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Quantum-Safe Internet (QSI)

Complementary Skills Workshop 3

Deliverable D5.3

Deliverable:	D5.3
Deliverable Name:	Training Del. 6
Lead Beneficiary:	UvA
Work Package No:	WP5
Dates:	15-16 May 2025.
Link:	Third Complementary Skills Workshop, Copenhagen. - QSI
Due Date:	31/05/2025.
Location:	Copenhagen.
Topics:	Training topics:

- ✓ Business Project Management.
- ✓ Commercialization Process.
- ✓ Practical tools to effectively present and defend business ideas.
- ✓ Exercises.

References: Grant Agreement.

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1. INTRODUCTION

The Complementary Skills 3 (CS3), was organized by the Technical University of Denmark in Copenhagen, on May 15-16, 2025, together with the QSI Workshop, which was also held in Copenhagen on May 12-14, 2025. Please see Deliverable D6.4 (WP6) for more information about this latter event.

This is the last Complementary Skills Workshop planned by the network. The other two Complementary Skills workshops have been already celebrated:

- Complementary Skills 1 (CS1): it took place at the University of Amsterdam from June 27–30, 2023 and it was led by Christianne Vink from Reflect Academy. The focus of CS1 was on essential researcher qualities, managing challenges in daily research, outlining individual research plans, and strategies for attention, time management, and metacognition. For more information about this Workshop, we refer the reader to Deliverable D5.1 (WP5), Training Del. 1, whose status is approved.
- Complementary Skills 2 (CS2): it took place in Porto, Portugal, on March 11th, 2024. It was organized by Eindhoven University of Technology as part of the School on Post-Quantum Cryptography. The CS2 was led by Richard A. Fuchs, a science journalist and media trainer, in collaboration with the National Institute for Science Communication (NaWik). Its goal was to equip scientists with the skills to communicate their research clearly and effectively to the general public. Key topics included the importance of framing in science communication, techniques for crafting core messages, the use of the NaWik Arrow tool, building trust in science, and interactive group exercises to improve communication skills. For more information, we refer the reader to Deliverable D5.2 (WP5), Training Del. 4, whose status is approved.

Figure 1. Mads Vad Kristensen

CS3 was facilitated by Mads Vad Kristensen. He is an Innovation Partner at DTU Skylab, the innovation hub of the Technical University of Denmark (DTU). In this role, he collaborates closely with startups and research teams to transition deep-tech prototypes into market-ready products. Mads provides strategic guidance, technical expertise, and facilitates partnerships with industry leaders, hospitals, and other stakeholders. His work is central to programs like Skylab Pilots, which accelerates the

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development of innovative solutions in fields such as medtech and smart materials. Mads is based at DTU Skylab's Developer Hall in Kgs. Lyngby, Denmark.

2. LOCATION

As already mentioned, CS3 was celebrated in the Technical University of Denmark (DTU), in the DTU Building 101. DTU is particularly engaged in three fields of quantum technologies—quantum computing, quantum sensors, and quantum communication. This comprises the whole gamut from basic research, which is still necessary in virtually all areas of quantum technology, to actual technology development. DTU especially plays a role in developing technologies for implementation and use by authorities and industry. Within the QSI project, DTU is the lead beneficiary for WP7, the WP in charge of the Outreach Activities.

Figure 2. DTU Building 101, where CS3 took place.

3. ORGANIZATION

Christian Majenz, was the local organizer chair. He is co-supervisor within the QSI project with experience in optical communications and networks, quantum devices, QKD, quantum algorithms and post-quantum cryptography (PQC). Below we include a brief summary of his profile:

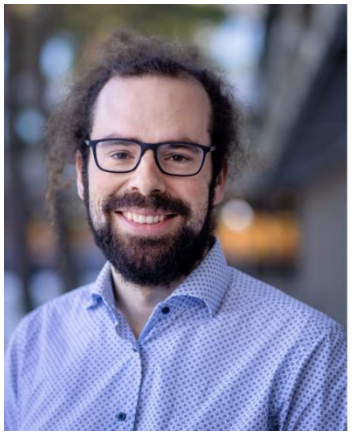

Figure 3. Prof. Christian Majenz

He obtained his Master's degree in physics from University of Freiburg. His M.Sc. thesis was supervised by David Gross. He obtained his PhD from University of Copenhagen under the supervision of Matthias Christandl, spending some time at Caltech along the way. Afterwards, he has been a postdoctoral researcher at the QuSoft center, University of Amsterdam and

at CWI in Amsterdam. Currently, Christian is an Associate Professor at Technical University of Denmark. His main research interests are quantum aspects of cryptography.

In collaboration with Christian Majenz, the **Doctoral Candidate Fabrizio Sisinni** helped with the organization of this CS3 as local organizer co-chair.

4. PROGRAMME.

Below we include a description of the activities done in CS3:

- On 15 May, Mads Vad Kristensen aimed to equip scientists with essential skills in **Business Project Management** and **Commercialization Process**, offering them practical tools to **effectively present and defend business ideas**. As QSI Doctoral Candidates, gaining advanced research expertise is only one part of building a successful career. Equally important is the ability to transform innovative ideas into real-world impact. In this context, mastering business project management, understanding the commercialization process, and using practical tools to effectively present and defend business ideas are crucial skills that bridge the gap between academic research and industry application. More precisely:
  - ✓ The **Business Project Management** contents have equipped the doctoral candidates with the ability to plan, execute, and lead complex projects—skills that are essential both within academia and in business environments. It has fostered a structured approach to innovation, helping researchers align technical goals with strategic business objectives.
  - ✓ The **Commercialization Process** contents are key to translating research outcomes into viable products or services. Understanding market needs, intellectual property rights, funding strategies, and business models enables PhD students to move beyond the lab and bring their innovations to life, benefiting both society and the economy.
  - ✓ Finally, being able to **effectively present and defend business** ideas is critical for securing support from stakeholders, investors, or policy-makers. Practical communication tools—such as pitch decks, storytelling techniques, and persuasive presentation skills—enable researchers to clearly articulate the value of their work and inspire confidence in its potential.

Together, these skills have empowered QSI Doctoral Candidates to become not only scientists but also **innovators, leaders, and change makers** in today's knowledge-driven economy.

- On 16 May, after the training received on the previous day, the Doctoral Candidates received some more concrete guidelines on how to actually apply the tools they theoretically got introduced to the day before to real-case scenarios. This included fictitious use-cases and qualitative analyses of the steps to carry out in order to properly prepare to bring an idea to the market. After that, it was time to visit and make a small tour of the DTU Skylab, the proud DTU incubator which is the place where students, researches, startups & industry come together to innovate. Here over the years, people have developed cutting-edge facilities and a vibrant community. Today this innovation hub fosters bold ideas, technology development, prototyping, and promote real-world impact, having led to the creation of hundreds of start-ups in the past decade. Doctoral Candidates had the chance to discuss with their peers at DTU which took the initiative to build their own company, learning directly from their experience.

✓ **Mads Vad Kristensen's presentation slides in a photo gallery:**

Figure 4. Pictures of Mads Vad Kristensen's presentations

✓ **Small tour to the DTU Skylab photo gallery:**

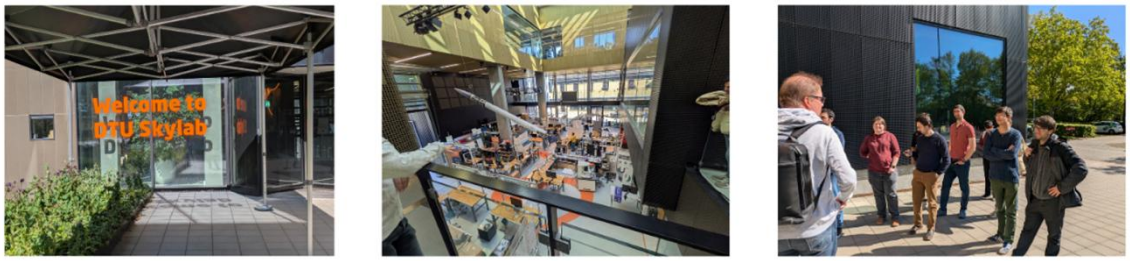

Figure 5. Pictures of the tour to the DTU Skylab

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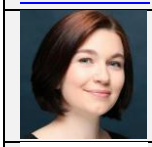
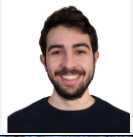
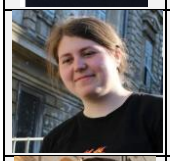
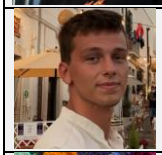
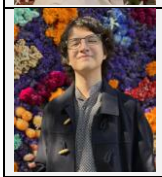
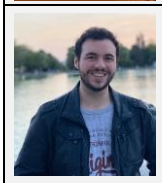
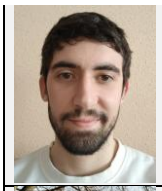
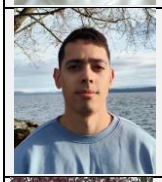
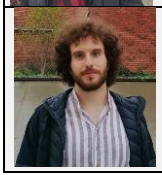
5. DOCTORAL CANDIDATES

All the Doctoral Candidates attended this CS3, except from DC5, who was participating in the PKC 2025 conference in Røros, Norway, which took place on May 12-15, 2025. PKC 2025 was organized by the International Association for Cryptologic Research (IACR) and Norwegian University of Science and Technology (NTNU).

This event was very significant for the research of DC5 due to the fact that his paper titled "Multiple Group Action Dlogs with(out) Precomputation" was accepted for presentation in this conference and also will be published soon.

PHOTO	DC NUMBER & NAME	INSTITUTION	NATIONALITY	START DATE	CS CARRIED OUT
	**DC1: Alessandro Marcomini**	University of Vigo	Italian	January 2023.	**CS1 CS2 CS3**
	**DC2: Silvia Ritsch**	Eindhoven University	Austrian	October 2022.	**CS1 CS2 CS3**
	**DC3: Álvaro Yángüez Bachiller**	Sorbonne University	Spanish	October 2023.	**CS2 CS3**
	**DC4: Gina Muuss**	Amsterdam University	German	October 2023.	**CS1 CS2 CS3**
	**DC5: Massimo Ostuzzi**	University of Bochum	Italian	October 2023.	**CS1 CS2**
	**DC6: Sergio Javier Bustos Juárez**	Toshiba	Mexican	September 2023.	**CS2 CS3**
	**DC7: Shashank Kumar**	University of Geneva	Indian	August 2024.	**CS3**
	**DC8: Matías Ruben Bolaños Wagner**	Padova University	Argentinan	November 2022.	**CS1 CS2 CS3**

	**DC9: Javier Rey Domínguez**	Leeds University	Spanish	May 2023.	**CS1 CS2 CS3**
	**DC10: Loïc Millet**	ID Quantique	French	January 2024.	**CS2 CS3**
	**DC11:** Vaisakh Mannalath	University of Vigo	Indian	March 2023.	**CS1 CS2 CS3**
	**DC12:** Fabrizio Sisinni	Denmark University	Italian	December 2022.	**CS1 CS2 CS3**

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