Deployment of a campaign to measure the ICT Carbon Footprint

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Name : BOURGEOIS

First Name : Guillaume

Position : PhD student in 2nd year

I am a software developer with strong interdisciplinary skills in the areas of:

- Computer Programming and Supply Chain, Data Visualization, Interactive Software Programming, or in the field of Artificial Intelligence and Big Data.

- I have a Master's degree in Computer Science with a specialization in Computer Systems for Industrial Logistics Engineering and Services (SIGLIS) from the University of Pau and the Pays de l'Adour.

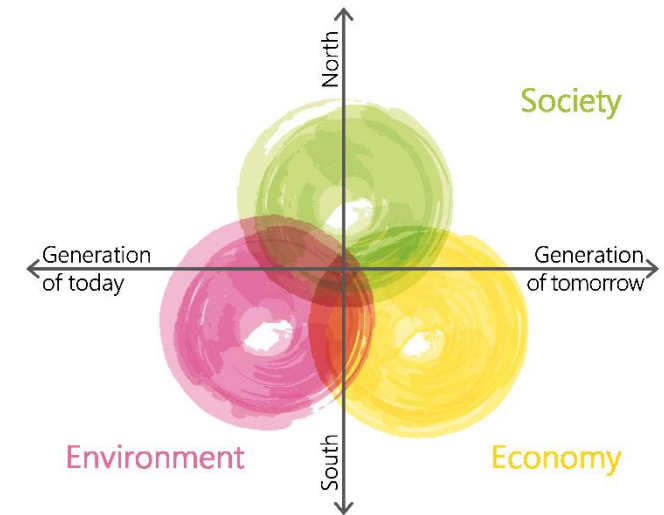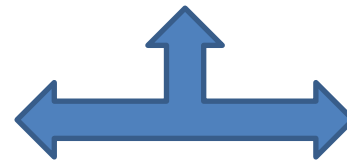What are we talking about ?

WeGreenIT2018

WeNR2021 and INR

PLAN

Our benchmark :
- Objectives
- Methodology
- Results

Conclusions

Perspectives

What are we talking about ?

5

ENCOURAGE
initiatives for a more
responsible digital world

ESTIMATE
the **environmental
footprint, performance**
and **maturity** of
companies

SHARE
best practices for
each sector of activity

WeGreenIT2018 :

Proposal :

The WeGreenIT study, published on 11 October 2018, assesses the environmental footprint of digital technology. It is co-produced by WWF France and the Green IT Club, created in 2014 to lead green IT projects and **at the origin of responsible digital methods**.

However, the study has many limitations:

- It takes place in **1 country**.
- The study did not take into account the different entities that make up an organization.
- The sample studied is not large enough to **create a reliable model**.
- The level of **granularity of the research is low**.
- The **local community is underrepresented**.
- The **Cloud part is not detailed**.

Based on this observation, a new, **more ambitious tool designed to reach the largest number of people** was officially **launched on March 31, 2021, namely WeNR**.

INR and WeNR2021 :

INR :

- INR

  – Created in **2018**
  – Members carry "digital responsible" projects

- Objectives

  – **Sharing** and **exchanging** between peers to build skills
  – **Sharing intelligence** on the themes of sustainable IT, responsible digital, and responsible digital design
  – Punctual **contribution of expertise** on key topics
  – **Mutualizing some projects to reduce their cost** while creating consensus
  – Giving **voice to user companies**

Source : institutnr.org

WeNR is a tool that comes in 3 versions :

WeNR Light

Online questionnaire to assess the level of Digital Responsibility maturity.

(S2 2021)

WeNR Standard

The questionnaire is accessible online, the data is then processed confidentially and asynchronously with a delivery of the results 2 months later in the form of a first level report.
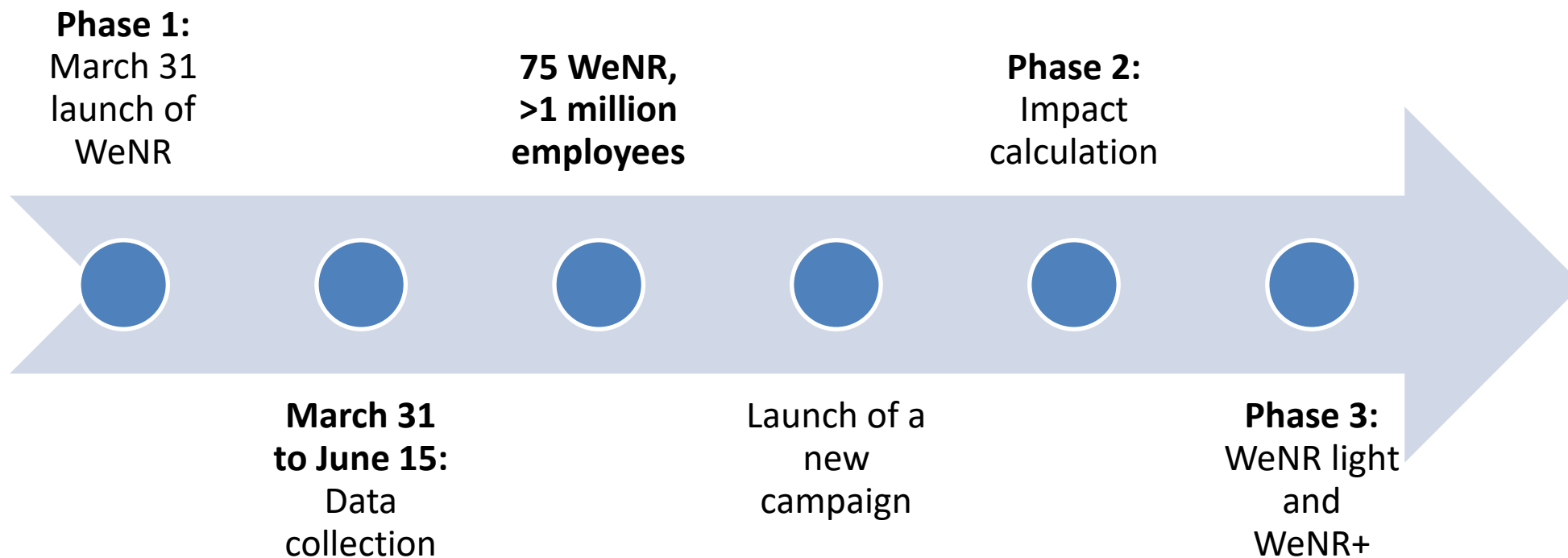
(March 31, 2021)

WeNR Plus

This version of the tool (coming soon) is reserved for INR member organizations. Obtain a complete and detailed report from a quantitative, qualitative and comparative point of view with organizations of the same sector.

Source : wenr.isit-europe.org

Procedure :

Phase 1: March 31 launch of WeNR

75 WeNR, >1 million employees

Phase 2: Impact calculation

March 31 to June 15: Data collection

Launch of a new campaign

Phase 3: WeNR light and WeNR+

Comparison table :

Comparison of the two studies: :

	WeNR2021	WeGreenIT2018
Country concerned :	France, Belgium, Switzerland	France
Language of Rendering :	English, French	French
Participating Organization :	75	24
Collaborator involved :	1 200 000	775 000
Transparent methodology :	Yes	No
Individual Report Rendering :	Yes	No
Global Report Rendering :	Yes	Yes
Predictive System (AI) :	Yes	No
Creation of a web-based tool :	Yes	No

Our benchmark :
- Objectives
- Methodology
- Results

1. What is the digital footprint of an employee?

2. What are the main sources of impacts?

3. How does my company compare to other participants?

4. How to reduce this footprint?

5. What are the best practices of the participants?

Data pre-processing

Calculation

Report creation
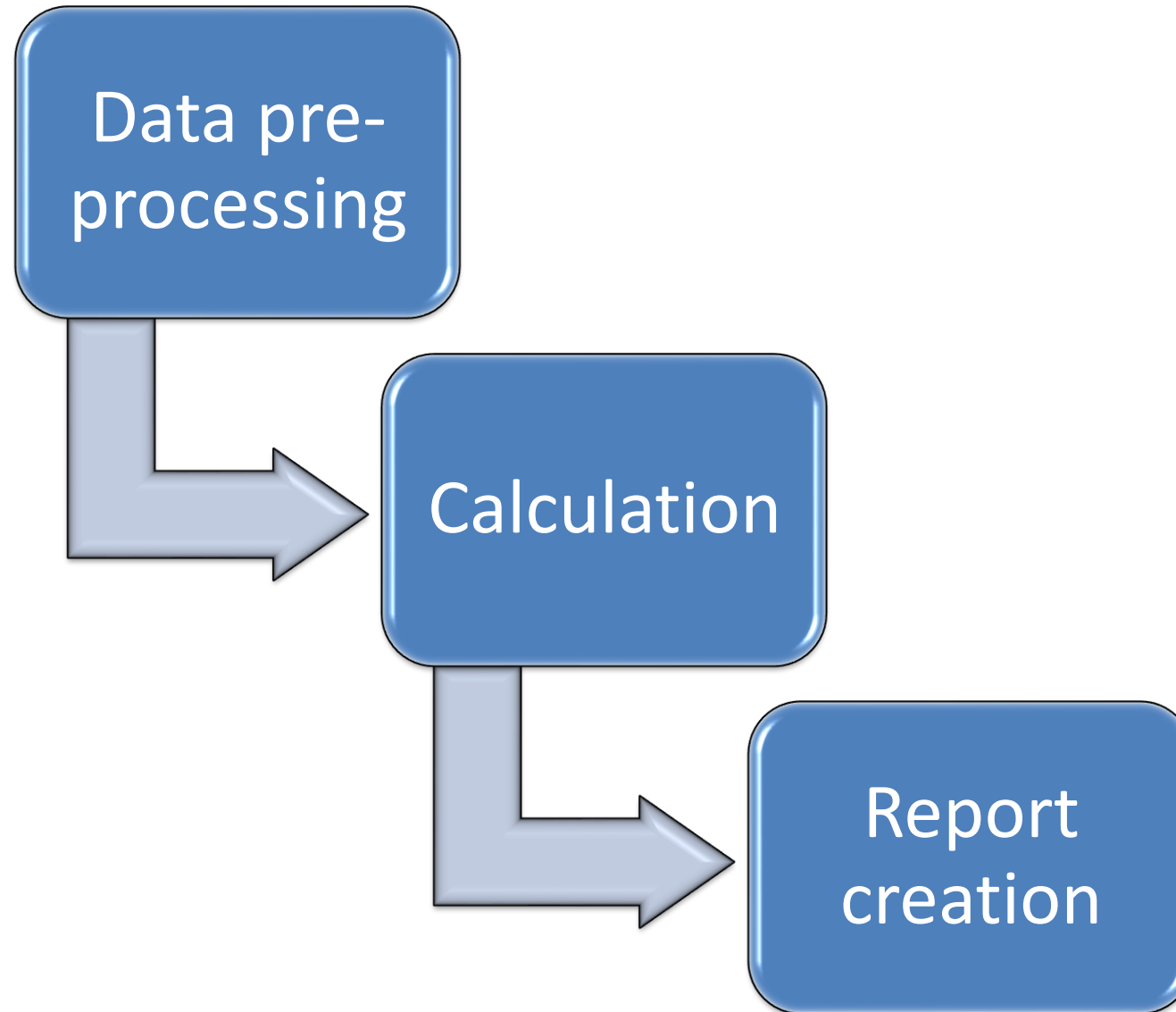
Use of open-source / public data

▸ Selected indicator: GHG

EEA

Impact of the production of the countries

ADEME

Impact of the manufacturing of the devices

ENERGY STAR

Electrical consumption of appliances
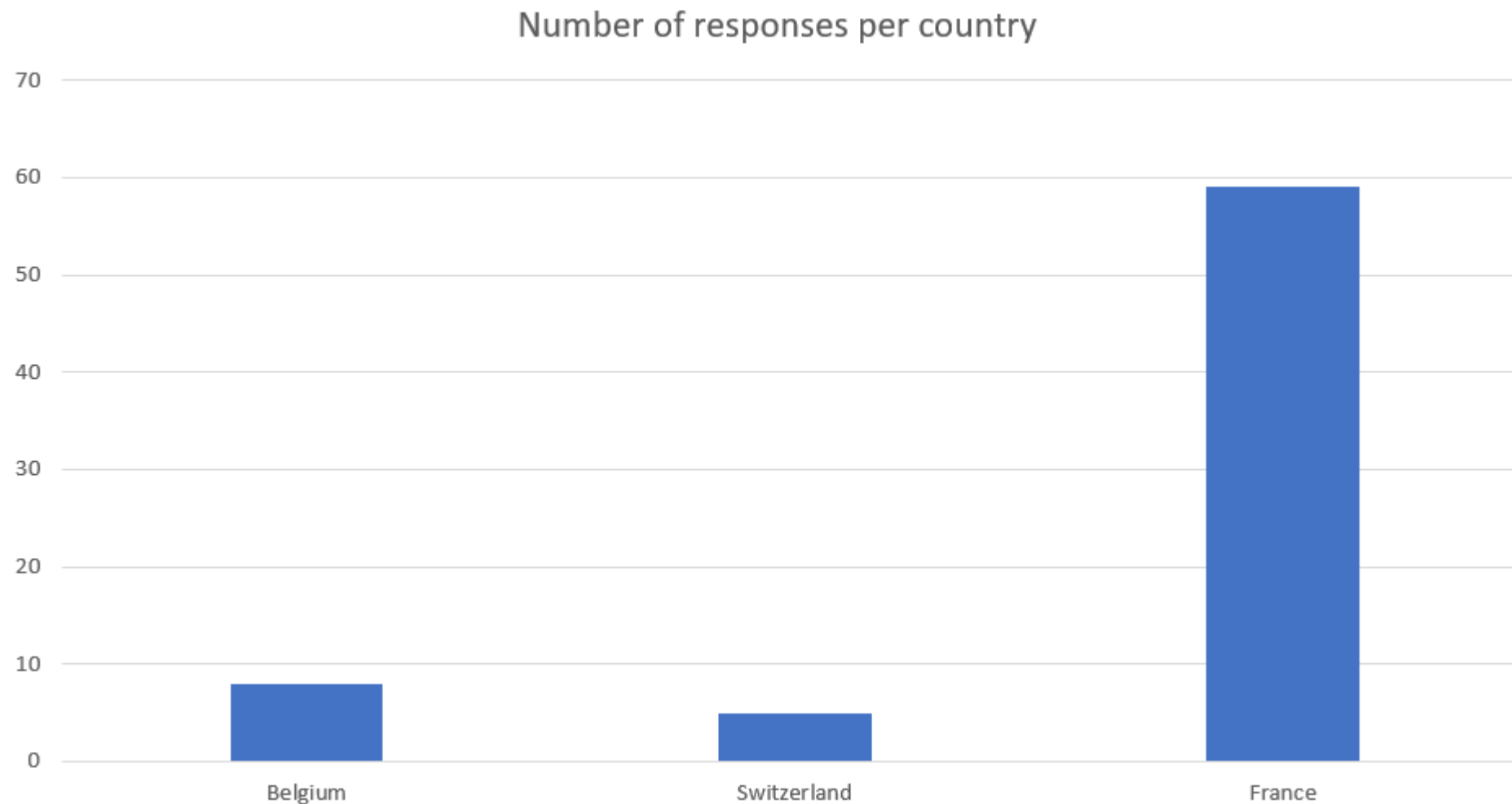
Results :

75 Respondents for the WeNR2021 study

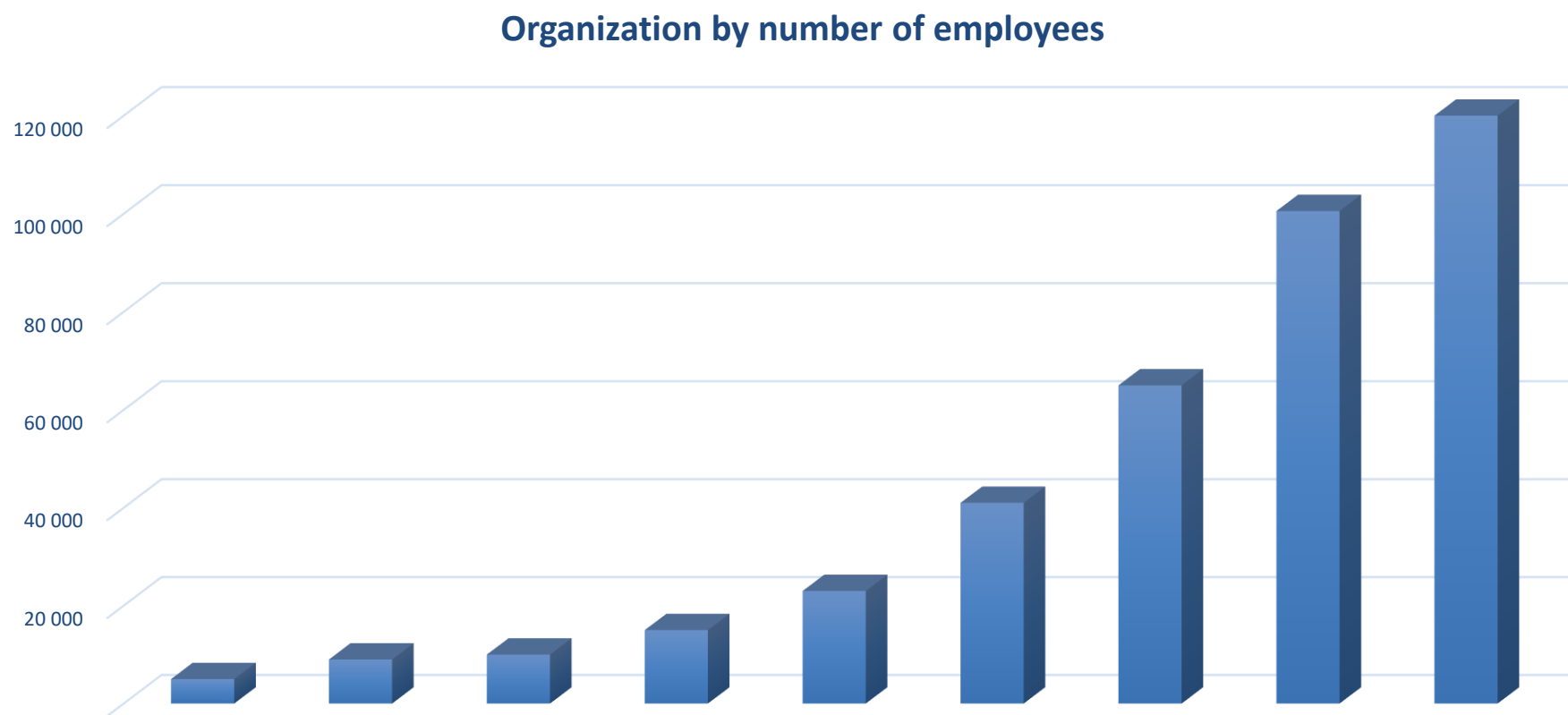Countries : Belgium, Switzerland, France

Example of participants :

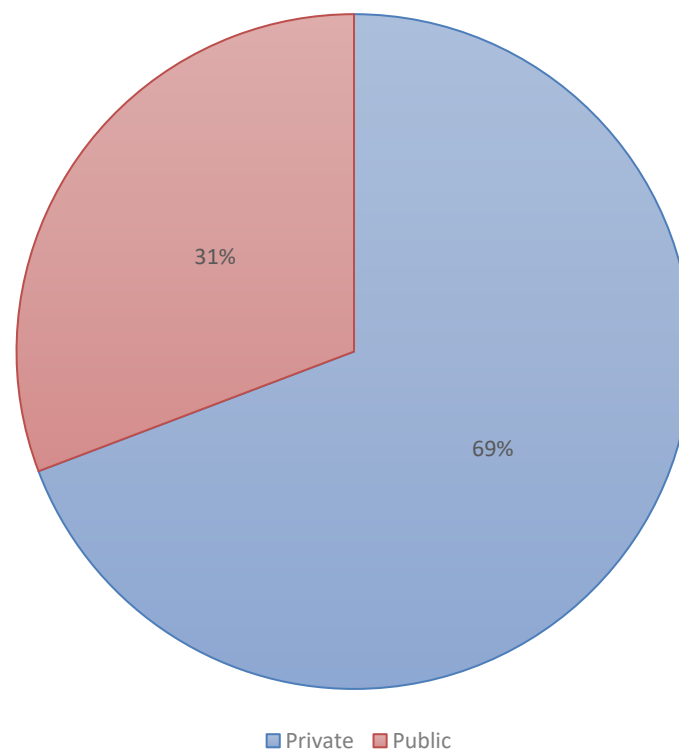# Results :

Countries : Belgium, Switzerland, France

Number of responses per country

Total : Over 1,300,000 people involved in the WeNR2021 study

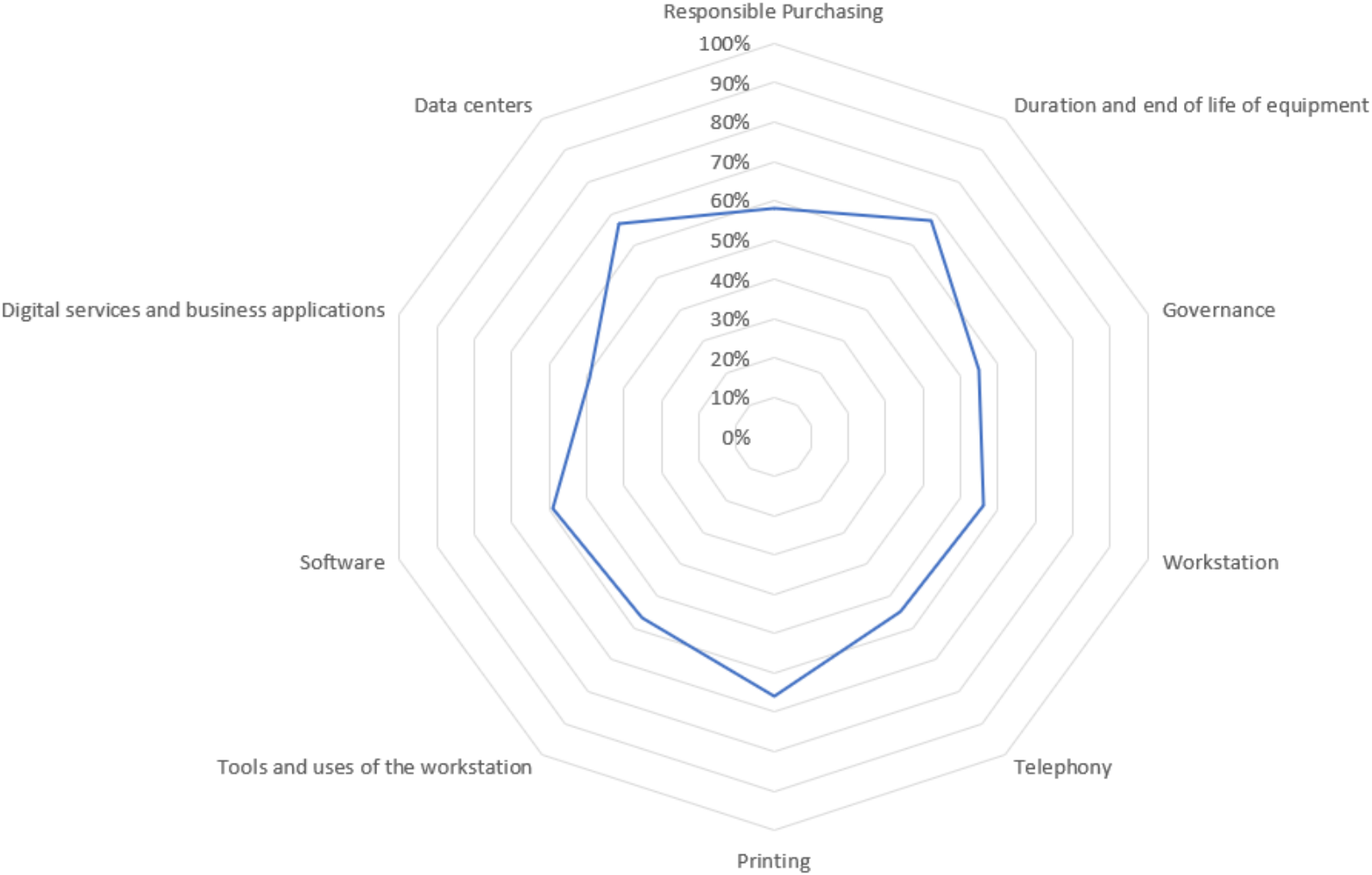**Organization by number of employees**

Results :

All types of organizations: VSEs, SMEs, large companies, local authorities, universities.

Distribution of the public and private sectors

Results :

The most polluting areas are the **user environment and printing**.

The equipment in particular that consumes the most :

1. **Desktops**
2. **Monitors**
3. **Laptops**
4. **Switch**
5. **Wi-Fi_access_point**
6. **Printers**
7. **Local_Servers**

Percentage difference for greenhouse gases between manufacturing and use (Inventory) :

Manufacturing: 93 %

Use: 6 %

Percentage difference for greenhouse gases between manufacturing and use (DC):

Manufacturing: 59 %

Usage: 40 %

Percentage difference for greenhouse gases between inventory and data centers:

Inventory: 82 %

DC: 18 %

Conclusions and Perspectives :

Conclusion :

Methodologies for assessing the environmental impact
of the information and communication technology
communication :

Recommendation L.1450 (Pending publication of the WeNR method in a scientific journal)

Perspective :

- ✓ Creation of the general report WeNR2021 presented to Bercy.
- ✓ A usefull tool to guide Sustainable IT politics

D'ici, on voit +loin !

If you are you interested in develop our benchmark in your country, do not hesitate !

Thank you for your attention

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