



# **Revised (Final) Version of Gamification-based "Competence Hub" on Sport Innovation Platform**

*Deliverable No: 14 (D4.3)*

**Promoting Employability of Young Student-Athletes through  
“Competence Hub” on Sport Innovation**

**COMPATH – 101050955**



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## 1. Executive Summary

The COMPATH Competence Hub has progressed from a promising prototype (D7) to a production-ready, multilingual learning ecosystem that equips Europe's 16-25-year-old student-athletes with technology-led skills and twenty-first-century competences.

Between M18 and M34 the platform underwent three evidence-driven iteration cycles, informed by:

- Local and international pilots involving 40 educator-facilitators, 54 on-site student-athletes and 142 self-paced on-line learners across seven programme countries plus the United Kingdom;
- Usability surveys, server audits which generated a prioritised backlog of 34 technical, UX and pedagogic actions; and
- KPI monitoring that tracked usability, engagement and perceived career relevance.
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Key results include:

- Average usability rose to 4.61 (5-point scale);
- Perceived career applicability improved to 4.35;
- All quantitative WP-4 targets have been met or exceeded; and
- The final platform is fully compliant with GDPR.

The deliverable documents the improvements undertaken, presents the final usage data, and sets out a sustainability pathway that combines a freemium access model with open API integrations into mainstream Learning Management Systems (LMS). The Competence Hub is therefore ready for large-scale roll-out from July 2025 and will be showcased during the European Week of Sport.

## 2. Introduction & Purpose

COMPATH addresses the employability gap faced by young athletes by blending sport-facing emerging technologies (AI, Big-Data, IoT, VR/AR, e-Sports) with transversal skills (critical thinking, creativity, media literacy, entrepreneurship). The Competence Hub constitutes the project's digital nucleus, delivering 12 gamified learning modules and a European community space.

Where Deliverable D7 presented the testing version, D4.3 captures the revised and final platform as validated through WP-4 pilots. It:

- details the methodology used to prioritise and implement improvements;
- describes the technical, UX and pedagogic enhancements realised;
- provides updated analytics and impact evidence; and
- outlines sustainability & exploitation measures beyond the EU funding period.

## 3. Revision Methodology

The revision of the Competence Hub moved deliberately from a promising pilot to a production-ready learning ecosystem by coupling solid evidence with an agile delivery rhythm. We began by consolidating four complementary data streams generated during the Common Pilot Scheme: 142 post-module learner surveys, strengths-and-improvements canvases captured in on-site workshops.

Stage	Evidence source	Analysis / synthesis tool	Output
Pilot feedback	142 post-module surveys	KPI variance analysis	Prioritisation matrix



<b>Workshop insights</b>	9 “Strengths / Improvements” canvases (international workshop)	Thematic coding	Pedagogic backlog
<b>Platform telemetry</b>	Server logs & GA4 funnels	Drop-off mapping	UX backlog
<b>Accessibility audit</b>	WCAG 2.1-AA checklist	Expert review	Compliance report

## 4. Technical and User-Experience Enhancements

The final release introduces a set of interlocking upgrades that collectively raise usability, accessibility and pedagogic impact beyond the levels reported in Deliverable D7.

Foremost is a **mobile-first responsive grid** that replaces the earlier fixed layout. During the pilots, 78 percent of learners accessed the Hub on smartphones and struggled with small tap targets; the new adaptive design optimises thumb-zone navigation and fluidly re-flows content across all screen sizes.

To safeguard learning progress in bandwidth-constrained settings we implemented **auto-save quizzes**. Answers are now cached locally in encrypted storage and synchronised once connectivity is restored, eliminating the frustration of data loss recorded in pilot feedback. Engagement has been further boosted by a **real-time leaderboard** built on a lightweight WebSocket architecture: scores, badges and rank changes propagate instantly to every active session, turning solitary study into a shared competitive experience.

Visual cues play a pivotal motivational role, hence the introduction of a **progress heat-map dashboard** on the learner home screen. By shading incomplete modules the heat-map nudges users towards unfinished content and has already increased multi-module completion rates in post-pilot monitoring.



Accessibility was treated as non-negotiable. Colour palettes, focus states and keyboard shortcuts were overhauled to achieve demonstrated compliance with **WCAG 2.1-AA**, a milestone now documented in the Hub's public conformance statement. Finally, recognising educators' need for objective evidence of engagement, we added a **CSV analytics export** to the facilitator console. Administrators can pull session counts, completion times and badge distributions directly into their own dashboards or research tools, reinforcing the Hub's position as a data-informed learning environment.

Together these enhancements resolve all high-priority issues identified during the pilot phase and position the Competence Hub for confident roll-out across Europe's sport-education landscape.

## 5. Pedagogic and Content Revisions

The final iteration of the Competence Hub does more than polish code and interfaces; it reshapes the learning journey itself so that every click leads the student-athlete closer to real-world innovation skills.

### Driving Principles

Our revisions were guided by three principles that surfaced repeatedly in pilot feedback:

- Career relevance – learners want clear links between the modules and employability in the sports sector.
- Active construction of knowledge – passive video watching had to give way to hands-on challenges.
- Inclusive representation – examples and case studies must reflect the diversity of European sport.



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## Embedded Mini-Project Template

Each of the twelve modules now culminates in a structured mini-project that asks learners to apply the new concept to their own sporting context. For instance, in the Big-Data Analytics module the project invites athletes to design a dashboard that tracks two training variables of their choice. The template provides scaffolds—problem statement, design sketch, data source hints—and auto-generates a PDF portfolio that learners can attach to job or scholarship applications. Early analytics show a 17 % increase in module completion when the mini-project is activated, confirming its motivational power.

## Ethics and Regulation Boxes

Stakeholder consultations highlighted a gap in legal and ethical literacy, especially around privacy regulations and emerging tech such as drones or AI video analysis. Short “Ethics in Action” boxes therefore precede relevant lessons, offering bite-sized guidance on GDPR compliance, intellectual-property rights and safeguarding. They link to external national resources so facilitators can localise the discussion with minimal effort.

## Inclusive Case Library

We reviewed the entire catalogue of case studies and replaced mono-disciplinary or elite-male examples with a broader selection that features women’s sport, para-sport initiatives and resource-constrained community clubs. A searchable tag system lets educators surface cases by sport, technology and inclusion theme, aligning with Erasmus+ priorities on equality and social cohesion.

## Streamlined Multimedia

Two modules—Sport-Adapted Learning Skills and VR/AR in Sport—recorded below-average usability ratings ( $\leq 4.0$ ) during the pilot. Their video sequences have been condensed by 30 %,



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scripts rewritten in plainer language and broken into micro-lessons no longer than four minutes. Transcripts are available in all eight project languages, and optional audio-descriptions make the content accessible to visually-impaired learners.

## 6. Sustainability, Scalability and Exploitation Roadmap

The Competence Hub is designed to thrive beyond its EU funding horizon through a blended revenue and partnership model.

- **Freemium business logic** – Core modules and community forums remain open-access.
- **Capacity-building infrastructure** – Bi-annual Train-the-Trainer webinars will certify local facilitators, while a Student-Ambassador scheme uses alumni networks to seed adoption within clubs and universities.
- **Technical openness** – A public API and LTI plug-in slated for Q1 2026 will allow frictionless integration with Moodle, Canvas and national VLEs, enabling large-scale deployment without duplicating user management.
- **Governance and maintenance** – A Memorandum of Understanding assigns hosting and code stewardship to COLINN for three years, supervised by a Sustainability Committee chaired by Loughborough University.
- **Future enhancements** – Planned R&D lines include an AI-driven recommendation engine, voice-over micro-videos and VR drills, to be pursued through Horizon-Europe proposals now in preparation.

Together these measures secure the Hub's long-term viability and its mission to equip Europe's young athletes with innovation-ready competences.

## 7. Conclusions and Recommendations

The COMPATH Competence Hub has journeyed from a promising prototype to a fully-fledged, multilingual learning ecosystem that demonstrably raises the career readiness of Europe's young student-athletes. All quantitative KPIs set for WP-4 were met or surpassed, with

usability climbing to 4.61/5 and perceived career applicability to 4.35/5 after the final round of improvements. Taken together, these results confirm that the Hub fulfils its core mandate: to offer a scalable, engaging and academically rigorous pathway into sport-innovation careers.

### Key Take-aways

- **Gamification Works—When Grounded in Authentic Tasks.** Progress heat-maps, real-time leaderboards and skill-linked digital badges boosted completion rates by 17 % compared with the testing version. Yet the strongest learning gains occurred after mini-projects and career-relevant case studies were embedded, underscoring the importance of pedagogic depth alongside game mechanics.
- **Mobile is Mission-Critical.** Nearly four out of five sessions originated from smartphones; without the mobile-first redesign many users would have abandoned the experience. Future evolutions should therefore treat responsive design and offline functionality as non-negotiable.
- **Data Transparency Empowers Educators.** CSV analytics export has already enabled partner coaches to correlate engagement patterns with on-field performance metrics, turning the Hub into an evidence-generation engine rather than a black-box LMS.

Priority	Recommendation	Intended Benefit	Time Frame
High	Launch a <b>Europe-wide Train-the-Trainer programme</b> (webinars + micro-credentials)	Rapid diffusion and pedagogic fidelity	6 months
High	Develop a <b>native mobile app</b> with offline caching and push notifications	Extend reach to data-poor contexts; raise return-visit frequency	9 months
Medium	Implement <b>AI-driven personal learning paths</b> leveraging xAPI data	Personalised pacing; higher retention	12 months

<b>Medium</b>	Translate the UI and content into <b>two additional EU languages</b> (FR, IT)	Market expansion; inclusion	12 months
<b>Low</b>	Pilot an <b>industry sponsorship model</b> (white-label modules for clubs/brands)	Long-term financial sustainability	18 months

With a robust technical foundation, a validated pedagogic model and a clear sustainability roadmap, the Competence Hub is poised to become a flagship example of how Erasmus+ Sport projects can deliver lasting, pan-European impact. The consortium therefore recommends formal hand-over of the platform to the Dissemination & Exploitation Committee, followed by a high-visibility showcase during the European Week of Sport. Continuous, evidence-based enhancement should remain the guiding principle as the Hub scales from hundreds to tens of thousands of student-athletes in the years ahead.

## 8. Annex: Competence Hub Screenshots

COMPATH

Future Leaders through Sport Innovation

Q Search

Håkon Ege

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Module 6: Virtual, Augmented and Mixed Reality in Sports13 lectures | 59m 28s

Module 7: eSports and Sport-Focused Gaming13 lectures | 48m 48s

Module 8: Wearable Technologies11 lectures | 57m 37s

Module 9: Sports-Adapted Literacy Skills10 lectures | 1h 54s

Module 10: Sports-Adapted Learning Skills12 lectures | 1h 12m 56s

Module 11: Entrepreneurial Mindset for Sports Businesses10 lectures | 1h 13m 24s

Module 12: Career Planning and Entering to Technology-Oriented Sports Businesses10 lectures | 49m 49s

Continue Learning

COMPATH

Go to details

17 hours 39 minutes 44 seconds

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Learning Outcomes:

- Master the skills needed to excel in today's sports world.
- Develop a deep understanding of how technology is transforming sports.
- Learn to think like an entrepreneur and build a successful sports business.
- Gain expertise in data analysis, AI, and other advanced technologies for sports.
- Discover how to create unforgettable fan experiences through digital tools.
- Prepare for a future career in the exciting world of sports technology.

Supported Languages

Español

Norsk

English

Deutsch

Hrvatski

Italiano

Svenska

Slovenščina

Polski

Disclaimer

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COMPATH

Go to details

12 hours 39 minutes 44 seconds duration

Español, Norsk, English, Deutsch, Hrvatski, Italiano, Svenska, Slovenščina, Polski

Certificate of completion

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Statistics

Search

In Progress

Not Started

Completed









Name	Total Users	Completion Rate	Your Score	Your Rank	Your Badge
<div><div>COMPATH</div><div>12h 39m 44s</div><div>COMPATH</div></div>	112	83%	0	#8	NEW USER

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## My Certificates



### COMPATH - Course Certificate

Complete the course in order to get your certificate.

Complete Lectures →









If you see any issue regarding your certificate please contact [info@collectiveinnovation.no](mailto:info@collectiveinnovation.no)



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Home / Frequently Asked Questions

## Frequently Asked Questions

### COMPATH FAQ

- What is Compath? ▾
- What skills are taught in Compath? ▾
- Are there any prerequisites for joining the course? ▾
- Is there a certification upon completion the courses? ▾
- How does this course help with employability? ▾
- What should I do if I face technical issues on the portal? ▾
- Can I complete the course at my own pace? ▾
- What if I have questions about the course content? ▾
- Can I network with others through the platform? ▾

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<https://portal.sportsinnovationshub.com/faqs>



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Module 1: Artificial Intelligence (AI) in Sports

9 lectures | 59m 13s

▶ Introduction to Module

▶ Topic 1: Impact of AI in Modern Sports

▶ Topic 2: AI Fundamentals

▶ Topic 3: AI in Sports: Real-world Applications

▶ Case Study: AI tools for coaching and training

▶ Topic 4: Advancing Career with AI in Sports Industry

▶ Module Feedback

▶ External Resources

▶ Knowledge Check

Module 2: Data Analytics in Sports

10 lectures | 1h 20m 29s

Module 3: Drones Technology in Sports

11 lectures | 1h 5m 33s

Continue Learning

COMPATH  
Go to details

12 hours 39 minutes 44 seconds duration

Español, Norsk, English, Deutsch, Hrvatski, Italiano, Svenska, Slovenščina, Polski

Certificate of completion

EN

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https://portal.sportinnovationshub.com/module/6/lecture/612

COMPATH  
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Topic 1: Impact of AI in Modern Sports

Your Progress 82% Course Content

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Module 1: Artificial Intelligence (AI) in Sports

Impact of AI in Modern Sports

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01:49

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Next

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Module 1: Artificial Intelligence (AI) in Sports

9 lectures | 59m 13s

▶ Introduction to Module

▶ Topic 1: Impact of AI in Modern Sports

▶ Topic 2: AI Fundamentals

▶ Topic 3: AI in Sports: Real-world Applications

▶ Case Study: AI tools for coaching and training

▶ Topic 4: Advancing Career with AI in Sports Industry

▶ Module Feedback

▶ External Resources

COMPATH

Future Leaders through Sport Innovation

Knowledge Check

Your Progress

82%

Course Content

## M1: Knowledge Check

EXAM - RESULTS

PASSED

You got 100 over 100.  
It means you have answered 100% of questions correctly.


Show Answers

This exam is submitted on 9/17/2024, 10:22:54 AM.

←

Previous

Next→



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☒ Topic 1: Impact of AI in Modern Sports

▶ 1m 50s

☒ Topic 2: AI Fundamentals

▶ 2m 46s

☒ Topic 3: AI in Sports: Real-world Applications

▶ 2m 41s

☒ Case Study: AI tools for coaching and training

▶ 10m

☒ Topic 4: Advancing Career with AI in Sports Industry

▶ 2m 56s

☒ Module Feedback

▶ 1m

☒ External Resources

▶ 30m

☒ Knowledge Check

▶ 7m

Module 2: Data Analytics in Sports

Scan the QR code and visit [Competence Hub](#)

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