

Quantum for Good

Project Proposal & Statement of Work

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Revision History Table		Template Date 04/04/2025
Version	Summary of Changes	Date
V1.0	Initial draft for “Poster creation for Quantum for Good Workshop”	04/02/2025

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1. Executive Summary

The project involves developing a research poster for the "Workshop on Responsible Quantum Innovation." The poster titled "Quantum for Good? Not Without Returns" explores the critical challenge of funding socially beneficial quantum innovation amid widespread commercial losses in the quantum sector. It highlights the growing dependency on public funding and calls for startups to develop credible business models that attract more private capital.

The core message is that although quantum technologies promise societal benefits, without financial viability and early return on investment, such goals risk remaining aspirational. Startups like IonQ and D-Wave have shown substantial losses despite years of development. Government-backed firms like PsiQuantum also lack clear market products. Our poster argues that "Quantum for Good" is only sustainable if the field becomes investable on its own merits.

The poster is based on a comparative funding analysis of IonQ, D-Wave, and PsiQuantum. It features concise graphics, citation-backed arguments, and thought-provoking questions for stakeholders. Table 1 shows project roles.

Team Member	Feature responsibility
John Kang	Concept, research, writing, poster design

Table 1 Preliminary Subsystem Responsibilities

2. Literature Review/Market research

This poster targets academics, entrepreneurs, and policymakers attending the workshop on responsible innovation. It responds to the observed dissonance between technical breakthroughs in quantum computing and the sector's lack of profitable business models. Attendees will gain insights into the fiscal realities of the industry and the need for aligning "quantum for good" goals with investability.

Currently, there are no posters that focus on the financial aspects of the quantum industry. Most existing work highlights technical breakthroughs but often overlooks the issue of long-term economic sustainability. My poster fills this gap by examining financial reports and funding trends. It presents a straightforward narrative using recent investment data, supported by clear visuals and concise explanations.

3. Research Project Deliverables

Final Presentation Format

A 24x36" printed poster for the workshop on Responsible Quantum Innovation.

A digital version (PDF/PNG) for submission and sharing.

What Analysis Is Being Run?

The poster presents a comparative financial analysis of IonQ, D-Wave, and PsiQuantum based on their 2024 financial results. It also examines broader trends in venture capital within the quantum startup ecosystem.

What Accuracy Is Expected?

Accuracy is expected in referencing financial reports and funding sources. The goal is not numerical precision in modeling but clarity in presenting well-supported information. Success is measured by how effectively the poster communicates its message and encourages thoughtful discussion.

What if the Analysis Doesn't Work?

Adjust focus toward qualitative interviews or case studies if current data proves insufficient.

What if the Data Isn't Available?

Data is publicly accessible through financial disclosures and media reports, with a low risk of data issues.

4. Project Timeline & Gantt Chart

Milestone	Date
Team Formation	2/14/2025
Core Topic Selection	3/31/2025
Signed proposal	4/04//2025
Financial and funding research on companies	4/11/2025
Data analysis and summary	4/23/2025
Poster concept design and layout	4/25/2025
Advisor review	4/30/2025
Final edits and submission	5/05/2025
Presentation at iShowcase	5/07/2025
Presentation at workshop	5/27/2025

Table 2: Milestone Schedule

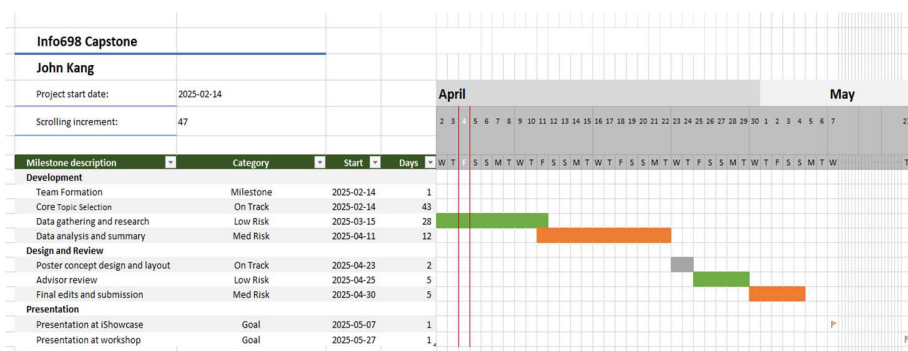


Table 3: Gantt Chart

5. Ethics

#	Question	Generally	Data Breach
All entries	Educational poster with no user data collection	N	N

6. Approvals

The signatures of the people below indicate an understanding of the purpose and content of this document by those signing it. By signing this document, you indicate that you approve of the proposed project outlined in this Statement of Work, the division of work, the Ground Rules and that the next steps may be taken to create a Product Specification and proceed with the project.

Approver Name	Title	Signature	Date
John Kang	Team Project Manager	<i>Jongseon Kang</i>	4/03/2025
Dr. Sarah Young	Advisor	<i>Sarah Young</i>	4/4/2025
Dr. Greg Chism	Instructor		

Section	Author	Word Count
1. Executive Summary	John Kang	158
2. Literature Review	John Kang	113
3. Deliverables	John Kang	143
4. Timeline & Gantt	John Kang	n/a (Tables only)
5. Ethics	John Kang	n/a (Table only)
6. Approvals	John Kang	65
7. Appendix	John Kang	672

7. Appendix

A. Advisor Engagement

1) Project Team Responsibilities

- The Project Manager will set up and facilitate a weekly call/meeting with the Faculty Advisor. The Project Team will provide weekly status updates to the Faculty Advisor including upcoming deliverables, critical issues, and any adjustments to the Project Plan.
- Documents will be provided to the Faculty Advisor with adequate time for review and signature. The time necessary for review will be agreed with the Advisor. The minimum review time will be 3 days prior to the document due date.
- Design files will be provided to the Faculty Advisor as requested in a format agreed to with the Advisor.

- Support requirements will be clearly requested from the Faculty Advisor with the dates required and an adequate time for fulfilling the request.
- Modifications requests to the Project Plan by Faculty Advisor will be reviewed and agreed to within 1 week of the request.

2) Faculty Advisor Responsibilities

- The Faculty Advisor will provide knowledge and expertise to help the group stretch their skills.
- The Faculty Advisor will participate in a weekly or bi-weekly call/meeting with the Project Team to review the project status, upcoming deliverables, priorities, issues, and progress to the agreed Project Plan.
- The Faculty Advisor will provide document review, feedback and approval, rejection, approval with contingencies with adequate time for the Project Team to meet the course due dates.
- The Faculty Advisor will provide feedback to requested support requirements from the Project Team. This includes feedback and guidance on design implementations decisions, design files, test plans, test procedures and test results.
- The Faculty Advisor shall provide technical advice and guidance to the Project Team answering inquiries approximately 1 hour per week.
- Modifications to the Project Plan by the Project Team will be resolved and documented within 1 week of the request.
- Grade the finalized project using a skill-based rubric
- Attend iShowcase in May.

B. Ground Rules

As a team and as individual team members, we agree to:

1. Stay focused on our objectives and goals.

Each time the team meets, we will clearly define our objectives and desired outcomes at the beginning of the meeting. We will politely remind team members if we are getting off track.

2. “Sidebar” any issues that are relevant but not consistent with the immediate objectives.

Occasionally, important matters are raised that are not relevant to the immediate goals of the meeting. To keep the group on track, but avoid losing the issue, create a “sidebar” where these topics can be listed and discussed later.

3. Listen when others are speaking.

We will listen and consider others’ input before adding our own comments.

4. All viewpoints will have an opportunity to be heard.

We understand that some team members may be quieter than others. We will make an effort to get each team member’s viewpoint and that no one dominates the discussion.

5. Differences of opinion will be discussed respectfully

We will identify areas of agreement before assessing areas of disagreement. We will encourage each other to look beyond our own point of view. We will discuss different ideas respectfully. As

a team, we will weigh the merits of different opinions and agree on a process for choosing a direction. All team members will respect and follow the decision or direction.

6. Look for the good points in new ideas.

We will endeavor to explore the value in each idea as we assess and select our path forward.

7. Focus on the future, not the past.

We will use our past experience to inform our decisions, but focus the discussion on the future objectives. Blame for past performance is counterproductive, we will focus on finding solutions.

8. Agree upon specific action items and next steps.

At the end of each meeting and discussion, we will summarize and agree on specific next steps, action items and assignments.

9. Accountability

As team members, we will each be responsible for our individual assignments and contribution to achieving the team objectives and goals. We will honor our responsibilities and not let our team members down.