⟨ EQUAL|TY ⟩

Efficient QUantum ALgorithms for IndusTrY

WP6 Impact creation

D6.2 Dissemination & communication plan

Version: 1.0

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Document control

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[1]R: Document, report (excluding the periodic and final reports); DEM: Demonstrator, pilot, prototype, plan designs; DEC: Websites, patents filing, press & media actions, videos, etc.; DATA: Data sets, microdata, etc.; DMP: Data management plan; ETHICS: Deliverables related to ethics issues.; SECURITY: Deliverables related to security issues; OTHER: Software, technical diagram, algorithms, models, etc.

[2]PU – Public, fully open, e.g., web (Deliverables flagged as public will be automatically published in CORDIS project's page); SEN – Sensitive, limited under the conditions of the Grant Agreement; Classified R-UE/EU-R – EU RESTRICTED under the Commission Decision No2015/444; Classified C-UE/EU-C – EU CONFIDENTIAL under the Commission Decision No2015/444; Classified S-UE/EU-S – EU SECRET under the Commission Decision No2015/444

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Abstract

A quantum revolution is unfolding, and European scientists are on the lead. Now, it is time to take decisive action and transform our scientific potential into a competitive advantage. Achieving this goal will be critical to ensuring Europe's technological sovereignty in the coming decades.

EQUALITY brings together scientists, innovators, and prominent industrial players with the mission of developing cutting-edge quantum algorithms to solve strategic industrial problems. The consortium will develop a set of algorithmic primitives which could be used as modules for various industry-specific workflows. These primitives include differential equation solvers, material simulation algorithms, quantum optimisers, etc.

To focus our efforts, we target eight paradigmatic industrial problems. These problems are likely to yield early quantum advantage and pertain to the aerospace and energy storage industries. They include airfoil aerodynamics, battery and fuel cell design, space mission optimisation, etc. Our goal is to develop quantum algorithms for real industrial problems using real quantum hardware. This requires grappling with the limitations of present-day quantum hardware. Thus, we will devote a large portion of our efforts to developing strategies for optimal hardware exploitation. These low-level implementations will account for the effects of noise and topology and will optimise algorithms to run on limited hardware.

EQUALITY will build synergies with Quantum Flagship projects and Europe's thriving ecosystem of quantum start-ups. Use cases will be tested on quantum hardware from three of Europe's leading vendors and two HPC centres. The applications targeted have the potential of creating billions of euros for end-users and technology providers over the coming decades. With EQUALITY, we aim at playing a role in unlocking this value and placing Europe at the centre of this development. The project gathers 9 partners and has a budget of €6M over 3 years.

Consortium

The EQUALITY consortium members are listed below.

Legal Name on Grant Agreement	Short name	Country
CAPGEMINI DEUTSCHLAND GMBH	CAP	DE
QU & CO AI BV	QC	FR
AIRBUS OPERATIONS GMBH	AOG	DE
DEUTSCHES ZENTRUM FUR LUFT - UND RAUMFAHRT EV (DLR)	DLR	DE
FRAUNHOFER GESELLSCHAFT ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV (FHG)	ENAS	DE
INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET AUTOMATIQUE (INRIA)	INRIA	FR
UNIVERSITEIT LEIDEN (ULEI)	ULEI	NL
DA VINCI LABS	DVL	FR

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WP	Work package
KPI	Key Performance Indicator

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1. Executive Summary

This document is a deliverable of the EQUALITY project, funded under grant agreement number 101080142.

This deliverable, "D6.2 Dissemination & communication plan", is part of Work Package 6 (WP6) "Impact creation" which "ensures communication and dissemination of EQUALITY project activities to different stakeholders: from researchers, industry, policymakers to the public. The main goal of activities in this WP is improving impact, public acceptance, and translation. We also implement and monitor the project Open Science activities. The objectives of this work package are to develop the project communication infrastructure, to elaborate and implement a successful dissemination plan, to develop a supporting ecosystem, and to manage open data and open access publications."

This deliverable presents the strategy for communication and dissemination of the EQUALITY project's objectives and results. It identifies key audiences and stakeholders, their characteristics, and relevant messages. The plan presents the communication and dissemination activities, channels, and materials project partners will use throughout the project. These are the project's visual identity and brand guidelines, deliverable and presentation templates, website and social media presence, scientific publications, press releases, promotional materials and newsletters, organisation of and participation in events, and networking activities with other projects and initiatives. It also establishes a timeline for activities and discusses key performance indicators (KPIs).

Da Vinci Labs (DVL) is WP6's lead beneficiary and is responsible for the development and execution of this plan. It will be continuously improved according to the performance of the covered activities. The evaluation of the communication and dissemination activities will be made available at M12, 24, and 36 with the deliverable "D6.3 Dissemination & communication reports".

2. Communication and Dissemination Plan

According to the European Commission in the Horizon Europe Programme Guide[3], good communication (i) starts at the outset of the action and continues throughout its entire lifetime; (ii) is strategically planned and not just ad-hoc efforts; (iii) identifies and sets clear communication objectives; (iv) is targeted and adapted to audiences that go beyond the project's own community, including the media and the public; (v) chooses relevant messages; (vi) uses the right medium and means; (vii) is proportionate to the scale of the action.

Following these guidelines, EQUALITY's communication and dissemination plan is developed to ensure that the project, its objectives, and results are properly and widely disseminated to target audiences and stakeholders, increasing its impact and outreach. It starts with identifying these target groups and the key messages being conveyed to each of them. Next, to reach those groups with an adequate message, the EQUALITY consortium identified a well-defined number of communication activities to be carried out throughout the project's duration. It includes a choice of the most appropriate and efficient dissemination channels and the

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[3] Horizon Europe Programme Guide, https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/programme-guide_horizon_en.pdf

development of adequate materials. Finally, a timeline for their implementation is set, and key performance indicators (KPIs) are established to evaluate their deployment and guide course corrections when necessary.

2.1. Audiences and Key Messages

EQUALITY's dissemination and communication activities are aimed at several target audiences – individuals or groups likely to be interested in learning about the project or whom the project wishes to engage – and stakeholders – individuals or groups who are involved in, impacted by, or have a vested interest in the project. Since these groups often overlap, and audiences may become stakeholders through their engagement with the project, the two words will be used interchangeably here.

Target audiences were identified by the EQUALITY consortium based on the target's potential interest in learning about the project, its objectives and outcomes, their potential influence in or contribution to achieving such outcomes, or their potential to be affected by it. These may be individuals, groups of people, public and private entities, such as decision-makers, scientific communities, universities, and industrial players, from local, national, European or even international levels. These groups are listed in Table 1. This is, however, a continuous exercise, and target audiences may evolve as EQUALITY is developed and achieves its results.

With the identification of the target audiences, a strategy for communication can be put in place. It starts with establishing key messages that must be shared with each target audience. Table 1 shows the initial key messages tailored to each target audience. These messages are context-dependent and may change according to time and communication channels. Additional key messages may also be created according to the project's needs.

Table 1: EQUALITY's target audiences and key messages.

Target group	Key message
Industry Players	"EQUALITY brings together scientists, innovators, and prominent industrial players with the mission of developing cutting-edge quantum algorithms to solve strategic industrial problems."
	"EQUALITY's goal is to develop quantum algorithms for real industrial problems using real quantum hardware, grappling with their present-day limitations by developing strategies for optimal hardware exploitation."
	"EQUALITY targets applications with the potential of creating billions of euros for end-users and technology providers over the coming decades."
	"EQUALITY will tackle paradigmatic industrial problems, where quantum capabilities could be transformational in the near future, such as airfoil aerodynamics, battery and fuel cell design, space data analysis and mission optimisation."
	"EQUALITY will solidify the link between strategic European industries and the emerging quantum ecosystem, while also contributing to technologies critical to the green transition."

Target group	Key message
Cloud Service Providers and Systems Integrators	"EQUALITY will collaborate with some of Europe's leading vendors in the quantum computing space to move the field forward towards higher technology readiness."
	"EQUALITY's algorithms will be tested on quantum hardware platforms such as PASQAL, AQT, IQM, DLR, PNCQH, and OpenSuperQ."
	"EQUALITY's quantum algorithms and low-level implementations for industrial applications will increase the demand for quantum hardware use, a huge commercial opportunity for quantum hardware providers."
Quantum Computing and AI Experts	"EQUALITY will tackle eight computationally complex problems, likely to yield early quantum advantage: airfoil aerodynamics, battery and fuel cell design, fluid dynamics, space data analysis and mission optimization, materials design, and multidisciplinary optimization."
	"EQUALITY will develop a set of quantum algorithm primitives with wide applicability: (stochastic) differential equation solvers, quantum generative models, quantum chemistry simulators, periodic materials simulators, quantum evolution kernel methods, non-kernel quantum ML techniques, and Gibbs state-based optimisation."
	"EQUALITY's algorithms will be tested on quantum hardware platforms based on Rydberg atoms, trapped ions, superconducting qubits, and hybrid architectures."
Policy Makers	"EQUALITY brings together scientists, innovators, and prominent industrial players with the mission of developing cutting-edge quantum algorithms to solve strategic industrial problems."
	"EQUALITY contributes to transform the EU's outstanding quantum research into competitive advantage, ensuring European technological sovereignty."
	"EQUALITY builds synergies with EU's Quantum Technologies Flagship and Europe's thriving ecosystem of quantum start-ups to tackle critical industrial problems."
	"EQUALITY will solidify the link between strategic European industries and the emerging quantum ecosystem, while also contributing to technologies critical to the green transition."
General Public	"EQUALITY brings together scientists, innovators, and prominent industrial players with the mission of developing cutting-edge quantum algorithms to solve strategic industrial problems.
	"EQUALITY's efficient quantum algorithms for industries will contribute to more energy-efficient aerodynamics and more durable and affordable batteries, which are critical to propelling these sectors towards zero emissions."

3. Activities, Channels, and Tools

EQUALITY's communication will be implemented through several activities, channels, and tools. This section describes the following:

- Visual identity and brand guidelines to create a consistent brand identity and improve awareness around the project;
- Deliverable and presentation templates for internal and external communication of the project;
- Website containing public domain information about the project aimed at different stakeholders and target audiences;
- Social media channels to engage and build relationships with different stakeholders and target audiences;
- Scientific publications for dissemination of key results produced during the project, accompanied by layperson summaries published on the project's website and social media channels;
- Press releases to maximise the dissemination of project's results and important milestones on the media;
- Promotional materials composing a communication kit with clear and simple language aiming to reach a variety of target audiences;
- Events organisation and participation to raise awareness around the project, its activities and expected results, and disseminate the relevant developments;
- Networking activities with other projects and initiatives to ensure the impact of the project's results and to ensure the adoption of the project's outputs.

These activities are detailed in the following sections, alongside a timeline for execution and key performance indicators (KPIs).

In addition to the collective activities listed above, each partner of the EQUALITY consortium intends to conduct individual dissemination activities, ensuring maximum project visibility in their respective countries. These activities were presented in the Grant Agreement and are reproduced below in Table 2.

As required by Article 17 of the Grant Agreement, all material used for communication and dissemination activities related to the EQUALITY project acknowledge the EU support and display the EU emblem and funding statement (in the local language where appropriate). Moreover, they include the disclaimer:

> "Funded by the European Union under Grant Agreement 101080142. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Commission. Neither the European Union nor the granting authority can be held responsible for them."

EQUALITY's dissemination and communication activities and materials will use the English language. Partners are, however, incentivised to adapt any of those to their local language for the local dissemination of the project.

Table 2: EQUALITY consortium partners individual dissemination activities.

Partner	Individual dissemination and communication activities
CAP	Presentation of the project results to relevant scientific workshops.
	Dissemination of the project results in the Capgemini centre of excellence and Quantum Labs.
	Exploration and development of additional scenarios and business cases in other industries and validation of the included hypothesis with the relevant stakeholders.
QC	Communication and dissemination of project results to partners, and broader scientific audiences.
	Publication of research articles in peer-reviewed journals.
	Communication of the relevant project results to PASQAL's immediate network and stakeholders in the quantum ecosystem, not involved in the project.
	Joint organisation of lectures with consortium partner Da Vinci Labs.
AOG	Communications on conferences presenting the knowledge developed in the project.
	Internal advertising on Quantum Computing Technology, including spill-overs to other divisions.
	Participation in conferences including dissemination towards quantum technology industry and aerospace. For aeronautics: ISC (International Super Computing Conference), DLRK (Deutscher Luft und Raumfahrtkongress), for space: International Astronautical Congress (IAC, 2024), Living Planet Symposium (LPS, 2024), International Conference Space Optics (ICSO 2022).
DLR	Training of at least one (1) PhD student in the project and publication of one (1) PhD thesis.
	Dissemination of the knowledge developed in the project in public lectures at the University of Ulm.
	Use of the results developed in this project to inform future R&I projects.
INRIA	Use of the know-know and expertise developed to train young researchers (PhD students and Postdocs).
ULEI	Publication of the project results in various high-impact journals and conferences.
	Open-source software development (using GitHub and supporting infrastructure).
DVL	Publication of articles directed at a broad audience to disseminate the project findings.
	Joint organisation of lectures with consortium partner PASQAL.
	Organisation of workshops and meetings (online or during relevant industry meetups) to reach out to the key stakeholders.
	Liaison with partners for effective communication and dissemination of knowledge developed in the project.

3.1. Visual Identity

EQUALITY's logo creates a consistent brand identity and improves awareness of the project and its objectives to all stakeholders. The logo is presented in Figure 1. It was made available to all partners in different versions and file formats using the project's internal document repository.

All materials produced will follow the established brand guidelines, including instructions on logo usage, and standard fonts and colours of the project are shown in Figure 2. The brand guidelines were made available to all partners using the project's internal document repository.

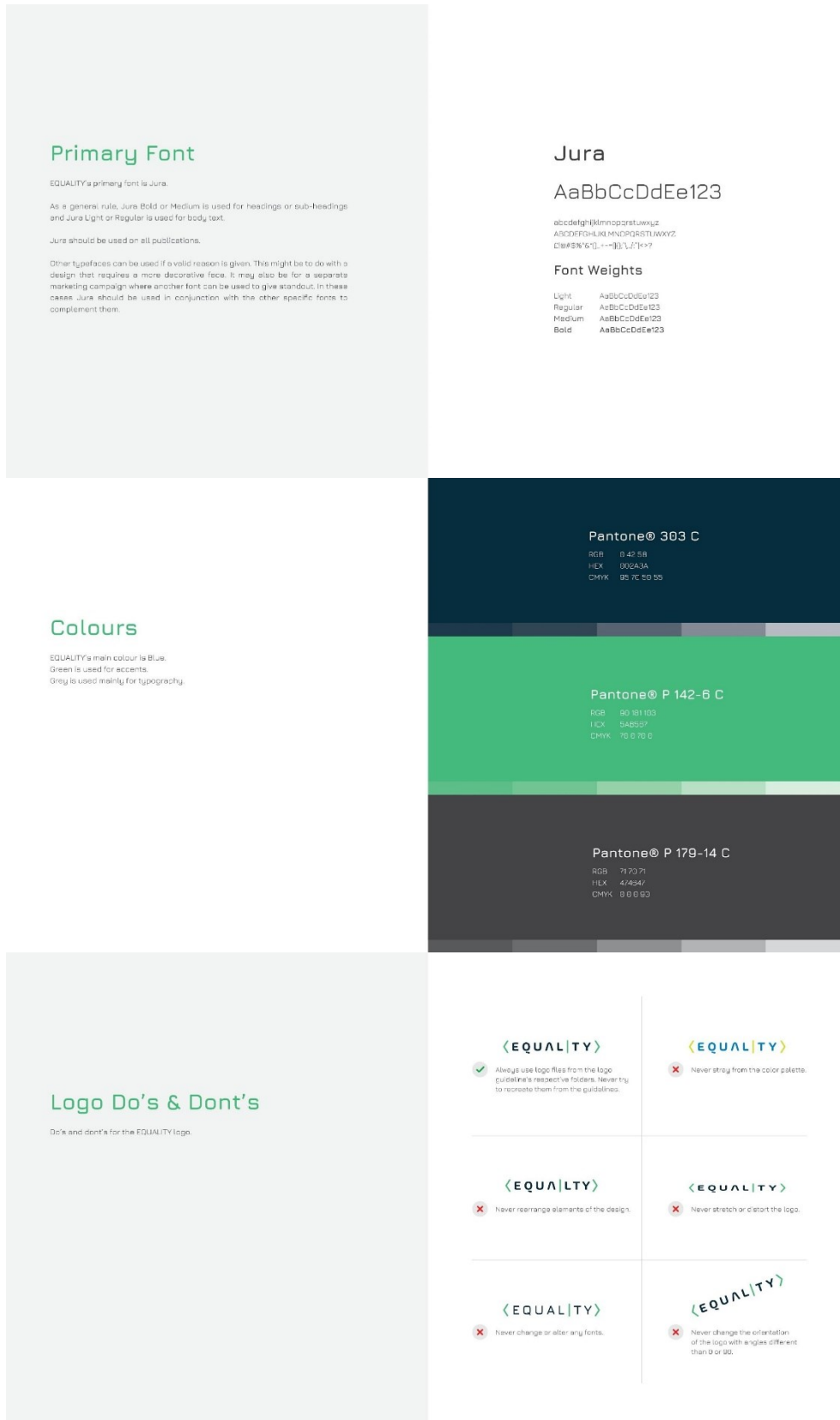*Figure 1: Different versions of the EQUALITY project logo.*

Figure 2: Extract from the brand guidelines for the EQUALITY project.

3.2. Project Templates

Templates for internal and external communication of the project were produced and made available to all partners using the project's internal document repository. Templates are subject to updates over time to better represent the evolution of the project.

The deliverables template will be used for all of EQUALITY's deliverables. The template defines a series of quality controls for project deliverables and provides a series of features that enhance the quality of the documents, such as:

- front page with project/document identification and partner logos;
- headers and footers providing useful document information and funding information,
- a concise overview of all document information, including version history control and table of contents, lists of figures and tables, etc.; and
- a uniform formatting template for the main content.

A simplified version of this template will be used for other documents produced by the partners.

EQUALITY will be presented in several internal and external meetings, conferences, and other events. These are opportunities to disseminate the project, its developments, and results, increasing awareness around it. The presentation template was created containing:

- a front slide including the project logo, presentation title and presenter information;
- a consortium slide including all partners' logos;
- a content slide;
- a final slide including an invitation to visit the project website and social media channels.

The presentation template will be complemented by a slide deck to be developed so all partners can present the project in a standardised way.

3.3. Website

The EQUALITY project website – http://equality-quantum.eu – contains public domain information about the project aimed at different stakeholders and target audiences.

From a design perspective, the EQUALITY website has been custom designed and developed specifically to integrate with the EQUALITY brand to ensure a strong and consistent brand experience and with mobile-first thinking to deliver the best experience on mobile devices as well as ensure smooth and speedy browsing. The EQUALITY website has been developed using custom-coded HTML, PHP, and JavaScript and has been integrated with ExpressionEngine, a flexible & secure open-source PHP-based CMS for easy updating of content. Google Analytics is used to monitor the performance of the website (number of sessions, users, engagement time, etc.).

Consortium partner DVL is responsible for keeping the website always up-to-date and functioning properly, solving any issues in a timely manner. The schedule for these updates will depend on the specific needs of the website. Relevant website updates will be communicated to consortium partners through internal channels and to target audiences through EQUALITY's social media channels. The upcoming updates include publishing the

first news articles, adding social media feeds to the "Home" and "News" pages, and small adjustments to design elements.

Figures 3 show a screen capture of EQUALITY website homepage. More information on EQUALITY's website is provided on deliverable "D6.1 Project website (including project repository)".

Figure 3: EQUALITY website, segment of the "Home" page in the "Home" section.

3.4. Social Media

Social media are important communication tools to engage and build relationships with different stakeholders and to increase brand awareness for the project. EQUALITY social media profiles will be used for communicating about:

- The project's goals, milestones, findings, and public deliverables;
- Facts and figures on subjects related to the project's field;
- Featured consortium partners, members, and other key stakeholders;
- News, press releases and website updates;
- Scientific publications accompanied by summaries aimed at a general audience;
- Organisation of meetings, webinars, conferences, and other events;
- Participation of consortium partners in third-party events;
- Relevant content published by third parties, such as the latest trends and developments in the field.

Social media profiles on the platforms Twitter and LinkedIn were set up by M1:

- Twitter: https://twitter.com/EQUALITYquantum
- LinkedIn: https://www.linkedin.com/company/equality-quantum/

Profiles and publication timelines are shown in Figures 4 and 5. Initial content was published concerning the kick-off meeting and the EQUALITY's objectives. Content is being regularly posted, and a calendar was set up where partners can suggest and approve content for the updates to be published on each channel, ensuring continuous activity. Starting at M4, a minimum weekly publication frequency is planned.

Consortium partners and members are incentivized to share EQUALITY social media publications and to tag the EQUALITY profiles when publishing content related to the project in their own profiles.

To increase the visibility of these channels, the EQUALITY website includes links to the project's social media profiles. Additionally, as they become sufficiently populated with content, the social media timelines will be integrated into the website's homepage.

To assess their effectiveness, the project's social media accounts will be monitored using the analytics provided by each platform. Throughout the project's duration, the consortium will assess the suitability to create additional profiles on other social media channels, such as Instagram, TikTok, or new platforms.

Table 3: Social media timeline and KPIs.

Activity	KPI	Year 1	Year 2	Year 3	Total
Social Media Channels	Twitter Followers	50	200	500	500
	LinkedIn Followers	50	100	200	200

Figure 4: EQUALITY Social Media – Twitter profile and timeline.
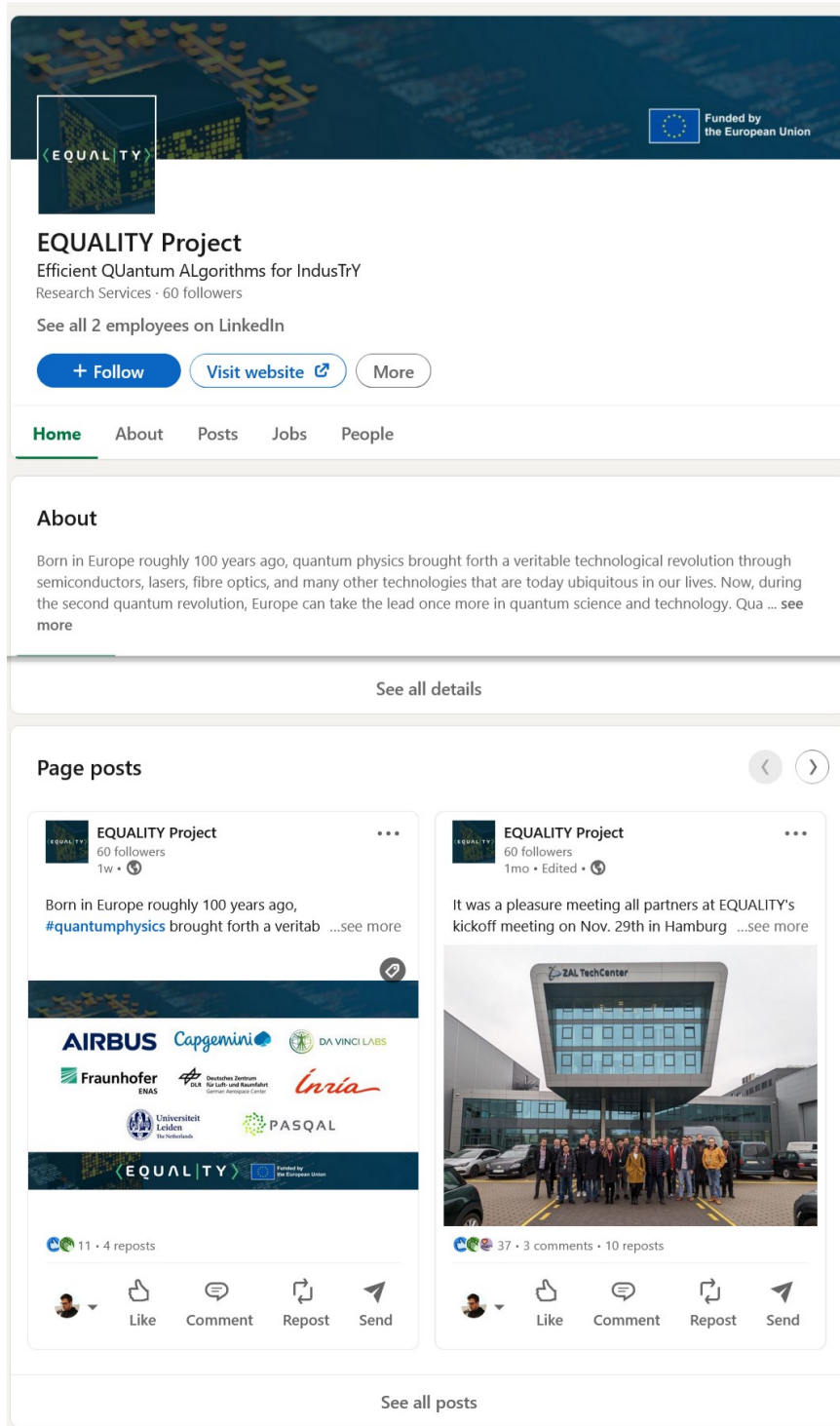
Figure 5: EQUALITY Social Media – LinkedIn profile and timeline.

3.5. Press Releases

To maximise the project's dissemination to the media, the consortium will prepare press releases to promote EQUALITY's results and important milestones. The initial plan is the preparation of three press releases throughout the project's duration. They will be disseminated by each consortium partner through their networks and will be available on the project website. Press releases will be produced in English and as needed, translated into the national languages of partners to be sent to national media. Additionally, all press releases will be made available on the project website and social media channels.

Partners are expected to keep a record of the distribution and publication of the press releases. A press clipping register is available to all partners at the project's internal document repository.

The first press release was prepared by DVL regarding the project start, with information of the project's goals, partners, funding, etc. The press release was distributed to all partners to be adapted by their respective communications offices as deemed necessary and distributed to various media. Figure 11 shows the first press release.

Table 4: Press releases timeline and KPIs.

Activity	KPI	Year 1	Year 2	Year 3	Total
Press Releases	Number of Press Releases	1	1	1	3
	Total Coverage	250	750	1000	2,000
Mainstream Publications	Number of Articles	5	10	16	30
	Total Readership	100,000	300,000	600,000	1,000,000

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EQUALITY consortium selected by the EU's Horizon Europe Program to develop quantum algorithms for industrial applications

The project brings together scientists, innovators, and industrial players and will receive a cumulative six-million-euro funding from the European Commission over the next three years.

Berlin, January 30th – The EQUALITY[1] consortium composed of Airbus, Capgemini, Da Vinci Labs, Fraunhofer ENAS, German Aerospace Center, INRIA, Leiden University and PASQAL, has been selected by the EU's key funding program for research and innovation, Horizon Europe, to develop innovative quantum computer algorithms to solve strategic industrial problems.

By transforming current industrial interest into widespread adoption, EQUALITY objective is to solidify the link between strategic European industries and the emerging quantum ecosystem, while also contributing to technologies which are critical to the green transition. The project is one of three projects selected out of 51 submitted. The partners will receive a cumulative six-million-euro funding from the European Commission over the next three years.

The consortium will target eight paradigmatic industrial use cases - computationally complex and faced routinely by the industrial partners - that can benefit from the quantum-enabled speed-up: airfoil aerodynamics, battery design, fluid dynamics, space mission optimization, materials design, multidisciplinary optimization, space data analysis and fuel cell design. The computational requirements are enormous, forcing today engineers to use simplistic models or rely on expensive build-and-test cycles. This is exemplified in aerodynamics, where it is more feasible to test models in a wind tunnel than solving the difficult equations involved in simulations. Similarly complex situations are also found in Li-ion batteries and fuel cell simulations.

The opportunity provided by quantum computers to tackle such questions computationally promises a competitive edge for European industry. Moreover, energy-efficient aerodynamics and more durable and affordable batteries are critical to propelling these industries towards zero emissions.

Born in Europe over 100 years ago, quantum physics brought forth a technological revolution, enabling inventions such as semiconductors, lasers, fibre optics, and other technologies that are today ubiquitous in our lives. Now, during the second quantum revolution, Europe can take the lead once more in quantum science and technology.

Quantum computers, the exponents of this second revolution, can perform several operations that are too difficult, or even impossible, for regular processors. And as they approach widespread commercial application, they open up market opportunities in several sectors.

The use of today's quantum hardware, however, requires grappling with the limitations of this nascent technology. These bottlenecks limit the application of quantum computers to solve industrial problems. Therefore, it is important to create strategies and software approaches that maximize the hardware capabilities of available quantum computers from providers such as PASQAL.

[1] EQUALITY stands for Efficient 'QUAntum ALgorithms for IndusTrY'

Figure 6: EQUALITY first press release.

3.6. Scientific Publications

Key results produced throughout the project duration will be disseminated in the form of article pre-prints, peer-reviewed articles in scholarly journals, articles in conference proceedings, monographs, patents, and research data (data underlying publications, curated data and/or raw data).

EQUALITY will publish peer-reviewed scientific articles in gold open-access journals listed by the Directory of Open Access Journals (DOAJ), such as Quantum, PRX, PRX Quantum, Quantum Machine Intelligence, and NeurIPS.

Open science will be the main driving criteria of communication and dissemination activities under the EQUALITY project. The project will strictly follow the open access policy, ensuring immediate online access to scientific information that is free of charge to the end user. Preprint versions of all articles will be deposited into multidisciplinary open-access repositories, e.g., ArXiv or Zenodo.

EQUALITY's first publication is already available on ArXiv. Authored by ULEI's Vedran Dunjko and collaborators, the paper "Reduce-and-chop: Shallow circuits for deeper problems" investigates to what extent it is possible to mimic the performance of a deeper quantum computation by using a shallower device many times. The publication was also made available on EQUALITY's website.

Once published in a scholarly journal or in a conference proceeding, the article's final version will be immediately made available on the project's website and posted into the institutional open repository. This open repository will automatically feed OpenAIRE with articles to ensure the largest possible impact among researchers, policymakers, and businesses.

Each partner will ensure open access to the deposited publication within six months of publication, assuming an electronic version is available without extra charge via the publisher. The partners will also ensure access to the bibliographic metadata that identifies the deposited publication (including terms under the grant agreement, the name of the action, acronym and grant number, the publication date, and length of embargo period if applicable, and a persistent identifier). All scientific peer-reviewed articles will be published under Creative Commons CC BY 4.0 licence. Thus, the authors retain all the copyright of the article. However, the partners will retain their copyright and grant licences to publishers based on Creative Commons licences.

Along with the dissemination to the scientific community, publications will be disseminated with layperson summaries published on the project's website and social media channels to reach a wider audience. If appropriate, additional press releases will be considered for the dissemination of major results of the project.

Table 5: Scientific publications timeline and KPIs.

Activity	KPI	Year 1	Year 2	Year 3	Total
Scientific Publications	Number of Publications	2	5	5	12
	Total Readership	-	-	-	250,000

3.7. Communication Kit

A communication kit containing several resources will be developed as promotional material for the project will be developed throughout Y1, aiming to reach a variety of target audiences with clear and simple language, avoiding technical content as much as possible. It will include the following materials:

- Factsheet, flyer, or brochure communicating a general overview of the project, its challenges and expected impacts for distribution during events;
- Roll-up banners and/or posters which can be used by each partner at their own institutions and/or at events to capture the attention of passers-by;
- Slide deck: a series of standard presentation slides introducing the project to be used by itself or included in more general presentations as needed by the partners.

Additionally, a series of videos will be produced explaining EQUALITY's objectives and highlighting its results. The videos may include interviews with project partners, partner institutional and research footage, stock footage, animations, and infographics. The videos will be uploaded to a video hosting platform (such as YouTube), made available on the project's website and promoted on social media channels, and distributed to all partners' platforms and information multipliers. Additional resources may be developed as necessary.

For distribution to stakeholders and the media, the communication kit will complement any press release, publication, and other materials produced throughout the project duration.

The communication kit will be distributed to partners and stakeholders in digital form. The production of printed versions will be the responsibility of each partner according to their needs. Partners are, however, incentivised to reduce the environmental impact of the project and limit the production of printed materials. These materials will also be delivered to partners in editable form for the purpose of localisation to the partner's language if necessary.

Table 6: Communication kit timeline and KPIs.

Activity	KPI	Year 1	Year 2	Year 3	Total
Project Videos	Number of Videos	-	-	2	2
	Total Viewership	-	-	10,000	10,000

3.8. Events

The organisation of, and participation in events, including scientific and industry conferences, trade shows, workshops, and seminars, both virtual and physical, related to the partners' or the project's field of expertise, are prime opportunities to raise awareness around the project, its activities and expected results, and disseminate the relevant developments.

Additionally, they provide partners with networking opportunities with researchers and stakeholders and establish and deepen ties with other EU-funded projects and initiatives and other groups in the scientific and industrial community.

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EQUALITY partners are incentivised to participate in such events at the local, national, EU and international levels. Upcoming relevant events include Q2B, ICCAD, DATE, STACS, and ICALP. This list will be continuously updated, extended, and communicated to all EQUALITY partners. These events are also included in the Events section on the project's website.

Each partner will follow its own strategy to disseminate the project results, including submitting papers or presentations or proposing themselves as speakers. The participation of partners in third-party events will be promoted on the project's social media channels. Partners are expected to keep records and to provide information on their participation in events alongside pictures. An event participation register is available to all partners at the project's internal document repository.

Furthermore, EQUALITY will organise three webinars in the last year of the project to promote the main achievements of the project. The webinars will be recorded (following consent from participants), uploaded to a video hosting platform (such as YouTube),made available on the project's website, and promoted on the social media channels alongside any relevant material.

In organising and participating in events, gender balance will be considered when selecting speakers, as we believe that this is an excellent means to reach out to both female and male participants.

Table 7: Events timeline and KPIs.

Activity	KPI	Year 1	Year 2	Year 3	Total
Event Participation	Poster Submissions	2	4	10	16
Webinar Organisation	Number of Webinars	-	-	3	3
	Number of Attendees	-	-	240	240

3.9. Networking

EQUALITY will take advantage of synergies and build networks with relevant stakeholders, local, national, European, and international communities, associations, initiatives, and projects to ensure the impact of the project's results and to ensure the adoption of the project's outputs.

The Quantum Technologies Flagship has consolidated Europe's scientific leadership in quantum technology. Moreover, this initiative has created a fertile ground where European quantum start-ups thrive and take the lead as global players. EQUALITY builds upon this success by rallying top European quantum talent to tackle critical industrial problems.

EQUALITY will collaborate with some of Europe's leading vendors in the quantum computing space to move the field towards higher technology readiness. The consortium is tightly connected to various flagship and national initiatives, as shown in Table 8.

Additionally, consortium partners belong to several industry associations and networks such as the Quantum Computing Industry Group (QCIG), European Technology Platform for High-Performance Computing (ETP4HPC), Associated to Quantum Technology & Application Consortium (QUTAC), PRACE Industrial Advisory Board (IAC), BDLI (Bund der deutschen

Luftfahrtindustrie), and will be able to use them to disseminate the project results via newsletters, magazines and presence in international conferences not covered by the consortium partners. QC, ENAS, DLR, CAP and DVL are members of the Quantum Industry Consortium (QuIC) and will disseminate the project's results within the framework of Working Groups 3 and 6.

Table 8: Flagship and National initiatives connected to the EQUALITY consortium.

Project	Project description and cross-fertilisation opportunities
PASQuanS H2020 01/10/2018 31/03/2022	The consortium will collaborate closely with the Quantum Flagship project PASQuanS. Several of the algorithms developed in EQUALITY will be designed for and tested on quantum hardware built under the umbrella of PASQuanS and operated by PASQAL. EQUALITY will thus develop industrially relevant algorithms compatible with this Rydberg atom platform, which will help advance the PASQuanS' results towards commercial maturity.
AQTION H2020 01/10/2018 31/03/2022	The consortium will collaborate closely with Quantum Flagship project AQTION, aiming to develop and exploit a robust, compact ion-trap quantum computer based on scalable quantum hardware and widespread industry standards. Several of the algorithms developed in EQUALITY, including low-level implementations, will be designed for, and tested on quantum hardware built under the umbrella of AQTION.
OpenSuperQ H2020 01/10/2018 31/03/2022	The consortium will collaborate closely with the Quantum Flagship project OpenSuperQ. One of the main results of this project will be the establishment of a working prototype of a high-performance quantum computing system at Forschungszentrum Jülich (FZJ). Several of the algorithms developed in EQUALITY will be designed for and tested on this platform. Moreover, we will collaborate with quantum hardware provider IQM Quantum Computers, who leads a €12.4m project funded by the German Ministry of Education and Research and intended to support the Flagship project, OpenSuperQ.
NEASQC Horizon 2020 01/09/2020 31/08/2024	EQUALITY partner ULEI is part of the Quantum Flagship project NExt ApplicationS of Quantum Computing (NEASQC). EQUALITY is perfectly aligned with NEASQC's vision that: "NISQ computing can deliver significant advantages when running certain applications, thus bringing game-changing benefits to users, and particularly industrial users." The synergies between these two projects are clear and consortium members will strive towards fostering synergies between the consortia.
QIA H2020 01/10/2018 31/03/2022	The consortium will collaborate closely with the Quantum Flagship project Quantum Internet Alliance (QIA). QIA's objective is to develop a blueprint for a pan-European Quantum Internet by ground-breaking technological advances, culminating in the first experimental demonstration of a fully integrated network stack running on a multi-node quantum network. EQUALITY partner INRIA has contributed to the development of delegated computation protocols within the context of the QIA. EQUALITY explores the potential applications of these protocols to noise mapping on near-term quantum computers.
HPCQS H2020 01/12/2021 31/01/2023	EQUALITY partner INRIA is part of the "High-Performance Computer and Quantum Simulator hybrid" (HPCQS) project. HPCQS sets out to integrate two quantum simulators, each controlling about 100+ qubits in supercomputers located at two European HPC centres. This new infrastructure could be used to test the performance of EQUALITY's algorithms and benchmark against classical HPC techniques once it becomes operational. INRIA's EQUALITY team is already conducting discussions with the steering committee of HPCQS to that effect.

Project	Project description and cross-fertilisation opportunities
QSC National programme 01/11/2017 31/10/2027	EQUALITY partner ULEI is part of the "Quantum Software Consortium (QSC)", a collaboration between QuSoft (University of Amsterdam, Centrum Wiskunde & Informatica), Leiden University and QuTech (the Delft University of Technology, Netherlands Organization for Applied Scientific Research). QSC is a cross-disciplinary effort to build a new research community in the Netherlands in Quantum Information Science. As part of QSC, ULEI has access to the latest advances in quantum software and an extremely valuable talent pool.
Divide and Quantum National Programme	EQUALITY partner ULEI leads the "Divide and Quantum" consortium, consisting of various academic and industrial partners, to develop and apply the divide & quantum technology, which empowers small quantum computers to solve large industrial-scale problems by using methods from parallel computing (divide & conquer).

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