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Up2U Project Objectives and Key Results

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Executive Summary

Objectives and Key Results (OKRs) are defined in this document at the level of the Up2U project, its work packages, down to the individual tasks. The aim of the OKR process is to define, coordinate and communicate how the individual tasks' objectives and key results contribute to the work packages' objectives as well as the over objective of the project. Project participants, task and work package leaders are kindly invited to consult the OKRs at any time in order to better position their work and set their targets.

0   Project Objective and Key Results

Project "Up 2 University" Objective:

Bring innovation to schools by piloting teaching & learning technology and methodology that empowers teachers and students to develop digital skills required by the 21st century internet society.

Key Results:

1. Both learning technology and state-of-the-art teaching methodology that are proven in higher educational context have been adapted to secondary schools.
2. Teachers are empowered to develop new skills and be the ambassadors of digital learning at schools that closes the gap towards higher education.
3. Policy changes are influenced at all possible levels by sharing the success stories of large-scale Up2U pilots across several European countries.

1   Work Package 1 Objective and Key Results

WP1 "Project management and externa liaisons" Objective:

Deliver all the work that has been promised in the Annex 1 of the Grant Agreement within the fixed timeframe and budget.

Key Results
1. Project reached all the milestones and submitted all the deliverables.
2. Project finished on time.
3. Project stayed within budget with minimum underspend.

Task 1.1 "Project management" Objective:

Manage the project in an open, transparent and responsive manner on a daily basis.

Key Results:
1. Regular Board meetings and Management Team meetings are held to give direction and supervise the progress of the Work Packages and Tasks.
2. Communication channels and collaboration tools are provided to the project participants.
3. Partners' issues and requests are handled in a responsive and timely manner.

Task 1.2 "Finance and administration" Objective:

Fulfil all the requirements of the European Commission with regard to financial and administrative matters.

Key Results:
1. Quarterly financial reports are collected to monitor the progress of the project
2. Milestones and Deliverables are submitted on time.
3. Project Officer at the EC is regularly consulted and updated on the progress of the project.

Task 1.3 "IPR and external liaison" Objective:

Manage IPR of open software and content in the project as well as maintain liaisons with relevant projects running in parallel with Up2U.

Key Results:
1. IPR registry is kept up-to-date during the project duration
2. Software components, where possible, are made available under an open source license in the public domain.
3. EC Coordination Days are attended and other cross-project communications and activities are facilitated.

2   Work Package 2 Objective and Key Results

WP2 "Dissemination and outreach" Objective:

Identify, verify and deliver the main messages of the project to the key stakeholders according to a comprehensive go-to-market strategy that maximizes the overall impact of Up2U.

Key Results:
1. Traditional communication channels (i.e. website, leaflets, multimedia) give sufficient, up-to-date information about the progress of the project.
2. Social media channels are managed and coordinated across the community in order to deliver tailored messages to the targeted groups.
3. Go-to-market strategy developed, updated and consequently followed during the project lifetime.
4. Project events and trainings supported and organized in a professional manner.

Task 2.1 "Project communications" Objective:

Promote the project, its vision, results and impacts, to the defined target audience (schools) as well as to the wider education community, attract and enlarge the user groups involved in our large-scale pilots.

Key Results:
1. Key target groups and messages are identified and continuously updated according to the progress of the pilot activities.
2. Marketing strategy is up-to-date and serves the need of the project.
3. The impact factors of the project are clearly communicated in the right language.

Task 2.2 "Web presence and design" Objective:

Create a visually appealing, up-to-date and informative website and learning environment.

Key Results:

1. Public Up2U project website is 100% up and its content is always up-to-date.
2. Multimedia and other digital elements are visually appealing and following the agreed design principles.
3. The learning platform(s) and its tools and services (i.e. the learning environment) are all Up2U branded, where possible.

Task 2.3 "Event and training organisation" Objective:

Provide administrative support and coordination to the project workshops and training events according to the need of the pilot activities in the various countries.

Key Results:
1. Project events are supported with the necessary materials, knowledge sharing and internal communication.
2. Trainings are supported with logistics, and coordination/communication across countries, as needed.

3   Work Package 3 Objective and Key Results

WP3 "Cloud-based infrastructure services" Objective:

Assess the use of public and private cloud-based infrastructure services as well as educational content, with proven track records in higher education and research, integrate and adapt them to the specific learning context of schools.

Key Results:
1. The necessary network services of NRENs and GÉANT, where possible, are used for ensuring pervasive access to "always-on" education.
2. Privacy-protected personal and shared data storage solution is integrated into the Up2U learning platform.
3. Content repositories and repository services with relevant educational materials are searchable and findable across silos.

Task 3.1 "Network services and access" Objective:

Analyse, validate and advice on the network services (i.e. connectivity and access) available to the project.

Key Results:
1. Core network service requirements are analysed and the distributed network architecture is defined.
2. The Up2U Content Delivery Network (CDN) case is piloted, analysed and the necessary decisions are made and justified.
3. Access network scenarios (i.e. in the school, at home, on the road) are evaluated and policy recommendations are made.

Task 3.2 "Federated cloud storage and sharing" Objective:

Make sure that a state-of-the-art, secure and trusted, file-based sync and share solution is adapted to the project and integrated into the Up2U infrastructure supporting open federated sharing across multiple service domains.

Key Results:
1. Both personal storage spaces and shared group folders are provisioned to the next generation learning platform of Up2U.
2. Open Cloud Mesh (OCM) protocol allows federated sharing of files and folders across multiple service domains of Up2U.
3. Full-stack integration of application services (such as Jupyter Notebooks) exploit the benefit of a multi-domain secure and trusted hybrid storage infrastructure back-end.

Task 3.3 "OER aggregation and exposure" Objective:

Provide easy one-stop-shop access to open educational resources and (paid) content across multiple repositories for teachers and learners.

Key Results:
1. eduOER hub is integrated into the next generation learning platform via standard protocols.
2. At least 20 relevant repositories are connected to the OER aggregation hub of Up2U, acting as a one-stop-shop broker.
3. New service elements and enhancements are piloted to address the needs of emerging social interactions.

4   Work Package 4 Objective and Key Results

WP4 "Integrated application toolbox" Objective:

Design and develop a scalable and flexible integrated "application toolbox", which supports student-driven, personalized, dynamic learning path creation with social sharing, interactions and learning analytics.

Key Results:
1. The selected Up2U next generation Learning Management System (LMS) forms the integration platform of the "application toolbox".
2. Both in-house developed and third-party commercial tools are continuously assessed and integrated into the LMS platform via standard protocols.
3. The piloted teaching and learning scenarios are fully supported by the applications and services portfolio of the toolbox.
4. Learning Analytics and digital rewards systems are deployed.

Task 4.1 "Application toolbox framework" Objective:

Implement and deploy the Up2U application services container (i.e., the toolbox) that hosts all Up2U application services and acts as a central gateway for brokering the relevant tools/services according to user demands and learning analytic needs.

Key Results:
1. The branded Up2U next generation Learning Management Systems is up and running on the hybrid infrastructure cloud platform of Up2U.
2. The highly modular and portable integrated software stack is packaged and made publicly available on GitHub with installation guides and best practices in order to be replicated at other service domains.
3. Learning analytics applied in a consistent and integrated manner across the whole portfolio of platforms and services.

Task 4.2 "Tools for formal learning" Objective:

Investigate, asses and incorporate digital tools and services that are potential candidates for adoption in formal educational environments.

Key Results:
1. Learning scenarios of Up2U are supported by tools and services approved by the pilot schools to be used in their formal learning environment.
2. 3-5 teaching scenarios are designed and supported to develop new skills for teachers.
3. Recommendations are made to policy makers to ease the way of digital tools' adoption to schools.

Task 4.3 "Tools for informal learning" Objective:

Acquire suitable digital tools and services to aid informal learning scenarios to the piloted and promoted by Up2U.

Key Results:
1. Learning scenarios of Up2U are supported by the appropriate number of informal tools and services either developed in-house or provided by third-party contributors.
2. 3-5 learning scenarios are designed and supported to develop critical skills of students.
3. All tools and services are integrated into the "application toolbox" via standard protocols ensuring modularity and portability.

5   Work Package 5 Objective and Key Results

WP5 "Learning community management and skills training" Objective

Make sure that the pedagogical models, novel teaching and learning methods and the necessary skills of teachers and students are understood and fully supported by the platforms, tools and technologies that Up2U is piloting.

Key Results:
1. Critical thinking of students are developed by the highly personalized, dynamic learning path creation process of Up2U.
2. Tutoring and mentoring role of teachers are put forward helping them to develop the necessary skills and to experiment and validate novel learning scenarios.
3. Online courses and training events are conducted and pedagogical aspects shared across the community as well as fed back to tools development.

Task 5.1 "Subject Matter Committee and training programme" Objective

Bring school educators, technology experts and policy makers together in order to influence the evolution of the Up2U ecosystem.

Key Results:
1. SMC is established including internal and external experts and regular meetings are conducted to seek advice for the development of the Up2U ecosystem.
2. Training programme defined and kept up-to-date in order to train the user community in the pilot countries.
3. Students' behaviour and acceptance level is continually assessed and results are fed back to the development of pedagogical practices.

Task 5.2 "Teacher skills development" Objective

Define the "new teacher" profile in a dominantly web-based digital education, address what skills and abilities the teachers need in the context of student-driven, personalised, dynamic learning environment for schools.

Key Results:
1. The new "digital teacher" model is fully profiled in the given educational context.
2. Teachers of pilot schools are trained.
3. Teachers are involved in the tools development process.

Task 5.3 "Project-based and peer-to-peer learning scenarios" Objective

Carry out a series of pioneering activities allowing teachers and students to exploit to the full what technology can offer today in terms of web learning opportunities.

Key Results:
1. Detailed analytics of collaborative learning models centred on the active role of students and aiming at building knowledge or creating artefacts in small groups.
2. Pedagogical models are tested and validated by the pilot schools.

Task 5.4 "Social innovation, real-time creation and assessment" Objective

Experiment with sharing experiences of mixed reality environments via remote participation, select and develop case studies for such complex environments and optimize user experience.

Key Results:
1. The experience of visiting a museum and sharing the experience with remotely connected learning groups is created and analysed.
2. The experience of interacting remotely with a science lab is create and analysed.

6 Work Package 6 Objective and Key Results

WP6 "Roadmap for security and trust" Objective

Propose an executable roadmap for ensuring security and privacy, concerning firewalling of network traffic at schools, handling of intellectual property rights, copyright materials, student identity, and the right to choose data storage locations.

Key Results:
1. Pilot schools are aware of the IT and network security risks and able to address them with actions that are necessary and sufficient to conduct seamless digital education.
2. Pilot schools are empowered to use the state-of-the-art federated identify and trust management frameworks.
3. Pilot schools are enabled to comply with the latest European GDPR and Copyright regulations and in principle follow the open access and open content policies.

Task 6.1 "Security roadmap" Objective

Discuss, advice and disseminate an executable security roadmap for schools covering technical, legal, ethical and social aspects of the adoption of ICT in Education.

Key Results:
1. The use of secure WiFi access (preferably via eduroam) for both students and staff is promoted to the school IT personnel.
2. The BYOD policy is seamlessly supported across the school facilities.
3. State-of-the art IT and network security practices are adopted by the pilot schools.
4. Any software component provided or made available by Up2U is security audited.

Task 6.2 "Trust and Identity" Objective

Provide a common framework for schools' identity and access management (IAM) components.

Key Results:
1. School IT personnel are empowered to manage user identity, roles and attributes that enables students and staff to access the trusted education services.
2. WebSSO and federated identity management systems guarantee the users privacy across all platforms.

Task 6.3 'Content policy and OER curation" Objective

Promote and influence open access and content policy to all actors of the education marketspace via specific use cases and value propositions developed in the Up2U project context.

Key Results:
1. General awareness has been created around the European GDPR and Copyright regulations.
2. Open access and open content policies are adopted by the pilot schools and promoted to students, teachers, content providers and course developers.
3. OER content appearing in the Up2U platforms are curated.

7   Work Package 7 Objective and Key Results

WP7 "Pilot coordination and continuous risk assessment" Objective

Roll out and test the infrastructure service components and the application toolbox through very large-scale pilots, identify strategies for scaling and achieving bigger impacts.

Key results:
1. School pilots are running in at least 7 European countries (Germany, Greece, Hungary, Italy, Lithuania, Poland and Portugal) using the Up2U platform(s) and its services.
2. The Minimal Valuable Product outcome of the project is continually improved over the product lifecycles.
3. The infrastructure and services' functional and technical quality are regularly assessed and potential risks (associated with deployment, operations, and sustainability) identified and mitigated during the agile development workflow.
4. User experiences are evaluated, shared and fed back to developers across the multi-cultural and multi-lingual European community.

Task 7.1 "Large-scale pilot coordination" Objective

Identify, monitor and coordinate software integration processes together with a pilot setup, upgrade and evolution in the pilot countries.

Key Results:
1. Common architectural model is defined to guide the technical integration of different infrastructure services and software components.
2. Set of relevant use-cases driving large-scale pilot demonstrations and their added-value features is identified and shared inside and outside of the project.

Task 7.2 "MVP and continuous service improvement" Objective

Enforce the concept of Minimum Viable Product (MVP) in order to manage the end-to-end software ecosystem development, its improvement and large-scale deployment.

Key Results:
1. Pilot cycles are defined and executed.
2. Series of Minimum Viable Products (MVPs) with just-right set of features and functionalities are tested and evaluated.
3. Decisions on development directions are based on the user feedback of MVP cycles.

Task 7.3 "Quality control and risk assessment" Objective

Develop, establish and operate a continuous risk assessment function during the entire lifetime of the project and to liaise with other related projects and initiatives.

Key Results:
1. Quality assurance procedures are defined, established and maintained.
2. Risk register is created and kept up to date.
3. If problems do occur, the associated contingency measures are implemented swiftly to minimise impact.

Task 7.4 "Evaluation of results" Objective

Evaluate the results of the large-scale pilots, and apply all the identified improvements accordingly in an interactive way.

Key Results:
1. List of usability and user experience questionnaires are defined and performed, including ease of learning, ease of use, satisfaction and usefulness of large-scale pilots.
2. Quantitative assessment of the solution software stack in terms of sustainability and maintainability are reported in accordance with the defined milestones.

8   Work Package 8 Objective and Key Results

WP8 "Sustainability and exploitation of results" Objectives

Define an effective sustainability and exploitation framework based on GÉANT's NREN community, their existing customer base, SME partners and connected schools in order to mainstream learning solutions for secondary education that are proven in higher education and research contexts.

Key results:
1. All the tools and services the project incorporates, designs, develops, and tests are sustainable after the lifetime of the project.
2. Significant impact has been made to the perception of technological and commercial rewards and benefits associated with secondary education.
3. It is easy for new schools to join the Up2U infrastructure and ecosystem that we have created for the specific learning context.

Task 8.1 "Sustainability and business models" Objective

Ensure the sustainable design and operation of the Up2U ecosystem and develop business models.

Key Results:
1. Plans and strategies are defined to maintain and host the Up2U service ecosystem during and after the project. This includes the technical as well as the operational perspective.
2. Business models for selected products in the ecosystem are developed and opportunities with industry stakeholders are discussed.

Task 8.2 "Ecosystem analysis" Objective

Gain an understanding of the complex ecosystem Up2U will operate in via detailed analysis of the different stakeholders.

Key Results:
1. Stakeholders are identified and analysed; what is and could be their role, their market size, their competences and potential added value, their requirements and demands.
2. Gap analysis is performed to identify missing competencies at national and European levels.

Task 8.3 "Industry engagement" Objective

Showcase business opportunities for industry based on the ecosystem analysis, the pilots, and the business model evaluation.

Key Results:
1. Exploitation strategies focusing on commercial organisations are defined.
2. 2-3 pilots with industry partners are carried out potentially including content, course, tools and services developments.

Task 8.4 "New schools" Objective

Make it easy for new schools, beyond those initial schools who joined the country pilots, to benefit from Up2U.

Key Results:
1. New schools' easy on-boarding process is defined and coordinated.
2. In particular, the NRENs, but in general the whole consortium, have used their networks to contact new schools