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# Building the Bridge between Digitally Assisted Innovation Management and Sustainability in Logistics: The EARTH Project Foundations and Findings

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***Abstract:***

***Purpose:*** *The article presents the foundations and findings of the EARTH project and is focused on the analysis of the potential of the applicability of a digitally assisted innovation management approach to drive sustainability projects in Logistics. The scope of the research conducted during the project implementation was mainly focused on the following issues: RQ1: What sustainability initiatives in logistics are taken by companies to meet the Sustainable Development Goals (SDGs); RQ2: What benefits can be achieved by applying an innovation management approach and dedicated IT tools to implement sustainable solutions in logistics, and how do the companies translate this approach into day-to-day operations?RO3: How can a benchmarking platform support the assessment of digitally assisted innovation management, respecting the implementation of sustainable solutions in logistics?*

***Design/Methodology/Approach:*** *The article utilizes the mixed method based on literature review, a comparative multi-case analysis of innovation management practices and sustainable solution development in logistics, and Design Science Research (DSR) complemented by Action Design Research (ADR) to create a benchmarking tool to be tested in a real environment.*

***Findings:*** *Based on a literature review and interview-based case studies, the role and scope of initiatives to implement SDG-oriented solutions in logistics, as well as companies'*

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*capability in using digitally assisted innovation management to carry out these implementations, were analyzed. This provided the foundation for developing the benchmarking platform to monitor the digitalization status of companies' innovation processes and to examine if the use of IT tools for innovation management supports companies' efforts to undertake actions aligned with sustainability in logistics.*
***Practical Implications:*** *The logistics sector lacks a fully structured approach to innovation management supported by dedicated IT tools to manage the implementation of sustainability solutions. The benchmarking platform was developed to help companies understand the level of digitalization in their innovation processes, while respecting the implementation of sustainable solutions in logistics.*
***Originality/Value:*** *The key value lies in translating mixed-method evidence (literature, multi-case, DSR/ADR) into a benchmarking platform that operationalizes the assessment of digitally assisted innovation management for SDG-oriented logistics implementations.*

***Keywords:***

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## 1. Introduction

In logistics, a sustainability-oriented focus stimulates innovation across multiple operational domains, including supply chain management, warehousing, material handling, procurement, packaging, reverse logistics, waste and resources management, transportation, and distributing activities (Grzelakowski, 2024; Shamout, 2024; Romagnoli *et al.,* 2023; Aravindaraj and Rajan Chinna, 2022; Graczyk-Kucharska, 2021; Bartolini *et al.,* 2019; Yakovleva, 2019).

The adoption of the 2030 Agenda and the Sustainable Development Goals (SDGs) has further underscored the need to integrate environmental protection, social inclusion, and economic efficiency, thereby creating a coherent plan for implementing sustainable innovations (United Nations, 2025; Tyagi *et al.,* 2023).

Against this backdrop, digitally assisted innovation management provides the organizational mechanism to translate sustainability commitments into implementable projects, using innovation management frameworks, data analytics, and digital platforms to prioritize, execute, and scale solutions with measurable KPIs.

In this context, the EARTH project (https://innovating4earth.eu/) focuses on identifying how digitally assisted innovation management can support the implementation of sustainable solutions in logistics (EARTH Project, 2025). The research addresses three main questions: RQ1: What sustainability initiatives in logistics are companies implementing to meet the Sustainable Development Goals (SDGs)? RQ2: What benefits can be achieved by applying an innovation management approach and dedicated IT tools to implement sustainable solutions in logistics, and how do the companies translate this approach into day-to-day operations? RQ3: How can a benchmarking platform support the assessment of digitally assisted innovation management in the implementation of sustainable logistics solutions?

The article presents the foundations and findings of the project, combining evidence from literature review, previous project experiences, comparative multi-case analysis, and Design Science Research (DSR), complemented by Action Design Research (ADR). The integration of these approaches enabled the development of a benchmarking platform that evaluates the degree of IT tools' assistance in innovation management when implementing sustainable solutions in logistics.

## 2. Literature Review

The concept of sustainability has gradually evolved beyond its ecological origins, particularly since the 1972 United Nations Conference on the Human Environment in Stockholm, into a comprehensive and multidimensional framework that integrates economic efficiency, social equity, and environmental responsibility (United Nations, 1972). As defined by the Brundtland Commission (World Commission on Environment and Development, 1987), sustainable development is “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”.

Over the following decades, the Brundtland idea was progressively translated into managerial practice through policy frameworks and measurement systems (e.g., the SDGs, the GHG Protocol). This institutionalization shifted sustainability from a single-issue environmental concern to an integrated performance paradigm linking ecological limits with social equity and economic viability across organizations and supply chains.

In this context, sustainability is addressed in its environmental, economic, and social dimensions within the framework of a multidimensional structure, defined as the

Triple Bottom Line (TBL) or Three Pillars of Sustainability (TPS) (Kusmendar *et al.,* 2025).

Adopted in 2015, the Paris Agreement and the 2030 Agenda with the 17 Sustainable Development Goals (SDGs) established a global framework guiding action across international, national, sectoral, and individual domains (United Nations, 2025; Balukja, 2024; Yadav and Thorat, 2022; Grainger-Brown and Malekpour, 2019; United Nations, 2015).

The TBL framework and SDGs requirements have been rapidly adopted in the logistics sector, which is an integral part of the global trade structure and supply chain, as in other sectors, and the pressure on industry stakeholders to balance economic, environmental, and social factors has increased (Rad and Gülmez, 2017; Elkington, 1998).

Changes in legal regulations, shifting expectations due to increased stakeholder awareness, and economic imperatives have made sustainability the centerpiece of logistics practices. Logistics Service providers seem to give top importance to sustainability actions aimed at (i) increasing the efficiency, effectiveness, and utilization of their resources, (ii) increasing sustainable behaviour, and (iii) improving the way they measure and assess their sustainability performances. (Abbasi and Nilsson, 2016).

Furthermore, sustainability is increasingly operationalized through circular economy models that reconfigure traditional logistics and supply chains, prioritizing waste reduction, pollution prevention, and product life extension in logistics practices (Alasmari, 2025).

The focus on sustainability has catalyzed the adoption of innovative approaches and technologies in the logistics sector and operations.

Implementation of innovations has become a key driver in ensuring sustainability in logistics. Changes are visible across all major logistics domains, including transportation and last-mile delivery, warehouse management, procurement, and facility operations.

Innovation in logistics is not merely the pursuit of technological novelty but a vehicle for socio-technical change that reconciles economic performance with environmental integrity and social well-being. Achieving that synergy requires purposefully combining sustainability goals with innovation practices (Stock *et al.,* 2017) and today, implementing innovations shifts from ad-hoc projects to a transparent, data-rich, and integrated system, improving idea development and decision-making, enabling seamless collaboration with external partners, deepening interactions with customers, and supporting flexible, cross-functional teamwork (Zaverzhenets and Łobacz, 2021).

This requires that the innovation management process be supported by IT tools to coordinate workflows, institutionalize knowledge sharing, provide analytics and reporting, and accelerate the design, prototyping, and testing of new products or services (Velinov *et al.,* 2023; Kadlubek *et al.,* 2022).

The benefits of digitizing innovation management to drive innovations in logistics can include the following aspects (EARTH Project, 2025):

- Efficiency and costs – the digitization of innovation automates labor-intensive tasks and streamlines workflows, reducing administrative costs for information-intensive activities, accelerating processes, and improving resource utilization. As a result, organizations can make better decisions, achieve shorter innovation cycles, and improve outcomes with fewer inputs.
- Broader collaboration and integration – digital tools support collaboration among a wide range of stakeholders (employees, customers, partners) throughout the process. Real-time platforms facilitate communication, rapid feedback, and idea sharing, making innovations more participatory, more creative, and better aligned with the market.
- Support at different stages – digital tools cover the entire innovation cycle, from needs identification, through ideation and idea evaluation, and collaboration on design and testing, to market deployment and product monitoring.
- Data-driven decisions – digitization enables the collection and analysis of large datasets (customer feedback, trends, performance), helping companies better tailor their offerings, reduce risk, and increase the impact of innovations.
- Scalability and integration – integrated platforms make it easier to scale innovations, manage larger projects, track progress and resources, and maintain consistent quality. They ensure smooth growth of innovations while upholding high standards of performance, compliance, and collaboration.
- Effective portfolio management – digital tools capture and organize ideas, support choosing the right timing and scope of deployments, and balance quick offer adjustments with the development of long-term initiatives in line with set priorities.

Taking into consideration benefits and the fact that innovations are becoming more and more complex, as well as that implemetation involves many individual and organizational participants, diverse activities that must be prioritized and structured in different ways, the application of digital tools at each stage of the innovation management process should be perceived as the possibility to improve operational efficiency, effectively scale innovations, and remain flexible in a competitive market. Integrating digital tools into the innovation process enables companies to

accelerate product development, foster collaboration, and make more informed, data-driven decisions.

Although the role of digitally assisted innovation management is widely acknowledged, the adoption of IT tools by companies remains limited (Bisogni *et al.,* 2024). A question that appears is whether digital tools were not actually applied, or the interviewees were unaware of their use at different stages of the innovation process (from identification of innovation opportunities, idea generation and idea management, concept development, product/service/process development, testing and validation, to market launch/commercialization).

## 3. Research Methodology

The study employed a mixed-methods research design, integrating qualitative and design-oriented approaches to explore the applicability of digitally assisted innovation management in implementing sustainable solutions in logistics.

The research process was structured around three research questions (RQ1–RQ3), addressing: (1) sustainability initiatives undertaken by logistics companies to meet the SDGs, (2) benefits of applying innovation management and digital tools to support sustainable solutions inplementation, and (3) the potential of a benchmarking platform to assess digitalization levels in innovation management when implementing sustainable sollutions.

The research proceeded in four interrelated stages:

1. *Literature Review:* The review of academic and professional sources was conducted to identify conceptual frameworks and empirical evidence on sustainable logistics, innovation management, and digital transformation. This stage established the theoretical foundation for analysing how digital tools can support sustainability-oriented innovation as well as helped to identify the range of sustainability solutions implemented in logistics.
2. *Comparative Multi-Case Analysis:* A qualitative, interview-based multi-case study was carried out among logistics (Logistics Service Providers) and manufacturing companies from different European countries participating in the EARTH project. To ensure consistency during data collection, a document outlining the interview framework was prepared and shared with all project members. Interviews were conducted both in person and online, and the results were summarized in interview reports, which were then reviewed by team members.
3. *Design Science Research (DSR):* Following the DSR paradigm, the findings from the literature and case analyses, combined with iterative cycles of design, evaluation, and refinement, were applied for benchmarking platform development. Additionally, insights gained from analyzing the Digital Innovation Project (https://www.innovatingdigitally.eu/) supported the

design and technical development of the benchmarking environment. The taken approach helped to develop the assessment mechanisms to analyze digitally assisted innovation practices in logistics during the implementation of sustainability-oriented solutions.

4. *Action Design Research (ADR):* The ADR component is applied to ensure close collaboration with companies, enabling the gathering of feedback and validation.

Overall, the methodological framework, developed by combining theoretical exploration with applied design, has contributed to creating an environment in which it is possible to assess how digitally assisted innovation management supports the logistics sector in implementing sustainability solutions and aligning with the Sustainable Development Goals.

## 4. Research Results and Discussion

Adoption of the SDGs has become a significant catalyst for driving innovation in logistics. The aim of implementing sustainable innovations is to achieve high standards of functioning in ecological, social, and economic aspects.

Several initiatives can be identified that companies undertake to meet the requirements of the SDGs. Their broad scope, aggregated within 10 intervention areas, is presented in Table 2.

***Table 2.*** *Catalogue of Logistics Sustainability Initiatives for SDGs Implementation*

| **Intervention areas** | **Examples of sustainability initiatives** | **SDG goals*** |
|---|---|---|
| Reduction of GHG (greenhouse gases) emissions | Air-pollution control from engines and installations for NOx/PM (nitrogen oxides/particulate matter); route optimization; modal shift and multimodal integration; deployment of low/zero-emission vehicles (EV, hydrogen, biofuels); eco-driving; telematics and GPS-based dispatching; application of IoT devices; supplier decarbonization and sustainable procurement engaging in GHG reduction (Greenhouse Gases – $CO_2$, $CH_4$, $N_2O$, etc.); implementing emission-reduction targets aligned with SBTi (Science Based Targets initiative); green tenders and evaluation criteria; supplier trainings and audits | 7, 9, 11, 12, 13, 17 |
| Reducing noise | Transport electrification; window replacement; use of acoustic screens and quiet operations; use of quiet brakes, air dampers, resilient track pads (railway) | 3, 11, 13 |
| Increasing energy efficiency | Use of smart lighting (LED, sensors); HVAC optimization (heating, ventilation, air conditioning); deployment of building management system/energy management system/facility management system (BMS/EMS/FMS); implementation of renewable energy sources (RES); use of energy-efficient material handling equipment/chargers (MHE); implementation of mechanisms reducing water flow and of alternative water sources; optimization of facility and resource utilization using machine learning and AI (artificial intelligence) | 6, 7, 9, 11, 12, 13 |

| | | |
|---|---|---|
| Enhancement of biodiversity and land use | Creation of green roofs/walls; planting native species; ecological compensations; limiting light pollution (e.g., using dimming, motion sensors, taking working hours into account); stormwater retention and management (e.g., using retention roofs, rain gardens, rainwater tanks, reuse of water for irrigation/cleaning) | 11, 13, 15 |
| Waste reduction and circularity | Reusable/returnable packaging; right-sizing and optimization of packaging; use of recyclable/biodegradable materials; development of reverse logistics and repair/renovation loops | 11, 12, 13, 14, 15 |
| Raising awareness and achieving corporate governance | Ecodriving training, training in Material Handling Equipment (MHE); recycling and sustainable-development trainings; implementation of a supplier code of conduct; implementation of climate-risk and business-continuity plans and policies; creating and compliance with the principles of professional ethics; inclusive trainings and accessibility | 4, 8, 9, 11, 12, 13, 16, 17 |
| Increasing supply chain resilience and reducing climate risk | Scenario analysis; modelling of alternative routes; use of alternative transport modes; inventory buffers for critical SKUs (Stock Keeping Unit); weather-aware routing (wind, temperature, icing); maintaining critical processes during disruptions under Business Continuity Management (BCM) | 9, 11, 13 |
| Implementing sustainable last-mile logistics | Creation of urban micro-hubs; deployment of cargo-bikes; deployment of parcel lockers; use of delivery time windows; creation of LEZ (Low Emission Zone) areas and fleet verification based on LEZ compliance | 11, 13 |
| Implementing modern technologies and IT solutions | Implementation of BMS/EMS/FCM in buildings; integration of TMS/WMS/SCM/ERP; data processing, decision support and process optimization by application of Big Data, Business Intelligence, Artificial Intelligence with Machine Learning (Big Data & BI & AI/ML); creating digital twins to run simulation (Digital Twins & Simulation); deployment of digital documents (e.g., e-POD, e-invoice); utilization of the Internet of Things and Radio Frequency Identification (IoT/RFID); application of cloud and edge computing (Cloud/Edge); utilization of modern communication technologies (5G/LPWAN); implementation of mobile robotics (AGV/AMR), robotic process automation and intelligent robotic process automation (RPA/IRPA); implementig augmented, virtual, and mixed reality (AR/VR/MR); application of electronic data interchange, distributed ledger and blockchain technologies (EDI/DLT/Blockchain), utilization of additive manufacturing (3D Printing – 3DP) | 7, 9, 11, 12, 13 |
| Increasing equality and accessibility | Access to services in under-served regions (also in countries with low development level, during war and crises, with hunger and diseases); investing in logistics and transportation infrastructure to reduce differences between countries, regions and cities; developing the logistics network (also in hard-to-reach locations); shared transportation system; creating safe and decent working conditions; broadening access to facilities and digital products; inclusive recruitment and upskilling; creating local jobs | 1, 2, 3, 5, 8, 9, 10, 11, 12, 17 |
| *Goal 1: No Poverty; Goal 2: Zero Hunger; Goal 3: Good Health and Well-being; Goal 4: Quality Education; 5: Gender Equality; Goal 8: Decent Work and Economic Growth; Goal 9: Industry, Innovation, and Infrastructure; Goal 5: Gender Equality; Goal 6: Clean Water and Sanitation; Goal 7: Affordable and Clean Energy; Goal 8: Decent Work and Economic Growth; Goal 9: Industry, Innovation, and Infrastructure; Goal 10: Reduced Inequalities; Goal 11: Sustainable Cities and | | |

Communities; Goal 12: Responsible Consumption and Production; Goal 13: Climate Action; Goal 14: Life Below Water; Goal 15: Life on Land; Goal 16: Peace, Justice, and Strong Institutions; Goal 17: Partnerships for the Goals

***Source:*** *Own study based on Abu Tabanjeh et al., 2025; Aghili, 2025; Finke & Schumann, 2025; Johnson et al., 2025; Keskin et al., 2025; Lu & Taghipour, 2025; Mantecchini et al., 2025; Massari et al., 2025; Müllerklein & Fontaine, 2025; Živičnjak et al., 2025; Deral et al., 2024; Dyczkowska et al., 2024; Expert Group on Urban Mobility, subgroup 4, 2024*; *Lackner et al., 2024; Li et al., 2024; Liu et al., 2024; Malinowska & Troczyński, 2024; Sonar et al., 2024; Waduge et al., 2024; Zhang et al., 2024; Apruzzese et al., 2023; Cozzolino & De Giovanni, 2023; Foster et al., 2023; Jelti et al., 2023; Mallick et al., 2023; Perotti & Colicchia, 2023; Pinchasik, 2023; Romagnoli et al., 2023; Aravindaraj & Rajan Chinna, 2022; Bjørn, 2022; Grzybowska & Stachowiak, 2022; Khan et al., 2022; Rathore et al.,2022; Tan & Sidhu, 2022; Cichosz et al., 2020; Malinowska et al., 2018; Dembińska et al., 2018; Ranjbar, M. 2018).*

However, these initiatives reflect the needs of all seventeen SDGs. In the case of logistics, the most salient are: SDG 7 – Affordable and Clean Energy, SDG 9 – Industry, Innovation, and Infrastructure, SDG 12 – Responsible Consumption and Production, and SDG 13 – Climate Action.

This prioritization is also emphasized in the interviews conducted as part of the EARTH project. In the studied organizations, the main streams of transformation are as follows:

1. decarbonization of transport (modernizing vehicle fleet - *Logbook Logistics*, *Bumerang Logistics*, *Enterprise Logistics*; investing in electric vehicles – *Amazon;* route optimization - e.g. GLAP platform in *Torello);*
2. renewable energy solutions utilization to increase energy efficiency (photovoltaic /PV/ installations in building – *Florim*; *Enterprise Logistics;* PV panels on selected fleet vehicles to maintain battery charge – *Torello);*
3. circular economy and waste reduction policy (reusable packaging lines and recycled materials at levels of 50–100% - *Aerosol Service*; reduction of plastics in favor of secondary raw materials – *Amazon*; "zero-waste" practices and responsible resource management – *Florim)*;
4. digitalization of processes and applying a data-driven approach (consolidate workflows with Mybook - *Logbook Logistics*; ETGB /Elektronik Ticaret Gümrük Beyannamesi/ and chatbot assistant - *UPS Türkiye;* WMS/TMS with telematics - *Enterprise Logistics;* vision solutions, ERP system, and Power BI - *Aerosol Service;* dedicated IT tools and AI platforms – *Amazon;*
5. environmental management and transparency (standardization with ISO 14001 and air quality monitoring - *SO.GE.MA*; implementing ISO and GMP /Good Manufacturing Practice/ with carbon footprint reporting, pursuing the Climate Pledge 2040; Sustainability Corner" for proper waste segregation – *Amazon*; continuous improvement system at the plant level - *Collins Aerospace*).

Although SDGs 7, 9, 12, and 13 are strongly reflected in the above actions, practices extend beyond them. Companies also advance the social dimension, inclusion, and competences development (DEI programs, including Women Exporters Program - *UPS Türkiye*'s; NEXT and Aula 162 initiatives - *Number1 Logistics*; safe and compliant workplace - *Collins Aerospace*'), as well as enhancing biodiversity ("Save the Bees" program - *SO.GE.MA*).

While these initiatives collectively form a coherent roadmap for sustainable logistics, the implementation approaches for these innovations vary considerably. Interviews emphasized that in many companies, initiatives are owner-led or customer-driven, with decisions taken at the top-management level (e.g., *Logbook Logistics, Bumerang Logistics, Enterprise Logistics, SO.GE.MA S.p.A.*).

At the same time, some organizations demonstrate a strategic and tightly specified approach to innovation (e.g., *UPS Türkiye, Amazon, Collins Aerospace, Técnicas Reunidas, Aerosol Service Sp. z o.o.*), featuring a clearly defined strategy (including environmental/DEI targets), a project portfolio, and a structured implementation pathway (idea → evaluation → pilot → scale).

The very process of digitalizing innovation implementation also reveals disparities. On the one hand, the use of IT tools to support innovation implementation remains limited. Many companies, when carrying out innovation-related activities, rely on meetings, phone calls, video conferences, and basic collaboration tools (such as Microsoft Teams/SharePoint, shared cloud files, and Excel). At the same time, systems like ERP primarily serve as sources of operational data.

On the other hand, the conducted interviews indicated that companies also use tools for planning and coordination (Microsoft Project, Project Class, Azure DevOps, Trello, Asana), analytics (Power BI), and software development automation (automated testing, CI/CD), and increasingly apply AI-based solutions (internal assistant platforms) for research and quick access to knowledge. Within companies, a growing need for standardization and digitalization is observed, along with rising awareness of the importance of collecting and harmonizing data.

The literature review and interview findings served as the basis for designing and developing a benchmarking platform that analyzes a company's use of IT tools to support innovation management throughout the entire process of creation and implementation. The audit conducted within the platform encompasses six key stages of the innovation process: innovation opportunity identification, Ideation and idea management, innovation concept development, service/product/process development, testing and validation, and market launch/commercialization.

The benchmarking mechanism enables companies to quickly and easily compare their innovation processes with similar organizations, helping them identify potential areas for improvement, understand process weaknesses, and make informed

investment decisions regarding the digitalization of their innovation implementation processes.

A detailed assessment of each activity at every stage of the innovation process allows a closer look at the degree of digitalization of individual innovation activities. At the same time, the audit examines whether successive activities within each stage have supported the implementation of sustainable development objectives. Additionally, the audit helps evaluate the direction of implementing innovative solutions to achieve the Sustainable Development Goals (SDGs). An interesting aspect for users is also the indicator-based assessment of digitally assisted innovation practices, measured by:

- Innovation Process Engagement Index (IPE) - shows the complexity and systematization of innovation management practices in the company. It indicates the readiness of the process for digitalization, enabling a comparison of approaches across different industries.
- Innovation Process Digital Coverage Index (IPDC) - illustrates the extent to which individual stages of the innovation process are supported by digital tools. It enables an understanding of the potential for digitalization of activities.
- Innovation Process Digital Intensity Index (IPDI) - indicates the intensity of actual use of digital tools in innovation management. Analyzed together with IPE and IPDC, it allows for benchmarking with other digital innovators.
- Digitalization and Engagement Index (IPDI/IPE) - shows the relative value of the IPDI indicator to IPE and indicates the degree of intensity of using digital tools for the scope of implemented innovation activities. It measures the gap between the current and achievable level of digitalization.
- Impact of innovation process implementation methods on achieved results and level of Sustainable Development Goals implementation – shows how the way the innovation process is implemented affects the achievement of the Sustainable Development Goals.

At this stage, the benchmarking platform provides a coherent operating environment, enabling assessment across companies. It is available directly at https://innovatingdigitally.apsl.edu.pl/ or via a redirect from the project website https://innovating4earth.eu/. Pilot tests are currently underway with companies, which will be used to gather initial feedback and improve the solution.

## 5. Conclusions

The conducted research confirms that the application of digitally assisted innovation management when implementing sustainability practices in logistics creates a space for investigation and development.

The analysis of literature and case studies revealed that although companies increasingly recognize the importance of sustainable development, their level of digital maturity and methodological approach to innovation management remain uneven. Many organizations rely on ad-hoc, owner-driven initiatives, while only a few demonstrate structured, data-driven strategies supported by dedicated IT tools.

The benchmarking platform developed within the EARTH project provides a valuable contribution to these findings. It allows companies to assess their digitalization level in innovation management, identify gaps, and benchmark their performance with others. Additionally, it provides for the assessment of IT tools support during the implementation of solutions for sustainable development, specifically in relation to the implementation of the SDGs.

By linking the innovation process stages with digital tool utilization and taking action for sustainability, the platform enables both self-assessment and organizational learning. The analysis of the benchmarking results may support decision-making regarding investment priorities, process standardization, and encourage companies to incorporate digital solutions at various stages of innovation implementation.

The further development of the benchmarking platform will focus on expanding the dataset through the broader participation of logistics companies and the collection of user feedback. This will enable more accurate refinement of the platform to meet the user's needs. Fundamental are the guidelines concerning the processing of results and the creation of comparisons, which aim to increase the impact of the collected findings.

In the long term, the platform is expected to evolve into a comprehensive benchmarking and learning environment, linking academia, business, and policymakers. Such a tool can significantly contribute to improving the competitiveness and sustainability of the logistics sector by fostering IT-based innovation management, enabling better resource allocation, and enhancing companies' capacity to meet the Sustainable Development Goals (SDGs) during the implementation of innovation.

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