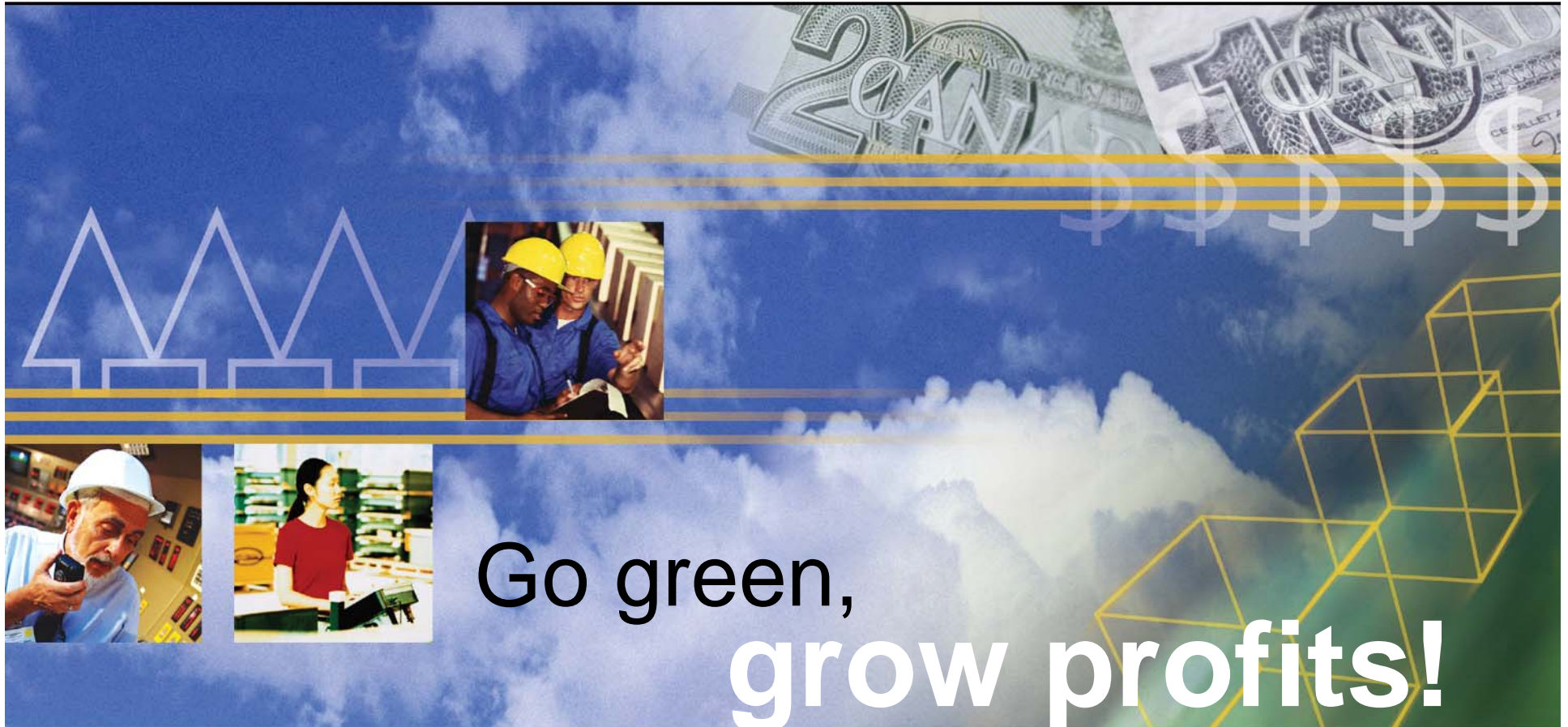




Five years of results and lessons learned



Go green,
grow profits!

François Huppé, Eng. MSc
Environment Canada, Quebec Region
Canadian Pollution Prevention Roundtable, June 2, 2005



Presentation Overview



- **Why Enviroclub^{OM} ?**
- **Program description**
- **Results**
- **Lessons learned**

OM: Enviroclub is an official mark of Environment Canada

Why Enviroclub?



Issues:

small businesses
not aware of
pollution prevention

Reach small
businesses

Approaches:

Outreach carried out
with hands-on activities

recognize that
for business owners,
greening the business
is good, but making
savings is better

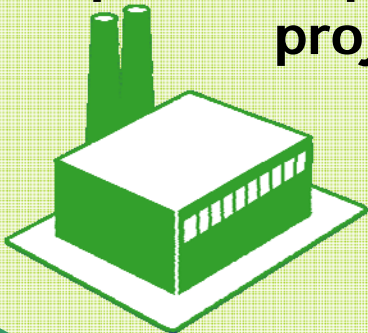
Description: Content of an Enviroclub

Enviroclub^{MO}

Enviroclub^{MO}

12 to 15 small businesses
doing:

In-plant
pollution prevention
project



Workshops on
environmental
performance



Description: In-plant projects



In-plant project supported by **90 hours** of consultation

- Completing a **pollution prevention activity**:
 - Operating improvements
 - Process or technology improvements
 - On-site reuse and recycling
 - Raw material change
 - Product or service change

OR


- Assessing environmental impacts and implementing a key step of an **environmental management system**

Description:

Workshops content

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Day 1

- What is pollution prevention
- Environmental management and profitability
- Mock plant 

Day 2

- Environmental management systems

Day 3

- Selecting profitable projects of pollution prevention
- Environmental emergencies
- Energy eco-efficiency

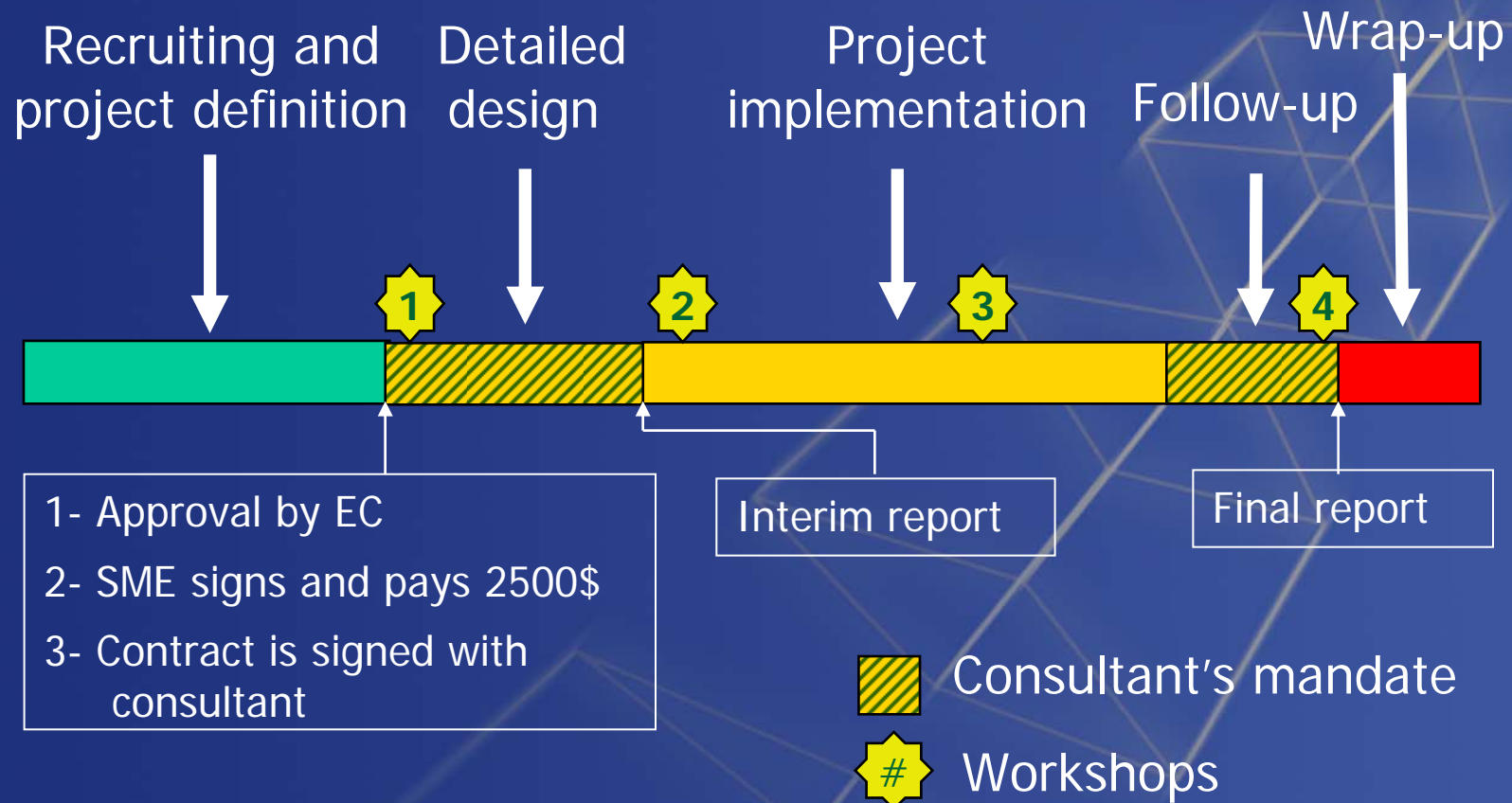
Day 4

- Greenhouse gases
- Marketing successes
- Financial assistance

Description: Implementation steps



A club lasts 10 months:



Description: Organisation

Management committee

 Développement économique Canada Canada Economic Development

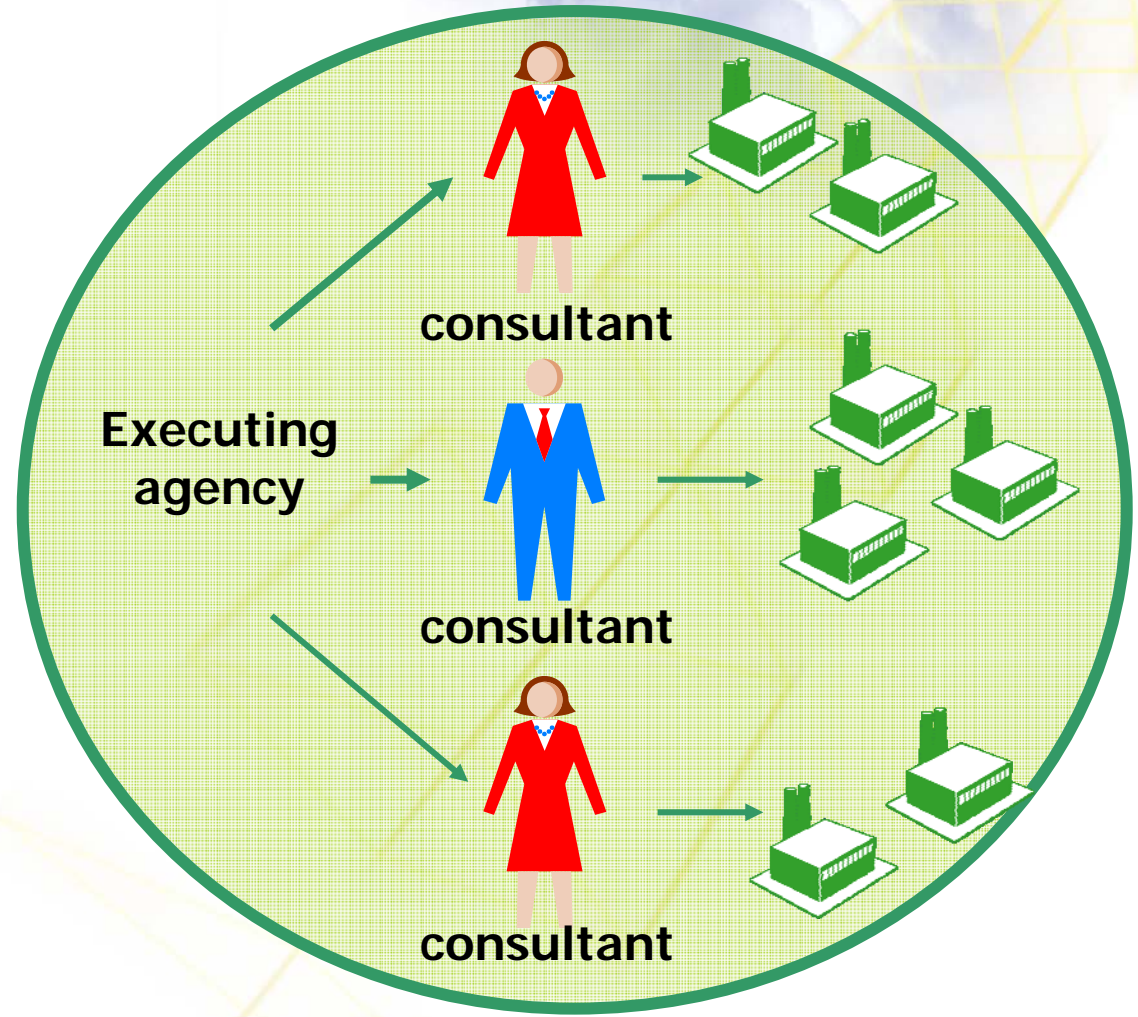
Canada

 Conseil national de recherche Canada National Research Council Canada

Canada

 Environnement Canada Environment Canada

Canada



Results: Measurement framework



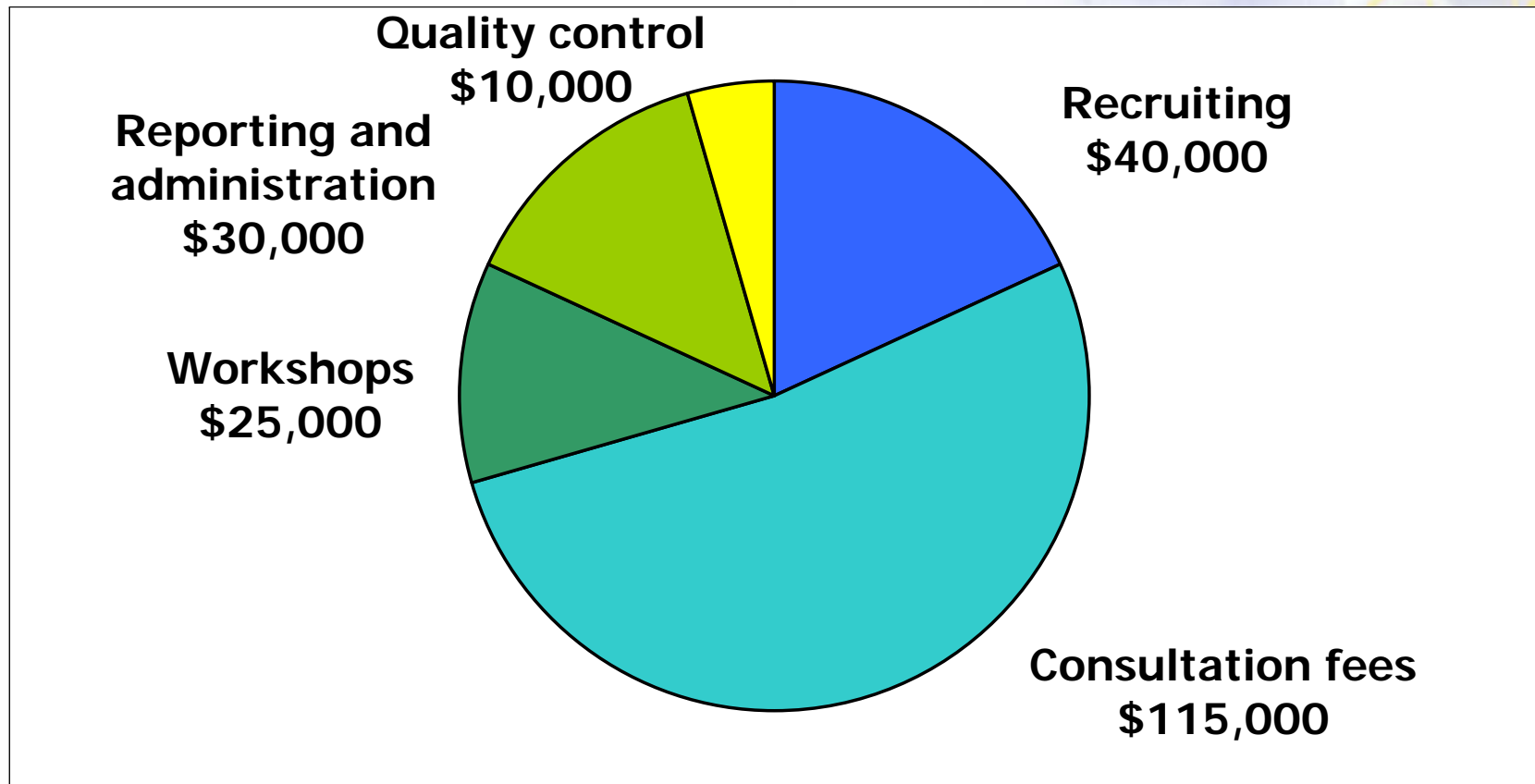
Enviroclub^{MO}

Results	Indicators
Inputs	Program cost Activity
Outputs	Environmental Economic Social
Outcomes	Outreach (attitude and behaviour)

Results from completed projects are compiled

Input results: Cost of one Enviroclub

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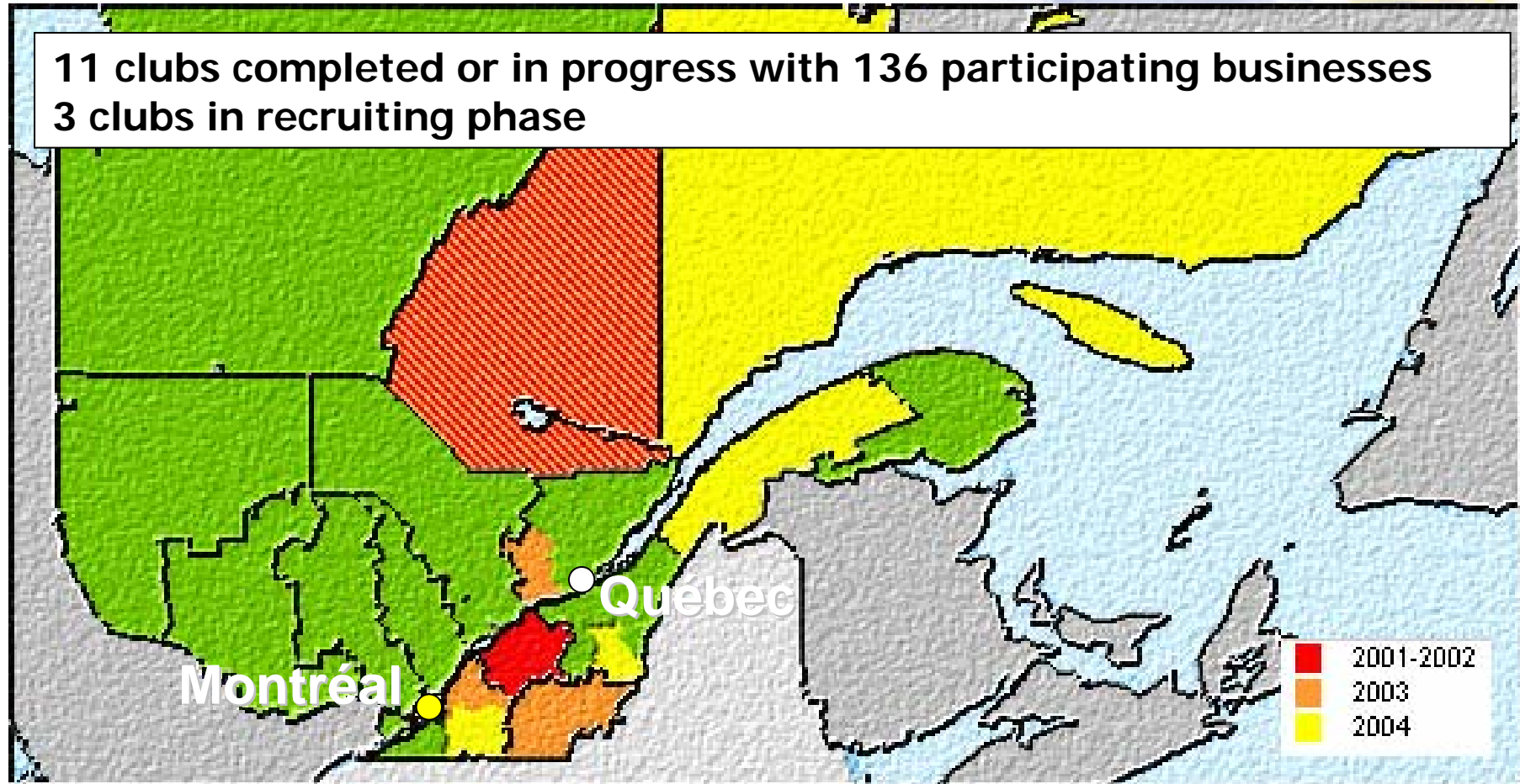


Total cost for one Enviroclub: \$220,000 *

* Does not include projects implementation cost. All data are in Canadian dollars

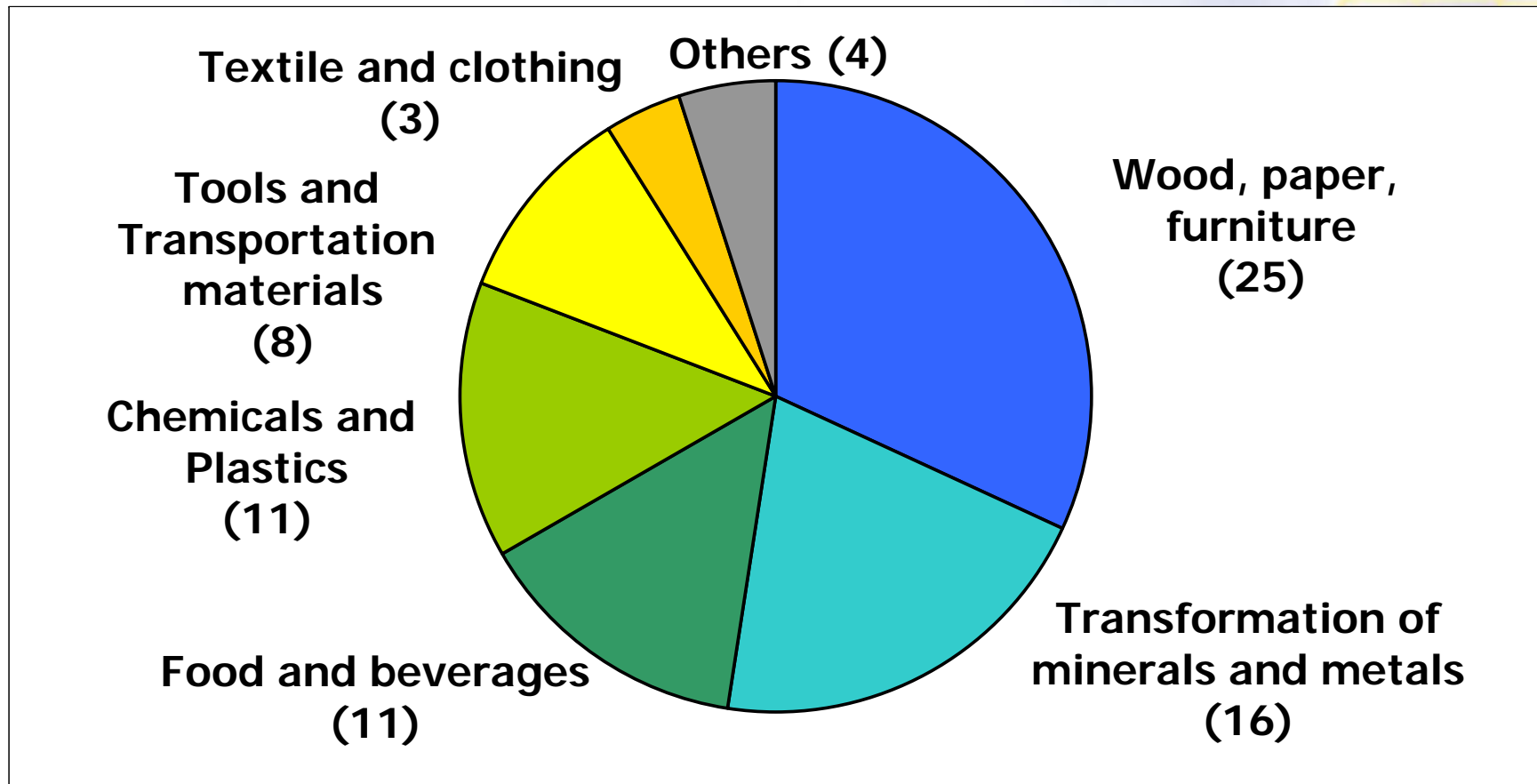
Input results: Clubs and participation

Enviroclub[™]



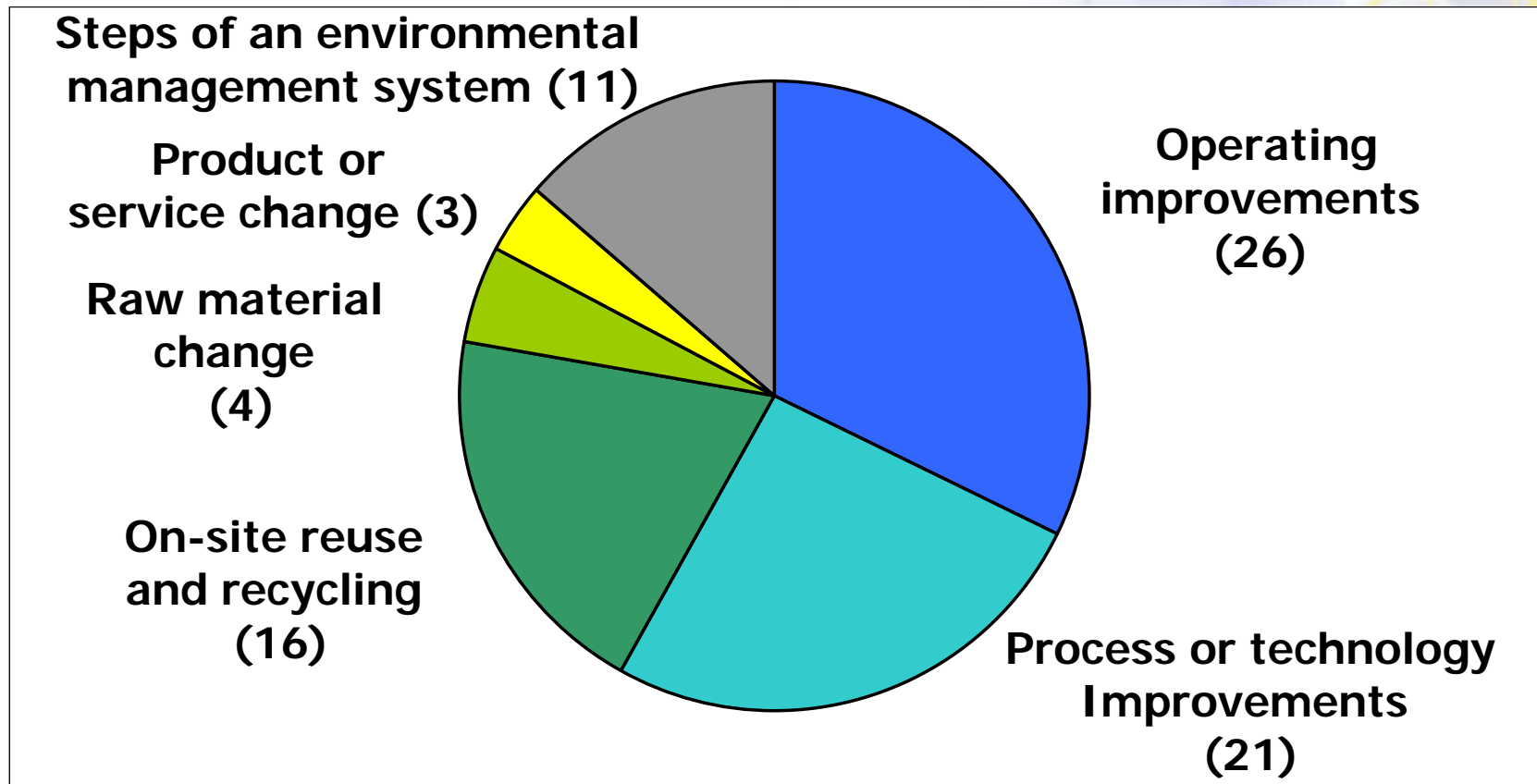
Input results: Types of industries (7 clubs)

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Input results: Types of projects (7 clubs)

Enviroclub^{OM}



67 projects completed on 78 undertaken *

* The total on the graph is higher because some projects covered more than one type

Output results: Example of project



- **Industry:** agrifood (cheddar cheese processing)
- **Problem:** water and heat going down the drain
- **Solutions:**
 - Recirculate warm water, use automatic nozzles, recuperate cleaning water, etc.
- **Results:**
 - ↓ Water: 37,400 m³/year (83%)
 - ↓ Natural gas: 16,500 m³/year (11%)
 - ↓ Greenhouse gas emissions: 31 tonnes/year
 - ↑ Savings: \$30,000/year (2.6 years payback)

Output results: Resource use reductions



Water

0,5M m³

300 olympic swimming pools

Wood

11,300 m³

3,100 cords

Natural gas

2,2M m³

heating needs for 900 households

Petroleum products

0,22M litres

1,400 barrels

propane

0,3M litres

32,000 bar-b-Q tanks

Electricity

960 MWh

needs for 38 houses

All reductions are given on an annual basis

Output results: Pollution reductions



Toxic substances **53 t**

Hazardous waste **708 t** 35 truckloads

Greenhouse gases **17,100 t** emissions of
3,700 mid-size cars

All reductions are given on an annual basis

Output results: Economic gains



Project cost: total for all projects **\$5,9M**

Annual savings: total for all projects **\$5,1M**
(3 projects amount to \$2,3M)

Annual savings: mean **\$91,000**

Annual savings: mean **\$53,000**
(without 3 big projects)

Annual savings: median **\$25,000**

Payback period: mean **2 years**

Outcome results: Outreach



1 to 2 years after the Enviroclub (preliminary data)

Positive attitude toward pollution
prevention

81%

Has carried out, is carrying out or
intends to undertake other pollution
prevention activities

63%

Lessons learned: Recruiting



- Recruiting is the critical step in implementing Enviroclub
- Signing up tends to be last minute, some drop at this stage
- Marketing strategy relies on:
 - **Personal contacts:** Use local development organisations (ex.: chamber of commerce)
 - **Cost savings:** put at the forefront
 - **Success stories:** draws attention
 - **Plant visit:** identify a profitable pollution prevention opportunity quickly

Lessons learned: Implementation



- Some unforeseen changes during implementation (technical difficulties, different economic returns)
- For the first 7 clubs, out of 82 participants, 4 left early on and 11 did not complete their project because:
 - External factors (bankruptcy, change of ownership, fire)
 - Lower economic return than expected
 - Change of technology
- Constant follow up to have projects completed
- High satisfaction rate on workshops and participation in general

Lessons learned: Results



- Results hard to predict but seems to follow patterns
- Measurement framework proves a powerful tool to support implementation and gives credibility to the program
- Outreach results encouraging but preliminary. To be closely monitored
- **Bottom line:** Enviroclub fulfills expectations of the federal partners



Questions, comments

Visit our website: www.enviroclub.ca