J-PAL
ABDUL LATIF JAMEEL POVERTY ACTION LAB

Why Evaluate

Using Evidence to Inform Policy

Course overview

1. Why Evaluate
2. Theory of Change & Measurement
3. Why & When to Randomize
4. How to Randomize
5. Sample Size & Power
6. Randomized Evaluation from Start to Finish
7. Threats & Analysis
8. Ethical Considerations
9. Generalizing & Applying Evidence

Lecture overview

I. Motivation for impact evaluation
II. Prerequisites for a good impact evaluation
III. Case study: Why evaluate?
IV. Future of evaluation & evidence-informed policymaking

Lecture overview

I. **Motivation for impact evaluation**

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The decision-maker's dilemma: Each challenge has many *potentially* good solutions, but time and funding are limited

How do you choose between seemingly good program options?

Pair knowledge of local conditions with rigorous evidence from around the world to design your program

How do you know whether a program really works or not?

Use data and **impact evaluations** to:

- See whether it has the intended effect
- Compare different solutions in terms of their cost and magnitude of impact
- Scale the most cost-effective solutions

How do you define impact?

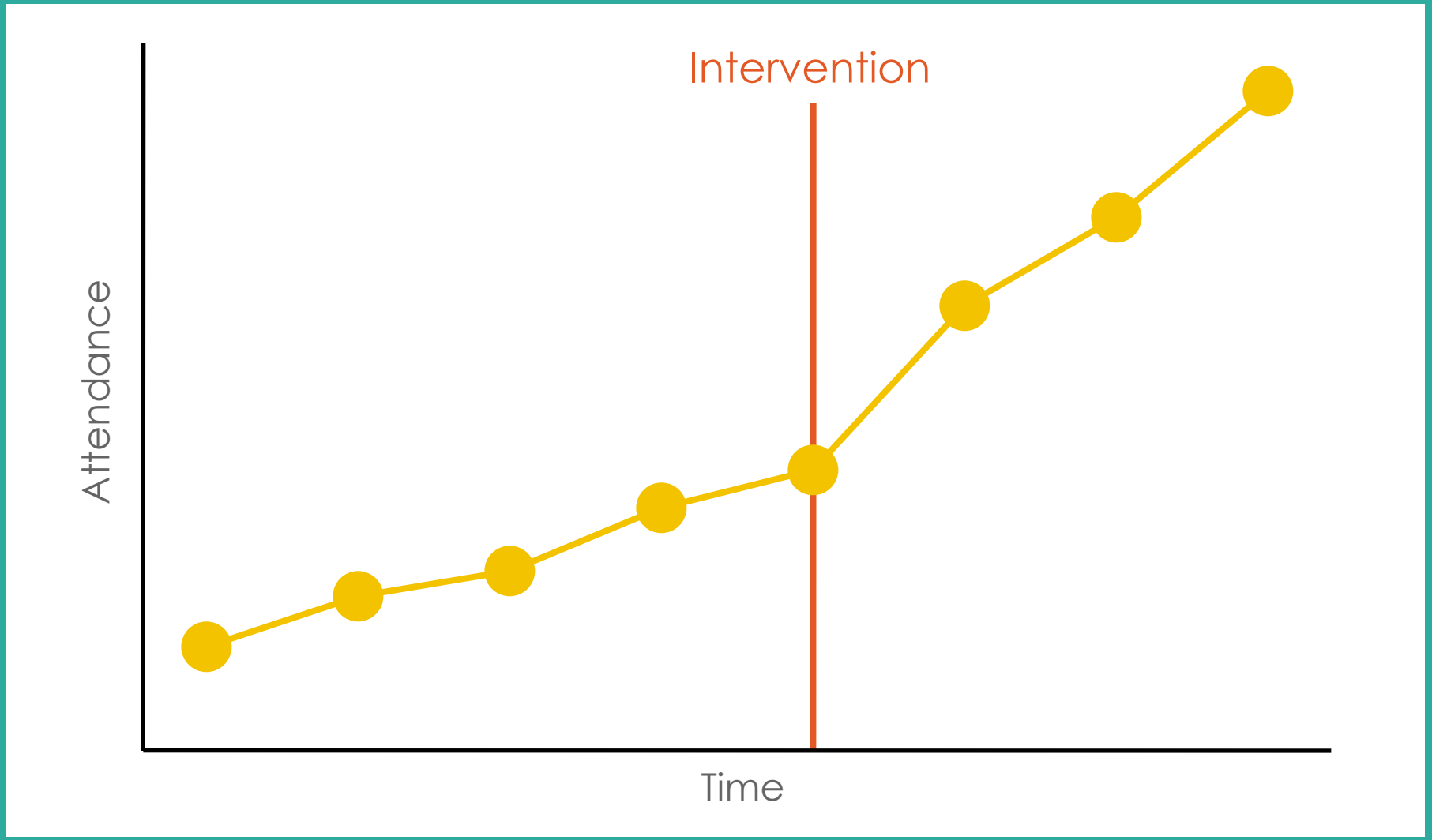
How do you know if a program is effective?

Impact: Definition

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

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

What is the impact of this program?



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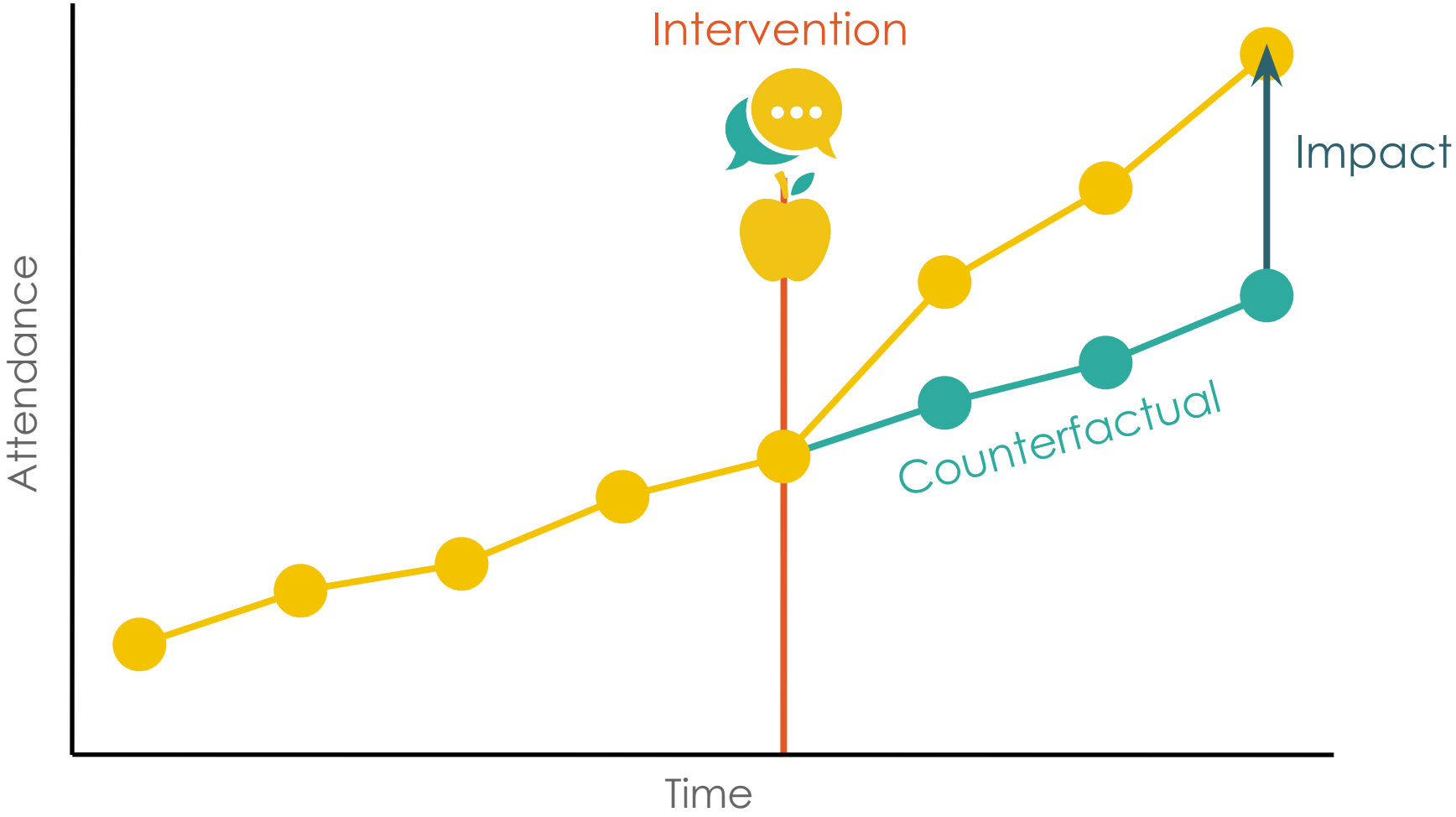

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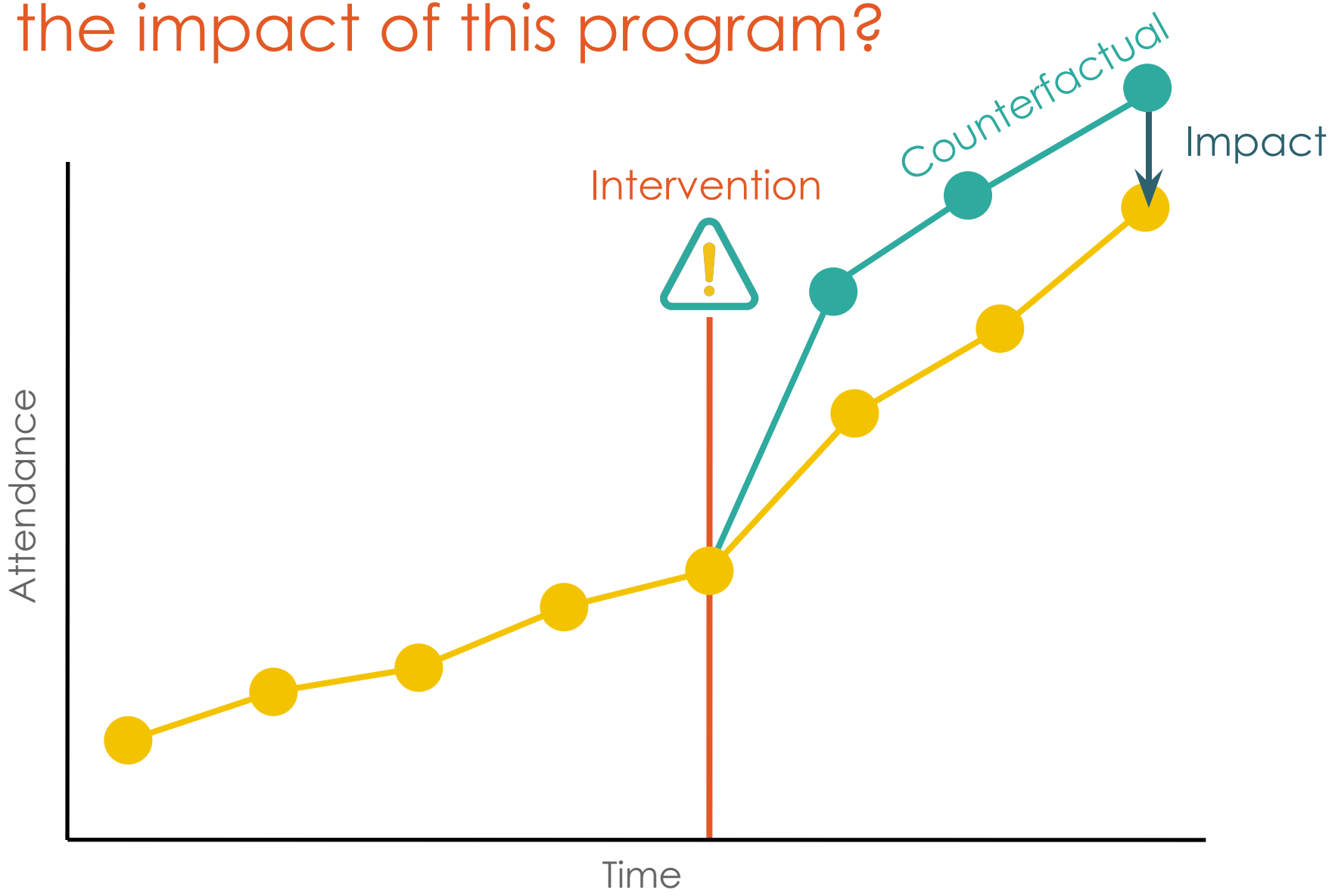

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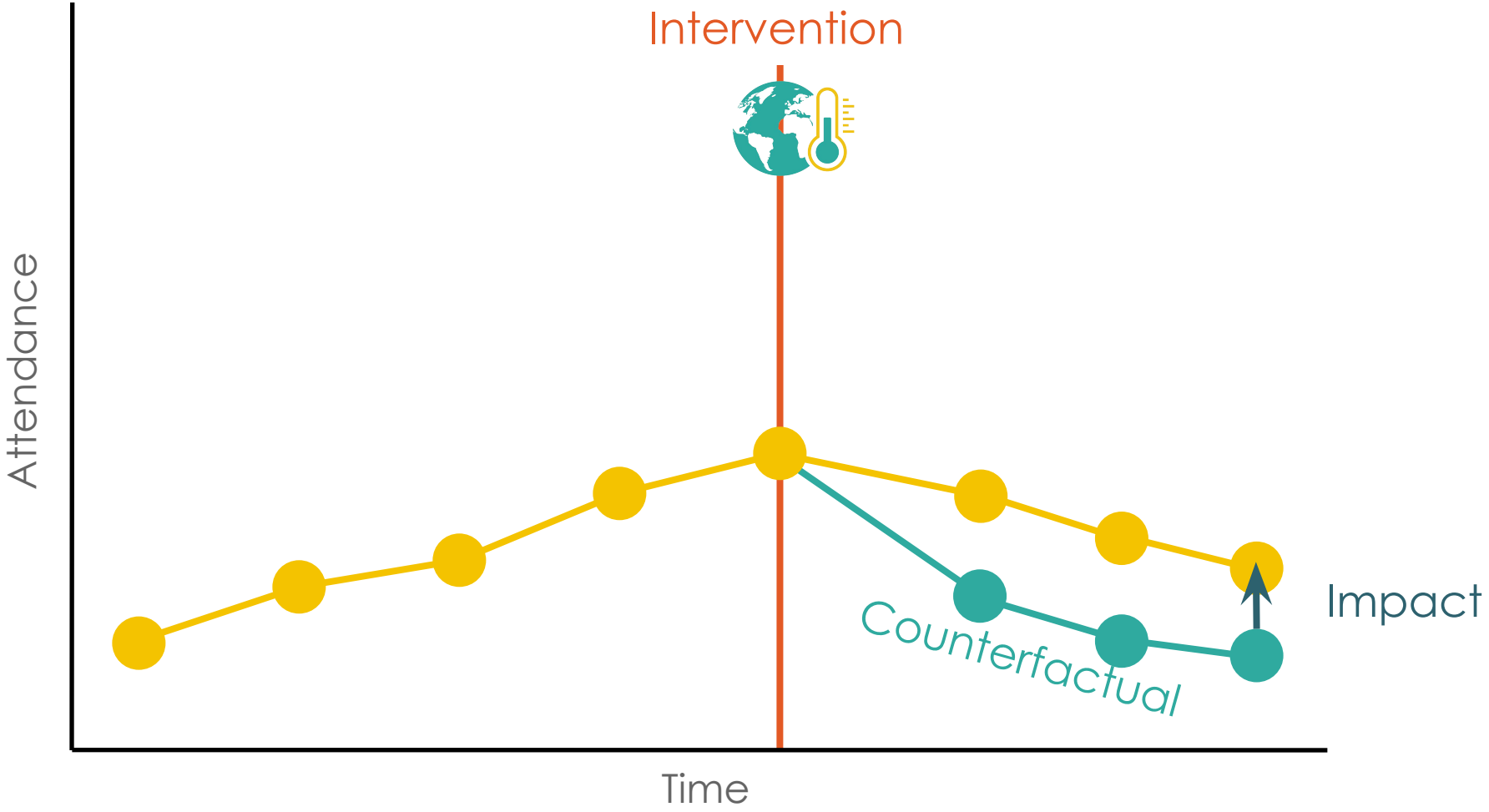


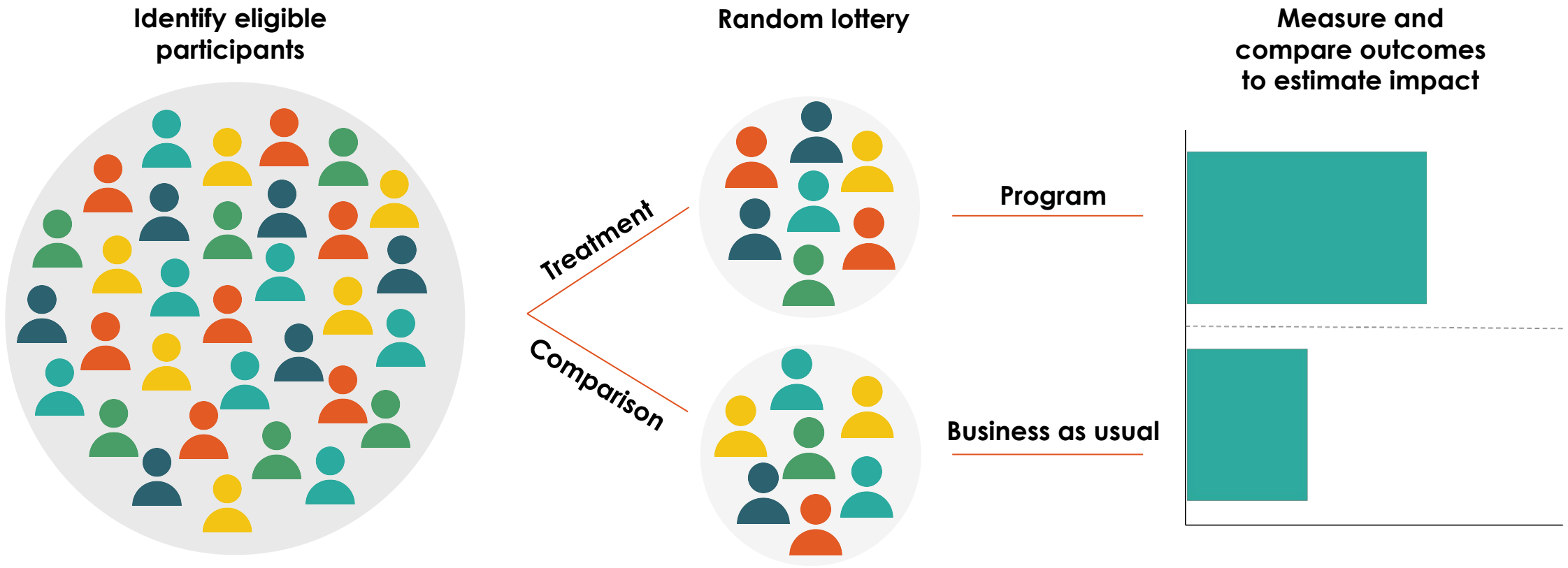
Impact: How can we measure it?

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

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

This can be done in different ways, but in this course we will primarily focus on Randomized Controlled Trials (RCTs)

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



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A good impact evaluation builds on good program design and implementation

Conduct a needs assessment

NEEDS ASSESSMENT

What is the problem?

- Understand the extent of the problem and who is affected
- Identify the contributing factors and barriers that exist
- Consider promising solutions to meet the community's goals

A good impact evaluation builds on good program design and implementation

Conduct a needs assessment

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Design program and build a theory of change

PROGRAM DESIGN

Use the existing evidence base to inform the program

- What are the inputs or activities?

What steps are needed to achieve the desired change in outcomes?

- What assumptions need to hold?

A good impact evaluation builds on good program design and implementation

Conduct a needs assessment

↓

Design program and build a theory of change

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Pilot program and evaluation

PILOTING

Pilot the program and evaluation, adjusting as needed

- Can the program be implemented with fidelity?
- Can the evaluation be implemented to ensure learning?

A good impact evaluation builds on good program design and implementation

Conduct a needs assessment

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Design program and build a theory of change

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Pilot program and evaluation

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Implement and monitor program process

IMPLEMENTATION AND PROCESS MONITORING

- Was the program carried out as planned?
- Is the program reaching the target population? Do people use the services?

A good impact evaluation builds on good program design and implementation

Conduct a needs assessment

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Design program and build a theory of change

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Pilot program and evaluation

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Implement and monitor program process

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Estimate impact and cost-effectiveness

IMPACT EVALUATION AND COST-EFFECTIVENESS

- Did the program have the intended effects?
- Given magnitude of impact and cost, how does it compare to alternatives?

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Deforestation is a key contributor to carbon emissions

- Change in land use—mostly deforestation—represents at least 11% of global carbon emissions caused by humans
- **Payments for Ecosystem Services, (PES)** pay individuals to conserve their land, representing a promising solution to help mitigate climate change while preserving income

Photo: Alex Coutts | IPA

Needs assessment & theory of change → Piloting & process monitoring → Impact evaluation & cost-effectiveness

Context & intervention

- Uganda's deforestation rates are highest on private land, where landowners report cutting trees to clear farmland or to sell for income

- The Chimpanzee Sanctuary and Wildlife Conservation Trust, designed a PES program
  - Offered payments of about 28 USD per hectare per year to landowners who enrolled and complied with a contract to conserve their forest

Photo: New Vision

Needs assessment & theory of change → Piloting & process monitoring → Impact evaluation & cost-effectiveness

What would you want to know to understand whether the program was implemented as intended?

Process monitoring

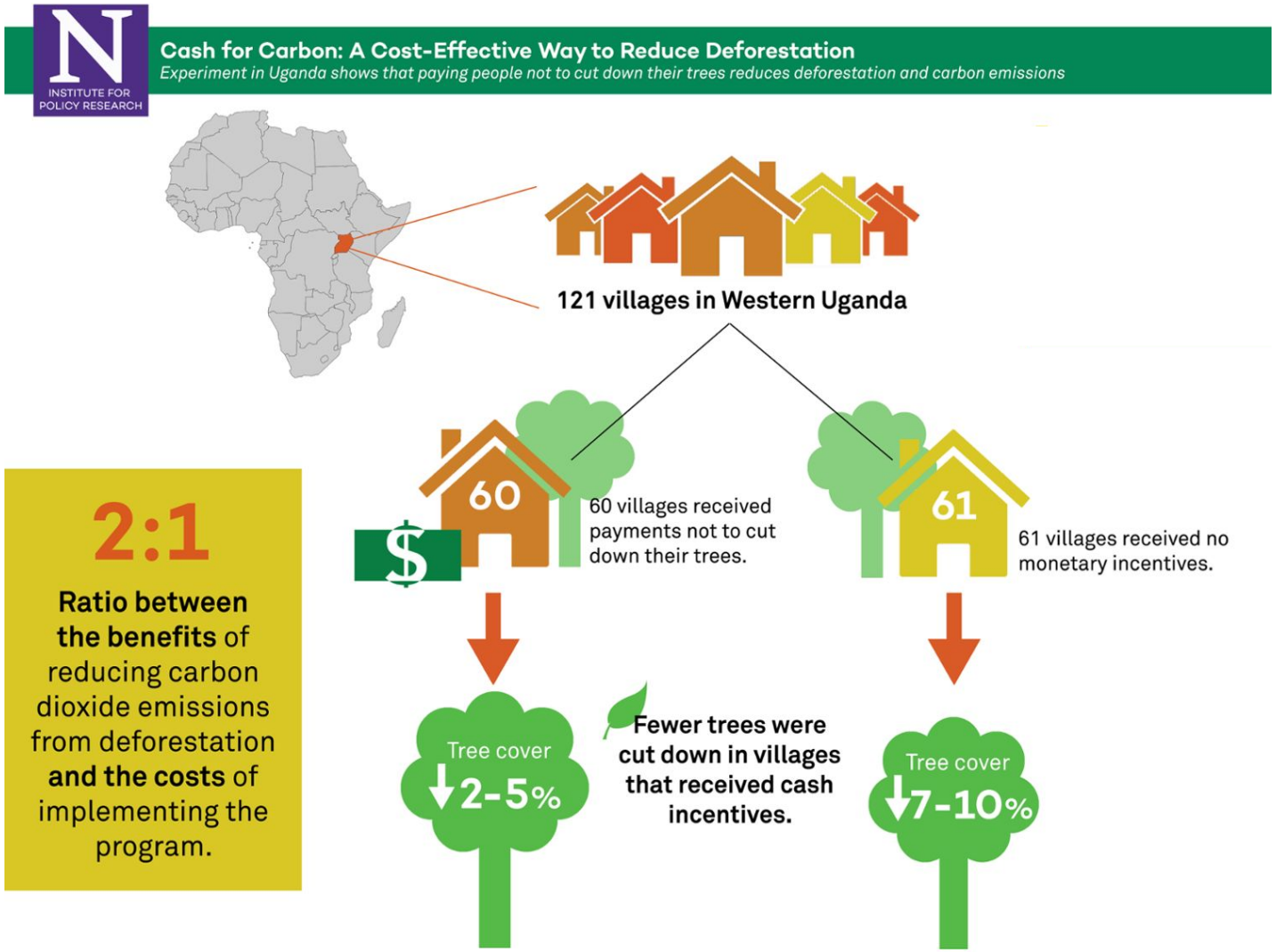
- Did landholders hear about the program?
- Was the enrollment process and contract clear?
- Do landowners enroll in the program?
- Are payment amounts accurately calculated?

32% take up: Interviews suggested 2/3 of individuals who did not sign up were unaware of the program or faced logistical barriers during the sign-up process.

"Cash for carbon: A randomized trial of payments for ecosystem services to reduce deforestation." Jayachandran et al., 2017.

Needs assessment & theory of change → **Piloting & process monitoring** → Impact evaluation & cost-effectiveness

Do you think the program (as implemented) reduced deforestation?



Northwestern Institute for Policy Research

Needs assessment & theory of change → Piloting & process monitoring → **Impact evaluation & cost-effectiveness**

What can we learn from this evaluation?

Effective and cost-effective:
Even with relatively low participation rates, the PES program appears to be an effective and cost-effective way of reducing deforestation and averting carbon dioxide release in Uganda.

Inspired further investigation at scale:
This informed a subsequent evaluation of Mexico's national PES program, Pago por Servicios Ambientales, to understand whether cost-effectiveness can be increased by requiring participants to enroll all of their eligible land.

Needs assessment & theory of change → Piloting & process monitoring → **Impact evaluation & cost-effectiveness**

This is just one of the pathways to policy change

Shifting global thinking

Institutionalizing evidence use

Applying research insights

Adapting and scaling a program

Scaling up evaluated pilots

Scaling back an evaluated program

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When to consider an impact evaluation

Evidence base is uncertain

- Novel program or population
- Mixed results or limited information on certain outcomes

Program has been heavily adapted

- Unclear whether core mechanisms are intact
- Uncertain whether program can be implemented with fidelity to model

Mechanisms of solution unclear

Sometimes the most effective way to determine whether an identified solution addresses the root cause is to evaluate it.

Building a program around a strong theory of change and monitoring the implementation process is critical regardless!

When considering whether an impact evaluation is the best use of scarce resources, think about…

- What is your informed prior that the program will be effective?
- What would you like to learn about the program beyond its impact?
- What is the resource tradeoff for evaluation?
- How will the findings inform policy decisions?

The use of RCTs is expanding to tackle key policy-research challenges in new areas

Climate change

Advance evidence-based policies in climate change mitigation and adaptation.

Social protection

Improve the effectiveness of programs to reduce poverty, inequality, vulnerability, and risk.

Discrimination and racial equity

Identify effective approaches to counter discriminatory practices and reduce prejudice.

AI for social good

Test strategies for effective adoption of AI for program targeting, access, and delivery.

The future of work

Test strategies for job creation and helping workers adapt to changing economies.

Big data

Increase the use of big data for evidence-informed decision-making.

Conclusion: Evidence is key to good policy making

A fundamental dilemma for decision-makers is to select the best possible program to address a given challenge

The only way to know whether a program is effective in your context is to evaluate its impact

A good impact evaluation builds on the careful and evidence-informed program design and implementation

Impact evaluations can be costly, but not evaluating a program can be even more costly

References and resources

Testing the Effectiveness and Cost-effectiveness of Payments for Ecosystem Services (references)

- J-PAL Evaluation Summary (Uganda)
- Research article (Uganda)
- Working paper (Mexico)

Evidence to Policy

- Pathways to Policy Change

Growth is not enough

- J-PAL blog
- Project Syndicate

Reuse and citation

To reference this lecture, please cite as:

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