Attribution

A practical framework to select the most appropriate attribution method

Today's morning program

Plenary 8:30 – 10:30	Groups 11:00 – 12:30

- Attribution; what is it and why important ?
- Present a framework to select appropriate method to assess attribution.
- Discuss 4 cases that applied different attribution methods.

MDF 1	MDF 2
NMDP 1	NMDP 2
ALCP 1	ALCP 2
PM 1	PM 2

Before the intervention

After the intervention

Is this the result of our intervention?

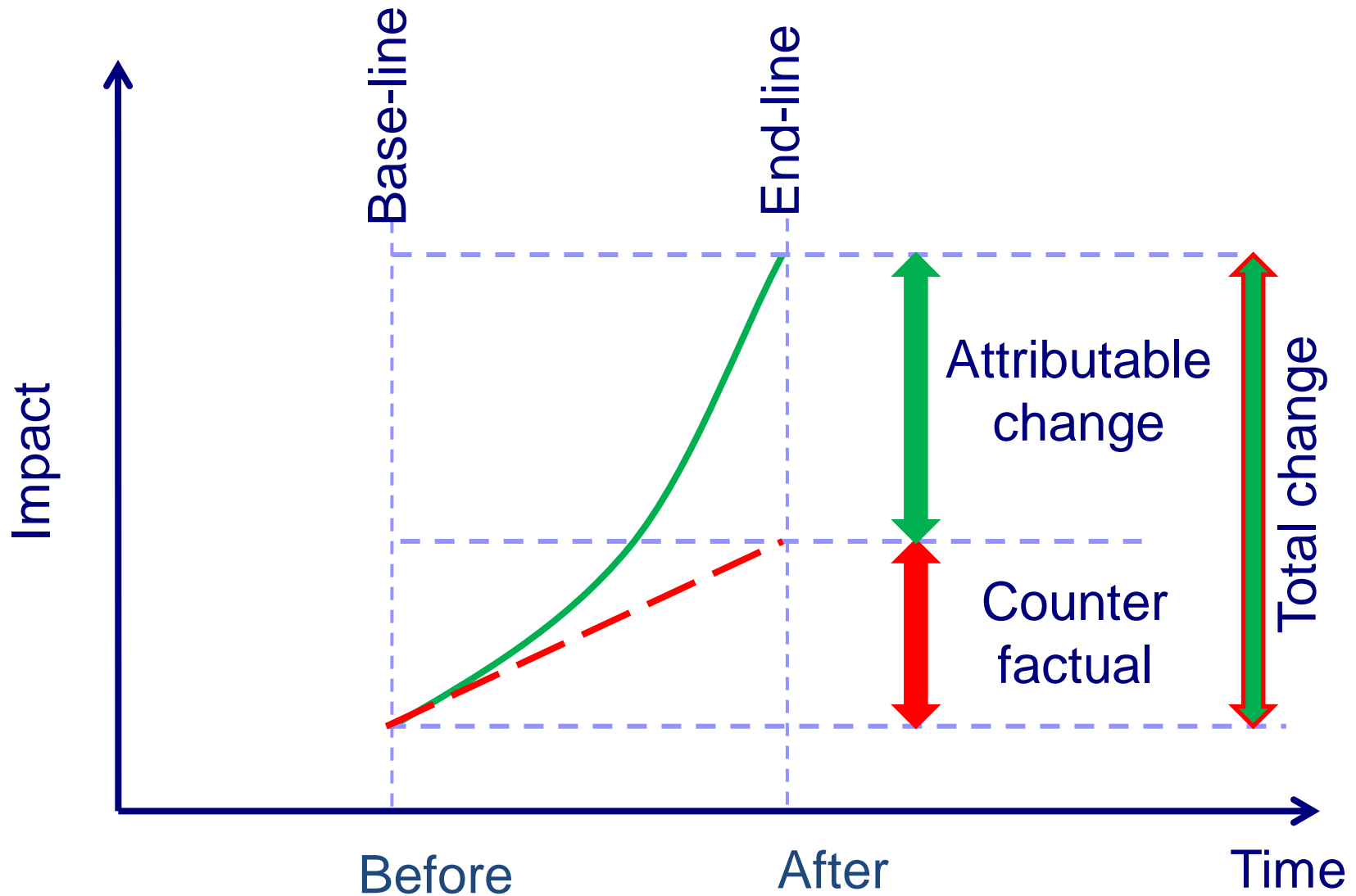# Before the intervention

After the intervention

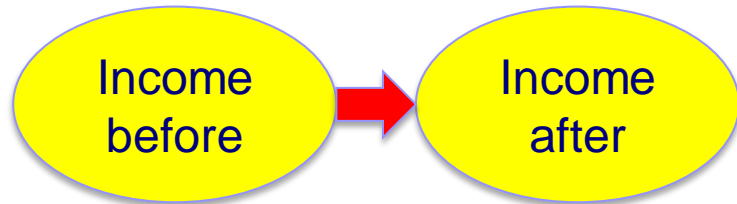

Is this the result of our intervention?

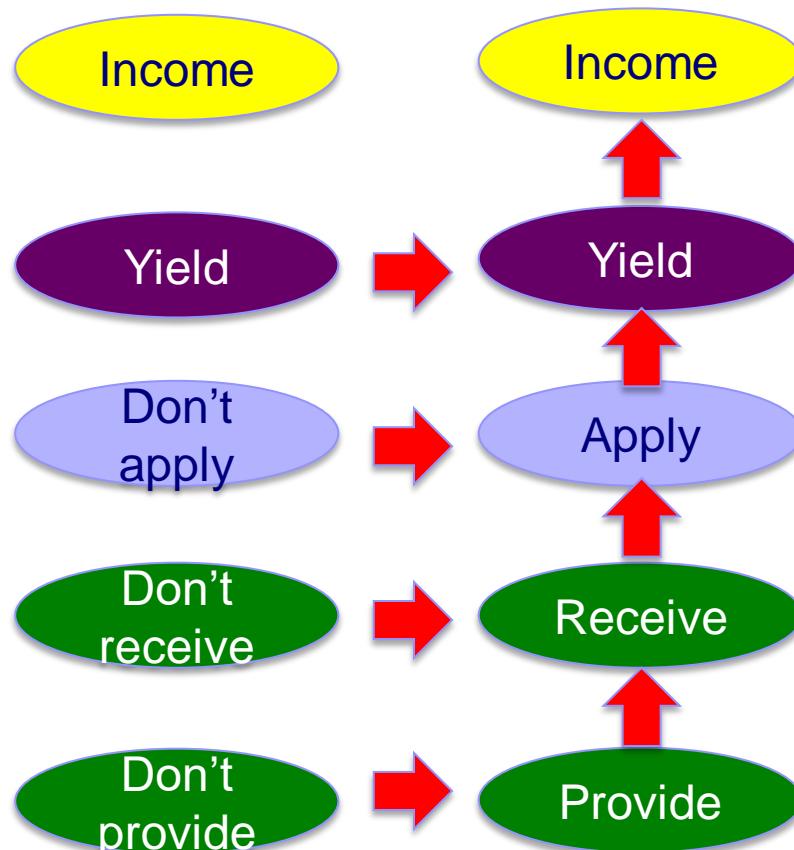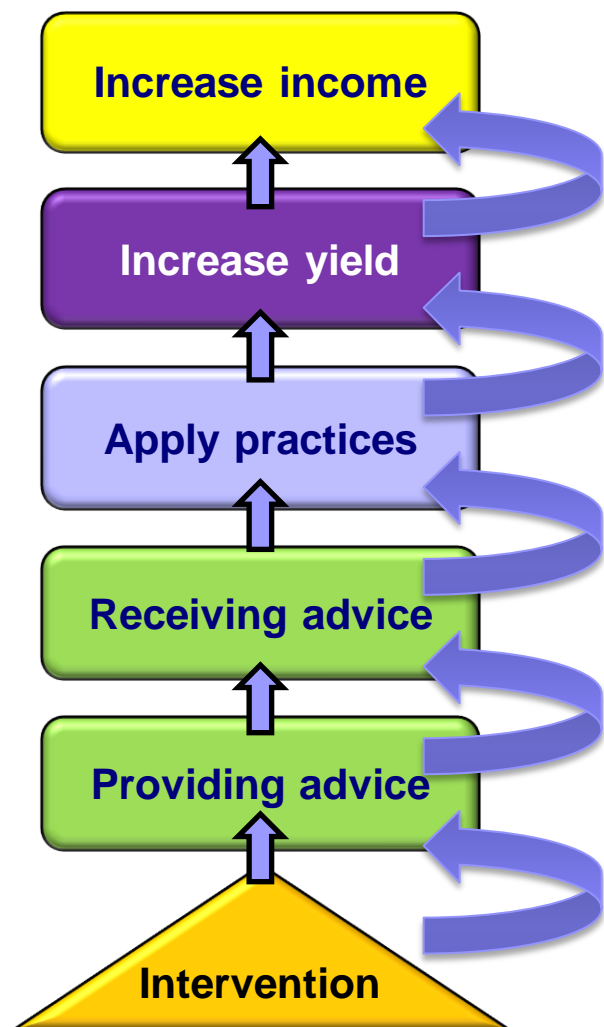# Why it's important

First Question: are changes due to the intervention logic?

Income before → Income after

Intervention

First Question: are changes due to the intervention logic?

Before the intervention

After the intervention

Second Question: external factors influencing changes?

Income

Yield

Don't apply

Don't receive

Don't provide

Weather, seeds, fertilizer, pesticides etc.

For different reasons, from other sources.

Income

Yield

Apply

Receive

Provide

Before the intervention

Factors that might influence

After the intervention
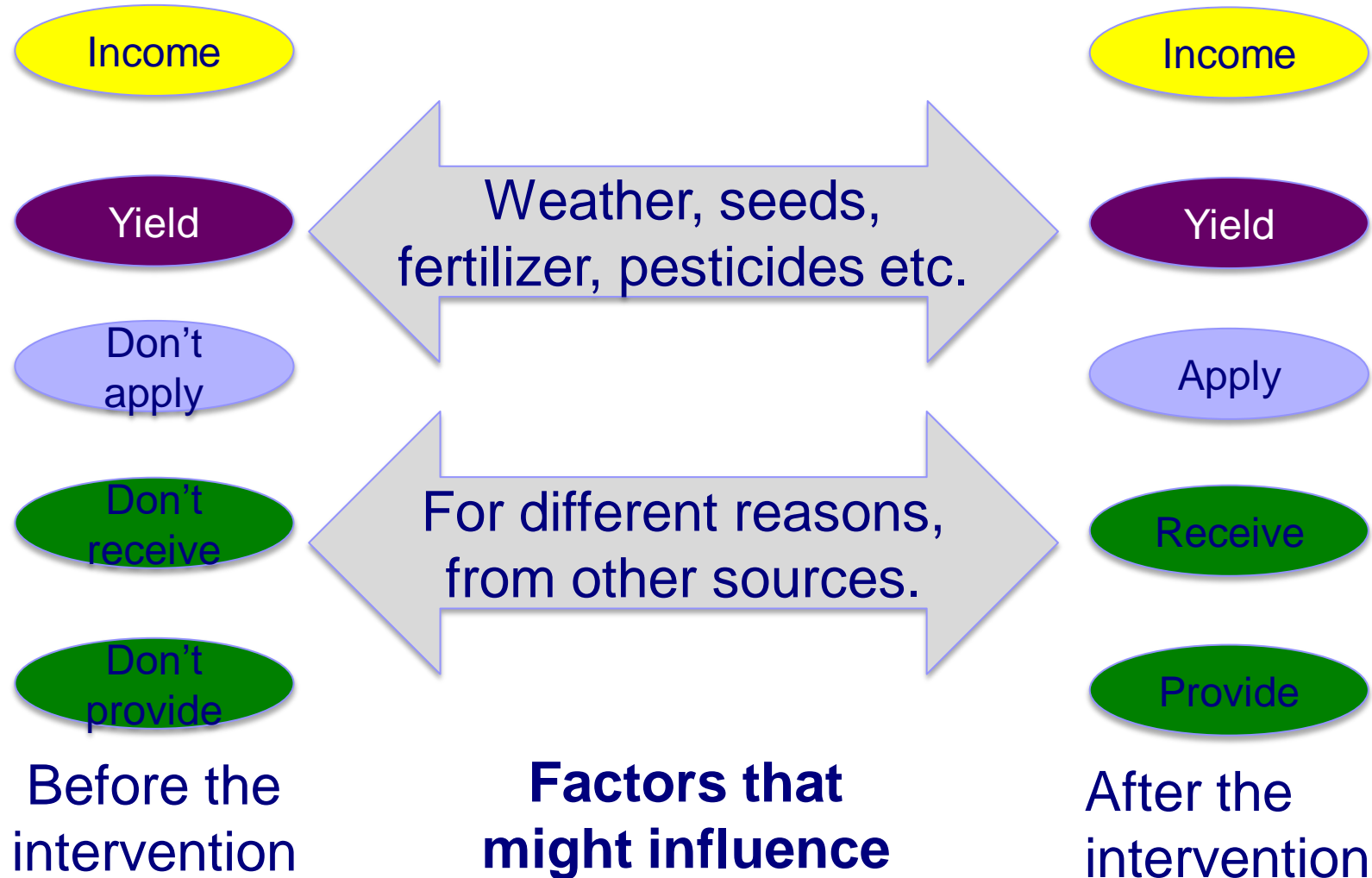
There is not one method to assess attribution; the most appropriate method depends on the intervention logic and program context.
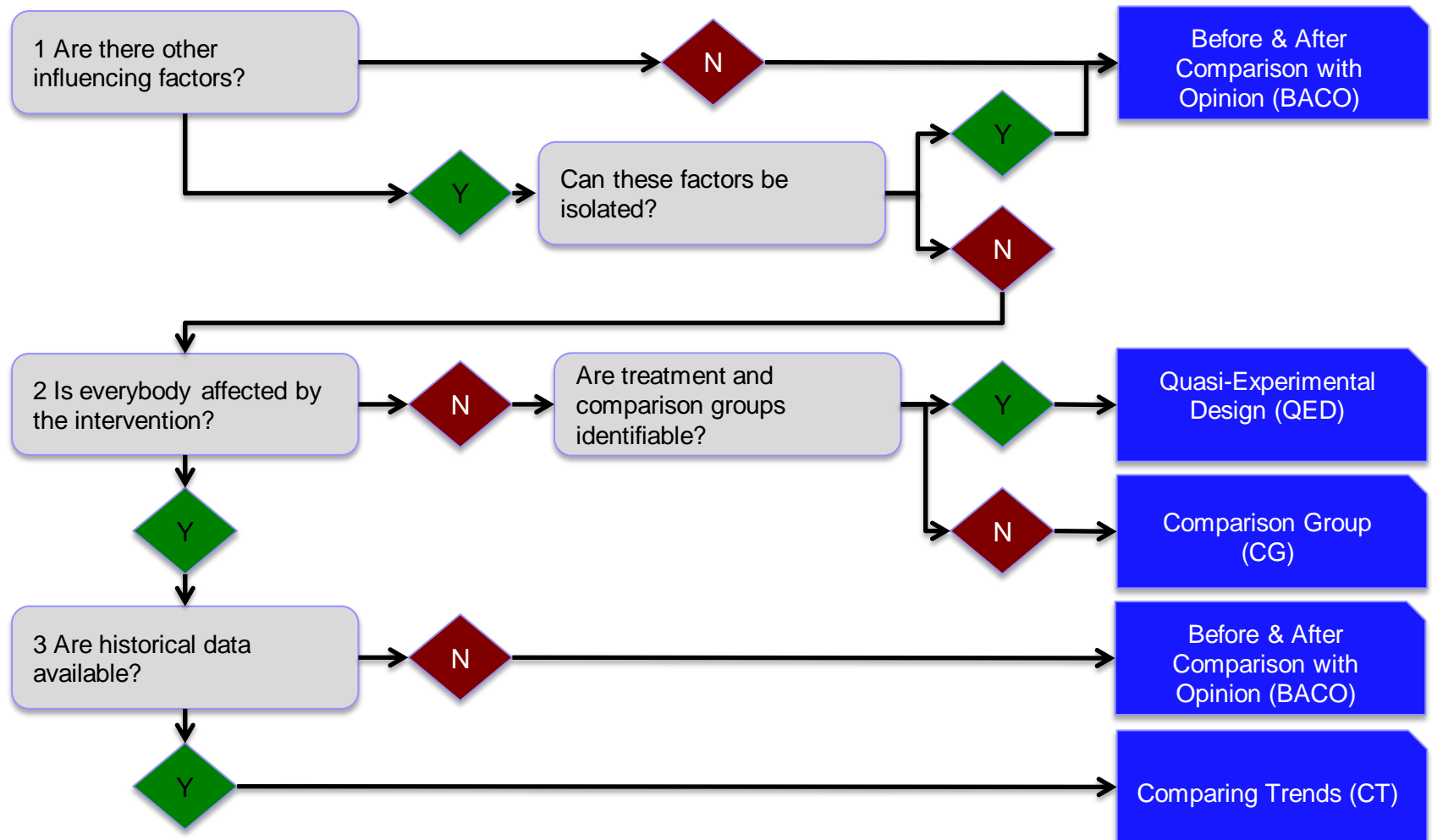
Today:
- To select an appropriate method
- Common methods only
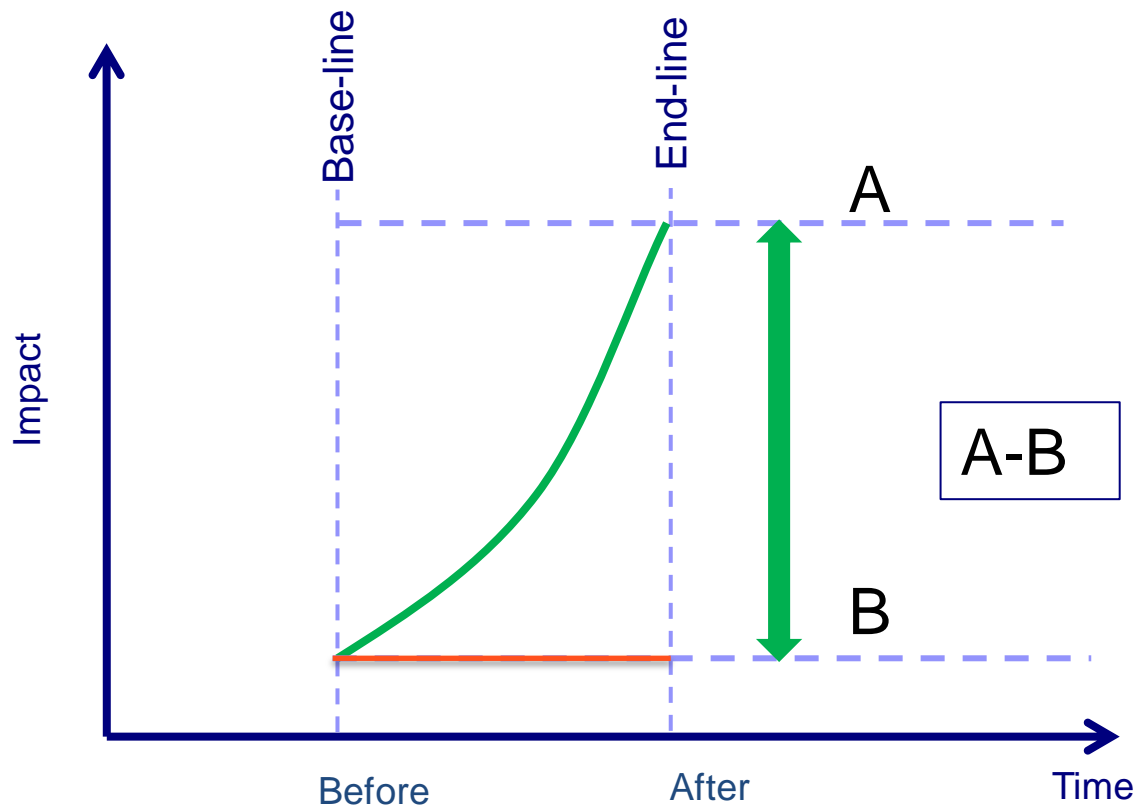- Not on research methodology

Questions → Attribution method

1 Are there other influencing factors?
- **N** → Before & After Comparison with Opinion (BACO)
- **Y** → Can these factors be isolated?
  - **Y** → Before & After Comparison with Opinion (BACO)
  - **N** → (continues to question 2)

2 Is everybody affected by the intervention?
- **N** → Are treatment and comparison groups identifiable?
  - **Y** → Quasi-Experimental Design (QED)
  - **N** → Comparison Group (CG)
- **Y** → (continues to question 3)

3 Are historical data available?
- **N** → Before & After Comparison with Opinion (BACO)
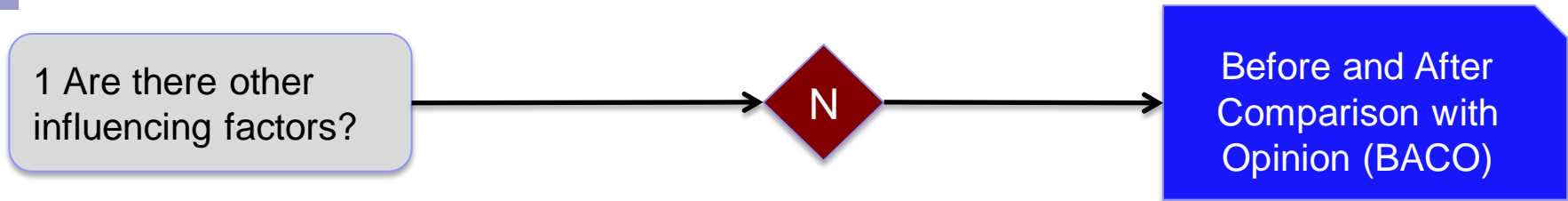- **Y** → Comparing Trends (CT)

| 1 Are there other influencing factors? | → | N | → | Before and After Comparison with Opinion (BACO) |

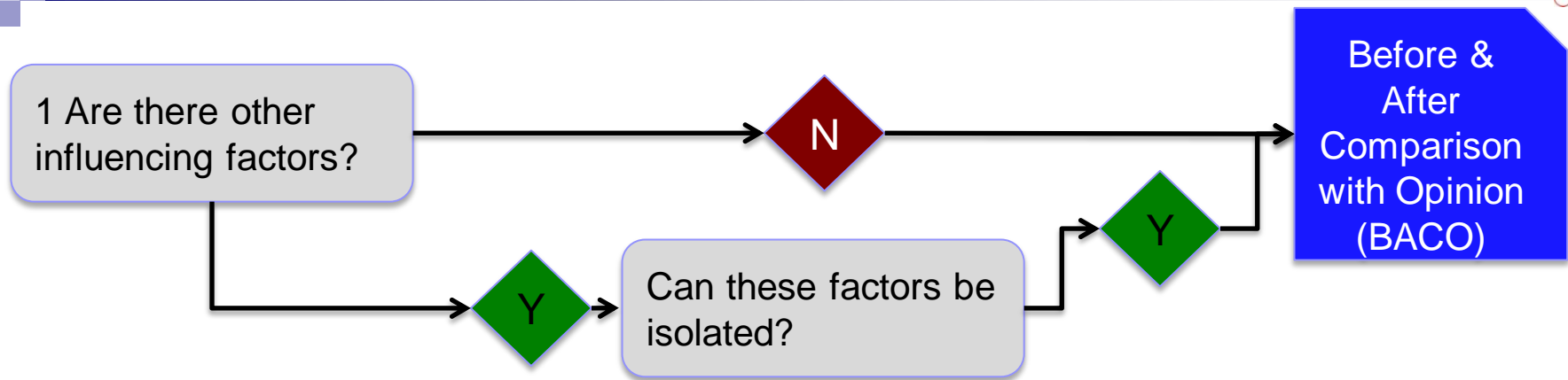**Be realistic when deciding if there are no other influencing factors:**

- forgetting other factors

- Estimating the significance of change

- assuming everything influences everything

- Has the counterfactual been constant over the past years?

- Can we ignore minor changes due to other factors given the significance of change due to our intervention?

1 Are there other influencing factors?

N

Can these factors be isolated?

Y

Y

Before & After Comparison with Opinion (BACO)

- Freeze factors that influence the change but are not related to your intervention.

- Remove respondents from your sample if only few of them were exposed to one or two external factors.
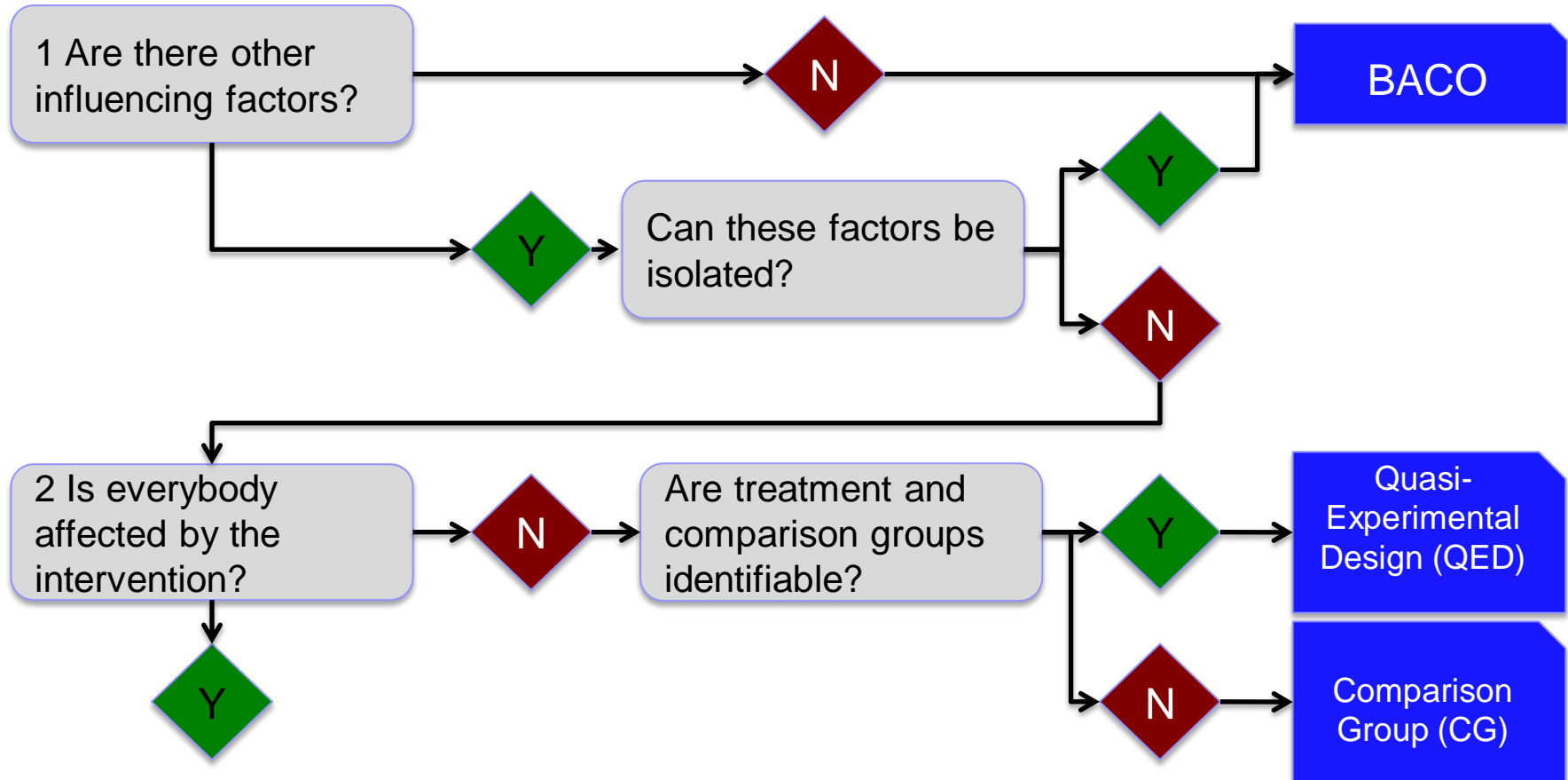
Both groups exposed to the same external factors
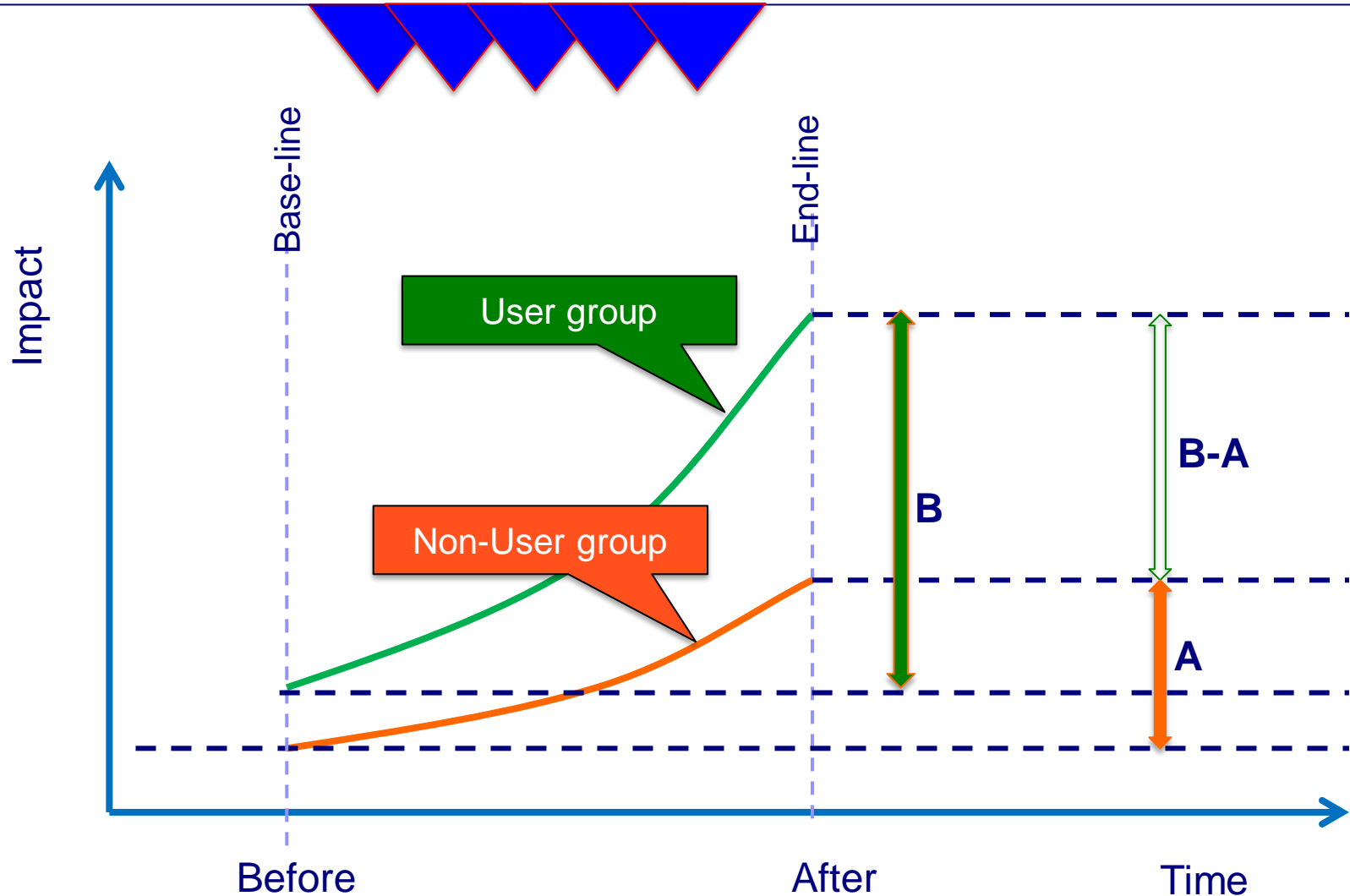
Quasi-Experimental Design (QED)

Comparison Group (CG)

QED column 1: Income ← Yield ← Apply ← Receive ← Provide (Treatment)

QED column 2: Income ← Yield ← Don't apply ← Don't receive ← Don't provide (Comparison)

Allocate beforehand

CG column 1: Income ← Yield ← Apply ← Receive ← Provide (Users)

CG column 2: Income ← Yield ← Don't apply ← Receive ← Provide (Non-users)

Allocate afterwards
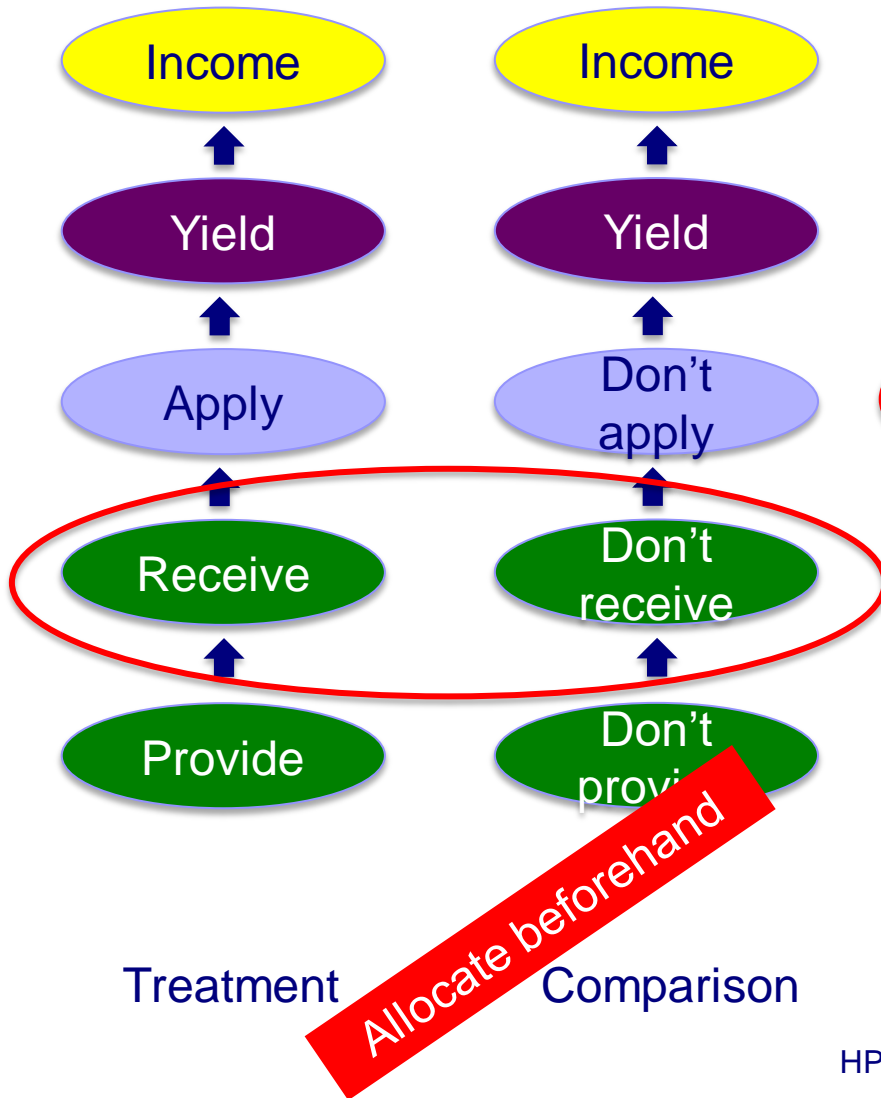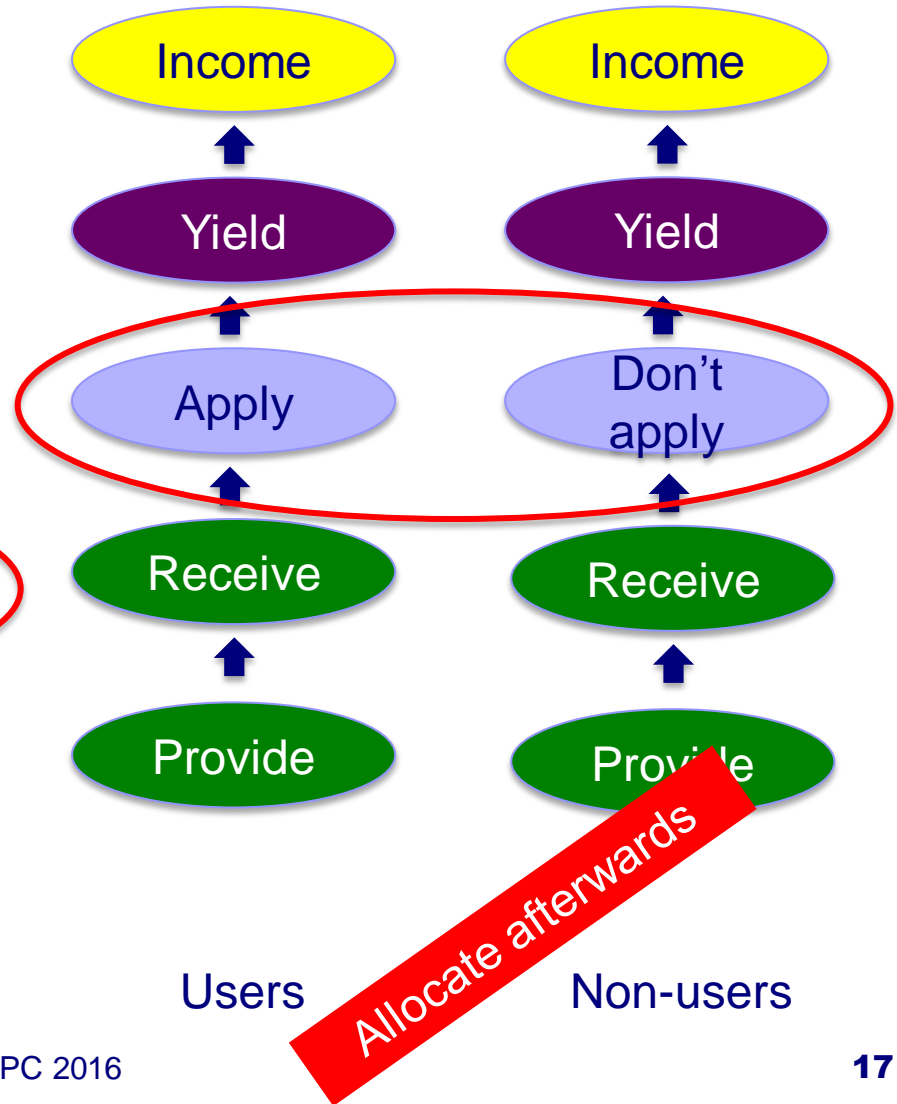
Quasi-Experimental Design (QED)	Comparison Group (CG)

- Certainty

- Exposure to same external factors feasible

- Self-selection is important

- Uncertainty

- Exposure to same external factors is crucial

- Self-selection is not important

You Are Here

Past   Present   Future

Treatment   Comparison   Users   Non-users
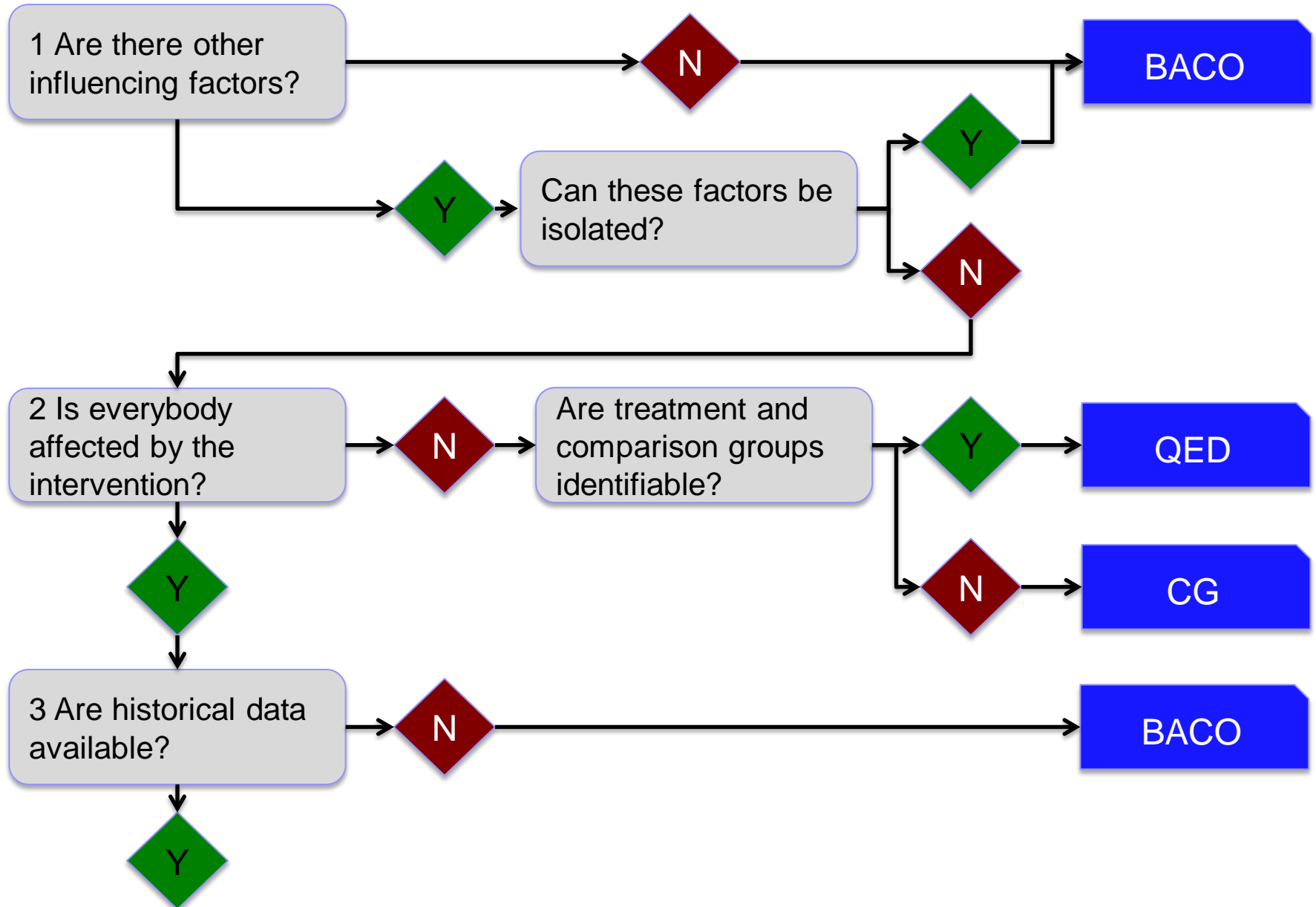
Impact

B-A

B

Beta

A

Alpha

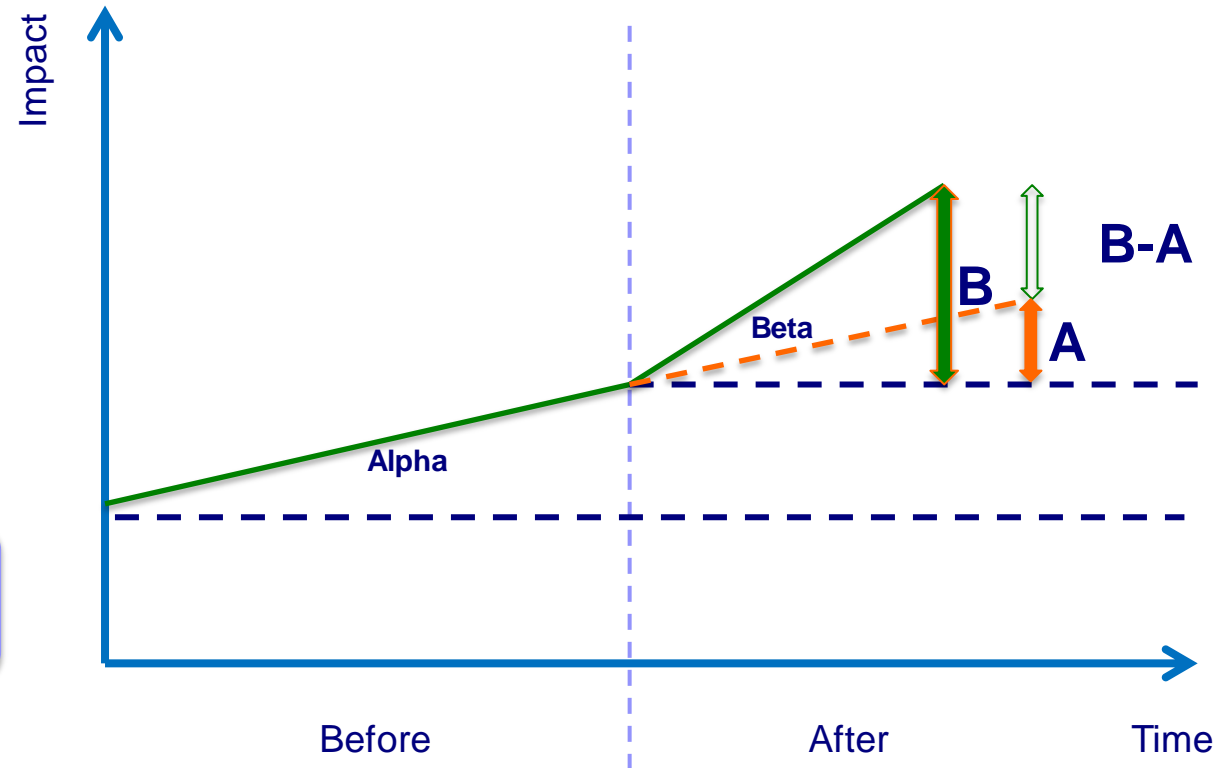Before   After   Time
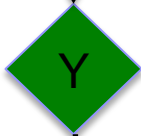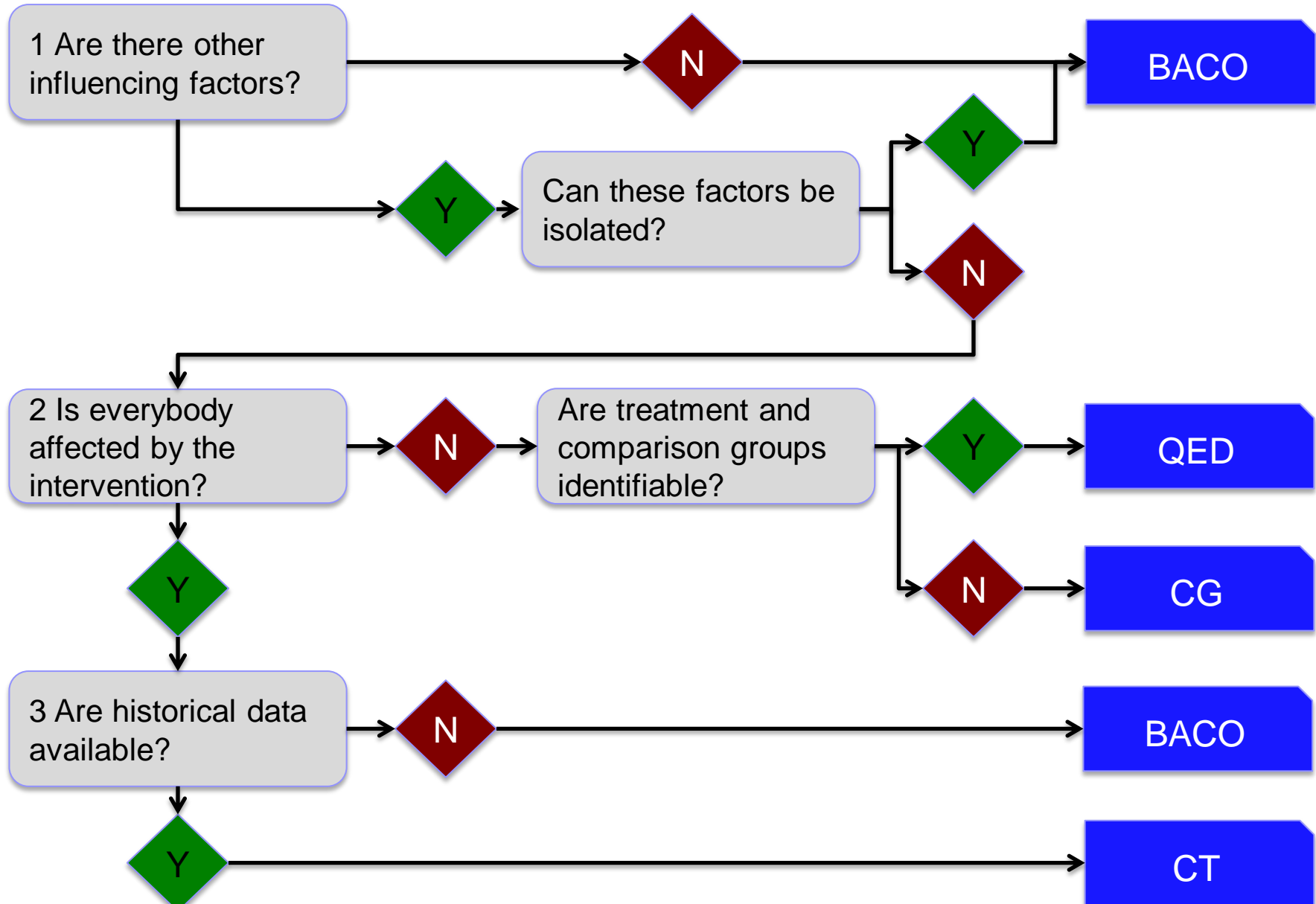
2 Is everybody affected by the intervention?

Y

3 Are historical data available?

Y

Comparing Trends (CT)

Before we go the four cases…
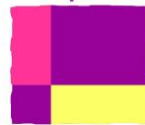
Timor-Leste   Nepal   Nigeria   Georgia

Syeda
Samira Saif

Sanju
Joshi

Belinda
Boateng

Zakaria
Tavberidze

Market Development Facility

- Stimulates business innovation, investment and regulatory reform with the aim to create **additional jobs and income** for poor women and men in rural and urban areas through **sustainable and broad-based pro-poor growth**

- Operates in Fiji, Timor-Leste, Pakistan, Sri Lanka and Papua New Guinea

- In **Timor-Leste** since 2012 with a budget of AUS$ 6.5 million over 5 years

- **Sectors**   Agribusiness, Processing & Rural Distribution

     Greenfield Industries (Manufacturing and Tourism)

- A team of 10 staffs supported by 1 MD Adviser and 1 MD & RM Adviser

- Some 2,947 men & women benefitted with a NAI of USD 344,935 (Dec 2015)

Samarth - Nepal Market Development Programme

- Focuses on improving the **incomes of the poor in rural markets**

- Implemented in more than **30 districts** (out of 75)

- **5 year programme** up to March 2017

- Budget of GBP 15 million

- **10 sectors comprising 3 portfolios**

  - Crops: Ginger, Vegetables, Mechanization, Crops Protection Inputs

  - Livestock: Dairy, Pigs, Fish, Livestock Feed

  - Tourism and Media

- 38 implementation staffs, 4 MRM staffs

- **Scale:** 77,100 outreach reported to date

Adam Smith International

THE SPRINGFIELD CENTRE
FOR BUSINESS IN DEVELOPMENT

swisscontact

UKaid
from the British people

Propcom Mai-karfi

- **Objective:** To raise the incomes of 250,000 women and 250,000 men in northern Nigeria by March 2018.

- **Country and geographical coverage:** 20 states in Northern Nigeria

- **Project period and budget :** 2012-2018, GBP 27M

- **Sectors:** Mechanization, Ag. Inputs, Storage and Livestock

- 26 Implementation staff and 7 MRM staff

- **Impact reported to date:** 350,649 (45,946 women), Dec 2015

Alliances Lesser Caucasus Programme

- **Project objectives**: Poverty alleviation and transition to durable market economy for the livestock sector
- **Georgia**: Kvemo Kartli, Ajara & Samtskhe-Javakheti
- March 2008 until March 2017; Total budget: 13 M CHF
- **Sectors**: Dairy, Meat, Sheep and Honey
- 38 Implementation staff and 4 MRM staff
- **Scale**: 431,691 HHs; NAIC:18.5 M USD; Jobs: 442

MDF Market Development Facility

Poverty Level

Farmers earn net additional income

New jobs created

Sector Level

Farmers increase rice cultivation to sell to Acelda on a commercial basis

Acelda sells processed rice to domestic market

Farmers sell paddy to Acelda for local processing

Acelda processes paddy into high quality milled rice and packages for domestic market

Outcome Level

Acelda communicates to farmers that it will buy local paddy from farmers regularly to supply to rising domestic market for processed rice

Output Level

Acelda is well equipped and able to manage procurement of paddy from local farmers

- Connectivity between producers and market

- Partner- Acelda Unipessoal Lda

- Target beneficiaries - Farmers selling paddy to Acelda

F — Rice → P
P — $ → F
P — Certainty → F
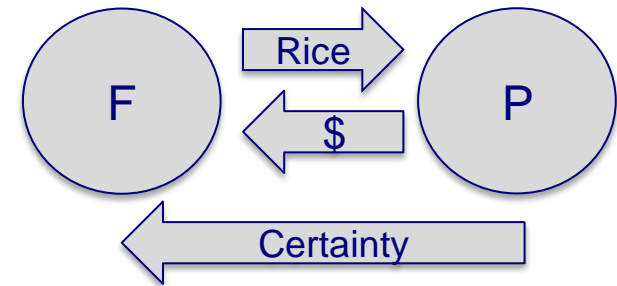
- Counterfactual- *'What would the farmers have done with the rice production had Acelda not bought it?'*

SAMARTH
Nepal Market Development Programme

MERCY CORPS

Farmers' income from ginger increases
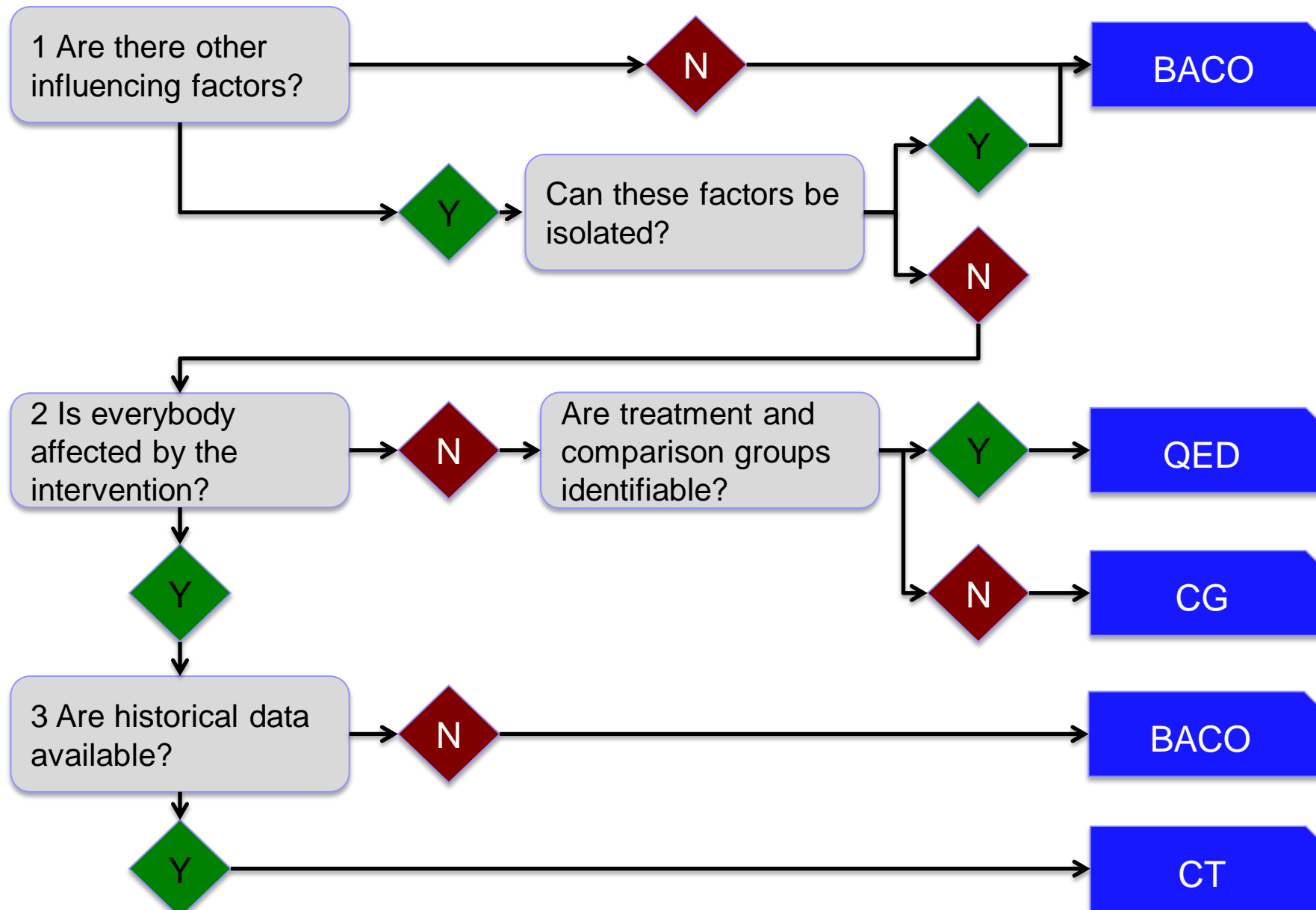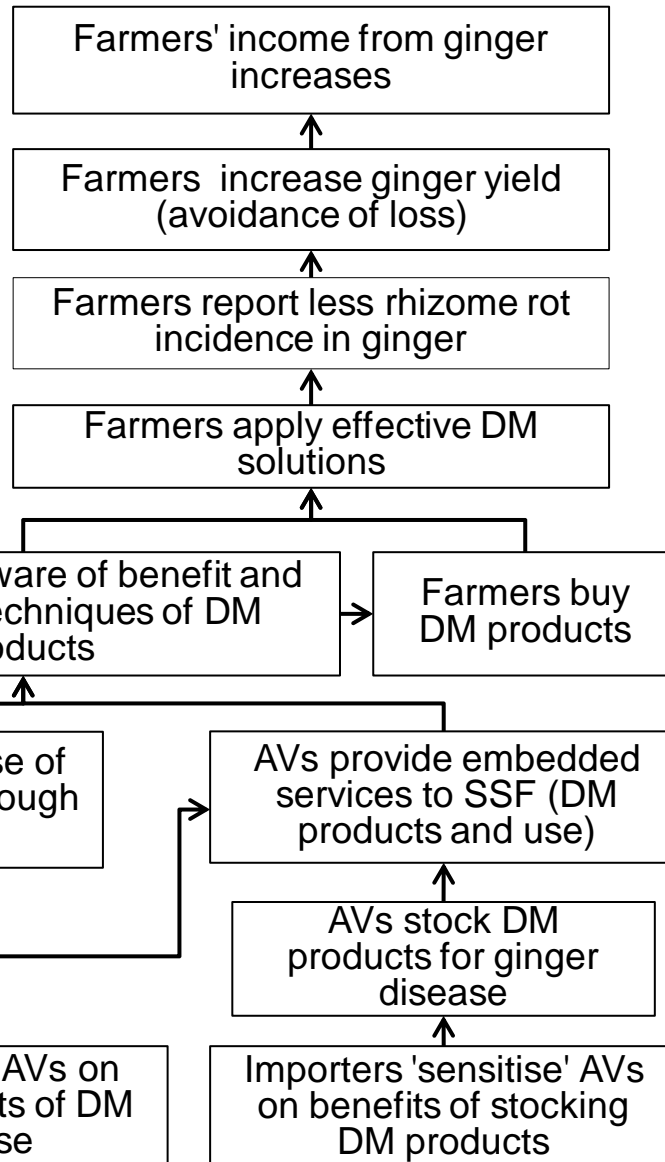
↑

Farmers increase ginger yield (avoidance of loss)

↑

Farmers report less rhizome rot incidence in ginger

↑

Farmers apply effective DM solutions

↑

Farmers are aware of benefit and application techniques of DM products → Farmers buy DM products

↑

AVs promote use of DM products through demo

AVs provide embedded services to SSF (DM products and use)

↑

AVs stock DM products for ginger disease

↑

Importers train AVs on technical aspects of DM product use

Importers 'sensitise' AVs on benefits of stocking DM products

- Reducing incidence of rhizome rot by using bio-fungicide

Training, Products   Information, Products

Importer   AgroVet   Farmer

Money   Money
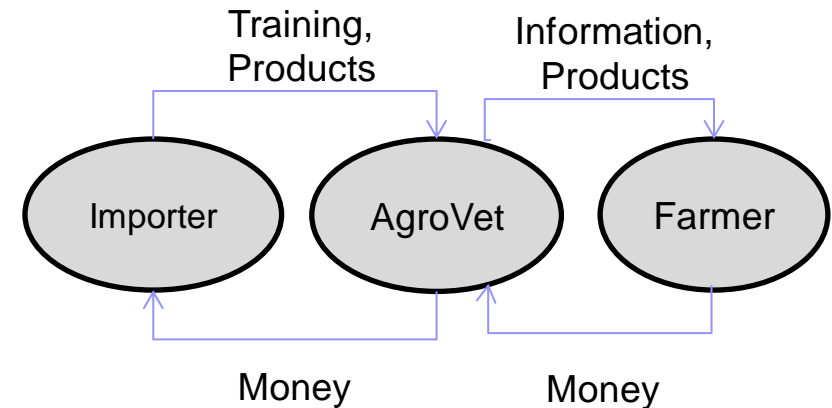
- PPI $2.50/day, Proxy- Farmers owning/renting 0.5 ha of land or less, of which up to 0.15ha is used for ginger

  - Counterfactual- *'What would the yields have been had the farmers not used and applied the BM?'*

1 Are there other influencing factors? → N

1 Are there other influencing factors? → Y → Can these factors be isolated? → Y

Can these factors be isolated? → N

2 Is everybody affected by the intervention? → N → Are treatment and comparison groups identifiable? → Y → QED

2 Is everybody affected by the intervention? → Y

Are treatment and comparison groups identifiable? → N

Propcom
Mai-karfi
Making rural markets work for the poor

Farmers earn additional income

Farmers save costs by using tractor services

Farmers have increased yields and sell more

Operators provide mechanization services to farmers at a fee

Owners receive tractors and employ operators

Banks along with Government Credit risk Guarantors finance tractors for tractor owners

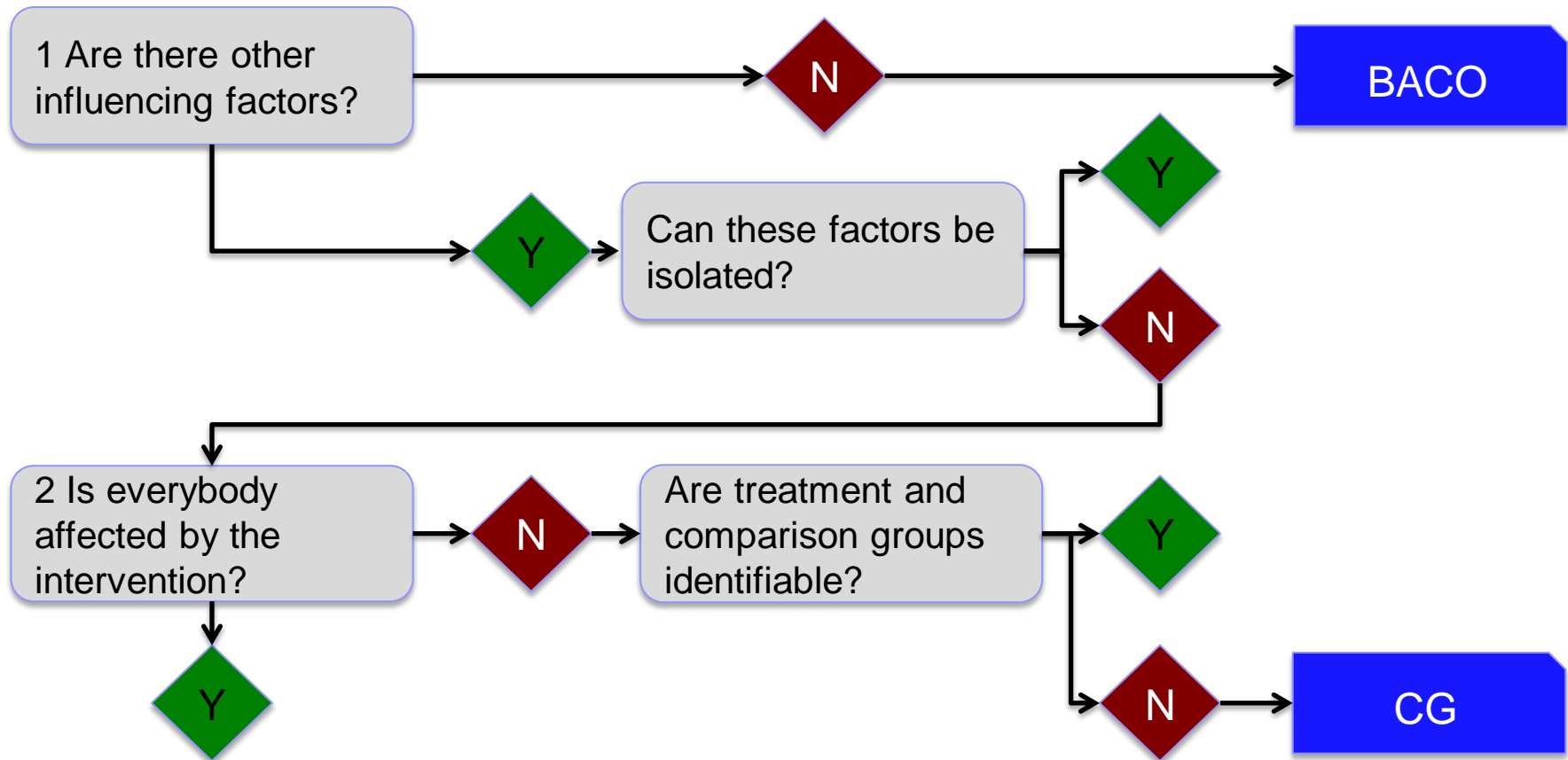PM develops financing model for Ag. Mech. Market with banks, tractor owners and vendors

Increase the supply and use of commercial tractor services for farmers in Northern Nigeria.
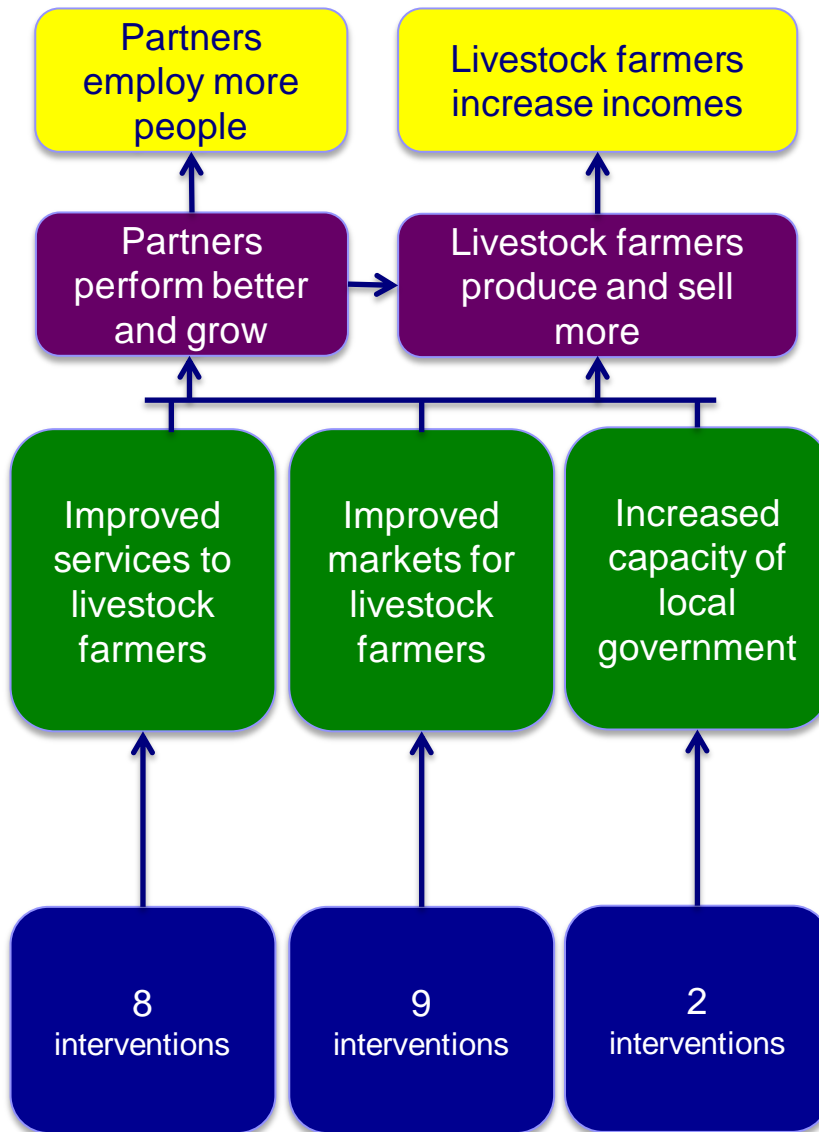
Partners:
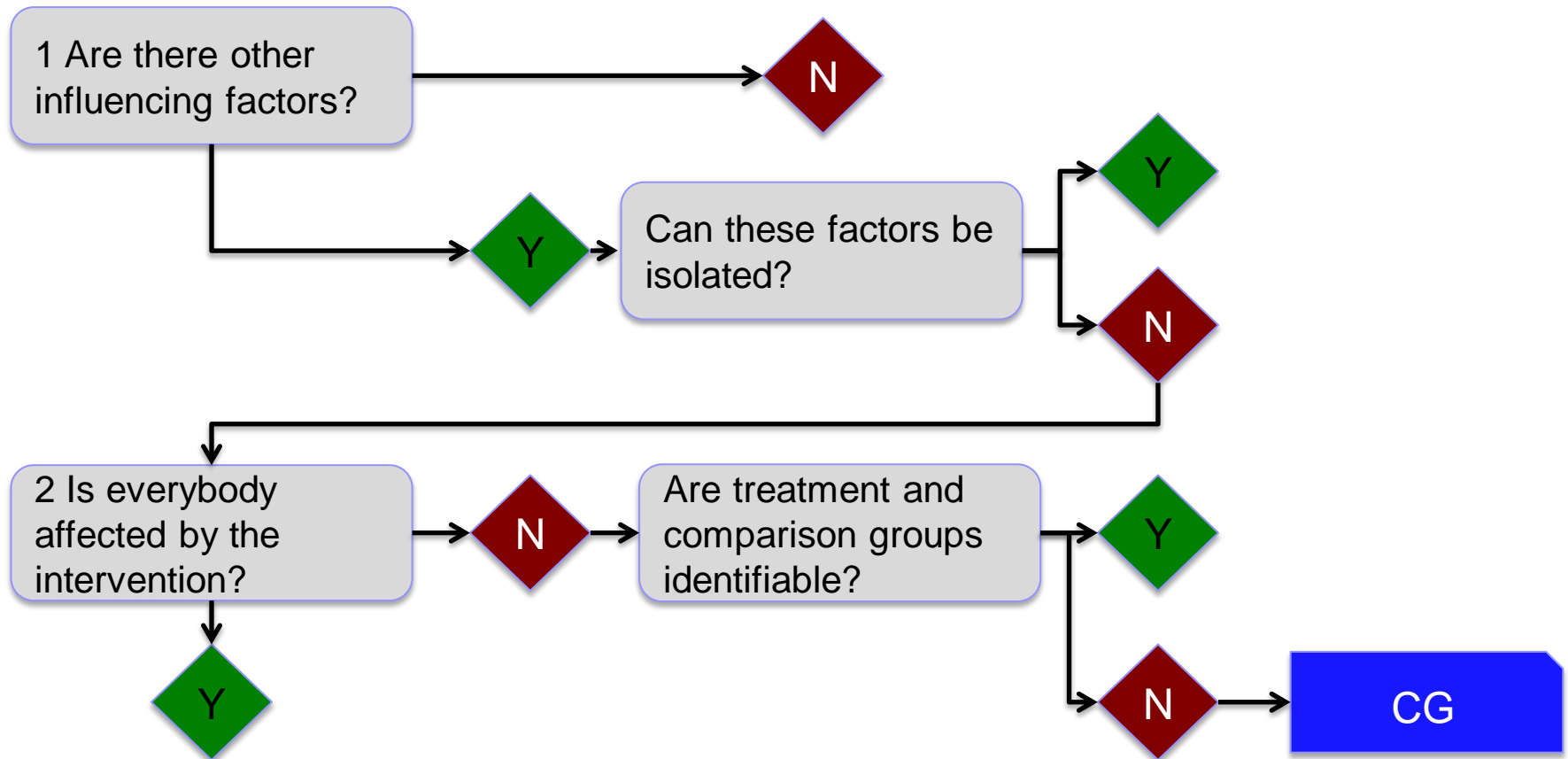TOHFAN, Agro Pro, ACT-AFINA, FCMB, NIRSAL, Co-tek, etc.

Counterfactual:
1. The cost of land preparation when not using tractor services
2. The yield when not using tractor services

ALCP Alliances Lesser Caucasus Programme

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┌─────────────────────┐   ┌─────────────────────┐
│ Partners employ     │   │ Livestock farmers   │
│ more people         │   │ increase incomes    │
└─────────────────────┘   └─────────────────────┘
          ▲                          ▲
┌─────────────────────┐   ┌─────────────────────┐
│ Partners perform    │──▶│ Livestock farmers   │
│ better and grow     │   │ produce and sell    │
│                     │   │ more                │
└─────────────────────┘   └─────────────────────┘
```

Improved services to livestock farmers — **Improved markets for livestock farmers** — **Increased capacity of local government**

8 interventions — **9 interventions** — **2 interventions**

- **Goal**: Poverty alleviation and transition to durable market economy for livestock sector
- **Partners**: Private sector enterprises (processors, vets, others) and Government agencies
- **Beneficiaries**: livestock farmers
- **Business models**: 19 business models with different partners

- **The counterfactual**: livestock farmers producing and selling products not using any of these services and products

Before we go for coffee…