DIGITAL MANUFACTURING PLATFORMS FOR CONNECTED SMART FACTORIES

D1.8 1st Report on Open Calls

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Abstract: This deliverable reports on the activities performed to prepare the QU4LITY 1st Call for Proposals, to be started on May 7th. The deliverable also gathers some of the documents issued by the QU4LITY consortium for the applicants. **Disclaimer**: the official documents for the open call will be published on the website of the projects, https://qu4lity-project.eu Documents included in this deliverable are a draft version.

Co-funded by the Horizon 2020 Programme of the European Union

HISTORY

Version	Date	Modification reason	Modified by
0.1	31/01/2020	First draft	Irune Mato (INNO)
0.2	14/02/2020	First version including Guide for Applicants and template	Irune Mato (INNO)
0.3	28/02/2020	First version of the topics	Irune Mato (INNO)
0.4	18/03/2020	Review of the topics	Oscar Lázaro (INNO)
0.5	24/03/2020	Second version of the topics	Carmen Polcaro (INNO)
0.6	27/03/2020	Final Version of the topics	Carmen Polcaro (INNO)
0.7	31/03/2019	Update due to COVID pandemics	Carmen Polcaro (INNO)
0.8	14/04/2020	Version ready for review	Carmen Polcaro (INNO)
0.9	15/04/2020	Reviewed version	Alberto Miranda (ATOS)
1.0	17/04/2020	Ready for delivery	Carmen Polcaro (INNO)

1 Executive Summary

This deliverable reports on the activities performed to prepare the QU4LITY 1st Call for Proposals, to be started on May 7th: defining the topics, building the applications platform, planning of the first dissemination actions. The deliverable also gathers some of the documents issued by the QU4LITY Consortium for the applicants.

The preparation of the open call has been completed during the COVID-19 pandemics and the related lockdown. Due to the situation, the opening of the call has been postponed one month, from April 1st to May 7th to give to potential applicants the time to organize themselves in the current situation and take the opportunity offered by the QU4LITY open call.

Next steps are the promotion of the call on the dissemination channels of the project and, after the call is closed, on August 7th, starting the evaluation in September.

2 Introduction

2.1 Scope of the document

Deliverable 1.8 reports on the work performed by the QU4LITY consortium in the preparation of the QU4LITY 1st Open Call. The call was going to be open for the reception of proposal on April 1st. Due to the COVID-19 emergency, the coordination team has decided to postpone the opening one month, from April 1st to May 7th to give to potential applicants the time to organize themselves in this peculiar situation and take the opportunity offered by the QU4LITY open call. During the reporting period of the corresponding task the consortium has been engaged in the following activities:

- Definition of the conceptual framework of the open call
- Identification of the assets provided by the consortium to the applicants
- Definition of the topics
- Set up of the platform for submission
- Definition of the criteria to select evaluators
- Preparation the documents to give support to the applicants
- Drafting a plan for dissemination activities

The preparation of the open call has started in January 2020 and the present report cover the work done until April 15.

3 Report on the open call

3.1 Introduction

The project QU4LITY pursues the ambitious goal to become the reference project to develop and foster the European AI digital platform for Zero Defect Manufacturing (ZDM). To this end, QU4LITY is developing digital enhancements to state of the art ZDM equipment and processes, while providing a reference architecture and Autonomous Quality (AQ) blueprints for integrating them in the factory. Furthermore, 9 production facility pilots and 5 manufacturing equipment pilots have been designed in order to demonstrate multi-stage autonomous ZDM processes and the digital enhancement of machines. Finally, through the cascade funding of third parties, selected with an open call mechanism, QU4LITY will enable **SMEs and MidCaps, both as manufacturers and solution providers** to develop, validate, deploy and adopt innovative Autonomous Quality solutions for ZDM.

With Open Calls we would like to involve European SMEs and MidCaps, both as solution developers and/or integrators, and manufacturers to implement new pilots and/or enhance existing pilots and digital platforms, using QU4LITY enablers.

The project has planned two open calls, the first QU4LITY open call will be ready for receptions of proposals from applicants from 2020 May 7th until August 7th. The

present report covers the period from January to April 2020, when the preparation of the documents and of the platform for submission have been carried out.

The selection and involvement of winners of the open call will be the first step for the creation of a community of users and solution providers around the project's results, including the QU4LITY market. The members of the project's community will use the project's platforms, testbeds and innovation management services to implement the paradigm of AI drive Zero Defect manufacturing promoted by the project, while also learning by the experience of large-scale pilots.

3.2 Approach to QU4LITY Open Calls

During the reported period, the QU4LITY consortium has been involved in the preparatory work needed for the open call process to take place. **This work covers technical and operational aspects**.

First of all, the definition of a **conceptual framework** of the open call is required to enable the integration of the solutions and pilots, coming from the winners, in the roadmap towards the global objectives of the project. This framework has been defined in parallel with the work done by the partners to introduce and develop the Autonomous Quality concept, which is one of the pillars of the project. As reported below in the guide for applicants "QU4LITY does not call for abandoning well established and sound quality control methods, but on the contrary calls for extending such methods with a multi-dimensional, multi-stage and systematic framework for cognitive collaborative quality assurance throughout an entire supply chain; i.e. autonomous quality control framework". Within this comprehensive framework, QU4LITY Open Call 1 targets the development of pilots that address advanced production process and systems which incorporate AI-based solution to implement the QU4LITY value chain (Type A) and further aims at complementing existing pilots currently running in 14 industrial companies (Type B) and to expand the scope of existing digital platforms and pilots will new functionalities and features.

Open call winners of Type A are requested to design, implement and demonstrate their own ZDM pilots using and validating **enablers and digital platform** provided by the project partners. These enablers are being developed under WP3 "Interoperable & Trusted Digital Infrastructures for ZDM". Currently, the most updated catalogue of enablers developed in QU4LITY is recollected in the D3.13, "Library of Integrated, Interoperable Digital Enablers" which will be distributed as part of the documentation of support for applicants. Open call winners of the type B are requested to provide enhancements to existing pilots and digital platforms

Six topics have been defined to cover those technologies and solutions, needed to ensure Zero Defect Manufacturing, that are complementary to the topics already dealt inside the project and are of general interest among manufacturers. All these aspects are collected and presented in the Guide for Applicants, in section 4.

3.3 Preparation of the QU4LITY Open Calls

In parallel with the technical framework of the open call, the consortium has dealt with the operational aspects such as building the platform for the open call submission, define the criteria for the selection of the experts and all the aspects related to the dissemination of the open call.

The platformfor submission is based on a proprietary tool by Innovalia, EMS, **Evaluation Management System**, which enables the implementation and monitoring of all the phases related with the open call: submission, evaluation and follow up of the winners. The system is flexible and has been customized to the details of the QU4LITY open call.

A call for external experts for the evaluation will be opened on May 7th in parallel with the open call process, with the aim of **creating a large pool of experts** for the evaluation process. The requirements for the experts are the following

- Proven work experience in the topics of the open call
- Experience in evaluation of proposal, experience with H2020 calls is preferred
- No conflict of interest, according to the rules established in the "Code of conduct of the experts" by the European Commission.

Our goal with the call for experts is to get a **gender balanced pool** and having so many Members States (MS) represented as needed to avoid the "country bias". In other words, we would prefer to have each proposal evaluated by two experts coming from other countries respect to the applicant.

Regarding the **conflict of interest**, after the initial declaration of not being involved in the preparation of any of proposal, experts will be required to read one by one the abstract of the proposals and the identity of the applicants and declare their compliance with the following requirements:

- Not to benefit directly or indirectly if the proposal is accepted
- Not having a close family or personal relationship with any person representing an applicant legal entity
- Not being a director, trustee or partner or is in any way involved in the management of an applicant legal entity
- Not being employed or contracted by one of the applicant legal entities or any named subcontractors

Finally, we have prepared support documentation for the applicants:

- The guide for applicant where all the technical and administrative aspects related with the open call are detailed.
- A template of the proposal, with a suggestion about the length and the content of the different sections.

These two documents are reported in section 3 and 4. More documents will be shared with applicants, in particular documents about the enablers provided by QU4LITY and information about pilots.

3.4 Impact of the COVID-19 pandemics

The preparation of the open call has been completed during the COVID-19 pandemics and the related lockdown. The situation has had a certain impact on the process of the open call, especially due to the fact most of the companies of the consortium had to switch to a *Working from home* modality and this required a certain amount of organization. The call has been postponed one month, from April 1st to May 7th to give to potential applicants the time to organize themselves in the current situation and take the opportunity offered by the QU4LITY open call.

Moreover, QU4lity Open Call would like to contribute to the recovering of the European SMEs providing support to and fostering the development of technologies to cover particularly new zero defect manufacturing strategies in the context of: manufacturing repurposing, cost reduction, good first time production, business to business collaboration, and, more in general, development of autonomous quality solutions as a service for key sectors of European activity such as Food, Logistics, Automotive, Aeronautics, Healthcare, Life Science.

To this end we have reviewed the text of the topic and we will try during the evaluation to identify the proposal that most impact might have to the solution of this kind of crisis also in the future

3.5 Conclusions and next steps

In the reported period the consortium has carried out the technical and operational activities needed to ensure the open call to take place correctly and according with the recommendation of the European Commission.

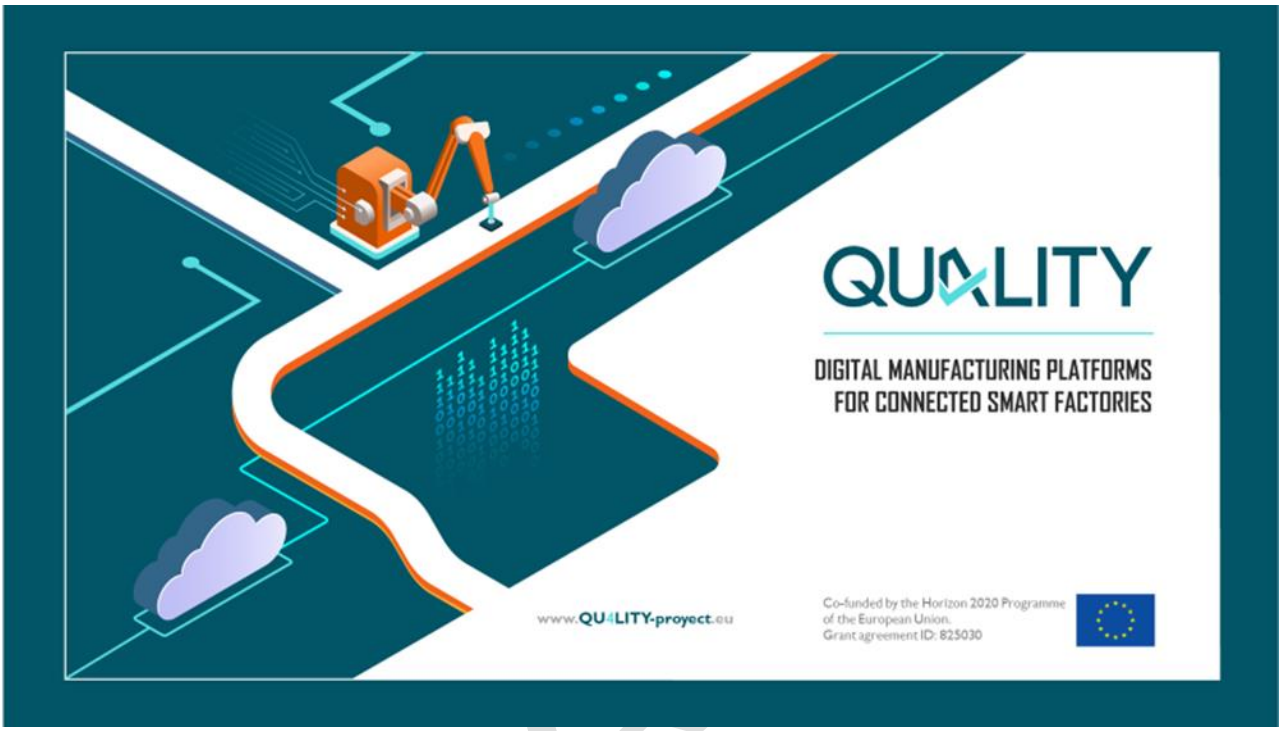
From May 7th the open call will be opened for reception of proposals until August 7th. Before and after the opening several remote dissemination actions will be carried out thorough social network and the website. Newsletters, webinars and other remote dissemination actions will be carried out to maximize the access to SMEs and MidCaps to the open call.

At the same time, also the call for experts will be opened, with the aim to create a large pool of experts on the topics for the open call.

The evaluation process will be carried out starting from September and should be completed by the end of October, in order for winner to start their project on December 2020.

In the next report, due on September 2020, details on dissemination activities, the process of the call and statistics about the applicants will be reported.

4 QU4LITY Open Call 1 guide for applicants



QU4LITY 1st Open Call

(Call for Experiments, Guidelines and Rules for Participation)

Co-funded by the Horizon 2020 Programme of the European Union

Contents

1 Introduction

As part of the DT-ICT-07-2018-2019 (IA) call considerations, financial support to third parties is foreseen for the incorporation of third-parties (notably SMEs) that will take advantage of the platforms and pilots of the project and the Open APIs provided on top of them, towards enhancing the QU4LITY compliant systems (i.e. pilots/platforms) with additional functionalities and features. In particular, as listed in the call text, QU4LITY should address the following aspect: "*For large-scale piloting and ecosystem building activities, proposals may involve financial support to third parties, as explained in the introductory section 'Platforms and Pilots', to support SMEs in piloting and developing prototype applications on top of digital manufacturing platforms".*

QU4LITY will exploit this opportunity as a means of attracting SMEs in the project, as user and validators of the project's autonomous quality paradigm, but also as additional participants to the project's virtualized innovation hub and ecosystem. In particular, QU4LITY will provide financial support to SMEs that will engage in the following type of activities:

- ZDM Pilots for SME manufacturers, aiming at customizing and deploying the project's autonomous quality paradigm according to the needs of SMEs.

- Enhancements to QU4LITY digital platforms and pilots by SMEs, which will give SMEs the opportunity to further develop the project's systems using the Open APIs provided by the project.

SMEs participating in both of the above types of activities will also engage in the project's virtualized innovation hub and related market platform. In this one the project will take advantage of the open calls processes in order to build its community (i.e. ecosystem building) and to establish a critical mass of participants in the project's ecosystem.

1.1 Context

Any European manufacturing company has a constant need to strive for excellence. This requires producing top quality goods, being highly efficient in terms of costs and resources, while being extremely responsive to market and customer needs, and using and offering creative and innovative solutions. Moreover, there is an increasingly pressure on European industry to build sustainable, green and circular processes and products that ensure not just business goals but also societal and environmental ones for future generations – see European Green Deal[1].

[1] https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en

However, due to increased product mass customization and the proliferation of global manufacturing networks, scalable first-time right manufacturing is becoming also increasingly complex. Products are increasingly complex, feature an increasing amount of electronics or micro-features and are increasing composed of advanced (multi-) materials - becoming stronger, lighter and smarter whilst remaining at least as safe or secure as previous versions. While a clear benefit for the end customer, such process variation is the enemy of competitiveness and profitability. It causes waste and inefficiency, leads to high quality costs and manning levels, and results in late deliveries and poor traceability. Hence, with new product features, new manufacturing processes and techniques will emerge, which in turn will call for evolution of quality control and quality assurance procedures capable to effectively deal with the inherent variability of Factory 4.0 manufacturing processes, ultimately reducing scrap levels and raising productivity.

Traditional quality control models such as TQC, end-of-line SPC or in-line multi-stage quality control solutions are not fully capable to deal with the dynamism of such new manufacturing scenarios, calling for effective support to control smart and connected excellent and responsive production processes that combine speed, precision, quality and reliability with flexibility and agility. Manufacturing companies need to produce from very small lot-sizes to big volumes and there is a growing need for the ability to quickly scale up from small to big lot-sizes whilst retaining the required quality. Traditional quality methods are rigid and still do not deliver learning and adaptation capabilities. In such connected production environments to determine the root causes or sources of variance of bad quality in supply chains is usually more difficult because multiple parties are involved in the current global manufacturing environment.

1.2 Vision

QU4LITY does not call for abandoning well established and sound quality control methods, but on the contrary calls for extending such methods with a multi-dimensional, multi-stage and systematic framework for cognitive collaborative quality assurance throughout an entire supply chain; i.e. autonomous quality control framework.

QU4LITY is leveraging on the modular and composable digital enablers to support the implementation of a **closed loop (feedback and feedforward) quality assurance and improvement framework to unlock the key to predictable, productive manufacturing** within which to anticipate and naturally control quality variation in the factory, backed by traceable, supply chain and process centric information view and information flow support and with innovative technology, proven methods and expert human-in the-loop support for cognitive manufacturing. Artificial Intelligence in QU4LITY is used to learn complex behaviors as perception, self-reasoning or action from experience (data acquired and simulated) in federated and privacy-preserving distributed manufacturing environments, barrier that conventional Artificial Intelligence used to overcome only with expert knowledge. QU4LITY is proposing to spread intelligence across the various levels of the smart connected factory (field, edge, factory and cloud) with suitable networking, computing and analytic enablers

(including visualization) that are able to meet volume, variety, velocity of decisions in the shop floor.

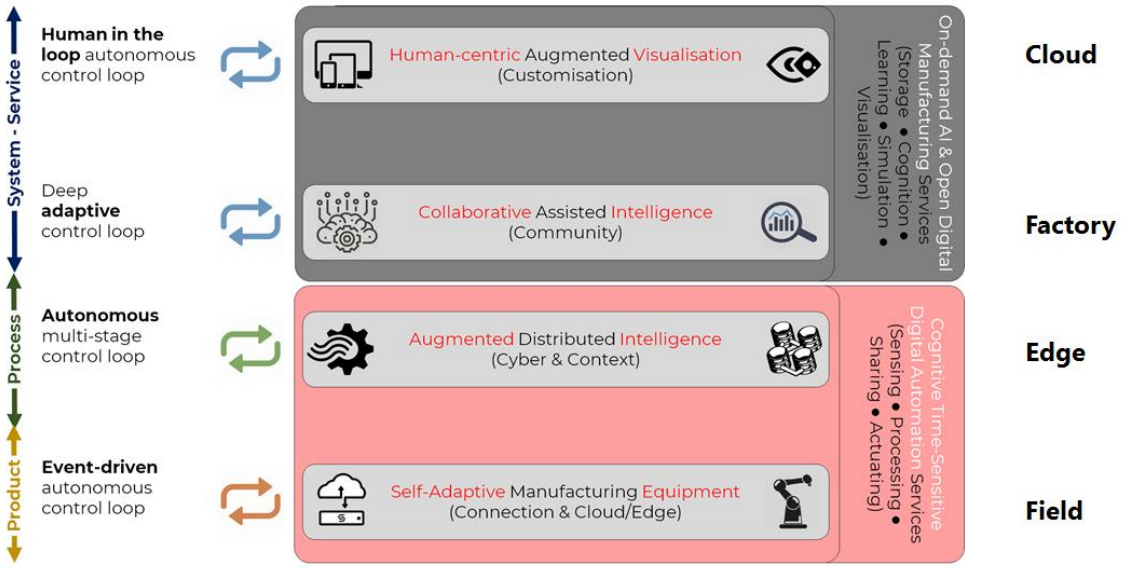
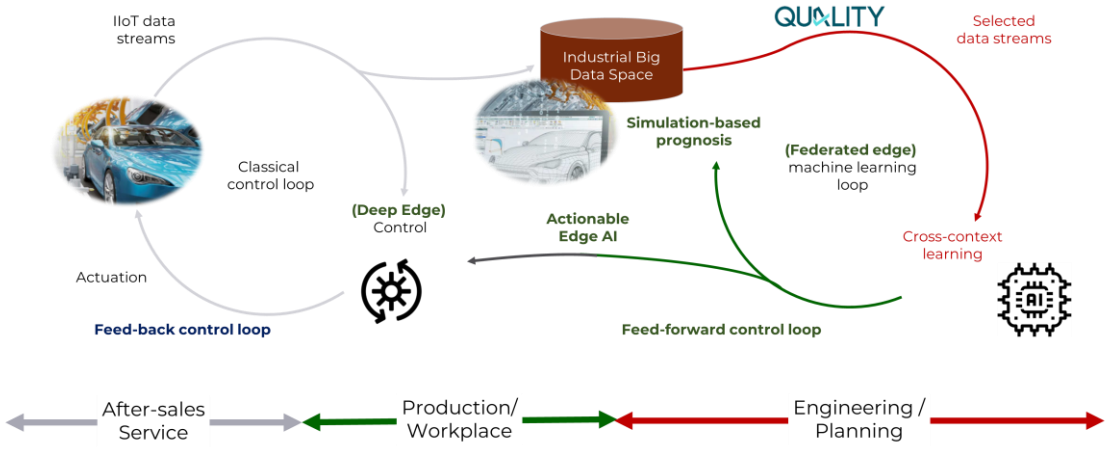


Figure 1 – QU4LITY AI distribution model and types of decision and control workflows,

QU4LITY brings quality control to new levels of automation, adaptation, actuation, cognition and collaboration. The goal is to get quick, comprehensive feedback about the whole production process, looking at both the production means, the part and all of the elements contributing to manufacturing in that final workpiece.



1.3 Types of Call

According to the objectives denoted above, the main financing targets for additional third parties through the QU4LITY open calls will be:

TYPE A: New Large-Scale Pilot

Calls for new autonomous quality pilots . The calls will invite candidates to propose novel pilots that align to the QU4LITY autonomous quality concept, notably pilots that implement features and functionalities that are not available as part of the large-scale pilots of the consortium partners. **OBJECTIVES:**

- Validate the QU4LITY concept, digital platforms and APIs in areas beyond the pilots of the consortium partners.
- Demonstrate end-to-end Autonomous quality in a cross-border pilot.
- Attract SME Manufacturers and Solution Providers to the project's multi-side platform and ecosystem.

ALLOCATED BUDGET: €362,500 for the funding of 5 proposals (max budget: 72.500 € for proposal)

Each proposal must be submitted by a single applicant, consortia are not allowed

TYPE B: Expansion of QU4LITY pilot systems

To expand the scope of existing digital platforms and pilots with new functionalities and features, which will be contributed by the SMEs, using the Open APIs that will be made available over the project's platforms. The SMEs will be given the opportunity to validate these enhancements in the project's experimental infrastructures and testbeds.

OBJECTIVES:

- Validate the expandability of the QU4LITY digital platforms.
- Complement existing pilots and platforms with added-value features and functionalities.
- Expanding the QU4LITY ecosystem and broadening the solutions QU4LITY portfolio in the market platform.

ALLOCATED BUDGET: € 225,000 for the funding of 3 proposals (max budget: 75.000 € for proposal)

Each proposal must be submitted by a single applicant, consortia are not allowed

1.4 Open Call Objectives and Topics

QU4LITY Open Call 1 targets the development of pilots that address advanced production process and systems which incorporate AI-based solution to implement the QU4LITY value chain. The open call aims at complementing existing pilots currently running in 14 industrial companies and to expand the scope of existing digital platforms and pilots will new functionalities and features. Applicants are required to apply one or more of the digital technologies mentioned in the topics, such as AI, robotics, edge computing and others to improve quality control in any of the points of the quality value chain, design and demonstrate the data flow that

enable the implementation of a closed loop (feedback and feedforward) quality assurance for the whole manufacturing process.

QU4LITY is looking for SMEs to provide technologies and innovations that could help European manufacturing industry in a **faster recovery from COVID-19 pandemic** with a focus both on new digital solutions for zero defect manufacturing working practices taking advantage of Qu4LITY digital continuity enabling technologies and platforms.

QU4LITY is looking also for experiments supporting automation and autonomy in trusted and fair procurement and manufacturing of innovative treatment, testing, monitoring of progress and protecting people in the next phases of the COVID-19 pandemic. At the same time, QU4lity Open Call would like to contribute to the recovering of the European SMEs during the next months providing support to and fostering the development of technologies to cover particularly new zero defect manufacturing strategies in the context of: manufacturing repurposing, cost reduction, good first time production, business to business collaboration, and, more in general, development of autonomous quality solutions as a service for key sectors of European activity such as Food, Logistics, Automotive, Aeronautics, Healthcare, Life Science.

1.4.1 Topics

- **Topic Q1: Data Driven AI for pattern recognition in Zero Defect Manufacturing for high performance product**

Pattern recognition is the process of recognizing patterns by using an Artificial Intelligence algorithm, it can be defined as the classification of data based on knowledge already acquired or on statistical information extracted from patterns or their representation. Pattern recognition is able to detect arrangements of characteristics or data that provide value information about a given system or data set.

Applicants to topic Q1 are required to design, implement and experiment data driven algorithms for pattern recognition related to Zero Defect Manufacturing for identification of defects, proactive quality control, reverse engineering for high performance products. The aim is to demonstrate the potential of this technology to improve the quality control in any of the critical point of their quality value chain and to analyse its connection and impact on the whole manufacturing process.

- **Topic Q2: Data Driven AI in Human Machine Collaboration for Zero Defect manufacturing**

Partnering with machines is integral to the future of how we live and work. A new era of intelligent systems will be characterized by trust and understanding between humans and machine. This collaboration can provide many benefits. Machines or

robot can assemble and consider more data points than humans, can incorporate and often provide a less biased support to decision and improve the productivity.

Applicants to topic Q2 are required to demonstrate the potential of the human machine collaboration for quality control in manufacturing, developing autonomous learning or decision-making algorithms to improve the quality in any of the critical point of their quality value chain and analyse its connection and impact on the whole manufacturing process.

- **Topic Q3: Integration of Data driven inline Autonomous Quality in solutions for Zero Defect Manufacturing**

Traditional quality control models such as Total Quality Control, end-of-line Statistical process control or in-line multi-stage quality control solutions are not fully capable to deal with the dynamism of the Smart Factory Scenario scenarios, calling for effective support to control smart and connected production processes.

Data Driven inline Autonomous Quality solutions can deliver learning and adaptation capabilities to manufacturing companies that need to quickly scale up from small to big lot-sizes, or between different parts whilst retaining the required quality.

Applicants to topic Q3 are required to demonstrate the potential of the Data driven inline Autonomous Quality solution in highly flexible manufacturing scenarios to cover the whole quality value chain.

- **Topic Q4: Edge and/or real time solutions for Zero defect Manufacturing**

Edge is how is known the computing infrastructure that exists close to the sources of data, such as industrial machines, industrial controllers e.g. SCADA systems, and databases aggregating data from a variety of equipment and sensors.

Applicants to topic Q4 are required to demonstrate the potential of the Data Driven edge computing enabled applications based on e.g. analytics, machine learning etc. to improve the quality in any of the critical point of their quality value chain and analyse its connection and impact on the whole manufacturing process.

- **Topic Q5: Ensuring Quality Management in supply chain trough blockchain based technologies.**

Quality assurance in complex production systems is a difficult problem to tackle, given the number of parties involved in the sourcing of raw materials and parts and the extreme customization of products. Moreover, Zero Defect Manufacturing goals require that Autonomous Quality solutions are extended to the entire supply chain, possibly including logistics. This objective poses unique challenges, as it implies that

some suppliers, although being autonomous businesses, are fully integrated into the control loop. Blockchain technology can help by providing a common, company-neutral data exchange infrastructure where key information can travel between all stakeholders of a process with top guarantees of provenance, integrity and transparency.

Applicants to topic Q5 are required to develop novel distributed applications to control the quality and traceability of materials and products along the supply chain and analyse their connections and impact on the whole manufacturing process.

- **Topic Q6 Integrating ZDM solutions in Mass Customization and Lot Size One Manufacturing processes**

Mass customization as a strategy that allows the production of small lots (even as small as lot size one) is becoming more and more popular and is one of the main implementations of the concept of Industry 4.0. Mass customized products, though are complex, feature a significant amount of electronics or micro-features and are composed of advanced (multi-) materials - becoming stronger, lighter and smarter whilst remaining at least as safe or secure as previous versions.

Applicants to topic Q6 are required to develop novel applications for a Zero-Defect Manufacturing through the integration of Autonomous Quality (AQ) Control Loops into Mass Customization and Lot Size One processes, using data driven technologies.

2 Open Call Announcement

The announcement has been published on the portal of the European Commission and contains the main details of the topic.

Project Acronym: QU4LITY

Project full name: Digital Reality in Zero Defect Manufacturing

Grant agreement number: 825030

Call Identifier: QU4LITY OC1

Call title: Call for Proposals for pilots and digital platform in the field of Zero Defect Manufacturing (ZDM) by SMEs and MidCaps

Publication Date: April 15th, 2020

Open for submission: May 7th, 2020

Deadline: July 10th, 2020

Expected duration of the activities: 9 Months

Total budget: € 1,000,000

Maximum funding request per proposal: € 75,000

Project web address: https://qu4lity-project.eu/

Submission site: https://qu4lity.ems-innovalia.org/

Mail: qu4lity_opencall@innovalia.org

The submission site will be available from May 7th

A contact tool is available inside the submission site.

3 QU4LITY Open Call Requirements

3.1 Eligibility criteria

The call for third-parties support will be addressed to SMEs, as defined in the EU law: (EC recommendation 2003/361/EC as published in the Official Journal of the European Union L 124, p. 36 of 20 May 2003), working on the field of CPS as well as small consortiums including SMEs and/or RTO (Research & Technology Organizations). All organizations eligible for Horizon 2020 will be eligible to submit proposals for the open calls, except for the consortium's partners and other parties that may have conflicts of interest.

The call for third-part support will be also open to entities outside the EU, which will however have to bear their project costs.

The criteria for financial support will include:

(A) The Innovation of the application (i.e. in terms of its Scientific and Technological Excellence) to be implemented/integrated based on QU4LITY,
(B) Its impact on the QU4LITY ecosystem and its contribution to meeting QU4LITY's goals and objectives,
(C) The ability of the SME and MidCaps to implement the experiments and/or integrate its new services, on the basis of the team and company profile, background infrastructures, experience, but also based on its proposed implementation plan.

The financial support will be given upon presentation of specific deliverables by the selected partners.
Each proposal must be submitted by a single applicant, consortia are not allowed

3.2 Timeline of the selection process

The selection process will be completed (at most) within 3 months from the official date that the call for proposals is issued. The deadline for the submission and collection of the proposals will be 3 months after the official issuing of the call. The evaluation process will be completed within 2 months, allowing (at least) 1 month for the final approval and the required contacts between the PCT and the third parties who have been awarded the financial support.

3.3 Evaluation process

External experts who will be appointed and approved by the QU4LITY consortium will be in charge of selecting the third parties that will develop new solutions over the QU4LITY software and pilot infrastructure, as well as third parties that will replicate QU4LITY across additional smart environments.

Two external evaluators will be appointed for the evaluation of each proposal. Each evaluator can be assigned with up to ten (10) proposals although efforts will be made

to reduce and balance the load. The collected proposals will be assigned to evaluators within 1 week from the submission deadline. The individual proposal evaluations will be completed within 3 weeks after the assignment. Within this period the evaluators are allowed to meet remotely and consult each other. Afterwards and during the second month of the evaluation process, the evaluation results will be cross-examined by all the evaluators who will finally rank the proposals from the most to less successful according to the selection criteria . For this process a remote consensus meeting is with all evaluators.

The evaluation criteria to be applied are the following:

• Excellence and innovation (Threshold: 3/5 - Priority:2): The Innovation of the application (i.e. in terms of its Scientific and Technological Excellence) to be implemented/integrated based on QU4LITY,

• Impact including industrial relevance and business strategy (Threshold: 4/5 - Priority: 1): (B) Its impact on the QU4LITY ecosystem and its contribution to meeting QU4LITY's goals and objectives,

• Implementation and deployment of resources (Threshold: 3/5 - Priority: 3): The ability of the third-party to implement the experiments and/or integrate its new services, on the basis of the team and company profile, background infrastructures, experience, but also based on its proposed implementation plan.

Each proposal will be assessed according to the three criteria, through the usual 0 – 5 score scales for H2020:

• 0: The proposal fails to address the criterion under examination or cannot be judged due to missing or incomplete information;

• 1 (Poor): The criterion is addressed in an inadequate manner, or there are serious inherent weaknesses;

• 2 (Fair): While the proposal broadly addresses the criterion, there are significant weaknesses;

• 3 Good The proposal addresses the criterion well, although improvements would be necessary;

• 4 (Very good): The proposal addresses the criterion very well, although certain improvements are still possible;

• 5 (Excellent): The proposal successfully addresses all relevant aspects of the criterion in question.

The final approval of the selected third parties to receive financing will be done by the PCT, considering the best fit to the specific project objectives and possible conflict of interest issues.

4 Submission of proposals

General information

Submission deadline: All submissions must be made by August 7th at 17.00 Brussels local time

Electronic submission: Proposal submission is exclusively in electronic form using the proposal submission tool accessible via the QU4LITY open call web-site: https://qu4lity.ems-innovalia.org/

The central component of proposal submission is the uploading of a PDF-document (whose size must not exceed 5.0 MB) compliant with the instructions on the proposal structure given below.

Proposal format and structure: Proposals must be submitted in English. The main section of the proposal must not exceed 10 pages in length (with text no smaller than 11-point Verdana font). Thus, with the inclusion of the cover page and administrative pages (discussed below), the maximum page count is 13 pages. **Proposals will be truncated to this page count and the independent expert evaluators will only be provided with the truncated version.**

The structure of the proposal (and indicative length per section) should be as follows:

1. Summary (0.5 pages)
2. Industrial relevance, potential impact and exploitation plans (3.5 pages)
3. Description of the work plan and concept (3 pages)
4. Quality of the consortium as a whole and of the individual proposers (2 pages)
5. Justification of costs and resources (1 page)

As indicated above, the overall length of the above 5 sections must not exceed 10 pages.

In addition to the 10-page proposal description, a cover page and 2 pages of administrative data for statistics analysis, including, **when available**, the Participant Identification Code (PIC) issued by the European Commission (http://ec.europa.eu/research/participants/portal/desktop/en/organisations/register.html).

5 QU4LITY Call 1 Template

QU4LITY

DIGITAL MANUFACTURING PLATFORMS FOR CONNECTED SMART FACTORIES

European Commission

Grant Agreement Number: 825030

QU4LITY Open Call 1

Full Title of your proposal

Acronym of your proposal (optional)

Main target of proposal	"TYPE A" or "TYPE B"
Date of preparation of your proposal:	dd/mm/2020
Version number (optional):	
QU4LITY Topic addressed	Topic
Your organization(s) name(s):	Your organization(s) name(s)
Name of the coordinating person:	Name of the coordinating person
Coordinator telephone number:	Coordinator telephone number
Coordinator email: [This is the email address to which the Acknowledgment of receipt will be sent]	Coordinator email

Note: Grey highlighted areas need to be filled

Statistical Information for the European Commission`s Initiative

1 Participant (Organisation name)	2 Participant short name	3 Country	4 Type (SME /MID /IND / AC / OTHER)	5 First time EU project? (Y/N)	6 PIC number	7 Total cost	8 Requested funding
TOTAL							

Instruction

[Please delete these instructions in the submitted version]

1. Participant: Insert the name of the organisation.
2. Participant short name
3. Country: Insert the 2-letter country code (using the Eurostat country codes: http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Country_codes).
4. Type: Insert
   a. SME for an SME,
   b. MID for a mid-cap enterprise,
   c. IND for large industrial enterprise,
   d. AC for academia (universities and research institutes),
   e. OTHER for any other organisation type (e.g. governmental agencies, industry consortia etc.)
5. Fill in Y if this would be the first European project for that partner, N otherwise.
6. Provide the PIC number here if available.
7. Specify the total costs in Euros (0 decimal places)
8. Specify the requested funding in Euros (0 decimal places[2])

[2] i.e. rounded to the nearest Euro

Summary

(Guideline: 0.5 pages)

Industrial relevance, potential impact and exploitation plans

(Guideline: 3.5 pages)

Instruction

[Please delete these instructions in the submitted version]

QU4LITY Call-1 targets the development of autonomous quality processes by SMEs solution integrators to SMEs manufacturers.

The open call aims at complementing functionalities around QU4LITY reference architecture and performing experiments in Autonomous Quality.

Please, specify which topic you address and the alignment of your proposal to the topic:

Topics

T1.
T2.
T3.
T4.

Description of the work plan and concept

(Guideline: 3 pages)

Introductory text & explanation of the experiment concept.

In this section applicants are required to provide an adequate description of the experimental facilities provided by the manufacturing SME.

Experiment Title
Role of the applicant[3]:
Description: •
Workplan **Task 1 Task name** Task description. *Note: If your experiment consists of different tasks, please insert a description of each task.* ***Deliverable**: Deliverable short description (Experiment Month nn (i.e. within months 1 to 6 of the experiment))*
Impact and Outputs *(Output = concrete results from the experiments, such as, but not limited to, application release, business case, analyses/reports of the experiment, validation report.* *Impact = explanation of the use of project results and the related business impact, enhanced capabilities or potential for service offerings, etc.)* The output of experiment will be: • The results of the experiment will be reported in 2 mandatory deliverables, one at M3 and one at M6. Applicants are free to issue more deliverables if needed.

[3] Examples of roles: End-user, application or technology expert, developer.

Efforts (PM):

PM = Person Months

Background and qualification

(Guideline: 2 pages)

This section describes the proposer and includes an overview of the activities, the proposer's qualifications, technical expertise and other information to allow the reviewers to judge the proposer's ability to carry out the Experiment.

Justification of costs and resources

(Guideline: 1 page)

Cost breakdown per Participant

	Total PM	**Cost (€)**
1. Direct Personnel costs		

2. Other direct costs[1]	
3.Total direct costs (sum of row 1 and row 2)	
4. Indirect costs[2] (25% of row 3)	
5. Total costs (sum of row 3 and row 4)	
6. Requested funding[3] (up to 60000 EUR)	

[1] Costs for experimental facilities of the applicants, if any, are included in "Other direct costs".
Costs for subcontracting and other direct costs, such as travel, equipment, need to be clearly explained.
[2] Indirect costs are to be calculated as 25% of direct costs (i.e. personnel costs + other direct costs).
[3] Funding rate 70% of eligible costs (100% for non-profit organisations).

List of figures

Partners: