

Chemical leasing training Case study

IAMC Toolkit

*Innovative Approaches for the Sound Management of
Chemicals and Chemical Waste*



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION



Overview of the presentation

- 1. Background and motivations**
- 2. Set up of Chemical Leasing and Monitoring**
- 3. Actual benefits**

Background and motivations



I- Background and motivations

WHO, WHAT, WHY ?



Innovative Services

Blau Automobiltechnik

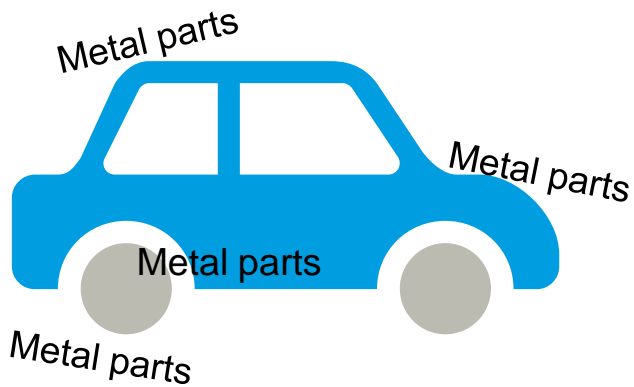


MAGNA STEYR

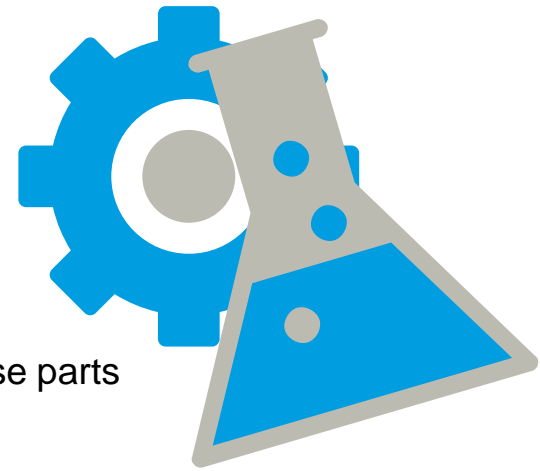
**Cleaning process of metal
parts in the automotive
industry**

I- Background and motivations

WHO, WHAT, WHY ?



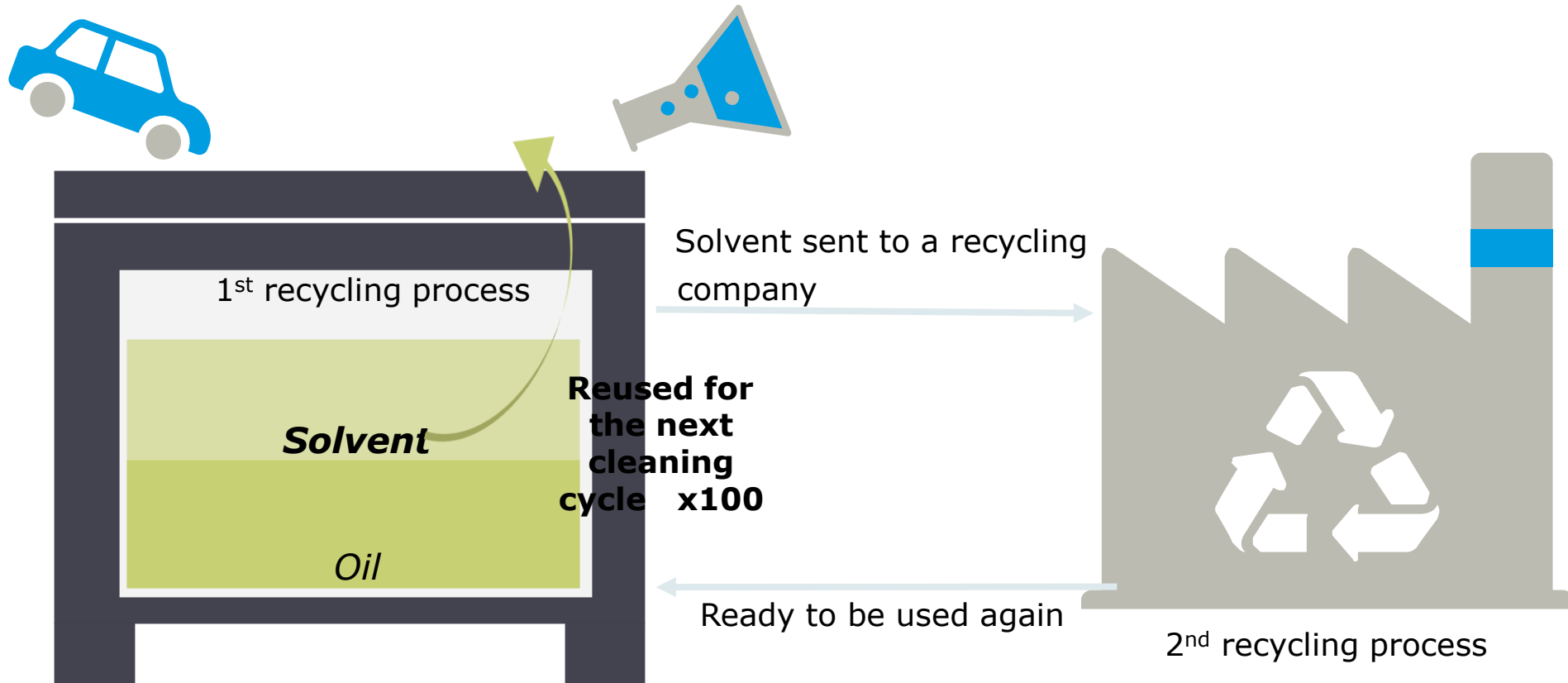
Oil is required during the manufacturing of these parts



Oil needs to be removed in an industrial cleaning process employing solvents

I- Background and motivations

THE ORIGINAL PROCESS



I- Background and motivations

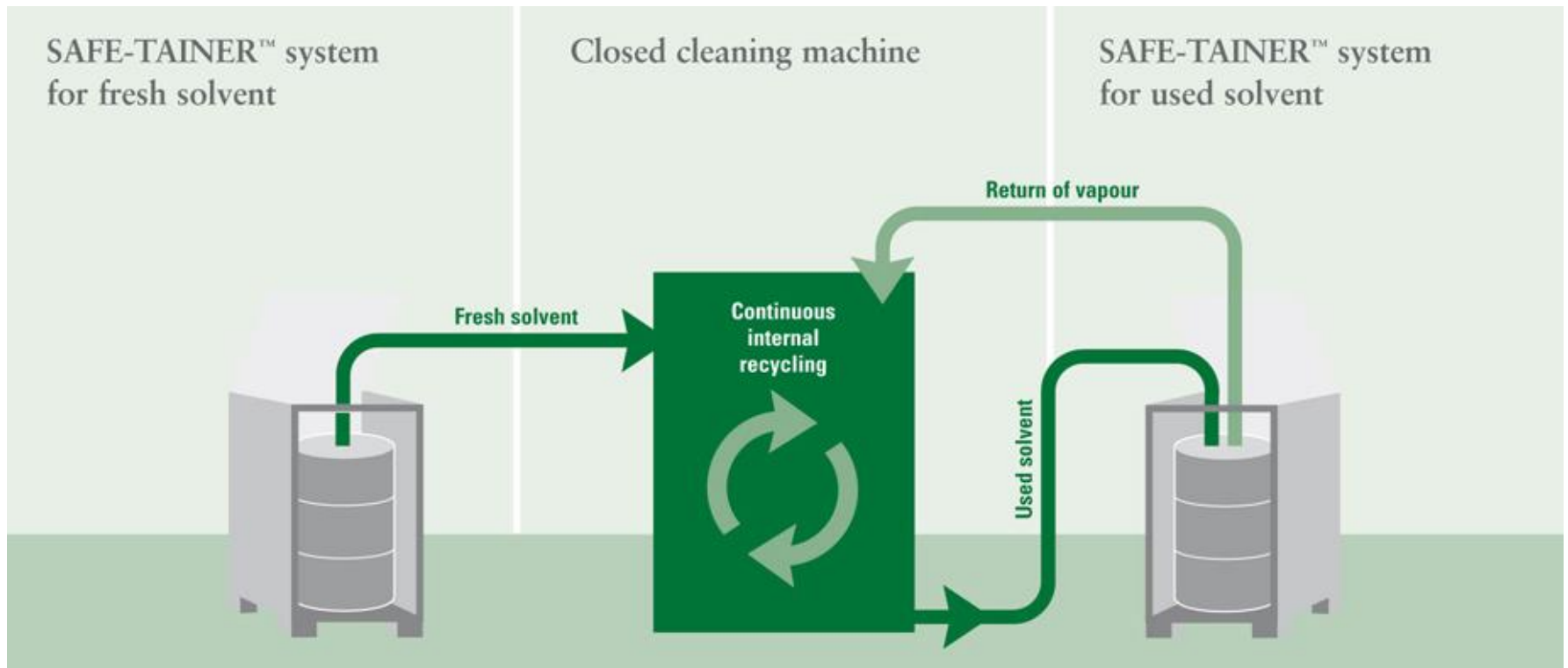
THE ORIGINAL PROCESS



Set up of Chemical Leasing and Monitoring

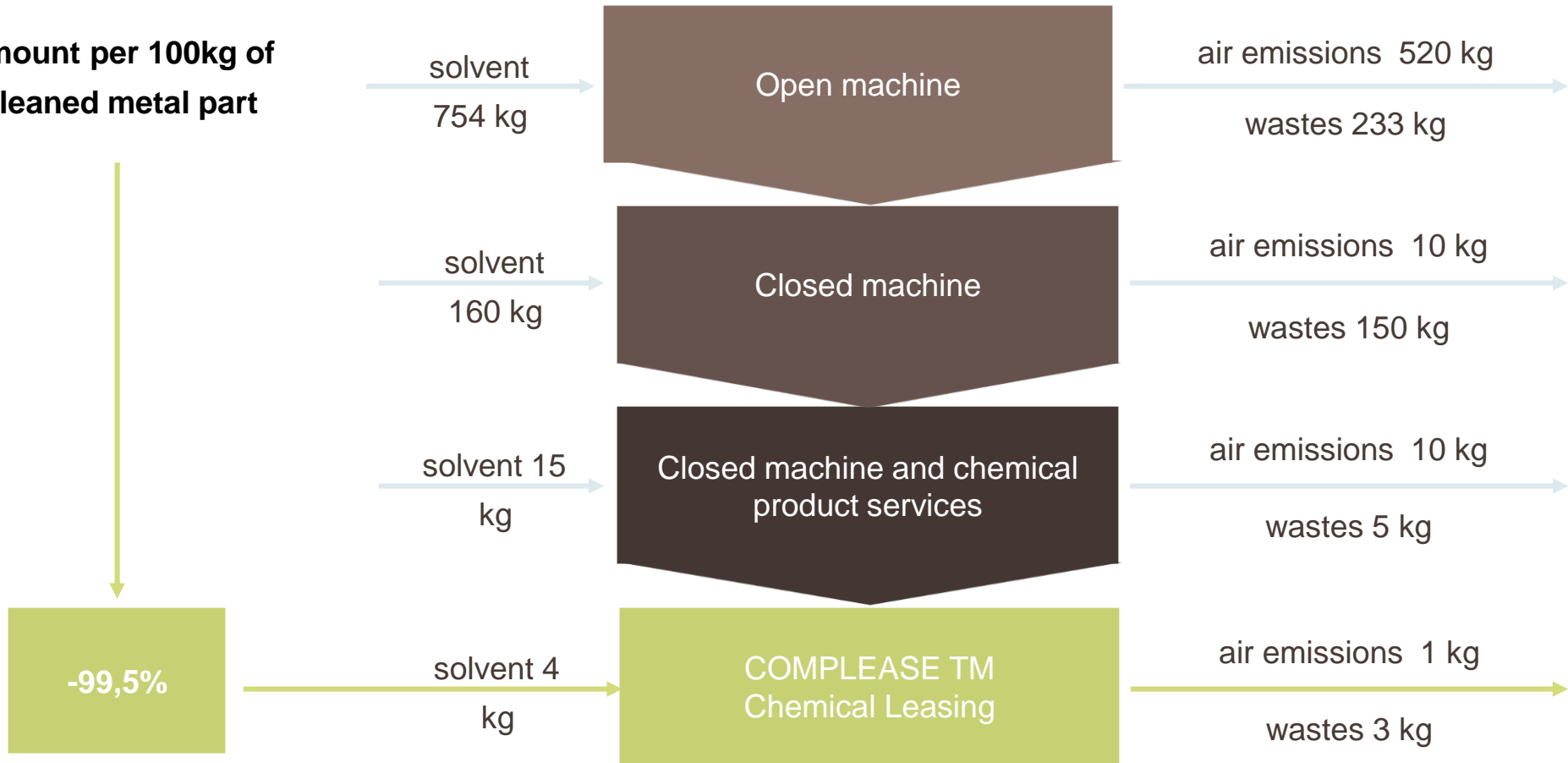


II- Set up of chemical leasing and monitoring



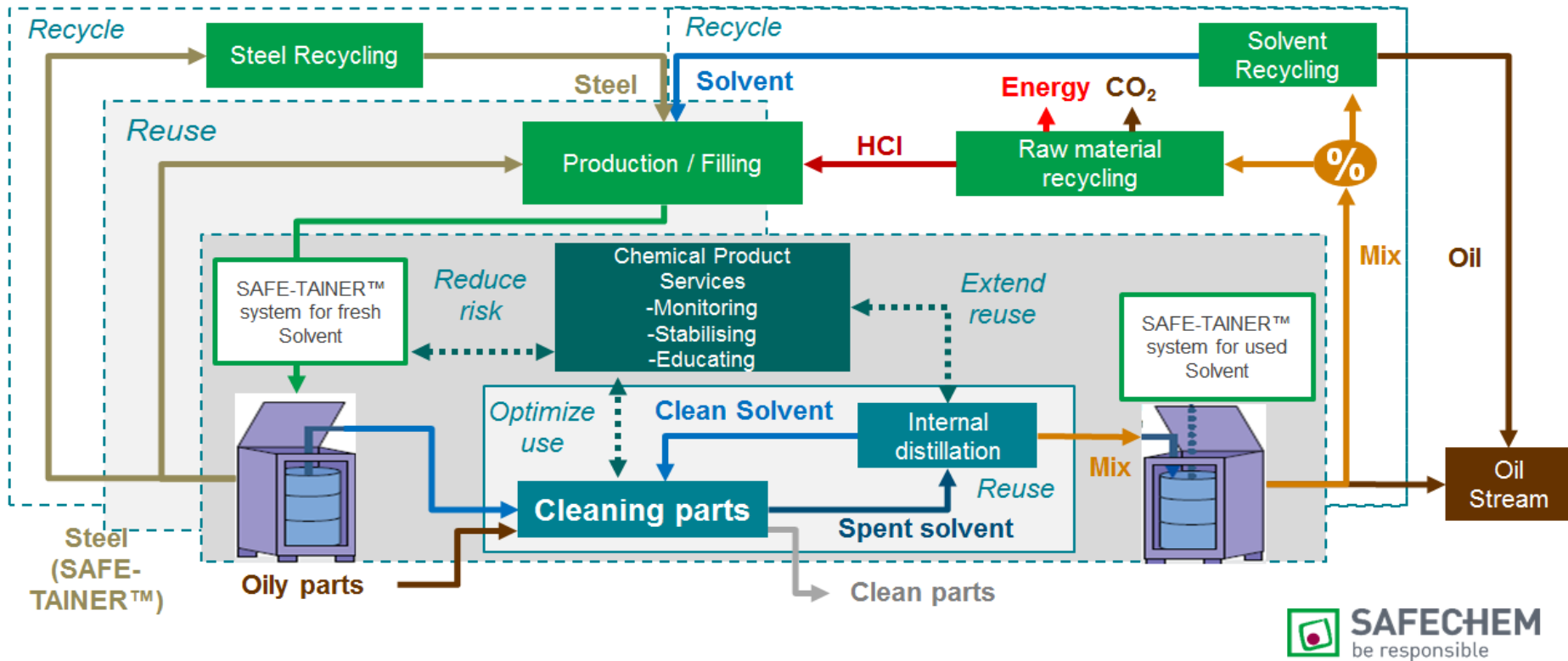
II- Set up of chemical leasing and monitoring

Amount per 100kg of cleaned metal part



Actual Benefits

III- ACTUAL BENEFITS



III- Actual benefits

GENERAL BENEFITS

The new Chemical Leasing business model achieved the following savings for the same results:

- > 70% solvents**
- > 50% energy consumption in the application**
- > 55% need for stabilizers**
- Reduction of raw material consumption**
- ~ 40% waste**

III- Actual benefits

ECONOMIC BENEFITS



Cost savings \pm 50,000 € / year for the cleaning process (lower chemicals and energy consumption)



High initial investment costs offset in a relatively short time period



Competitive advantages and enhanced business relations

III- Actual benefits

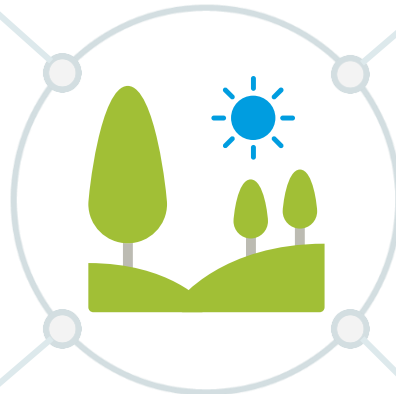
ENVIRONMENTAL BENEFITS

Reduction of chemical and resource consumption

Perchloroethylene : -76%
Stabilizers : -74%
Activated carbon : -87%

Reduction of energy demand (direct and indirect)

Due to the optimized process : -46%
Due to the reduced amount of solvent produced : -20MWh



Reduction of waste

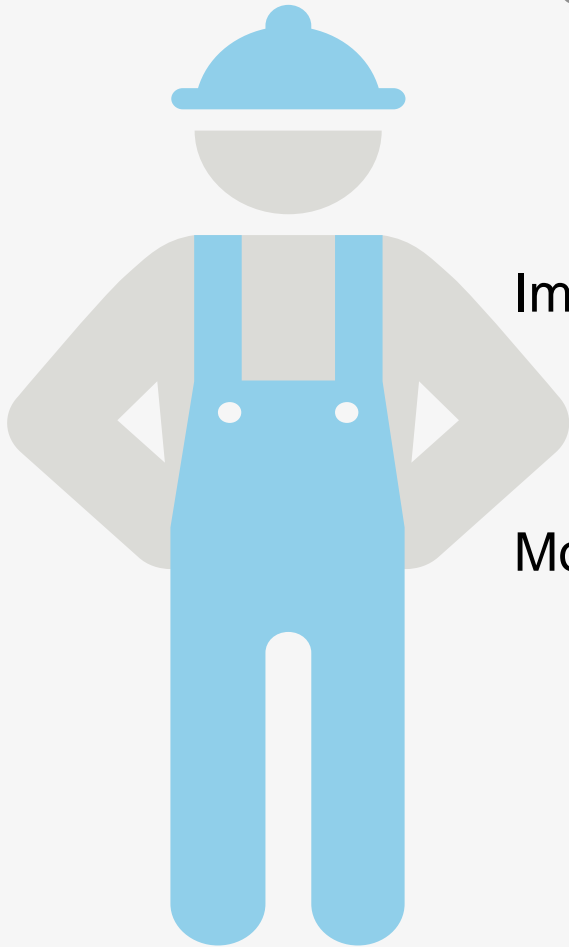
Perchloroethylene : -40%
Activated carbon : -87%
Oil : no change

Reduction of emissions

Air emissions due to improved technology and reduced amount of solvents : -90%
Greenhouse gas emissions due to lower energy demand : CO2 equivalents : -45t

III- Actual benefits

SOCIAL BENEFITS



Improved environmental awareness of staff

Risk for occupational health and safety significantly reduced

More training of the workers and creation of new jobs

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