Working 9 to 5 on climate change

World Resources Institute

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Introduction:

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- John Watson

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About the World Resources Institute

WRI is an environmental think tank that transforms ideas into action to protect the planet and improve people's lives.

Introduction

- WRI's carbon dioxide (CO_2) commitment:

Reduce CO_2 emissions to net zero by 2005 and publicly report progress and lessons learned

- ✓ Minimize our impact on climate change
- ✓ Walk the talk
- ✓ Hold ourselves to the same standard
- ✓ Gain direct practical experience

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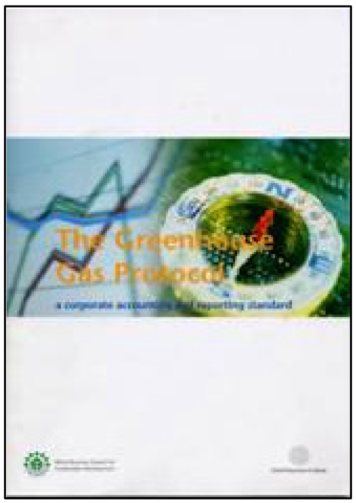
Introduction:

- Greenhouse Gas Protocol (GHG Protocol)



- ✓ A common standard for GHG accounting
- ✓ Multi-stakeholder collaboration
- ✓ Standards and calculation tools
- ✓ In use by companies and climate initiatives worldwide

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Today's workshop

Plan Your Inventory

Part I:
- **GHG inventories**
- **Organizational boundaries**

Part II:
- Operational boundaries

Collect Data

- The data you need
- Where to find it

Calculate Emissions

- Emissions factors
- Where to find them
- Pitfalls to avoid

Making it happen

- Setting a target
- Reducing emissions
- Reporting your results
- Gaining organizational support
- Next steps

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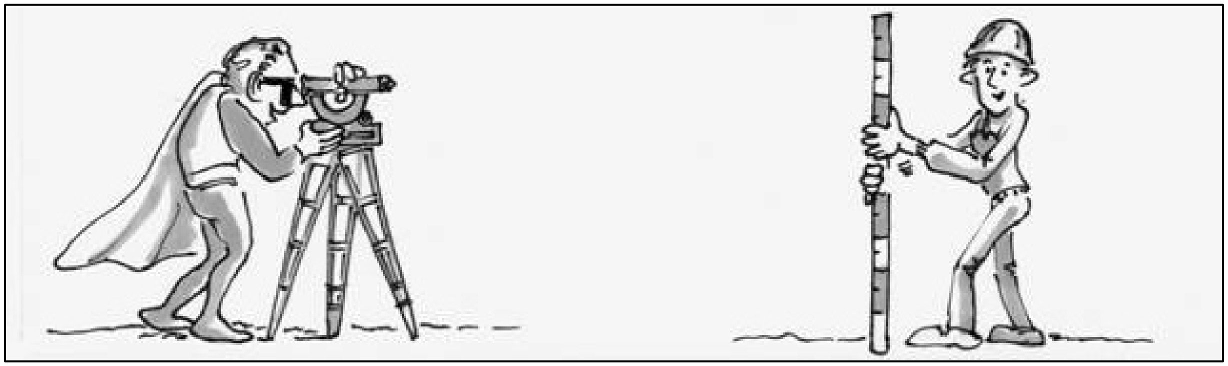
Plan your inventory: Part I



- A GHG inventory is a list of your organization's emissions and sources.

Plan your inventory: Part I

GHG Accounting and Reporting Principles:

- Relevance
- Completeness
- Consistency
- Transparency
- Accuracy

Plan your inventory: Part I

- Define your boundaries
  - Organizational
  - Operational

Organizational boundary

↓

Company/organizational structure

Operational boundary

↓

Emissions sources

Plan your inventory: Part I

Organizational boundary *= businesses and operations that make up your organization.*

- Equity share
- Control

Plan your inventory: Part I

Equity Share: Account for emissions from operations according to equity share in the operation.

Example: Companies **A** and **B** are wholly owned but ***Company C*** *is a joint venture between the two.* ***Company A*** *has a 40% equity share and* ***Company B*** *has a 60% equity share.*

Company A → 100% of emissions from Company A + 40% of the emissions from Company C

Company B → 100% of emissions from Company B + 60% of the emissions from Company C

Plan your inventory: Part I

Control: Account for 100% of emissions from operations it controls but 0% from operations it owns an interest in but does not control.

- **Financial control:** Ability to direct the financial and operating policies of the company.

- **Operational control:** Full authority to introduce and implement operating policies of the company.

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Plan your inventory: Part I

Control: Account for 100% of emissions from operations it controls but 0% from operations it owns an interest in but does not control.

Example: *Companies **A** and **B** both control their own operations. **Company A** has an interest in **Company C** but no control. **Company B** has financial control of **Company C**.*

Company A → 100% of emissions from Company A + 0% of the emissions from Company C

Company B → 100% of its emissions + 100% of the emissions from Company C

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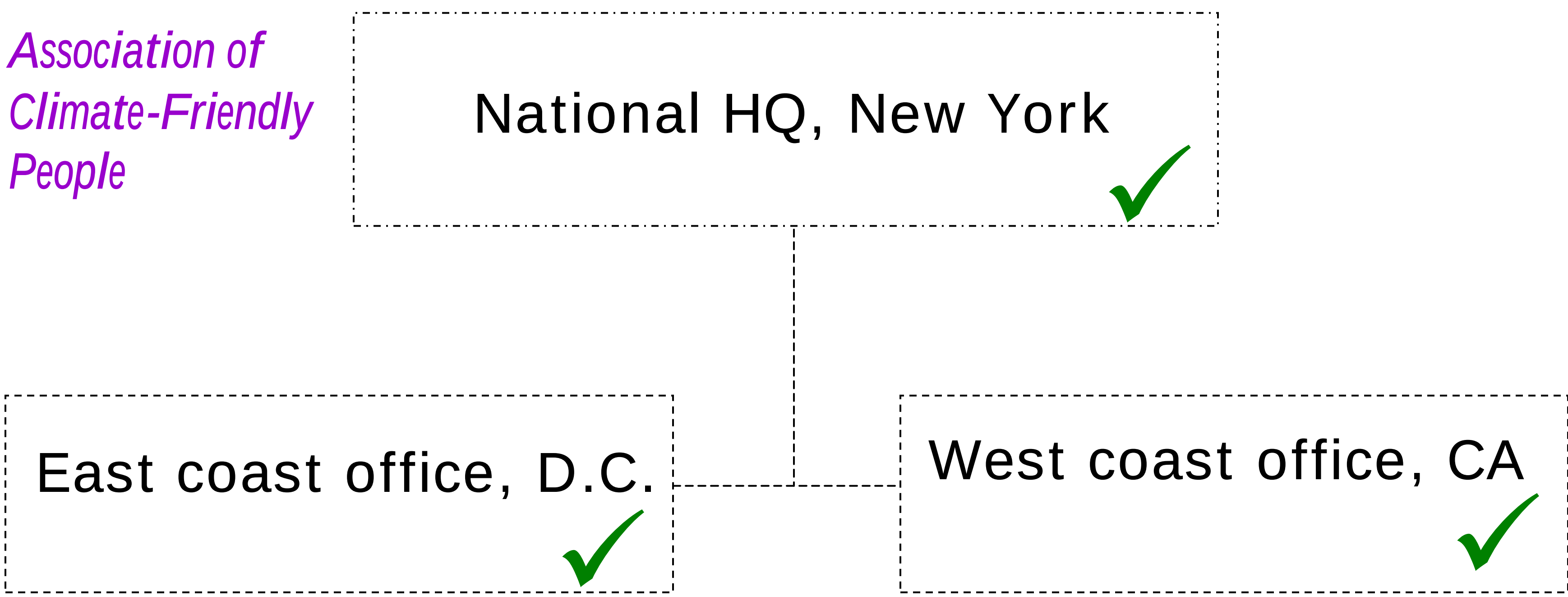
Plan your inventory: Part I

- Activity: Draw or describe your organizational boundaries

Example: *Equity share or control?*



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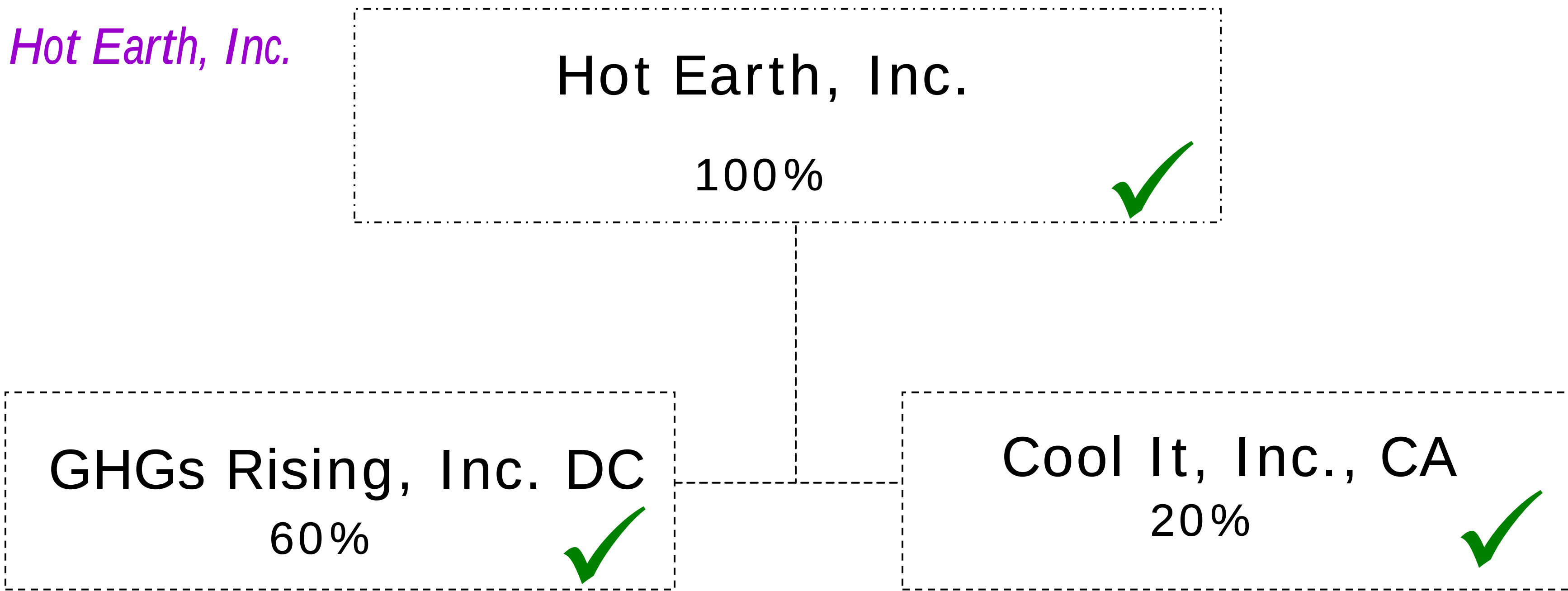
Plan your inventory: Part I

- Activity: Draw or describe your organizational boundaries

Example: ***Equity share*** *or control?*

Hot Earth, Inc.



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Plan your inventory: Part I

- Activity: Draw or describe your organizational boundaries

Example: *Equity share or* ***control****?*

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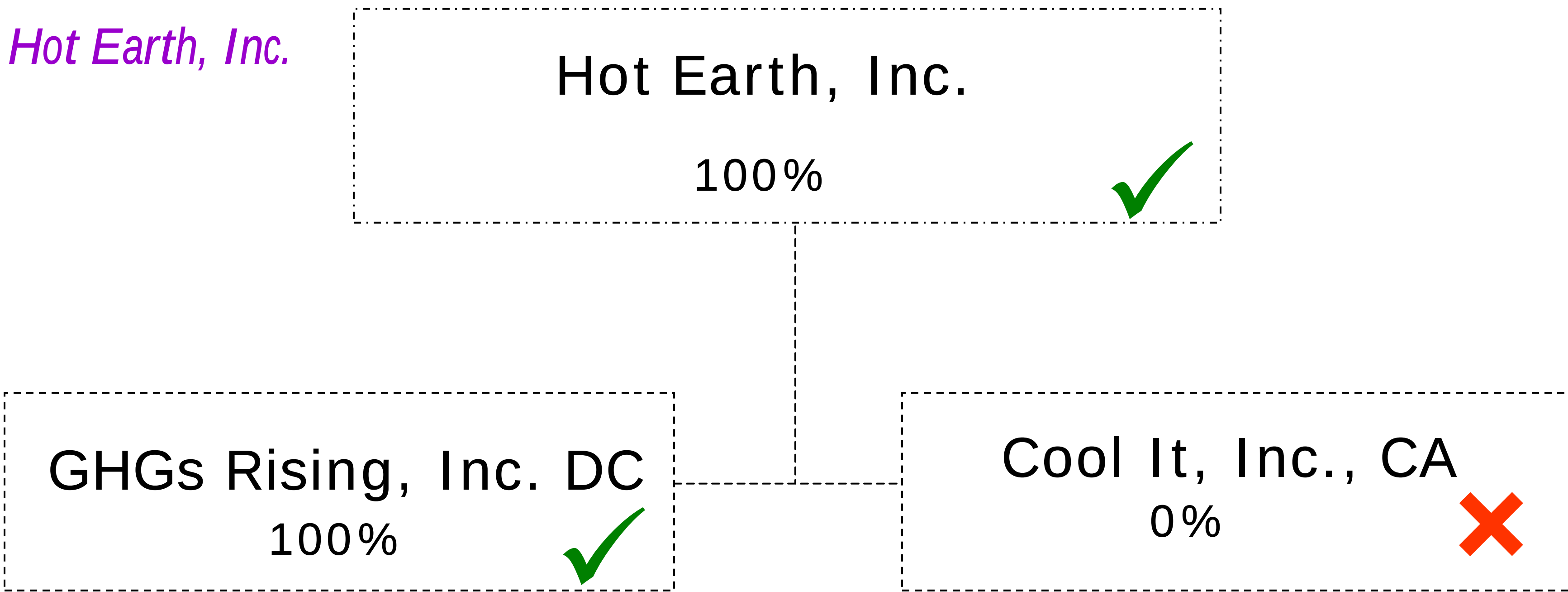

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Plan your inventory: Part II

- Define your boundaries
  - Operational

Operational boundary *= activities that result in emissions*

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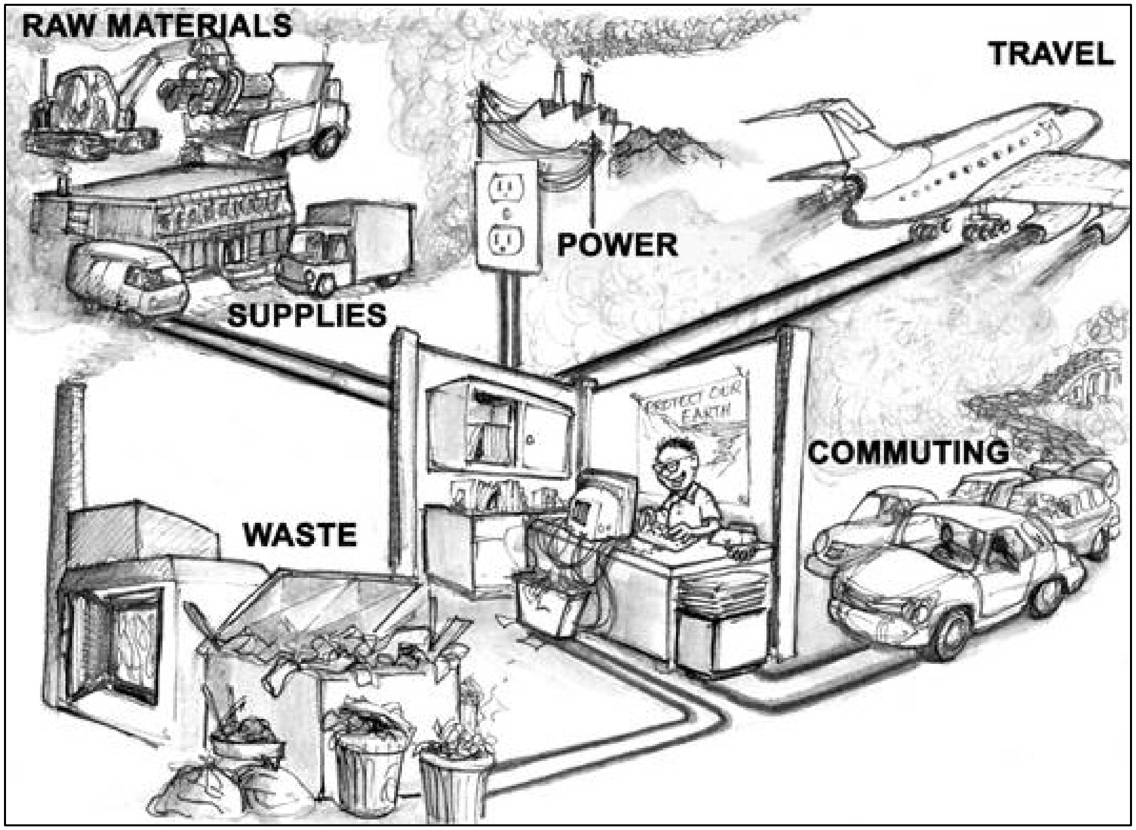
Plan your inventory: Part II



- ✓ Direct emissions
- ✓ Indirect emissions

Plan your inventory: Part II

***Direct emissions** = emissions from sources owned or controlled by your organization*

- Examples of **direct** emissions:
  - ✓ Fuel burned in the company-owned boiler
  - ✓ Business travel in a company-owned car

Plan your inventory: Part II

Indirect emissions *= emissions that are a consequence of your activities but are owned or controlled by another organization*

- Examples of **indirect** emissions:
  - ✓ Use of purchased electricity
  - ✓ Travel by commercial plane, train, automobile

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Plan your inventory: Part II

1 • **Scope 1** = direct emissions

2 • **Scope 2** = indirect emissions from consumption of purchased electricity

3 • **Scope 3** = all other indirect emissions

Plan your inventory: Part II

- Activity: Define your operational boundary, listing your organization's direct and indirect emissions sources.

direct emissions sources

indirect emissions sources

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Collect data

activity data × emissions factor = CO_2 emissions

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Collect data

Activity data. *Quantifies activities in units specific to that activity.*

Examples of activity data:

✓ Kilowatt hours (kWh) of electricity

✓ Therms or cubic meters of natural gas

✓ Gallons or liters of heating oil

✓ Miles or kilometers traveled by plane, train or car

activity data *× emissions factor = CO_2 emissions*

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Collect data

- Estimating electricity usage when space is not separately metered:

$$\left(\frac{\textit{area of org's space}}{\textit{total building area}}\right) \times \textit{total building use of electricity} = \textit{approx. kWh used by your organization}$$

activity data *× emissions factor = CO_2 emissions*

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Collect data

- Estimating fuel use data based on distance traveled and fuel efficiency:

$$\frac{\textit{distance traveled}}{\textit{fuel efficiency}} = \textit{approximate fuel use}$$

activity data *× emissions factor =* CO_2 *emissions*

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Calculate emissions

Emissions factors. *Factor that converts activity data to emissions values.*

Examples of emissions factors:

- ✓ *X* pounds of CO_2 per kWh
- ✓ *X* kg of CO_2 per mile
- ✓ *X* tons of CO_2 per gallon

*activity data × **emissions factor** = CO_2 emissions*

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Calculate emissions

- Units, units, units!
  - ✓ Vehicle miles versus passenger miles
  - ✓ Short tons, long tons, metric tons
  - ✓ Consistent units!

activity data × emissions factor = CO_2 emissions

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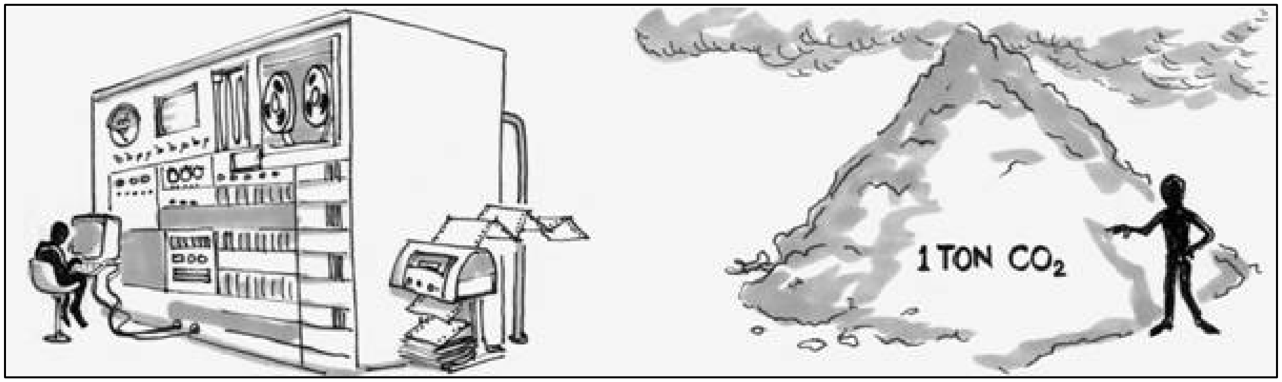
Calculate emissions



- Activity: Calculate emissions

activity data × emissions factor = CO_2 emissions

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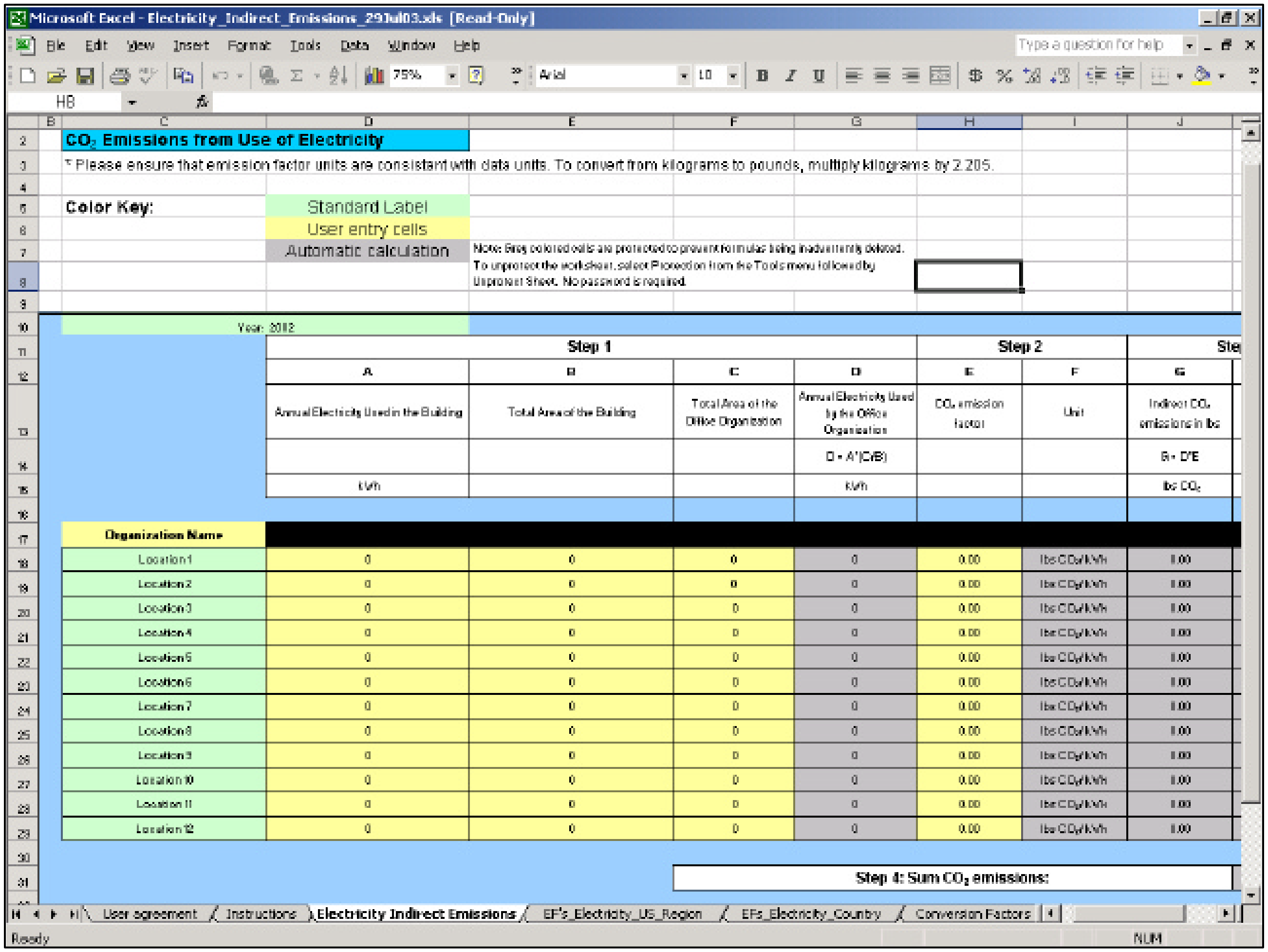
Calculate emissions



- ✓ Direct emissions
- ✓ Electricity
- ✓ Business travel
- ✓ Commuting

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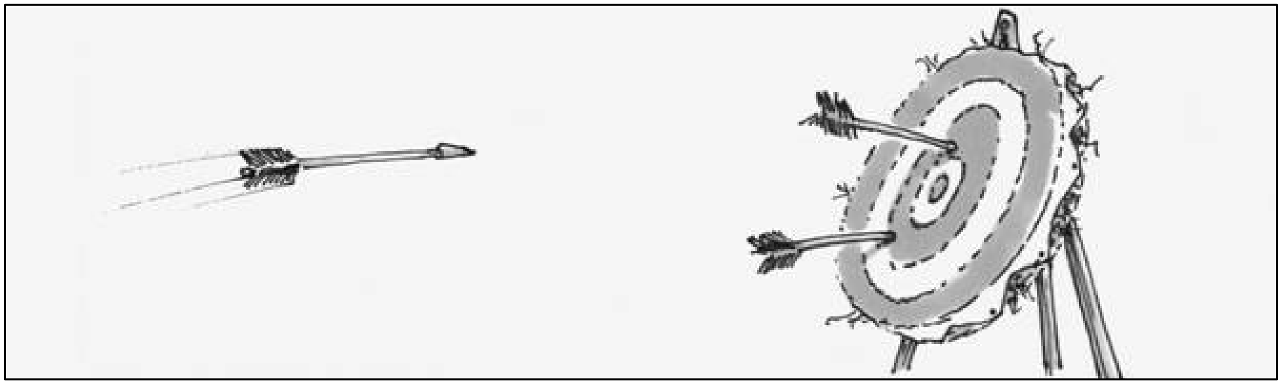
Making it happen: Set a target



- Choose a base year
- Select interim and long-term targets
  - Absolute
  - Rate-based

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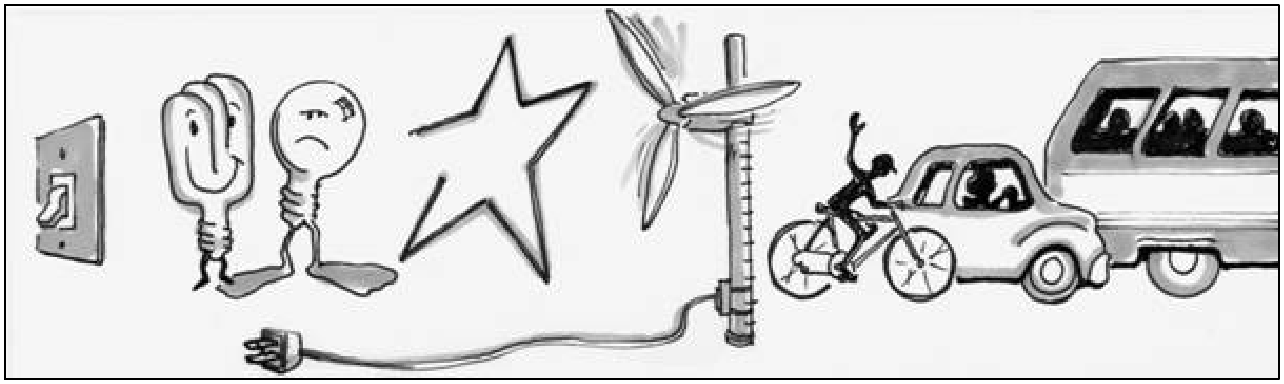
Making it happen: Reduce emissions



- Emissions reduction activities

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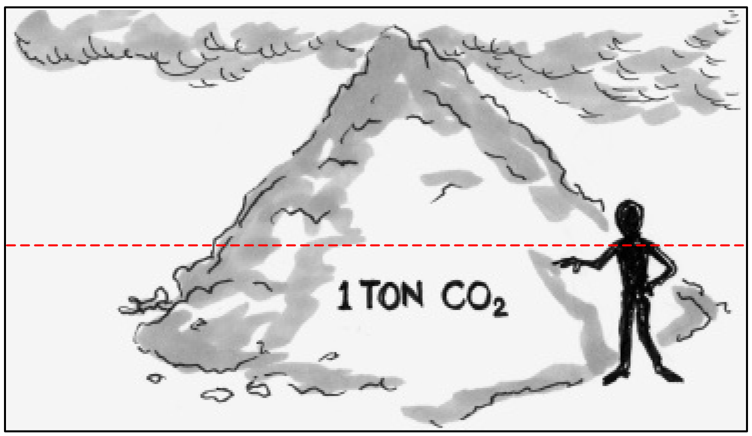
Making it happen: Reduce emissions

- 2 computers

✓**$60 a year savings**

✓**800 lbs of CO_2 (0.4 tons)**



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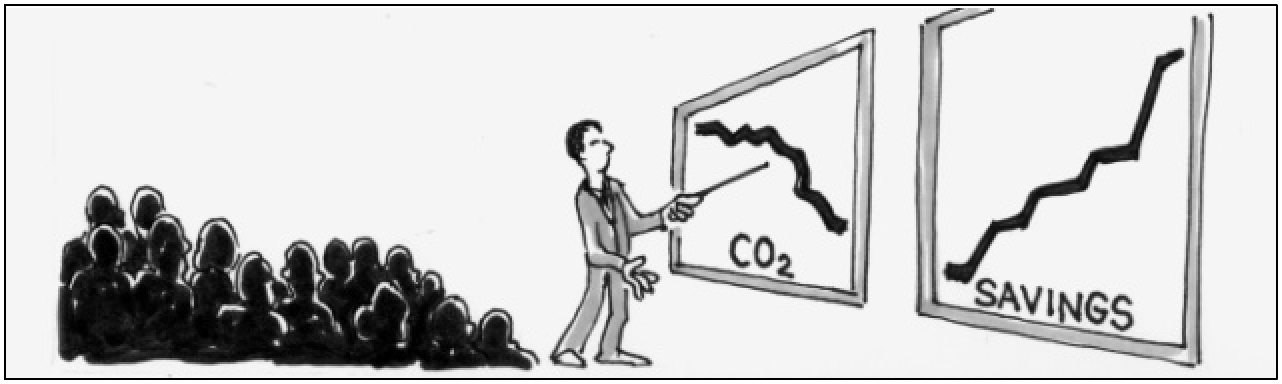
Making it happen: Report your results



- ✓ Staff
- ✓ Board of directors
- ✓ Members
- ✓ General public
- ✓ Climate initiatives

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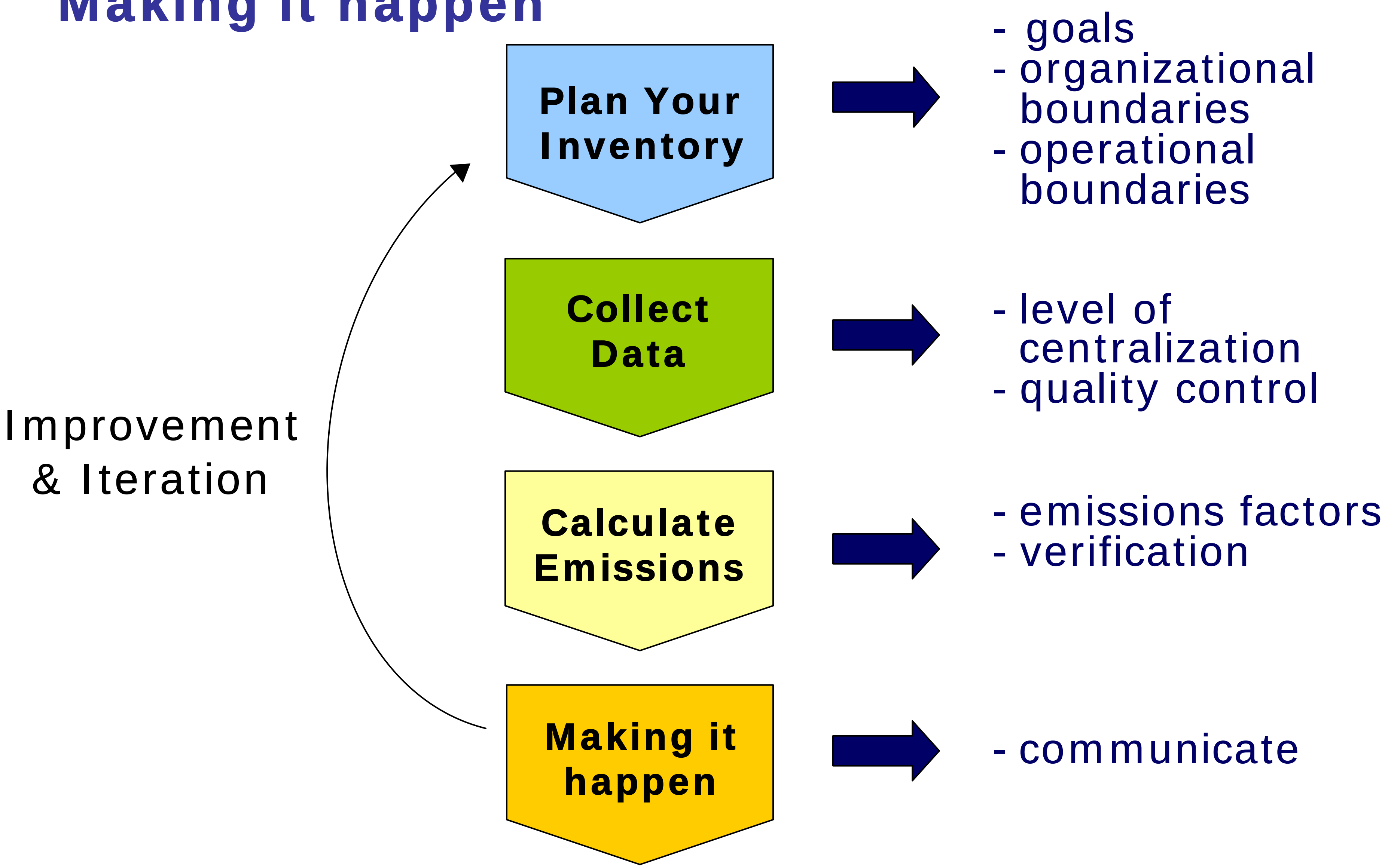
Making it happen



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