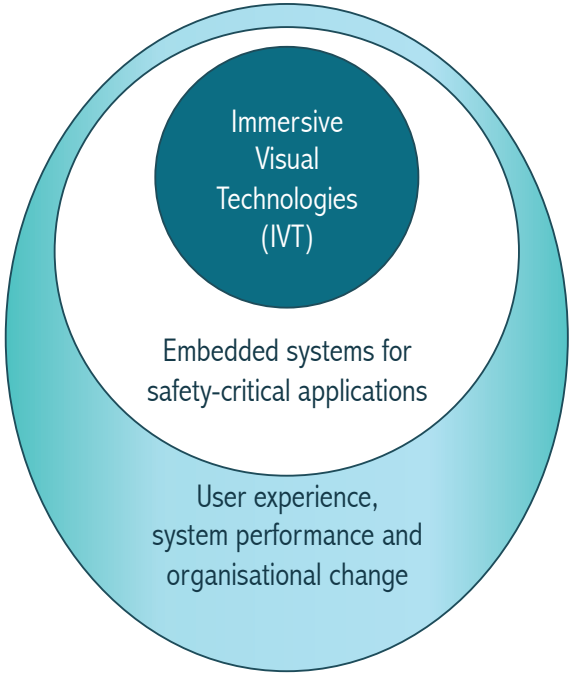
PROJECT GOALS

The main objective of the project is to train multidisciplinary experts on core imaging technologies, and the related systems and human factors for the successful design of the safety-critical applications of the future.



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Marie Sklodowska-Curie
Innovative Training Network

ImmerSAFE

IMMERSIVE VISUAL TECHNOLOGIES FOR SAFETY-CRITICAL APPLICATIONS

https://immersafe-itn.eu/

@ImmerSAFE Project

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PROJECT IN A NUTSHELL

The research programme is organized in three work packages:

WP1: Immersive visual technologies;
WP2: Embedded systems for safety-critical applications;
WP3: User experience, system performance and organizational change.

WP1

Light field sensing and processing
Multimodal 3D reconstruction from mobile sensors
Depth-corrected head-up display visualization
Reliable and fast communication of immersive visual data

WP2

Dependability analysis
Methods and architectures for real time implementation
Integration towards use cases Ultra-durable embedded transparent display

WP3

Fatigue induced by use of IVT
User ability to receive information from IVT Relation of IVT to organisational changes

INDIVIDUAL RESEARCH PROJECTS

- Vision enhancement in extreme environmental conditions
- Accommodation and convergence cues on transparent display media
- Multi-camera surround view visualisation and multi-modal sensor integration
- Ultra-reliable communications of immersive visual data
- Dependability in vision-centered systems
- Assessing the effectiveness of immersive visual technologies in an industrial machine framework
- Evaluating the Quality of Experience of immersive visual systems in operative control rooms
- How do immersive visual technology affect task performance in control centres?
- Organisational changes caused by immersive visual technologies in safety-focused organisations
- Industrial visualisation using see-through interfaces
- Embedded system for enhanced surround vision in work machines
- Augmented and virtual reality systems in operative control rooms
- Real-time image processing and analysis of UAV videos for safety-critical applications
- Compression methods for geometry-enhanced light field images under safety-critical conditions
- Rugged multicoloured transparent displays

TRAINING STRUCTURE

COLLECTIVE TRAINING		INDIVIDUAL TRAINING
PhD courses	LOCAL	Cross-disciplinary research projects with intersectoral supervisory Teams
Training School, Tech Days, Immersive Cluster Day	NETWORK-WIDE	Secondments in academy and industries
Webinar series designed for ImmerSAFE	ONLINE	Dedicated Moodle courses made available online
Attending International conferences and meetings with the Advisory Board	CONFERENCES	Coaching to improve presentation skills