Deliverable D6.3:

Quality Assurance Methodology and Application in the First Year (M12)

Contractual Date:	30-09-2025
Actual Date:	30-09-2025
Grant Agreement No.:	101190015
Work Package:	WP6
Task Item:	T6.3
Lead Partner:	UR
Authors:	Alvaro Pina Stranger (UR), Amir Aghaei Anvigh (UR), Stéphanie Gauvain (UR)

Abstract

The present Quality Assurance Methodology supports ACHIEVE partners in managing activities effectively and transparently. It defines procedures, structures, and responsibilities to guide coordination, ensure accountability, and secure timely, high-quality results in line with ACHIEVE's goal of strengthening Europe's skills in High Performance Computing (HPC), Cloud, and Data through a new Master's programme and Self-Standing Learning Modules (SSLMs).

Versioning and contribution history

Version	Date	Authors	Notes
0.1	12/09/2025	Alvaro Pina Stranger (UR), Amir Aghaei Anvigh (UR)	Initial draft
0.2	17/09/ 2025	Alvaro Pina Stranger (UR), Amir Aghaei Anvigh (UR)	QA Templates drafted
0.3	18/09/2025	Vilma Djala (EITD)	Template comments
0.4	22/09/2025	Alvaro Pina Stranger (UR), Amir Aghaei Anvigh (UR)	Integrated comments
0.5	24/09/2025	Vilma Djala(EITD)	QA deliverable comments
1.0	25/09/2025	Alvaro Pina Stranger (UR), Amir Aghaei Anvigh (UR), Vilma Djala(EITD), Gianluca Palermo (PoliMi)	Final version after review

Table of contents

1. Introduction

Large European projects such as ACHIEVE involve diverse institutions, spanning universities, research centres, and industrial partners. Each partner brings unique expertise, but also different working habits, institutional requirements, and expectations. Without a coherent approach to quality assurance, this diversity could lead to inconsistencies, delays, or misunderstandings.

For this reason, Quality Assurance (QA) in ACHIEVE is not treated as an administrative requirement, but as a shared framework for collaboration. It provides clear rules on how deliverables are prepared, how meetings are documented, how risks are monitored, and how educational outputs are validated. More importantly, QA in ACHIEVE ensures that every partner knows what is expected of them, how their contributions are reviewed, and how improvements are identified and implemented.

The methodology is designed to be lightweight but effective. Instead of creating unnecessary bureaucracy, it focuses on a few key tools and templates that cover the essential aspects of project quality: deliverables, milestones, risks, meetings, and education. By applying these tools consistently, the consortium can demonstrate accountability and guarantee high-quality results for learners, industry, and academia.

This deliverable explains the QA approach in detail. It begins by outlining the objectives and governance of QA (Section 2). It then describes the methodology underpinning the system, including continuous improvement cycles and corrective/preventive actions (Section 3). Section 4 explains how QA

was applied in practice during Year 1, while Section 5 describes the tools and templates developed to support the process. Section 6 summarises the results and lessons learned, and Section 7 presents conclusions and recommendations. The annexes provide the actual templates and logs, ensuring that the main text remains clear and explanatory.

2. Objectives and Governance of Quality Assurance

2.1. Objectives of QA in ACHIEVE

Quality Assurance (QA) in ACHIEVE goes beyond checking whether tasks are completed on time. Its main purpose is to ensure that every output produced by the consortium has value, relevance, and durability. Because ACHIEVE has built a new Master's programme and Self-Standing Learning Modules (SSLMs) to strengthen Europe's skills base in High-Performance Computing (HPC), Cloud, and Data, QA must cover both project management processes and educational quality aspects.

The objectives of QA were therefore designed as guiding principles that shape the way partners work together. They address not only compliance with deadlines but also credibility, transparency, and learning. In this sense, QA acts as both a protective shield ensuring no critical aspect is missed and as an engine of improvement helping the project evolve and adapt throughout its lifecycle.

In practice, QA in ACHIEVE aims to:

- **Ensure reliability of outputs:** Deliverables, milestones, and educational materials must be trustworthy, internally and externally consistent. Reliable outputs inspire confidence not only among project partners but also among students, and industry stakeholders who will ultimately rely on ACHIEVE's educational content.

- **Promote transparency:** QA ensures that every partner can clearly see how the project is progressing. Transparency prevents duplication of effort, reduces the risk of miscommunication, and fosters a culture of accountability. By sharing information openly, partners gain a collective sense of ownership.
- **Support timely delivery:** European projects operate under strict timelines. QA provides monitoring tools—such as deliverables and milestones templates—that enable early detection of delays. This gives partners the opportunity to act quickly with preventive or corrective measures before deadlines are compromised.
- **Foster continuous improvement:** QA is conceived as a dynamic process rather than a fixed framework. Corrective and Preventive Actions (CAPA) allow the consortium to learn from its own experience, document issues, and adapt working practices over time. In this way, QA strengthens the consortium's resilience.
- **Guarantee educational quality:** Beyond administrative and financial management, ACHIEVE is primarily an educational project. QA therefore ensures that the Master's programme and SSLMs are pedagogically robust, aligned with industry needs, and compliant with academic standards across partner universities.

In short, QA in ACHIEVE exists to guarantee that outputs are not only delivered but delivered well, on time, and with enduring value. It is as much about supporting people and processes as it is about monitoring compliance.

2.2. Governance of QA

Having clear objectives is not enough; they must be matched with a governance framework that specifies who is responsible for what. In ACHIEVE, QA governance is deliberately structured so that quality is not concentrated in a single individual or body but distributed across all levels of the consortium.

This ensures that QA is both strategic and operational, with checks and balances built into day-to-day work.

The governance system integrates formal roles (GA, PEC, PC, QM, WPLs) with the active involvement of all partners. Each has a clearly defined responsibility, but together they form a collaborative chain of accountability:

- **General Assembly (GA):** The GA is the project's highest decision-making body. It endorses the QA methodology and ensures that it remains aligned with the long-term vision and strategic objectives of ACHIEVE.
- **Project Executive Committee (PEC):** The PEC functions as the consortium's operational hub. It monitors QA indicators such as deliverables, milestones, and risks. When issues are detected, the PEC is empowered to initiate corrective actions, making it the guardian of quality at the tactical level.
- **Project Coordinator (PC):** The PC has the ultimate responsibility for the application of QA across the project. This includes verifying deliverables before submission, ensuring deadlines are met, and making sure all partners of the consortium are informed and involved.
- **Quality Manager (QM):** The QM designs, applies and maintains the QA methodology itself. He ensures templates are up to date, deliverables follow consistent standards, and CAPA actions are properly documented and closed. The QM is also the reference point for methodological questions.
- **Work Package Leaders (WPLs):** Each WPL is accountable for the quality of outputs within their work package. They apply templates, oversee risk identification, and ensure deliverables are of high quality before reaching the PC and QM for review.
- **All Partners:** Finally, QA is a shared responsibility. Every partner is expected to respect deadlines, contribute to reviews, and ensure accuracy in their contributions. QA becomes effective only when everyone treats it as part of their role, not as an external control.

By embedding QA responsibilities across the consortium, ACHIEVE ensures that quality is not an afterthought but a built-in feature of project

implementation. This distributed governance model strengthens trust, accountability, and the long-term impact of the project's outcomes.

3. Quality Assurance Methodology

A methodology is the backbone of any Quality Assurance (QA) system. For ACHIEVE, the methodology was deliberately designed to be practical, transparent, and adaptive. It draws on established quality management principles, but it is applied in a way that matches the specific needs of a multi-partner educational project. Unlike in purely industrial or technical projects, ACHIEVE's QA must balance two dimensions: (1) the rigorous monitoring of project management processes, and (2) the assurance of academic and pedagogical quality for the Master's programme and Self-Standing Learning Modules (SSLMs).

The methodology is structured around three main pillars: a cycle of continuous improvement, a system of corrective and preventive actions, and a suite of monitoring tools and templates. Together, these elements create a framework that is simple enough to be applied consistently across all partners, yet robust enough to detect problems early, resolve them effectively, and preserve a memory of lessons learned.

3.1. The Continuous Improvement Cycle (Plan-Do-Check-Act)

The first principle is the Plan–Do–Check–Act (PDCA) cycle, which provides the rhythm of the QA system. This cycle is widely used in quality management, but in ACHIEVE it is applied in a way that is simple, flexible, and directly useful to partners.

Before going into its steps, it is important to understand why PDCA is so central. In a project like ACHIEVE—with multiple deliverables, milestones, and educational outputs—activities are interconnected. A delay or issue in one task can easily affect another. PDCA provides a shared approach to managing these activities, ensuring that all partners follow the same logic: plan carefully, execute responsibly, check results objectively, and act quickly if improvements are needed.

The four steps are applied continuously across all levels of the project:

- **Plan:** Each activity begins with a clear definition of objectives, responsibilities, and timelines. For example, when a deliverable is initiated, the Work Package Leader specifies the purpose, structure, contributors, and internal deadlines. This shared plan creates alignment from the start.
- **Do:** Partners implement the planned activity, whether it is drafting a report, developing a Self-Standing Learning Module (SSLM), or organising a consortium meeting. The emphasis here is on execution with awareness of upcoming review steps.
- **Check:** The output is assessed against predefined criteria. Reviews may be carried out by the Quality Manager, by peers, or by the Project Executive Committee (PEC). The goal is not only to detect errors but to judge whether the output truly supports ACHIEVE's objectives—for example, whether an SSLM is pedagogically robust and relevant to industry.
- **Act:** When gaps or problems are found, corrective steps are taken. This might involve revising a deliverable, refining guidance to partners, or adjusting the planning of future tasks. The "Act" step ensures that feedback is used constructively, so that each cycle ends in improvement.

Because PDCA is repeated continuously, learning and adjustment become part of daily work. It transforms QA from a policing mechanism into a support tool that helps partners succeed.

3.2. Corrective and Preventive Actions (CAPA)

The second principle is the system of Corrective and Preventive Actions (CAPA). While PDCA sets the rhythm, CAPA ensures that problems are treated with transparency and that improvements are systematically documented.

In many projects, small issues can accumulate unnoticed until they cause delays or reduce quality. CAPA is ACHIEVE's way of capturing, analysing, and responding to these issues before they escalate. It encourages partners to see problems not as failures, but as opportunities to improve processes.

There are two types of actions:

- **Corrective Actions** deal with problems that have already occurred. For example, if a deliverable is submitted late or with inconsistent formatting, the corrective action may involve revising the template, redistributing tasks, or providing clearer instructions for the next cycle.
- **Preventive Actions** address potential issues before they arise. For instance, if partners anticipate that gathering feedback may take longer than expected, a preventive measure could be to introduce internal buffer deadlines.

Each CAPA is logged in a dedicated tracker (see annex). This log includes the issue, the corrective or preventive action decided, the person responsible, the deadline, and the resolution status. By doing so, CAPA ensures accountability and traceability. It also creates a memory of lessons learned, which helps the consortium refine its practices over time.

In ACHIEVE, CAPA is not treated as a burdensome process but as a practical tool to work better together. Its value lies in helping partners act quickly, avoid repeating mistakes, and demonstrate to stakeholders that issues are handled systematically.

3.3. Supporting Instruments

Finally, while PDCA and CAPA describe the principles, ACHIEVE also relies on supporting instruments to put these principles into practice. These instruments include templates and trackers that give partners a common structure for recording progress, monitoring risks, and documenting decisions.

It is important to note that these instruments are not complex; their strength is their simplicity and uniformity. By using the same formats across the consortium, ACHIEVE ensures that information can be easily aggregated, compared, and shared.

The detailed description of these instruments is provided in Section 5 (QA Tools and Templates), with full references in the annex. Here, it is sufficient to emphasise that such instruments are essential for translating the methodology into everyday practice.

4. Application of QA in the first year

Designing a QA system is only the first step; the real test lies in how it is applied in practice. During its first twelve months, ACHIEVE not only established the framework described above but also put it into action across multiple dimensions: project management, deliverable production, milestones, risk monitoring, and the design of the Master's programme and Self-Standing Learning Modules (SSLMs).

The first year was crucial because it coincided with the start-up phase of the project. Partners had to establish trust, align working methods, and deliver the first key outputs while simultaneously learning how to collaborate effectively. Quality Assurance therefore played a dual role:

- On the one hand, it ensured that early outputs met the required standards.
- On the other, it acted as a coordination mechanism, helping partners converge on common practices.

The QA system was activated through regular monitoring, structured templates, and internal reviews. This allowed the consortium to detect problems early (such as delays or inconsistencies), to take corrective and preventive actions, and to keep partners informed through transparent reporting. Importantly, QA was not just used at the level of deliverables, but also in educational content design, ensuring that the new Master's programme and SSLMs respected both academic and industry standards.

4.1. Deliverables and Milestones

One of the most visible applications of QA in Year 1 was the tracking and review of deliverables and milestones. Each deliverable followed a clear workflow:

- The Work Package Leader defined its objectives, structure, and contributors.
- Drafts were shared for internal review by the Quality Manager and, where relevant, by the PEC.
- Issues raised in reviews were logged and addressed before submission.

Milestones were tracked in parallel, providing checkpoints to verify that the project was moving in the right direction. These controls gave the consortium confidence in the reliability and credibility of its outputs.

4.2. Meetings and Decision-Making

Another area where QA was applied systematically was in project meetings. From the very beginning, meeting agendas, minutes, and action points were

documented using standard templates. This ensured that decisions were recorded, responsibilities were assigned, and follow-up could be monitored.

By treating meetings as part of the QA cycle, the consortium avoided common pitfalls such as forgotten commitments or unclear outcomes. Meeting records also provided a useful archive for EIT Digital and for partners who could not attend in person.

4.3. Risk Monitoring and CAPA in Action

The risk monitoring process became particularly important in the first year. Several risks were identified early, such as the possibility of delays in curriculum design or difficulties in aligning partner contributions. These risks were not only recorded but also actively managed.

- In some cases, Corrective Actions were triggered — for instance, when a deliverable draft was delayed, the PEC intervened to reallocate responsibilities.
- In other cases, Preventive Actions were taken — such as introducing internal deadlines earlier than official ones to ensure that feedback cycles remained realistic.

The CAPA log thus became a living document, demonstrating that the consortium could react quickly and adaptively to challenges.

4.4. Educational Quality: Master's Programme and SSLM

Because ACHIEVE's core mission is educational, QA also had to cover the design and piloting of academic content. In Year 1, this meant validating the structure of the new Master's programme and reviewing the first drafts of Self-Standing Learning Modules (SSLMs).

Quality checks included:

- Ensuring that modules addressed the priority areas of HPC, Cloud, and Data.
- Verifying that learning outcomes were clearly defined and aligned with both academic standards and industry needs.
- Reviewing teaching materials for clarity, consistency, and relevance.

These checks provided early assurance that the educational outputs of ACHIEVE would be not only innovative, but also credible, pedagogically sound, and attractive to students.

4.5. Building a Culture of Quality

Finally, one of the most important achievements of Year 1 was the creation of a culture of quality within the consortium. Partners quickly realised that QA was not just an administrative obligation but a shared responsibility that helped everyone perform better.

Regular monitoring, transparent reporting, and the use of common templates fostered a sense of accountability and trust.

5. QA Tools and Templates

5.1. Deliverable Control Template (Annex A)

Deliverables are the most visible results of the project. For ACHIEVE, these include reports, guidelines, and technical outputs such as curriculum drafts and quality checklists. The Deliverables Control Template was developed to ensure that all these outputs are delivered on time, at the right level of quality, and with transparent responsibility.

This template includes key fields such as deliverable title, due date, responsible Work Package Leader (WPL), internal reviewers, and current status (draft, under review, submitted). By centralising this information, the consortium can quickly see where attention is needed.

In practice, the workflow is straightforward:

1. At the start of the year, deliverables are listed with due dates.
2. WPLs are reminded of deadlines through periodic PEC meetings.
3. Internal reviewers record their feedback in the template.
4. Once finalised, the template shows that the deliverable was approved and submitted.

The value of this template lies in its visibility. Without it, delays or missing reviews could go unnoticed. During Year 1, it was particularly useful when multiple deliverables were due in close succession, allowing the PEC to spot bottlenecks and introduce corrective measures.

The complete Deliverables Control Template is provided in Annex A.

5.2. Milestones Control Template (Annex B)

Milestones differ from deliverables because they are checkpoints rather than written outputs. For example, finalising the structure of the Master's programme or launching a pilot SSLM are milestones that indicate the project is progressing as planned.

The Milestones Control Template records each milestone with its description, deadline, responsible partner, and the evidence that demonstrates it has been achieved. This evidence can be meeting minutes, draft documents, or pilot testing results.

The template ensures that milestones are not just announced but are formally verified. This is especially important in ACHIEVE, where milestones such as

curriculum validation or student feedback collection have strategic importance.

In Year 1, the template confirmed that milestones like the draft curriculum and initial SSLM pilots were reached on schedule, providing confidence to the consortium and external stakeholders.

The full Milestones Control Template is included in Annex B.

5.3. Meeting Control Template (Annex C)

Coordination is at the heart of a multi-partner project like ACHIEVE. The Meeting Control Template was introduced to make sure meetings are more than just conversations, they become documented and actionable events.

This template records the agenda, list of participants, key discussion points, decisions taken, and follow-up actions with assigned responsibilities and deadlines.

In practice, the template is completed during or immediately after each meeting, typically by the WP Leader or meeting chair. This ensures that all participants — and those unable to attend — have a clear record of what was discussed and agreed.

The value of this template is that it turns discussions into accountability. In Year 1, it ensured that PEC and WP meetings resulted in concrete follow-ups. For example, when the PEC decided to introduce stricter internal review deadlines, the action was recorded, assigned, and verified in the next meeting.

To optimise time and ensure consistent oversight, WP1 meetings, which brought together WP1–2 and WP3–4 leaders to coordinate the market analysis activities and the design of the questionnaire, also served as an opportunity to address PEC-related items. Since PEC leaders were regularly present in these discussions, the consortium occasionally integrated PEC points at the end of

WP1 meetings for efficiency. This arrangement allowed operational topics and strategic oversight to be covered in a single sitting, reducing duplication of effort while reinforcing alignment and accountability across the project.

The Meeting Control Template can be found in Annex C.

5.4. Risk Control Template (Annex D)

Risk management in ACHIEVE is not limited to high-level oversight by the PEC; it is also embedded in the daily work of each Work Package (WP). To support this, the consortium developed the Risk Control Template (Annex D), which enables WP Leaders and partners to systematically identify, evaluate, and monitor risks within their own areas of responsibility.

This template provides a structured and transparent way for partners to document potential threats to deliverables, milestones, or activities, and to outline corrective and preventive measures in line with the CAPA process. It ensures that risks are captured early, consistently assessed, and escalated to the PEC if needed.

Each entry in the Risk Control Template includes:

- **Risk ID and description**: a concise definition of the risk (e.g., delays in preparing a deliverable draft, insufficient student recruitment for SSLMs, or partner staff turnover).
- **Responsible WP/partner**: ownership of monitoring and reporting.
- **Likelihood and impact ratings**: typically using a three-level scale (low, medium, high).
- **Mitigation measures**: steps already in place to reduce probability or impact.
- **Contingency measures**: fallback actions to apply if the risk materialises.
- **Status and follow-up**: open, in progress, or resolved, with dates of review.

In ACHIEVE's first year, the Risk Control Template was applied by all WPs and consolidated during PEC and consortium meetings. This process revealed several common challenges:

- Some risks (e.g., late contributions to deliverables) were widespread across WPs and required shared mitigation strategies.
- Risks connected to curriculum harmonisation were particularly relevant in WP3–WP4, requiring early escalation to PEC-level monitoring.
- Preventive measures, such as setting earlier internal deadlines or agreeing on back-up contacts for key tasks, proved effective in reducing delays.

The Risk Control Template therefore plays a dual role:

1. It allows WPs to manage risks locally in a structured way.
2. It feeds into the PEC Critical Risks Template (Annex E), ensuring that risks of consortium-wide importance are escalated and monitored strategically.

This system ensures that ACHIEVE has both granular visibility of risks at WP level and a consolidated view of critical threats at consortium level, creating a balanced and resilient risk management framework.

The complete Risk Control Template is included in Annex D.

5.5. PEC Critical Risks Template (Annex E)

Risk management is one of the pillars of Quality Assurance in ACHIEVE. While all Work Packages (WPs) are responsible for identifying and monitoring risks within their scope, certain risks require central oversight by the Project Executive Committee (PEC). To address this, the consortium uses the PEC Critical Risks Template (Annex E), which monitors and consolidates the most significant risks that could affect the project's overall objectives.

This template ensures that:

- Critical risks are identified consistently across partners and WPs.
- Risks are evaluated using a common scale for likelihood and impact.
- Mitigation strategies are clearly defined and regularly updated.
- The PEC has a single, authoritative view of project-level risks and the measures in place to manage them.

Each risk entry in the template includes:

- A short description of the risk (e.g., delays in curriculum approval, insufficient engagement from industry partners, or misalignment of SSLM content across institutions).
- The WP primarily responsible for monitoring it.
- Likelihood and impact ratings (e.g., low, medium, high).
- Mitigation actions already in place.
- Contingency or escalation measures if the risk materialises.
- The PEC's review status and comments.

In practice, the PEC Critical Risks Template acts as a subset of the wider Risk Control system (Annex D). While WPs handle day-to-day risk monitoring, the PEC template provides a strategic lens, focusing only on those risks that could undermine the overall success of ACHIEVE.

During Year 1, this template was particularly useful for:

- Tracking potential delays in the finalisation of the Master's programme curriculum and ensuring early corrective measures.
- Addressing challenges in the harmonisation of SSLM prerequisites across institutions.
- Monitoring partner resource allocation risks, especially in connection with the delivery of teaching modules and dissemination activities.

By centralising oversight of these risks, the PEC ensured that responses were coordinated at consortium level, avoiding fragmented or duplicative efforts.

This strengthened the project's resilience and ensured that mitigation strategies were consistently applied.

The full PEC Critical Risks Template is provided in Annex E.

5.6. Issues and Approvals Tracker Template (Annex F)

In a large, multi-partner project such as ACHIEVE, where numerous deliverables, milestones, and academic outputs must be coordinated across institutions, decision-making and problem resolution need to be clearly documented. To ensure transparency, accountability, and traceability, the consortium developed the Issues and Approvals Tracker Template (Annex F).

This template serves two complementary purposes:

1. **Issues Tracking:** recording challenges, deviations, or risks that arise during project implementation, together with the corrective or preventive measures agreed upon.
2. **Approvals Tracking:** documenting formal decisions and validations made by the Project Executive Committee (PEC), Work Package Leaders (WPLs), or the General Assembly (GA), particularly when a deliverable, milestone, or major academic design (e.g., SSLM or Master's module) is approved.

The Issues and Approvals Tracker provides a centralized log where partners can:

- Register the description of an issue or decision.
- Identify the responsible partner or WP.
- Record the date, context (e.g., PEC meeting, consortium call), and type of decision taken.
- Indicate the status (open, in progress, resolved, or approved).

- Capture any follow-up actions or deadlines.

By doing so, the template prevents ambiguity about whether a challenge has been addressed or whether a decision has been formally validated. It also creates an institutional memory for the consortium, ensuring that future audits, evaluations, or transitions between staff can rely on a documented trail of actions and approvals.

During the first year of ACHIEVE, the tracker was used to:

- Log and resolve technical and organizational issues, such as aligning curriculum drafts across universities.
- Document approvals of early deliverables and dissemination outputs before submission to the European Commission.
- Register PEC-level decisions, for example regarding risk mitigation measures or adjustments to timelines.

This systematic documentation strengthened the transparency of project governance and supported the Quality Manager in monitoring the implementation of Corrective and Preventive Actions (CAPA).

The full Issues and Approvals Tracker Template is included in Annex F.

5.7. SSLM Quality Checklist Template (Annex H)

The ACHIEVE project introduces Self-Standing Learning Modules (SSLMs) to complement the Master's programme in High-Performance Computing (HPC), Cloud, and Data. SSLMs are designed to be flexible, modular, and industry-oriented, allowing learners, including professionals outside the Master's programme,to access advanced training in specific topics. Because of their modular nature and diverse audience, a dedicated quality checklist is necessary to ensure coherence, accessibility, and academic value across all SSLMs developed within the project.

The SSLM Quality Checklist Template (Annex H) was developed to provide partners with a structured framework for designing, reviewing, and improving SSLMs. It builds upon the same principles as the Academic QA Checklist, but it is adapted to the specificities of short, stand-alone learning experiences. The checklist covers four key areas:

- **Content and Learning Outcomes**: verification that each SSLM has clearly defined Intended Learning Outcomes (ILOs), consistent with its allocated workload (equivalent to ECTS), and aligned with ACHIEVE's overall objectives in HPC, Cloud, and Data. The content must reflect state-of-the-art knowledge and practical skills relevant to industry.
- **Structure and Delivery:** assessment of module sequencing, internal coherence of lectures, use of appropriate prerequisites, and clarity of delivery format (e.g., online, blended, face-to-face). The checklist ensures that SSLMs can be followed independently while also complementing the full Master's programme.
- **Assessment and Feedback:** confirmation that SSLMs include transparent assessment methods (where applicable), opportunities for learners to provide feedback, and mechanisms for instructors to integrate feedback into future iterations.
- **Compliance and Inclusiveness:** verification of GDPR compliance, equal access opportunities, and respect for academic and ethical standards.

In practice, during the first year of ACHIEVE, the checklist was piloted on the initial drafts of SSLMs prepared by partner universities. This application highlighted:

- The need to harmonize workload expectations, as some modules underestimated the time required for hands-on exercises.
- Variability in the explicit formulation of learning outcomes, which required alignment to ensure comparability across institutions.
- Opportunities to strengthen links with industry partners by embedding real-world case studies and datasets into SSLM content.

By applying the SSLM Quality Checklist early, the consortium ensured that modules were not only academically sound but also practical, engaging, and attractive to both Master's students and external professionals. The checklist also provided a common language for partners to evaluate modules consistently, regardless of institutional differences.

The complete SSLM Quality Checklist Template is presented in Annex H.

5.8. Academic QA Checklist Template (Annex I)

Since ACHIEVE's primary ambition is to design a new Master's programme in High-Performance Computing, Cloud, and Data while also offering flexible Self-Standing Learning Modules (SSLMs), academic quality assurance is central to the project's success. The Academic QA Checklist Template was created to ensure that both the Master's programme and the SSLMs meet EIT Label requirements, respect international academic standards, and remain relevant to industry needs.

The checklist is structured around three levels of quality criteria:

- IE Minor: verification of workload consistency with ECTS credits, alignment of Intended Learning Outcomes (ILOs), clarity of assessment rules, and inclusion of entrepreneurship and innovation-oriented modules.
- Technical Major: validation of programme coherence, sequencing of courses, balance of workload across semesters, use of appropriate prerequisites, agreement on Learning Objectives through curriculum and clear grading rules.
- Programme-level criteria: integration of industrial partners, mechanisms for student feedback and appeals, GDPR compliance, award rules, and assurance of equal opportunities across partner institutions.

In Year 1, this template was applied to the draft Master's curriculum and the first SSLM designs. The process revealed:

- Minor inconsistencies in how ECTS credits were distributed between technical and innovation modules.
- Gaps in the definition of prerequisites for SSLMs, which required clarification to ensure accessibility for students with different backgrounds.
- The need for stronger integration of industry case studies to reinforce the applied dimension of the programme.

By systematically applying the Academic QA Checklist, the consortium was able to refine both the structure and delivery of the educational offer. This ensured that the Master's programme is academically rigorous, learner-centred, and compliant with EIT Label standards, while also meeting the expectations of the labour market.

The complete Academic QA Checklist Template is provided in Annex I.

6. Implementation Timeline (M1-M12)

The first year of ACHIEVE (October 2024 – September 2025) was dedicated to establishing a Quality Assurance (QA) framework to support the implementation and management of the project throughout its duration. This implementation timeline documents how QA processes were deployed, tested, and refined during the first twelve months. It links QA actions to the project's major milestones, governance structures, and deliverables, ensuring that the methodology was not abstract but actively embedded in project operations.

6.1. Early Phase (M1–M3: Project Kick-off and QA Framework Establishment)

- The Kick-off Meeting (October 2024) was the starting point for introducing the QA methodology. All partners were familiarised with the role of QA in management, deliverables, milestones, risks, and education.
- The QA templates (Deliverable Control, Meeting Control, Milestone Control, Issues Approvals, Risk Control, SSLM Quality Checklist, Academic QA Checklist) were shared with the consortium, explained, and implemented across relevant project components, including meeting minutes, milestones, Project Executive Committee (PEC) documentation, etc.
- A common calendar of QA checkpoints was agreed upon: each deliverable to undergo internal partner review (T-14 days), Quality Manager (QM) review (T-7), and Project Coordinator (PC) validation (T-0).

6.2. Mid Phase (M4–M8: Piloting QA Tools in Deliverables and Meetings)

- During this period, several key deliverables were produced by the coordinator partner (D6.1 Project Management Handbook, D6.2 Data Management Plan, D5.1 Marketing Dissemination Plan).
- The Deliverable Control template was piloted for each submission, documenting responsible partners, deadlines, internal reviewers, and validation steps. This confirmed the efficiency of the red/black convention for identifying gaps.
- Consortium and PEC meetings (January and June 2025) applied the Meeting Control template systematically. Agendas, presence lists, notes, and follow-up actions were recorded in a uniform manner. This created a transparent governance audit trail.
- The Risk Control template was used at WP level, enabling leaders to capture early risks (e.g., survey delays, overlapping academic calendars). These were escalated into the PEC Critical Risk log where necessary.

6.3. Late Phase (M9–M12: QA Applied to Education and Milestones)

- By summer 2025, the project reached core academic milestones, notably MS2 “Market analysis and curriculum” and MS13 “Completion of the enrolment process of students for the first full cycle of master’s programme.”
- The Academic QA Checklist was applied to draft Master’s modules to ensure alignment between Intended Learning Outcomes (ILOs), workload (ECTS), and rubrics.
- The SSLM Quality Checklist was piloted on early drafts of self-standing modules, verifying clarity of entry requirements, global and operational learning outcomes, and assessment methods.
- Evidence-based QA was reinforced: links to agendas, minutes, deliverables, and risk logs were embedded directly into trackers, ensuring traceability.
- CAPA mechanisms were first applied at this stage, notably for issues such as data protection documentation and internal deadlines.

6.4. Summary of QA Integration

Over the first 12 months, QA evolved from being a set of templates into a living process used by all partners. Its integration can be summarised as follows:

- Kick-off (M1): Templates introduced, review calendar established.
- M3–M6: Templates tested on first deliverables and meetings.
- M6–M9: Risk Control and PEC oversight formalised.
- M9–M12: QA extended to academic content and SSLMs, with CAPA cycles initiated.

The implementation timeline demonstrates that QA was progressive and cumulative: starting with project management tools, expanding to governance, and finally embedding into education design and delivery. This ensured that QA was not a parallel activity, but rather a core part of ACHIEVE's culture of accountability and excellence.

7. Results and Evidence of QA Application

The application of Quality Assurance (QA) processes during the first year of ACHIEVE generated concrete results across project management, governance, risk control, and education design. This section documents evidence of QA in action, showing how tools and templates were not only adopted but actively shaped project outcomes.

7.1. QA in Deliverables

- **On-time submissions:** Major deliverables such as D6.1 *Project Management Handbook*, D6.2 *Data Management Plan*, and D5.1 *Marketing Dissemination Plan* were produced and delivered on schedule. This was facilitated by the Deliverable Control template, which provided visibility on responsibilities, deadlines, and review stages.
- **Quality improvements through peer review:** The T-14/T-7/T-0 review calendar ensured that drafts were circulated early, reviewed by peers, and checked by the QM before submission. This significantly improved internal consistency, reduced formatting errors, and ensured alignment with EU requirements.
- **Evidence traceability:** Deliverable trackers included direct links to files, ensuring that reviewers and PEC members could access the most updated versions without confusion.

7.2. QA in Governance and Meetings

- **Structured meeting records:** All PEC and Consortium meetings used the Meeting Control template, capturing agenda, attendance, minutes, and decisions. This created a reliable audit trail.
- **Transparency in decision-making:** The Issues Approvals Tracker documented PEC-level decisions, from approving risk mitigation actions to validating partner requests. This improved accountability and partner trust.
- **Efficiency gains:** By standardising meeting documentation, the project reduced follow-up delays and avoided duplication of tasks across work packages.

7.3. QA in Milestones

- **Achievement of MS2 (Market analysis and curriculum):** The Milestones Control template monitored progress against deadlines, ensuring that both the market analysis and draft curricula were delivered despite initial delays.
- **Achievement of MS13 (Student enrolment):** The enrolment of the first student cohort marked a key success. QA ensured that all prerequisites (curriculum approval, partner coordination, communication to candidates) were traceable and verified in advance.
- **Evidence-based monitoring:** All milestone trackers contained links to supporting deliverables, minutes, and partner reports, providing a "single source of truth" for PEC oversight.

7.4. QA in Risk and Issue Management

- **Proactive risk capture:** Work Package leaders regularly updated the Risk Control template, identifying risks such as delays in market surveys, uneven academic calendars, and potential GDPR issues.
- **Escalation to PEC Critical Risks:** High-level risks were elevated to PEC monitoring through the PEC Critical Risks template. For example, misalignment in SSLM learning outcomes was escalated and resolved through additional cross-partner reviews.
- **Corrective actions:** CAPA measures were applied to prevent late deliverable submissions, such as introducing automatic reminders and reinforcing the internal review cycle.

7.5. QA in Education (Master's and SSLM)

- **Academic QA Checklist applied:** Draft Master's modules were reviewed to verify coherence between Intended Learning Outcomes (ILOs), workload (ECTS), and assessment rubrics.
- **SSLM Quality Checklist piloted:** The first drafts of SSLMs were checked for clarity of entry requirements, alignment with project-wide learning goals, and accessibility for diverse learners.
- **Feedback loops introduced:** Student and stakeholder feedback mechanisms (surveys, pulse checks) were designed during Year 1 to be piloted in Year 2, ensuring that education QA extends beyond partner reviews to learner experiences.

7.6. Overall Impact of QA Application

The first year demonstrated that QA in ACHIEVE was not merely procedural but transformative:

- Deliverables and milestones were produced with higher quality and stronger evidence chains.
- Governance became more transparent and traceable, strengthening partner accountability.
- Risks were detected early and corrected before escalating into major disruptions.
- Education quality was safeguarded at the design stage, ensuring readiness for student enrolment.

In summary, the systematic application of QA created a culture of accountability, clarity, and continuous improvement within ACHIEVE.

8. Non-Conformities, Corrective and Preventive Actions (CAPA)

The first year of ACHIEVE confirmed that the Quality Assurance framework was effective in supporting partners and ensuring the smooth progress of activities. While a few minor deviations were observed, such as slight differences in timing of partner contributions to surveys, the need for additional formatting checks in early deliverables, and occasional adjustments in aligning curricula across institutions, these were addressed constructively within the consortium. The Corrective and Preventive Action (CAPA) cycle provided a structured process for recording, analysing, and following up on such cases. Corrective actions included reinforcing internal scheduling practices through the T-14/T-7/T-0 deliverable review cycle, implementing a final formatting and compliance check by the Quality Manager, and organising joint academic exchanges to harmonise curricula when needed. All cases were documented

using the CAPA template (Annex G), which ensured transparency and consistency across the project.

In addition to corrective measures, several preventive practices were implemented to strengthen overall project delivery and reduce the likelihood of similar issues arising in the future. Standardised templates for deliverables, meetings, and risk control were disseminated with clearer guidance, while peer reviews were implemented by leveraging on different partners of the consortium before major submissions. Work package leaders also coordinated a shared academic calendar, enabling better anticipation of national or institutional constraints such as examination periods or holidays. Targeted training sessions, for example on GDPR compliance, EU branding, and curriculum design standards, further reinforced partner capacity. These measures did not only resolve isolated cases but contributed to cultivating a proactive culture of accountability and anticipation. By the end of the first year, ACHIEVE partners were able to demonstrate improved consistency in outputs, timely delivery of results, and an enhanced confidence in the project's governance and Quality Assurance framework.

9. Lessons Learned and Recommendations

The first year of ACHIEVE provided valuable insights into how a structured Quality Assurance (QA) framework can support a complex, multi-partner project. One of the key lessons learned is that templates are not merely administrative tools but enablers of coordination and trust. By using Deliverable Control, Meeting Control, and Milestones Control templates (Annexes A–C), the consortium was able to establish shared expectations for timelines, responsibilities, and documentation. This created a culture of transparency where partners could easily trace progress, identify gaps, and engage in constructive peer review. Similarly, the systematic use of Risk Control and PEC Critical Risks templates (Annexes D–E) revealed that early

identification and escalation of risks significantly reduces the likelihood of disruptions. This was particularly visible when misalignments in curriculum design were detected early and corrected through joint reviews, preventing more serious delays later in the process. The introduction of the CAPA template (Annex G) further reinforced accountability by ensuring that corrective and preventive measures were documented in a consistent and auditable manner.

Another important lesson is that QA must remain dynamic and adaptive. While templates created clarity, their initial application revealed the need for adjustments, such as clarifying instructions, introducing training sessions, and ensuring consistency across work packages. This flexibility strengthened the overall framework and underscored the value of feedback loops. The piloting of the Academic QA Checklist and the SSLM Quality Checklist (Annexes H–I) demonstrated the importance of embedding quality considerations at the design stage of both the Master's programme and the Self-Standing Learning Modules. These tools not only safeguarded academic rigor but also supported harmonisation across institutions and prepared the ground for student-centred evaluation in Year 2.

Looking forward, the consortium recommends continuing to refine these instruments, integrating more automated reminders for deadlines, expanding training to new staff members, and ensuring that QA outcomes are regularly reflected in PEC discussions. We recommend also to anticipate constraints regarding the recruitment process by schools and teacher exchange programme. In this way, QA will remain a living process that evolves alongside the project, reinforcing ACHIEVE's ambition to deliver high-quality education in HPC, Cloud Computing, and Infrastructure.

Annexes

Annex A – Deliverable Control Template

WP	Deliverable No.	Title	Lead Partner	Due Date	Delivery Date	Status
WP1	D1.1	Master's programme: Market analysis and curriculum design	KTH	31 Oct 2025	–	Planned
WP1	D1.2	Report on programme delivery – First Cycle	UNITN	30 Sep 2027	–	Planned
WP2	D2.1	Report on programme delivery – Second Cycle	UNITN	30 Sep 2028	–	Planned
WP3	D3.1	Self-standing modules: Market analysis and curriculum design	METU	28 Feb 2026	–	Planned
WP3	D3.2	Intermediate report on delivery of self-standing modules	POLIMI	30 Sep 2027	–	Planned
WP4	D4.1	Final report on delivery of self-standing modules	POLIMI	30 Sep 2028	–	Planned
WP5	D5.1	Marketing and Dissemination Plan	EIT Digital	31 Mar 2025	28 Mar 2025	Submitted
WP5	D5.2	Report on marketing and dissemination activities – Year 1	EIT Digital	30 Sep 2025	–	Planned
WP5	D5.3	Report on marketing and dissemination activities – Year 2	EIT Digital	30 Sep 2026	–	Planned
WP5	D5.4	Report on marketing and dissemination activities – Year 3	EIT Digital	30 Sep 2027	–	Planned
WP6	D6.1	Project Management Handbook	EIT Digital	31 Mar 2025	28 Mar 2025	Submitted
WP6	D6.2	Data Management Plan	EIT Digital	31 Mar 2025	28 Mar 2025	Submitted
WP6	D6.3	Quality Assurance Methodology – Year 1	UR	30 Sep 2025	–	Planned

WP	Deliverable No.	Title	Lead Partner	Due Date	Delivery Date	Status
WP6	D6.4	Enrolment results – Year 1	EIT Digital	30 Sep 2025	–	Planned
WP6	D6.5	Enrolment results – Year 2	EIT Digital	30 Sep 2026	–	Planned
WP6	D6.7	Quality Assurance – Year 2	UR	30 Sep 2026	–	Planned
WP6	D6.9	Intermediate Report on community and mobility	EIT Digital	30 Sep 2026	–	Planned

Annex B – Meeting Control Template

A) Consortium / GEA / PEC

N.	Ordinary Meeting	Extraordinary Meeting	Date (Planned)	Has the meeting been held?	Have meeting notes been taken?	Related documents
1	Kick-off – GEA Meeting 1		Oct 10–11, 2024	Yes	Yes	Agenda, Presence list, Notes (Day 1), Kick-off presentations
2	GEA–PEC Meeting		Oct 2024 (Kick-off period)	Yes	Yes	Kick-off notes, Issues and Approvals
3	GEA Meeting 2 (M15)		3 December 2025	Planned	–	–
4	GEA Meeting 3		2026 (M13–M15)	Planned	–	–

N.	Ordinary Meeting	Extraordinary Meeting	Date (Planned)	Has the meeting been held?	Have meeting notes been taken?	Related documents
5	GEA Meeting 4		2027 (M25–M27)	Planned	–	–
6	GEA Meeting 5		2028 (M37–M39)	Planned	–	–
7	PEC face-to-face meeting 1		Jan 15, 2025	Yes	Yes	20250115_PECMeeting_notes.docx
8	PEC face-to-face meeting 2		Mar 20, 2025	Yes	Yes	20250320_PECMeeting.docx
9	PEC face-to-face meeting 3		Sept 2025 (planned)	Planned	–	–
10	PEC face-to-face meeting 4		2026	Planned	–	–

B) WP1 Bi-weekly and Extraordinary

N.	Ordinary Meeting	Extraordinary Meeting	Date	Held?	Notes?	Related documents
11	WP1 Meeting		Jan 09, 2025	Yes	Yes	20250109_WP1 notes.docx
12	WP1 Meeting		Jan 30, 2025	Yes	Yes	20250130_WP1 notes.docx
13	WP1 Meeting		Feb 06, 2025	Yes	Yes	20250206_WP1 notes.docx

N.	Ordinary Meeting	Extraordinary Meeting	Date	Held?	Notes?	Related documents
14	WP1 Meeting		Feb 20, 2025	Yes	Yes	20250220_WP1 notes.docx
15	WP1 Meeting		Mar 06, 2025	Yes	Yes	20250306_WP1 notes.docx
16	WP1 Extraordinary		Mar 13, 2025	Yes	Yes	20250313_WP1 Extraordinary.docx
17	WP1 Meeting		Mar 20, 2025	Yes	Yes	20250320_WP1 notes.docx
18	WP1 Meeting		Apr 03, 2025	Yes	Yes	20250403_WP1 notes.docx
19	WP1 Meeting		Apr 17, 2025	Yes	Yes	20250417_WP1 notes.docx
20	WP1 Meeting		May 08, 2025	Yes	Yes	20250508_WP1 notes.docx
21	WP1 Meeting		May 15, 2025	Yes	Yes	20250515_WP1 notes.docx
22	WP1 Meeting		May 28, 2025	Yes	Yes	20250528_WP1 notes.docx
23	WP1 Meeting		Jun 12, 2025	Yes	Yes	20250612_WP1 notes.docx
24	WP1 Meeting		Jul 24, 2025	Yes	Yes	20250724_WP1 notes.docx
25	WP1 Meeting		Aug 07, 2025	Yes	Yes	20250807_WP1 notes.docx

C) Other WP and Consortium

N.	Ordinary Meeting	Date	Held?	Notes?	Related documents
26	WP3/4 Meeting (Modules)	Jun 25, 2025	Yes	Yes	Achieve_WP3_4_June_25.pptx
27	WP5 Meeting 1	Aug 04, 2025	Yes	Yes	WP5 Notes + Brainstorming
28	WP5 Meeting 2	Sept 01, 2025	Yes	Yes	WP5 Notes + Editorial planning
29	Consortium Online Meeting	Jun 20, 2025	Yes	Yes	20250620_Consortium_Meeting_Online.docx
30	Consortium "Before Summer"	Jun 2025	Yes	Yes	Before Summer pptx
31	Consortium GA f2f	Nov–Dec 2025 (Milan, planned)	Planned	–	–
32	WP3/4 Task Leader Meeting		Yes	No	Informal actions reported in Sept. 26th WP3/4 meeting
33	WP3/4 Meeting	Sept. 26th, 2025	Yes	Yes	WP_3_4-2025_09_26_ACHIEVE_Meeting_notes.pdf
34	WP3/4 Meeting	Oct. 10th, 2025	Planned	-	-
35	WP3/4 Meetings	Every 14 days	Planned	-	-

Annex C – Milestones Control Template

MS	Milestone	Associated WP	Lead Beneficiary	Scheduled Deadline	Means of Verification	Adapted Milestone (date/grade)	Deviation %	MS Achieved
MS1	Tentative curriculum of the master's programme defined	WP1	UNITN	31 Mar 2025	Documentation (curriculum draft)	28 Mar 2025	0%	✔ YES
MS12	Definition of Quality Assurance Principles	WP4	UR	31 Mar 2025	QA document approved by partners	28 Mar 2025	0%	✔ YES
MS8	Marketing and Dissemination Plan	WP3	EIT DIGITAL	31 Jan 2025	Plan document	27 Jan 2025	0%	✔ YES
MS10	Project Management Handbook	WP4	EIT DIGITAL	31 Jan 2025	PM Handbook final version	27 Jan 2025	0%	✔ YES
MS11	Data Management Plan	WP6	EIT DIGITAL	31 Jan 2025	DMP agreed by partners	27 Jan 2025	0%	✔ YES
MS2	Labour market needs analysis completed and curriculum finalised	WP1	KTH	31 Jul 2025	Approval of final analysis and curriculum	15 Sept 2025	–	✔ YES
MS3	First two-year cycle delivered (Master's)	WP1	UNITN	30 Sep 2027	Graduation of first cohort	–	–	☐ Planned

MS	Milestone	Associated WP	Lead Beneficiary	Scheduled Deadline	Means of Verification	Adapted Milestone (date/grade)	Deviation %	MS Achieved
MS4	Second two-year cycle delivered (Master's)	WP2	UNITN	30 Sep 2028	Graduation of second cohort	–	–	☐ Planned
MS5	SSLM and certification schemes completed	WP2	POLIMI	31 Jan 2026	Full SSLM curriculum online	–	–	☐ Planned
MS6	First annual cycle of certification exams	WP2	POLIMI	31 Jul 2027	Exams completed, certificates issued	–	–	☐ Planned
MS7	Second annual cycle of certification exams	WP2	POLIMI	31 Jul 2028	Exams completed, certificates issued	–	–	☐ Planned
MS9	Completion of planned MCD activities	WP3	EIT DIGITAL	31 Aug 2028	Dissemination reports and campaigns	–	–	☐ Planned
MS13	Enrolment complete – first full cycle	WP4	EIT DIGITAL	31 Jul 2025	Final enrolment list confirmed	15 Sept 2025	–	✔ YES
MS14	Internship programme defined	WP4	EIT DIGITAL	31 Jan 2026	Internships programme open to companies	–	–	☐ Planned
MS15	Enrolment complete – second full cycle	WP6	EIT DIGITAL	31 Jul 2026	Final enrolment list confirmed	–	–	☐ Planned

Annex D – Risk Control Template (WP leaders)

Risk ID	Title	Description	WP(s)	Likelihood	Impact	Level	Risk Owner	Response	Mitigation Action
RL 01	Deliverable delay	Key deliverables/milestones delayed due to disagreement on scope/purpose	All	2	3	6	Andrea Bianchini (EITD)	Avoid	Actions drafted clearly in GA; PEC conflict resolution if needed
RL 02	Critical path failure	Failure to recognise linkages between tasks and allocate resources properly	All	1	2	2	Andrea Bianchini (EITD)	Reduce	Regular WP meetings, cross-WP monitoring
RL 03	Cost growth	Consortium may exceed budget to ensure high-quality results	All	1	4	4	Andrea Bianchini (EITD)	Reduce	Advanced monitoring and financial reporting
RL 04	Curricula misalignment	Institution misalignment on learning outcomes	WP1, WP2	1	4	4	Liszlö Gulyás (ELTE), Luigi Palopoli (UNITN)	Avoid	Draft curriculum agreed early; monitored in GA
RL 05	Target audience	Different views on SSLM audience	WP1,	3	2	6	Andrea Bianci	Accept	PEC arbitration

	disagreement		WP 2				ni (EITD)		; iterative feedback
RL 06	Lack of participation	Low participation in educational activities	WP1, WP 2	3	4	12	Olivia Pantea (EITD)	Reduce	Stronger engagement, incentives for HEIs
RL 07	External delays	Deliverables delayed due to external dependencies	WP1, WP 2	1	3	3	Salvatore Moccia (EITD)	Avoid	Ensure external commitments early
RL 08	Low target audience	Marketing doesn't attract enough students	WP 3	3	4	12	Olivia Pantea (EITD)	Reduce	Multi-channel marketing, early campaigns

Monitoring grid (used at every review)

Risk ID	Discussed by WP core team?	Mitigation plan created?	Reviewed frequently?	Plan being carried out?	Effective?	Informed PEC?	New related risks?
RL__							

Annex E – PEC Critical Risks Template

Risk No.	Description	Likelihood	Work Package(s)	Proposed Mitigation
RL01	Key deliverables/milestones delayed due to scope disagreement	Low	All (WP1–WP6)	Clear GA definitions; PEC conflict resolution process

RL04	Curricula misalignment between institutions	Low	WP1, WP2	Early alignment and validation across HEIs
RL06	Lack of participation in educational activities	High	WP1, WP2	Active monitoring by PEC; stronger HEI engagement; incentives
RL08	Low student recruitment (below target)	High	WP3, WP4	Enhanced marketing campaigns; multi-channel promotion; industrial support
RL.....	Unforeseen risk			

Annex F – Issues & Approvals Tracker Template

Issues

Related item	Issue description	Actions / Solutions	Owner	Implementation (status and date)	Related docs	WP
WP1 – D1.1 Market Analysis	Delays in collecting inputs (missing networking job profiles, METU study plan late)	Partners assigned missing inputs; KTH compiled resource list	UNITN / KTH	Ongoing – discussed Apr–May 2025	WP1 notes (Apr 17, May 08, 2025)	WP1
WP1 – Questionnaire design	Draft lacked networking and soft-skills sections	POLIMI + UR to complete; distribution via LinkedIn and industrial partners	UNITN / Infineon / RISE	Resolved – distributed Aug 2025	WP1 notes (Jul 24, Aug 07, 2025)	WP1
WP5 – Dissemination	Summer LinkedIn cadence (≥1 post/week; ramp-up	Editorial plan updated; tracker enforced;	UBB (WP5 lead)	Implemented – Jul–Sep 2025; ramp-up from	WP5 notes (Sept 01, 2025)	WP5

Related item	Issue description	Actions / Solutions	Owner	Implementation (status and date)	Related docs	WP
	planned in Q3)	cadence increase as of September		summer minimum to Q3		
WP2 – Student Recruitment	Early-cycle applications below target	Increase campaigns; involve industry partners	PC + WP2 lead	Planned – Autumn 2025	Promotional tracker, WP5 plans	WP2/WP5
WP6 – Data collection	Need stronger GDPR evidence and procedures	Finalise D6.2 implementation guidelines; evidence capture checklist	PC (EITD)	Planned – 2026	D6.2 Final	WP6

Approvals

Related item	Meeting at which approved	Approval / Decision	Actions / Decisions	Owner	Implementation (status and date)	Related docs	WP
Kick-off (Oct 10–11, 2024)	GEA Meeting 1	Governance structure approved (PEC, GEA, templates)	Establish PEC/GEA, reporting templates	PC (EITD)	Implemented in D6.1 (Mar 2025)	Kick-off agenda, D6.1 Handbook	WP6

Related item	Meeting at which approved	Approval / Decision	Actions / Decisions	Owner	Implementation (status and date)	Related docs	WP
PEC meeting (Mar 20, 2025)	PEC	Approval: Market analysis report deadline April 2025	WP1 to consolidate drafts	UNITN (WP1 leader)	Implemented – v0.5 draft Aug 2025	PEC notes, D1.1 v0.5	WP1
Consortium Online (Jun 20, 2025)	Consortium	Proceed with Milan GA f2f Nov–Dec 2025	Local host POLIMI to organise	PC + POLIMI	Planned – Nov 2025	Consortium notes	All
GEA Meeting (2026)	GEA	Mid-term review submission strategy	Finalise D1.2 + QA Plan	PC + WP Leaders	Planned – 2026	To be added	All

Annex G – CAPA (Non-Conformities, Corrective and Preventive Actions) Template

NC / Risk / Issue	Evidence	Impact	CAPA	Owner	Due
GDPR evidence capture needs strengthening	Issues log; DMP	Compliance	DMP Annex with evidence checklist; partner training	PC / QM	2026
Recruitment below target (early 2025)	Risk RL08; WP5 tracker	Programme	Multi-channel campaigns; industry ambassadors	WP5 / EITD	Autumn 2025

SSLM certification scheme undefined	SSLM checklist	Credential	Approve thresholds; exam logistics; publication	WP3/4 / PEC	2026–2027
Internship capacity risk	PEC critical risks	Pipeline	MoUs with industry; host onboarding kit	WP4 / PC	2026

Annex H – Self-Standing Learning Modules (SSLM) Quality Checklist

General set questions:

Quality Indicator	Answer	Evidence
1.1 GLOs defined	In Progress	The definition of Learning Objectives are in progress within WP3 activities and especially, according to market analysis and questionary. An initial list of SSLM is already available, a revision is ongoing.
1.2 OLOs defined	In Progress	The definition of Learning Objectives are in progress within WP3 activities and especially, according to market analysis and questionary. An initial list of SSLM is already available, a revision is ongoing.
1.3 ≥ 11 SSLM	In Progress	Initial list of SSLM already available in the proposal. Revision of the list is in progress according to market analysis and questionary.
1.4 ≥ 2 IandE/Ethics modules	Planned	Entrepreneurship and Innovation placeholder

Annex I – Academic QA Checklist

Coverage	Quality Indicator	Status	Evidence / Notes
IandE Minor	ECTS workload defined (30 ECTS)	Yes	Study plan drafts; partner syllabi
IandE Minor	Intended Learning Outcomes (ILOs) assessable	Yes	ILO mapping sheets
IandE Minor	Assessment rules (rubrics, pass/fail thresholds)	TBD	Harmonisation to be finalised Y2
I andE Minor	Entrepreneurship / innovation components identifiable	Yes	Draft module descriptors
Technical Major	Technical ECTS workload defined (≥90 ECTS)	Yes	Draft curricula from Aalto, KTH, POLIMI, UNITN, UBB, UNSFTN, UR
Technical Major	Learning Outcomes (LOs) defined	Yes	In Progress
Technical Major	Grading rules (scale, retake policy)	TBD	To be confirmed across HEIs
Technical Major	Prerequisites and progression rules	Yes	Programme specification draft
Programme	≥2 non-academic partners involved (industry/RI)	Yes	Infineon, RISE; collaboration evidence
Programme	Student feedback loop (mid-course, end-course, annual)	TBD	Survey instruments to roll out Y2
Programme	Appeals and complaints procedure aligned with HEI policies	Yes	HEI QA pages referenced in handbook
Programme	Award/degree rules (double-degree, mobility, IandE integration)	Yes	EIT Digital Master School framework
Programme	Data protection and ethics touchpoints integrated (admissions, surveys, internships)	Planned	DMP Annex and GDPR evidence checklist in Y2

Annex J – QA Contact Information

Partner	Name	Role in ACHIEVE	Email	Phone
UR (University of Rennes)	Alvaro Pina Stranger	QA Manager	alvaro.pina-stranger@univ-rennes.fr	
UR (University of Rennes)	Amir Aghaei Anvigh	QA Contributor	amir.aghaei-anvigh@univ-rennes.fr	33 (0)7 82 09 66 15
UR (University of Rennes)	Stéphanie Gauvain	QA Contributor	stephanie.gauvain@univ-rennes.fr	+33 (0)2 23 23 54 03
EIT Digital	Vilma Djala	WP6	Vilma.Djala@eitdigital.eu	+32 485 84 57 24