Boavizta

Sustainable IT,
**What metrics and ressources
are needed to deliver
a compelling return on investment?**

Sustainable IT IRL*

March 2025

*In real life

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Executive
Summary

Based on interviews with about fifteen organizations recognized for their maturity in sustainable IT/digital sustainability

INVESTMENTS

- According to our respondents, sustainable IT is gradually overcoming the funding challenge, with an average of 1.7 FTEs mobilized and €120,000 in additional investment.
- While organizations that allocate a dedicated budget to sustainable IT generally report strong financial benefits, significant budget allocations remain rare, limiting the ability to scale these efforts.
- **Budget inertia**: The budget allocated to sustainable IT tends to grow in proportion to the organization's overall maturity on the topic. Identifying and launching small, high-impact initiatives can be an effective way to unlock additional funding.
- **ROI as a prioritization tool**: Estimating and tracking the return on investment of sustainable IT efforts can help accelerate their development — yet it is still rarely measured. Involving finance teams early in the process makes it possible to model expected returns and define the right indicators to monitor.

ROI

- Most of the observed savings come from reductions in consumables, hardware purchases, and energy bills.
- We introduce an Investment vs. Financial Gains matrix to help identify the most financially valuable actions.
- The EDF case study demonstrates an annual financial ROI of €23 million and a reduction of 11,000 tons of CO_2 equivalent.

INDICATORS

- Indicators are generally more aligned with operational management. We note a lack of specific and detailed indicators.
- The impact area most commonly — and almost systematically — targeted is that of "end-user hardware" (workstations, printers…).
- The three focus areas are climate impact (reference indicator: CO_2), energy consumption (reference indicator: kWh), and waste reduction (reference indicator: tons of WEEE).

The organizations interviewed highlight the strategic importance of sustainable IT.

By adopting more sustainable practices, they contribute to the fight against climate change while creating value for their stakeholders.

This white paper calls for collective action to accelerate the transition toward a more sustainable digital ecosystem and offers concrete recommendations to support that shift.

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Who are we?

OUR OBJECTIVES

- Enable public and private **organizations** to truly **transform** and take ownership of their digital strategy — whether by choice or through regulation — and to align it with approaches that **respect planetary boundaries**.

- Become an **interprofessional association** whose commons serve as international benchmarks, helping accelerate the reduction of both direct and indirect environmental impacts of digital systems, and shift the trajectory of those impacts.

- Make the environmental impact of digital transformation **tangible** by **creating, standardizing**, and **spreading** commons through a systemic, auditable, standardized, automated, and empowering approach.

+300 members   +15 projects

MISSIONS AND VALUES

WE, AS CITIZENS AND PARTICIPANTS IN THE DIGITAL ECOSYSTEM, RECOGNIZE THE RISKS AND CONSEQUENCES OF EXCEEDING PLANETARY BOUNDARIES — ALONG WITH THE ACCELERATING ROLE OF DIGITAL TECHNOLOGY AND ITS SOCIETAL IMPACTS. WE ARE COMMITTED TO REDUCING THE ENVIRONMENTAL FOOTPRINT OF DIGITAL ACTIVITIES WITHIN ORGANIZATIONS THROUGH THE DEVELOPMENT, CONSOLIDATION, AND SHARING OF DIGITAL COMMONS.

A COMMUNITY OF DOERS

Beyond well-meaning speeches, real progress happens when we roll up our sleeves and work together. We encourage initiative and welcome any effort aimed at improving how we assess, understand, and reduce the environmental impact of digital technology. These efforts should focus on creating resources that are accessible, usable, and understandable to as many people as possible.

WORKING FOR THE COMMON GOOD

We act in service of a cause greater than ourselves, while embracing diversity in identities and backgrounds. Our work is open (open-source, open-data, Creative Commons), and while it may indirectly support commercial initiatives — within the bounds of license terms — its core purpose is to democratize and normalize a thoughtful and informed approach to technology.

IMPACT AS OUR GUIDING PRINCIPLE

At Boavizta, open debate is part of our culture. We strive to ground our work on solid arguments, fostering collective intelligence and, at times, even sparking moments of awareness.
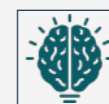
OPEN-MINDEDNESS & SCIENTIFIC RIGOR

The desire to achieve concrete results and tangible impact underlies all our actions and interactions. We continuously hold ourselves to this standard, while maintaining respectful and constructive communication.

Introduction

In 2023, our first white paper, based on a questionnaire and around fifteen interviews, outlined the drivers of a responsible digital approach, its benefits, and its challenges. We also released sector-specific fact sheets to provide greater context for three types of organizations: software publishers, IT consulting firms, and large companies.

Download

https://boavizta.org/en/blog/sustainableit-how-to-get-hierarchy-on-board

At the end of this deliverable, we were aware that our readers had not been provided with an answer: more concretely, how a responsible digital approach materializes from a pilot perspective (KPIs), investments (financial, people), and what return on investment (ROI) is achieved.
The second study offers answers to these questions. We invite you to continue reading! 🍿

In a context where the digital transition is accelerating, it is imperative to rethink our practices to minimize the environmental footprint of the IT sector. This white paper, the result of in-depth interviews with major organizations pioneering responsible digital technology, aims to inform and inspire decision-makers and the general public on responsible digital approaches.

⚠️ **Questions not answered in this report:**

- Impact of AI: we recommend the work of GenAI
- Impact of the Cloud: we recommend Boavizta's publication on the subject.
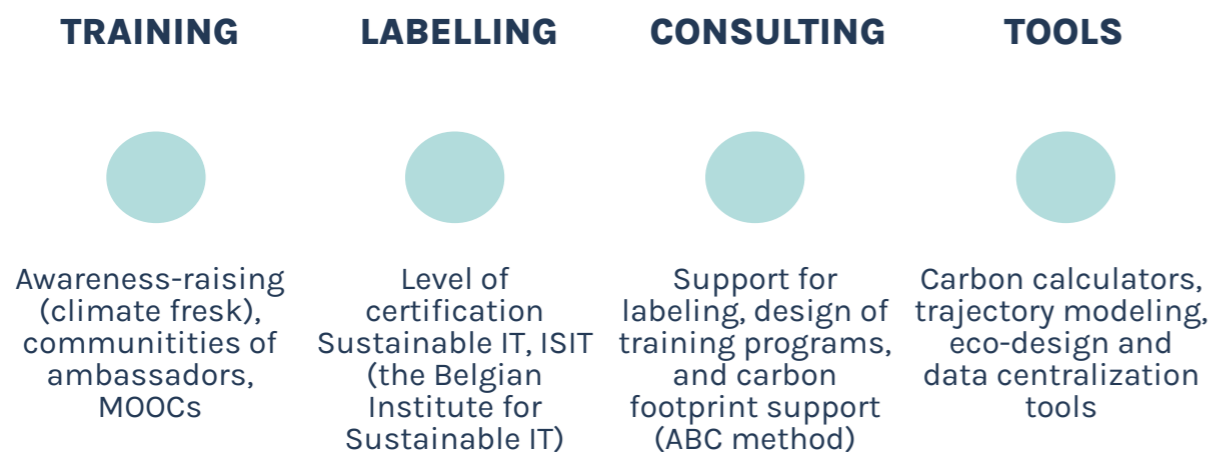
OBJECTIVES OF THE WHITE PAPER

- Defining Indicators of Sustainable IT: We present the main indicators used by organizations to measure the environmental impact of their digital activities. These indicators cover, among other things, device management, energy consumption, and electronic waste management.

- Identifying investments in Sustainable IT practices: We analyze the investments made by organizations, both financially and in terms of human resources (FTEs). These investments include infrastructure modernization, team training, and the development of more sustainable technologies.

- Evaluating Return on Investment (ROI): We examine the returns on investment of Sustainable IT initiatives, highlighting the economic, environmental, and social benefits. Case studies demonstrate that responsible practices can not only reduce operational costs but also strengthen organizations' reputation and competitiveness.

Investments

Key takeaways:

- **Budgetary inertia**: The budget allocated to Sustainable IT is proportional to the overall maturity of RD in the organization: identifying and launching small priority initiatives can lead to securing more budget later!
- **Initiative maturity cycle**: Training and tools are generally the first investment areas chosen, followed by certification. We observe consulting support throughout the maturity cycle for organizations that have the budget.
- **Grants as an accelerator**: Certifications and tools appear to be the investment areas most eligible for grants.
- **ROI as a prioritization factor**: Estimating and monitoring the ROI of Sustainable IT initiatives can facilitate their growth, but it currently seems rarely measured. Involving finance teams from the scoping stage will make it possible to model the expected ROI and define the right indicators to monitor.

The main Sustainable IT investment categories

TRAINING

Awareness-raising (climate fresk), communitities of ambassadors, MOOCs

LABELLING

Level of certification Sustainable IT, ISIT (the Belgian Institute for Sustainable IT)

CONSULTING

Support for labeling, design of training programs, and carbon footprint support (ABC method)

TOOLS

Carbon calculators, trajectory modeling, eco-design and data centralization tools

« Include the responsible digital approach in the objectives of each person in the company and in investment choices and project prioritization. »

RTBF

Distribution of investments of the companies surveyed

The logic here is that for every €100 invested in RD, the companies surveyed invest an average of €59 in consulting, etc.


59% Consulting
20% Training
8% Labelling
13% Tools
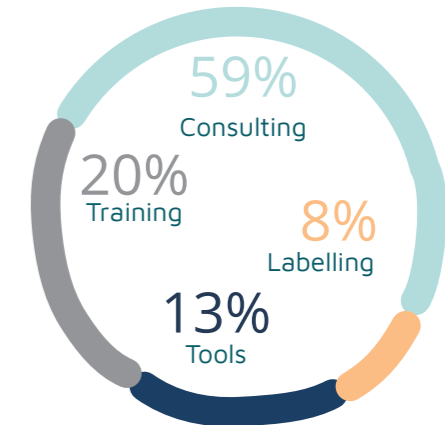
SOME GOOD PRACTICES

- **Budget balancing**: The RD budget can be shared and expanded with departments other than IT (HR, Real Estate, Marketing, Finance, etc.), as is the case at RTBF.
- **"Sustainable IT Advocate"**: RD initiatives can be launched with little or no centralized investment: a collective of referents, a network of ambassadors, and communities are popular with our respondents.
- **Incentivize initiatives**: Some respondents have integrated "ecological bonuses" into their incentive schemes!

Average amounts invested by category (in thousands of euros)

Context: Of the 15 companies that detailed their investments, 40% chose to invest in training with an average investment of 125k€, 60% in tools, 33% in certification, and 27% in consulting.

40% Training
60% Tools
33% Labelling
27% Consulting
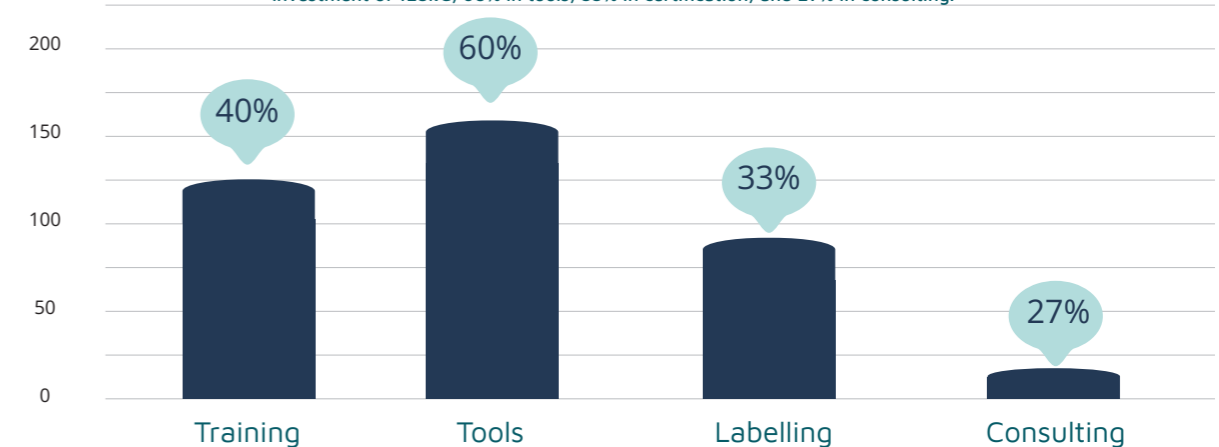
Observations

The majority of companies surveyed have allocated budgets to **assessing** and qualifying their carbon maturity through **training** and **measurement tools**. However, as not all of them are mature or require expertise to support them, respondents have made the effort to allocate **more than 50% of their responsible digital budget** to external services.

« We chose a coaching-training approach to ensure real adoption.» **dolist**

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Investments

Analysis of resources mobilized for Responsible Digital Technology:

Dedicated FTEs and additional budget are not proportional:
• Some organizations equip themselves with several RD FTEs without dedicating a large additional budget
• Others have a substantial budget with less than one dedicated FTE
• Only two very large groups have both several dedicated FTEs and a significant additional budget
Even though SMEs/mid-cap companies allocate smaller amounts on average than large groups, they are proportionally more significant (compared to equivalent turnover).

Of the 17 interviews analyzed, 13 organizations shared information on the budgets invested, and 16 on the FTEs mobilized.
On average, the SMEs/mid-cap companies surveyed invested €158,000 in RD, and large groups €330,000 (including FTEs and additional budget, 3 data points for SMEs/mid-cap companies and 8 for large groups).

Nantes Métropole
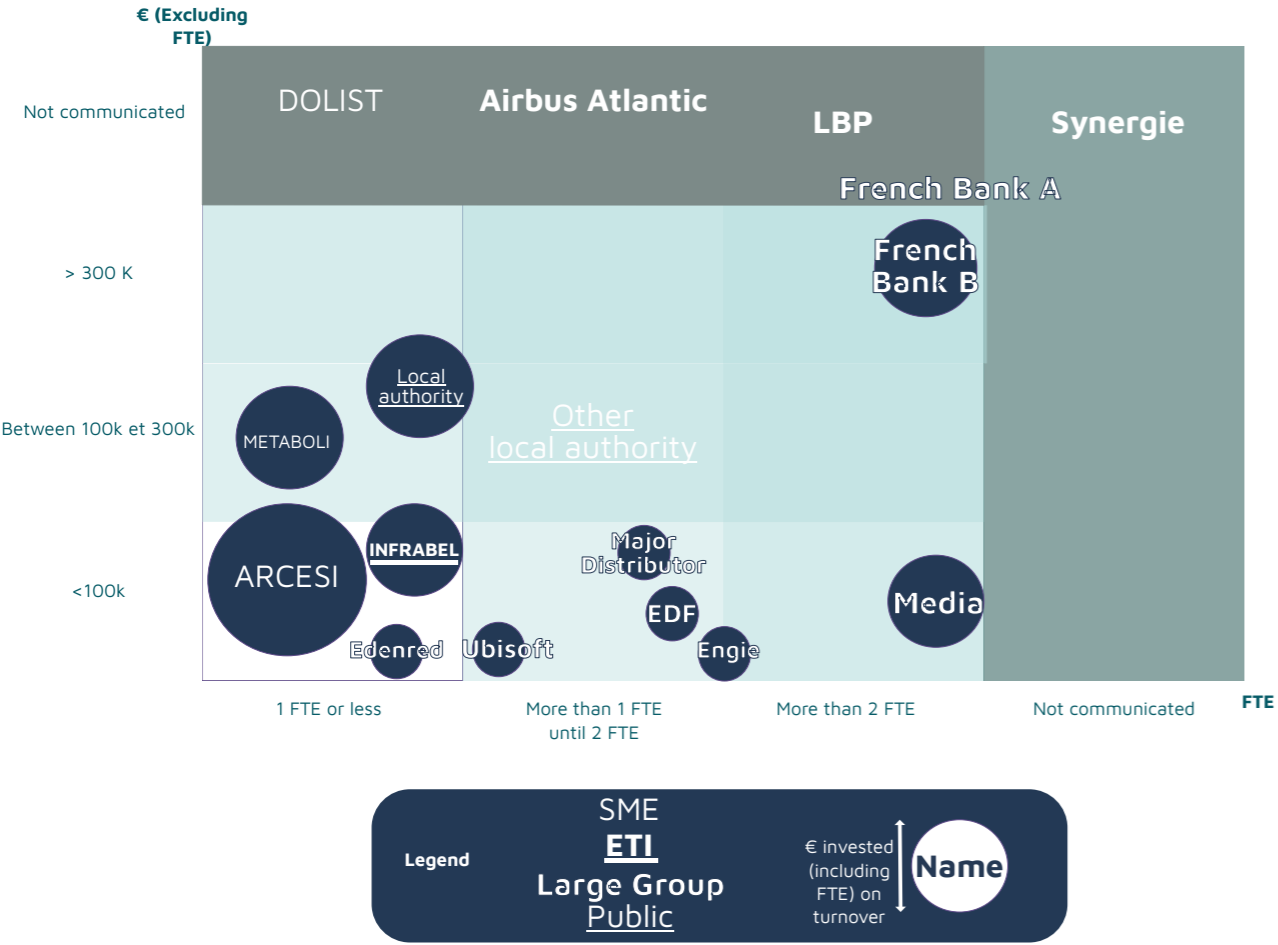
"While we're seeing noticeable improvements in awareness, business departments haven't yet fully adopted the reflex of allocating a dedicated budget to align their project development with the sustainable IT commitments championed by the administration. Defining a responsible digital strategy is an essential first step, but it's not enough on its own.
It's crucial to ensure this strategy is concrete, accessible, and understandable for all stakeholders, down to the most operational levels. This will allow it to be lastingly anchored in daily practices and ensure its long-term deployment and effectiveness."

« Sustainable IT is really about managing change. That means providing financial resources, but even more importantly, investing in people. »

Nantes Métropole

Chart

€ (Excluding FTE)

Not communicated	DOLIST	Airbus Atlantic — LBP	Synergie
		French Bank A	
> 300 K		French Bank B	
Between 100k et 300k	METABOLI, Local authority	Other local authority	
<100k	ARCESI, INFRABEL, Edenred	Major Distributor, EDF, Ubisoft, Engie	Media
	1 FTE or less	More than 1 FTE until 2 FTE	More than 2 FTE	Not communicated

FTE

Legend
SME
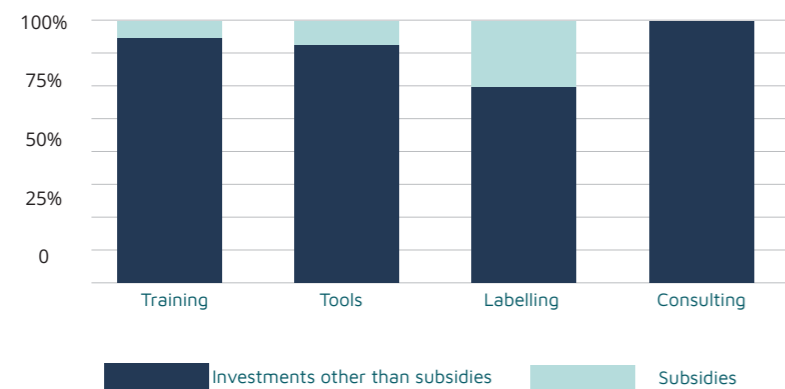ETI
Large Group
Public
€ invested (including FTE) on turnover — Name

Investments

SUBSIDIES

In 2024, certifications and tooling appear to be the investment areas most eligible for public subsidies, amongst the companies surveyed.

Distribution of ADEME Subsidies (%) on Invested Amounts

The ADEME is the reference organization that helps businesses in France with their ecological transition initiatives.

Legend: Investments other than subsidies · Subsidies

SOME ORGANIZATIONS SPECIALIZING IN AID AND SUPPORT MECHANISMS FOR DIGITAL SOBRIETY:

Alt Impact - Stratégie à la sensibilisation

Agir pour la transition - 35 dispositifs d'aide

Les Aides.fr - Transition écologique des TPE-PME

CONCLUSION

For our respondents, Sustainable IT seems to be gradually overcoming the funding challenge, with an average of 1.7 FTEs mobilized and an additional €120k in investments. Furthermore, organizations that allocate a dedicated budget to Sustainable IT praise its financial benefits.

Nevertheless, the allocation of a significant budget dedicated to Sustainable IT still appears to be rare, which compromises the scaling up of certain initiatives.

Therefore, modeling and tracking the financial returns of these initiatives from their initial framing emerges as a catalyst for their launch. Also, leveraging grants or tax credit mechanisms can tip the balance.

In collaboration with each studio, the IT teams have implemented a new solution called Power Plug since early 2024. This solution manages the energy consumed by our IT assets, thereby reducing costs and carbon emissions. It ensures that PCs and connected devices like monitors go into sleep mode when not in use, provided they're not on an exclusion list. The delay for sleep mode is set longer during office hours and shorter outside of them.

To date, it has been deployed on 12,000 devices across 32 sites.

The results are simply astounding: energy savings are estimated at 4,000 MWh, which represents 2,000,000 kg of CO2.

(~ 1,200 round trips between Paris and Montreal by plane.)
Ultimately, this means we're saving €775,000 in energy every year!
And they're not even done yet, as they're trying to reach all 18,000 eligible workstations in the coming months. »

Main ROI drivers

The returns on investment are to be classified into three main categories:

- Financial gains
- Environmental gains
- And social gains

If all respondents agree that the RD strategy implemented in their organization offers benefits across these three levers, it's clear there's a lack of maturity among the organizations surveyed in providing stable, quantifiable data. The ROI of RD is mostly not tracked within organizations. This observation correlates with the priority given to engaging governance and employees in adopting changes in practices, on one hand, and with indicator tracking, on the other.
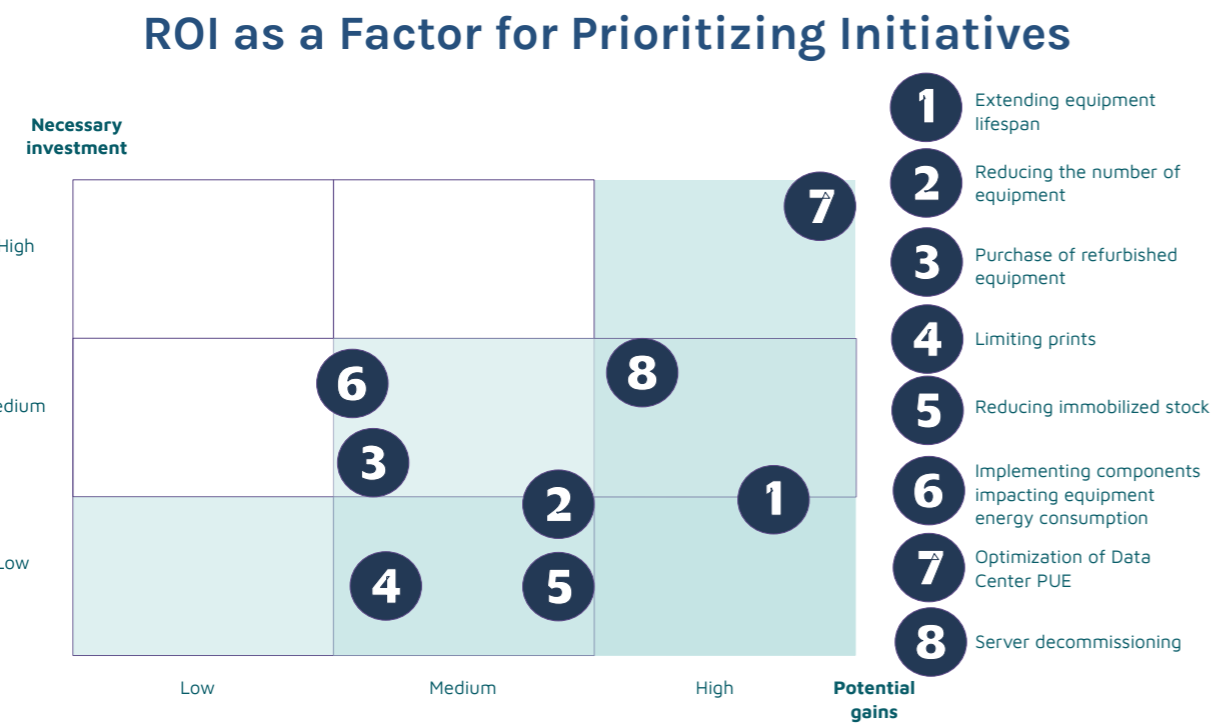
All respondents do, however, agree on the need to implement RD gain tracking and to establish a quantifiable follow-up for these gains.

The quantifiable ROIs are primarily savings made on the following expenditure items:
1. Consumable invoices
2. Equipment invoices
3- Energy invoices

Exceptionally, RD provides a comparative advantage in securing new markets. ARCESI, a tailored digital services company, wins tenders related to digital accessibility needs.

At this stage, while **gains** can be significant, they **remain marginal** compared to IT expenditures in each organization.
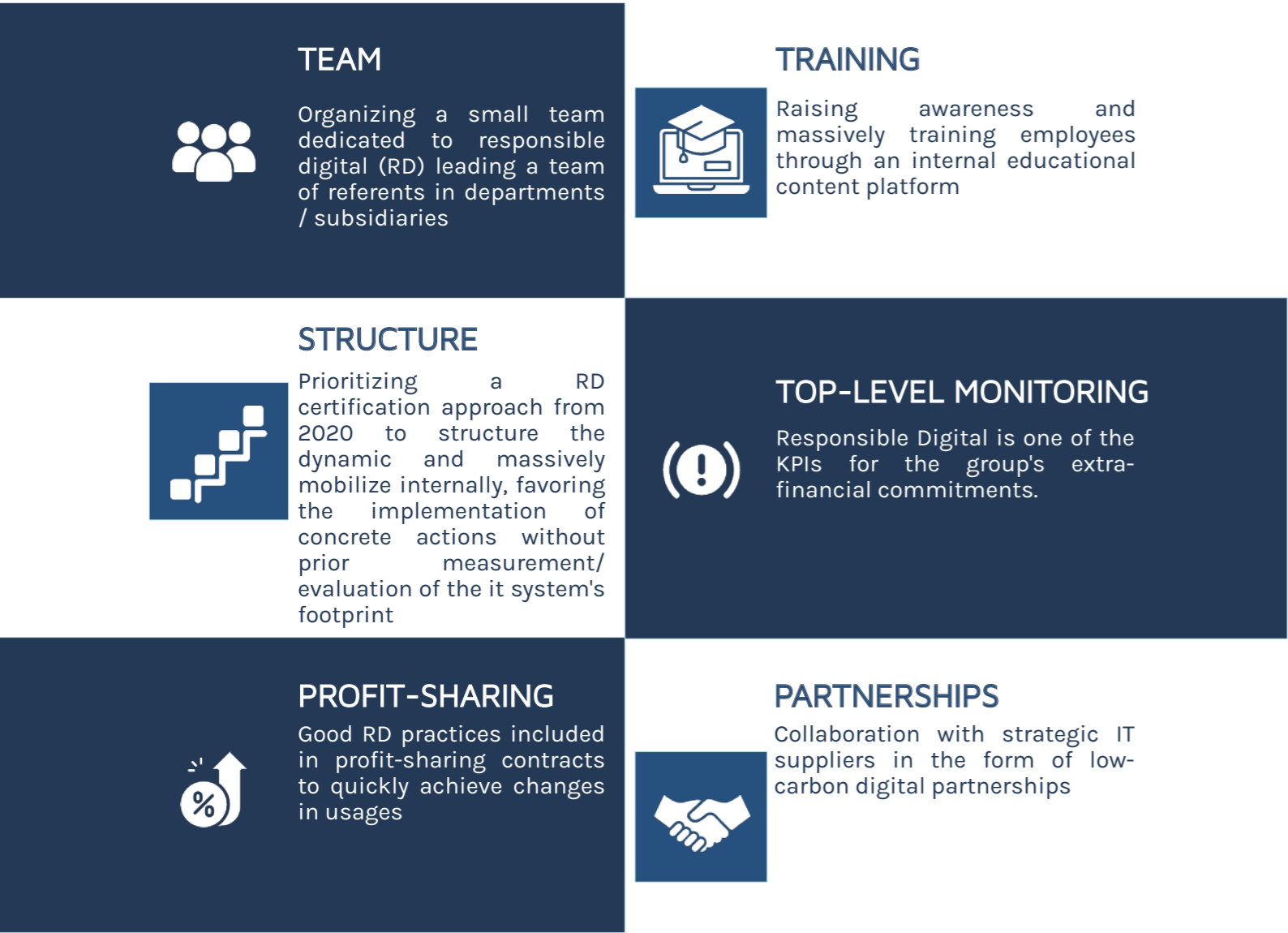
ROI as a Factor for Prioritizing Initiatives

1	Extending equipment lifespan
2	Reducing the number of equipment
3	Purchase of refurbished equipment
4	Limiting prints
5	Reducing immobilized stock
6	Implementing components impacting equipment energy consumption
7	Optimization of Data Center PUE
8	Server decommissioning

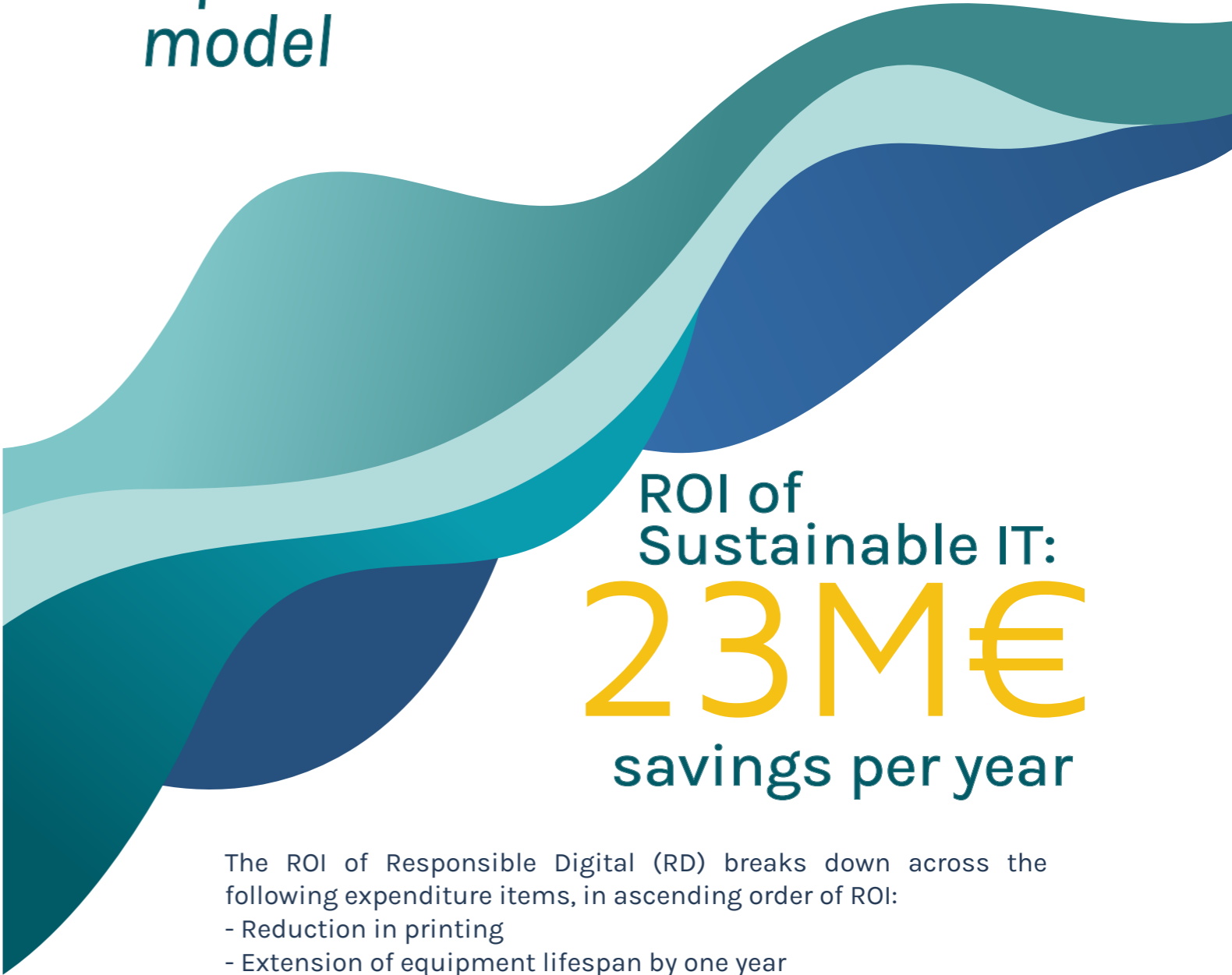| ACTION LEVER	LEVEL OF INVESTMENTS	TYPE OF ROI	LEVEL OF BENEFITS
1 - Extending equipment lifespan		Decrease in equipment bill	High: 20% to 50% decrease in the annual bill, taking full effect after 3 years.
2 - Reducing the number of equipment		Decrease in equipment bill	Medium - three-year impact
3 - Purchase of refurbished		Decrease in equipment bill	Stable or decreased equipment bill, depending on the organization
4 - Limiting prints		Decrease in consumables bill	Medium - over 30% decrease with immediate effect.
5 - Reducing immobilized stock		Decrease in charges	Low to Medium, depending on initial stock and reduction efforts.
6 - Implementing components impacting equipment energy consumption		Decrease in energy bill	Medium. Ubisoft : -775K€ / year
7 - Optimization of Data Center PUE		Decrease in energy bill	High
8 - Server decommissioning		Decrease in energy bill	High
9 - Ecodesign Specifications		Intellectual services invoice and energy bill	Not quantifiable
10 - Internal Training on Ecodesign		Decrease in energy bill	Not quantifiable
11 - Employee Awareness / Training on Responsible Digital		Social ROI: Retention and Attractiveness	Not quantifiable

LESSONS LEARNED

Considering that IT is a centralized support department across the entire EDF organization, EDF has chosen to invest along six axes:

TEAM

Organizing a small team dedicated to responsible digital (RD) leading a team of referents in departments / subsidiaries

TRAINING

Raising awareness and massively training employees through an internal educational content platform

STRUCTURE

Prioritizing a RD certification approach from 2020 to structure the dynamic and massively mobilize internally, favoring the implementation of concrete actions without prior measurement/ evaluation of the it system's footprint

TOP-LEVEL MONITORING

Responsible Digital is one of the KPIs for the group's extra-financial commitments.

PROFIT-SHARING

Good RD practices included in profit-sharing contracts to quickly achieve changes in usages

PARTNERSHIPS

Collaboration with strategic IT suppliers in the form of low-carbon digital partnerships

2 FTE
on RD

50k
annual budget

A profitable RD investment model

ROI of Sustainable IT:
23M€
savings per year

The ROI of Responsible Digital (RD) breaks down across the following expenditure items, in ascending order of ROI:
- Reduction in printing
- Extension of equipment lifespan by one year
- Decrease in server energy consumption

The gains are recurring and observable once the levers are implemented, with the exception of extending workstation lifespans, where the effects are accrued globally over 3 years, the time it takes to renew the workstations.

In addition, there are environmental and social gains:
- 11,000 tons of CO2 equivalent / year
- Employee pride and talent attractiveness.

The next goal is to achieve a financial ROI from the ecodesign of digital services.

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KPIs

You can find all indicators in our database:

https://boavizta.org/en/indicateurs-nr

GENERAL INSIGHTS

The main takeaways from the 2024 survey are as follows:

The most frequently assessed area of impact is user equipment—such as devices, printers, and similar hardware.

The three most commonly tracked issues are climate change (reference indicator: CO_2), energy (reference indicator: kWh), and waste reduction (reference indicator: tons of WEEE). At this stage, we can't yet speak of a true "multi-impact" approach, though a few initiatives are emerging — such as the use of LCA (Life Cycle Assessment) databases.

In addition, some organizations track indicators related to commitments (e.g., number of projects involved in sustainable IT initiatives) and objectives (e.g., 100% of subsidiaries labeled sustainable IT by 2025 / each subsidiary's IT department allocating 2% of its budget to these initiatives).

In general, the indicators tend to focus on the environmental footprint of the IT system (or simply hardware usage), rather than on actual decarbonization actions. One example is procurement policies, which often aim to characterize environmental impact, but not yet focused on reducing it.

Finally, very few outcome-based indicators were identified in the study, and no organization has defined or is tracking its own "low-carbon trajectory".

Three main areas are monitored using specific indicators:

Climate:
- Overall digital footprint
- Carbon footprint per employee
- Annual carbon assessment
- Avoided emissions

Energy, with consumption monitoring (MWh)

Waste : measured both as total waste produced (in tons) and the volume of e-waste (WEEE) recycled.

Additionally, some organizations are adopting indicators related to commitments (e.g., number of projects involved in sustainable IT initiatives) and objectives (e.g., 100% of subsidiaries certified in sustainable IT by 2025; each subsidiary IT department allocating 2% of its budget to these initiatives).

Sustainable IT is still mainly seen as an ethical or environmentally conscious effort rather than a driver of operational and financial efficiency—even though environmental and economic gains often go hand in hand.
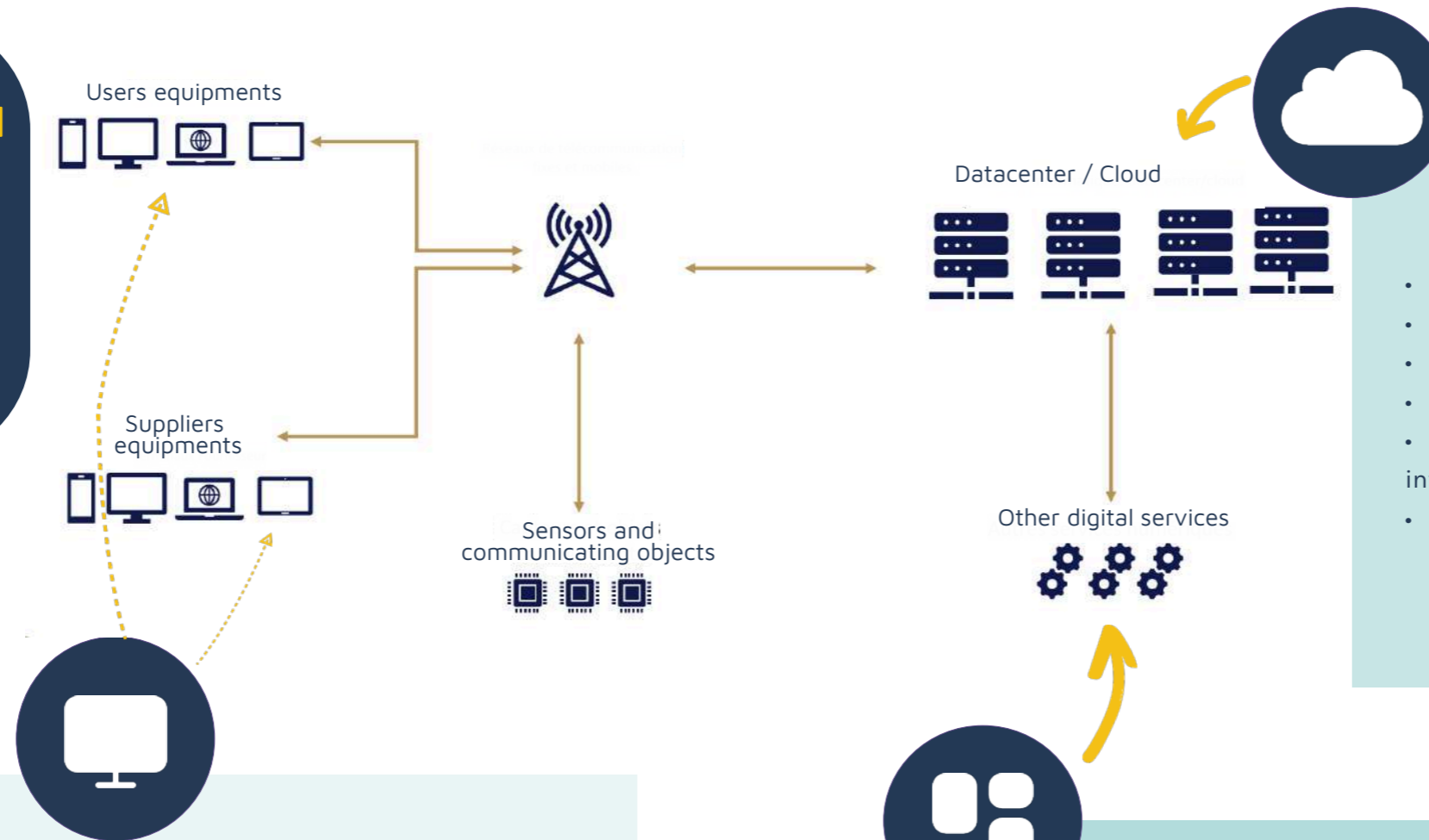
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Technical KPIs

Users equipments

Suppliers equipments

Sensors and communicating objects

Datacenter / Cloud

Other digital services

CLOUD & INFRA

- PUE of Cloud and Data Centers + WUE
- Data Center & Servers Power Consumption
- Azure and AWS FinOps monitoring
- CO_2 emissions from the "servers" part
- Carbon footprint and carbon intensity of infrastructure products (Vcpu, Ram, VM…) per k€
- Reporting of "decommissioning candidates" (about 2000 equipments: servers /switch…)

END-USER COMPUTING

- Equipment lifespan / Number of equipment that has exceeded its theoretical lifespan / % of equipment retired before the cut-off date (obj: less than 10%)
- Number of equipment per employee
- Refurbished purchases rate (+ target: 50% rate to be achieved)
- Percentage of recycling of old computers and reuse
- Number of impressions and usage rates, collaborative modes
- Number of "sleeping" computers
- Number of machines enrolled
- Number of pieces of equipment donated each year to refurbishers
- Equipment budget
- Percentage of PCs with a "light" master

APPS

- Number of apps with an Eco-score
- Implemented a GreenScore to identify how well the in-house eco-design framework has been applied - by application

Note: we have decided to present the indicators on this functional diagram, which is used by ADEME in its PCR documents

(indicators listed in order of occurrence)

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Sustainable IT, what metrics and ressources are needed to deliver a compelling return on investment?

IT System KPIs

PEOPLE

The KPIs listed here relate to the people concerned by the digital service and/or the Sustainable IT policy

- Number of people trained/sensitized to the Sustainable IT
- Number of people trained in the ecodesign framework
- Number of people trained through the frescoes / collages
- Number of certified people
- Number of meetings/events with the sustainable IT community
- Usage KPIs for collaboration platforms
- Number of video calls carried out in video rooms/year
- Percentage of people who use a programmable socket to turn off the box at the desired time at night
- Carbon footprint profit-sharing

SUPPLIERS

The KPIs listed here relate to the organization's "sustainable procurement" policy.

- Indicators for monitoring services delivered by suppliers (accessibility and eco-design level, number of workstations mobilized, etc.)

Subcontractors:
- Percentage of IT contracts with environmental clauses
- Integrate an environmental criterion at the same level as the price (= 25%) in the analysis of offers for all acts of ordering.
- Percentage of contracts where environmental considerations account for 10% of the score (target: 80% of contracts by 2026)
- Carbon footprint of the services provided the previous year (top 20 suppliers from each IT department)

OTHER

KPIs related to sustainability

- GreenIT website score
- RGAA compliance rate (French Guidelines for Digital Accessibility)
- (Special Gaming) Impact of Environmental Labelling on Players' Purchasing Practices
- Implementation of Multi-criteria indicators
- Social KPI: number of employees with disabilities, gender diversity

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Raising awareness on the challenges of Sustainable IT is often one of the first building blocks laid when implementing an Sustainable IT approach in companies. The training/awareness-raising offers are expanding. #digitalcollage #thegreencompagnon #thegreensoftwarefoundation

Vendors and partners are increasingly involved in companies' sustainable IT efforts — especially during the bidding phase where environmental criteria are established to become the norm. This therefore becomes a differentiating factor for bidding companies

'Websites are often mentioned, especially in terms of accessibility, which is a regulatory obligation.
We are seeing the emergence of social KPIs, but this is still in its infancy and quite complex to trace.

CONCLUSION

Responsible digital practices are progressing, and the organisations investing in them are seeing financial benefits.

However, significant allocation of resources (both financial and human) is rare and takes time, which slows down scaling up.

To address this challenge, modeling and monitoring ROI right from the projet planning stage are crucial, along with the effective use of financial opportunities. However, this study highlights that these indicators are still rarely or insufficiently tracked.

Considering the priority of climate, energy, and waste challenges, the financial ROI of Responsible Digital practices is essential for scaling progress.

We plan to continue our research in this area in 2025. If your organisation's Sustainable IT strategy can contribute to our reflections, please contact us!

PARTICIPATING ORGANISATIONS

We would like to thank the organisations participating in this study!

Finance and Insurance

LA BANQUE POSTALE

BNP PARIBAS

CA GROUP INFRASTRUCTURE PLATFORM

Transportation

INFRABEL

Energy

EDF

ENGIE

Technology

metaboli unlimited gaming

UBISOFT

dolist DATA & MESSAGING SOLUTIONS

Public administration

BORDEAUX MÉTROPOLE

Nantes Métropole

Media

rtbf.be

Commerce

Coopérative U

Services

Edenred

ARCESI

SYNERGIE

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