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NEWSLETTER 1/2024

TALON PROJECT



TALON

Autonomous and self-organised artificial intelligent
orchestrator for a greener industry 5.0

talon-project.eu

EDITORIAL

T This newsletter presents a summary of the primary dissemination outcomes of the project, which include journal and conference publications, as well as organization of events. Specifically, one (1) workshop of TALON, one (1) journal publication, and one (1) clustering activity.

Stylios Trevlakis, InnoCube

TALON CO-CREATION WORKSHOP

It is with great pleasure that we share the noteworthy outcomes of the recently concluded 2nd Plenary meeting for the TALON project, which transpired over 2.5 days in the vibrant city of Thessaloniki.

During this gathering, the entire consortium convened to deliberate and strategize on the development of an “Autonomous and Self-organized Artificial Intelligent Orchestrator for a Greener Industry 4.0.” The meeting served as a dedicated forum to synchronize our efforts and focus on the shared objective of ensuring the success of the TALON project.

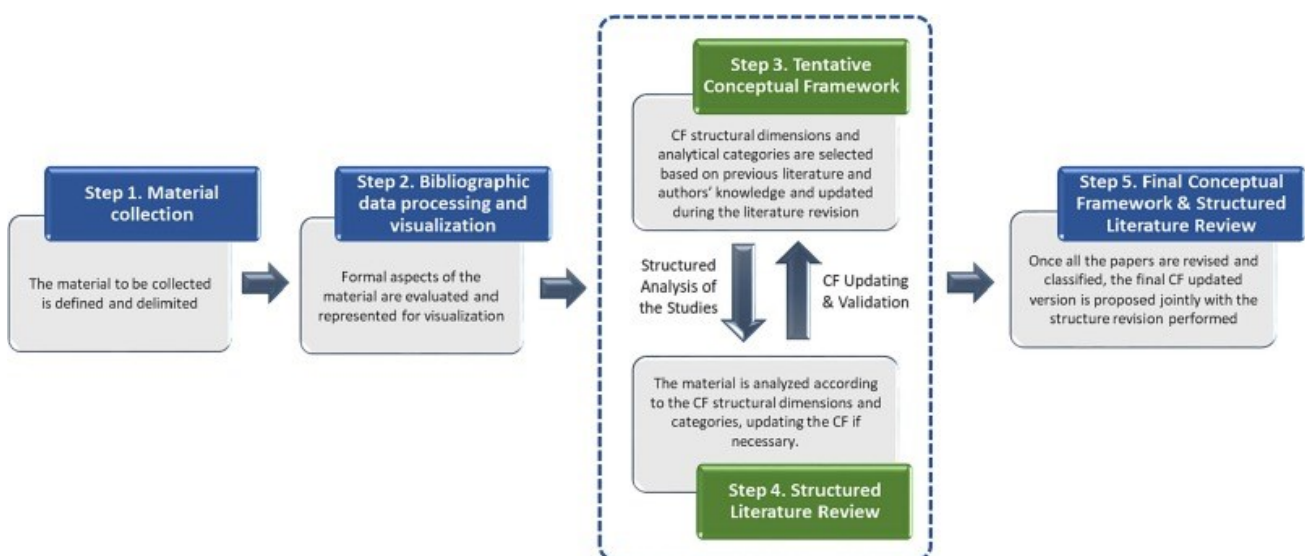
The analogy of a tight-knit musical ensemble aptly captures the essence of our collaborative endeavor. Each member of the consortium assumes a pivotal role, contributing to the harmonious realization of the TALON project. The collective commitment displayed throughout the meeting highlighted the shared vision of TALON towards success.

The unity and collaboration between the partners during the meeting was truly inspiring, as each participant brought forth their utmost dedication. This shared commitment is the driving force behind our journey toward a more sustainable and intelligent Industry 4.0. The TALON project serves as a testament to the extraordinary achievements that arise when a diverse group of individuals converges with a singular focus.



PAPER PUBLISHED: A CONCEPTUAL FRAMEWORK FOR THE OPERATIONS PLANNING OF THE TEXTILE SUPPLY CHAINS: INSIGHTS FOR SUSTAINABLE AND SMART PLANNING IN UNCERTAIN AND DYNAMIC CONTEXTS”

Recent practices in textile supply chains (SC) show a growing concern for sustainability not only in its economic dimension, but fundamentally in its environmental and social ones. One of the key management processes that affect sustainability is the SC operations planning since its fundamental role in achieving a balance between supply and demand in a sustainable manner. Moreover, in an uncertain and dynamic environment such as the textile sector, it is necessary to provide a certain learning capability to the operations planning techniques used to increase the speed and quality of response of the textile SC to unexpected situations. In this context, mathematical programming models, heuristics and artificial intelligence techniques have proven their validity to achieve sustainable, robust and smart supply chains. Despite their potential, neither a conceptual framework (CF) nor a literature review have been detected to support the development and study of such models in the textile supply chain operations planning. In view of these gaps, this paper proposes a CF for supporting the sustainable and smart operations planning of the textile supply chains in a dynamic and uncertain context based on a set of dimensions, categories and elements that reflect the specific characteristics of the textile sector. Firstly, a tentative CF is predefined based on other generic works on SC operations planning in uncertain context and the own authors’ knowledge. Secondly, a structured literature review based on this CF has been made resulting, at the same time, in the updating of some of its dimensions, categories and elements to reflect some textile specific characteristics. Consequently, the CF is not only predefined but also logically derived from the literature analysis. The results of the literature review show that there is a great opportunity to contribute to making textile supply chains more sustainable, smart, flexible, robust and resilient in dynamic and uncertain environments.



You can find more information about this paper [here](#).

You can refer to the paper as: "Lorente-Leyva, L. L., Alemany, M. M. E., & Peluffo-Ordóñez D. H., A Conceptual Framework for the Operations Planning of the Textile Supply Chains: insights for Sustainable and Smart Planning in Uncertain and Dynamic Contexts. Computers & Industrial Engineering, Volume 187, 109824, 2024."

TRUSTWORTHY AI CLUSTER

Nine projects funded under the Horizon Europe call HORIZON-CL4-2021-HUMAN-01-01 will pave the way for the widespread acceptance of Artificial Intelligence (AI) across Europe. These projects share a common goal of shaping AI solutions that are innovative, human-centric and dependable. Amid others, the main focus is on verifiable robustness, energy efficiency and transparency.

Each of these projects brings a unique perspective to the broad realm of trustworthy AI. Driven by the collective aim of fostering trust and confidence in AI technology, these initiatives are geared towards enhancing transparency, explainability, accountability, safety and performance in systems using AI.

The collaborative spirit of these projects is clear as the projects embark on shared efforts to understand each other's objectives and identify opportunities for synergies. These "cluster" activities work to ensure a cohesive strategy that aligns with the overall call objectives and the Digital Europe Strategy.

The following nine projects are part of the call and each project provides solid scientific solutions complemented by tools and processes for design, testing, validation, certification, software engineering methodologies and real-world applications.

- [AutoFair: Human-Compatible Artificial Intelligence with Guarantees](#)
- [ENEXA: Efficient Explainable Learning on Knowledge Graphs](#)
- [EVENTFLOW: Robust Learning and Reasoning for Complex Event Forecasting](#)
- [REXASI-PRO: REliable and eXplAinable Swarm Intelligence for People with Reduced mObility](#)
- [SAFEXPLAIN: Safe and Explainable Critical Embedded Systems Based on AI](#)
- [SustainML: Application Aware, Life-Cycle Oriented Model-Hardware Co-Design Framework for Sustainable, Energy Efficient ML Systems](#)
- [TALON: Autonomous and self-organized artificial intelligent orchestrator for a greener industry 4.0](#)
- [TUPLES: Trustworthy Planning and Scheduling with Learning and Explanations](#)
- [ULTIMATE: mUlti-Level Trustworthiness to IMprove the Adoption of hybrid arTificial intelligence](#)

By pooling their collective expertise, visions and communication channels, these projects aim to mutually amplify their impact.

The European AI strategy seeks to position the EU as a world-class hub for AI. This is why collaboration and synergies is a driving force of the European research landscape and a key player on the strategy. The core goal is to address the challenges of AI trust and uptake, ensuring that AI solutions are not only cutting-edge but that they also resonate with European values.

For more information about this collaboration and the projects funded under HORIZON-CL4-2021-HUMAN-01-01, visit the [EC Portal](#).



TALON



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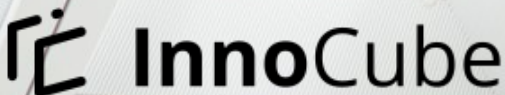
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