



Responsible Digital

How to get your
management
on board ?

December 2023

ABOUT

Boavizta is an independent, cross-organization association dedicated to assessing the environmental impacts of digital technology in organizations.

Among the various activities of Boavizta, the "Convincing Arguments" workgroup aims to highlight elements in favor of a responsible digital approach in organizations, whether qualitative or quantitative.

This document is the result of a year's work, and we hope it will provide you with valuable insights.

- The Project Team

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Who are we?

OUR OBJECTIVES

- Enable public and private **organizations** to truly **transform** and take responsibility (either by choice or regulation), and to align their digital strategies **with the planetary boundaries**.
- To become an **interprofessional association**, whose commons become **international** standards, helping to accelerate the **reduction** of both direct and indirect **environmental impacts** of digital technology and to **influence the trajectory** of these impacts.
- **To materialize** the environmental impact of digital transformations through the **creation, standardization** and **dissemination** of **commons** resources in a systemic, auditable, standardized, automated and empowering approach.

+250

Volunteer members

+15

workgroups

MISSION AND VALUES

WE, AS CITIZENS AND DIGITAL ACTORIS, ARE AWARE OF THE RISKS AND CONSEQUENCES OF EXCEEDING PLANETARY BOUDARIES AS WELL AS THE ACCELERATING ROLE OF DIGITAL TECHNOLOGY AND ITS SOCIAL IMPACTS. WE ARE COMMITTED TO REDUCING THE ENVIRONMENTAL IMPACT OF DIGITAL TECHNOLOGY IN ORGANIZATIONS THROUGH THE DESIGN, AGGREGATION, AND SHARING OF DIGITAL COMMONS.



A COMMUNITY OF DOERS

Beyond mere rhetoric, it is with hands-on involvement that we make progress together. We encourage initiative-taking and warmly welcome any effort aimed at improving the evaluation, understanding, and reduction of environmental impacts associated with digital technology. The efforts undertaken should aim to create resources that are accessible, usable, and understandable by the widest possible audience.



SERVING THE PUBLIC INTEREST

We act for a cause greater than ourselves while embracing a diversity of identities and profiles. Our outputs are open (open-source, open-data, creative-commons) and, while they may indirectly fuel commercial initiatives in compliance with licenses, their goal is to democratize and systematize a critical and enlightened approach to technologies.



IMPACT AS A GUIDING THREAD

At Boavizta, the exchange of ideas is common; we aim to rely on solid arguments to foster collective intelligence and even some moments of realization!



OPEN-MINDEDNESS & SCIENTIFIC RIGOR

The desire to achieve concrete results and a tangible impact underlies all our actions and interactions. We constantly remind ourselves of this imperative with goodwill in our exchanges.

Impacts of Digital Technology

DIGITAL POLLUTION

MANUFACTURING

A **2g chip** requires 1.6g of oil, 32 liters of water, 700g of fossil gas, and 190g of chemicals for its production. Hence, no device is insignificant. For comparison, a PC requires **2.5 tons of raw materials**.

USAGE

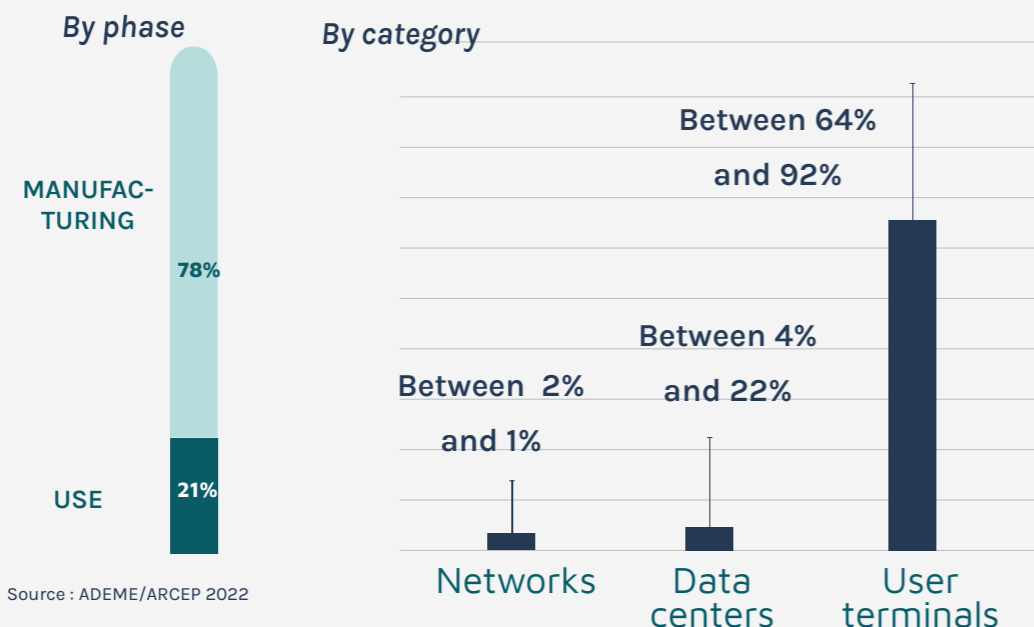
Energy consumption is **omnipresent** throughout the lifecycle of devices. Data centers, in particular, are major consumers. The total amount of data created in the world more than doubles each year. Ultimately, nearly **90% of all global data has been produced in the last two years**.

RECYCLING

57 millions de tonnes par an de déchets numériques dans le monde. **2kg de déchets électroniques par an et par Français**, soit 600 000 tonnes par an en France. Ils sont devenus quasiment non-recyclables à cause de la **miniaturisation** et de la **complexification** constante des composants.

Sources : GreenIT, Radio France, WEEE

MAJOR EMISSION SECTORS



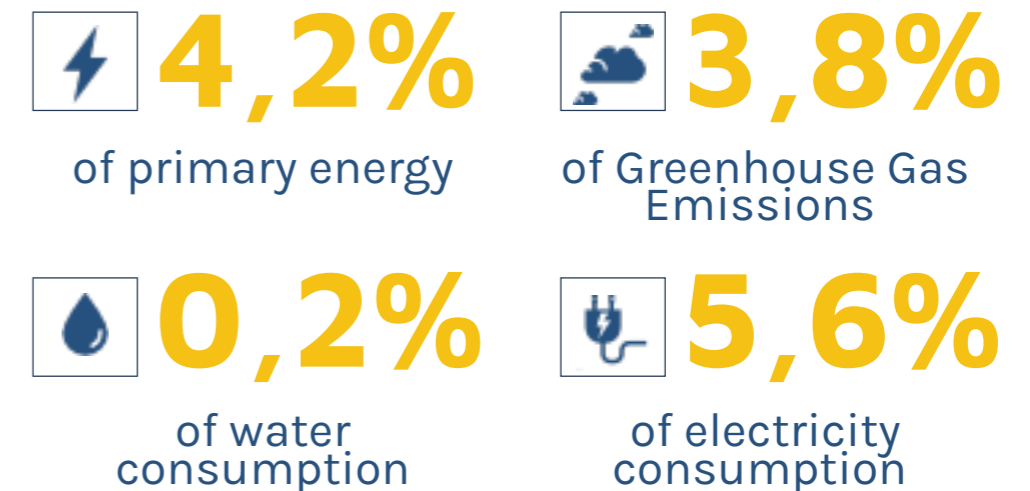
Source : ADEME/ARCEP 2022

Often underestimated and even invisible for decades, the environmental impact of digital technology is very real. Digital technology even ranks among the most polluting industries on our planet.

The rapid growth of new technologies combined with the over-consumption of equipment and the production/storage of an enormous quantity of data leads us to an alarming conclusion.

To ensure you understand the stakes of Responsible Digital, here are some initial statistics.

Some global statistics



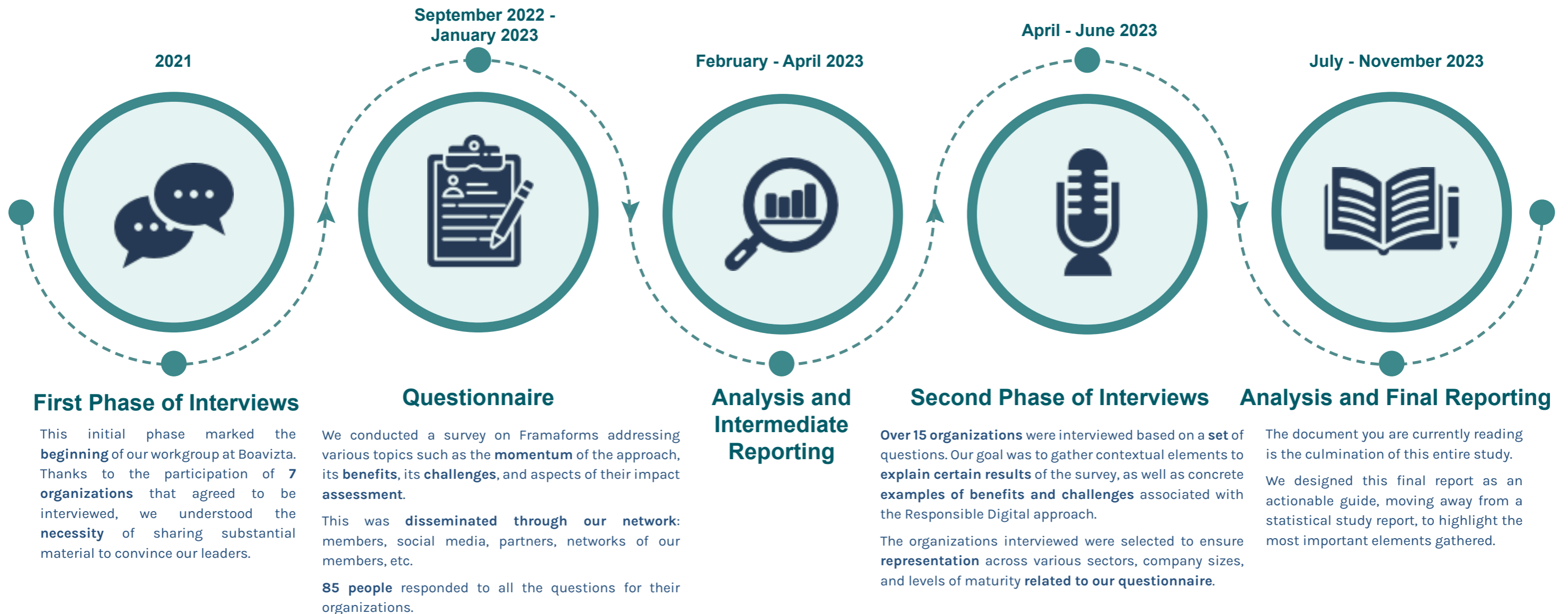
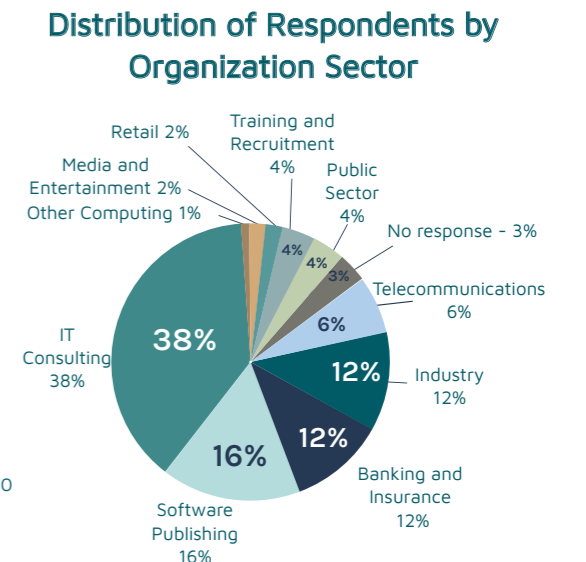
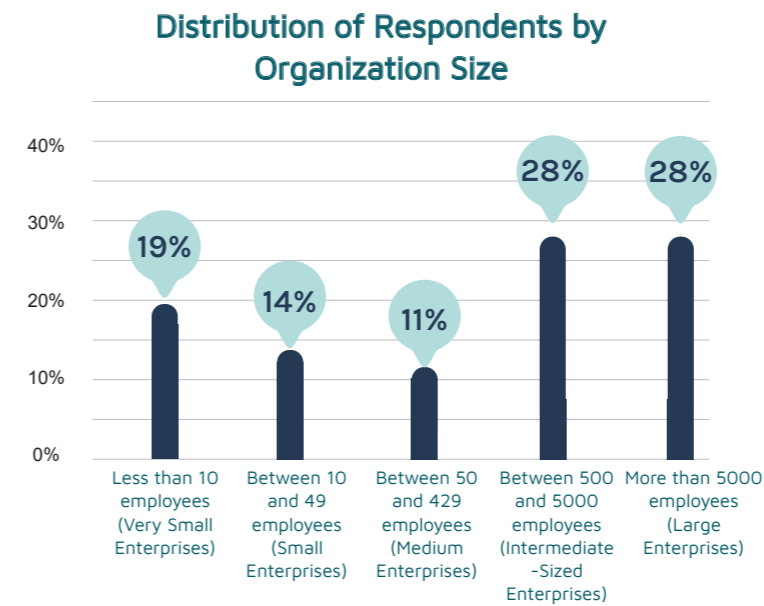
EQUIVALENT TO 2 TO 3 TIMES THE ELECTRICAL CONSUMPTION OF FRANCE.



Source : GreenIT

Approach of Our Study

The 'Convincing Arguments' workgroup lasted just over a year and gathered between 3 and 12 volunteer members of Boavizta each week.



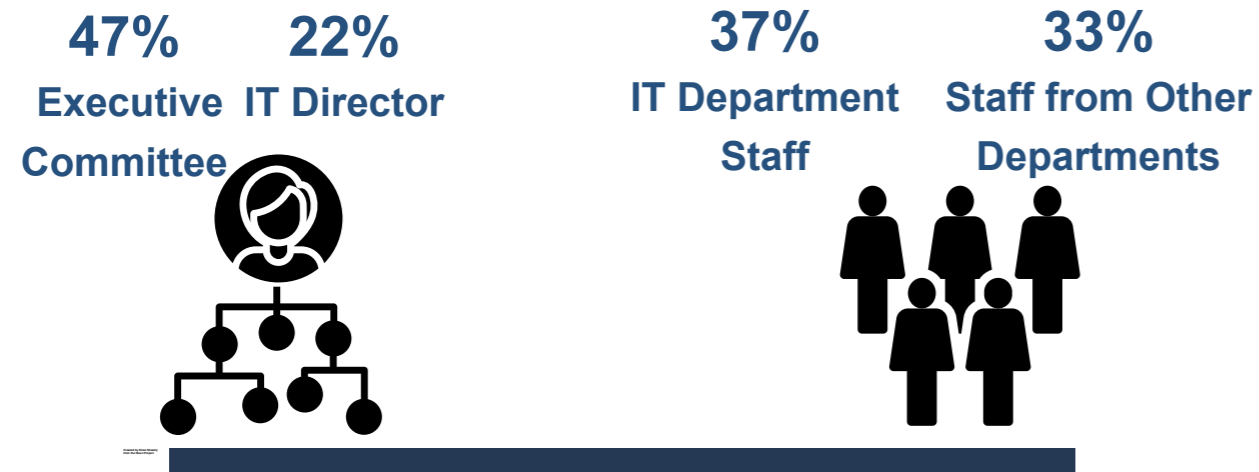
Momentum of a Responsible Digital Approach

The Executive Committee or Top Management is the only entity capable of sustaining a Responsible Digital approach within an organization. Without their sponsorship, motivations and initiatives fade away.

However, the initiators of this RD approach vary according to the size of the company or sector. You will find specific details for each profile starting from page 24 of this study.

WHO INITIATED YOUR DIGITAL RESPONSIBILITY APPROACH?

(multiple answers possible)



« Progress is made when middle management agrees to allow an employee to devote time to Green IT. »

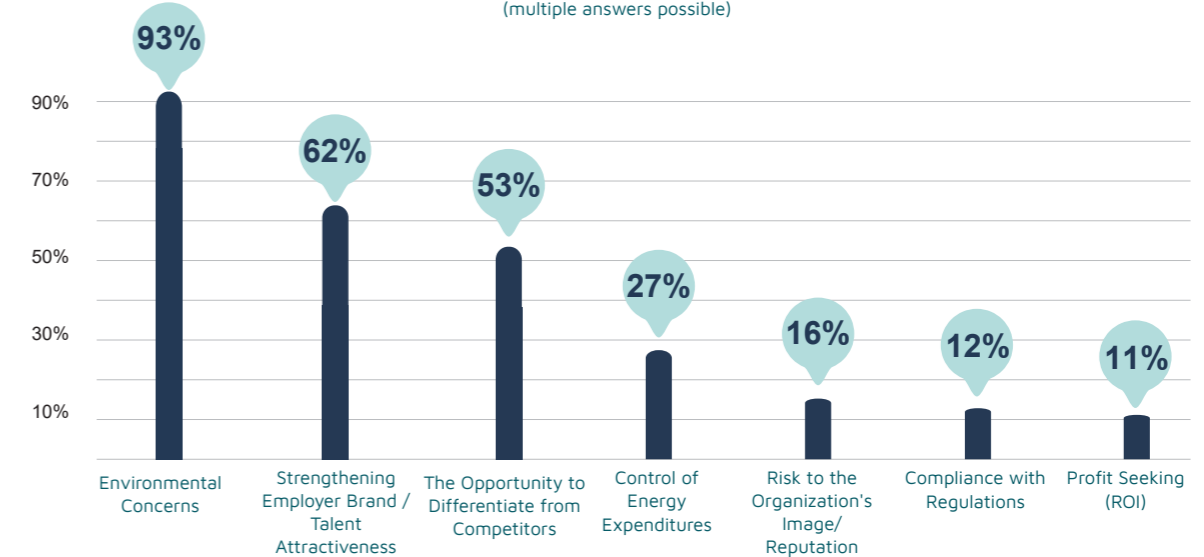
Thalès

THE ROLE OF EMPLOYEES

The initiation of Responsible Digital projects has often been the work of a few motivated, organized, passionate staff members, especially those tolerated by their immediate management.

Arguments in Favor of Initiating a Responsible Digital Approach

(multiple answers possible)



JOINT MANAGEMENT-EMPLOYEE LEADERSHIP

Regardless of the reason for initiating a Responsible Digital (RD) approach, it is essential to seek sponsorship from decision-makers to ensure the project's sustainability with the necessary resources (time and budget) and to align it with the overall CSR approach. However, the importance and influence of staff members in implementing an RD approach should not be overlooked. Without them, the RD approach remains just a vision. It is through their skills (current or in training) that each organization will find customized actions to efficiently reduce their impact.

We expected the impetus could also come from regulations, clients, or investors. Indeed, practices are maturing, and external constraints and expectations are becoming stronger. However, the study revealed that a Responsible Digital approach primarily originates from an internal demand (leaders, IT Director, and/or employees)



Arguments in Favor of Responsible Digital

Through this study, we aimed to provide employees and managers who wish to promote a Responsible Digital approach within their organization with **concrete arguments**. Several reasons for initiating a Responsible Digital approach were proposed in our questionnaire. We have grouped them into **4 key arguments**. For each argument, you will find a double page including:

- **details from the study** and graphs related to the argument,
- **testimonials** from the organizations interviewed,
- additional information, useful if you wish to **use** the argument!



Unsurprisingly, the argument overwhelmingly favored by 93% of respondents is 'environmental concerns'. We consciously chose not to elaborate on this one.

It seemed realistic to assume that **this argument alone was not sufficient** to convince organizations that have not yet started their Responsible Digital journey to embark on it. Therefore, our focus will be on additional reasons that ensure a **quick and certain decision-making process**.



REGULATION

12%

of respondents considered that this argument was the origin of their Responsible Digital approach.



FINANCIAL ROI

38%

of respondents considered that this argument was the origin of their Responsible Digital approach.



DIFFERENTIATION

53%

of respondents considered that this argument was the origin of their Responsible Digital approach.



EMPLOYER BRAND

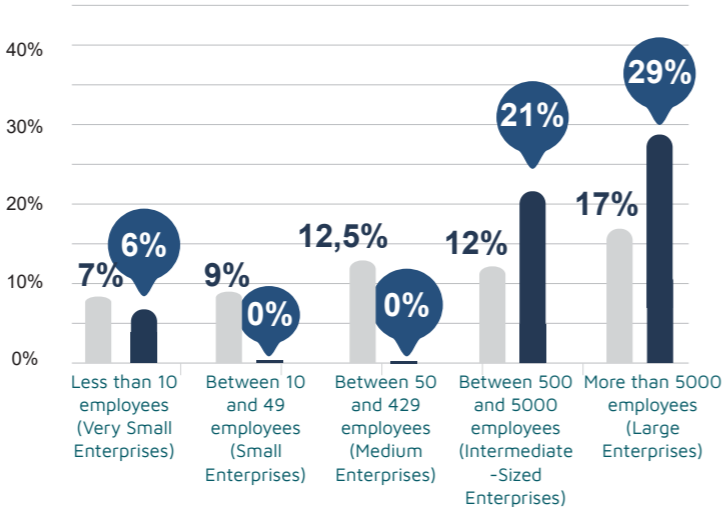
62%

of respondents considered that this argument was the origin of their Responsible Digital approach.

ARGUMENTS Regulation

Argument vs. Observed Benefit (distribution by organization size)

(multiple answers possible)



In gray: organizations that answered "Regulation" to the question "What were the arguments in favor of initiating the RD approach?"
In dark blue: organizations that answered "Compliance with regulations" to the question "What were the benefits of the RD approach?"

Among the 7 selected arguments supporting a Responsible Digital approach, respondents ranked compliance with legislation **in second to last place**, indicating that legal requirements are not yet considered a sufficient driving force... yet the legal framework is taking shape!

For
29%
of organizations with more than 5000 employees, compliance with regulations is one of the benefits of the Responsible Digital approach.

Aside from the **public sector** and **education**, few industries are constrained by legislation surrounding Responsible Digital practices.

Although public authorities are addressing the issue through the establishment of the **HCNE** (High Committee for Eco-Responsible Digital), the regulation itself is slow to become punitive. However, it's worth noting the **emergence of a legislative framework with the REEN law as its flagship**.

"The REEN law was the trigger for our Responsible Digital approach."
(Public Sector)

Here are the key principles of the 3 laws supporting Responsible Digital:

REEN (2021)

Aims to reduce the environmental impact of digital technology

- Raise awareness among users about the environmental impact of digital technology
- Limit the renewal of devices
- Promote virtuous digital usage
- Make data centers and networks less energy-intensive
- Deploy a responsible digital strategy across territories

AGEC (2020)

Anti-Waste Law for a Circular Economy

- Eliminate single-use plastic
- Better inform consumers
- Fight against waste and for solidarity-based reuse
- Act against planned obsolescence
- Produce better

CSRD

At the European level, it will mandate the publication of information in non-financial reporting starting from 2025 (for 2024 data).

- Broaden the scope, and therefore the companies concerned (50,000)
- Strengthen reporting obligations in a sustainability report
- Require a unique European electronic format, xHTML, for publication
- Add a requirement for information verification by an auditor or an independent third party.

ARGUMENTS

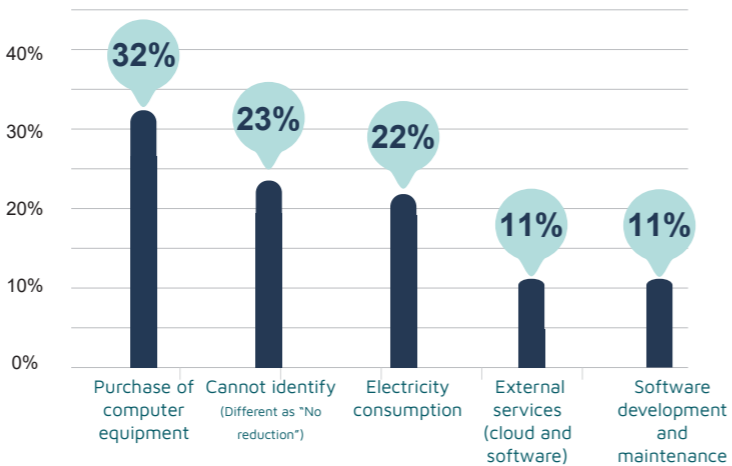
Financial ROI

Firstly, we noticed that the reduction of expenses is not the primary lever desired and identified by respondents. This may be related to the **lack of maturity of indicators** and therefore to the ability to track the savings generated.

The financial valuation of a Responsible Digital approach is not straightforward; 23% of respondents **do not know how to quantify it**, and 26% do not think that RD reduces expenses.

In the graph below, you will find the responses from organizations that have observed financial savings.

Top 5 Cost Reductions Related to Responsible Digital Practices
(multiple answers possible)



Organizations primarily reported monitoring impacts related to their IT infrastructure, and as a result, one-third indicated a reduction in equipment costs.

Among the most followed indicators of the RD approach, electricity consumption ranks second, just after greenhouse gas (GHG) emissions. It is, therefore, coherent to find electricity consumption among the most significant cost reductions observed.

Clear correlations can be made between RD and more responsible purchasing. RD also promotes lower electricity costs through more sparing use of equipment (computers, servers, etc.).

Optimizing costs related to information systems is a significant challenge within organizations, especially in a highly digitized world. **Allocating the right resources to the right needs with proper measure has thus become a competitive issue and an important factor in financial gains and loss limitations.**

"RD is generally a provider of savings because it requires good mastery of one's digital environment"
(Large Enterprise - Services)

Limiting electricity consumption, for example, represents a significant financial gain, especially in economies that are heavily carbon-based.

Some actions to reduce the environmental footprint directly align with economic challenges (e.g., eco-design, rationalization, decommissioning, extending the lifespan of equipment, etc.).

However, during our various interactions with the market, financial ROI did not emerge as a priority in the impulse of an RD approach, to our great surprise. We interpret this as due to the market's low maturity and the lack of reference points on the subject.

During our interviews, we collected some quantified gains:

Up to **-40%**
on electricity
(for an Ubisoft site)

UBISOFT

A potential saving of over 1 million euros per year by putting workstations on standby and extending the lifespan of equipment compared to the initial situation.

Large Enterprise (Aeronautics)

Removal of 10,000 IP fixed phones, equivalent to closing a data center.
(6Wh 24/7 consumption)

THALES

Attractiveness of profiles as well as a financial gain, especially on the electricity bill.

Some actions to reduce the environmental footprint directly align with economic challenges (e.g., eco-design, rationalization, decommissioning, extending the lifespan of equipment, etc.).

However, it's important to monitor the budgetary recollection to avoid investing the savings made into more impacting activities (see indirect rebounds for more information).

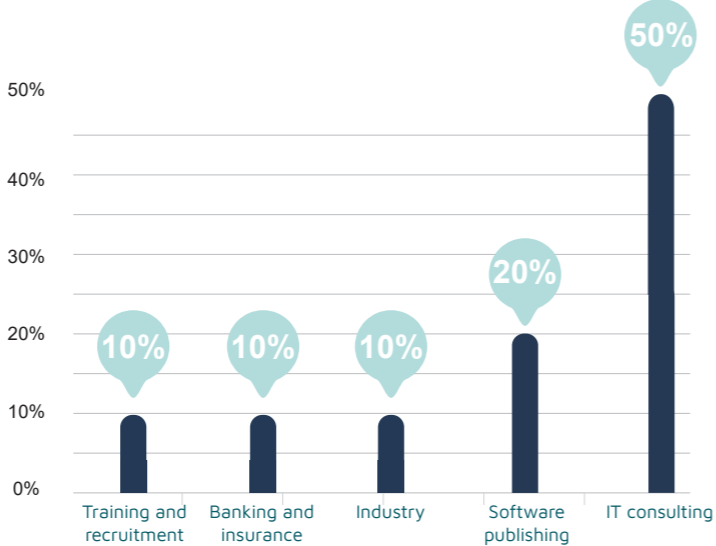
ARGUMENTS Differentiation

Only
14%
of organizations report gaining clients thanks to the Responsible Digital approach

Differentiating oneself among the competition through a Responsible Digital approach; is it an idealist's sweet dream to estimate that environmental impact will be an **important criterion** in clients' choices?

Maybe not... provided that the **organization's activity (consulting or product) includes or depends on Digital technology**, as is the case with IT consulting or software publishers. These are the two sectors that have the opportunity to exceed the average on this topic.

Which business sector observed a client gain thanks to Responsible Digital?



Source : Boavizta questionnaire, 2022

During our interviews, several respondents highlighted the **clients' demands** regarding the Responsible Digital approach. Whether through a call for tenders or in dealings with clients, **demonstrations of actions and evidence** are requested regarding their carbon footprint reduction in particular.

The monitoring of multi-criteria indicators and impact assessments provides factual elements about the claimed environmental benefits to reassure and convince clients.

« We are able to do better for the same price through frugality »
Pragmatic

Several ways to position oneself through Responsible Digital:

CSR Implementation

The first step is to present the Responsible Digital approach as an **application of the overall CSR approach to IT**.

Several respondents chose this option, like Les Petits Chaperons Rouges (a network of daycare centers).

For an IT consulting agency, RD advice is **integrated into the approach** of "helping the organization implement IT usages that meet its needs in an organizational, technical, and environmental manner." - (Nuageo)

Frugality

Eco-design involves making choices, giving up, or reducing. This implies frugality reflected in CAPEX investment and regular OPEX costs due to a control of hidden costs and maintenance, as explained by Digital4Better.

At Pragmatic, "**we even do RD without saying it**" by making frugal and sensible choices in projects. The financial argument can be a convincing factor for CEOs to undertake actions.

IT for Green

Some interviewed organizations also present digital solutions that **help reduce impacts** in other sectors. This use of digital technology is often referred to as **IT4Green**.

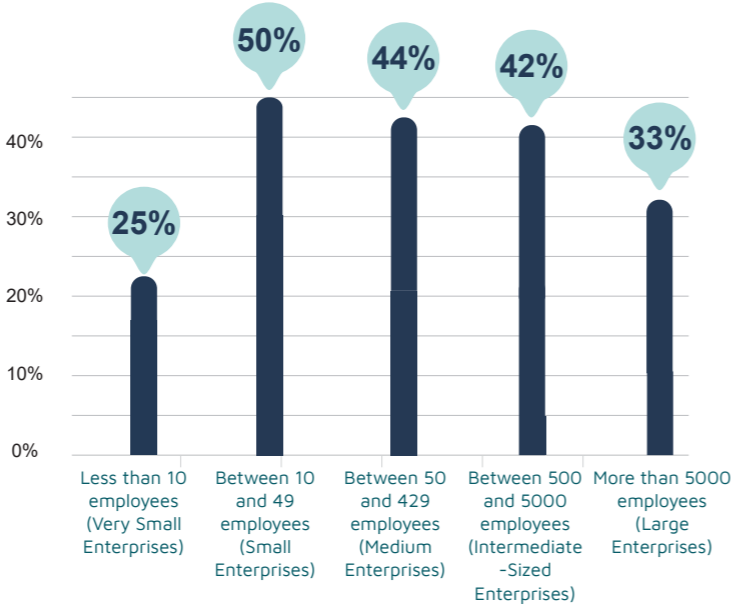
The approaches and data put forward on this topic are **controversial**, especially within the scientific community.

Although efforts towards **methodological standardization** are underway, the field remains immature and subject to debate.

ARGUMENTS Employer Brand

Organizations that have observed benefits on employer branding (distribution by size)

(multiple responses possible)



HR concerns (strengthening of employer branding, improvement of work-life quality, etc.) ranked second in the benefits obtained from a Responsible Digital approach (62% of respondents).

You will observe in the graph above that this particularly affects SMEs, who see it as a way to stand out in recruitment or in retaining their employees.

A critical yet hard-to-quantify subject

The benefits for employer branding are **not easily quantifiable** by organizations, due to a lack of indicators. This is what emerged from our interviews. Yet, the topic remains essential and a priority for the questioned organizations.

Companies in the **digital consulting sector** are particularly interested in developing Responsible Digital internally.

Indeed, the **market for consultants is competitive** in this sector, so attracting talent is a significant challenge for this type of company.

« CSR adds meaning and is beneficial for the employer brand and therefore for employee engagement »

(Large Enterprise - Services & Education)

Employer branding is cited as a benefit of an RD approach by

100%

of the organizations with over 5000 employees surveyed.

More benefits through impact assessment

We also observe that, among organizations that have evaluated their impact **once or more times**, 52% affirmed HR-related benefits versus 18% for those who had never assessed their impact.

Assessing one's impact allows for a more coherent approach **focused** on the most significant impacts and justified quantitatively. Moreover, the evaluation process often involves employees and encourages their engagement in the RD approach.

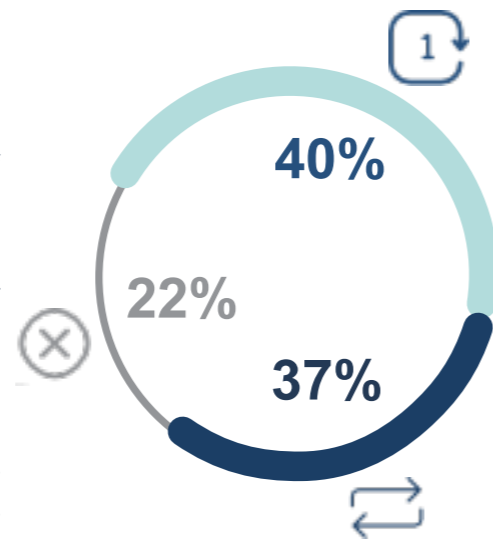
Impact Assessment

The diagnostic stage can prove to be a real lever to convince stakeholders of the impact and implement appropriate actions within a Responsible Digital approach.

REGULARITY OF EVALUATION

Regular evaluation (37%) is almost equivalent to "one-shot" evaluation (40%). The organizations interviewed, also considered more mature on the RD topic, seem to have understood the importance of **tracking reduction efforts** over time and conducting regular evaluations.

For companies that have only measured once, their response might be influenced by the fact that it's a **recent** topic within the company. 95% of the respondents to our study who have conducted evaluation actions say they track greenhouse gases, with carbon being the primary focus. Other criteria, such as water consumption or depletion of abiotic resources, are less considered.



HOW OUR INTERVIEWEES ACT

LARGE RETAIL SECTOR ENTERPRISE

“At the moment, our monitoring technique is to add a few fields in a table to track indicators.”

LARGE ENTERTAINMENT SECTOR ENTERPRISE

“We track monthly indicators along these four axes: Education, Assets, Datacenter, Storage. Goal: -10.8% GES by the end of 2024 compared to 2019 translated into operational objectives to ensure it is achieved.”

LARGE INDUSTRIAL SECTOR ENTERPRISE

“We are still looking for the formula (and the hours in their agenda) to empower employees on LCA.”

RESOURCES ALLOCATED

Companies regret not having enough people fully dedicated to the subject of impact evaluation because it takes a lot of time. This shows that there is a **lack of priority** given to the subject internally in general. To this day, the method of data collection remains primarily **manual**, even if more and more tools are being developed on the market for this purpose. When companies do not have specialists in-house and want to go further, they call upon **specialized consultants** (in LCA, for example).



EVALUATION METHODS

At this stage, the evaluation technique is mainly **single-criterion**, and CO2 remains the pre-eminent indicator evaluated, regardless of the frequency of evaluation.

The **WeNR** questionnaire was mentioned by several respondents. It allows for an understanding of the impact of one's Information System as a whole with **ease**

Impact evaluation, with a **multicriteria** analysis and a **life cycle** approach (LCA), is a topic addressed after a certain maturity, with a desire to **go further** in the analysis on certain company scopes.

We advocate daily for a digital impact evaluation based on Life Cycle Analysis and multicriteria. This is all the more important when dealing with equipment made from non-renewable resources. You will find open-source tools to help you assess your impact on our website.



PROFILE

Software Publishers

Software publishers are particularly concerned about the environmental footprint of digital technology as it is dependent on their main activity. They stood out in our survey due to their particular maturity on the subject. This maturity is notably linked to the place of the RD approach in their commercial discourse.

IMPULSE



The impulse from software publishers mainly comes from the leaders and/or the Executive Committee, although they are influenced by all employees.

MOTIVATIONS



In addition to environmental motivations, the drivers of the approach stem from regulation associated with commercial differentiation. Indeed, offering eco-responsible software to their clients appeals to many software publishers.

CHALLENGES



The classic triptych: no internal skills or time per employee to work on the subject. Add to this a lack of methods and assessment tools.

MATURITY

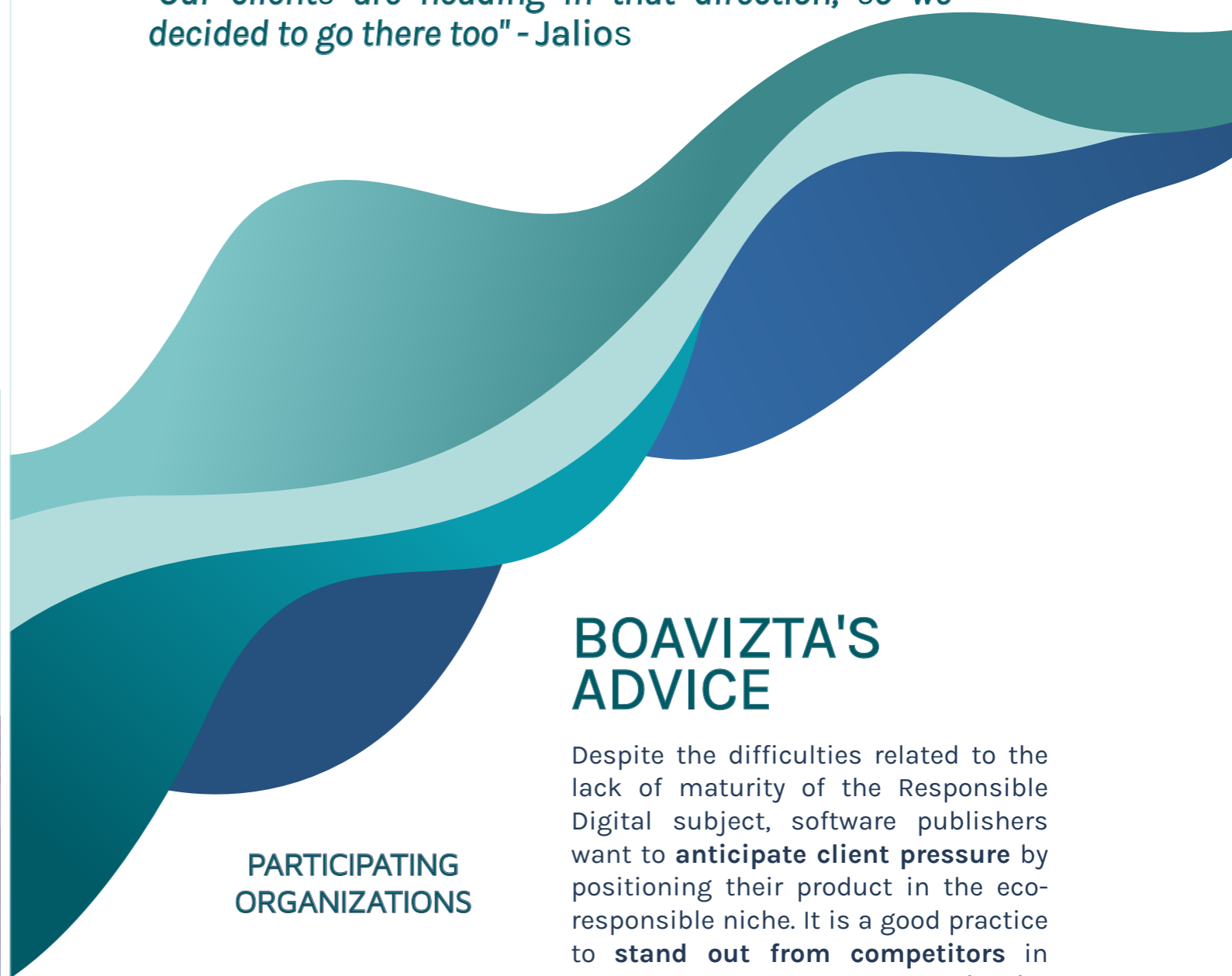


75% of publishers have assessed their carbon footprint once or more. They stand out from other companies. Notably, they mostly evaluate the footprint of data centers and the IT park, more than that of their digital products and services.



"Our commitment to Responsible Digital can set us apart from our competitors in tenders." - JaliOS

"Our clients are heading in that direction, so we decided to go there too" - JaliOS



BOAVIZTA'S ADVICE

Despite the difficulties related to the lack of maturity of the Responsible Digital subject, software publishers want to **anticipate client pressure** by positioning their product in the eco-responsible niche. It is a good practice to **stand out from competitors** in tenders, for example, and thus **justify** the associated human and/or financial investment.

Impact assessment is a way to both progress on the subject and to prove the improvements made.

PARTICIPATING ORGANIZATIONS



PROFILE

IT Consulting

IT consulting firms are at the forefront of Responsible Digital. They face a dual challenge: both to guide their clients on the path to more sustainable digital practices and to enhance their teams' skills. Consulting firms are among the first to have identified synergies between reasoned digital use and operational or financial performance.

IMPULSE



The topic of responsible digital becomes strategic, as there are business differentiation stakes (57%) and employer branding for recruitment (67%). The observation of improved operational performance in IT projects contributes to this motivation.

MOTIVATIONS



The topic of responsible digital becomes strategic, as there are business differentiation stakes (57%) and employer branding for recruitment (67%). The observation of improved operational performance in IT projects contributes to this motivation.

CHALLENGES



- Responsible digital is still rarely considered a priority.
- Middle management is a crucial link for adopting these approaches and remains difficult to convince.
- The economic lever still needs refinement.

MATURITY



- Half of the respondents to our study have already assessed their carbon footprint for the first time.
- The expressed ambition is to repeat the operation regularly.
- The Life Cycle Assessment (LCA) method is not yet predominantly addressed by clients.



“Responsible Digital is also a way to achieve operational performance.” Nuageo

“RD is associated with the concept of 'economy'.” Norsys

BOAVIZTA'S ADVICE

Following our interactions with these actors, it's clear that there's an overlap between RD actions carried out for clients and those conducted internally.

The maturity and skills of teams on Responsible Digital topics are crucial for genuinely engaging clients (for example, by applying the training offered to your clients to your teams).

It has been clearly established that environmental issues have positive business repercussions, which could encourage many companies to commit to a responsible approach.

PARTICIPATING ORGANIZATIONS



PROFILE

Large Enterprises

Due to the significance of their Information Systems and their human capacity, Large Enterprises (more than 5000 employees) are more advanced in the field of Responsible Digital. As Responsible Digital contributes to cost reduction (lowering energy bills, reducing equipment purchases...), these initiatives are favored by large companies that stand to gain more financially. The human resources allocated to the subject depend greatly on the sensitivity of the management in place.

IMPULSE



It mainly comes from leaders and/or the Executive Committee, although they are influenced by all employees. The emergence of GreenIT manager positions in these structures is observed.

MOTIVATIONS



Large Enterprises are primarily motivated by improving employer branding and the company's resilience to climate challenges. Financial gains (or cost reduction) come next.

CHALLENGES



We encounter again the triptych: lack of budget, time, and skills. In addition, management maturity is not always present.

MATURITY



Large Enterprises tend to regularly assess their Greenhouse Gas emissions and appoint GreenIT managers to coordinate projects.

“Responsible Digital is a lever for attracting talent and a source of savings, especially on the electricity bill.”

(Quote from a Large Enterprise in an interview)

LE CONSEIL BOAVIZTA

Large enterprises are among the most advanced organizations, notably through regular environmental footprint assessments and the appointment of a GreenIT Manager. However, they face other challenges such as training or raising management's awareness of digital impacts and the benefits of Responsible Digital. Implementing internal tools to quantify the benefits of an NR approach is a progression lever.

PARTICIPATING ORGANIZATIONS

THALES



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