InnovAite SLOVAKIA

Deliverable

D2.6: Summary Articles (Partial M10)

WP2 Communication & Dissemination

Responsible partner: CVTI SR

Partners:

Date: 30.1.2026

Confidentiality: Public

Funded by the European Union NextGenerationEU

RECOVERY AND RESILIENCE PLAN

DEPUTY PRIME MINISTER'S OFFICE FOR THE RECOVERY PLAN AND THE KNOWLEDGE ECONOMY

VAIA RESEARCH AND INNOVATION AUTHORITY

Contents

Revision history			
Version	**Date**	**Comment**	**Author**
V1	30.1.2026	First draft	David Cymbalak

1 Executive summary

Context and main purpose: This document constitutes the partial delivery of Deliverable D2.6 "Summary Articles" for the M10 cycle of the InnovAIte Slovakia project. The main purpose of this deliverable is to present curated, plain-language summary articles that synthesize partial publications and research results from Work Package leaders into comprehensive features for relevant media and the project website.

Subject matter and key findings:

During the M1-M10 reporting period, the InnovAIte Slovakia consortium has achieved significant research milestones, resulting in 8 peer-reviewed publications across multiple prestigious international venues. These publications span several work packages and demonstrate the project's early research productivity. These publications span prestigious venues including EMNLP 2025, CVPR 2025, ICCV 2025, EG VCBM 2025, International Journal of Computer Vision, Journal of Real-Time Image Processing, Social and Economics Revue and ICETA 2025.

Conclusions: The first cycle (M10) of deliverable demonstrates strong alignment with the project's objective of achieving a minimum of 34 peer-reviewed publications. With these published 8 publications already achieved in the early project phase, also with the significant amount waiting to be published, the consortium is on track to exceed publication targets. The research outputs contribute directly to WP3 (Cross-Domain AI), WP5 (AI-Driven Video), and WP7 (AI-Driven Insurance Operations).

Plan and next steps: Summary articles based on these publications will be published on the project website (www.innovaite.sk) and disseminated through e-newsletters. The next reporting cycle a partial deliverable (M18) will continue the editorial synthesis of new publications across all work packages.

Significance and continuity: This deliverable contributes to Specific Objective 1 (Research Excellence and Innovation and Specific Objective 9 (International Collaboration). It demonstrates the consortium's commitment to open science and public communication of research results.

2 Introduction

Context: This deliverable was created within the InnovAIte Slovakia project (Project No. 09I02-03-V01-00029), specifically under Work Package 2 – Communication and Dissemination and Task T2.4. It represents the first partial delivery of D2.6 Summary Articles for the M10 cycle.

Identification of actors:

Participating Project Partners		Role	Involved key experts	1st stage Reviewer	2nd stage reviewer / SB rapporteur
Gratex International, a.s.	GTI	Partner			**Ivan Polášek**
Asseco central Europe, a.s.	ACE	Partner	Petra Bobíková		
Vysoká škola báňská - Technická univerzita Ostrava	IT4@VSB	Partner		**Tomáš Karásek**	
Univerzita Komenského v Bratislave	UK BA	Partner	Viktor Kocur, Marek Šuppa, Zuzana Černekova		
Centrum vedecko-technických informácií Slovenskej republiky	CVTI	Lead - DL	David Cymbalak		

Pozn. DL – Deliverable Leader, TL – Team Leader, TM – Team Member, E – External Expert.

Feel free to delete unnecessary lines, including this instruction.

Main objective of the deliverable:

To aggregate, synthesize, and publish comprehensive summary articles from partial research publications prepared by work package leaders, making scientific findings accessible to broader audiences including media, stakeholders, and the general public.

Specific objectives:

- Collect and compile all peer-reviewed publications from M1-M10 period
- Create plain-language summaries suitable for non-specialist audiences
- Provide evidence of publication with links and documentation
- Publish on project website and relevant media channels

Significance and use:

This deliverable serves as the primary mechanism for communicating research achievements to external stakeholders. The summary articles will be used for:

- Project website content
- Newsletter material (D2.4)
- Media outreach and press materials
- Stakeholder engagement
- Progress reporting to funding bodies
- Promoting FAIR within the project

3 Project Context, Objectives of WP2

Context of the entire project:

The InnovAIte Slovakia project aims to build a dynamic and sustainable innovation ecosystem in artificial intelligence, linking cutting-edge research with practical applications. The project emphasizes AI solutions that are technologically advanced, ethical, environmentally sustainable, and socially beneficial.

Relevant Specific Objectives

	Specific Objective	SO Description and Verification
1	Research Excellence and Innovation	Objective: To conduct cutting-edge research in AI across various WPs, resulting in a minimum of 34 peer-reviewed publications in reputable journals and conferences within the project duration. Verification: Research outputs will undergo rigorous peer review. The number of publications and their impact factors will serve as indicators of research excellence.
4	Enhanced Traffic Safety	Objective: To reduce traffic accidents by at least 10% in selected urban areas using AI-based traffic safety systems within three years. Verification: Accident data and traffic flow metrics will be analyzed, and reductions will be measured against baseline statistics.
9	International Collaboration	Objective: To engage in a minimum of 3 collaborative international projects and co-publish at least 10 research papers with international partners within the project duration. Verification: Documentation of collaborative projects and publications will demonstrate international engagement.

Contribution to the achievement of a specific objective 1:

8 publications delivered in M10 cycle - demonstrates strong early progress toward publication goals.

Contribution to the achievement of a specific objective 4:

3 of 8 publications directly address computer vision for traffic applications.

Contribution to the achievement of a specific objective 9:

3 of 8 publications involve international collaboration with external partners

Relevant Work Package /s

	Work Package	WP Lead Partner	Task	Task Lead Partner	Task Leader
WP2	Communication and Dissemination	GRATEX	T2.4 Media appearance	CVTI	
WP3	Cross-Domain AI	DFKI.DE			
WP7	AI-Driven Insurance	Asseco			

Linking the deliverable to the project:

D2.6 Summary Articles directly fulfills the project's commitment to media appearance and scientific dissemination as defined in Task T2.4. By synthesizing complex technical publications into accessible formats, this deliverable bridges the gap between cutting-edge research and public understanding, supporting the project's broader impact objectives.

Links to other deliverables:

D2.2 (Project Website): Summary articles are published on the project website

D2.3 (Expert Conferences): Publications support conference presentations

D2.4 (E-newsletters): Summary articles provide content for newsletters

D2.5 (Press Releases): Research highlights inform press communications

D2.8 (Promotional Materials): Publications support promotional content

4 Updated scope definition and methodology

Definition of the baseline:

Scientific publications from research projects often remain inaccessible to broader audiences due to technical language, paywalls, and specialized formatting. The challenge is to translate complex AI research findings into compelling narratives that maintain scientific accuracy while being accessible to non-specialists.

Identification of the solution:

D2.6 addresses this challenge by:

- Collecting all peer-reviewed and published publications from consortium partners
- Creating structured summaries with consistent formatting
- Highlighting practical applications and societal impact
- Providing direct links to full publications where available

Defining the solution methodology and overall approach:

- Gather publication metadata from all WP
- Verify publication status and access details
- Collect abstracts, full published papers and key findings
- Create plain-language summaries
- Upload to project website
- Distribute through newsletter channels
- Archive in deliverable documentation

5 Deliverable content

The InnovAIte Slovakia consortium has produced 8 peer-reviewed publications during this reporting period (M1-M10). Below are the summary articles organized by research theme:

5.1. Computer Vision for Traffic Safety and Pose Estimation

Publication 1: Efficient Vision-Based Vehicle Speed Estimation

Authors: Andrej Macko, Lukáš Gajdošech, Viktor Kocur

Related Work Packages: WP3 (Cross-Domain AI), WP5 (AI-Video Driven Building and Road Safety)

Published In: Journal of Real-Time Image Processing (JRTIP), 2025

Plain-Language Summary: Researchers from the InnovAIte consortium have developed a significantly faster method for estimating vehicle speeds from traffic camera footage. By replacing ~~traditional object detection systems~~an older object detection architecture (RetinaNet) with a more efficient YOLOv6 architecture, the team achieved **8 times faster processing** while maintaining accuracy comparable to previous state-of-the-art methods. The approach was tested across various hardware platforms, including edge devices, making it practical for real-world deployment in traffic monitoring systems.

Key Innovation: The research demonstrates that smaller AI models with post-training quantization offer the best balance between accuracy and computational cost for real-world traffic safety applications.

Original Abstract: This paper presents a computationally efficient method for vehicle speed estimation from traffic camera footage. We build upon a previous state-of-the-art method that detects 3D bounding boxes of vehicles using vanishing point geometry and a modified RetinaNet object detector. We show that replacing RetinaNet with a better performing YOLOv6 architecture results in significant improvements in terms of computational efficiency without compromising vehicle speed estimation accuracy. We evaluate the modified method in several variants in terms of vehicle detection and speed estimation accuracy. Our extensive evaluation across various

hardware platforms, including edge devices, demonstrates significant gains in frames per second (FPS) compared to the prior state-of-the-art, while maintaining comparable or improved speed estimation accuracy. We analyze the trade-off between accuracy and computational cost, showing that smaller models utilizing post-training quantization offer the best balance for real-world deployment. On the BrnoCompSpeed dataset, our best-performing model achieves better speed estimation accuracy, detection precision and recall than the previous state-of-the-art, while being eight times faster. The transferability of our approach is further confirmed by an evaluation on a different dataset.

Link: https://doi.org/10.1007/s11554-025-01704-z

Publication 2: RePoseD - Efficient Relative Pose Estimation With Known Depth Information

Authors: Yaqing Ding, Viktor Kocur, Vaclav Vavra, Zuzana Berger Haladova, Jian Yang, Torsten Sattler, Zuzana Kukelova

Related Work Packages: WP3 (Cross-Domain AI), WP5 (AI-Video Driven Building and Road Safety)

Published In: International Conference on Computer Vision (ICCV) 2025

Plain-Language Summary: This international collaboration between Slovak, Czech, ~~German,~~ and Chinese researchers introduces a novel framework for determining camera positions using depth information from single images. The method leverages recent advances in monocular depth estimation (MDE) to improve relative pose estimation, which is a fundamental problem in computer vision applications like 3D reconstruction and autonomous navigation. The new solvers outperform existing methods in both speed and accuracy.

Key Innovation: The framework jointly estimates scale and shift parameters along with relative pose, addressing the inherent ambiguity in depth predictions.

Original Abstract: Recent advances in monocular depth estimation methods (MDEs) and their improved accuracy open new possibilities for their applications. In this paper, we investigate how monocular depth estimates can be used for relative pose estimation. In particular, we are interested in answering the question whether using MDEs improves results over traditional point-based methods. We propose a novel framework for estimating the relative pose of two cameras from point correspondences with associated monocular depths. Since depth predictions are typically defined up to an unknown scale or even both unknown scale and shift parameters, our solvers jointly estimate the scale or both the scale and shift parameters along with the relative pose. We derive efficient solvers considering different types of depths for three camera configurations: (1) two calibrated cameras, (2) two cameras with an unknown shared focal

length, and (3) two cameras with unknown different focal lengths. Our new solvers outperform stateof-the-art depth-aware solvers in terms of speed and accuracy. In extensive real experiments on multiple datasets and with various MDEs, we discuss which depth-aware solvers are preferable in which situation. The code is available at https://github.com/kocurvik/mdrp.

Link: https://openaccess.thecvf.com/content/ICCV2025/papers/Ding_RePoseD_Efficient_Relative_Pose_Estimation_With_Known_Depth_Information_ICCV_2025_paper.pdf

Publication 3: Practical Solutions to the Relative Pose of Three Calibrated Cameras

Authors: Charalambos Tzamos, Viktor Kocur, Yaqing Ding, Daniel Barath, Zuzana Berger Haladova, Torsten Sattler, Zuzana Kukelova

Related Work Packages: WP3 (Cross-Domain AI), WP5 (AI-Video Driven Building and Road Safety)

Published In: IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) 2025

Plain-Language Summary: Published at CVPR, one of the world's top computer vision conferences, this paper presents efficient new methods for determining the relative positions of three cameras from just four point correspondences. The researchers developed a clever technique using "mean-point correspondences" that simplifies the complex mathematical problem while achieving state-of-the-art accuracy. The new solvers are both efficient and easy to implement, making them practical for real-world applications in autonomous systems and 3D reconstruction.

Key Innovation: Novel use of approximate mean-point correspondences combined with existing efficient minimal solvers produces more robust and accurate results than previous approaches.

Original Abstract: We study the challenging problem of estimating the relative pose of three calibrated cameras from four point correspondences. We propose novel efficient solutions to this problem that are based on the simple idea of using four correspondences to estimate an approximate geometry of the first two views. We model this geometry either as an affine or a fully perspective geometry estimated using one additional approximate correspondence. We generate such an approximate correspondence using a very simple and efficient strategy, where the new point is the mean point of three corresponding input points. The new solvers are efficient and easy to implement, since they are based on existing efficient minimal solvers, i.e., the 4-point affine fundamental matrix, the well-known 5-point relative pose solver, and the P3P solver. Extensive experiments on real data show that the proposed solvers, when properly coupled with local optimization, achieve state-of-the-art results, with the novel solver based on approximate mean-point correspondences being more robust and accurate than the affine-based solver.

Link: https://openaccess.thecvf.com/content/CVPR2025/papers/Tzamos_Practical_Solutions_to_the_Relative_Pose_of_Three_Calibrated_Cameras_CVPR_2025_paper.pdf

Publication 4: Are Minimal Radial Distortion Solvers Really Necessary for Relative Pose Estimation?

Authors: Viktor Kocur, Charalambos Tzamos, Yaqing Ding, Zuzana Berger Haladova, Torsten Sattler, Zuzana Kukelova

Related Work Packages: WP3 (Cross-Domain AI), WP5 (AI-Video Driven Building and Road Safety)

Published In: International Journal of Computer Vision, 2025

Plain-Language Summary: This research challenges conventional wisdom in computer vision by demonstrating that complex mathematical solvers for handling camera lens distortion may not be necessary in practice. The team compared traditional radial distortion solvers with simpler approaches and found that a combination of basic pinhole solvers with sampled distortion parameters, or neural network-based distortion estimation, achieves comparable results with significantly less implementation complexity.

Key Innovation: The paper provides practical guidance for choosing between simple sampling approaches and learning-based methods depending on the application context.

Original Abstract: Estimating the relative pose between two cameras is a fundamental step in many applications such as Structure-from-Motion. The common approach to relative pose estimation is to apply a minimal solver inside a RANSAC loop. Highly efficient solvers exist for pinhole cameras. Yet, (nearly) all cameras exhibit radial distortion. Not modeling radial distortion leads to (significantly) worse results. However, minimal radial distortion solvers are significantly more complex than pinhole solvers, both in terms of run-time and implementation efforts. This paper compares radial distortion solvers with two simple-toimplement approaches that do not use minimal radial distortion solvers: The first approach combines an efficient pinhole solver with sampled radial undistortion parameters, where the sampled parameters are used for undistortion prior to applying the pinhole solver. The second approach uses a state-of-the-art neural network to estimate the distortion parameters rather than sampling them from a set of potential values. Extensive experiments on multiple datasets, and different camera setups, show that complex minimal radial distortion solvers are not necessary in practice.We discuss under which conditions a simple sampling of radial undistortion parameters is preferable over calibrating cameras using a learning-based prior approach. Code and newly created benchmark for relative pose estimation under radial distortion are available at https://github.com/kocurvik/rdnet.

Link: https://doi.org/10.1007/s11263-025-02657-3

5.2. AI for Healthcare Diagnostics

Publication 5: Efficient and Explainable 3D CNNs for Alzheimer's MRI Diagnosis

Authors: Martin Ropjak, Zuzana Cernekova

Related Work Package: WP3 (Cross-Domain AI)

Published In: Eurographics Symposium on Visual Computing for Biology and Medicine (EG VCBM) 2025

Plain-Language Summary: Researchers from Comenius University have developed a configurable deep learning framework for early detection of Alzheimer's disease from brain MRI scans. The system achieves **91.2% accuracy** in distinguishing between cognitively normal individuals and those with Alzheimer's disease using a 3D ResNet10 model. Crucially, the framework includes built-in explainability features (Grad-CAM visualizations) that show clinicians which brain regions influenced the AI's decision, an essential feature for clinical adoption.

Key Innovations:

- Memory-aware dataset chunking reduces training time by 35%
- Fully reproducible experiments via single configuration file
- Explainability visualizations highlight clinically relevant regions (hippocampus, temporal lobes)

Original Abstract: We present a configurable deep learning framework for classifying T1-weighted brain MRI scans into cognitively normal (CN), and Alzheimer's disease (AD). The pipeline is optimized for high-performance computing (HPC) environments and integrates explainability methods for visual model interpretation. Key contributions include a flexible, parameter-driven setup that enhances reproducibility, a memory-aware dataset chunking strategy for efficient GPU utilization, and built-in Grad-CAM visualizations for visual inspection of results. Using the ADNI dataset, our best binary classification (CN vs. AD) achieved 91.2% accuracy with a 3D ResNet10 model. The framework's scalability, reproducibility, and explainability make it a robust tool for medical imaging research.

Link: https://conferences.eg.org/vcbm2025/wp-content/uploads/sites/26/2025/09/Efficient-and-Explainable-3D-CNNs-for-Alzheimers-MRI-Diagnosis.pdf

5.3. AI Ethics and Governance

Publication 6: Legal, Economic and Ethical Limits and Challenges of Artificial Intelligence in Human Resource Management

Authors: Petra Bobíková, Patrik Břečka, František Babič

Related Work Package: WP3 (Cross-Domain AI)

Published In: Social and Economic Revue, 02-2025; Presented at "ECOSYSTEMS OF THE FUTURE: Startups, Smart Cities and Human Resources at the Core of the Digital Economy" 2025

Plain-Language Summary: This paper from Asseco Central Europe examines the complex legal, economic, and ethical challenges of implementing AI in human resource management. The authors analyze AI implementation from the employer's perspective while emphasizing protection of employee rights. Special attention is given to the recruitment process, where AI deployment raises critical issues related to equal treatment and non-discrimination. The paper addresses GDPR compliance challenges in automated decision-making and provides guidance for organizations implementing AI-based HR tools.

Key Findings:

- AI systems for recruitment are classified as "high-risk" under the EU AI Regulation
- Consent may not be appropriate as a legal basis for AI processing of job applicant data
- Organizations need robust monitoring and auditing mechanisms for AI tools
- Technical expertise gaps remain a significant barrier to responsible AI implementation in HR

Original Abstract: The rapid development of artificial intelligence (AI) is fundamentally transforming human resource management processes, creating new opportunities while also introducing complex legal, economic, and ethical challenges. This article focuses on analysing the limits and possibilities of AI implementation in various areas of human resource management from the employer's perspective, with particular emphasis on the protection of employees' rights as the weaker party in employment relationships. Special attention is devoted to the pre-contractual phase of employment, especially the recruitment process, where the deployment of AI tools raises critical issues related to compliance with the principle of equal treatment and the prohibition of discrimination. The article further examines the processing of personal data in the context of automated decision-making and explores the key questions employers must address to properly design internal policies and procedures. Finally, it offers a technological perspective,

highlighting the dynamic development of AI capabilities and their potential impact on the legal, ethical, and organisational frameworks of human resource management. The aim of the article is to contribute to the academic discourse on the legally compliant and sustainable use of AI in the employment context.

Link: https://doi.org/10.52665/ser20250209

5.4. AI for Low-Resource Languages

Publication 7: Trojsten Benchmark - Evaluating LLM Problem-Solving in Slovak STEM Competition Problems

Authors: Adam Zahradník, Marek Šuppa

Related Work Package: WP7 (AI-Driven Insurance Operations)

Published In: Conference on Empirical Methods in Natural Language Processing (EMNLP) 2025

Plain-Language Summary: Researchers from Comenius University have created the first comprehensive benchmark for evaluating Large Language Models (LLMs) on complex STEM problems in Slovak—a low-resource language. The Trojsten Benchmark contains 1,108 high-school competition problems in mathematics, physics, and programming with reference solutions. Using GPT-4 for both rubric generation and grading, the team found that AI grading shows only 1.05 average absolute deviation from human graders on a 5-point scale.

Key Findings:

- GPT-4o achieved the highest average score of 6.07 out of 10 on Slovak STEM problems
- Model performance consistently decreased with increasing problem difficulty
- Interestingly, GPT-4 performed better on original Slovak problems than English translations
- The benchmark addresses a significant gap in evaluation resources for low-resource languages

Original Abstract: Large language models show promising performance on reasoning tasks, yet evaluation methods for low-resource languages remain limited, particularly for complex STEM problemsolving. We introduce Trojsten Benchmark, a Slovak-language dataset of 1,108 high-

school competition problems with reference solutions across mathematics, physics, and programming, and a rubric-based LLM grading framework. Using GPT-4 to generate rubrics and grade solutions, we observe 1.05 average absolute deviation from human graders (5-point scale), while benchmarking GPT-3.5-Turbo, GPT-4, GPT-4o, and open-weight models (Llama 3, Phi-3). We quantify multistep reasoning performance by difficulty, show consistent underperformance on harder items, and demonstrate language sensitivity: accuracy drops on English translations of Slovak statements, evidencing challenges beyond translation. Trojsten Benchmark complements English-centric math datasets (e.g., MATH, GSM8K)bytargeting open-response, rubric-gradable reasoning under low-resource linguistic framing. We release code and data to enable reproducible evaluation and humanaligned auto-grading for STEM in under-served languages.

Link: https://doi.org/10.18653/v1/2025.emnlp-main.1779

5.5. Multicamera Computer Vision Systems

Publication 8: Image Stitching Methods for Enhanced Multicamera Computer Vision

Authors: David Cymbalak, Roman Vápeník, Martin Korének

Related Work Package: WP5 (AI-Video Driven Building and Road Safety)

Published In: International Conference on Emerging eLearning Technologies and Applications (ICETA) 2025

Plain-Language Summary: Researchers from CVTI SR have developed and tested advanced image stitching techniques for multicamera computer vision systems. The work progresses through three prototypes: basic homography-based stitching, parallax-tolerant refinement, and a hybrid system combining classical methods with deep learning (LoFTR correspondence matching). The research establishes foundations for real-time streaming pipelines capable of processing multiple camera inputs simultaneously, which is essential for traffic monitoring and smart building applications.

Key Innovation: The hybrid classical-deep integration approach demonstrates how traditional computer vision methods can be enhanced with modern deep learning techniques for improved robustness.

Original Abstract: This paper provides a discussion of advancements in image stitching techniques and presents a hands-on implementation and testing of selected methodologies. Existing approaches are analyzed, ranging from classical homography based methods to modern deep learning techniques, followed by the development of three progressive prototypes: simple homography based stitching, parallax-tolerant seam-driven refinement, and hybrid classical-deep integration using LoFTR correspondence matching. The research establishes foundations for transforming static prototypes into real-time streaming pipelines capable of simultaneously processing N-input multicamera systems. These image stitching pipelines appear suitable for future enhancement of multicamera computer vision systems and AI model input processing.

Link: https://doi.org/10.1109/ICETA67772.2025.11280234

6 Final conclusions and recommendations

Summary of key conclusions:

Numeric summary:

- 6 Conference papers
- 2 Journal articles
- **3** Publications with **international collaboration**
- 3 Open-Source code releases mentioned in papers
- **3.05 papers** considered as research output in category "Publications **in the WoS/Scopus** created within the project" (based on percentage recalculation mentioned in papers acknowledgement)
- **1.5 papers** considered as research output in category "Publications in databases **other than WoS/Scopus** created within the project" (based on percentage recalculation mentioned in papers acknowledgement)

Key conclusions:

- **Strong early research output**: The M10 cycle has produced 8 peer-reviewed publications, or 4.55 (calculating percentage of project assignment in acknowledgement), within the first 10 months. This demonstrates a significant research momentum across the consortium.
- **International collaboration success**: 3 of 8 publications involve international co-authors from Germany (DFKI), Czech Republic (VSB-TUO), and China, exceeding expectations for international engagement.
- **High-Impact venues**: Publications in CVPR 2025, ICCV 2025, EMNLP 2025, and the International Journal of Computer Vision establish the project's credibility in top-tier research communities.
- **Cross-WP integration**: Multiple publications bridge different work packages (particularly WP3 and WP5), demonstrating successful research integration across project domains.
- **Practical applications**: Research outputs directly address project objectives in traffic safety, healthcare AI, and AI ethics, with several publications including open-source code for practical implementation.

Final recommendations:

- Maintain current productivity trajectory to comfortably exceed the 34-publication target by project end.
- Leverage high-impact publications for broader media outreach and press releases (D2.5).
- Encourage additional publications from the WP4 and WP6 work packages to balance coverage across all research domains.

- Continue releasing code and datasets with publications to maximize research impact and reproducibility.
- At the final D2.6 (M30) Develop Slovak-language summaries of key publications for local media and stakeholders.

Proposal for dissemination and publication plan:

- M10 – Partial D2.6 Summary Articles and partial dissemination to project documentation system, project website or newsletter
- M18 – Extended Partial D2.6 Summary Articles and partial dissemination to project documentation system, project website or newsletter
- M26 – Extended Partial D2.6 Summary Articles and partial dissemination to project documentation system, project website or newsletter
- M30 – Final D2.6 Summary Articles for all published paper related to InnovAIte project and full dissemination to project documentation system, project website, newsletter and final project conference.

7 Risk and Mitigation Measures

Risk	Description	Mitigation Measure
Publication Access	Some publications may be behind paywalls	Provide preprint links and author contact information where available
Technical Accuracy	Plain-language summaries may oversimplify	Technical review by WP experts before publication
Timeliness	Delay in collecting publication information from partners	Establish regular reporting schedule with WP leaders
Language Accessibility	Technical jargon and language may limit audience reach	Multiple summary versions in final M30 deliverable (Slovak/English) for different audience levels

8 Annexes

8.1. Table - overview of annexes

Name of Annex	Description of content of Annex	Confidentiality	Location	Link
Macko, A., Gajdošech, L., & Kocur, V. (2025). Efficient vision-based vehicle speed estimation. *Journal of Real-Time Image Processing*.	Full Paper	Public	Online	https://doi.org/10.1007/s11554-025-01704-z
Ding, Y., Kocur, V., Vavra, V., Haladova, Z.B., Yang, J., Sattler, T., & Kukelova, Z. (2025). RePoseD: Efficient Relative Pose Estimation With Known Depth Information. *ICCV 2025*.	Full Paper	Public	Online	Access Link
Tzamos, C., Kocur, V., Ding, Y., Barath, D., Haladova, Z.B., Sattler, T., & Kukelova, Z. (2025). Practical solutions to the relative pose of three calibrated cameras. *CVPR 2025*.	Full Paper	Public	Online	Access Link
Kocur, V., Tzamos, C., Ding, Y., Haladova, Z.B., Sattler, T., & Kukelova, Z. (2025). Are Minimal Radial Distortion Solvers Really Necessary for Relative	Full Paper	Public	Online	https://doi.org/10.1007/s11263-025-02657-3

Pose Estimation? *Internation al Journal of Computer Vision*.				
Ropjak, M., & Cernekova, Z. (2025). Efficient and Explainable 3D CNNs for Alzheimer's MRI Diagnosis. *EG VCBM 2025*.	Full Paper	Public	Online	Access Link
Bobíková, P., Břečka, P., & Babič, F. (2025). Legal, Economic and Ethical Limits and Challenges of Artificial Intelligence in Human Resource Management. *Social and Economic Revue*, 02-2025.	Full Paper	Public	Online	https://doi.org/10.52665/ser20250209
Zahradník, A., & Šuppa, M. (2025). Trojsten Benchmark: Evaluating LLM Problem-Solving in Slovak STEM Competition Problems. *EMNLP 2025*.	Full Paper	Public	Online	https://doi.org/10.18653/v1/2025.emnlp-main.1779
Cymbalák, D., Vápeník, R., & Korének, M. (2025). Image Stitching Methods for Enhanced Multicamera Computer Vision. *ICETA 2025*.	Full Paper	Public	Online	https://doi.org/10.1109/ICETA67772.2025.11280234

About the project

The InnovAIte Slovakia project was launched in response to the call "Transformation and Innovation Consortia" announced by the Government Office of the Slovak Republic under the Recovery and Resilience Plan of the Slovak Republic (Component 9 – Investment 2: Supporting cooperation between companies, academia, and research and development organizations). The call aims to drive systemic transformation and increase the added value of key sectors of the Slovak economy through intensive collaboration among research institutions, innovative enterprises, the public sector, and internationally renowned partners.

InnovAIte Slovakia seeks to build a dynamic and sustainable innovation ecosystem in the field of artificial intelligence (AI), effectively linking cutting-edge research with practical applications. The project emphasizes the development of AI solutions that are not only technologically advanced but also ethical, environmentally sustainable, and socially beneficial. The consortium brings together leading research centers, universities, and businesses from Slovakia, Germany, and the Czech Republic.

Key focus areas include the development of AI algorithms for improving building energy efficiency, enhancing traffic safety through video analytics, automating software development, driving digital transformation in the insurance sector, and validating functional prototypes. Special attention is also given to AI education, talent development, and the incubation of startups.

The project's outcomes will significantly strengthen Slovakia's position in research and innovation, reduce environmental burdens, increase the competitiveness of the national industry, and modernize public services. By bridging the public and private sectors with international research excellence, InnovAIte Slovakia stands as a key instrument in addressing the social and economic challenges of today.

InnovAIte SLOVAKIA

InnovAIte Slovakia

D2.6 (Partial M10) Summary Articles

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