

**Line Bérubé**  
Vice-president


Nov. 20<sup>th</sup> 2012

**QUEBEC ICT**  
**RECYCLING INCENTIVES**

Entretiens  
Jacques-Cartier  
2012

# Agenda

- 1 Who is RECYC-QUÉBEC
- 2 ICT: A Global Issue
- 3 How To Solve The Issue
- 4 Quebec's Regulation
- 5 Program Design Principles
- 6 Success Key Factors
- 7 Reuse Or Recycle



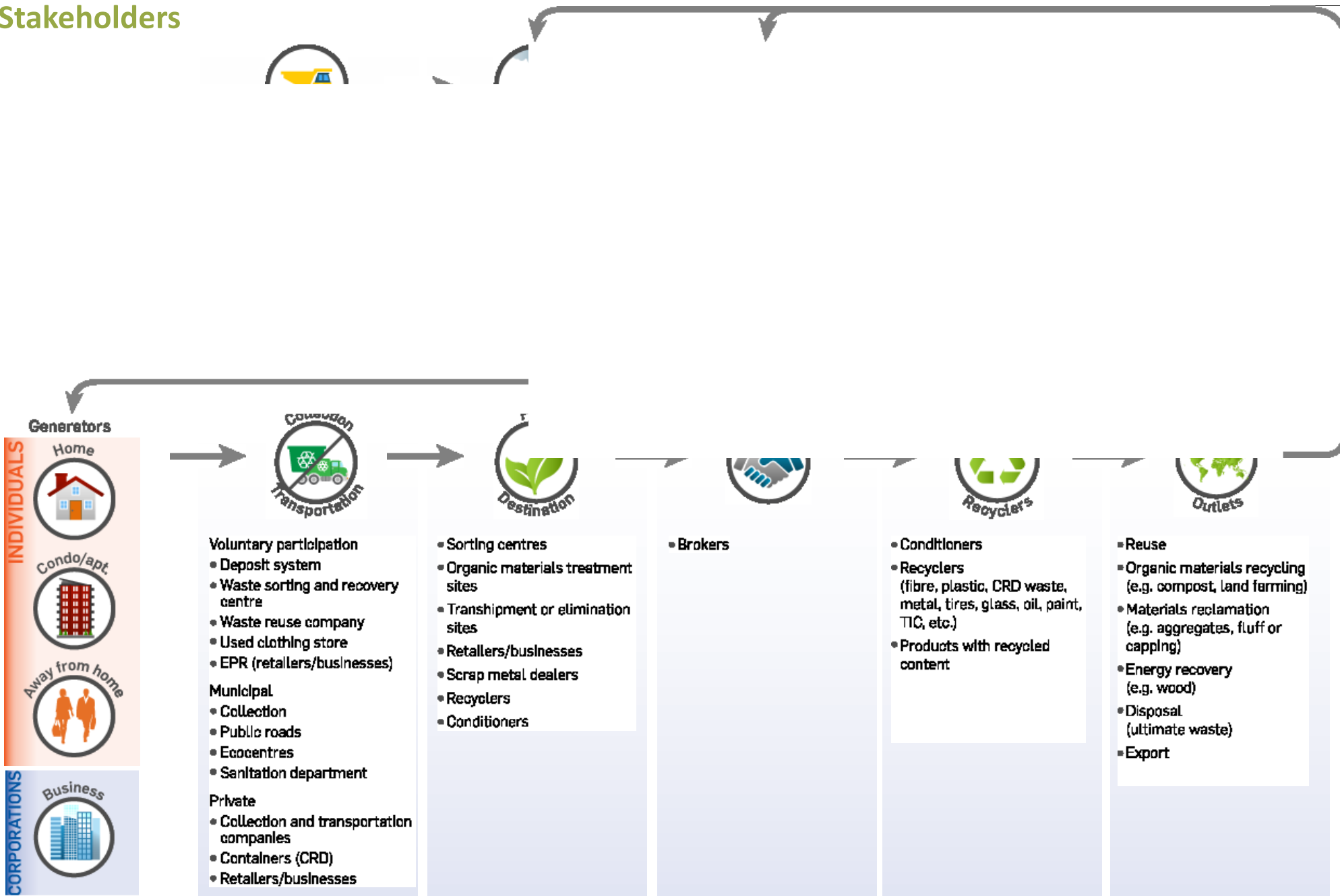
# RECYC-QUÉBEC



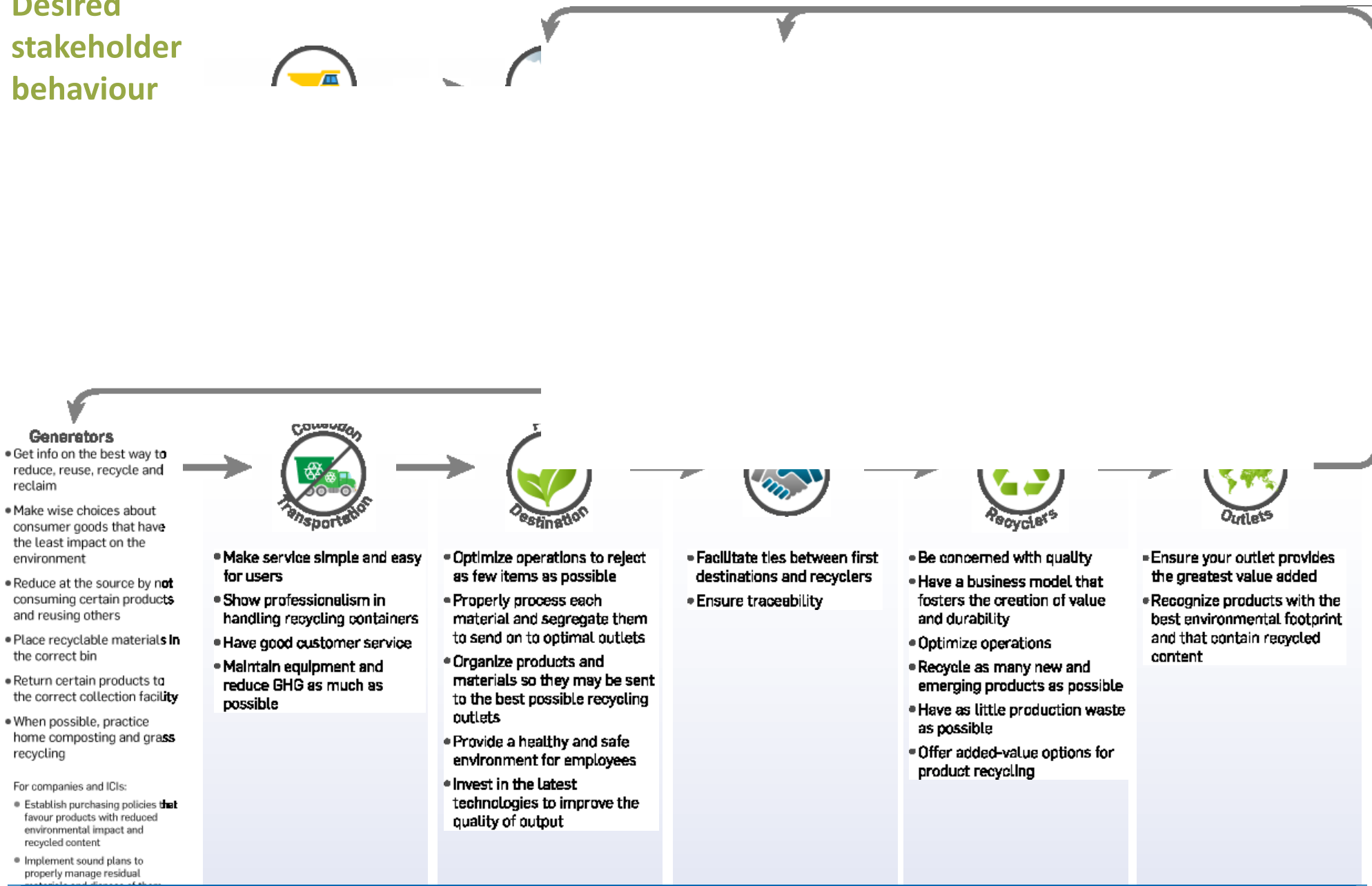
## Who We Are

- RECYC-QUÉBEC is a crown corporation Society created in 1990 by the Québec Government
- Accountable to the minister of Développement durable, de l'Environnement, de la Faune et des Parcs
- Our team: 75 employees committed to ecological waste management

# Stakeholders



# Desired stakeholder behaviour



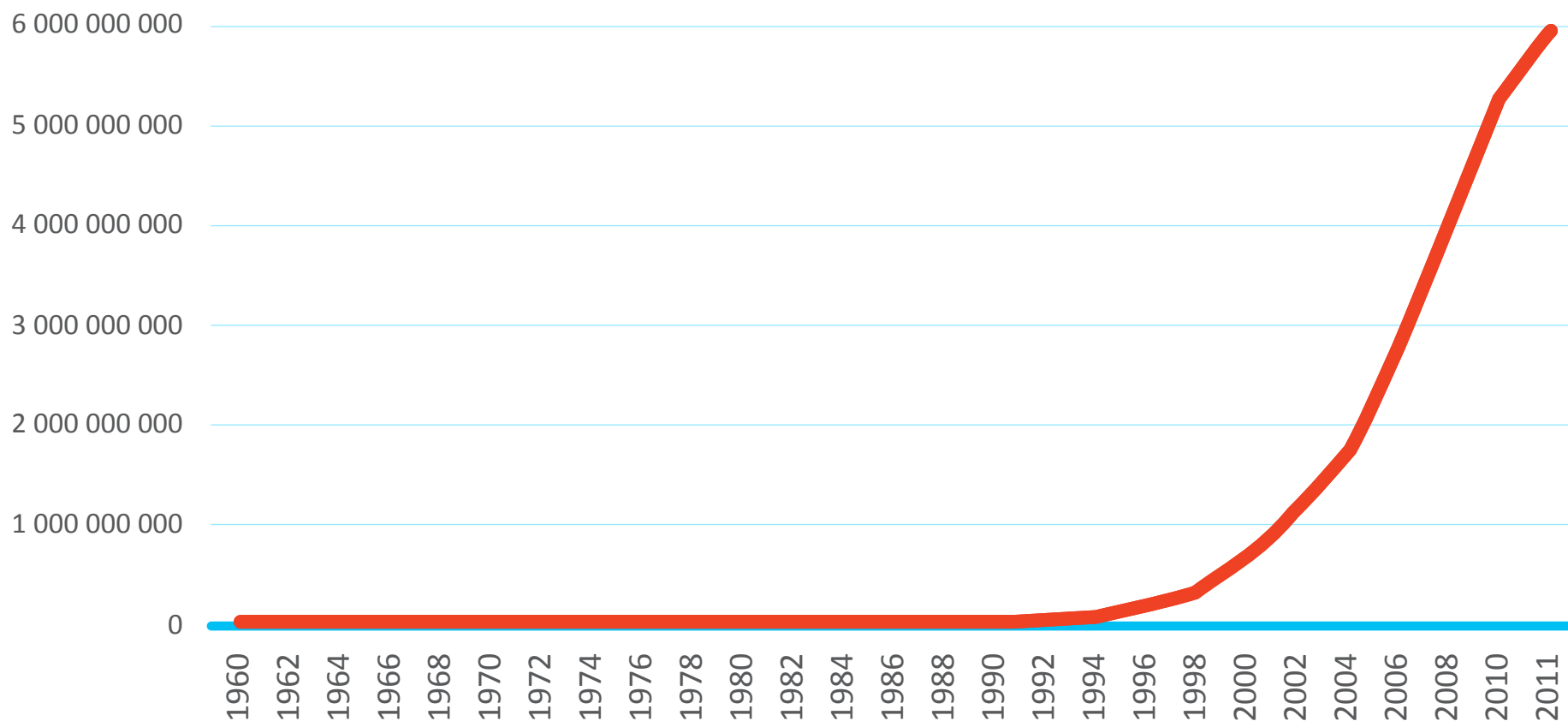


# INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

A Global Issue

# 40 Years On Earth

## Cell phone in circulation worldwide



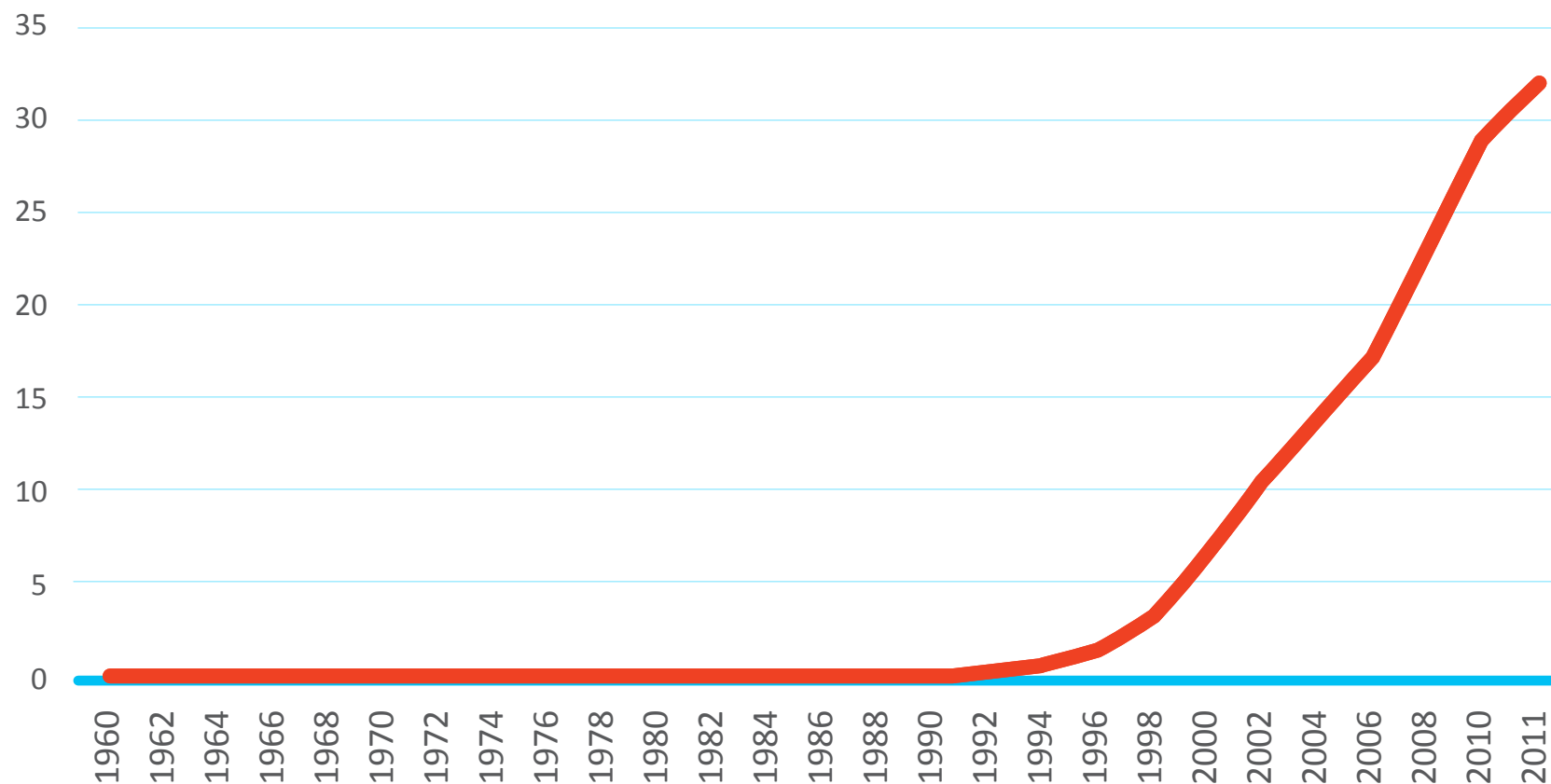
<http://www.itu.int/ITU-D/ict/publications/world/world.html>





# 40 Years On Earth

Access to Internet worldwide (%)



<http://www.itu.int/ITU-D/ict/publications/world/world.html>







## E-waste: 21<sup>st</sup> century's problem

<http://www.goldcircuitcycling.com/>

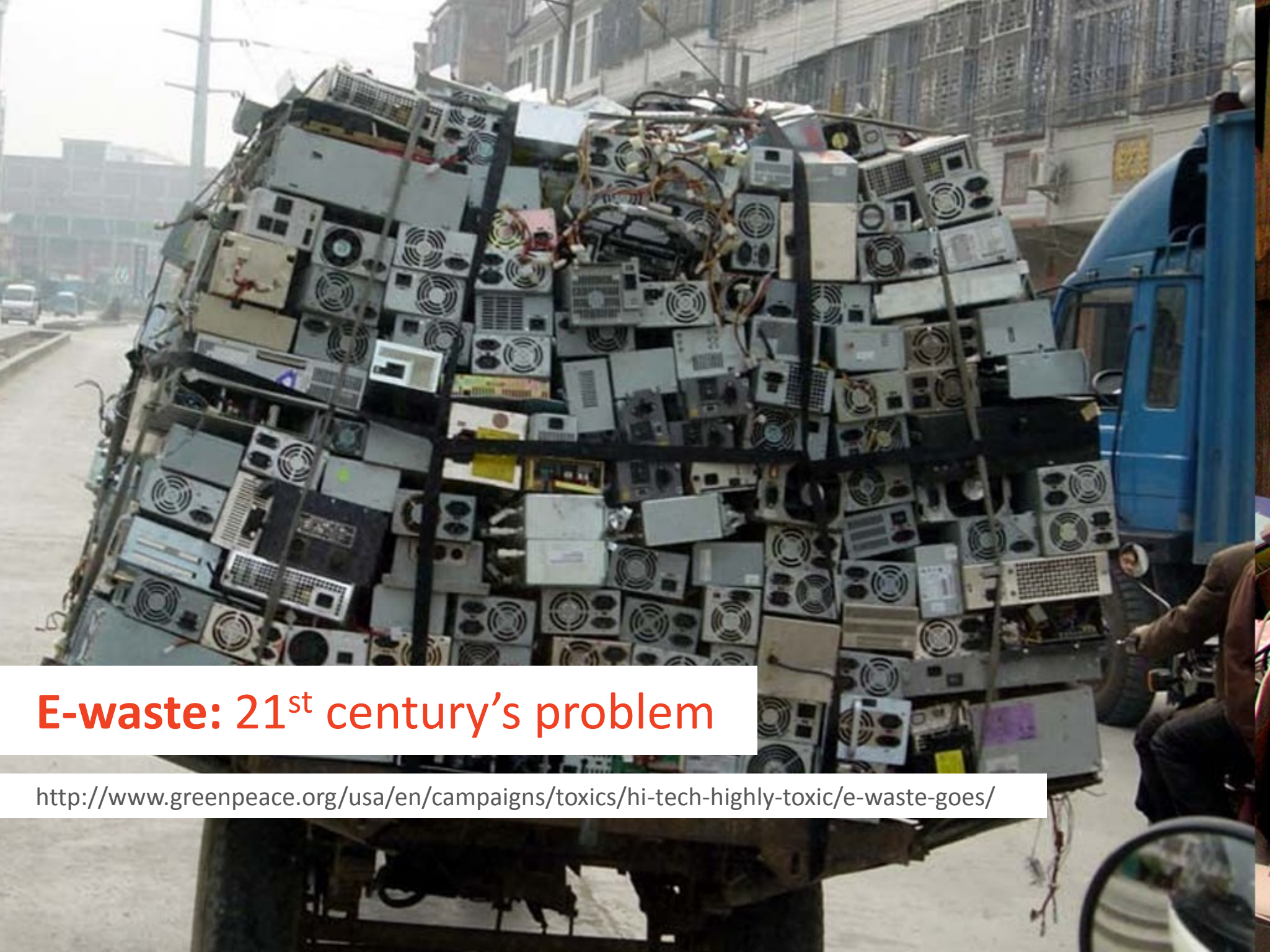




## E-waste: 21<sup>st</sup> century's problem

<http://www.treehugger.com/sustainable-product-design/rapid-repair-a-better-way-to-recycle-e-waste.html>





## E-waste: 21<sup>st</sup> century's problem

<http://www.greenpeace.org/usa/en/campaigns/toxics/hi-tech-highly-toxic/e-waste-goes/>





## E-waste: 21<sup>st</sup> century's problem

<http://inhabitat.com/electronics-recycling-101-the-problem-with-e-waste/>



# E-WASTE

## How To Solve The Issue

## How To Solve The Issue

Before, we had a linear system



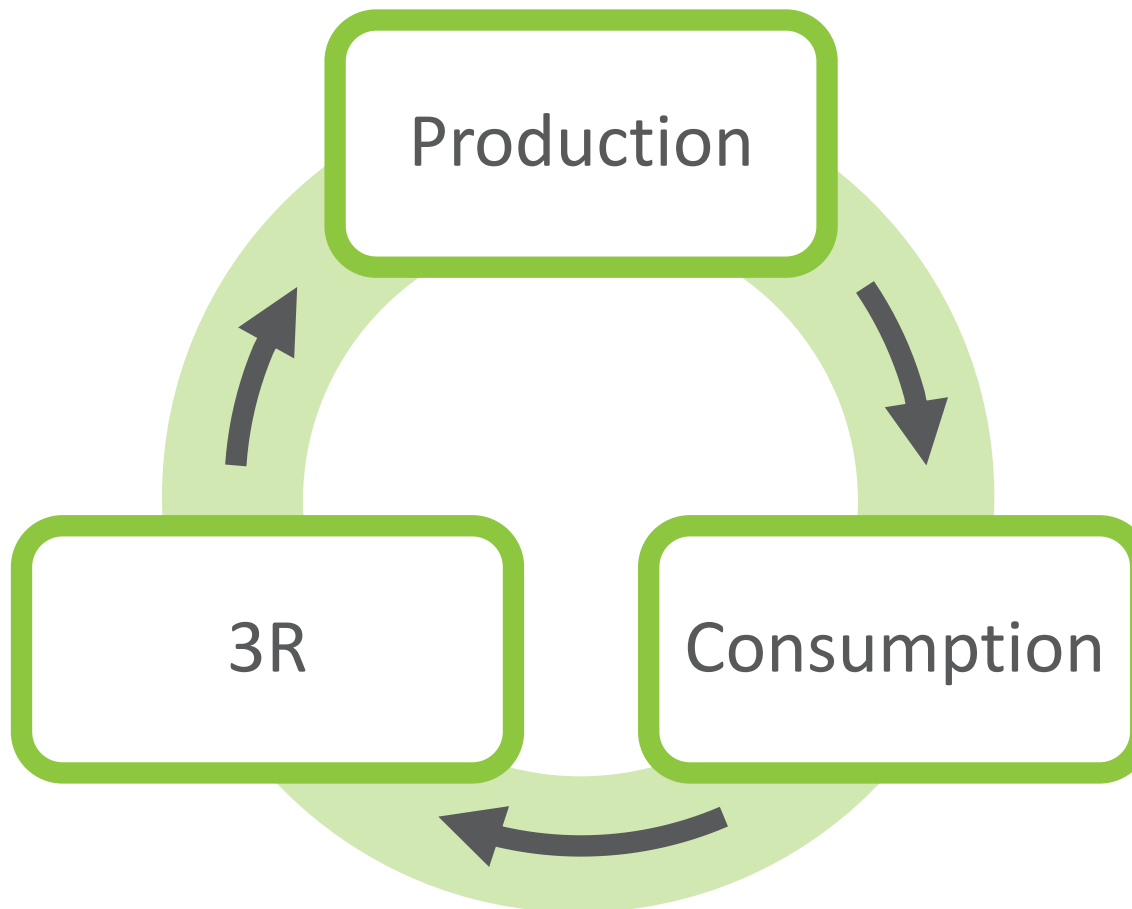
**Production**

**Consumption**

**Discard**

# How To Solve The Issue

We want to move to a circular system







# POLLUTER PAYS PRINCIPLE

# EPR

**“Extended producer responsibility (EPR)”** is an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s life cycle.

# EPR Features

- 1 Increasing producer responsibility by shifting responsibility upstream towards the producer and away from municipalities and/or regional or provincial waste management authorities
- 2 Providing incentives to producers to incorporate environmental considerations in the design of their products

## Why EPR

- Waste reduction
- Eco-design
- Source reduction
- Resources conservation

# Canada vs Europe





# QUEBEC'S REGULATION

# Quebec's Regulation Background

## First two regulations

- EPR on paints & containers since 2001
- EPR on oils, filters & containers in 2004

## These programs met the expectations; recovery rates for 2010:

- Paints: approx. 100 %
- Oils: more than 96 %



# Quebec's Regulation

## Unique aspects of this regulation:

- 3rv hierarchy
- Collective or individual program
- Reuse
- Minimum recovery rate
- Penalties (Incentives)
- Cost internalization
- Drop-off centers and collection services
- Audits
- Cost modulation



# Quebec's Regulation

## Hierarchy of the 3R

### Exception :

- (a) a life cycle analysis, complying with the applicable ISO standards and taking into account the perennality of resources and the externalities of various management methods for recovered materials, shows that a method is more advantageous than another in environmental terms
- (b) the existing technology or the applicable laws and regulations do not allow for the use of a management method in the prescribed order

# Quebec's Regulation

**Unique aspects of this regulation:**

**Two choices for producer:**

1. Implement an individual program

**or**

2. Be a member of an funding organization (IFO)

Same obligation and objective but with  
some adaptations

# Quebec's Regulation

**Why Reuse:** it offers potential advantages:

- Reduced waste management costs
- Reuse and Refurbish are jobs creators
- Sometimes, reuse electronics is the only means to providing much needed computers to schools or low income households
- Energy and raw materials savings

# Quebec's Regulation

## Minimum Recovery Rate

$$T = A / B$$

Annual recovery rate  
of the enterprise  
in %

Quantity of products  
actually recovered  
during the year

Quantity of products  
marketed during the  
reference year

As of 2015, minimum recovery rates  
must be attained yearly

# Quebec's Regulation

## Penalties

- No performance target until 2015
- Grace period of 5 years to achieve the target (Bonus/Malus system)
- The incentive must equal the cost of recovery and recycling of the product. (For a CRT screen, the “incentive” are 10\$ per unit)
- The payment goes to the Quebec Green Fund



# Quebec's Regulation

## Cost Internalisation

The costs related to the recovery and reclamation of a product, may be attributed only to that product and must be internalized in the price asked for the product as soon as it is put on the market. But, these internalized costs may be rendered visible only on the producer's initiative.

# Quebec's Regulation

## Drop-off Centers And Collection Services

### 2 Choices

- For each business or other place where that enterprise's products are marketed, there must be a permanent drop-off centre at the business or place or at any other location less than 5 km from the business
- Implement over a period of 2 years, 303 drop-off centres to be complying with the regulation

# Quebec's Regulation

## Audits

### 2 type of audits:

- Environmental audit every 3 years, by an independent third person certified, of the management of recovered products and compliance by all service providers, including subcontractors
- The annual report submitted to RECYC-QUÉBEC must be audited, both at the enterprise level and at the level of its service providers and subcontractors, by an expert independent third party expert a permit to practice public accountancy issued by a professional order



# Quebec's Regulation

## Cost modulation

The costs related to the recovery and reclamation of a product, may be attributed in order to recognize the producer's ecodesign efforts for a specific product as a competitive advantage



# PROGRAM DESIGN PRINCIPLES

# Best Practices in Program Design Principles

EPR program and policy development and implementation are based on:

- Transparency and flexibility
- Level playing field
- Harmonization

# Best Practices in Program Design Principles

- con'd

- Appropriate Standards
- Environmental improvement
- Operational efficiencies
- No cross-subsidization
- Collective or Individual Responses

# Success Keys For An Effective EPR Program

## No cross-subsidization - fees examples



Desktop Computers

\$7.50

€5.88



Portable Computers

\$1.65

€1.29



Display Devices - 29" or smaller

\$12.25

€9.60



Display Devices - 30" or larger

\$42.50

€33.32



Cellular Telephones

\$0.10

€0.08



Phones/Answering Machines

\$1.15

€0.90



E-book readers

\$1.65

€1.29

# How To Be Successful

**1** Goals + Incentive + Audits = **SUCCESS**

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**2** Involve stakeholders

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**3** Educate the target audiences

# FOR E-WASTE MANAGEMENT: REUSE OR RECYCLE



# RECYC-QUÉBEC And LCA

- Partner of CIRAIG since 2007
- Partner of UNEP/SETAC
- RECYC-QUÉBEC is committed to use LCA as a decision-making tool for implementing sustainable development in waste management
- SLCA on computer: First worldwide SLCA published and reviewed (May 2011)

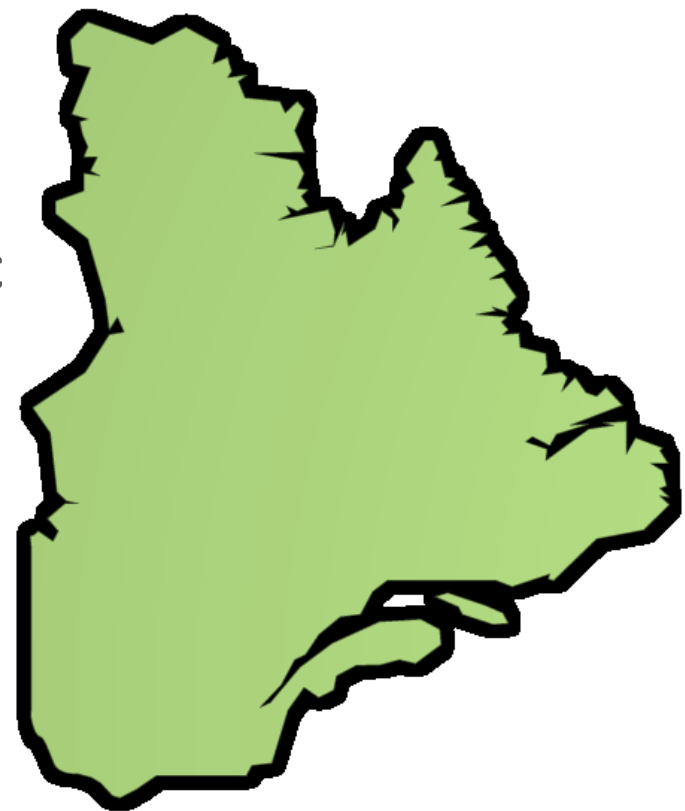




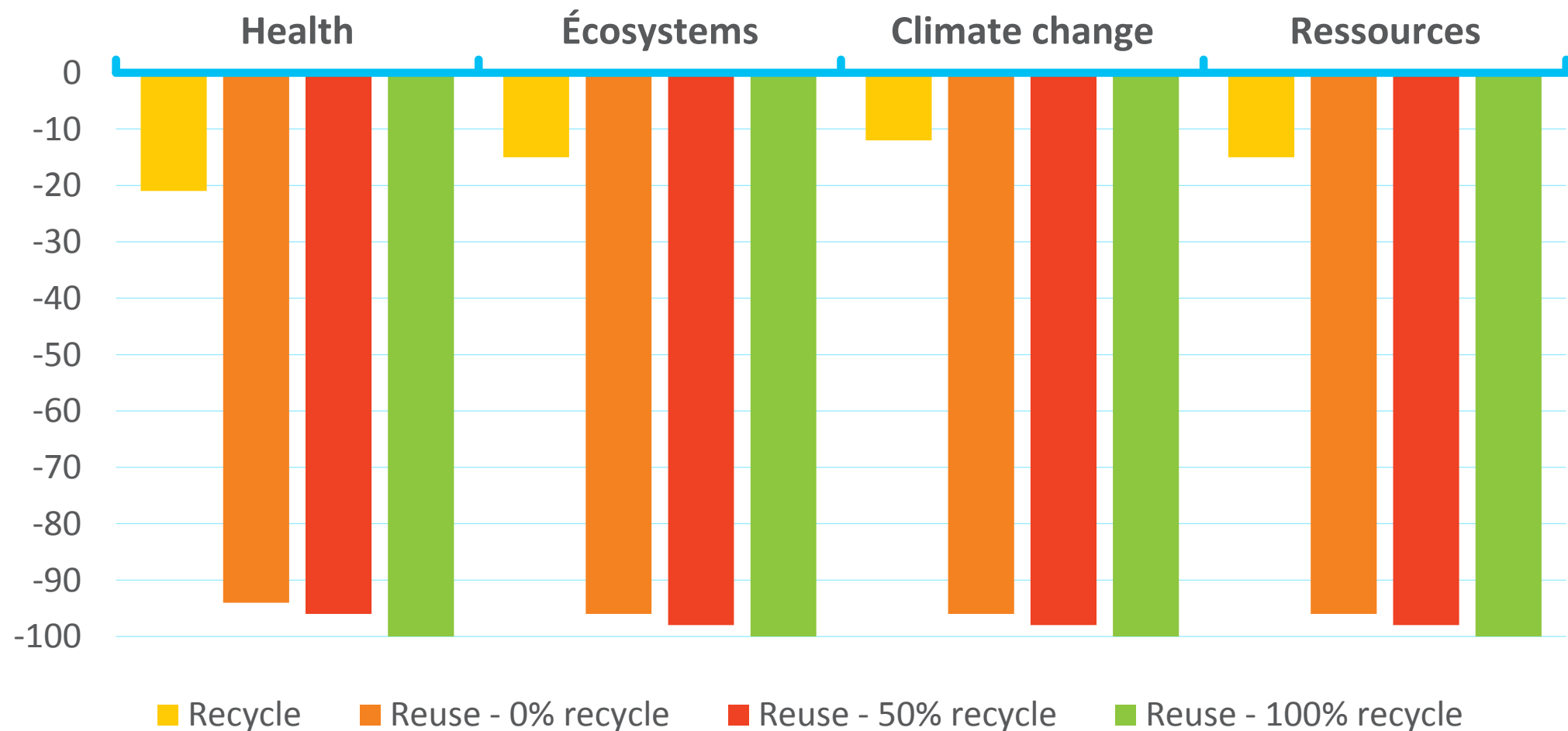
# Goal And Scope Definition

## Scope

- Computers from companies located in the province of Quebec
- State of the art: no exportation in developing countries
- Recycling industry: mostly private companies
- Refurbishing industry: mostly community oriented NFPO




# LCA Results (Environment)





# THE RESULTS FOR SLCA

# Stakeholders Mapping

Stakeholder categories	Life cycle stages				
	System 1 : refurbishing and reuse				
				System 2 : recycling	
	Reception and refurbishing	Distribution/ sale of refurbished computers	Utilisation	Recycling	Elimination 
Employees	X	X		X	X
Local community	X	X	X	X	X
<i>Youth in integration or training program</i>	X	X			
Society	Quebec society				
Consumers (clients)		Individuals, NFPO, Schools, Others	Individuals, NFPO, Schools, Others	X	
Actors of the value chain	Suppliers : large companies and institutions			Suppliers : large companies and institutions	X

# Impact Inventory And Assessment

- Based on UNEP/SETAC 2009 Guidelines for SLCA of products
- Same stakeholders and impact categories

## Stakeholder categories

Workers

Consumers

Local community

Society

Value chain actors

*Youth in integration  
or training program*

## Impact categories

Human rights

Working conditions

Health and safety

Cultural heritage

Governance

Socio-economic repercussions

# Scales For Social Impact Assessment

## Assessment of social risks



High risk



Medium risk



Low risk

## Assessment of social benefits

- No benefits
- + Low benefits
- ++ Medium benefits
- +++ High benefits

Unquantifiable benefits: yes / no scale

# Results – Scenario 1

## Society

Impact sub-category	Indicator	Scenario 1	
		Reuse	Recycling
Public commitments to sustainability issues	Public commitments related to sustainable development	++	++
Respect of the 3Rs	Nature of the activities in relation to the 3Rs	●	◆
Contribution to economic development	Job creation	+++	+
	R&D investments	Yes	No
	Value added creation	+++	+

# Results – Scenario 1

## Local community

Impact sub-category	Indicator	Scenario 1	
		Reuse	Recycling
<b>Community engagement</b>	Volunteer work, sponsorship, financial support and other participation in community organisations and initiatives	+++	+
	Commitment with and involvement of community stakeholders	●	●
	Neighbourhood-related problems, annoyances (noise, odours, heavy trucking, visual annoyances, etc.)	●	●
<b>Local employment</b>	Local employment preferences, (production jobs, executive jobs)	+++	+++
	Buy-locally practices and policies	++	+
<b>Access to material resources</b>	Access to computer equipment	Yes	n/a
<b>Access to immaterial resources</b>	Access to community-based services	+++	-
	Access to citizenship (reduction of digital gap)	Yes	No



# Results

## Summary

- No important social issues in the two systems
- More benefits related to reuse than recycling for all stakeholder categories
- Protection of confidential data and end-of-life responsibility were the only risks that were higher in the reemployment system (no certification)

## For more info on the LCA and SLCA

<http://www.recyc-uebec.gouv.qc.ca/Upload/Publications/Pneus/acve/Rap-acve.pdf>

QUESTION ?