J-PAL
ABDUL LATIF JAMEEL POVERTY ACTION LAB
EUROPE

ESII-funded project in Finland | Yhdessa photo project
©Mariajose Silva-Vargas

J-PAL
ABDUL LATIF JAMEEL POVERTY ACTION LAB
EUROPE

CLIMASCO, an example of an impact evaluation of climate education training

Adrien Pawlik

IDEE Programme Director & associate director of research – J-PAL Europe

November 18th, 2025

Outline

I. About J-PAL & IDEE

II. Introducing randomised evaluations

III. CLIMASCO

IV. Next steps & challenges

About J-PAL

At J-PAL, we conduct randomized evaluations to find answers to some of the many complex questions there are around how best to tackle poverty.

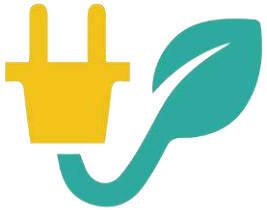
Anchored by a global network of researchers

Work across a broad range of sectors

Agriculture

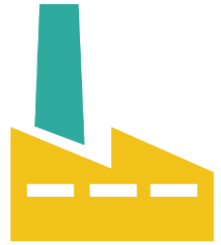
Crime, Violence, & Conflict

Education

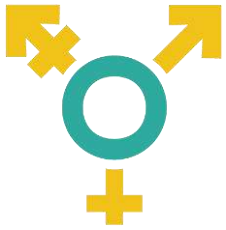


Environment, Energy, & Climate Change

Finance



Firms



Gender

Health

Labor Markets

Political Economy & Governance

Social Protection

Local grounding: Seven regional offices and hundreds of local partnerships

J-PAL North America
Massachusetts Institute of Technology (MIT)
Cambridge, USA

J-PAL Global
Massachusetts Institute of Technology (MIT)
Cambridge, USA

J-PAL Europe
Paris School of Economics
Paris, France

J-PAL South Asia
Institute for Financial Management & Research
Chennai & New Delhi, India

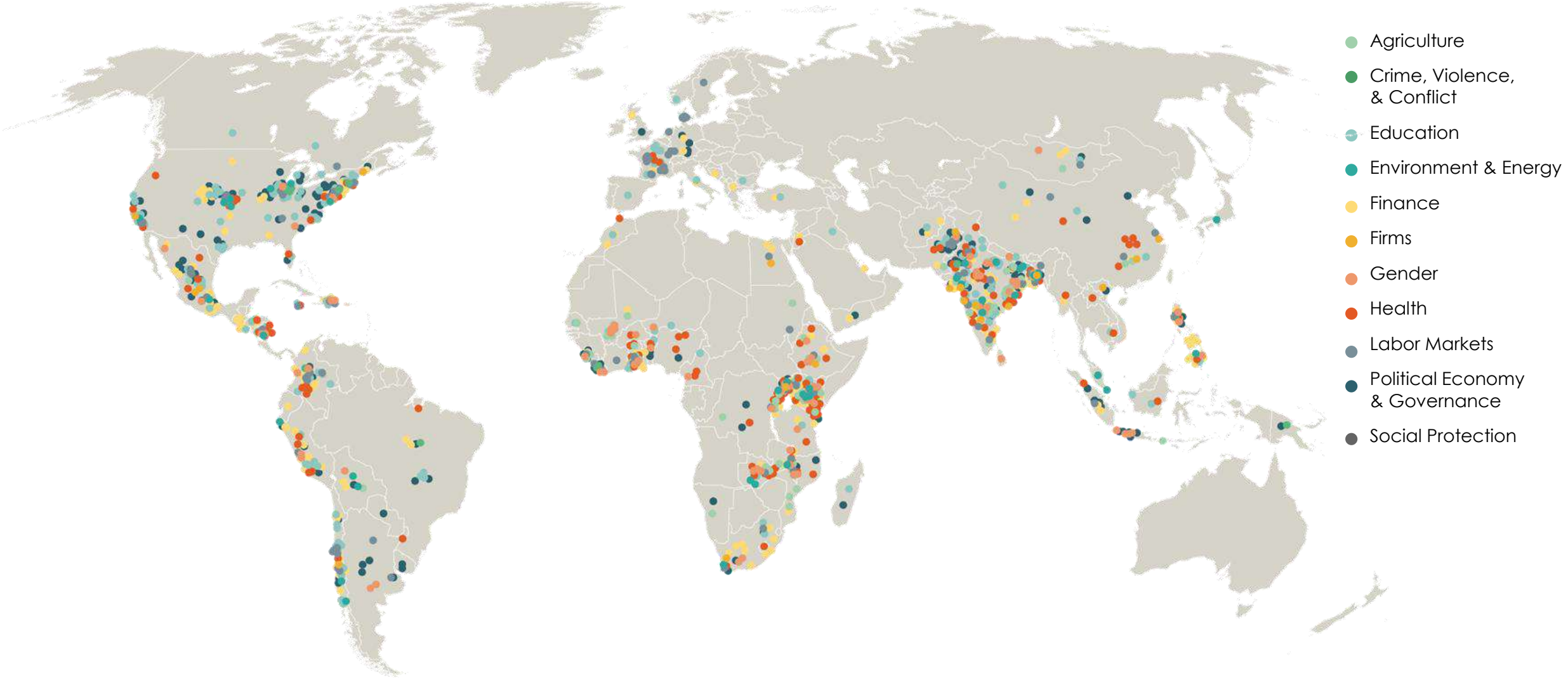
J-PAL Middle East and North Africa
American University in Cairo
Cairo, Egypt

J-PAL Latin America and the Caribbean
Pontifica Universidad Catolica de Chile
Santiago, Chile

J-PAL Africa
University of Cape Town
Cape Town, South Africa

J-PAL Southeast Asia
University of Indonesia
Jakarta, Indonesia

Global knowledge: 2,300+ completed randomized evaluations in more than 98 countries



Connecting the dots from research to action

Research

We fund innovative new research and help carry out projects of J-PAL affiliated researchers.

Policy outreach

We build partnerships, synthesize research results, lend technical assistance, and embed staff.

Training

We train researchers and decision makers in evaluation methods and develop rigorous online education tools to make learning more accessible for all.

idee

a long-term investment to develop the infrastructure for experimental research in the French education system—and promote the use of evidence produced by such research

About the IDEE programme

IDEE is a an **eight-year (2021-2029) partnership with the French Ministry of *National Education*** *(the Direction de l'Évaluation, de la Prospective et de la Performance, DEPP).The project is funded by the Government via the French National Research Agency (ANR) through the "Investment for the Future program", with the reference number* "ANR-21-ESRE-0034".

idee

FRANCE 2030

RÉPUBLIQUE FRANÇAISE
Liberté
Égalité
Fraternité

depp Direction de l'évaluation, de la prospective et de la performance

Our consortium

IDEE: Three strands of activity

Improving access to administrative data

Developing and sharing innovative tools and protocols for experimental research

Building partnerships and strengthening capacities for experimental research

Improving access to **administrative data**

Promote and facilitate researchers secure access to administrative data on education to reduce data collection costs and strengthen the impact of research in education.

How?

- By investing in data documentation; in the development of protocols for sharing, accessing, enriching and matching data; and in IT equipment

Examples:

- A **public catalogue** of education admin data for research
- A **free and secure remote data platform**

Developing and sharing **innovative tools and protocols** for experimental research

Purchase, develop, and document innovative measurement instruments, survey tools, resources for analysis, as well as legal and administrative protocols, in order to strengthen the quality and lower the cost of experimenting.

How?

- By developing shared research and measurement protocols for experimental and large-scale educational research

Example:

- **Catalogue of measurement tools** validated in French, and research protocols
- Loan of tools for research (tablets, eye trackers…).

Building **partnerships** and strengthening **capacities** for experimental research

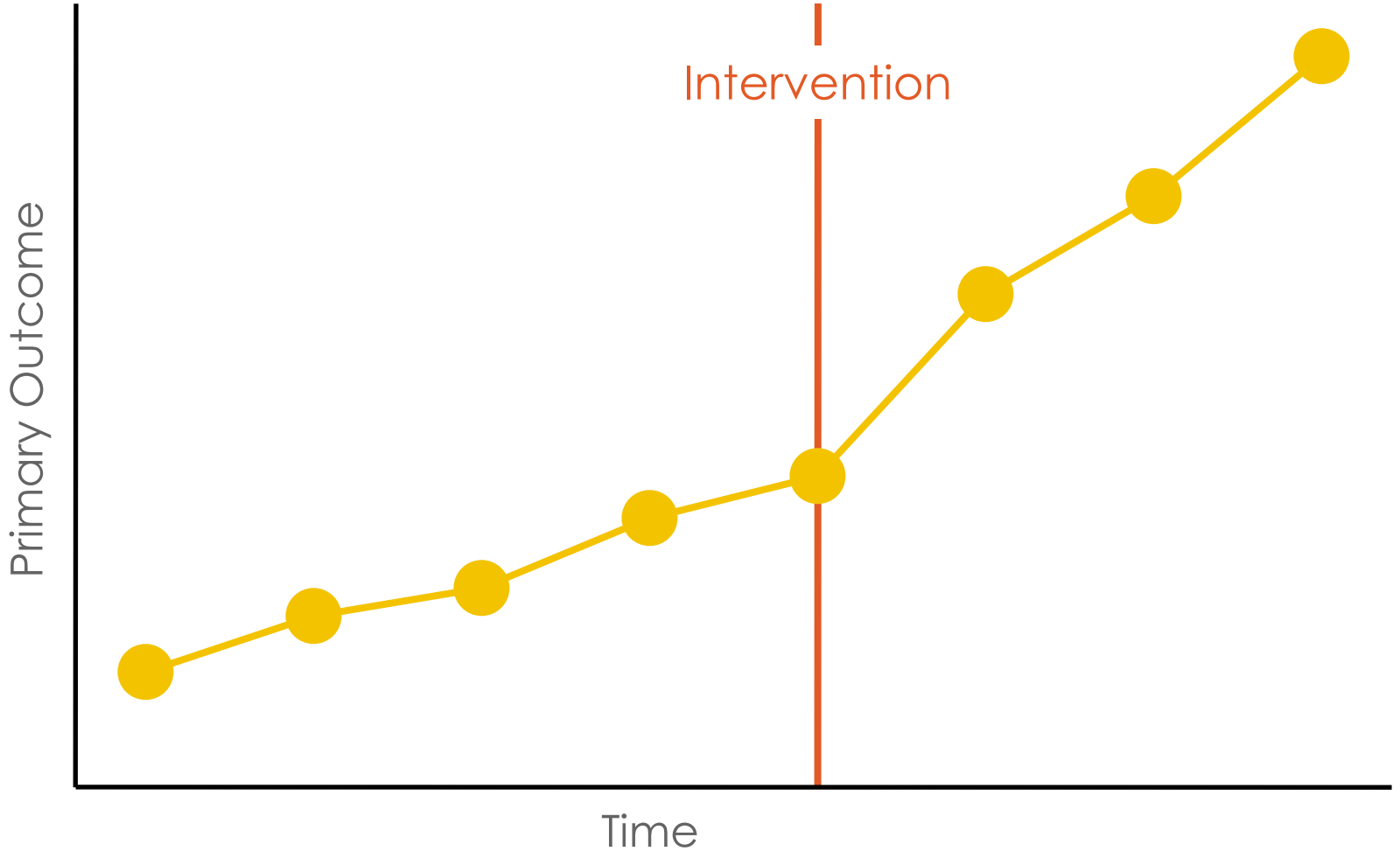
Facilitate new collaboration between education practitioners, policy makers, and researchers, and build their capacity to launch high-quality experimental research and use evidence in policy and practice.

How?

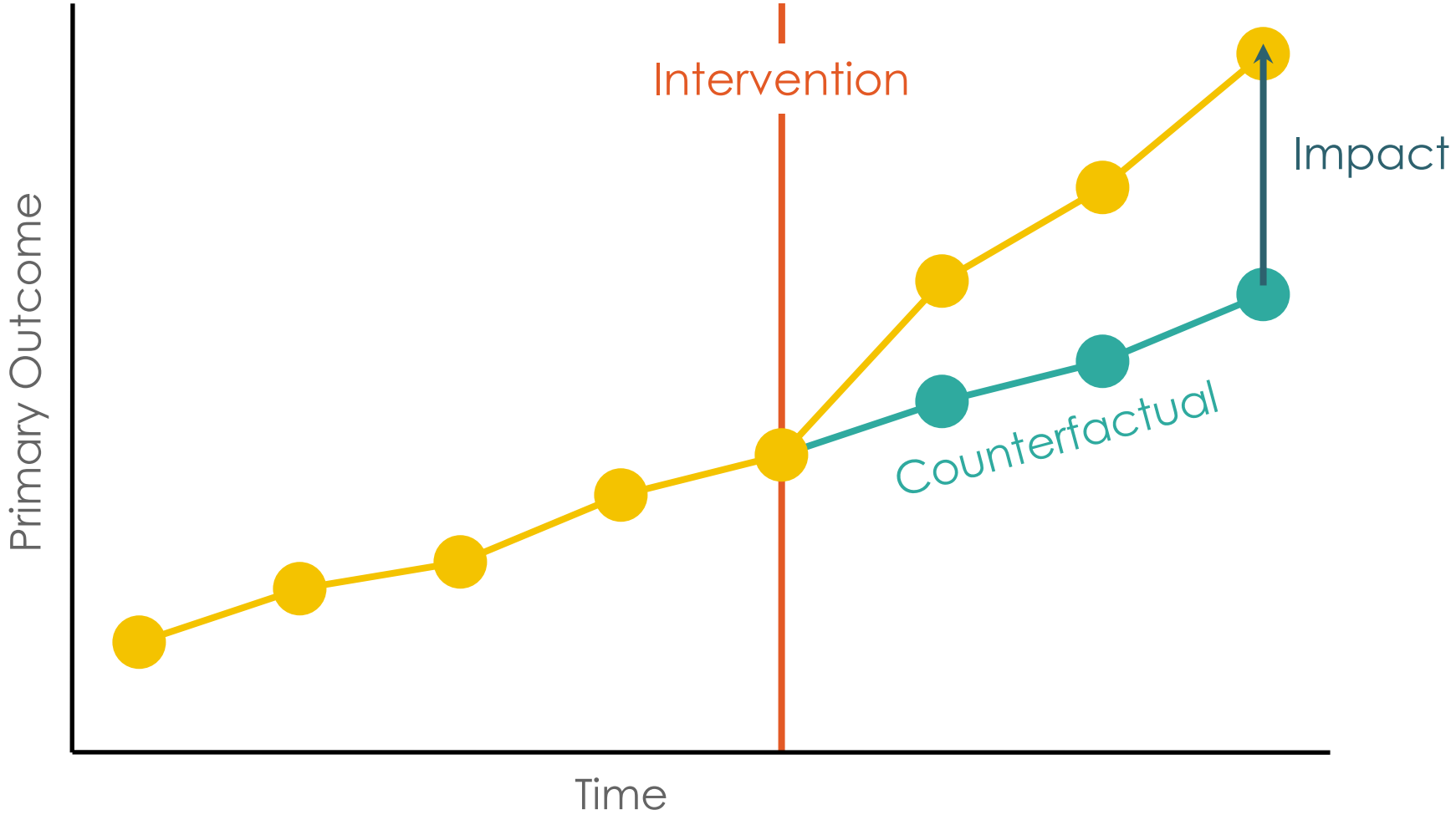
- By building researchers' capacity
  - Examples: **scientific seminars; advanced trainings; online resources** and **methodological support** to design and implement impact evaluations
- By establishing policy-research partnerships
  - Examples: **MoU** signed with some academic regions to support evidence generation and use; support to **recruit** participants for experiments
- By supporting evidence use in decision making
  - Examples: **trainings + MOOC** for education professionals and decision makers**; evidence dissemination activities** (notes, conferences, website, social media)

Introducing randomised evaluations

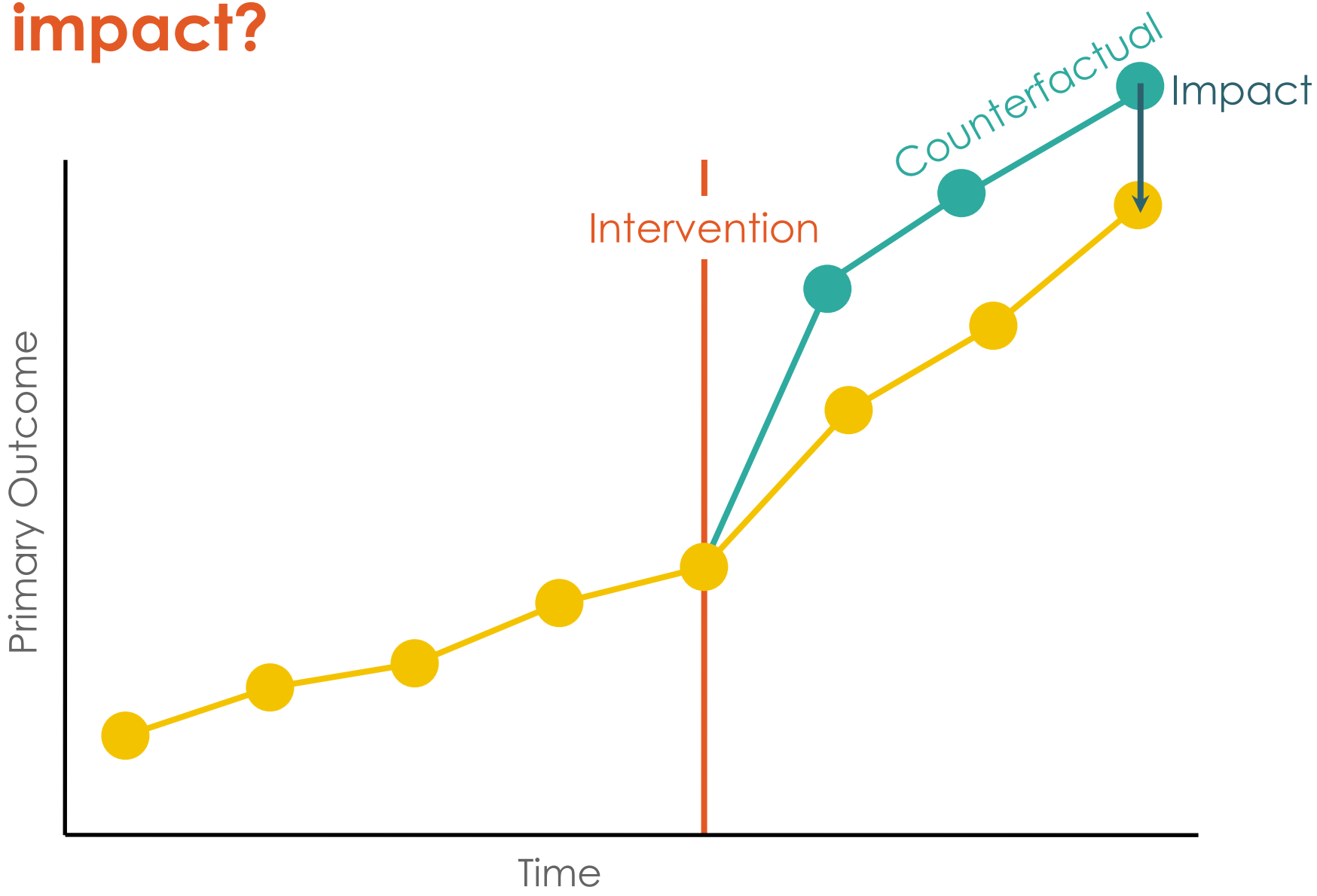
What is impact?



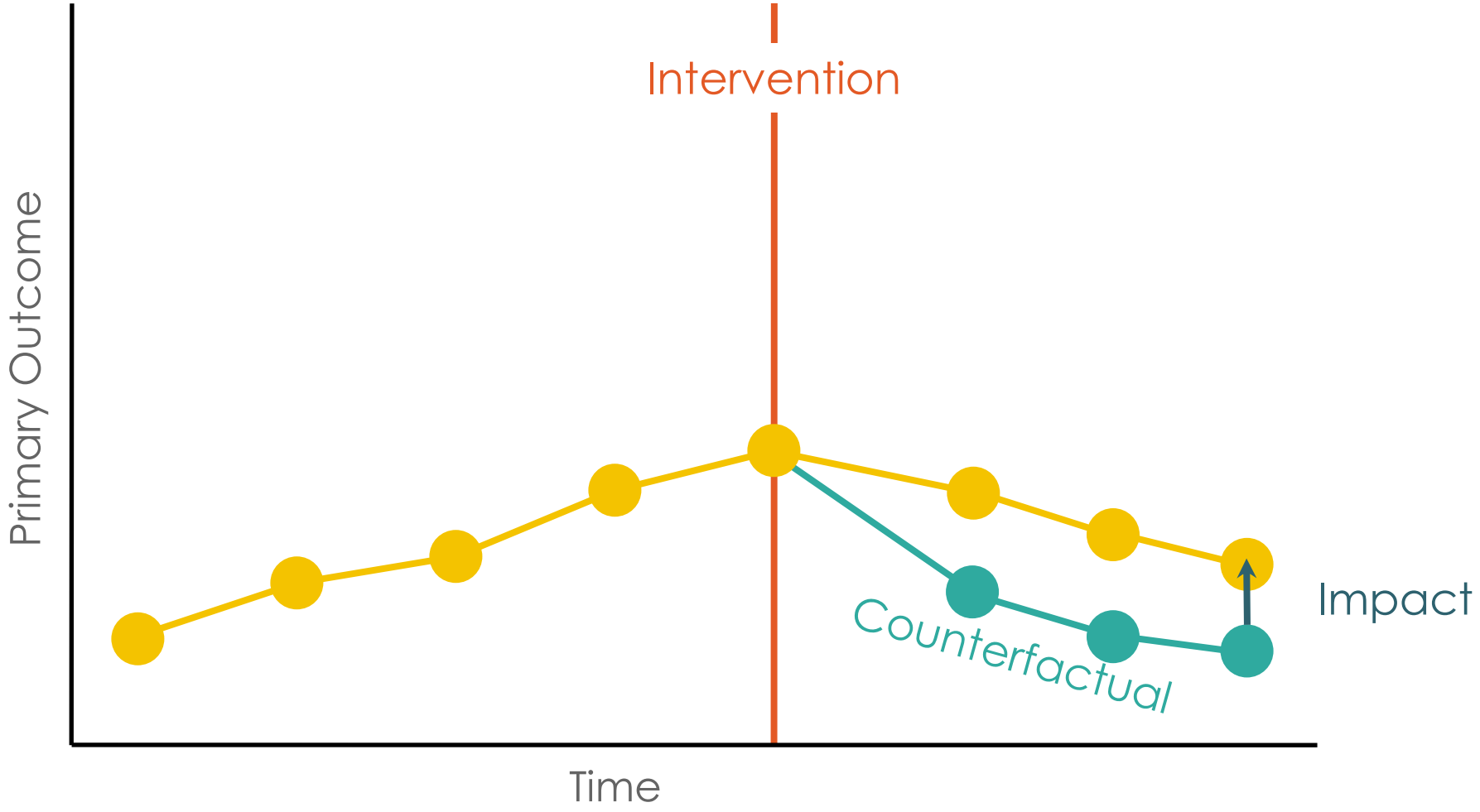
What is impact?



What is impact?



What is impact?



Impact: how can we measure it?

The impact of a programme is defined as a comparison between:

- **What actually happens** after the programme has been introduced
- **What would have happened** had the programme not been introduced (i.e. the "counterfactual")

In order to assess the impact of a programme, we need to understand the counterfactual, i.e. the state of the world that programme participants would have experienced in the absence of the programme

- **Problem:** The counterfactual never happened so it cannot be observed
- **Solution:** We need to "mimic" or construct the counterfactual

What all different methodologies are about: Creating a valid counterfactual

- Usually done by selecting a group of individuals that **did not participate** in the programme or that receives the **status quo**
- Usually referred to as the **control group** or **comparison group**
- How this group is selected is a **key decision** in the design of any **impact evaluation**

Constructing the counterfactual

Comparing apples to apples

Goal: Determine a comparison group that does not differ systematically from the treatment group at the outset of the program/study, so that differences that subsequently arise between them can be attributed to the program rather than to other factors.

Treatment

Source: freepik

Comparison

Impact evaluation methods

- Different impact evaluation methods construct the counterfactual in different ways by using different comparison groups
- Each rely on different assumptions for the comparison group to constitute a valid counterfactual
- Generally, the more likely that the assumptions will hold true in a given context, the stronger the evidence that our estimated impact is causal

Non-experimental (observational) methods

- Pre-post comparison
- Simple difference
- Multivariate regression*
- Matching
- Difference-in-difference
- Regression Discontinuity Design
- Instrumental Variable
- Natural experiment

Quasi-experimental methods

Experimental methods:

- Survey experiments
- Lab (in the field) experiments
- Field experiments

How to determine if a methodology is a good fit: Evaluate if the assumptions hold in your particular evaluation setting

The **method** we choose **matters**!

- Different impact evaluation methods create the **counterfactual** in **different** ways:
  - Different methods can yield very **different estimates** of causal impact
  - Different methods may be more or less appropriate under different circumstances
- Each method **rely on** different underlying **assumptions** to be able to construct a **credible counterfactual**
  - Whether these assumptions hold will depend on the evaluation at hand
- Understanding **assumptions** is key to assessing whether the method is appropriate for the evaluation at hand

Non-experimental and quasi-experimental:
Rely on being able to "mimic" the counterfactual under certain assumptions

The methods we just discussed are often referred to as non-experimental or quasi-experimental methods.

They rely on assumptions that **need to hold** to create a credible counterfactual.

Challenge:

Many of these assumptions are not testable.

The **credibility** of the **evaluation** will depend on the **credibility** of the **assumptions**.

Why randomise? You have (some) control over validity of assumptions!

Key advantage of randomised evaluations (or RCTs): Due to random assignment, members of the treatment and comparison groups **do not differ systematically at the outset of the evaluation**.

Treatment

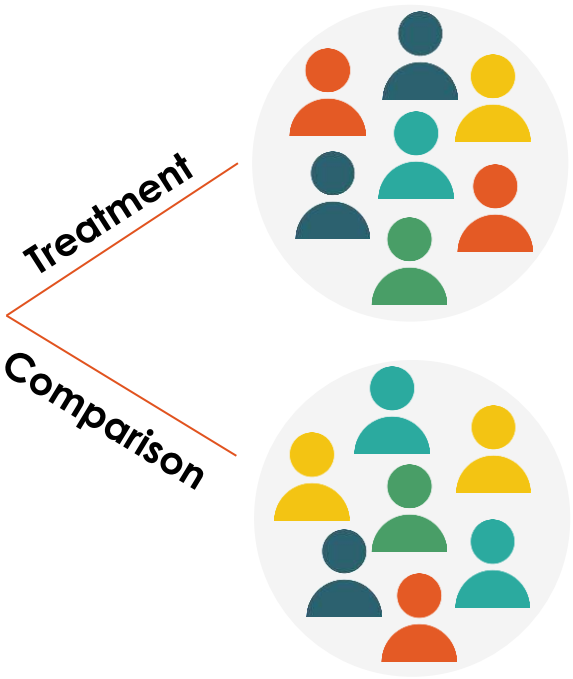
Source: freepik

Comparison

Randomised evaluations use random assignment to mimic the counterfactual and estimate a program's impact

Identify eligible participants

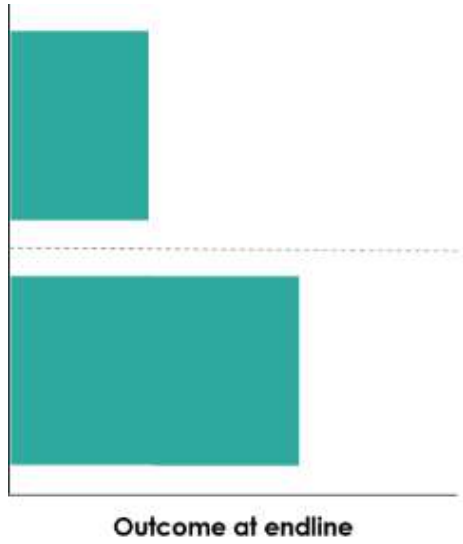
Random assignment



Program

Business as usual

Measure and compare outcomes to estimate impact



Assumption: Outcomes are only affected by program participation itself, not by assignment to participate in the program (or the evaluation).

What can I learn from an RCT?

What can I learn from an RCT?

Open the "black box": understand not just IF the program is effective but also WHY or the mechanisms behind

Learn how the **design of a policy or program** can be improved

Understand **heterogeneous effects**

Compare different modalities / features of the program

What types of questions can randomized evaluations help to answer?

- **How effective is a given program?**
  - Who benefits most?
- **How do different versions of a program compare to one another?**
  - Which components work or do not work? How do these function together?
- **How do program impacts compare under different delivery mechanisms?**
  - How to accurately target beneficiaries or respondents?
  - How to increase program take-up?
- **How cost-effective is a program?**
  - How does it compare to other programs designed to accomplish similar goals?
- **How accurate is a measurement tool for a given outcome?**
  - How do measured outcomes compare under different versions of a survey?

CLIMASCO presentation

CLIMASCO IN SUMMARY

2025 | 2029 | **Pilot project to strengthen climate change education in schools as part of the ecological transition**

CLIMASCO beneficiaries

- Trainers
- Teachers
- Management and administration team
- General, technical and vocational education , from primary to secondary school

To better support students: the citizens of tomorrow

Components of CLIMASCO

- **Continuing education** for beneficiary audiences
- **Teaching resources** based on scientific input
- **Communities of practice** for inspiration
- UNPRECEDENTED | **Research and evaluation:** studying the effectiveness of training initiatives implemented to offer a turnkey solution as part of **policy support**

Pilot areas

CLIMASCO partners

- **Coordinator** | Office for Climate Education
- **Financial support** | Banque des Territoires
- **Partners** | Réseau Canopé, the Créteil, La Réunion and Rennes Academies, *La main à la pâte* Foundation (with the Maisons pour la Science in Rennes and Paris-IDF), IDEE.

5-year objective:

110,000

hours of continuing education

#CLIMASCO

CLIMASCO

Why the CLIMASCO project?

CONTEXT

France has long been committed to promoting ESD through programmes run by associations and directly by the institution. However, many scientific and educational stakeholders note that climate change, despite being a key issue, remains insufficiently or only partially addressed.
This is why CLIMASCO, **based on existing needs** and **capitalising on existing resources**, will develop a **comprehensive and effective climate change education programme** within the framework of the ecological transition.

OBJECTIVES

1. For project beneficiaries: development of ECC skills with a target of 110,000 hours of continuing education
2. For the education system
   - Assess the impact of different training programmes
   - Develop recommendations based on the results of the impact evaluation to support scaling up

Target audiences

Trainers

Teachers

Management and administrative staff

General, technical and vocational education, from primary to secondary school

To better support students: the citizens of tomorrow

CLIMASCO's missions

- **Professional development of beneficiary audiences**
  - Training educational stakeholders
  - Producing educational resources

- **Communities of practice**
  - Facilitate communities of practice to encourage cross-sector dialogue (educators, scientists, local authorities, business community)
  - Promoting best practices, participating in international networks

- **Research and evaluation**
  - Diagnosis: current situation and state of the art
  - Impact evaluation of CLIMASCO measures
  - Recommendations
  - Public policy support component

Project fundamentals

All educational and training content offered as part of the CLIMASCO project will include:

- A solid scientific foundation
- An interdisciplinary approach
- A socio-emotional approach
- Consideration of student agency

CLIMASCO has a Scientific and Educational Committee (CSP) made up of climate scientists, education specialists and teachers to jointly develop and validate the project's training content and educational resources.

A differentiated approach by region

PILOT ACADEMIES

Pilot training courses, provision of resources and involvement in the impact evaluation carried out

Strong involvement - from project design to implementation

NATIONAL

Distribution of royalty-free resources and simple deployment on demand – without incorporating the research component

Prior to a possible scaling up led by the Institution

From 2030

INTERNATIONAL

Promotion of the project and sharing of knowledge produced in international seminars and at COPs

To inspire other similar projects around the world

CLIMASC

What constitutes valid and useful evidence?

Claims supported by appropriate and rigorous data analysis (causality rather than correlation) and placed in an appropriate context.

The quality of the impact evaluation depends on the proper design and implementation of the programme

Conduct a needs assessment

NEEDS ASSESSMENT

What is the problem?

- How big is the problem?
- Who are the people most in need of assistance?

What are the explanatory factors?

- Formulate a hypothesis about the causes of the problem and propose possible solutions

The quality of the impact evaluation depends on the proper design and implementation of the programme

Conduct a needs assessment

↓

Design the programme and develop a theory of change

THEORY OF CHANGE

Selecting a programme to meet identified needs

- What are the inputs or activities?

What steps are necessary to enable the intervention to produce the desired change?

- What assumptions need to be tested?

The quality of the impact evaluation depends on the proper design and implementation of the programme

Conduct a needs assessment

↓

Design the programme and develop a theory of change

↓

Implement the programme and conduct a process evaluation

IMPLEMENTATION AND PROCESS EVALUATION

- Has the programme been implemented as planned?
- Is the programme reaching the target population? Is the population using the services concerned?

The quality of the impact evaluation depends on the proper design and implementation of the programme

Conduct a needs assessment

↓

Design the programme and develop a theory of change

↓

Implement the programme and conduct a process evaluation

↓

Estimate the impact

IMPACT EVALUATION

- Did the programme have the expected effects?
- If so, what is the extent of these effects?

The quality of the impact evaluation depends on the proper design and implementation of the programme

Conduct a needs assessment

↓

Design the programme and develop a theory of change

↓

Implement the programme and conduct a process evaluation

↓

Estimate the impact

↓

Conduct a cost-effectiveness analysis

COST-EFFECTIVENESS ANALYSIS

- What is the cost of the programme in relation to its impact?
- Given the size of the observed effects and the cost of the programme, how does it compare with other possible solutions?

2025 initial diagnosis : tools

Teacher surveys

→ one survey for all teachers to assess current practices and needs

→ one survey for teachers who take part in training to assess adequacy with needs

Interviews of academic actors

→ understanding how climate change education is organised within partner Academies, identifying constraints and opportunities

Analysis of curricula and official websites

→ Assessing where climate change education fits in existing curricula

→ Identifying resources and trainings already available to teachers

Scientific state of the art

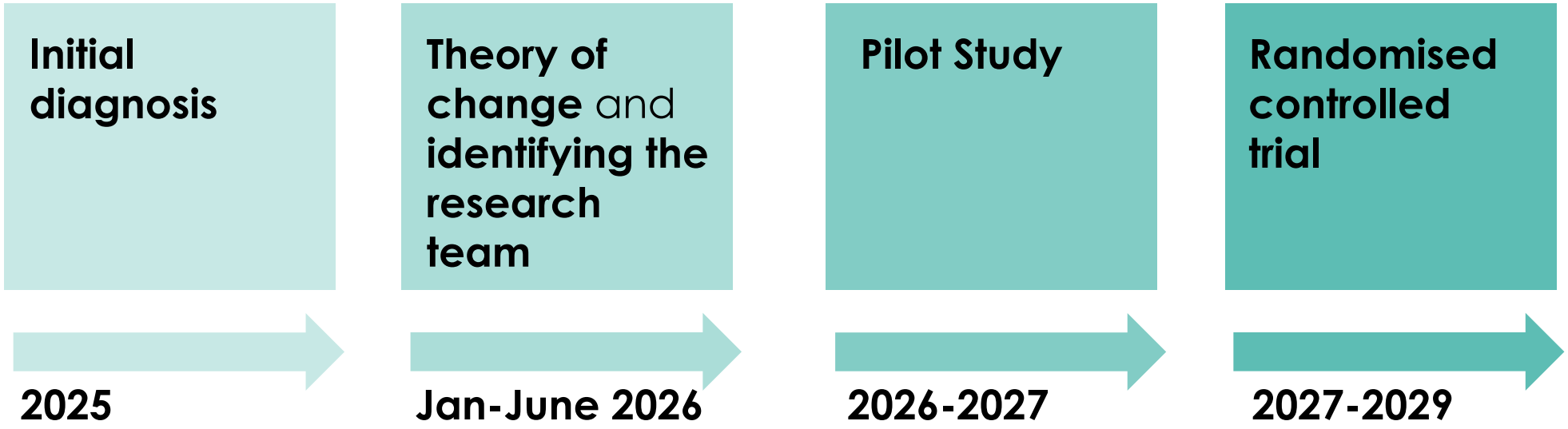
→ identifying evidence-based recommendations to create efficient teacher training, as well as gaps in knowledge.

2025 initial diagnosis : objectives

Informing the Academic Teacher Training Plan for 2026-2027
Results will be communicated to partner Academies to orient the elaboration of the training plan for next academic year.

Identifying research questions to investigate for 2026-2029
Following this initial diagnosis, a research team will develop an intervention to be tested in a large-scale randomised controlled trial.

CLIMASCO timeline



Thank you!