

On 23rd September 2025, on the initiative of a group of Franco-German willing players made of the Quantum Technology and Application Consortium QUTAC, Le lab Quantique, Quandela, CEA and Fraunhofer, with the support from the French embassy in Germany and the German embassy in France, the French German Dialogue of Quantum Technology Players took place in Paris and Massy (France). This event brought together more than 60 selected experts, managers and decision-makers from innovation, corporates, research and public authorities from France and Germany.

Building Today the Quantum Future of Europe For and With the Industry

Conclusions from
the Franco-German
Dialogue of Quantum
Technology Players

2025

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On 23rd September 2025, the French German Dialogue of Quantum Technology Players took place in Paris and Massy, bringing together more than 60 selected representatives from research, industry, start-ups and public authorities from France and Germany.

Taking place as 2025 is the international year of quantum science and technology, this multi-stakeholder dialogue was jointly organised by a group of Franco-German willing players made of the Quantum Technology and Application Consortium QUTAC, Le lab Quantique, Quandela, CEA and Fraunhofer with the support from the French embassy in Germany and the German embassy in France. It gathered a broad sample from the French and German quantum ecosystems, including:

Alice & Bob	European Commission	Pasqal
Attocube Systems	Eviden	QbitSoft
Axa	Fraunhofer	Quandela
BMW	French Ministry of Economics and Finance	QUTAC
Bosch	French Ministry of Europe and Foreign Affairs / French Embassy in Germany	Secrétariat Général pour l'Investissement SGPI
C12	French Ministry of Research and Higher Education	Siemens
Caisse des Dépôts	Grand Equipment National de Calcul Intensif GENCI	SLB Schlumberger
Capgemini	German Embassy in France	SPRIND
Commissariat à l'Energie Atomique et aux Energies Alternatives CEA	HQS Quantum Simulations	Thales
Crédit Agricole	JoS Quantum	VDI Technologiezentrum
Deutsche Bahn	Jülich Supercomputing Center	Quantum BW
Deutsche Telekom	Le Lab Quantique	Quantum Business Network
Deutsches Zentrum für Luft und Raumfahrt DLR	Lufthansa Industry Solutions	Quantum Energy Initiative
Electricité de France EDF	Munich Quantum Valley	Quobly
European Champions Alliance	OVHcloud	

Under the title “building today the future of Europe for and with the industry”, this dialogue focused on the very needs of the end-users of quantum technologies and on how we might all together support the adoption of quantum technologies by industry, starting with our corporates and high-performance computing centres. It allowed discussing actions to shape a more competitive, sovereign and sustainable digital Europe making full use of the French and German scientific, industrial and technological potential on quantum technologies.

It built on the results from a first closed-door Dialogue hosted at the French Embassy in Berlin in November 2024 and **followed the ambition to bring together and scale-up the quantum ecosystems in Germany, France and the EU expressed in the Franco-German economic agenda agreed at the Franco-German Council of Ministers headed by President Macron and Chancellor Merz, in Toulon (France) on 29th August 2025.**

Key Topics/ Priorities

Participants identified the following key topics to be tackled in order to build today the quantum future of Europe for and with the industry, through the co-development and adoption of European sovereign quantum technologies by our French and German end-users (corporate, high-performance computing centres):

1) Use Cases

We need a concrete, industry-driven pipeline of end-to-end use cases, aligned with realistic expectations and a clear definition of “quantum advantage”: **adoption starts when corporates explore real projects guided by practical how-tos and leadership buy-in.** We could propose **developing further scenario workshops following an industry vertical approach** – on quantum for finance, quantum for pharma, quantum for materials, quantum for logistics, etc. – asking our champions to answer real use-cases coming from French and German corporates in these fields. Such a vertical approach could be supported by **application-oriented calls coming from industrial consortia or our public authorities.** **Giving industry players hybrid access to high-performance & quantum computing**, via European cloud channels, should also be supported. These use-cases should also **prepare the transition** from today’s noisy quantum prototypes to future fault-tolerant quantum computing architectures, ensuring that industrial partners can scale their early experiments into truly operational quantum solutions.

2) Success Stories

Tangible wins persuade. We should disseminate good **French and German examples of the translation of scientific achievements into business stories that show return on investment and operational impact** and can be reused as references across sectors. **European companies should be accompanied and motivated** to support the European quantum ecosystem and co-develop / adopt European sovereign solutions.

3) Benchmarking and management of expectations

A particular focus should be given to **benchmarking progress** toward error-corrected and fault-tolerant systems, as these will determine the long-term viability and sovereignty of European quantum technologies. We should establish neutral, transparent benchmarking protocols to **compare performance and reliability.** We should run staged pilots, bridge research–industry gaps and set honest timelines, in order to **avoid hype-driven disillusion or backlash.** We should **organise a user-oriented community and support acculturation** of non-quantum experts through joint Franco-German quantum awareness and talent programs.

4) European champions

We should consider **building scale and reducing fragmentation by nurturing champions at the European level while connecting national strengths, in particular in strategic domains.** This may imply having to choose between targeting public and private funding on a few players in order to build a few future champions instead of fragmenting funding among the whole ecosystem. Creating **shared Franco-German or European R&D infrastructure and cloud platforms** would be relevant accompanying measure. In this context, **supporting European players** pioneering fault-tolerant quantum computing will be crucial to ensure that Europe remains competitive in the post-Noisy Intermediate Scale Quantum era.

5) Trust / Intellectual Property

Trust requires **clear rules, coordination, and the right balance between openness and protection.** We should **clarify and possibly align IP rules** in both countries and keep incentivising patents.

6) European strategies

We should develop **joint Franco-German quantum roadmaps** and a Franco-German / European funding strategy, **avoid duplication of efforts across borders and promote shared projects** with long-term impact and better clarity for our industry. **Hardware and software** components of quantum computing should be tackled jointly along a full stack approach, in order to avoid non efficient redundant developments on both sides.

7) Funding

Adoption of quantum technologies by French and German corporates and other end-users will be accelerated with blended finance and funding. When corporates do not already identify immediate buy-in, it is **key to mobilise strategic industrial investment funds or risk-taking private capital** to accompany and stimulate co-development and adoption of quantum solutions by the industry. In addition, **public bilateral funding programs for start-ups and scale-ups should expand** and public authorities and funding agencies from France, Germany or Europe could **envisage stream-lining cross-border funding** through a single-entry point.

8) Talents

France and Germany offer very strong scientific and business academic training that are key to Europe's competitiveness and sovereignty. **Talent training should be prioritised further. Shared talent platforms and joint doctoral schools/study schemes** between France and Germany should be developed.

9) Gathering of ecosystems among France and Germany

Despite the fact numerous conferences are taking place on quantum technologies all over Europe, **the need for more specific knowledge and contacts among the French and German ecosystems** of research, innovation, and industry/corporates is strong. French-German cross-invitations at meetings, events, and technology fairs, dedicated learning expeditions, speed-dating with presentations from each player among the French and the German ecosystems, and other **creative formats could be developed to nurture a "Franco-German reflex"**, where both ecosystems get acquainted and used to one another, as a necessary step towards the **identification of potential complementarities and synergies.** In addition, it is crucial to maintain a **multi-stakeholder approach** including policymakers (at the EU, national and regional levels), academia/public research, startups and scale-ups, corporates, HPCs, in which to invite also private funders, and to pay specific attention to the needs of the end-users of quantum solutions.

10) Dialogue governance

The Franco-German dialogue of quantum technology players **should be followed up and expanded**. Along with the French and the German commitment made at the end of August 2025 to “bring together and scale-up the quantum computing ecosystems in Germany, France and the EU” and that “French and German stakeholders will set a focus on quantum applications and quantum software to jointly develop industrial use-cases for quantum computing”, a dedicated **governance mechanism should be supported jointly** by France and Germany for this initiative, including the allocation of appropriate resources, so as to **ensure continuity, effective coordination, accountability, alignment with national strategies, dissemination of results and increased impact**.

Proposed Actions

Participants mentioned the following actions supporting the co-development and adoption of European sovereign quantum technologies by our French and German end-users (corporate, high-performance computing centres) – to be implemented in the coming 24 months:

	Concrete Project / Action Proposed	Player	More Information
Development of Use-Cases	We can/will contribute to identifying and demonstrating early use-cases leveraging fault-tolerant quantum computing capabilities – in cooperation with French and German industrial partners, focusing on near-term feasibility	Alice & Bob	Ongoing
	We can/will share expertise on error correction and FTQC architectures to support cross-border use-case development	Alice & Bob	Ongoing
	We will get in touch with French and German companies to look for cooperation opportunities	Bosch	Ongoing
	We can/will develop novel and honest industrial end-to-end use cases applicable in the near future	HQS Quantum Simulation	Ongoing
	We will continue to stimulate French-German technical cooperation, including exploring potential use-case co-development opportunities where appropriate, building on our strong connections with the French quantum community	Munich Quantum Valley	Ongoing
	We will provide French and German end-users a cloud quantum platform with 7 QC accessible before 2027	OVHcloud	Ongoing

	We can/will organise French-German use-cases workshops with industries from both countries	Quandela	Ongoing
	We will work on exposing Quobly's QPU on German Cloud platforms	Quobly	Ongoing
	...	...	...
Communication & Success Stories	We will support the organisation of a side-event of the French-German Summit on Europe's Digital Sovereignty, 18 th Nov. 2025, Berlin	QUTAC	Ongoing EU-Summit - Bundesministerium für Digitales und Staatsmodernisierung
	We can/will contribute to communication on the importance of fault-tolerance for scalable quantum advantage	Alice & Bob	Ongoing
	We can/will support visibility of Franco-German collaborations around FTQC	Alice & Bob	Ongoing
	We will communicate on French success stories and best practices to German decision-makers	German Embassy in France	Ongoing
	We will disseminate the results of this dialogue on our website and towards French policymakers	French Embassy in Germany	Ongoing
	We can/will demonstrate the industrial quantum advantage to French and German business	HQS	Ongoing
	We will support best practice communication to French and German players	Olivier Ezratty	Ongoing
	We can/will contribute to communication on HPCQS success	Pasqal	Ongoing
	We can/will gather corporate insights and communicate from both sides of the Rhine	Quandela	Ongoing
	We will support the organisation of a side-event of the French-German Summit on Europe's Digital Sovereignty, 18 th Nov. 2025, Berlin	QUTAC	Ongoing EU-Summit - Bundesministerium für Digitales und Staatsmodernisierung
	...	...	...
Benchmarking & Expectations Management	We can/will put in place a French German Working Group to federate QPU benchmark initiatives (incl. Application-oriented Benchmarks for Quantum Computing in France, Scalable and Modular Benchmarking of Industrial Quantum Computing Applications in Germany) under the umbrella of the European Quantum Computing Benchmarking Coordination Committee	Thales & Fraunhofer	European EQCBC: https://qt.eu/working-groups/european-quantum-computing-benchmarking-coordination-committee French BACQ Benchmark: https://arxiv.org/pdf/2403.12205 German BenchQC: https://arxiv.org/pdf/2504.11204

	We can/will share insights on how to bridge NISQ and FTQC eras for end-users	Alice & Bob	Ongoing
	We can/will create a German French forum for clear and honest expectation management in quantum computing	Jülich research center – JUNIQ	Ongoing
	We can/will pool French and German resources to assess the scaling behaviour of all relevant quantum algorithms	Jülich research center – JUNIQ	Ongoing
	We can/will contribute to better explain to French and German end-users what to expect from quantum in 1, 3, 5, 10 years	QbitSoft	Ongoing
	We can/will participate in Franco-German dialogues on realistic FTQC timelines and performance expectations	Alice & Bob	Ongoing
	...	...	...
Multi-stakeholder Dialogue and Exchanges	We will have France as partner country of Quantum Effects 2025 stimulating further exchanges among our ecosystems	Quantum BW	Implemented – Stuttgart, 7-8 th October 2025 https://www.messe-stuttgart.de/quantum-effects/news/newsroom/meldungen/
	We will sign a MoU with Maisons du Quantique from Grand Est to develop further cooperation with this long-time partner	Quantum BW	MoU signed in Strasbourg, 29 th September 2025
	We will sign a joint MoU to bring our ecosystems closer to one another and explore further cooperation	GENCI / Quantum BW	MoU signed in Stuttgart on 7 th October 2025 Quantum Effects 2025 - Quantum BW news
	We will stimulate the participation from German engineers and speakers in the Quantum Engineering Sciences & Technology for Industry & Services conference (QUEST-IS) Paris 2025	Thales	Ongoing – QUEST-IS'25 – From Quantum Engineering to Applications for Citizens
	We will try organising joint collaborations and exchanges with equivalents in Germany from the Le Lab Quantique hub	Le Lab Quantique	Ongoing
	We will stimulate Franco-German panels and exchanges on the adoption of quantum technologies by end-users in the frame of the participation of Germany as partner country of VivaTech 2026.	French Embassy in Germany	Ongoing
	We will continue the franco-German quantum dialogue started in Berlin in 2024	German Embassy in France	Ongoing

	We will explore the interest of a French-German project, extending the model of the Maisons du Quantique in France, to strengthen the involvements of the end-users	CEA	Ongoing
	We will try to engage end-users	Bosch	Ongoing
	We intend to encourage workshops and exchange programs for students and researchers, building on existing collaborations and exploring future opportunities	Munich Quantum Valley	Ongoing
	We are open to contributing ideas to the drafting of strategic roadmaps	Munich Quantum Valley	Ongoing
	We can/will contribute to a European approach through Q-PLANET, aimed to build a quantum chip industrial pilot line over a six-year period with a consortium of 37 partners across 12 EU countries	Pasqal	Ongoing
	We can/will create a sister company in Germany to work closer with the German ecosystem	QbitSoft	Ongoing
	We will create international collaboration program between France, Germany and other European countries	Quobly	Ongoing
	We can/will take part in Franco-German roundtables and exchange programs promoting quantum resilience and FTQC approaches	Alice & Bob	Ongoing
	We will explore cooperation opportunities with German institutions to foster understanding of FTQC benefits	Alice & Bob	Ongoing
	...	...	...

Annex – Press-Release: French German Dialogue of Quantum Technology Players in Paris

Paris, 7th October 2025 – *The French German Dialogue of Quantum Technology Players took place on 23rd September in Paris and Massy, attended by 60 representatives from research, industry, start-ups and political decision-makers from France and Germany. The morning session was held at Station F, and the afternoon at Massy on the site of Quandela, a pioneer in photonic quantum computing.*

On 23rd September 23, 2025, nearly 60 representatives from the French and German quantum ecosystems met to accelerate Franco-German cooperation in this field.

Following the first quantum dialogue organised at the French Embassy in Berlin last November, this dialogue is part of the joint ambition of the French and German governments to ‘*bring together the quantum computing ecosystems in France, Germany and the EU and to scale them up*’ – reaffirmed in the economic agenda of the Franco-German Council of Ministers on 29th August 2025.

By focusing on the needs and expectations of future end-users of quantum technologies, this event, organised by a Franco-German consortium of willing French and German players gathering QUTAC, Quandela, Le Lab Quantique, CEA, Fraunhofer, with the support from the European Champions Alliance and both embassies had a triple objective.

First, it aimed at stimulating new contacts between and within the French and German ecosystems and among a wide range of players: start-ups providing quantum solutions, political decision-makers, providers of high-performance computing infrastructures, large industrial companies, research and innovation organisations, etc.

Second, the Dialogue wanted to enable collective strategic European design-thinking and support open and trust-worthy multistakeholder exchanges where everyone could express themselves and listen to each other’s needs and challenges – with a specific attention paid to the experience and views from the end-users (corporates, HPCS).

Finally, a third goal was to incentivize commitments from the ecosystem that would fuel the Franco-German reflex around the European and sovereign development of these technologies.

The day brought together:

- Corporate representatives and start-ups from Germany including Attocube systems, BMW, Bosch, Deutsche Telekom, Deutsche Bahn, HQS Quantum Simulations, JoS Quantum, Lufthansa Industry Solutions, Siemens;
- Corporate representatives and start-ups from France including Alice & Bob, Axa, C12, Capgemini, Caisse des Dépôts, Crédit Agricole, EDF, Eviden/Atos, OVHcloud, Pasqal, Quandela, Quobly, QbitSoft, SLB (Schlumberger), Thales;
- Network representatives including the European Champions Alliance, Le Lab Quantique, Munich Quantum Valley, Quantum Energy Initiative, Quantum Business Network, and the Quantum Technology & Application Consortium (QUTAC);
- Experts from public authorities, research and innovation organisations, and high-performance computing infrastructures including CEA, DLR, European Commission, Fraunhofer, French Ministry of Economics and Finance, French Ministry of Europe and Foreign Affairs / French Embassy in Germany, French Ministry of Research and Higher Education, German Embassy in France, Jülich Supercomputing Center, Quantum BW, SGPI, SPRIND, VDI Technologiezentrum.

Organised in Paris’ Station F, at the heart of the innovation ecosystem, the morning session, introduced by Lucie Finet, Deputy Director of the French Tech mission, provided an opportunity for active exchanges on how to collectively support the development of quantum technologies in France and Germany.

Discussions were based on initial trends and ideas identified as part of the dialogue held a year ago on the obstacles and potentials of supporting the development of quantum technologies. This year’s meeting aimed to go further by encouraging participants to think about the role that each of

them could play in taking the co-development and adoption of quantum technologies by future users to the next level. Individual commitments were made to contribute to this dynamic in the coming 24 months.

The afternoon happened in Massy, where, in the presence of H.E. Stephan Steinlein, German Ambassador to France and Dr. Niccolo Somaschi, co-founder and CEO of Quandela, all participants had a tour of the factory before two round-table discussions took place:

- The first round table, moderated by Karem Hadla (QUTAC), enabled an exchange of views among French and German industry players as potential users of quantum computing, with contributions from Frédéric Barbaresco (Thales), Dr. Joseph Doetsch (Lufthansa Industry Solutions), Andrea Le Vot (Crédit Agricole) and Dr. Thomas Strohm (Bosch).
- The second round table on “Why and how should we build an integrated European quantum infrastructure?” was moderated by Marine Xech-Gaspa (Quandela) and involved Cyril Allouche (Eviden), Dr. Philippe Deniel (CEA Très Grand Centre de Calcul), Dr. Oscar Diez (European Commission), Prof. Dr. Thomas Lippert (Jülich Supercomputing Centre) and Sabine Mehr (Grand Equipement National de Calcul Intensif).

A concluding session gave Loic Le Loarer, Quantum Strategy Coordinator (SGPI) in France, Markus Wilkens, in charge of Europe at the VDI Technologiezentrum and Nicolas Bergeret, Consul General of France in Frankfurt, the opportunity to give their feedback on the event and connect it with current policy prospects.

The momentum generated by this dialogue will continue over the coming months, with the aim of strengthening synergies and stimulating further cooperation among players in both countries.

The Franco-German Dialogue of Quantum Technology Players was initiated and organised in 2025 by a group of willing French and German players including



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