Open Educational Resource:

Digital Sustainability Canvas

Within the Erasmus+ KA2 Capacity Building Project (CBHE)

WORK4CE – Cross-domain competences for healthy and safe work in the 21st century

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1 Summary

This document explains the use of the Digital Sustainability Canvas (DSC). It is a practical visual framework designed to assess and enhance the sustainability impacts of Digital Transformation Projects (DTPs). These projects aim to develop new products or services, improve process efficiency, establish new business models, or increase organizational maturity. By focusing on sustainability, the DSC helps organizations leverage positive impacts, reduce negative ones, and align with sustainability goals, ultimately benefiting people, the planet, and profit.

Learning Objectives

The DSC helps users understand sustainability in DTPs by:

- Comprehending the environmental, social, and economic impacts of DTPs.
- Using the DSC's 11 key placeholders to align projects with sustainability goals, assess impacts, and develop strategies.
- Enhancing analytical skills through practical case studies, linking theory with real-world practices.

Competences and Skills

Users will:

- Assess environmental, social, and economic impacts, identifying key sustainability metrics.
- Align projects with sustainability goals, improving decision-making.
- Analyse and interpret sustainability data to solve challenges effectively.
- Communicate sustainability impacts and strategies clearly.
- Collaborate with interdisciplinary teams to achieve sustainability objectives.

Materials

To effectively use the DSC, several key materials are essential:

- *DSC template:* A structured tool with 11 placeholders for key aspects of DTPs.
- *Case study:* A real-world DTP to apply the DSC.
- *Guideline:* Step-by-step instructions for completing the DSC based on the case study.

DSC Template

The DSC is outlined with 11 placeholders, each focusing on a different aspect of a DTP. Each placeholder represents a crucial component for analysis. Utilizing the DSC template allows to systematically assess projects, identify areas for improvement, and ensure alignment with sustainability goals. This structured approach helps to develop strategies to maximize positive impacts on the environment, society, and the economy.

Guideline for using the Digital Sustainability Canvas

The guideline for completing the DSC provides a clear, systematic approach to evaluate all critical aspects of a project. The process includes:

Step 1: Review the Case Study: Read the case study on the Digital Transformation Project (DTP) to identify relevant information for each placeholder in the Digital Sustainability Canvas (DSC). Analyse how each project component aligns with the placeholders to understand the project's scope and context, aiding in sustainability assessment.

Step 2: Analyse the Current Situation: Use the questions provided for each placeholder to describe the DTP's current state, including objectives, scope, activities, technologies, and outcomes. Outline existing processes and resources to establish a baseline for assessing sustainability impacts and identifying areas for improvement. Evaluate the project's impact on environmental, social, and economic sustainability.

Step 3: Evaluate the Impacts: Assess whether the impacts identified are positive, negative, or neutral using the RAG (Red, Amber, Green) method or symbols (+, -, N). Consider both direct and indirect effects and refer to standards like the UN Sustainable Development Goals (UN-SDGs). Categorise impacts across all project aspects for a comprehensive visualisation of sustainability status.

Step 4: Analyse Results: Use the completed DSC to support decision-making and strategic planning. Suggest changes to mitigate negative impacts and enhance positive ones, focusing on maximising benefits across environmental, social, and economic dimensions. For the practical case study, the DTP from ERA's it is used to demonstrates how the DSC can be applied. By analysing this case study, users gain valuable insights into the DSC's application, fostering a comprehensive understanding of sustainability. Additionally, it improves analytical skills by connecting theoretical knowledge with corporate sustainability practices, offering a complete view of sustainable digital transformation.

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2 Digital Sustainability Canvas

Digital transformation projects (DTPs) aim to develop new products or services, enhance process efficiency, establish new business models, or increase organizational maturity. The outcome of these projects is crucial for planning and can significantly impact various areas. Such projects often produce side effects or unintended impacts. Assessing and determining the impact of DTPs, particularly concerning people, planet, and profit, is a core aspect of sustainable project management. The Digital Sustainability Canvas (DSC) is a visual framework for analysing these sustainability impacts of DTPs.

The DSC aids DTPs to be managed with a focus on sustainability. It enables communication and visualisation between project stakeholders through a graphical canvas model. This approach provides a clear and structured method for assessing and monitoring impacts, promoting a more sustainable digital transformation by integrating sustainability considerations into project planning and execution. DSC supports organisations to leverage positive impacts and reduce negative impacts, ensuring alignment with sustainability goals.

By following this structured canvas, it is possible to systematically assess projects, identify key sustainability issues, and develop strategies to reduce negative impacts while maximizing positive outcomes. This ensures that digital transformation efforts contribute meaningfully to sustainable development goals (SDGs), promoting economic growth, social well-being, and environmental protection.

This document includes the DSC template, a step-by-step guideline, and a real case study, all aimed to assess sustainability impacts. The practical case studies and detailed questions in the guideline helps to fille the DSC. This tool enables to integrate sustainability into digital transformation efforts, promoting sustainable development, economic growth, social well-being, and environmental protection.

For students, the DSC aids them to sharpen their analysis skills about sustainability impacts. By screening and assessing the sustainability performance of a DTP, students can maximize their learning experience. A real case study fosters a holistic understanding of sustainability, improving analytical skills by connecting theoretical knowledge with companies' practices. This approach helps to gain a critical perspective on the sustainability challenges faced by the industry. This practical tool can also be used by companies across different sectors, helping them address the sustainability challenges of their organization more broadly.

3 Learning Objectives

Users will be better equipped to visualize and assess sustainability impacts of their DTPs, ensuring they contribute positively to environmental, social, and economic

dimensions. These objectives focus on using the DSC and developing essential analytical skills for sustainable project management.

- Learn how DTPs impact environmental, social, and economic dimensions.
- Understand the importance of adopting sustainable principles to foster resilience, prosperity, and innovative value creation within DTPs.
- Enhance analytical skills by studying sustainability practices through practical case studies, linking theoretical knowledge with real-world corporate sustainability practices to gain an industry perspective.
- Perform comprehensive assessments of sustainability performance, fostering a holistic understanding and improving analytical abilities.

4 Competences and Skills

Table 1 outlines the core competences and skills developed by the Digital Sustainability Canvas (DSC) in Digital Transformation Projects (DTPs). The table is divided into four main competences, each with associated skills:

Table 1: Competences and skills

Competence	Skills Developed
Sustainability Assessment	• Evaluate environmental, social, and economic impacts. • Identify key sustainability metrics.
Strategic Planning	• Align projects with sustainability goals. • Improve decision-making based on sustainability performance.
Analytical Skills	• Analyse and interpret data. • Solve sustainability challenges.
Communication and Collaboration	• Communicate sustainability impacts effectively. • Collaborate with interdisciplinary teams.

5 Material

To use the DSC, it is necessary to have essential materials such as:

- *DSC Template:* This structured tool is a roadmap, featuring 11 key criteria categorized by placeholders. Each placeholder represents a crucial aspect of the DTP to be considered.
- *Case Study:* The case study is a real DTP developed within a business environment. It serves to apply the DSC in a tangible context.
- *Guideline:* This document provides step-by-step instructions tailored to completing the DSC based on the case study information.

6 Digital Sustainability Canvas template

The DSC (Fig. 1) consists of 11 placeholders, each focusing on a different aspect of the DTP. Each placeholder represents a key component where specific information is filled in and analysed. The DSC provides a structured approach to assess and enhance the sustainability the projects. By filling in each section with detailed information, organizations can identify areas for improvement, ensure alignment with sustainability goals, and develop strategies to maximize positive impacts on the environment, society, and the economy.

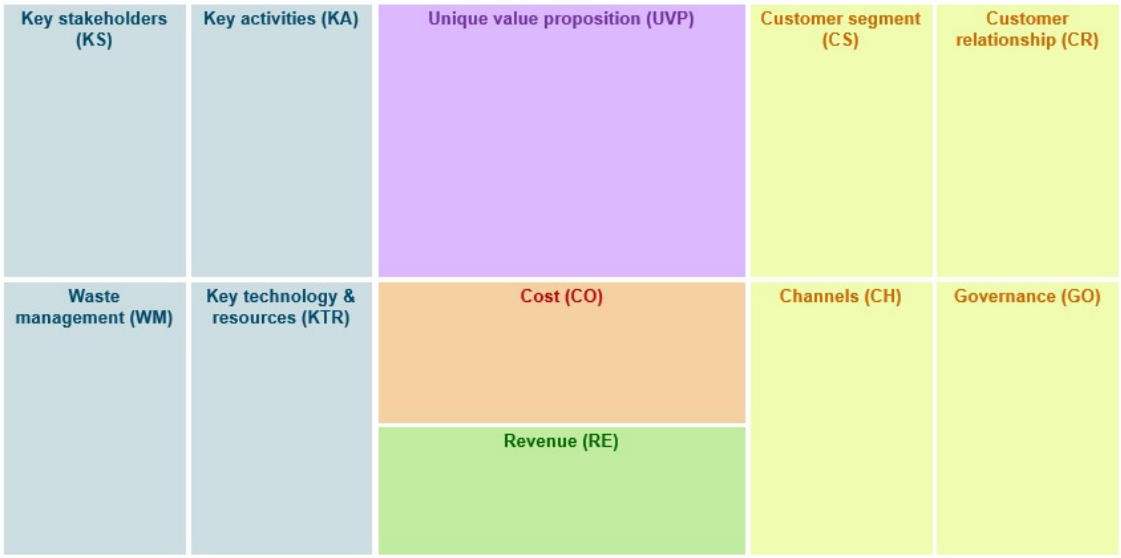

Fig. 1: Digital Sustainability Canvas template

7 Description of the DSC Placeholders

This section provides a detailed overview of each placeholder in the Digital Sustainability Canvas (DSC). The placeholders represent key components of a Digital Transformation Project (DTP) and outline essential characteristics that can be identified within the

project. Each placeholder is accompanied by guiding questions designed to stimulate critical thinking and help users provide relevant information for every section of the DSC. By addressing these questions, users can uncover key insights and identify areas for improvement, ultimately enhancing the sustainability of their DTP.

Unique Value Proposition (UVP):

The Unique Value Proposition defines what makes the project valuable and unique to its customers. It highlights the key benefits the project delivers, setting it apart from competitors by addressing customer needs in a distinct and sustainable way. Defining the UVP first helps to clarify the project's core purpose and value, ensuring all subsequent decisions are aligned with these goals.

Guiding Questions:

- What unique value does the project deliver to customers?
- Which specific customer needs does the project satisfy?
- How does the organisation create social value for its stakeholders?

Customer Segment (CS):

This placeholder identifies the different groups of customers targeted by the project. Understanding these segments ensures the project is tailored to meet their unique needs and preferences, which helps in designing products, services, and communication strategies that resonate with them. Knowing the customer segments also helps align the value proposition and customer relationship strategies effectively.

Guiding Questions:

- Which customer groups are we targeting with this project?
- How can we tailor the project to meet their specific needs and preferences?
- What adjustments are needed in our products, services, and communication strategies to align with customer expectations?

Customer Relationship (CR):

This section outlines the approach to engaging with customers, building relationships, and maintaining satisfaction. It details the strategies and methods used to attract, retain, and build loyalty among customers, ensuring that the project's value proposition is clearly communicated and continuously supported. Maintaining strong customer relationships

helps build trust and fosters long-term engagement, which is crucial for the project's success.

Guiding Questions:

- What types of relationships do the target customer segments expect?
- What is the cost of maintaining these relationships?
- How do these relationships align with the overall business model?

Channels (CH):

Channels describe the ways through which the project reaches and delivers value to customers. This includes distribution methods, communication strategies, and any other means of connecting with the target audience. Identifying appropriate channels ensures that customers receive the value offered by the project effectively and efficiently, supporting both reach and customer engagement.

Guiding Questions:

- Through which channels do the customer segments prefer to be reached?
- Which channels are the most cost-effective?
- What are the impacts of these distribution channels?

Governance (GO):

Governance encompasses the structures, policies, and processes that ensure the project is managed responsibly and transparently. It includes compliance with laws, ethical standards, and sustainable practices, providing a framework that aligns the project with regulatory requirements and stakeholder expectations. Strong governance helps to mitigate risks, maintain accountability, and ensure all project activities are conducted ethically and sustainably.

Guiding Questions:

- Are there regulations that may restrict the project's business model?
- How does governance ensure responsible and transparent project management?
- How does the project align with laws, ethical standards, and sustainable practices?

- Are there tax incentives, government grants, or other external funding opportunities available?

Key Stakeholders (KS):

This placeholder identifies the main stakeholders involved in the project, including internal and external parties such as employees, customers, suppliers, partners, and community members. Understanding stakeholder roles and interests is crucial for aligning the project with sustainability goals, addressing their needs, and fostering positive relationships that support project success.

Guiding Questions:

- Who are the key partners involved in the project?
- Who are the main suppliers, and what roles do they play?

Key Activities (KA):

This section lists the core activities required to implement the DTP, including essential processes, operations, and tasks necessary for achieving the project's objectives. Defining key activities ensures they address stakeholder needs, align with governance standards, and support the value proposition, distribution channels, customer relationships, and revenue generation strategies.

Guiding Questions:

- Which activities deliver value, reach customers, build relationships, and generate revenue?
- How can we integrate social sustainability, like fair labour and safety standards, into these activities?

Waste Management (WM):

This section focuses on how the project manages waste to minimise environmental impact through reduction, recycling, and responsible disposal practices. It also addresses end-of-life or end-of-use scenarios, ensuring all aspects of resource use are considered to promote a circular economy and reduce the project's ecological footprint.

Guiding Questions:

- Does the project have an effective waste management plan in place?
- Have overall waste outputs increased, decreased, or stayed the same?

- Is hazardous waste being managed properly?
- Are digital technologies being leveraged to improve waste management?

Key Technology & Resources (KTR):

This placeholder highlights the tools, technologies, and resources required for the project, such as hardware, software, human resources, and other essential assets. Identifying these resources ensures that all necessary tools and technologies are available and effectively used to support the key activities and overall project objectives.

Guiding Questions:

- What resources support value, channels, relationships, and revenue?
- How do these resources impact the project economically, environmentally, and socially?
- Which assets are available and utilized?

Cost (CO):

The cost section details the financial aspects of the project, including initial investments, ongoing expenses, and potential savings. Understanding these costs is essential for assessing the project's economic viability and ensuring it remains financially sustainable over time. It provides a clear picture of financial requirements and identifies opportunities for cost efficiencies.

Guiding Questions:

- What are the major costs involved in the business model?
- Which resources and activities are the least sustainable, and why?
- Are there more sustainable alternatives available, and do they make economic sense?

Revenue (RE):

Revenue outlines the income generated by the project, including sales, subscriptions, and other streams. It helps assess financial sustainability and profitability by providing a comprehensive overview of the project’s ability to generate and maintain income over time. Concluding with revenue ensures that all components are aligned to support the project's overall financial goals.

Guiding Questions:

- Which are existing and possible revenue sources?
- What value are customers willing to pay for?
- What are customers currently paying, and what payment methods are they using?
- What payment options are available?
- Are customers willing to pay extra for sustainability, and are there pricing models that encourage sustainable customer behaviour?

8 Guideline for using the Digital Sustainability Canvas

To effectively assess a Digital Transformation Project (DTP) using the Digital Sustainability Canvas (DSC), follow these 7 steps. This guideline provides a structured approach to completing the DSC, ensuring that all critical aspects of the project are thoroughly assessed. By using this framework, project teams can better visualise and communicate sustainability impacts, fostering informed decision-making and strategic planning.

Step 1: Review the Case Study

Begin by thoroughly reading the case study related to the Digital Transformation Project (DTP). Identify relevant information for each placeholder in the DSC, guided by the provided questions. Analyse how each component of the project aligns with the DSC placeholders, ensuring entries are clear, concise, and specific. This step is basic for understanding the scope and context of the project, making it easier to assess its sustainability impacts.

Step 2: Analyse the Current Situation

Describe the current state of the Digital Transformation Project (DTP) being analysed. This step establishes a comprehensive baseline for understanding the project. Include detailed information about the project's objectives, scope, key activities, technologies used, and current outcomes. Clearly outline the current processes and resources involved. This detailed description will provide a clear picture of the existing project setup, setting the stage for later analysis of its sustainability impacts and identifying potential areas for improvement.

For each placeholder, analyse how the project impacts the three pillars of sustainability—environmental, social, and economic. Identify the specific ways in which the project affects each pillar:

- *Environmental Impact:* Assess resource consumption, energy use, emissions, waste generation, and overall ecological footprint. Determine whether the project reduces, maintains, or increases its environmental impact.
- *Social Impact:* Consider the effects on stakeholders, such as employees, customers, and communities, focusing on aspects like job creation, working conditions, community engagement, and social well-being.
- *Economic Impact:* Review the project's financial performance, including cost savings, revenue generation, competitiveness, and long-term viability. Determine the extent of its impact on economic sustainability.

Using the information gathered, fill out the DSC with detailed entries for each placeholder, guided by the answers to the provided questions.

Step 3: Evaluate the Impacts

Determine whether the impacts identified in Step 2 are positive, negative, or neutral for sustainability. Use the RAG method to categorise each impact: Red for negative impact, Green for positive impact, and Amber for neutral impact. You can also use symbols: (+) for positive, (-) for negative, and (N) for neutral.

Consider both direct and indirect impacts, using recognised standards like the UN Sustainable Development Goals (UN-SDGs) as a reference to ensure a thorough evaluation. This assessment helps identify areas that need improvement and highlights contributions to sustainability goals.

Apply this categorisation across all aspects of the project in the DSC to effectively code the impacts. This step allows for a clear and comprehensive visualisation of the project's sustainability status.

Step 4: Analyse Results

Analyse the results from the DSC to support decision-making and strategic planning. For negative impacts, suggest changes to relevant placeholders to convert them into positive ones. Develop actionable recommendations to mitigate negative effects and enhance sustainability. The aim is to maximise the project's positive impacts while minimising its negative ones across environmental, social, and economic dimensions.

9 Case study

This case study presents a real Digital Transformation project, providing a detailed set of data to illustrate the effective use of the Digital Sustainability Canvas (DSC). It acts as a practical guide to evaluating the sustainability impacts of digital initiatives by connecting relevant information to each section of the DSC.

Through this example, you will discover how to identify and categorise sustainability factors, including environmental effects, social responsibilities, and economic outcomes. The DSC framework allows you to visualise these impacts clearly, highlighting both positive contributions and areas for improvement.

To provide a clear understanding of how to fill in the DSC the content for filling in the placeholders are identified and marked within the text. These are highlighted in the same colour as their corresponding placeholders in the DSC template, and the abbreviation of each placeholder is included for easy reference.

Case study: ERA's Digital Transformation Project

For over 27 years, ERA Marketing Centre has been a cornerstone of the market research industry in Baku, Azerbaijan. Founded in 1996, the company has built a strong reputation for its ethical standards and valuable insights, expanding its services across the CIS countries and Turkey. As the industry moved rapidly towards digitization, ERA recognized the need to evolve to maintain its competitive edge and continue providing high-quality service.

To lead this transformation, ERA launched an ambitious digital project in 2023, led by Deputy Director Kanan Hasanov. Running from January to December, the project aimed to overhaul traditional workflows by integrating advanced digital tools, enhancing data processing capabilities, and expanding service offerings. Central to this effort was the development of an online dashboard system for scalable data collection and the deployment of 200 tablet-based CAPI (Computer-Assisted Personal Interviewing) systems to digitize face-to-face interviews. These innovations reduced operational costs by 20%, saved an estimated $150,000 annually, and improved data synchronization speeds by 30%, reducing data processing times from 24 hours to 16 hours. Additionally, new digital mapping tools increased the accuracy of geospatial analysis by 35%, allowing ERA to provide clients with deeper, more strategic insights. However, the shift to digital tools and infrastructure, such as online dashboards and tablet systems, also led to a 15% increase in electricity consumption for data centres and servers, contributing to a 10% rise in the company's overall carbon footprint. **(UVP), (KA), (KTR), (WM), (CO)**

The transformation wasn't just about adopting new technologies; it was also about reshaping the company's culture. ERA understood that technology is only as effective as the people who use it, so they invested heavily in their employees. With an investment of $300,000 in professional development, the company created tailored training programs, e-learning modules, and hands-on experiences to empower its 150 employees to embrace new digital tools and approaches. This focus on human capital led to a 15% increase in employee engagement and a 10% boost in productivity. Yet, the push toward digitalization also introduced challenges in maintaining the same level

of personalized interaction that some clients valued. 20% of customers surveyed felt that digital tools, while efficient, made their experience feel impersonal, which could reduce customer engagement and affect long-term relationships. **(CR)**

The project was guided by a core team of 10 key members—project managers, IT specialists, data analysts, and change management consultants—who managed day-to-day operations and strategic decisions. They were supported by an auxiliary team of 15 to 20 members who provided technical assistance, conducted 30 training sessions, and offered administrative support. While 80% of the team consisted of in-house experts, ERA strategically integrated 20% external talent, including technology vendors and consultants, to bring specialized knowledge and fresh perspectives. However, not all suppliers initially met the company's high sustainability standards, necessitating an additional $50,000 in resources to improve their practices. **(KS), (CO)**

To ensure broad support and alignment with the transformation, ERA conducted over 20 workshops for internal teams and external partners, involving more than 100 participants. These workshops fostered collaboration, encouraged knowledge-sharing, and helped build a unified understanding of the project's objectives. By providing a forum to address concerns and gather feedback, ERA created a sense of shared ownership among stakeholders, which proved crucial in successfully implementing new tools and processes. However, 10% of long-standing customers resisted the shift to digital methods, preferring traditional approaches that relied on more resource-intensive practices. **(GO), (CS)**

The transformation led to several unexpected benefits, including the introduction of new services like predictive analytics and real-time market trend analysis. These offerings helped generate an additional $500,000 in revenue for the fiscal year, reflecting a *12% increase overall*. However, the increased reliance on digital platforms also led to a 20% rise in electronic waste (e-waste) from outdated or replaced devices like tablets and servers, amounting to approximately 300 kg of e-waste. **(UVP), (RE), (WM)**

ERA's enhanced digital capabilities also broadened its client base. The company experienced a 25% growth in new clients, particularly in the technology, e-commerce, and digital media sectors, which rely heavily on sophisticated data analytics. The addition of real-time analytics and user-friendly digital interfaces attracted 15 new clients, leading to a 20% increase in customer satisfaction. Furthermore, ERA's updated websites, mobile apps, and a 30% rise in social media engagement enabled the company to reach a younger, tech-savvy audience and enhance its overall digital presence. However, the increased use of digital channels introduced additional energy demands, as maintaining these platforms required intensive data storage and cooling systems, contributing to a 15% rise in energy consumption. **(CS), (CH), (KA), (KTR), (WM)**

To measure the impact of the digital transformation, ERA conducted comprehensive customer surveys. The feedback was overwhelmingly positive: 85% of clients were satisfied with the speed and accuracy of the data provided by the new tools, and 70% appreciated the ease of using the user-friendly dashboards. However, 10% of long-standing customers expressed hesitation about the digital shift, citing a preference for traditional methods. This insight underscored the need for continued support and training to help all clients transition smoothly into the digital era while maintaining a balance between digital efficiency and personalized service. **(CR), (CH), (KA)**

The transformation also aligned with ERA's sustainability goals. By integrating digital tools into its operations, ERA significantly reduced its reliance on paper, cutting usage by 60%, equivalent to saving around 250,000 sheets of paper annually. However, the increased use of electronic devices and digital platforms led to higher electricity consumption, estimated at an additional 50,000 kWh per year, and concerns regarding the long-term environmental impact of electronic waste and resource depletion. **(WM)**

In line with its environmental objectives, ERA re-evaluated its supply chain and made strategic shifts to increase local sourcing by 15%. The company partnered with suppliers known for strong environmental practices and corporate social responsibility (CSR) policies. Each supplier underwent rigorous assessments to ensure compliance with sustainability standards, including renewable energy use and waste minimization. Despite these efforts, the initial lack of alignment with some suppliers slowed ERA's progress toward its sustainability goals and required an additional $25,000 investment to bring all partners up to the desired standards. **(KS), (CO)**

The digital transformation required a significant financial commitment. ERA allocated around $700,000 to cover initial expenses, including software licenses, hardware, and cybersecurity upgrades. Ongoing costs of about $200,000 per year were earmarked for maintenance, cloud service fees, and cybersecurity operations—investments essential for maintaining the security and functionality of ERA's digital infrastructure. The high energy costs associated with running new digital infrastructure, such as data centres and increased server usage, also added an estimated $30,000 annually to operating costs. Despite these expenses, ERA viewed these investments as necessary to maintain efficiency, foster innovation, and ensure market leadership. **(CO)**

On the revenue front, ERA discovered that 60% of its customers were willing to pay more for enhanced services that directly improved their operations, such as real-time analytics and personalized insights. To meet these expectations, ERA introduced flexible payment options, both digital and traditional, ensuring accessibility for all clients. However, the additional costs associated with sustainable practices, like energy-efficient resources and waste management, presented challenges in achieving broader revenue growth, especially among customers less willing to pay a premium for these initiatives. **(RE)**

To promote sustainable practices, ERA also developed innovative pricing models that rewarded clients for adopting eco-friendly behaviours, such as reducing waste and using energy-efficient resources. These incentives increased customer retention by 10% and strengthened ERA's reputation as a business dedicated to social responsibility and sustainability. However, the lack of specific tax incentives or external funding to support sustainable practices limited the financial feasibility of some initiatives. **(WM), (KA), (GO)**

By integrating digital innovation and sustainability into its core operations, ERA Marketing Centre successfully navigated its transformation journey. The company improved service quality, expanded its market reach, and strengthened customer loyalty, all while remaining committed to environmental stewardship. However, the journey also highlighted several challenges, including increased energy consumption, electronic waste, and resistance from some stakeholders, which must be addressed to fully realize its sustainability goals.

10 Application of the Digital Sustainability Canvas to the Case Study

This section provides an example of how to apply the DSC using the previously discussed case study. The process begins by filling in the DSC with relevant data that has been highlighted in different colours within the case study text, indicating where each piece of information should be placed for each placeholder.

The guiding questions will be used to systematically evaluate the sustainability impact of the DTP. Each aspect of the project will be assessed to determine whether its impact is positive, negative, or neutral. This practical application serves to demonstrate how the DSC can be effectively utilised to visualise and analyse the sustainability impact of this project.

Key stakeholders (KS)
- Core and support teams,
- external vendors and consultants,
- suppliers with CSR standards,
- internal teams
- partners,
- customers

Key activities (KA)
- Deploy digital tools for data collection. (+)
- Update websites, apps, and social media. (+)
- Train customers for digital adoption. (+)
- Expand services and use eco-friendly pricing. (+)
- Invest in staff training.
- Align with teams and partners. (+)

Unique value proposition (UVP)
To deliver faster, more accurate data and insights through advanced digital tools, reduce costs, improve efficiency, and balance innovation with sustainability and social responsibility.

Customer segment (CS)
- Tech, e-commerce, and digital media sectors.
- Young, tech-savvy clients.
- Long-standing customers preferring traditional methods.
- New clients interested in real-time analytics.
- Customers valuing sustainability practices.

Customer relationship (CR)
- Digital tools and personalized service. (+)
- Challenges with personalization. (-)
- Boosts satisfaction, retention, and growth. (+)
- Incentivize eco-friendly practices. (+)

Waste management (WM)
- 60% less paper use, saving 250,000 sheets/year. (+)
- 300 kg/year of e-waste generated. (-)
- Increased electricity use (50,000 kWh/year). (-)
- Partner with suppliers for waste reduction and renewable energy. (+)
- Sustainable disposal and recycling of e-waste. (+)

Key technology & resources (KTR)
- Online dashboards. (+)
- Tablets for interviews. (+)
- Digital mapping tools. (+)
- Core team (10), support team (15-20). (+)
- Staff training. (+)
- Tech vendor partnerships. (+)
- Data centres increase energy use. (-)

Cost (CO)
- Key costs: $700,000 initial tech investment, $200,000/year upkeep, $50,000 for supplier sustainability, $30,000/year energy costs. (-)
- Least sustainable: High energy use and e-waste from digital tools. (-)
- Sustainable options like energy-efficient tech and greener suppliers exist but need upfront costs. (+/-)

Revenue (RE)
- Earned $500,000 from new services. (+)
- 60% of customers willing to pay extra for better services. (+)
- Offered flexible payment options. (+)
- Revenue growth limited by the cost of sustainable practices. (-)

Channels (CH)
- Digital channels: websites, apps, and social media. (+)
- Direct communication through surveys. (+)

Governance (GO)
- Held 20+ workshops to align stakeholders. (+)
- Upheld ethical and sustainable practices. (+)
- Ensured supplier compliance with sustainability. (+)
- Lacked tax incentives or funding for sustainability. (-)
- Managed resistance to digital methods. (N)