SLOG 4.0

Digital and green skills for boosting innovation
and sustainability of the logistics sector

PROJECT AIMS

The project links two frameworks: sustainability/green skills and 4.0 technologies/digital skills within the field of logistics and aims to adapt green and digital skills of students to the requirements of the industry 4.0.

"TO INCREASE THE ADOPTION OF SUSTAINABLE AND DIGITAL PRACTICES IN THE LOGISTICS SECTOR, SECTOR RESPONSIBLE FOR CREATING SUBSTANTIAL COSTS FOR SOCIETY."

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PRESENTATION ON...

SLog 4.0's Progress Update

In a recent series of meetings for the SLog 4.0 project, significant strides were witnessed across various work packages, signaling **substantial progress toward the project objectives**.

Key highlights from the discussions included Eren Özceylan (GAUN) sharing positive news regarding the completion of formula definitions for validation across all modules, emphasizing the importance of integrating **practical exercises to enrich learning experiences**.

During discussions on assessment strategies, a consensus emerged on the necessity of incorporating multiple-choice questions to ensure the **integrity of evaluations**. As efforts continue to finalize assessment questions for certification, discussions around **copyright licensing** for published materials are evolving.

Partners showcased diverse progress in drafting textbooks, with Brigita (UM) advocating for **collaborative efforts** to streamline the process. Collective deadlines were set for textbook completion, underlining the urgency of timely submissions to facilitate reviews and subsequent iterations.

A pivotal moment arose when an **optimized peer review process** for ensuring module coherence was explored. Instead of evaluating individual organizational contributions, partners agreed to review modules as cohesive entities. While **textbooks are nearing completion**, efforts to extract supplementary materials like presentations and videos are ongoing.

These updates underscore the unwavering commitment to advancing the project. Together, partners are leveraging collaborative efforts to drive **meaningful impact in logistics sustainability education**, embodying dedication to innovation in the field.

DIGITAL INCLUSION AND ACCESSIBILITY IN LOGISTICS

In the era of **Logistics 4.0 and Society 5.0**, the convergence of advanced technologies with **societal needs** highlights the imperative of digital inclusion and accessibility in logistics operations. While Logistics 4.0 solutions offer immense potential for enhancing efficiency, sustainability, and connectivity within supply chains, it is essential to ensure that these benefits are **accessible to all members of society**, regardless of their background, abilities, or access to technology.

Digital inclusion in logistics encompasses a range of initiatives aimed at **bridging the digital divide** and empowering individuals from diverse backgrounds to participate in and benefit from digitalized supply chain processes. This includes efforts to provide **affordable access to technology, digital literacy training programs, and user-friendly interfaces** tailored to the needs of different user groups, including those with disabilities or limited technological proficiency.

DIGITAL INCLUSION AND ACCESSIBILITY IN LOGISTICS

One key aspect of digital inclusion in logistics is ensuring **accessibility for individuals with disabilities**. This involves designing logistics systems, software, and interfaces in compliance with accessibility standards such as the **Web Content Accessibility Guidelines (WCAG)**, ensuring compatibility with screen readers, voice commands, and other assistive technologies (Poultourtzidis et al., 2022). By making logistics platforms and applications more accessible, organizations can enable individuals with disabilities to actively engage in logistics-related activities, from order placement to tracking shipments, thereby promoting inclusivity and equal participation in the digital economy (Poultourtzidis et al., 2022).

Moreover, digital inclusion efforts in logistics extend beyond accessibility considerations to address broader societal challenges such as **socioeconomic disparities and geographic isolation**. In rural or underserved communities, for example, **access to reliable internet infrastructure and digital technologies may be limited** (Fanea-Ivanovici & Pana, 2020), posing barriers to participation in digitalized logistics processes. To address these challenges, collaborative initiatives involving government agencies, nonprofit organizations, and private sector stakeholders are essential to expand broadband access, provide **technology training**, and promote digital literacy in underserved areas.

DIGITAL INCLUSION AND ACCESSIBILITY IN LOGISTICS

Additionally, promoting digital inclusion in logistics entails designing **user-centric interfaces** and applications that cater to diverse user needs and preferences. This includes **multilingual interfaces, intuitive navigation features, and personalized user experiences** tailored to different demographic groups. By prioritizing user experience and usability testing, logistics organizations can enhance the accessibility and usability of their digital platforms, thereby empowering users of all backgrounds to navigate supply chain processes more effectively (Fanea-Ivanovici & Pana, 2020).

Digital inclusion and accessibility are fundamental principles that underpin the vision of Society 5.0 and the transition to Logistics 4.0. By prioritizing these principles in logistics design and implementation, organizations can unlock the full potential of digital technologies to drive inclusive economic growth, social equity, and sustainable development. Embracing digital inclusion in logistics **not only fosters greater diversity and participation in the digital economy but also strengthens the resilience and adaptability of supply chains** in an increasingly interconnected and interdependent world.

Bibliography

Fanea-Ivanovici, M., & Pana, M.-C. (2020). From Culture to Smart Culture. How Digital Transformations Enhance Citizens' Well-Being Through Better Cultural Accessibility and Inclusion. *IEEE Access*, 8, 37988–38000. https://doi.org/10.1109/ACCESS.2020.2975542

Poultourtzidis, I., Marina Katsouli, A., Anastasiades, S., Makroglou, S., Sidiropoulos, E., & Bamidis, P. D. (2022). Supporting Digital Inclusion and Web Accessibility for People with Cognitive Disabilities. In B. Séroussi, P. Weber, F. Dhombres, C. Grouin, J.-D. Liebe, S. Pelayo, A. Pinna, B. Rance, L. Sacchi, A. Ugon, A. Benis, & P. Gallos (Eds.), *Studies in Health Technology and Informatics*. IOS Press. https://doi.org/10.3233/SHTI220543

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DID YOU KNOW...

Sustainable Packaging Solutions

In the realm of logistics and supply chain management, **packaging plays a pivotal role** in safeguarding products during transit while also impacting environmental sustainability. Traditional packaging materials like plastic, styrofoam, and excessive cardboard contribute significantly to pollution and resource depletion. However, the landscape is rapidly evolving with the emergence of sustainable packaging alternatives designed to **minimize environmental impact** without compromising on functionality.
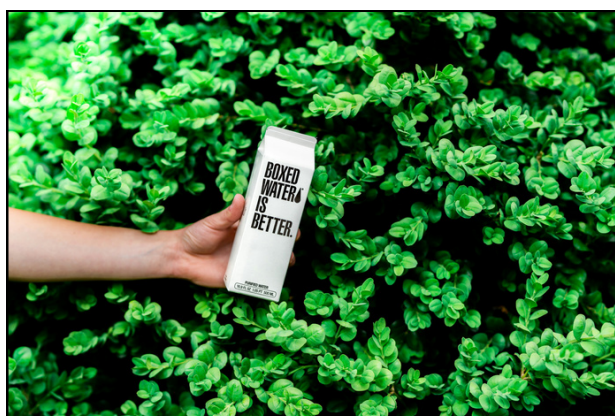

One notable trend in sustainable packaging is the widespread adoption of **biodegradable and compostable materials**. These include options such as **cornstarch-based packing peanuts, mushroom-based packaging, and plant-based plastics** derived from renewable resources like sugarcane or hemp. Unlike their conventional counterparts, **these materials break down naturally over time**, reducing the burden on landfills and ecosystems.

Additionally, the concept of **"right-sizing"** packaging has gained traction as companies seek to optimize package dimensions to match product size and minimize excess material usage. By employing advanced algorithms and design software, logistics professionals can **tailor packaging dimensions to fit products snugly**, thereby **reducing empty space and overall packaging volume**. This not only cuts down on material waste but also translates to lower shipping costs and reduced carbon emissions due to decreased transportation volume.

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DID YOU KNOW...

Sustainable Packaging Solutions

Furthermore, the rise of **reusable packaging** models presents a promising avenue for sustainability in logistics. Instead of single-use containers and boxes, reusable packaging solutions allow products to be transported multiple times before reaching the end consumer, which **not only reduces packaging waste but also fosters a circular economy** model wherein materials are continually recycled and reused, mitigating the need for virgin resources.
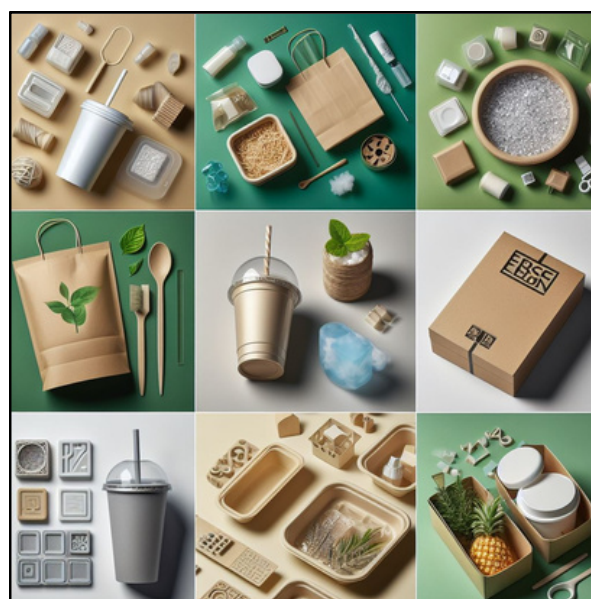
Innovations in **digital technology** are also reshaping the landscape of sustainable packaging. From **blockchain-enabled tracking systems** to **smart sensors that monitor package integrity and temperature**, these advancements enhance supply chain visibility and efficiency while minimizing the risk of damage or spoilage, thus further reducing waste.

As businesses increasingly prioritize sustainability in their operations, the demand for sustainable packaging solutions is poised to soar. By embracing these innovative approaches, logistics stakeholders can not only mitigate their environmental footprint but also unlock cost savings, enhance brand reputation, and contribute to a healthier planet for future generations. **Sustainable packaging isn't just a trend — it's a fundamental shift towards a more resilient and responsible logistics industry**.

SLog4.0

WHAT IS SLOG4.0?

Slog4.0 is a European project that aims to promote the uptake of eco-friendly and technologically advanced approaches within the logistics industry, a sector known for generating significant expenses for society, including greenhouse gas emissions and pollutants. For this purpose, it aims to contribute to the formation of a fresh cohort of proficient professionals for the logistics sector, equipped with a sustainability-focused mindset and a comprehensive skill set aligned with the principles of Industry 4.0.

PROJECT INFORMATION

Name: Sustainable Logistics4.0: Digital and green skills for boosting innovation and sustainability of the logistics sector
Number: KA220-HED-B12C4B93
Duration: 36 months
Funding: Erasmus+ Programme of the European Union, call "Cooperation partnerships in higher education"

PROJECT PARTNERS

The consortium includes 4 universities that believe in the need of proposing an innovative training offer in the field of logistic 4.0 by developing a new interdisciplinary curriculum, and 3 companies providing specialized and advanced services, selected upon the expected commitment proven by consolidated previous relations and their acknowledged proficiency.
The partners of the project are:
◆ Poznan University of Technology (Poland) - coordinator
◆ University of Aveiro (Portugal)
◆ University of Gaziantep (Turkey)
◆ University of Maribor (Slovenia)
◆ Valuedo srl (Italy)
◆ ECQA (Austria)
◆ Zerynth srl (Italy)

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