EdTech's Road to Evidence with WiKIT

What do we mean by evidence?

- Obtained by rigorous, independent and objective research

❑ Teachers' views and usability reports are part of evidence-gathering but are not "research"

❑ By research we mean rigorous, independent and objective evaluation of the EdTech's use on children's learning

❑ Research is conducted to find out when and how an EdTech works

- For which children does it work best?

- For which skills?

- For which types of teaching?

❑ Use can be by the child alone (independent learning) or in the classroom (collaborative learning)

❑ Teachers' implementation of EdTech in their classroom (their pedagogy) can be part of the evaluation study
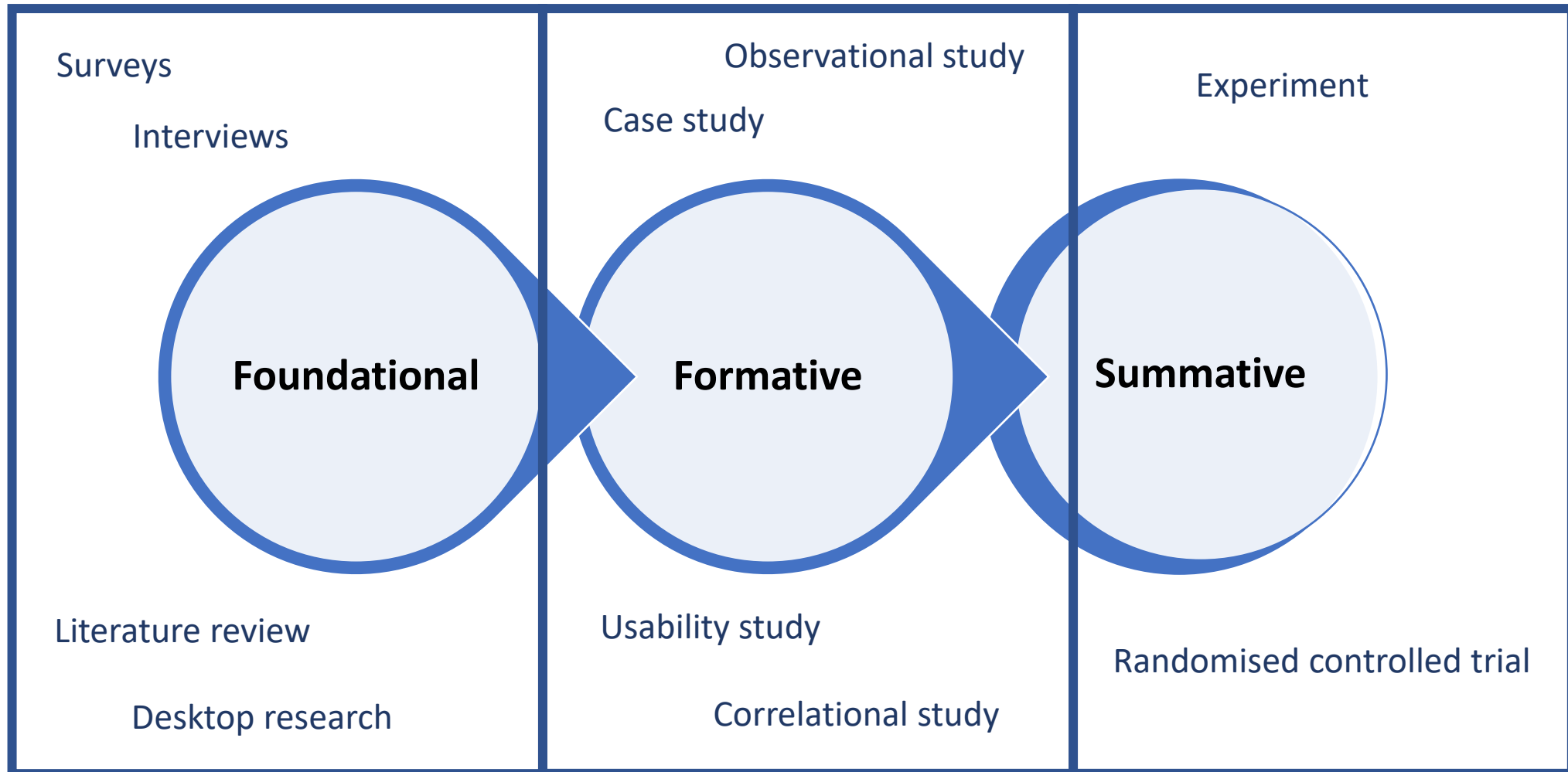
When conducting research, we subscribe to the standards of RAND

- Engagement: We interact with those who have a stake in how our research is conducted, interpreted, and applied.

- Inclusion: We include all important perspectives throughout the research process.

- Relevance: We seek to inform and influence effective and timely solutions to important policy problems.

- Rigor: We conduct objective analyses grounded in a clear purpose using sound logic and the most appropriate theories, methods, and data sources available.

- Transparency: We explain our research, analysis, findings, and recommendations in ways that are understandable and usable.

- Legitimacy: We conduct research ethically, avoid conflicts of interest, and maintain independence and objectivity.

https://www.rand.org/about/standards.html

Types of research (simplified)

Surveys

Interviews

Observational study

Case study

Experiment

Foundational ▶ **Formative** ▶ **Summative**

Literature review

Usability study

Randomised controlled trial

Desktop research

Correlational study

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Effectiveness versus efficacy

	EFFICACY	EFFECTIVENESS
Example questions	Does the EdTech work as it was designed to work?	Does the use of the EdTech benefit children in the classroom?
Testing site	"Ideal classroom" selected based on strict criteria	Typical classroom
Participants	Children selected based on inclusion/exclusion criteria	All children in a given classroom
Intervention	EdTech is used according to an established protocol	EdTech is used flexibly, parallel with other tools already in the classroom

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Types of qualitative research

Record-keeping

Ethnography

Case study

Qualitative tools

Interviews

Narrative

Qualitative methods

Phenomeno logy

Observations

Action research

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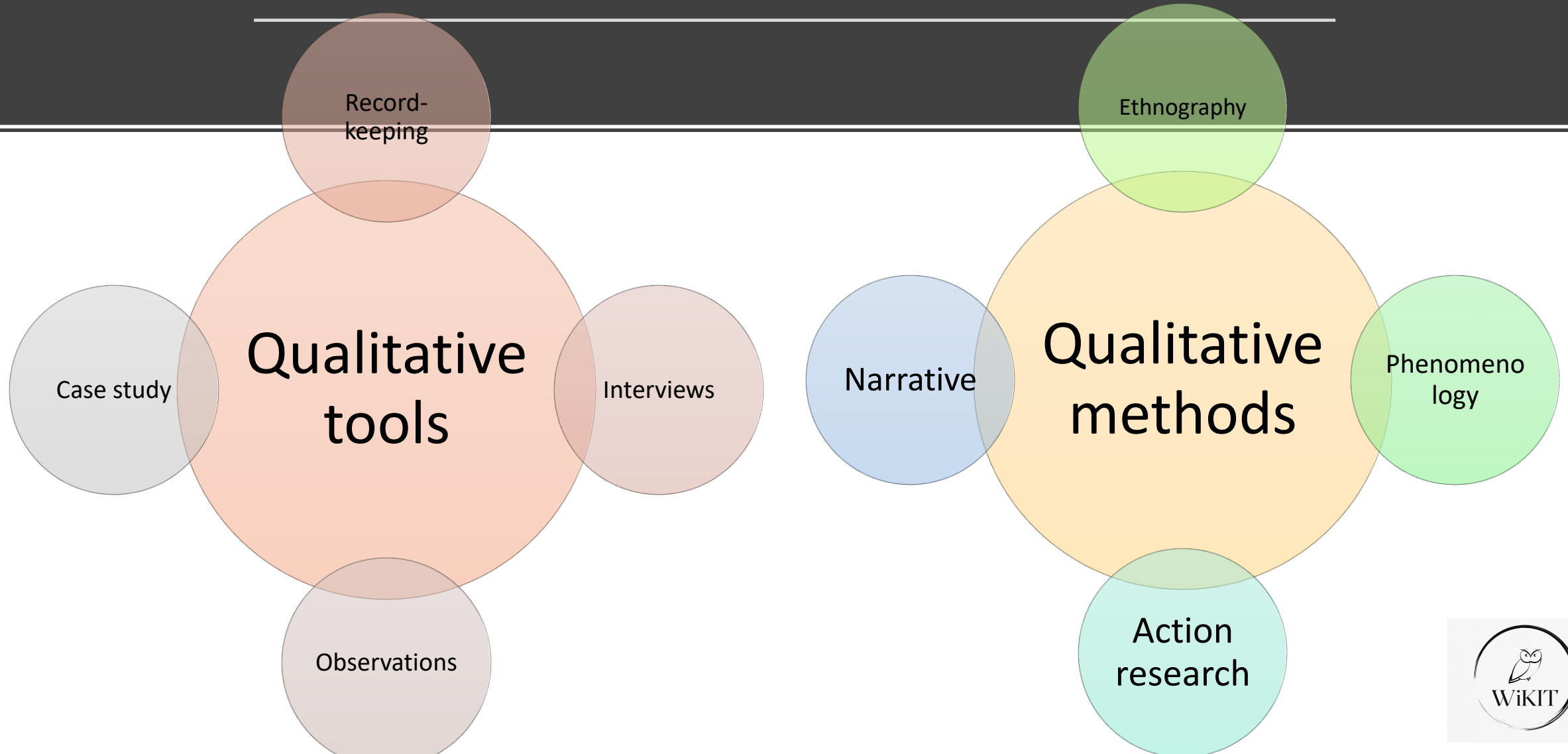
Research is complex …

- In addition to causal inference, you might consider qualitative and mixed methods, applied or design-based research

- Each target implies different data types and instruments to collect them

- For research to count as evidence, you need independent external research evaluation

- Independent measures have stronger evidence value than developer measures

EdTech often ask us:

- **What questions can we answer with this evaluation?**

- **What type of tool or instrument shall we use to capture the data?**

- **What is a milestone of progress?**

- **How do we know the intervention "works"?**
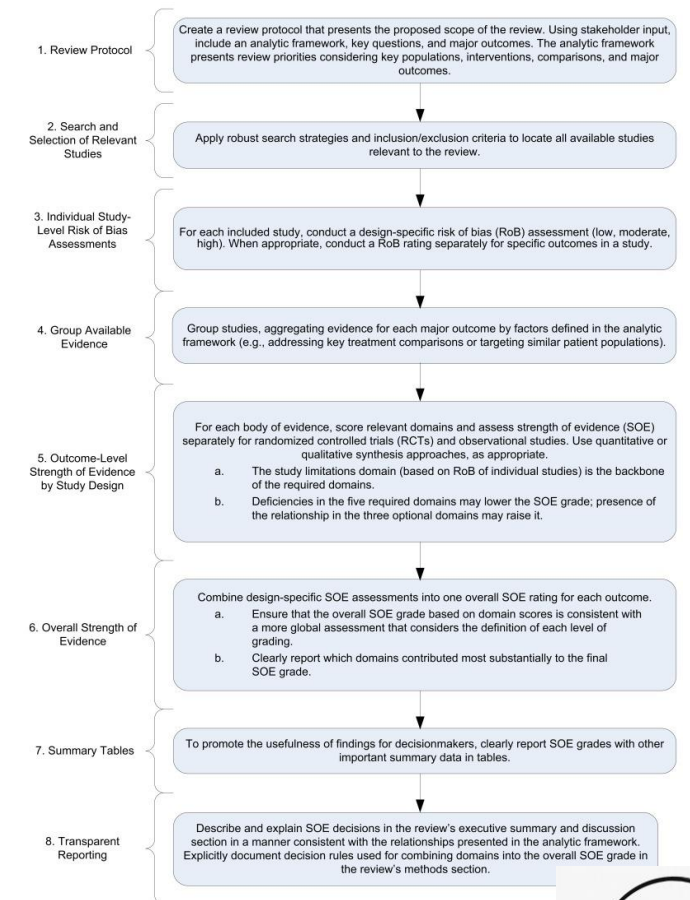
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Establishing your evidence base

- WiKIT can reliably and objectively locate your product at the appropriate evidence level

  We run a data audit and assess where you fit in terms of objective evidence frameworks

  To evaluate your evidence portfolio, we use the criteria of systematic review studies to establish strength of evidence

  We call it the "Wikit Method"

  Once you know your evidence level, we can recommend appropriate service to scale your evidence journey
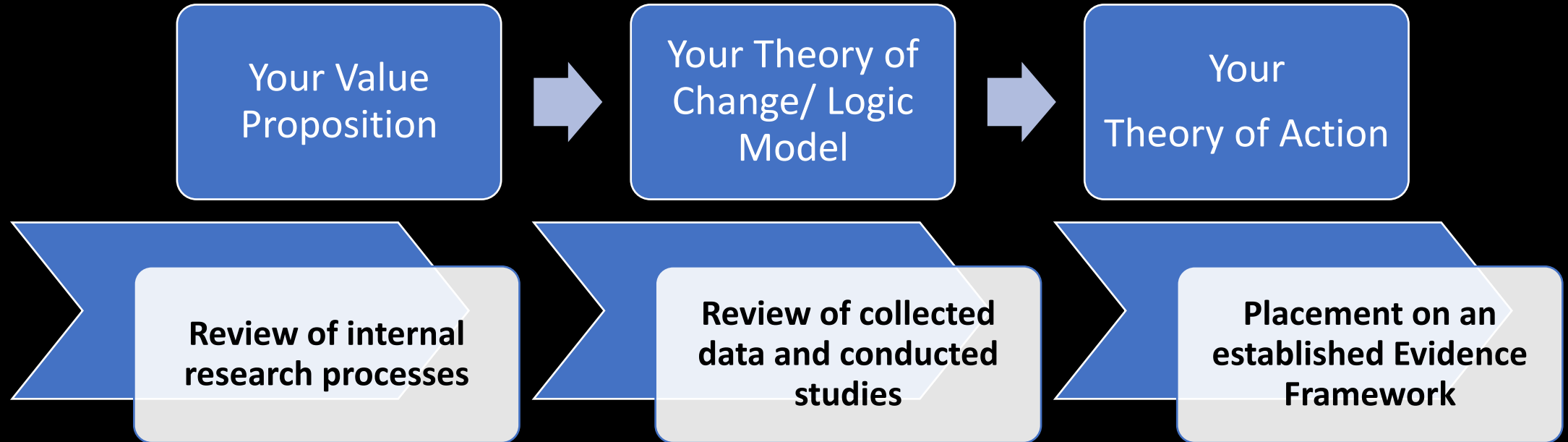
❖ **Systematic**
❖ **Rigorous**
❖ **Transparent**

1. Review Protocol	Create a review protocol that presents the proposed scope of the review. Using stakeholder input, include an analytic framework, key questions, and major outcomes. The analytic framework presents review priorities considering key populations, interventions, comparisons, and major outcomes.
2. Search and Selection of Relevant Studies	Apply robust search strategies and inclusion/exclusion criteria to locate all available studies relevant to the review.
3. Individual Study-Level Risk of Bias Assessments	For each included study, conduct a design-specific risk of bias (RoB) assessment (low, moderate, high). When appropriate, conduct a RoB rating separately for specific outcomes in a study.
4. Group Available Evidence	Group studies, aggregating evidence for each major outcome by factors defined in the analytic framework (e.g., addressing key treatment comparisons or targeting similar patient populations).
5. Outcome-Level Strength of Evidence by Study Design	For each body of evidence, score relevant domains and assess strength of evidence (SOE) separately for randomized controlled trials (RCTs) and observational studies. Use quantitative or qualitative synthesis approaches, as appropriate. a. The study limitations domain (based on RoB of individual studies) is the backbone of the required domains. b. Deficiencies in the five required domains may lower the SOE grade; presence of the relationship in the three optional domains may raise it.
6. Overall Strength of Evidence	Combine design-specific SOE assessments into one overall SOE rating for each outcome. a. Ensure that the overall SOE grade based on domain scores is consistent with a more global assessment that considers the definition of each level of grading. b. Clearly report which domains contributed most substantially to the final SOE grade.
7. Summary Tables	To promote the usefulness of findings for decisionmakers, clearly report SOE grades with other important summary data in tables.
8. Transparent Reporting	Describe and explain SOE decisions in the review's executive summary and discussion section in a manner consistent with the relationships presented in the analytic framework. Explicitly document decision rules used for combining domains into the overall SOE grade in the review's methods section.

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WiKIT's services

1. Establish evidence base

Interviews with the company team + Desktop research

Your Value Proposition → Your Theory of Change/ Logic Model → Your Theory of Action

Review of internal research processes

Review of collected data and conducted studies

Placement on an established Evidence Framework

You will get:
-overview of your current research base
-refined logic model and theory of change to follow
-Ability to systematically analyse your processes to drive sales and learner experience

You will have:
-increased understanding of where you are on your evidence journey
-increased understanding of your position in the market and next steps

Great for companies at early stage looking to articulate their value proposition and develop their research strategy

2A. Use research to drive learning impact

Hire and coordinate research teams to design and manage research

Create a research map with staffing/budget

Run primary studies

Use results to inform design and scaling plans
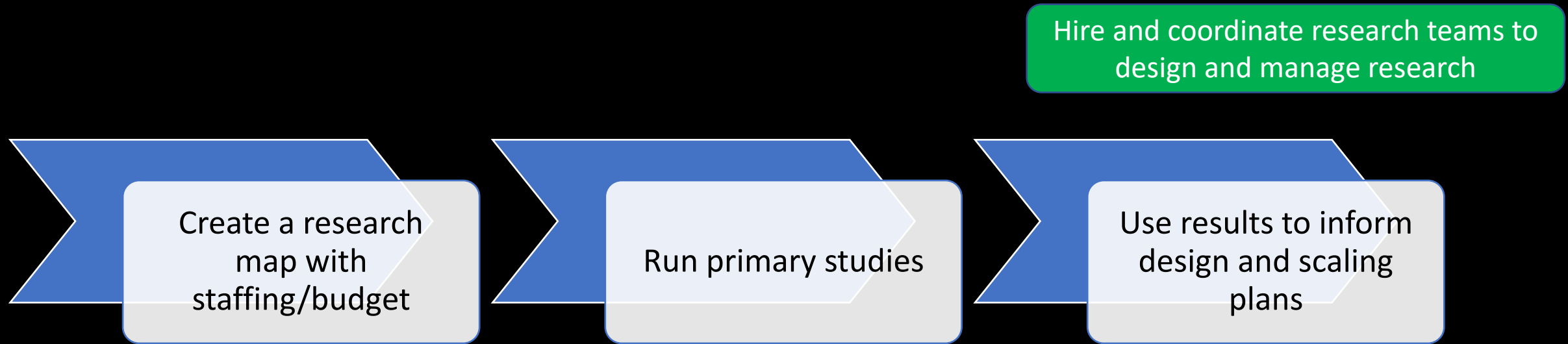
You will get:

-Ability/Knowledge to measure the impact of your product in different markets

-Ability/Knowledge to know when, for whom, and under what conditions, your product works best

Together with us, you will:

-Develop measurement plans and tools for ensuring valid measurement of short-term and long-term outcomes

-Deploy principles of learning sciences to evaluate the anticipated impact of your product

Great for companies that want to improve their products and processes with research insights over time

2B. Use evidence to scale

Interviews with beneficiaries and external stakeholders

Select a scaling model → Stakeholder mapping → Communication plan

You will get:

-marketing materials for showcasing your evidence base to customers

-communication materials for pitching to funders or procurement teams at schools' or governmental level
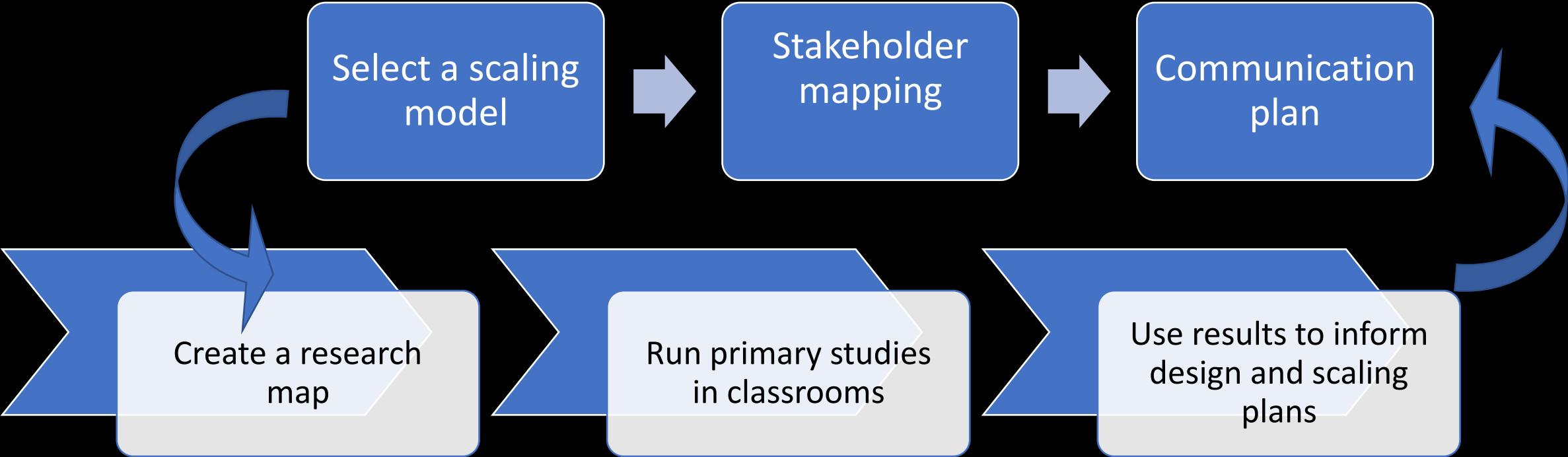
You will have:

-increased understanding of your target audience with comprehensive stakeholder mapping;

-increased understanding of the need for a research case to seek or justify external funding

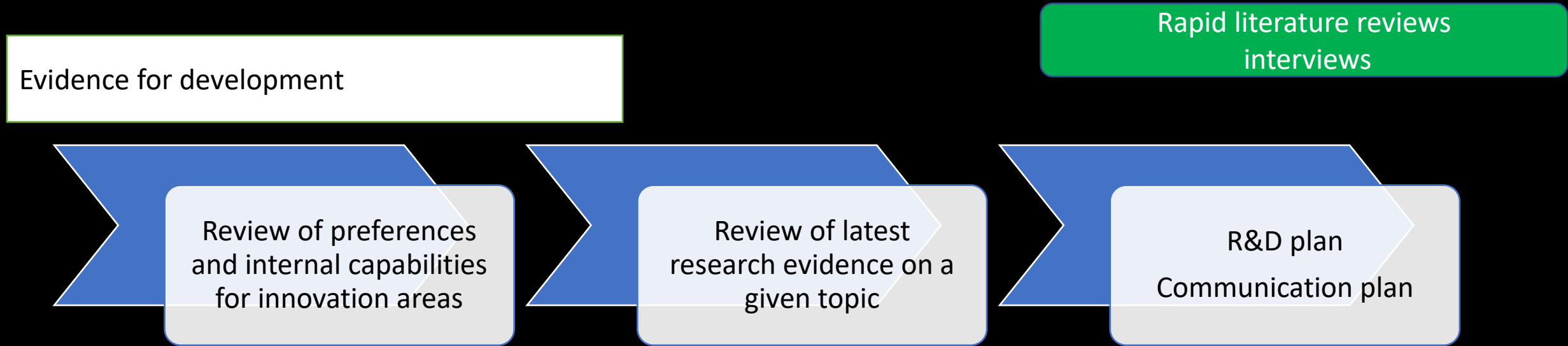💡 *Great for companies that want to scale with evidence of impact and validity*

Combine 2A & 2B in a cycle of continued improvement

Use research to drive sales

Select a scaling model → Stakeholder mapping → Communication plan

Create a research map

Run primary studies in classrooms

Use results to inform design and scaling plans

Use research to drive learning impact

3. Use evidence to innovate

Evidence for development

Rapid literature reviews
interviews

Review of preferences and internal capabilities for innovation areas

Review of latest research evidence on a given topic

R&D plan
Communication plan

You will get:
-research-validated plans for embedding cutting-edge evidence into your products
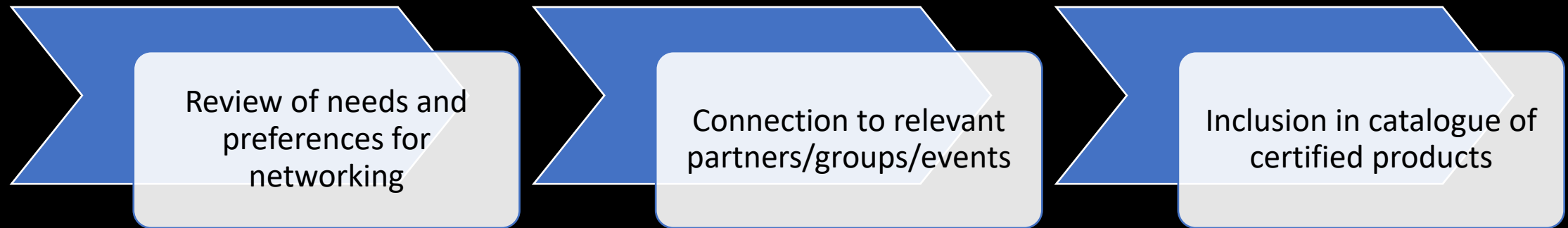-rapid literature reviews on latest developments in the content area you target

You will have:
-increased understanding of your innovation value
-increased understanding of known challenges and plans for proactively addressing them

Great for visionary companies that navigate change in a way that delivers impact and increases their reputational value

4. Use evidence to connect

Facilitating events/networking

Review of needs and preferences for networking

Connection to relevant partners/groups/events

Inclusion in catalogue of certified products

You will get:
-access to an evidence-driven network of EdTech producers
-VIP access to events, testbeds, certification and quality assessment tools
-increased visibility and transparency of products
-reduced price and accelerated membership options with our partners

Great for companies that benefitted from at least one of WiKIT's services

Internal training, coaching, workshops

We work as **your partner** and aim to establish long-lasting and solid relationships

-as your thinking partner, we engage with internal team members to incubate, test and scale design features and user experiences across your markets

-we help you strategise about emerging opportunities and challenges in the EdTech ecosystem

-we train your team on how to gather evidence and monitor the impact of products over time

-we train your team on design and help execute qualitative and quantitative research studies

Great for visionary companies that navigate change in a way that delivers impact and increases their reputational value

About this document

This document is a working paper produced for WikIt, AS by Professor Natalia Kucirkova. It is available for free under the Creative Commons Attribution 4.0 International https://creativecommons.org/licenses/by/4.0/ License.

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