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Digital done right

A guide to digitalizing sustainability

→ without the pitfalls ⊗

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Introduction

Sustainability is no longer a side initiative — it's a business imperative. Understanding and actively reducing your company's environmental impact is essential to building a future where both business and the planet can thrive. Achieving this means looking beyond your own operations to embed sustainability across your entire value chain. While certainly a significant undertaking, sustainability transformation is a strategic imperative for any company seeking to build resilience and ensure its long-term success.

Digitalization is a key enabler of sustainability transformation

Forward-looking companies have already recognized this and many are well on their way to digitalizing sustainability. In a recent Economist Impact survey, **corporate sustainability leaders identified ESG data and reporting software as the top area for sustainability-related investment in the coming year.**

So why release this guide now?

Because despite strong momentum and good intentions, **many organizations are being steered by misconceptions.** These common pitfalls quietly undermine progress, stall impact, waste precious resources and reduce digital transformation to a mere box-ticking exercise — without generating value for sustainability or the business.

This resource addresses those challenges head-on. In part one, we unpack the most common pitfalls that prevent digital sustainability efforts from reaching their full potential. In part two, we share a practical and pragmatic approach shaped by experience — one that helps companies avoid false starts and deliver lasting, meaningful value.

If your goal is to make digitalization work — not just in theory but in practice — this guide is for you.

Digitalizing sustainability: What are we talking about?

Terms like digital sustainability or digitalizing sustainability are often used interchangeably. At Quantis, we see these as umbrella terms for **the use of technology to accelerate sustainability transformation.**

Most commonly, this includes footprinting, but it also extends to areas like ESG reporting, risk assessment, data integration and beyond — the digital foundations that enable organizations to scale and embed sustainability across the business.

The value in digitalization

→ Automates processes, reducing manual effort and reporting timelines — saving time and resources for more strategic work.

→ Meets growing demands from investors and customers for greater accountability

→ Supports compliance with expanding ESG and financial reporting regulations

→ Enhances insights for informed decision-making and strategic planning

→ Delivers real-time, reliable and auditable data for better, faster footprint monitoring

→ Enables integration with multiple data sources for seamless, scalable reporting

Part 1

Avoiding common misconceptions on the digital sustainability journey

MYTH #1

Digitalization is mostly about finding the right tool ⊗

Selecting a tool isn't a magic bullet. Once you have a solution in place, your digital sustainability journey has only just begun. Success is dependent on multiple factors including senior leadership commitment and buy-in, strong communication and employee engagement. Research from **Harvard Business Review** suggests that 70% of digital transformations fail, largely due to cultural resistance and lack of leadership alignment.

"You've put us in a very uncomfortable position, but we needed that — it's going to help us improve."

Integrating the right tool should cause you some discomfort. It pushes the business to make even stronger strategic decisions around sustainability. As one CSO once shared with Quantis during a digital transformation project, "You've put us in a very uncomfortable position, but we needed that — it's going to help us improve." When implementing a shift away from business as usual, change management is key. And while effective change management programs will often face budgetary or capacity constraints, users ultimately need to be properly trained. It's also important to remember that digitalization is a long game. Continuous improvement and growth on your digital sustainability journey will require ongoing engagement. The inescapable reality is that your digital tool is just part of the answer: Real change comes from the human factor.

Change management

→ **Simply having a digital tool isn't enough — change management is just as critical to successful digital transformation.**

Long-term value

→ **User training — along with ongoing development and refinement of the tool — is crucial to ensuring it continues to deliver value.**

MYTH #2

Selecting the right digital tool is quick and easy ⊗

Choosing the right tool for your business requires thought and research. **Cheap and fast doesn't equate to good**. There is no one-size-fits-all footprinting solution and it's usually far more complex than simply picking the latest or most popular option — or using the same provider as a competitor. Even across sectors, each company has nuanced needs. The right solution — one that aligns with your sustainability and business goals, plus your IT infrastructure now and in the future — requires clear use-case definitions, cross-functional stakeholder input and decision making, and some market research.

The carbon management market is still in its infancy. There are a multitude of vendors coming (and going!) to market all the time. Plus, there are rapidly evolving industry standards to navigate. Beware of rushing into software decisions without first capturing the full range of stakeholder needs. **Prioritizing early alignment among stakeholders over quick selection ensures the solution truly supports your goals.** And in some cases, you might actually be better off building your own tailored solution — existing solutions won't work for everyone.

Tool selection

→ **Cheap and fast doesn't equal good.**

Unique criteria

→ **There's no one-size-fits-all solution — choosing the popular option or following your competitors may not deliver the best fit for your needs.**

Evolving market

→ **The market is still in its infancy, with plenty to navigate — from emerging vendors to shifting industry standards.**

Clear objectives

→ **Avoid accepting a recommended tool at face value — define your objectives and identify pain points first.**

MYTH #3

Digital sustainability transformation is an IT project ⊗

Digital sustainability transformation shouldn't be treated solely as an IT project. To ensure maximum uptake and successful implementation, you must be driven by and aligned around the broader objectives of the project. This also requires centering the organization's sustainability department as the primary stakeholders in the roll out, among several other key user groups.

Implementing a digital footprint project requires expertise beyond IT, as IT departments typically lack deep knowledge of methodological choices, underlying assumptions, historical calculation logic and domain-specific data — such as emission factor databases and activity data relevant to the company and its industry. Successful implementation will rely on footprinting expertise to structure data, select the right databases and emission factors and make strong methodological choices. It requires expertise that can collaborate with IT to help connect the pipes.

Keys to success

→ **Approaching digital sustainability transformation solely as an IT project risks significant weaknesses and long-term complications. Success hinges on applying the right methodologies, aligning with industry best practices and leveraging accurate datasets.**

Footprinting expertise

→ **Above all, footprinting expertise is essential to set priorities and make the methodological choices that drive sustained progress.**

MYTH #4

The right tool delivers immediate financial savings ⊗

Investing in the right digital tool requires a meaningful upfront investment — not just in licensing, but also in integration, process changes and cross-functional alignment. It's a commitment of time, resources and effort. But like any strategic investment, when done right, it yields long-term returns that far outweigh the initial costs.

The ROI isn't always immediate — nor should it be.
Instead, it builds steadily over time through improved data accuracy, more efficient resource use, streamlined reporting and better decision making. These gains lead to reduced operational costs, stronger risk management and a more resilient business overall.

That said, realizing these benefits depends on making the right choices early on. It's critical to consider the total cost of ownership, not just licensing fees. For instance, a tool that aligns with your sustainability vision but fails to meet IT or finance requirements may lead to silos, duplication or inefficiencies. In some cases, building a proprietary tool can offer greater value over time — particularly if your business faces complex reporting needs, detailed product-level analysis or integration with internal systems.

The value is real — but it's cumulative. Digitalizing sustainability isn't about quick wins. It's about building infrastructure that will deliver increasing returns in the form of cost savings, competitive advantage and regulatory readiness for years to come.

Upfront costs

→ **Upfront costs include licensing, implementation and embedding new practices.**

Total cost of ownership

→ **Consider total cost of ownership: Are you better served by buying an off-the-shelf tool or building your own?**

MYTH #5

You can rely on your tool to clean up your data ⊗

Just as a GPS is useless without accurate location data, a slick tool won't add value unless it's fueled by quality, structured data.

Our experience suggests that data collection is typically poor and scattered. And the misapprehension that data cleansing can be left to the software provider or the tool itself will dilute any benefit the tool might offer.

The provision of structured sustainability data is on you. There's no shortcut. You'll have to put a clear internal data strategy in place — grounded in strong governance measures — to derive any value from digitalization. But you don't have to go it alone. Before you start the process, seek support from a trusted partner who will navigate this journey alongside you.

Structured data

→ **Without structured data, there's no digital sustainability strategy — and this is down to you, not your software provider.**

Data strategy

→ **A clear data strategy must include preparing, standardizing and structuring data, alongside rigorous data governance.**

Part 2

Delivering digital sustainability transformation

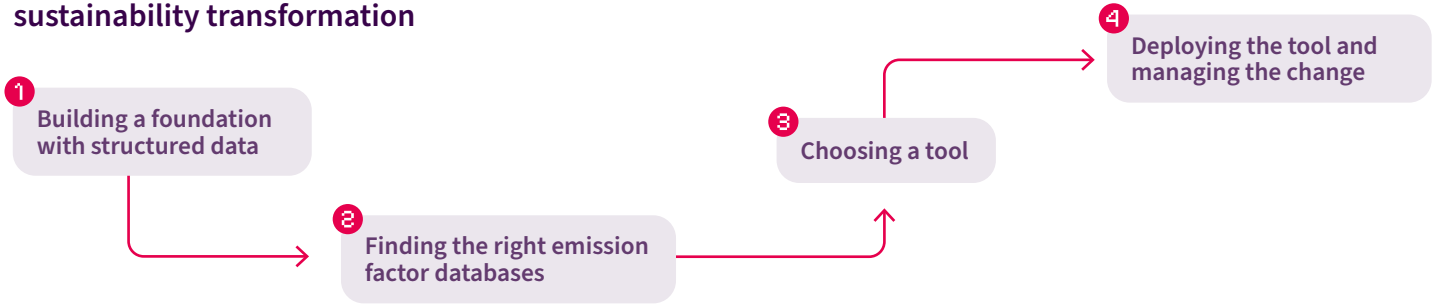
Choosing the right tool for impact

The primary goal of any sustainability strategy should be reducing environmental impact while driving business resilience. That requires taking full control of understanding and reporting on activities and determining which actions drive the most meaningful impact. Finding the right technology solutions to support this is often mistaken for the entire picture yet years of experience have shown us otherwise. Your tech solution is just one piece of the puzzle. Quantis has refined a process (below) to help companies across all sectors digitalize their sustainability efforts effectively — and avoid the missteps we see too often.

Before leaping into a decision on which tool or software vendor to use, you must be clear on the overall sustainability vision for your company and ensure you have structured data.

Surprisingly, these foundational steps are often overlooked. But without laying the groundwork, a digitalization project is unlikely to deliver its full value.

Four steps to successful digital sustainability transformation



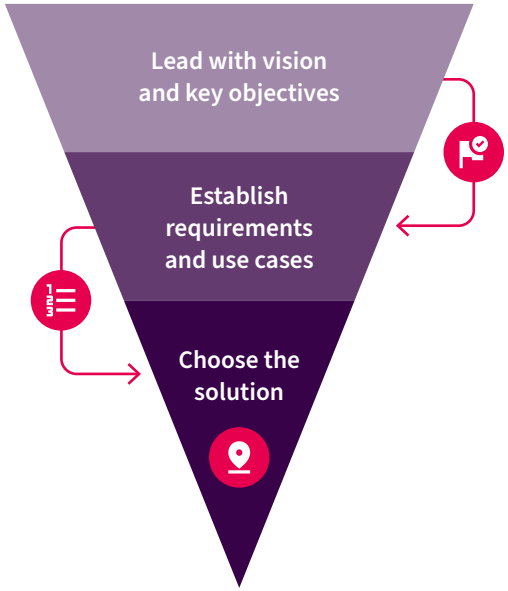
Sustainability starts with a plan, not a software

Lead with a vision

Leading with a list of requirements or specifications can seem like a natural place to start when choosing a digital solution. But this can create a situation in which your chosen footprinting solution ends up dictating what you're able to achieve, when it should be the other way around.

Instead of being led by a list of requirements, your sustainability vision and objectives – what you want to achieve at a macro level – should dictate your decision about which tool to use.

Be clear on your sustainability pain points and opportunities. Scope them with colleagues and stakeholders, from procurement and IT to finance. This top-level vision should connect the dots to overall business objectives.



Draw up objectives

Create a list of objectives that will drive you towards the overall goals and prioritize them. For example, if your vision is to be an excellent land steward, your objective might be to stop deforestation, making access to accurate deforestation data a requirement for your tool.

Establish requirements

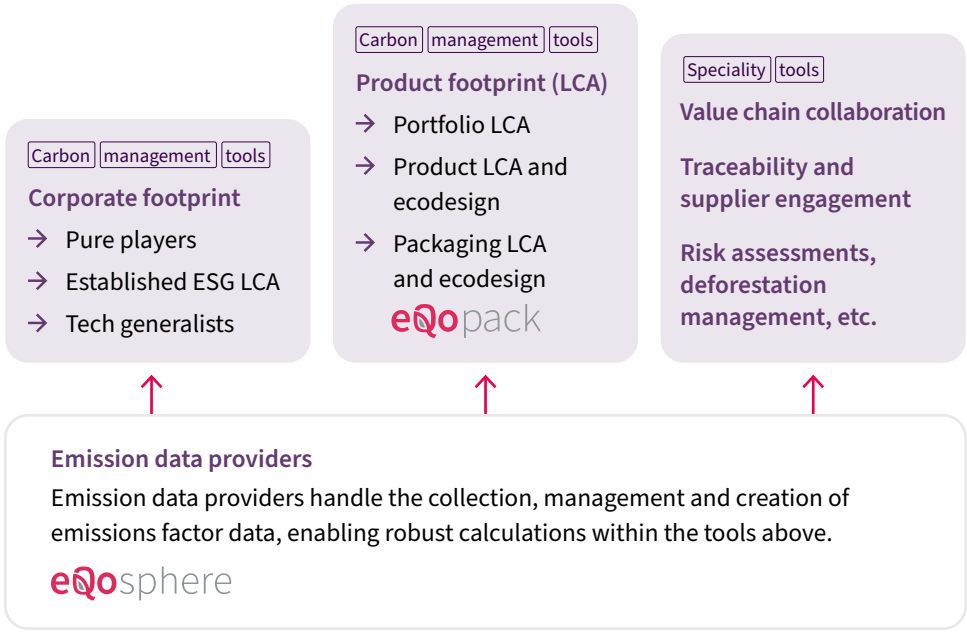
With clarity on your vision and objectives — and buy-in from all stakeholders — you can begin to draw up a list of specifications and use cases required from your digital solution.

Understand the market

There's no solution that ticks everyone's boxes. Finding the best digital tool to suit your business needs will require an objective assessment of the range of tools in the marketplace, looking beyond the sales pitch of each provider. You'll need a deep understanding of what they offer (to avoid regrets later) and a sense of how each solution might interface with your current IT infrastructure and sustainability systems. While the more advanced providers may offer support for data structurization (see next section), this warrants scrutiny: Does the provider really know your industry and your company? Do they have any footprinting knowledge?

With the abundance of digital players in today's market it's easy to feel overwhelmed. Broadly, three categories of service currently exist: corporate footprint tools, product footprint tools and specialty tools — each encompassing a range of firm types and/or focus areas. Companies often opt for multiple tools that complement each other. However, it's important to note that none of these tools can be used effectively without high-quality emission factors, such as those provided by platforms like **eQosphere**.

The digital sustainability landscape



A single solution might not be the answer.
You might find a variety of tools better serve you than just one. Or your specific business needs might mean the best solution is to build something in-house. While buying a tool will likely mean compromise, building a custom, internal tool may be more costly to maintain. **Ultimately, you can't have both cheap and custom.**

Footprinting tool must-haves

- → Delivers autonomy and automation
- → Improves accuracy and reduces error
- → Helps track complexity of sustainability metrics
- → Enables scalability and democratization

Vendor research: Tips for engagement

Dig deep

→ **Most solutions look compelling online, but it's essential to look beyond the sales pitch and assess whether they truly align with your use cases — both current and future feature needs.**

Stay focused

→ **Suppliers offer diverse strengths — such as industry specialization or unique features — but it's important to stay focused on the requirements that truly matter to your organization.**

Stay current

→ **Solutions are evolving rapidly. What a platform offered just months ago may already be outdated.**

Do your due diligence

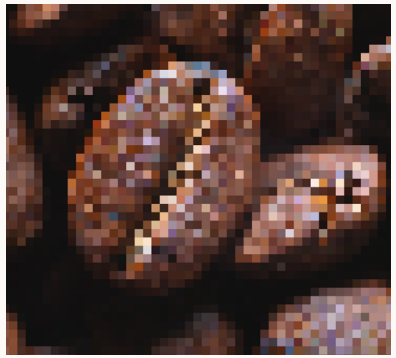
→ **Not all vendors or solutions will stand the test of time, especially as markets consolidate.**

Make a shortlist

You can now set out to create a shortlist of vendors, options and features from the solutions that fit the bill. This last part of the selection process is where you will need to dig deeper and conduct some serious testing. You will want to do this through "Proof of Concept" pilot projects or running trials with your data.

Example

A coffee company ends up with generic data



Coffee Company A went with a well-established software provider for its corporate carbon accounting hoping to go from multiple data sources to a single source of truth. While the provider claimed its software included a comprehensive list of emission factor databases, Coffee Company A didn't check these databases to confirm these met its needs. After inputting its previous year's footprint, it realized the software provider's databases didn't contain food-specific data. As a result, it was forced to assess decarbonization efforts with sector-specific initiatives — such as more sustainable field practices like cover cropping or reduced fertilizer use — outside of the tool. This meant data was stored in several locations, making it harder to manage and failing to deliver on the initial goal of centralization. Had the company done a proper assessment, looking at whether the databases matched its portfolio, it could have avoided this issue.

Before you buy

Assessing fit

→ **Assess each solution's resilience, reliability and alignment with your vision, objectives and use cases. Evaluate total cost of ownership, including the trade-offs between off-the-shelf platforms, custom-built tools and in-house solutions — especially for niche requirements.**

Initial evaluation

→ **An evaluation must be based on both functional requirements (like specific calculations and reporting capabilities) and non-functional requirements (such as user experience, scalability and integration with existing systems).**

Structuring the data for action

A data strategy is non-negotiable. Unfortunately, there are no shortcuts. While automation can be appealing for saving time and effort, it's only effective with clear, reportable activity data. Structured data is what enables real efficiencies, cost savings and, most importantly, the internal alignment and buy-in needed to scale sustainability efforts.

Data must be organized

A messy data set-up — lacking rules or misaligned with your company and its objectives — will deliver limited value and hinder progress toward effective digitalization.

A unified approach

A comprehensive view of environmental impacts also requires a company to be in control of its data. It must know what is reported and when, while outputs have to be accessible, comprehensible and actionable, with proper verification checks in place.

Stakeholder involvement

Data strategy must be developed and refined with all stakeholders involved. Remember, this is a cross-functional initiative spanning sustainability, IT and other departments.

Decode

What do we mean by activity data?

Activity data is quantitative information about a company's operations or product lifecycle that directly contributes to environmental impacts. It represents the actual physical or economic flows, such as products and services purchased, required to estimate emissions, resource use and other environmental effects.

Key steps for a strong data strategy

1. **Establish governance**
Understand what data needs to be collected, how often and by who, along with the level of granularity. Clarify your protocols for data collection, transformation, validation and storage. Define roles and responsibilities for data management.

2. **Create a clear taxonomy**
Be meticulous in your data management (ruling, centralization and version control) — ensuring it's structured and adheres to naming, standardization and cleaning (to spot outliers, mistakes and harmonize naming rules).

3. **Establish a robust gap analysis and quality control process**
Identify data gaps — what's available, what's missing and the quality of existing data. Determine which datasets require cleaning or validation to ensure reliability and accuracy.

4. **Ensure clear ownership**
The CSO should have visibility across the entire business and take ownership of the sustainability data and digitalization process.

Example

A sugar producer gained data consistency post-merger

Following a merger between two sugar producers — Company B and Company C — a critical challenge emerged around data consistency. Company B had established naming conventions for sugar across all business lines, based on factors such as type (beet or cane), country of origin and cultivation method, enabling accurate sustainability reporting. In contrast, Company C lacked unified naming standards and often did not capture basic details like country of origin, making integration difficult. Post-merger, the CSO of the newly formed entity took action: formalizing Company B's naming conventions, launching a data collection effort to fill in missing information and initiating a change management project to train procurement personnel on the new standards. As a result, the company achieved data consistency across systems and functions, leading to significant time savings in ESG accounting and reporting.

Managing emission data with confidence

Calculating a credible environmental footprint, creating accurate targets and making progress against these targets hinges on finding the databases and emission factors that accurately reflect your reality. Emission factors must provide transparency around your biggest impacts and where to act (deforestation, for example). Selecting suitable emission factors databases requires footprint expertise — as well as an understanding of both your company and its supply chain, and of the industry — to help you chose the best data for decarbonization and fill possible data gaps. These emission factors must then be effectively integrated into reporting, to enable your company to calculate its footprint and make informed decisions.

Decode

What is an emission factor?

A coefficient that quantifies the environmental impact of pollutants — such as greenhouse gas emissions (also known as carbon footprint) — linked to the production of a commodity or service.

Choosing a database

The emission factors you use will depend on several variables — most notably the types of materials and activities your company consumes and engages in, and the geographies in which you operate. Many organizations will require a sector-specific database; for example, platforms like the World Apparel and Footwear LCA Database (WALDB) or World Food LCA Database (WFLDB) are tailored to certain industries. An apparel company's data needs will differ significantly from those of a financial institution. But not all databases are created equal. Regardless of industry, there are key features and criteria to consider when selecting the right one for your company.

Features of a high-quality emission factors database

Transparent
Must be clear in its methodologies, assumptions and underlying data sources.

Customizable
If you need it, ensure the database has the ability to customize emission factors with primary data to reflect the reality of your suppliers.

Robust
Uses quality data that is broadly representative and able to withstand external scrutiny.

Granular
Provides a level of specificity to report across processes, regions, sectors and sources. Look at features such as activity-split capabilities (e.g., manufacturing, energy or transportation), Forest, Land and Agriculture (FLAG) categorization and gas-split information.

Accessible
The database should be easily accessible to all users. Evaluate whether additional tools are required just to access the data. Key considerations include public availability, cost (free vs. paid), ease of data retrieval and any usage restrictions.

Credible
Establish whether the database is accepted in scientific/industrial communities and aligned with established standards and guidelines.

Integrating emission factor data into reporting

Integrating emission factors into company reporting requires systems that support regular updates and version control to ensure the use of current, reliable data. Navigating data complexities and customizing outputs is essential — and best achieved with tools built for this purpose, such as Quantis' eQosphere. Emission factors must remain robust and up to date. While AI and programming can accelerate scalability, they must be guided by footprint experts with deep industry knowledge to ensure accuracy and relevance.

eQosphere

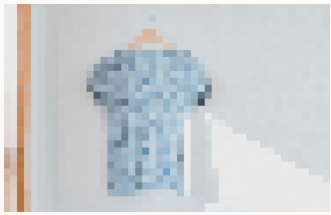
Discover

Given the unique context of each business, Quantis' proprietary software, eQosphere, helps companies design and customize emission factors to their specific needs.

It features an intuitive interface that simplifies complex tasks, enabling users to search and filter selected databases efficiently. By streamlining access and reducing reliance on manual, low-value activities, the tool provides teams with greater autonomy.

Example

Apparel firm chooses standard database and misses out on key actions



Apparel Company X skipped a thorough evaluation process and opted for an emission factors database solely because it was widely used by industry peers. Although the database was sector-specific and tailored to apparel, it only provided high-level data, such as kilograms of CO_2e per kilogram of material, without detailing what contributed most to that impact. Lacking visibility into production hotspots, the company was unable to identify effective reduction actions. A more rigorous selection process would have uncovered these limitations and guided the company toward a more transparent and granular database — one better aligned with its reduction goals.

Integrating your tool with ease

The final piece of the digital puzzle is integration. Transitioning from a manual process towards an integrated digital system is complex, and deployment will require investment.

Initial set-up

You will need to integrate your data into your internal systems — either manually or via connectors where available — and ensure users are properly trained to use the tool effectively. This change management process requires knowledge of your organization's footprint, data structures and sustainability goals. The sustainability department must develop a deep understanding of the selected digital footprinting tool, with a strong focus on generating actionable insights. To ensure effective implementation, consider assembling a cross-functional team led by the sustainability team, and including representatives from IT and other relevant business units. You will also have to rigorously test the results produced by the new system to ensure accuracy and reliability.

Data integration

You must integrate your data into your new footprinting software, adapting interfaces and dashboards, and structuring data to ensure that it is accessible and can deliver sound, actionable insights. You will need a clear methodology to import historical footprint data and targets into the new system, that aligns with your existing calculation logic, assumptions and methodological rules. This includes modeling the data appropriately and matching it with relevant emission factors. Where applicable, integration with existing IT systems may also be required.

Pain point

Data collection isn't fully automated (yet)

Based on Quantis' experience, only about 15–20% of footprint or ESG reporting software systems are currently integrated with company data via Application Programming Interfaces or connectors, which serve as bridges between systems that allow them to share data. As a result, data collection remains largely manual or semi-manual for many organizations. To manage this ongoing burden effectively, it's essential to ensure that data is well-structured from the start.

User training

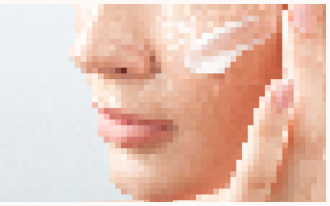
Human training is as crucial as data integration. You must familiarize users to ensure your chosen tool receives strong buy-in from all relevant stakeholders. The tool's outputs must also be tailored to meet the varied needs of different departments. For example, procurement might use the data for supplier choices, while product development could use it for eco-design decisions.

Ongoing change management

Perhaps one of the most underestimated steps in the entire digitalization process is investing in dedicated change management initiatives to support the people in your business. Change management is an ongoing process to help employees embrace transformation. Your teams will need training and support to feel confident in getting the best out of the new digital tools. They must be able to interpret results to create clear actions, and take into account data uncertainty and methodological assumptions that impact footprint calculations. Plus, training will require continuous refinement based on user feedback and changing organizational needs, given that each year you will need to conduct the assessment again.

Example

A cosmetic company uses a generalist IT consultant for integration



Cosmetic Company Z was selecting a platform to automate its corporate carbon footprint assessment and report in line with evolving regulatory standards. The company's IT department used an IT consultant to do the integration, in line with their usual approach to IT project implementation. However, the consultant lacked knowledge of the cosmetics sector, had no familiarity with the company's organizational structure — particularly its sustainability function — and no expertise in footprinting. The result was an extremely challenging integration: countless data gaps needed to be filled and emission factor matching was handled using logic that didn't align with best practices for the cosmetics industry. This misstep could have been avoided. Had the sustainability department been empowered to lead the roll out, the integration would likely have been managed by a footprint expert — someone aligned with the tool's primary users and the company's specific needs.

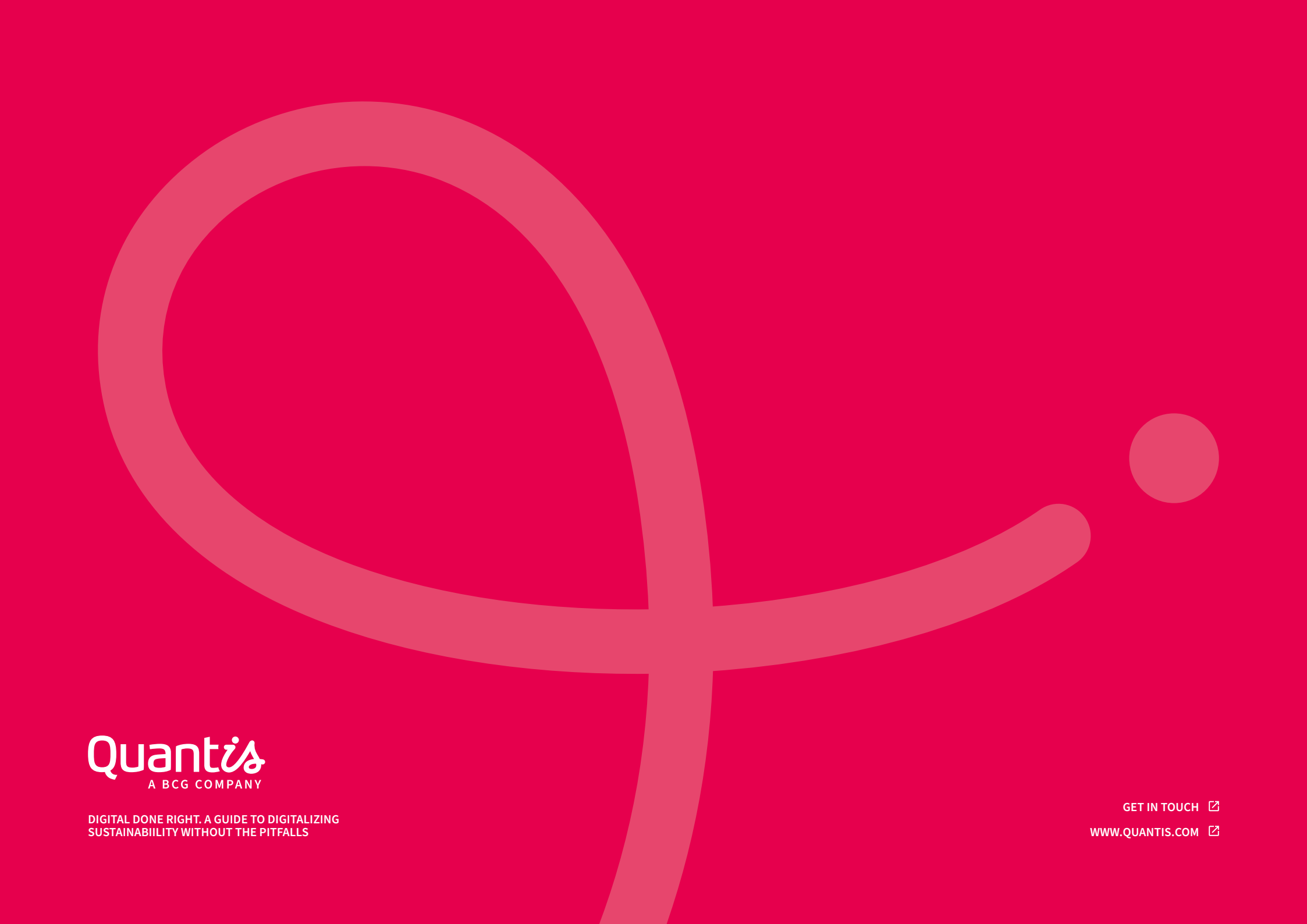
Conclusion

Success comes from effective transformation, not the tool

Success comes from effective transformation, not the tool

Digitalizing sustainability offers a comprehensive view across your organization's operations, enabling you to achieve your sustainability vision through accurate, real-time insights that drive long-term resilience and value. However, a digital tool alone won't deliver that vision. Reaching it requires a thoughtful transformation journey — one where shortcuts can undermine success. A sound strategy places real stakeholders at the center and draws on expertise that goes well beyond systems and IT. It must integrate deep knowledge in footprinting, sustainability and industry-specific context to be truly effective.

This insight is grounded in Quantis' deep experience supporting leading companies digitalizing their footprinting and sustainability reporting approaches. We hope the insights shared help you save time and resources when selecting both the approach and the digital tools to initiate your transformation. Because success doesn't stop at tool selection. Effective implementation requires a solid deployment methodology, well-structured company data and a strong change management program. Building internal capabilities to interpret results and make informed decisions is essential to unlocking long-term resilience and value — ultimately turning your sustainability strategy into a true competitive advantage.



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