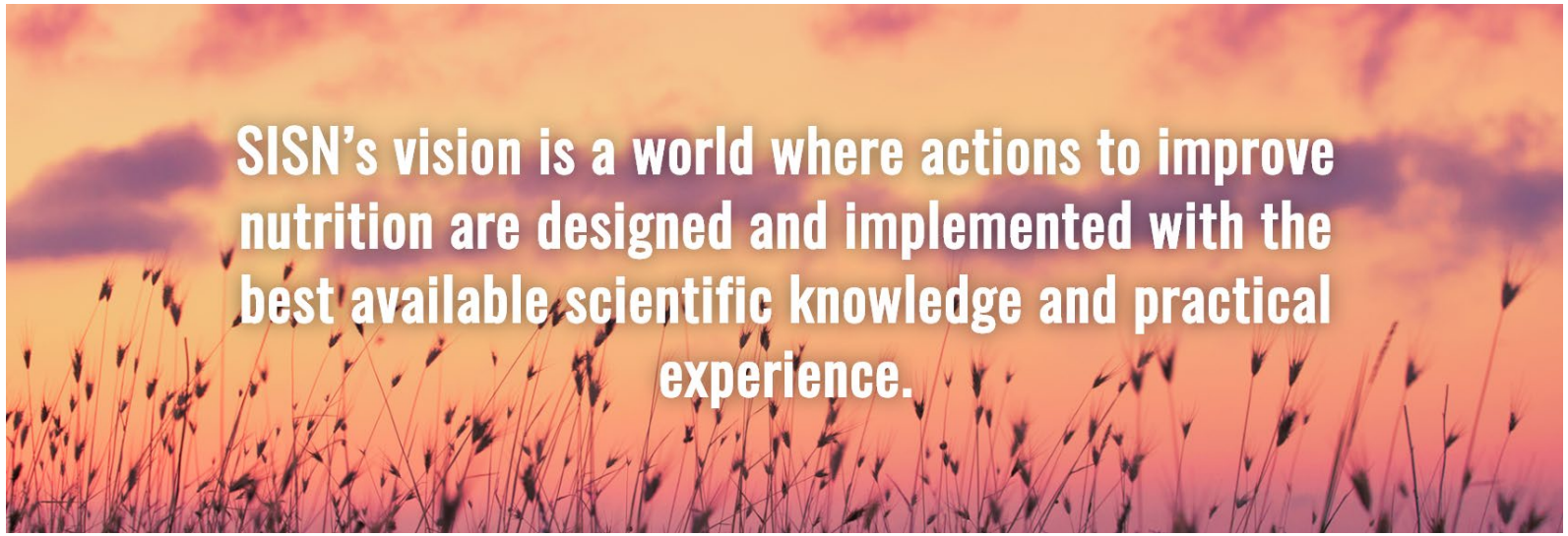
1. Challenges throughout the implementation process
2. Challenges in knowledge utilization

We need to address those two challenges to be more impactful.

Source: Hawkes, C., et al., *Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.* The Lancet, 2020. **395**(10218): p. 142-155.

Society for Implementation Science in Nutrition

SISN's mission is to convene, advocate, disseminate and promote dialogue among scientists, policy leaders, government officials, funders and practitioners **to advance the science and practice of nutrition implementation** world-wide



SISN integrative framework

- SISN identifies five domains whose characteristics, capacities, dynamics and fit influence the quality of implementation in a framework
    1. 'Objects' of implementation
    2. Implementing organization(s) and staff
    3. Enabling environment
    4. Target of the intervention
    5. Implementation processes
- SISN's overarching goal is to "collaboratively assess, build on strengths and address weaknesses in the five domains in a timely manner during all phases of planning and implementation"
- **How to use the framework?**

Source: Tumilowicz, A., et al., *Implementation science in nutrition: concepts and frameworks for an emerging field of science and practice.* Current Developments in Nutrition, 2018. **3**(3): p. nzy080.

Triple A Cycle

The Triple-A Cycle involves **assessing** the problem, **analyzing** its causes, and designing and implementing **actions**

Implementation :
Implementation Science System (ISS)
Operational Model

Double burden of malnutrition – Double duty actions

1. **Antenatal care** with a focus on **dietary interventions** to promote healthy diet
2. Protection and
3. **Complementa**
4. **Growth monit** ction of overweight
5. **Treatment of** otential long-term risks
6. **Social safety p** rces for nutrition
7. **School-based** ducation
8. **Agricultural d**
9. **Research on h** er scale shifts
10. **Research on po** cks, and beverages high in energy, sugar, fat and/or salt

Two central sets of challenges

1. Challenges throughout the implementation process
2. Challenges in knowledge utilization

We need to address those two challenges to be more impactful.

Source: Hawkes, C., et al., *Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.* The Lancet, 2020. **395**(10218): p. 142-155.

Double burden of malnutrition – Double duty actions

1. **Antenatal care** with a focus on **dietary interventions** to promote h… diet
2. Protection and…
3. **Complementa…**
4. **Growth monit…** …tion of overweight
5. **Treatment of …** …otential long-term risks
6. **Social safety n…** …rces for nutrition
7. **School-base…** …education
8. **Agricultural d…**
9. **Research on h…** …er scale shifts
10. **Research on po…** …cks, and beverages high in energy, sugar, fat and/or salt

Two central sets of c…

1. Challenges th… proces…
2. …

…s those two challenges to be **more impactful.**

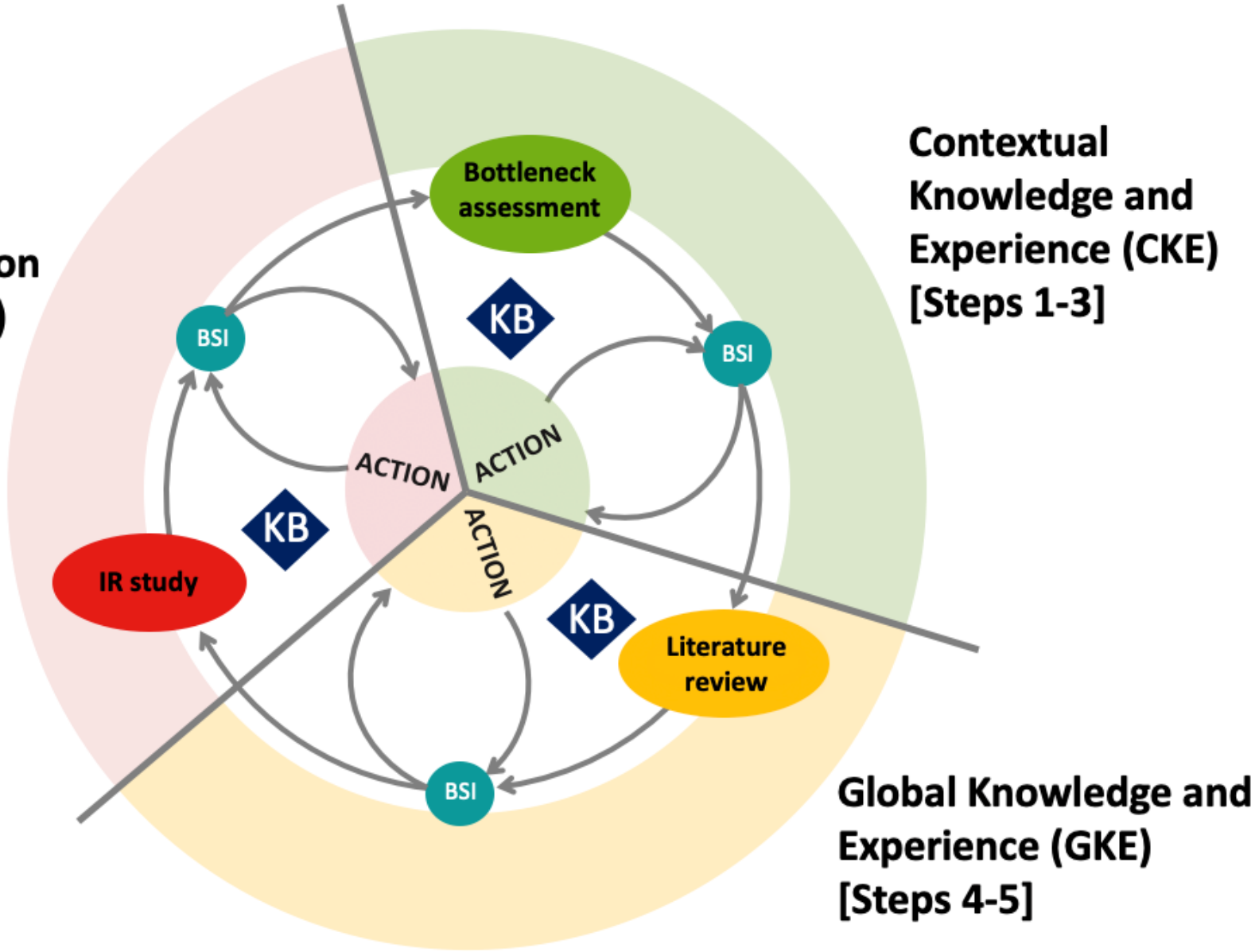
The ISS Operational Model can help to improve the implementation of those actions

Source: Hawkes, C., et al., *Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.* The Lancet, 2020. **395**(10218): p. 142-155.

What is the Implementation Science System (ISS) operational model?

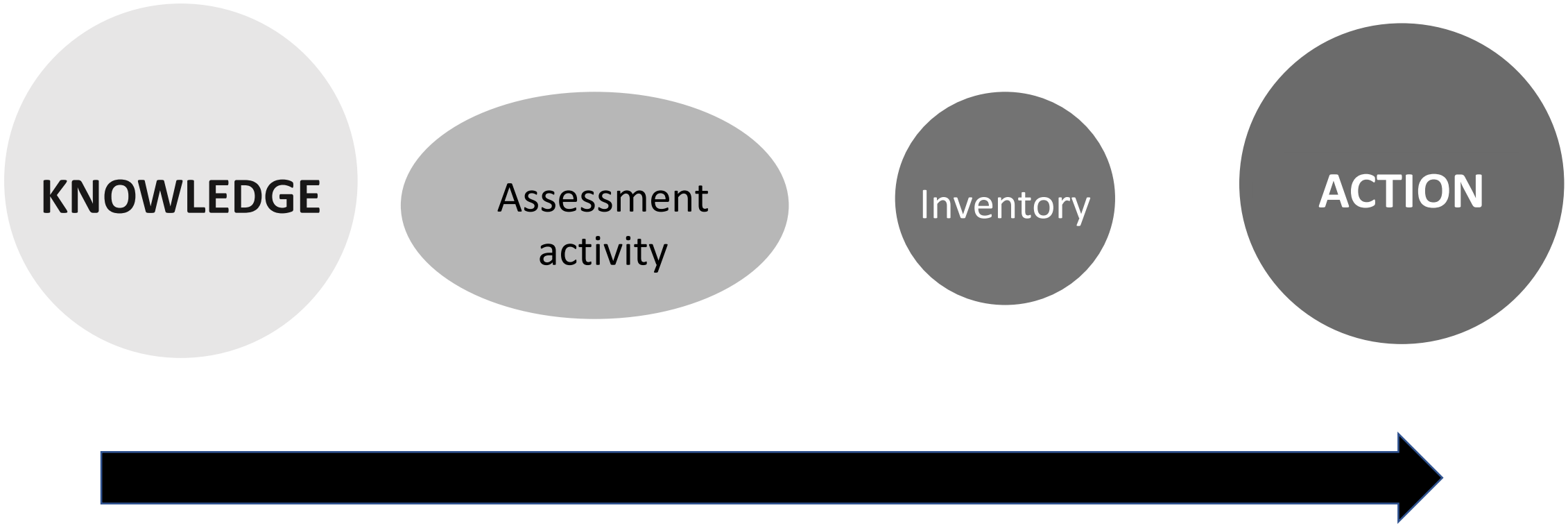
How can it be used ?

FIGURE 3 An operational model of the Implementation Science System.



Source: Michaud-Létourneau, I., et al., *Operationalizing Implementation Science in Nutrition: The Implementation Science Initiative in Kenya and Uganda.* Current Developments in Nutrition, 2022. **6**(1): p. nzab146

From knowledge to action



From knowledge to action

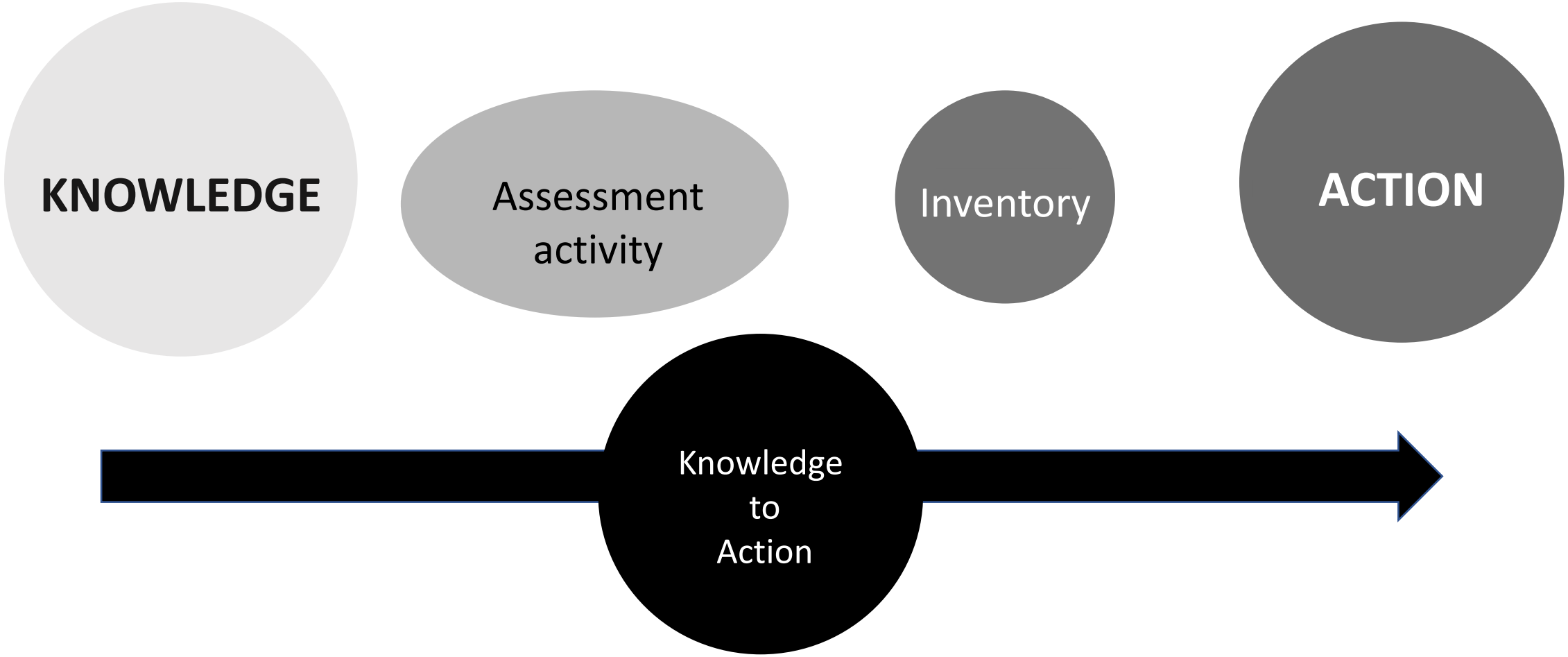
KNOWLEDGE

Assessment activity

Inventory

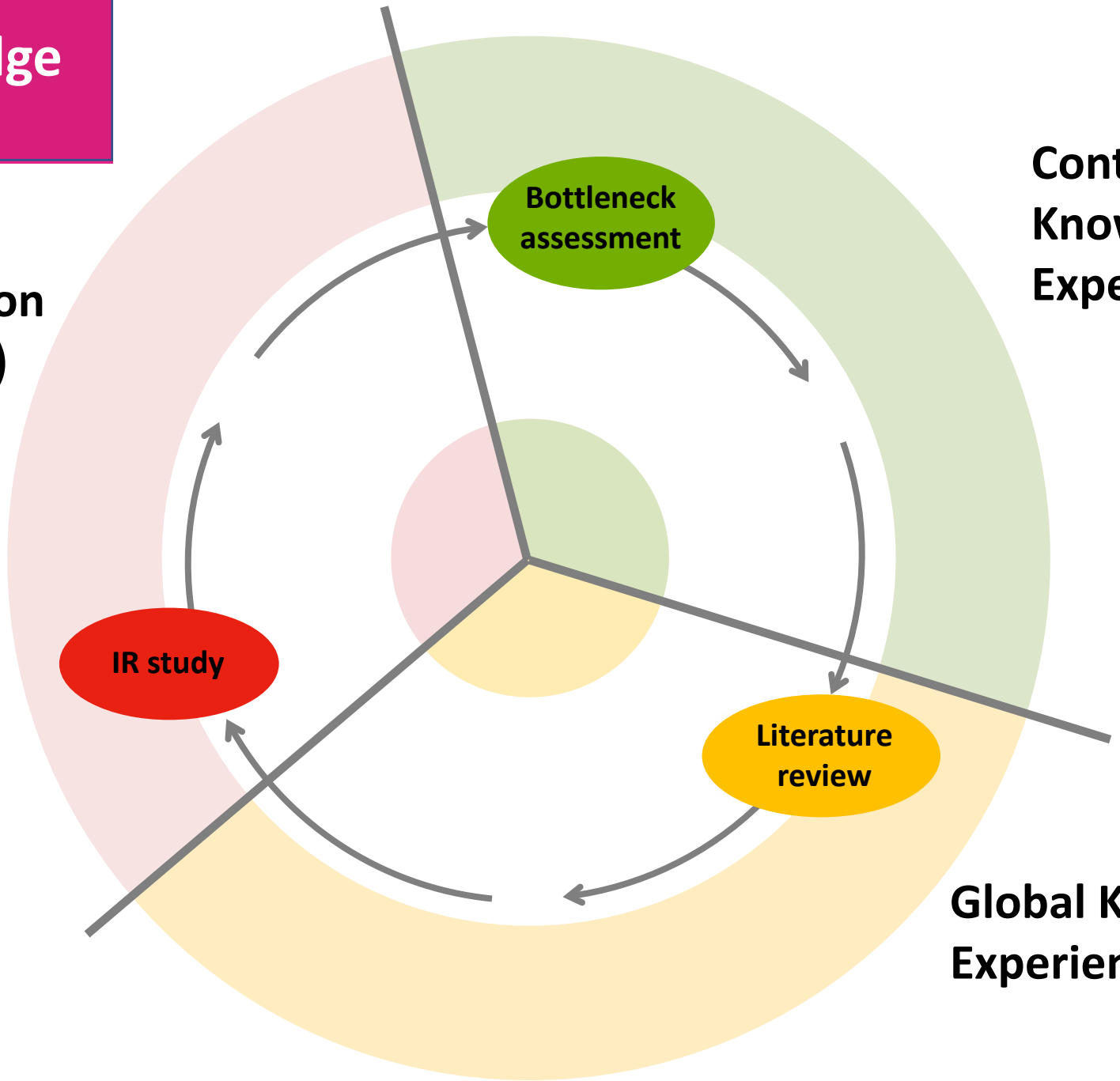
ACTION

From knowledge to action



Forms of knowledge

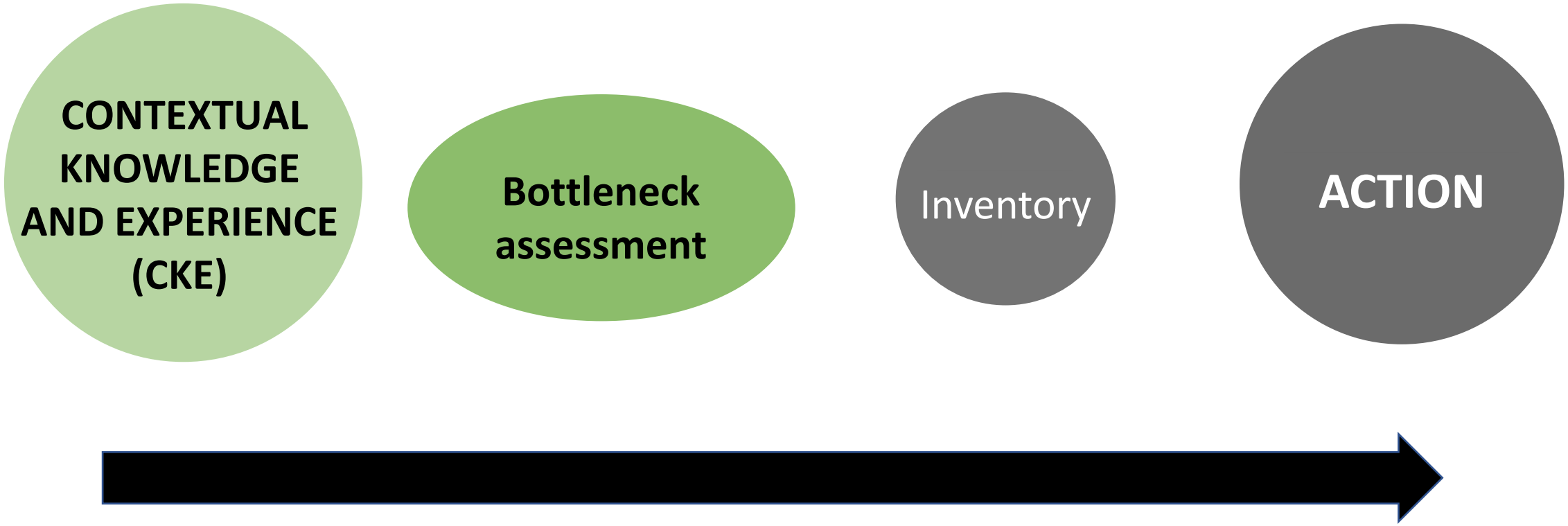
Contextual Implementation Research (CIR)



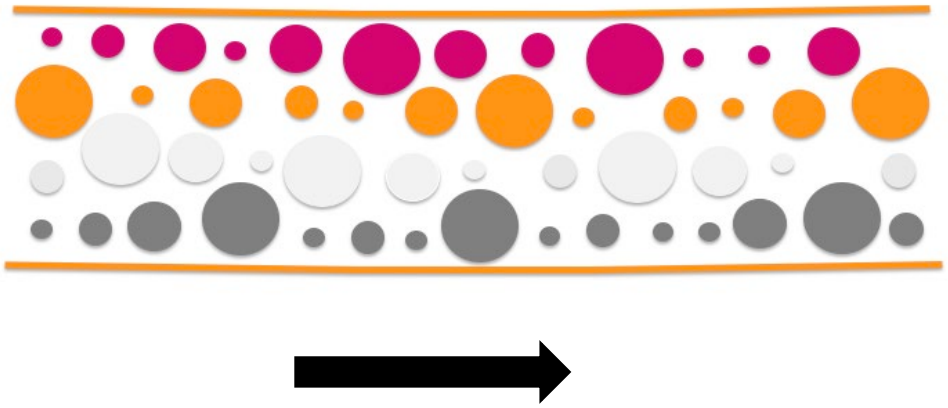
Contextual Knowledge and Experience (CKE)

Global Knowledge and Experience (GKE)

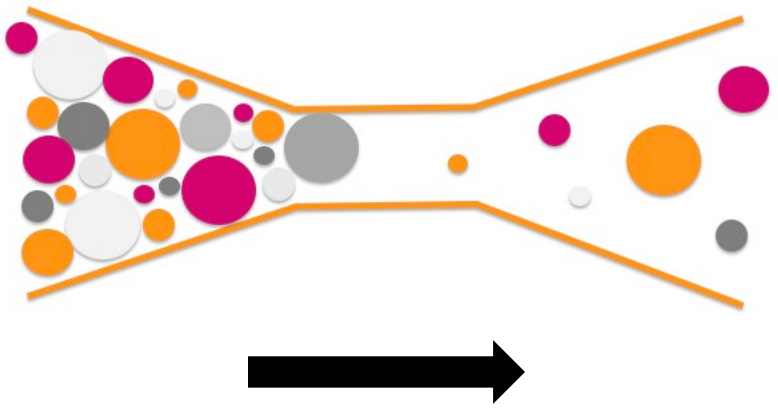
1. Contextual Knowledge and Experience



1. Contextual Knowledge and Experience

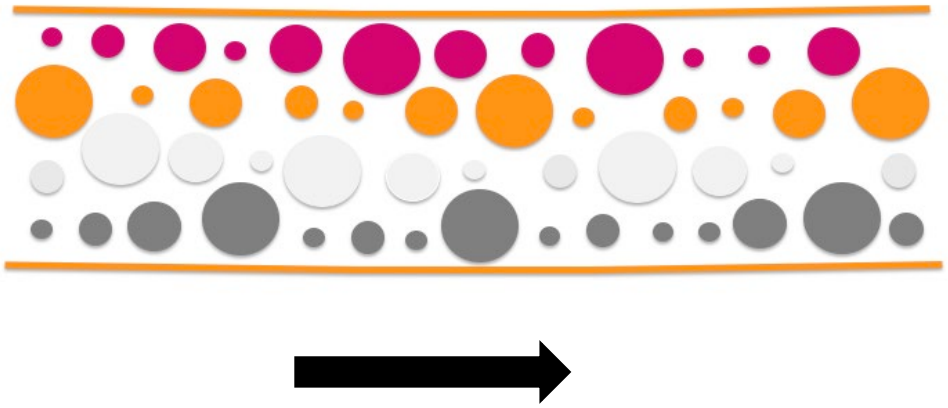


Bottlenecks

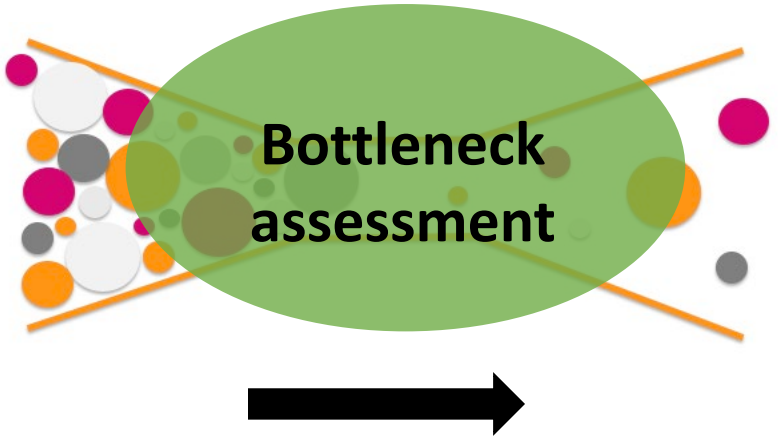


- A bottleneck is a **constraint**
- It restricts the flow of operations

1. Contextual Knowledge and Experience



Bottlenecks



- A bottleneck is a **constraint**
- It restricts the flow of operations

1. Contextual Knowledge and Experience

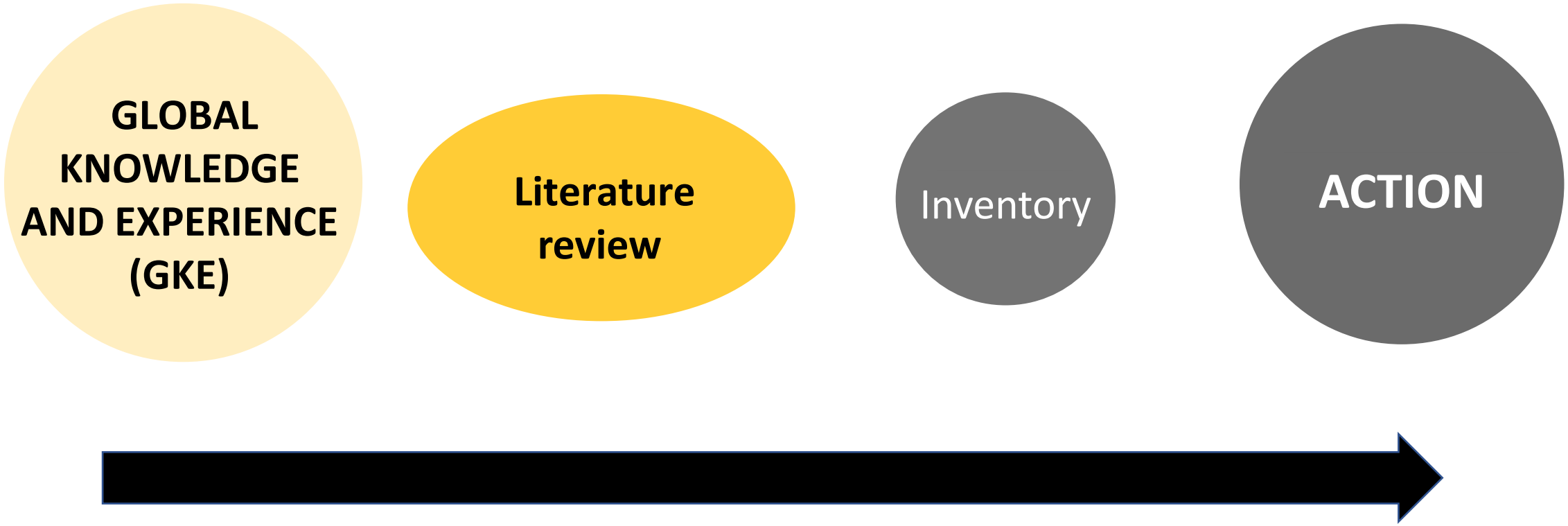
Bottleneck assessment

- Assessment done in a program to identify bottlenecks at various levels and potential solutions
- Prioritization done at the end to reach agreement on next steps

Example – Uganda team

- Program: Iron and folic acid (IFA) supplementation
- 2-day workshop
- Adapted 2 tools (District Assessment Tool for Anemia; Program Assessment Guide)
- Mapping of the systems
- 3 bottlenecks prioritized

2. Global Knowledge and Experience



2. Global Knowledge and Experience

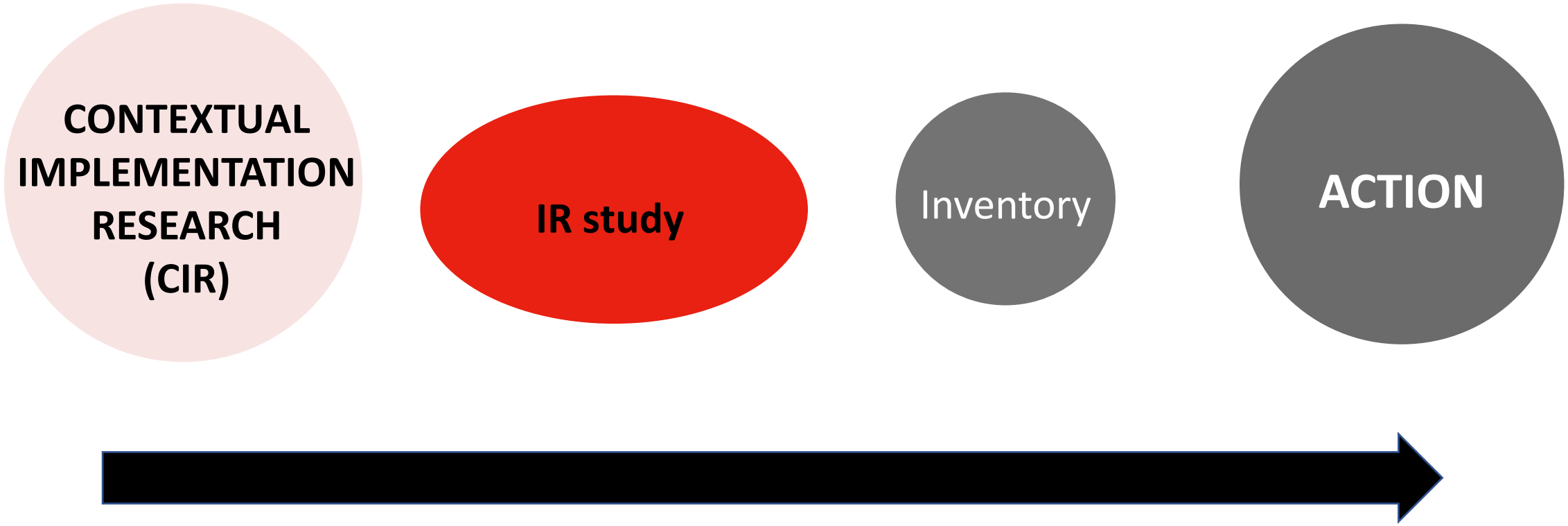
Literature review

- Search, examination and curation of existing knowledge
- Help find potential solutions to address bottlenecks identified

Example – Kenya team

- Program: IFA supplementation
- Creation of a small team
- Identify and review scientific and grey literature
- Topic: Factors affecting pregnancy disclosure
- Adapted a methodology called Scoping Review (development of the ScoRe guide)

3. Contextual Implementation Research



3. Contextual Implementation Research

IR study

- Design and implementation of IR studies to further understand bottlenecks and/or potential solutions

Example – Kenya team

- Methodology: focused ethnographic study
- Canceled due to COVID-19
- Presented an opportunity to focus the work on using existing knowledge

3. Contextual Implementation Research

Distinction between IS and IR

Implementation Science (IS):

- The science of implementation
- An interdisciplinary body of theory, knowledge, frameworks, tools and approaches whose purpose is to strengthen implementation quality and impact

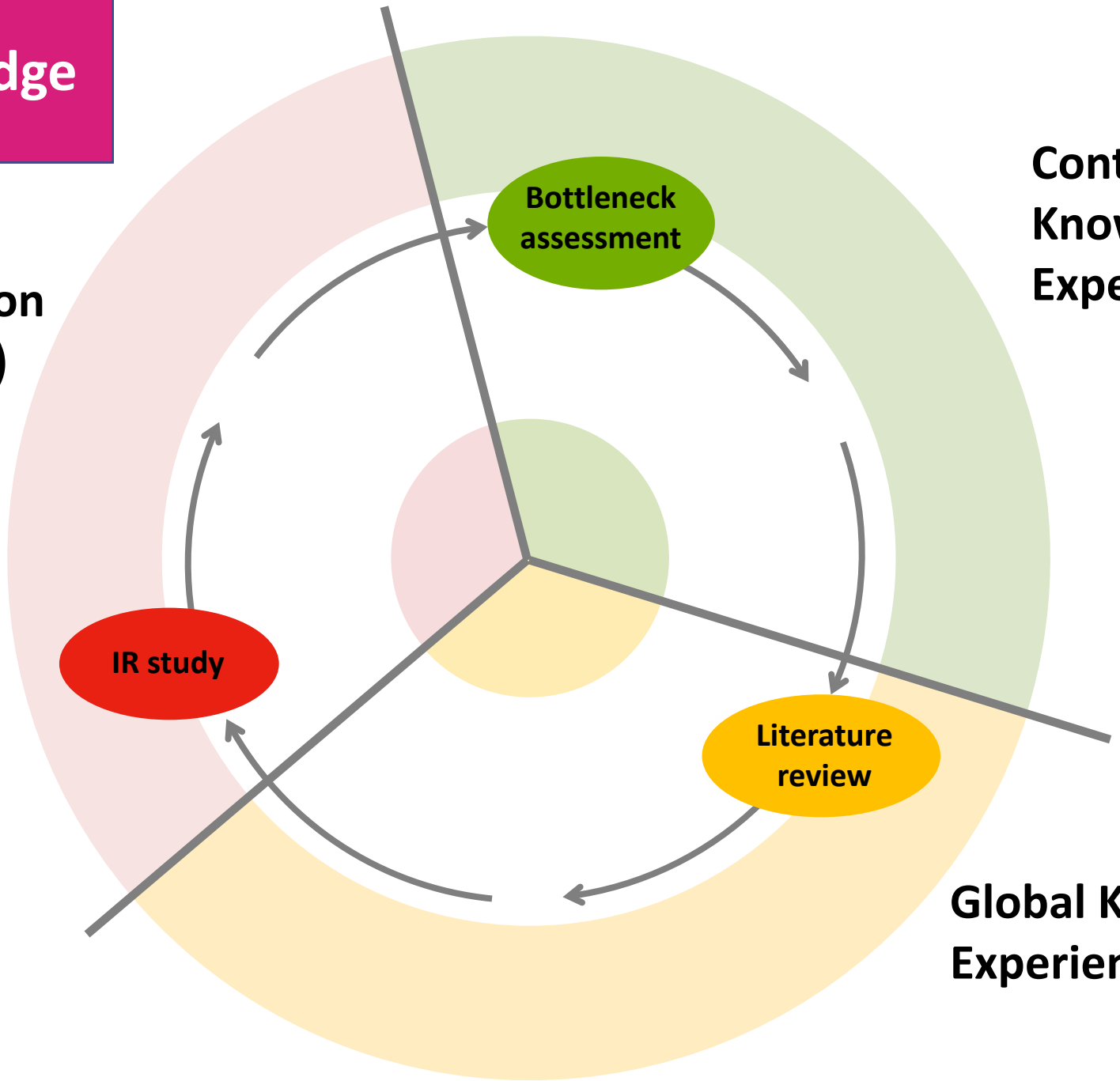
Implementation Research (IR):

- IR is the component of IS that generates new knowledge through empirical investigations
- A variety of methods of assessment, inquiry and formal research whose purpose is to assess different domains affecting implementation

Source: Tumilowicz, A., et al., *Implementation science in nutrition: concepts and frameworks for an emerging field of science and practice.* Current Developments in Nutrition, 2018. **3**(3): p. nzy080.

Forms of knowledge

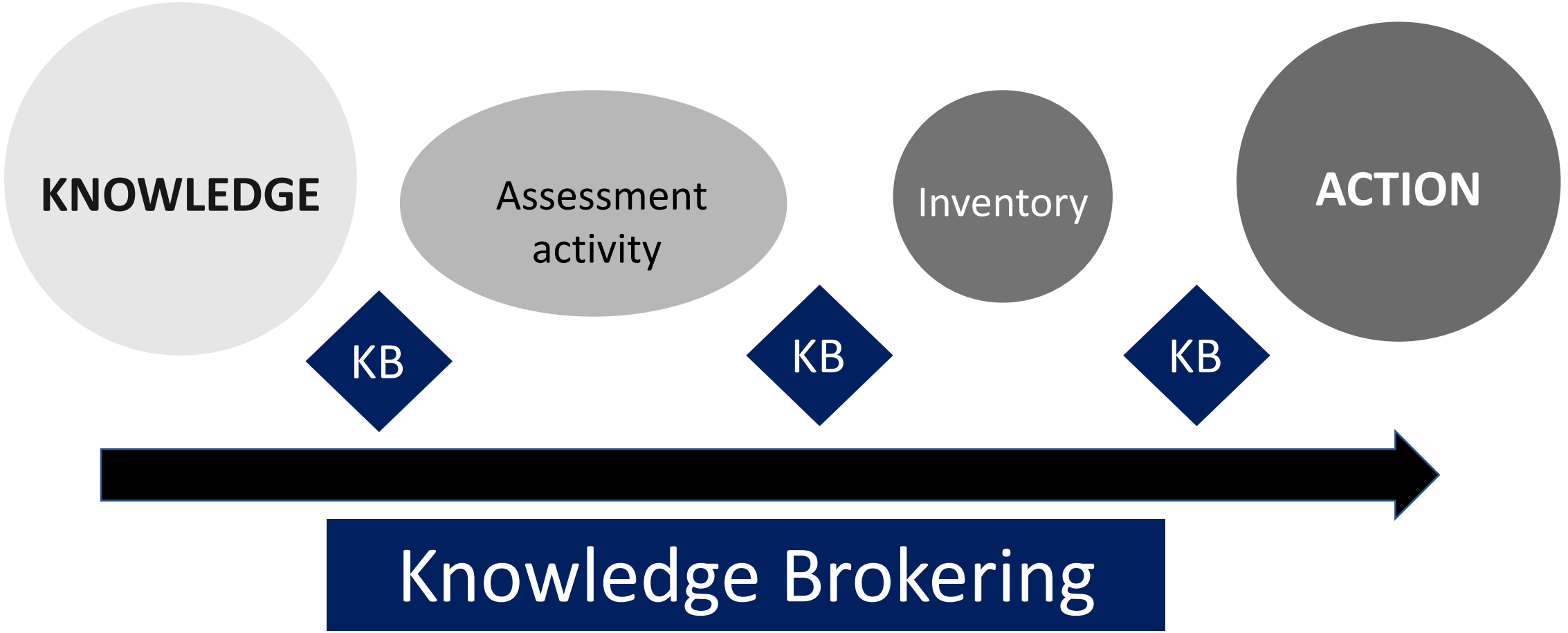
Contextual Implementation Research (CIR)



Contextual Knowledge and Experience (CKE)

Global Knowledge and Experience (GKE)

A central strategy: knowledge brokering

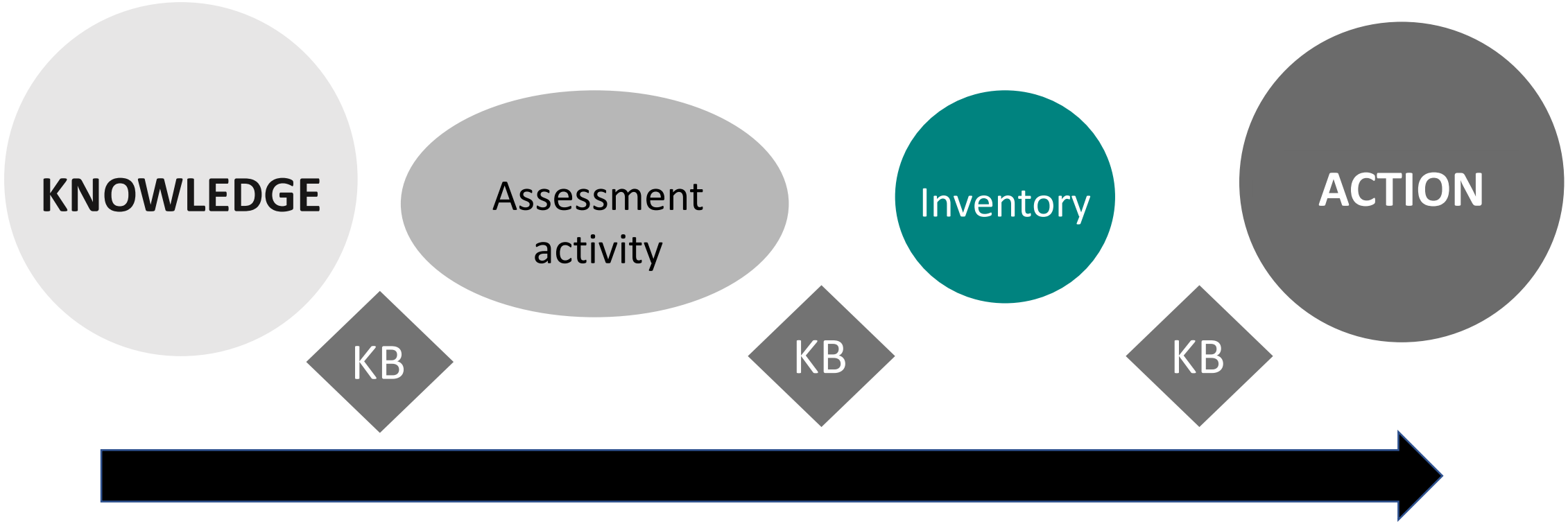


Knowledge brokering

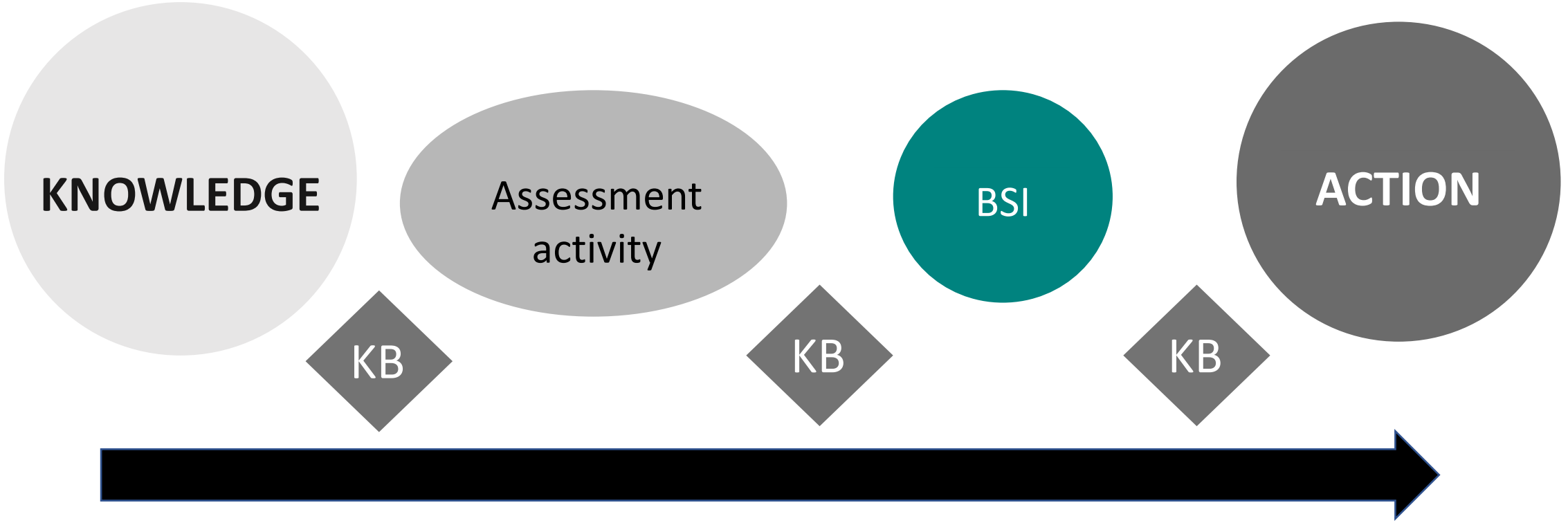
Role domains	Illustrative examples
Linking agent	Identified opportunities to connect different actors and foster trust and relationship to create a core team that engaged actors at the national and district levels (Uganda)
Capacity builder	Developed several training sessions to share IS principles and concepts with a team of researchers used with more conventional research (Kenya)
Facilitator	Facilitated agreement on modalities for the functioning of the core team (Uganda)
Evaluator	Helped identify and assess the system-level factors creating the bottlenecks (bottleneck assessment)
Knowledge manager	Trained and carried out literature review with a team of about 15 nutritionnists working in health communities to help better understand factors affecting implementation and identifying potential solutions (Kenya)

Source: Glegg, S.M. and A. Hoens, *Role domains of knowledge brokering: a model for the health care setting.* Journal of Neurologic Physical Therapy, 2016. **40**(2): p. 115-123.

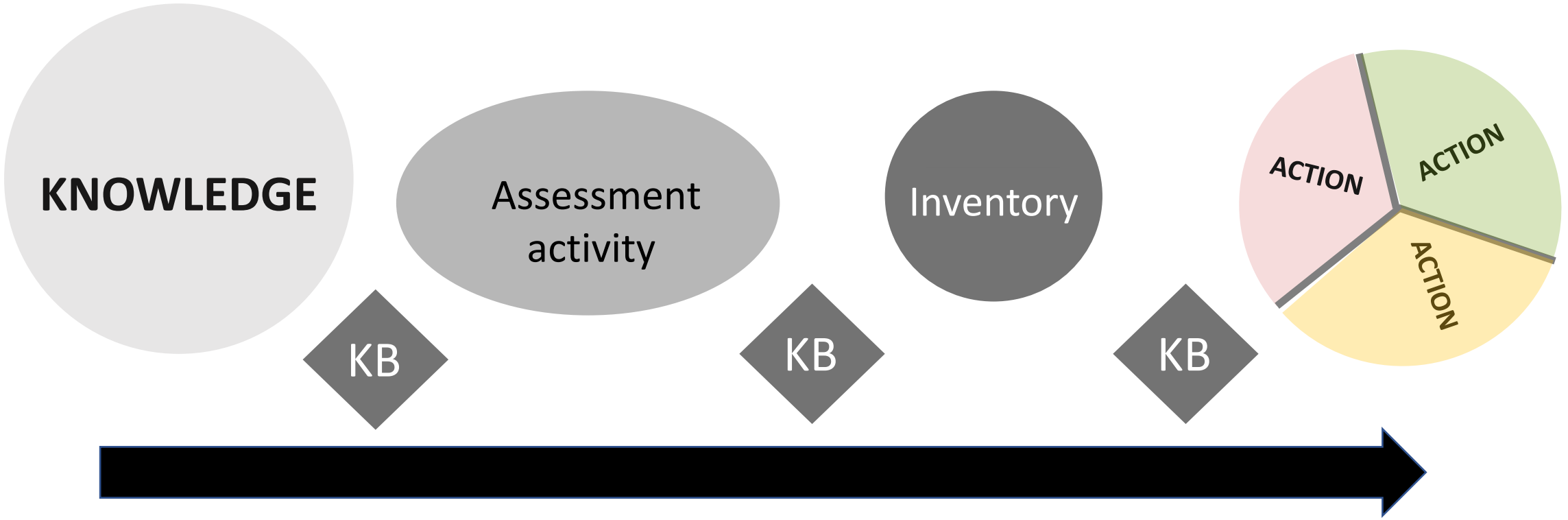
From knowledge to action



From knowledge to action

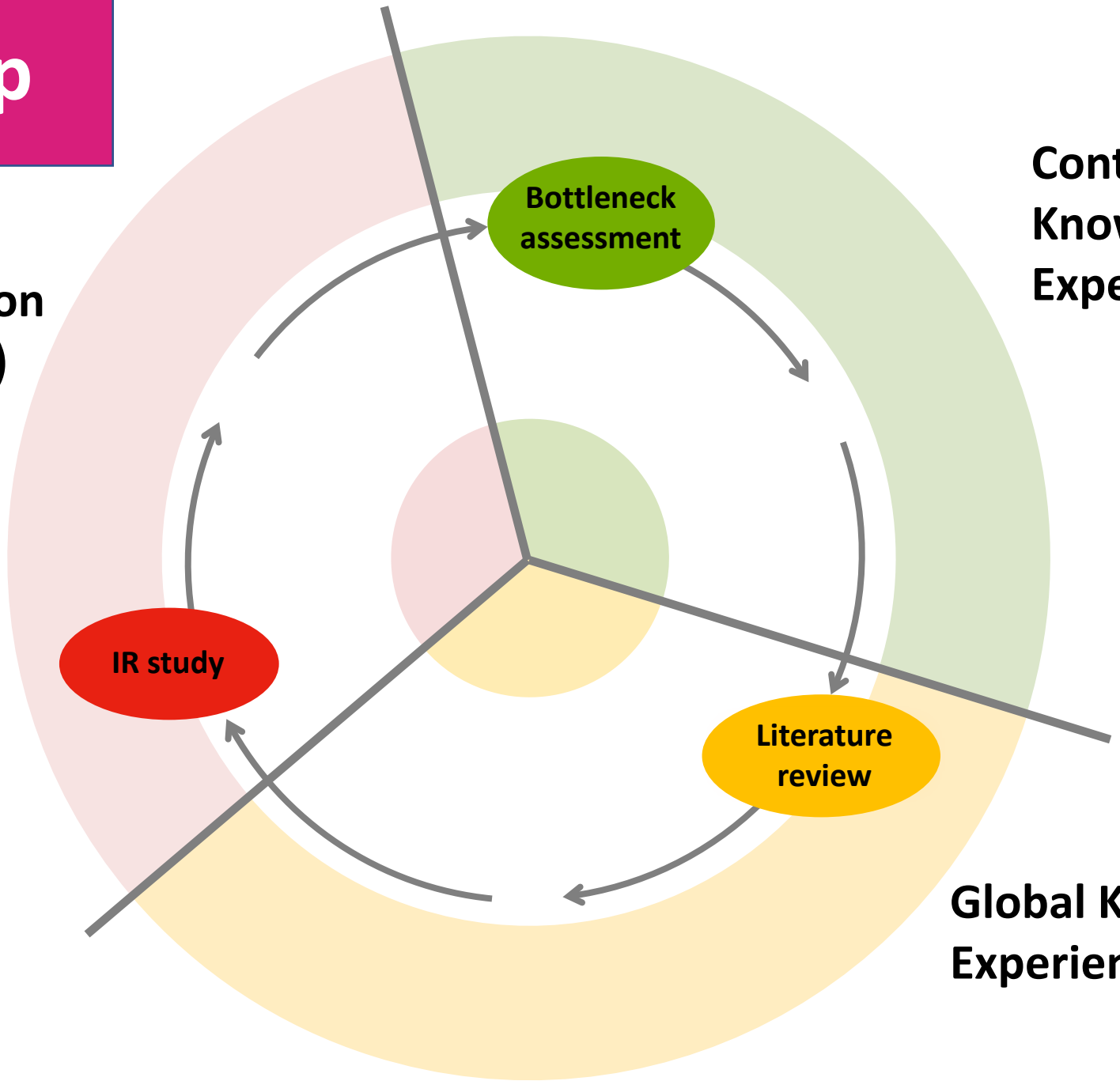


From knowledge to action



Summing up

Contextual Implementation Research (CIR)

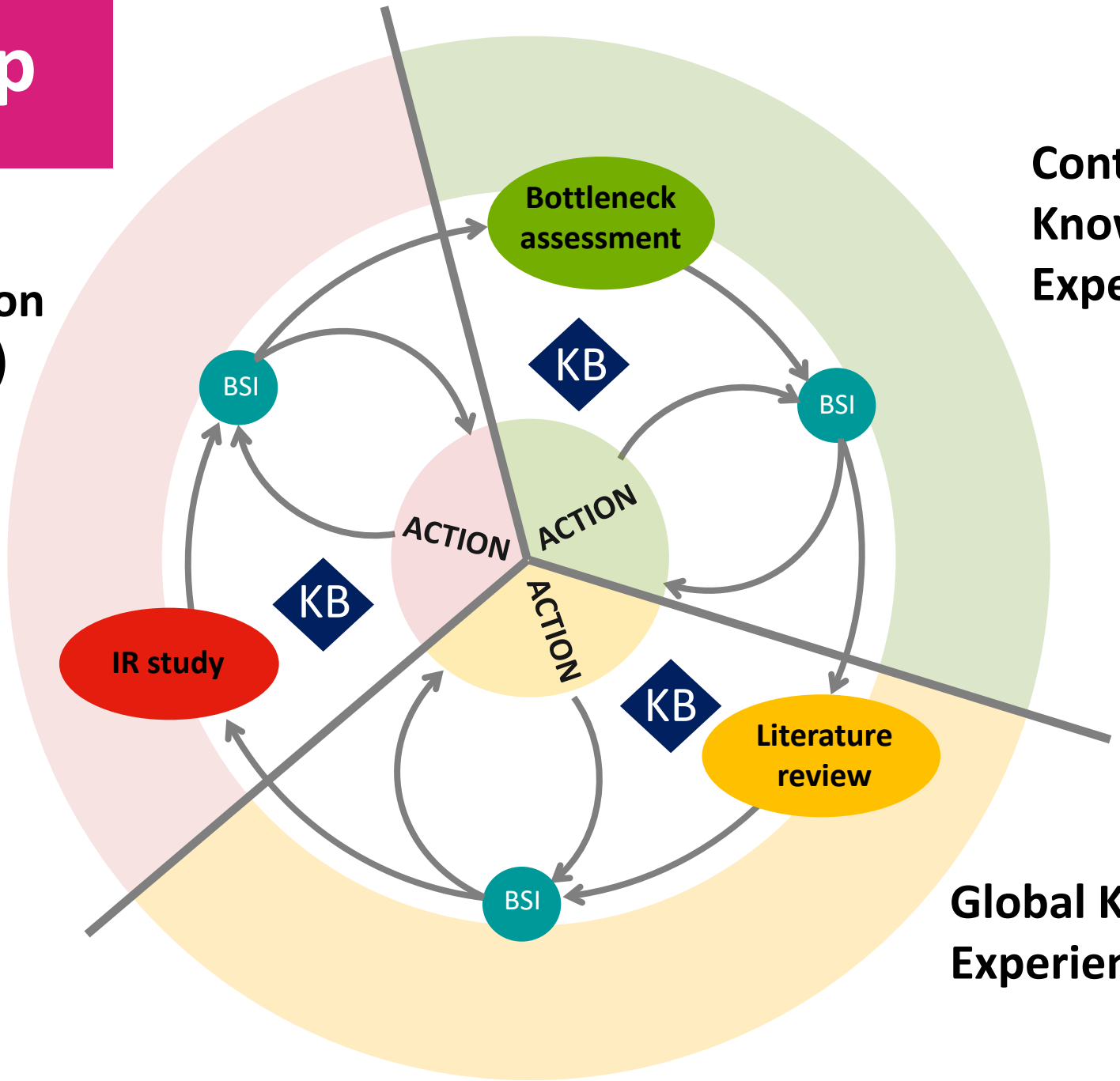


Contextual Knowledge and Experience (CKE)

Global Knowledge and Experience (GKE)

Summing up

Contextual Implementation Research (CIR)



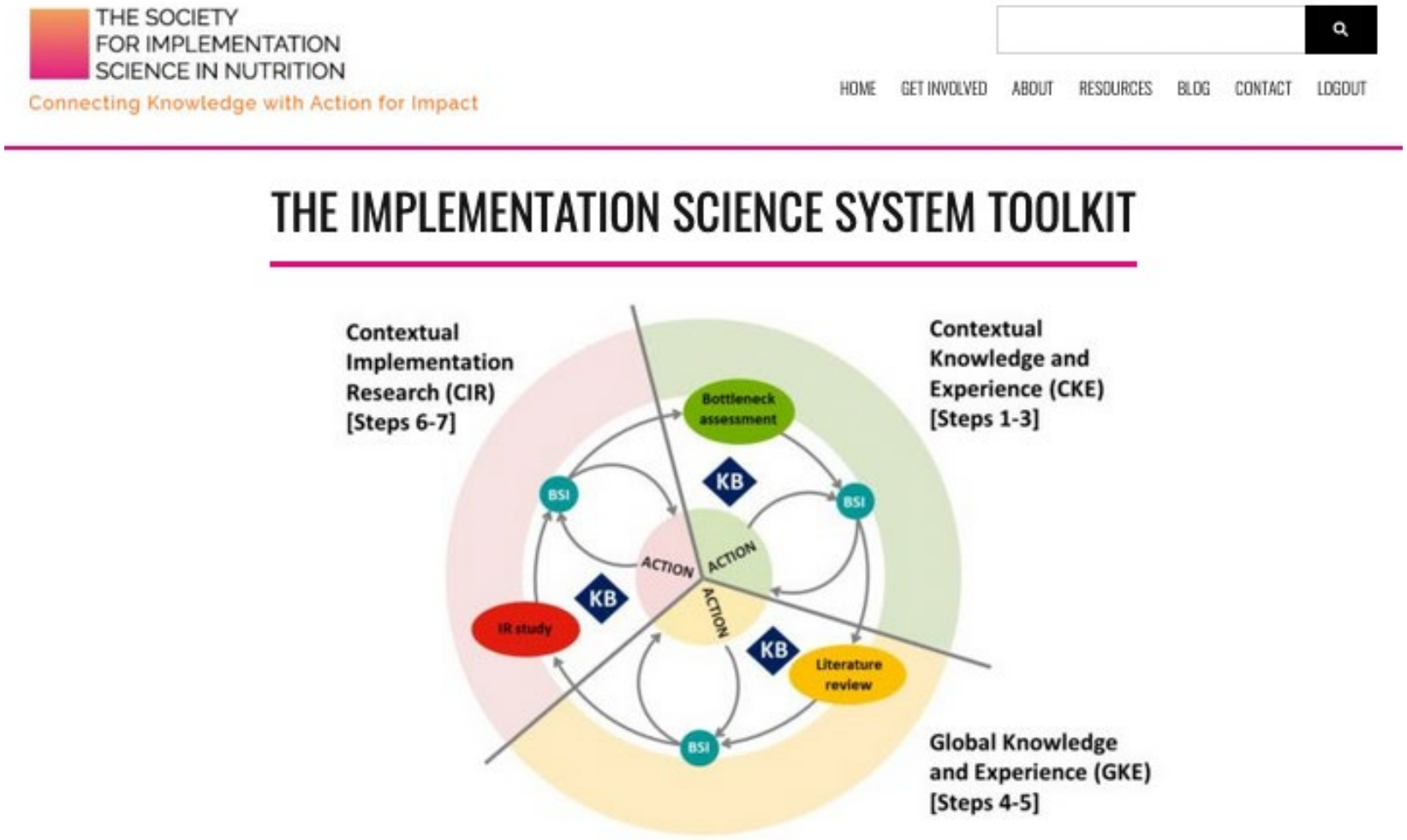
Contextual Knowledge and Experience (CKE)

Global Knowledge and Experience (GKE)

Take aways

1. Mobilize **existing knowledge**, frameworks and tools to address implementation bottlenecks whenever possible
2. **Whenever research** is needed, use methods with the level of **rigor, practicality and timeliness** appropriate to the decision context
3. **Collaboratively** identify research topics based on priority implementation challenges and bottlenecks
4. Facilitate **formal and informal interaction**, knowledge exchange, and collaboration between researchers and program/policy actors in an ongoing manner
5. **Knowledge brokering** (individual or team) can facilitate all processes to strengthen implementation and lead to impact.

Resources (1)



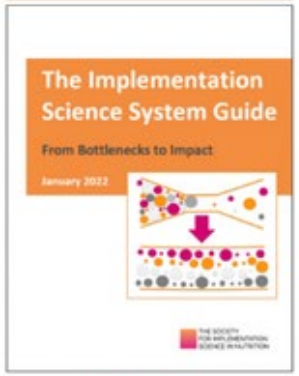
Source: SISN's website: https://www.implementnutrition.org/implementation-science-system-nutrition/

Resources (2)

The current Toolkit consists of:

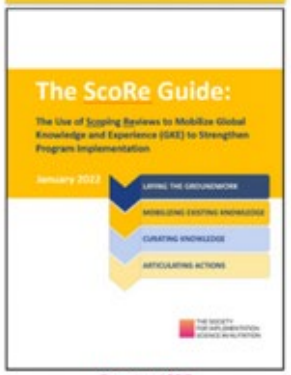
(click on the images below to learn more about each tool)

The Implementation Science System Guide



Download PDF

The ScoRe Guide



Download PDF

Program Assessment Guide

Download PDF

Supporting Materials

References

Glegg, S.M. and A. Hoens, *Role domains of knowledge brokering: a model for the health care setting.* Journal of Neurologic Physical Therapy, 2016. **40**(2): p. 115-123.

Hawkes, C., et al., *Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms.* The Lancet, 2020. **395**(10218): p. 142-155.

Michaud-Létourneau, I., et al., *Operationalizing Implementation Science in Nutrition: The Implementation Science Initiative in Kenya and Uganda.* Current Developments in Nutrition, 2022. **6**(1): p. nzab146.

Michaud-Létourneau, I., et al., *The Implementation Science System Guide: From Bottlenecks to Impact*. 2022, Society for Implementation Science in Nutrition (SISN): New York.

Michaud-Létourneau, I., et al., *The ScoRe Guide: The Use of Scoping Review to Mobilize Global Knowledge and Experience (GKE) to Strengthen Program Implementation*. 2022, Society for Implementation Science in Nutrition (SISN): New York.

Tumilowicz, A., et al., *Implementation science in nutrition: concepts and frameworks for an emerging field of science and practice.* Current Developments in Nutrition, 2018. **3**(3): p. nzy080.

Connect with SISN!

THE SOCIETY FOR IMPLEMENTATION SCIENCE IN NUTRITION

- **Website:** www.implementnutrition.org
- **E-mail:** implementnutrition@gmail.com
- **Follow us:** @implementnutri

The Society for Implementation Science in Nutrition

Thank You

Merci

THE SOCIETY
FOR IMPLEMENTATION
SCIENCE IN NUTRITION

https://www.implementnutrition.org/