LET'S PLAY THE QUANTUM



GAME.



WELCOME TO

THE FUTURE OF QUANTUM

Today quantum technologies are not only expanding the limits of computation, communication and sensing, they are also reshaping the values, institutions and relationships that underpin society. As these technologies scale, the question is no longer if they will impact our lives, but how and whose priorities will guide that impact.

The Quantum Futures Game lets you explore how quantum technology might change our world. This game challenges you to play as different stakeholders shaping the future. For example, you can be a government regulator, a business owner, someone from an NGO, a national government, or even the Earth itself.

Values are at the center of this game. In each round, you will face technological, geopolitical, or societal shifts between 2025-2030, 2030-2040, and 2040-2050. Some shifts might present challenges, others might bring positive change. Each player thinks from the perspective of their stakeholder role, chooses a value that matters most to them, and then makes a convincing pitch to earn the votes of other players.

This game does not try to predict the future. Instead, it asks you to think carefully about the different futures we might face and how the choices we make today might shape the future for better or worse.

The Centre for Quantum & Society created this game to support open discussion, long-term thinking, and playful reflection on how quantum technology affects society.

GAME OVERVIEW

PLAYERS: 3-4 teams of 2 players. Players work in pairs, allowing strategy discussions between turns. Be careful though—your competitors shouldn't overhear your plans!

COMPONENTS: 1 card set with 40 Value cards, 19 Stakeholder cards, 24 Voting cards. Also included, 1 Foresight Matrix Card and 4 Future Scenario Sets each with 3 Future Shift Cards and a 2050+ Future Scenario.

DURATION: 45-60 minutes to play one 2050 future scenario.

RECOMMENDED MATERIALS: Pen and paper to write down your pitches.

SUGGESTION: If you're on a strict schedule, appoint an independent facilitator as a time keeper for the pitches and debates.



FOUR SCENARIOS FOR 2050+

WINNING THE GAME

Across three rounds of debates, teams respond to unfolding shifts, choose and defend key values, and pitch their perspective. After each round, other teams will vote for the team they found most convincing. The team that accumulates the most votes by the end of the game shapes the quantum world of 2050—and wins.

PREPARE THE GAME CHOOSE ONE OF THE FOUR FUTURE SCENARIO SETS AND PREPARE THE GAME MATERIALS ROUND 01 ADOPT STAKEHOLDER PERSPECTIVE & PRIORITISE A VALUE PITCH, DEBATE & VOTE ROUND 02 ADOPT STAKEHOLDER PERSPECTIVE & PRIORITISE A VALUE THREE ROUNDS OF GAMEPLAY PITCH, DEBATE & VOTE ROUND 03 ADOPT STAKEHOLDER PERSPECTIVE & PRIORITISE A VALUE PITCH, DEBATE & VOTE **FINISH** REVEAL THE FUTURE SCENARIO FOR 2050+ & DECLARE THE WINNER

ACTIVE GAMEPLAY

The game unfolds over **three rounds** of strategic debates and voting.

- STAKEHOLDER ROLES: Deal one Stakeholder Card to each team. Each team reads their role aloud and places their card face-up in front of them
- BIG NEWS: Draw and read a Future Shift Card. It reveals a shift in the discourse of the chosen quantum scenario.
 Discuss the future shift together to explore its implications.
- 3. PRIOTISE A VALUE: Every team draws three Value Cards. In secret, each team chooses which value to prioritise—one that aligns with their stakeholder's perspective.
- 4. **DEVELOP A PITCH:** Each team prepares a one-minute pitch explaining their chosen value and reasoning, e.g., why this is important in light of the **Future Shift Card**.
- **5. PITCH WITH PURPOSE:** One at a time, each team delivers their pitch. All other teams listen closely to decide who earns their vote.
- **6. DEBATE:** After all pitches, there's time for questions and debate. Ask questions to expose contradictions or challenge assumptions.
- 7. VOTE FOR THE FUTURE: Every player votes simultaneously: on a countdown—3, 2, 1—each player places their Voting Card in front of the team whose pitch they found most convincing.
 - With 3 teams, there are 6 individual votes.
 - With 4 teams, there are 8 individual votes.

Each team keeps the **Voting Cards** they were awarded. Place the winning **Value and Stakeholder Cards** next to the **Future Shift Cards**.

- 8. TIME PASSES, MORE BIG NEWS: Repeat steps 1–7 for the second and third round.
- REACH 2050 AND PROCLAIM A WINNER: After three rounds, read aloud the final 2050+ Future Scenario. Identify which team earned the most Voting Cards and wins the Quantum Futures Game.
- **10. REFLECT & TAKE ACTION:** The winning team initiates the final reflection by answering "What are the implications of this future, and what course of action could be taken today to ensure or mitigate this future?"

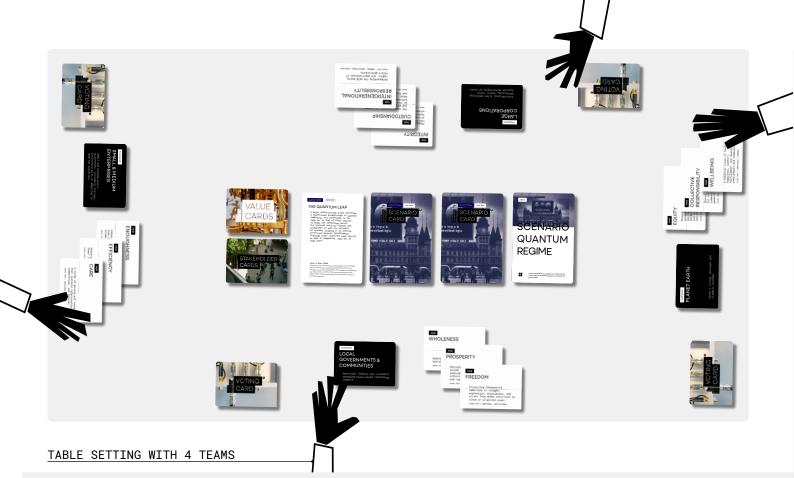
STRATEGISE YOUR QUANTUM DEBATE CRAFT

Some tips to craft a pitch that resonates and wins votes.

KNOW YOUR AUDIENCE: Don't just speak as your stakeholder—also speak to the other teams. Tailor your pitch to the things they care about. Ground your pitch in logic, but add emotional elements.

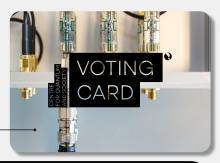
CHAIN YOUR NARRATIVE: Build continuity across rounds. Refer back to your past decisions to create a consistent worldview. Consistency builds credibility—and credibility earns votes.

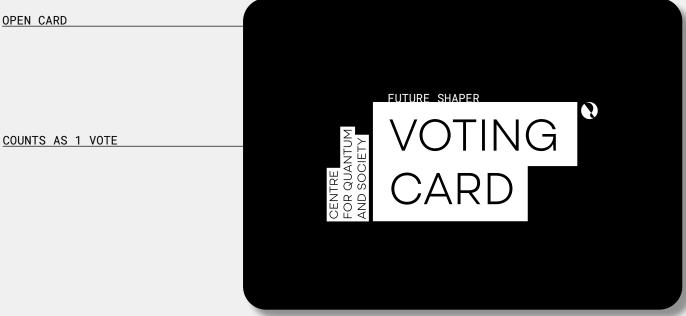
BUILD COALITIONS: Acknowledge shared values with other teams. Compliment strong arguments. One or two extra votes over three rounds can make the difference between winning and losing.





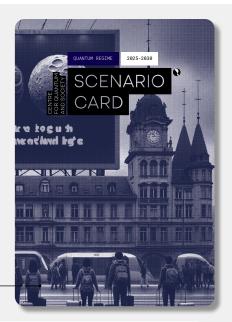
OPEN CARD CARD TYPE	VALUE
VALUE	—ACCOUNTABILITY
DESCRIPTION	Answerability and responsibility for actions and outcomes.
VALUE TYPE	→ VALUE TYPE > COMMUNAL, INSTITUTIONAL





CLOSED CARD





OPEN CARD FUTURE SCENARIO & MOMENT IN TIME QUANTUM REGIME 2030-2040 THE RISE OF PREDICTIVE FUTURE SHIFT **GOVERNANCE** The Regime and the states it controls introduce a social credit system. Using quantum sensors and advanced AI, **DESCRIPTION** this system constantly checks people's behaviour and loyalty. This dictates access to resources, jobs, and basic freedoms, all in the name of "social harmony". TODAY'S WEAK SIGNAL The expanding use of digital ID systems, such as India's Aadhaar or various European digital identity initiatives, is becoming more widespread. Alongside this, early WHAT WE SEE HAPPENING TODAY forms of social credit scoring systems, like those piloted in some Chinese cities, are being tested. Combined with sophisticated AI tools to analyse public behaviour, often using data from social media and public surveillance,

comprehensive.

surveillance systems are becoming increasingly

2050+ FUTURE SCENARIO TITLE



LOCATION IN SCENARIO MATRIX

OPEN CARD

FUTURE SCENARIO & MOMENT IN TIME

QUANTUM REGIME

2050+

INTRODUCTION

DESCRIPTION

Quantum technologies and their supporting value chains serve a powerful global Regime and its allied mega-corporations. The Regime controls the quantum and AI infrastructures that run daily life, giving it strong control.

Europe is fragmented. Some countries submit to the Regime, while others hold strong to their democratic values. However, both situations involve constant watching. Quantum sensors track people's actions and words, predicting behaviour to ensure everyone conforms in Regime-friendly nations and to prevent Regime takeovers in others. Many people live their lives online, using Regime-approved platforms and finding escape in virtual worlds or a new "quantum spiritualism."

Still, some people resist. Small groups work in secret, using their own hidden quantum networks and hoping for a different future. It is a world of advanced technology used for control, where the human desire for freedom endures.

THE CENTRE FOR **QUANTUM AND SOCIETY**

The Quantum Futures Game was commissioned and funded by the Centre for Quantum and Society, a knowledge and co-creation hub dedicated to maximizing the positive societal impact of quantum technologies. The Centre for Quantum and Society is part of Quantum Delta NL.

The Centre for Quantum and Society engages in:

- Facilitating groundbreaking academic research on ethics, legal frameworks, and effective communication about quantum technologies' impact.
- Developing tools to help organizations leverage quantum opportunities while addressing potential challenges.
- Conducting customised training programs and awareness activities with diverse stakeholders.
- Leading strategic foresight projects to build shared visions that shape governance choices preserving core societal values.
- Initiating mission-driven innovation in quantum projects.

Visit The Centre for Quantum and Society's website and www.quantumforgood.eu to learn more.

ACKNOWLEDGEMENTS

Thanks to our early playtesters at the Quantum Policy Academy, Alliander, the Policymakers and Designers usertests, and all colleagues at TU Delft and QDNL who helped refine the earlier versions of the game.

CREDITS AND LICENSE

The Quantum Futures Game was created by Deborah Nas and Juwe van Vliet and builds on the scenarios developed by George Profitiliotis. The content brings together insights from academic research, white papers, and projects by the Centre for Quantum and Society. Reach out for the complete list of sources. Graphic design by Juwe van Vliet, with images by joseph-hsing (via Unsplash), Pim Top en Marieke de Lorijn (for Quantum Delta NL). Scenario images created by George Profitiliotis are recoloured and given an effect for game purposes.

The Quantum Futures Game is published under a CC BY-NC-SA 4.0 license.

You are free to:

- Share | Copy and redistribute the game in any medium or format.
- Adapt | Remix, transform, and build upon the game.

Under the following terms:

- Attribution | If you create something using our game, you must credit us, provide a link to our original work, and clearly state any modifications you've made.
- Non-Commercial | You can't use our game for profit.
- Share Alike | If you remix, modify, or expand on our game, you must release your work under the same CC BY-NC-SA 4.0 license.
- No additional restrictions | You can't impose legal or technical limits beyond our license. That means no submitting anything based on our game to an app store without our approval.