

Curriculum Vitae – Horizon Europe Format Tunc Olcer

Senior XR and real-time simulation expert bridging engineering data and human execution in maritime and industrial environments.

Professional Profile

Senior XR and Real-Time Simulation Specialist with more than 20 years of experience in industrial, maritime, offshore, and engineering environments. Expert in Unity3D and 3ds Max, specialising in digital twin visualisation, immersive training, and human-centred XR applications for safety-critical systems. Extensive hands-on experience with European shipyards, offshore contractors, and complex mechanical systems. Proven ability to translate engineering data into usable, operational XR tools that improve safety, efficiency, and workforce adoption.

Key Competences

XR / AR / VR application development (Unity3D)
Real-time simulation and digital twin interaction
3D asset pipelines for industrial XR (3ds Max)
Human-in-the-loop system design
Maritime, offshore, and shipyard environments
Training and operational support for complex systems
Safety-critical and high-risk installation scenarios
Cross-disciplinary communication between engineering and operations

Professional Experience

Senior XR / Real-Time Simulation Specialist

Freelance / Industrial Projects | Europe | 2005 – Present

Design and development of real-time 3D, XR, and simulation solutions for industrial, maritime, offshore, and engineering clients.

Key responsibilities and achievements:

Development of Unity3D-based XR applications for industrial visualisation, training, and operational support.
Conversion of CAD and engineering data into optimised, spatially accurate 3D assets for real-time use.
Creation of immersive VR environments for design validation, constructability reviews, and safety training.
Development of AR-based guidance and visualisation concepts for complex installations and maintenance.
Close collaboration with engineers, operators, and supervisors to ensure usability and real-world relevance.
Contribution to digital twin visualisation layers supporting planning and execution.

Industrial and Maritime Projects

Royal IHC / IHC Merwede Offshore & Marine / IHC IQIP

XR visualisation, real-time simulation, and industrial animation supporting offshore and maritime engineering projects, including installation and operational concepts.

Allseas Group

Visualisation and simulation support for offshore construction and heavy-lift operations, contributing to understanding of complex sequences and safety-critical processes.

DCN Diving

Technical visualisation and simulation support for subsea and diving-related operations.

These projects provided direct exposure to shipyard workflows, offshore construction constraints, and safety-critical operational environments.

Education

Aerospace Engineering

Technical education with focus on mechanical systems, structures, and engineering principles.

Mechanical Engineering

Complementary engineering education supporting physical system understanding and fabrication.

Fine Arts / Visual Design

Formal training in visual communication and spatial representation, supporting high-quality, intuitive XR experiences.

Technical Skills

Engines & Platforms: Unity3D

3D Tools: 3ds Max

XR Domains: AR, VR, XR, real-time simulation

Data Types: CAD-derived geometry, engineering models, operational data

Hardware: Industrial VR/AR headsets (experience across multiple platforms)

Practical Engineering Skills

Mechanical prototyping and fabrication

Welding and metalwork

Physical system assembly and tuning

Strong understanding of real-world constraints in industrial environments

These skills support the creation of XR solutions grounded in physical reality rather than abstract visualisation.

Role in Horizon Europe / Clean Maritime Projects

Within Horizon Europe and Clean Maritime projects, the role corresponds to:

XR application development and integration
Digital twin visualisation and interaction
Immersive training and workforce upskilling
Human-centred interface design for safety-critical systems

Support for industrial pilots and demonstrations

Languages

English (fluent)
Dutch (fluent)
Turkish (native)
French (competent verbally although with heavy Canadian accent)
German (competent verbally in conversation)

Availability

Available as:

Individual expert contributor
XR technical partner
Work Package contributor or technical lead

