

**Trilateral Collaboration with Global Impact:
The U.S.-Japan-Israel Opportunity**

November 2021

K3 COUNCIL
Trilateral Bond

I. Backdrop: An Exploration of Trilateral Collaboration

1. The K3 “Kizuna” Council is a working group forum convening U.S., Japanese, and Israeli strategic thinkers and practitioners with extensive experience in the corporate, academia, and policy making arenas.¹ Established by Japan Society in 2020, the Council’s main objective is to explore strategic opportunities for high-impact cooperation and coordination between these three nations, in the spirit of the Japanese word *kizuna*, a bond or deep connection. The U.S.-Japan and the U.S.-Israel alliances each represent core linchpins of security, prosperity, and innovation in the Indo-Pacific and Middle East regions. Geostrategic changes in both Asia and the Middle East, coupled with Israel’s emergence as a technology superpower, have opened a new era of unprecedented collaboration between Japan and Israel.
2. Broad and deep alignment of interests, together with shared values of freedom, democracy, and open, transparent societies, reinforce the common perspectives and aspirations of these three nations. The advent of the Abraham Accords in 2020 and the normalization of relations between Israel and Arab states around the Persian Gulf are further strengthening the convergence. The timing becomes even more important to consider when juxtaposed with Japan’s longstanding and deep relations with Saudi Arabia, Iran, and with a growing demand for innovation from Israel in both Asia and the Middle East. For its part, Washington’s policy imperative to work more expansively with allies to confront global challenges, evolving geostrategic realities in Asia, and dramatic changes in the Middle East are combining to create a significant opening for more integrated cooperation.
3. With new administrations in all three capitals searching for strategic cooperation, this alignment is likely to only continue to deepen. Prime Minister Fumio Kishida’s economic security policy agenda seeks to effectively protect Japan’s technology advantage and its industrial supply chain, and these priorities can be advanced by working with partners. President Joe Biden has stated that partnerships will play a critical role in the U.S.’s diplomatic efforts. Prime Minister Naftali Bennett is seeking ways to translate Israel’s innovation prowess, 74 unicorns in this year alone, into sustainable growth and security. Bilateral agreements and programs already in place, for example, U.S.-Japan cooperative initiatives on new energy solutions, highlighted most recently in the Japan-U.S. Clean Energy Partnership (JUCEP), the U.S.-Israel joint task force on ransomware and cybersecurity, and Japan-Israel collaboration on digital health, could provide building blocks for enhanced U.S.-Israel-Japan cooperation. This unique window of opportunity should continue to expand.

¹ Please see Appendix 1 for a list of Council members.

4. Japan Society, supported by several hundred corporations and individual members, is the preeminent U.S. non-profit organization dedicated to strengthening U.S.-Japan relations and mutual understanding in a global context. Founded in 1907, Japan Society is based in New York and sponsors a broad range of programming on Japanese culture, the arts, and public policy. The immediacy of the global pandemic, climate crisis, and continuing national security threats all point to the need for finding solutions that transcend national borders and expand traditional partnerships. Japan Society seeks to help foster this transformation by building on our network of friendships and relationships and presenting fora in which collaborative dialogue can take place. The K3 Council represents one such initiative.
5. Specifically, the K3 Council launched three task forces to explore approaches to catalyze meaningful trilateral dialogue on significant opportunities for commercial application and growth that cannot be adequately realized by government efforts alone. Each task force examined a different theme that can potentially leverage respective start-up, surge-up, and scale-up strengths of Israel, the U.S., and Japan. The task force themes were:
 - *Infrastructure Development and Protection* — Connected smart infrastructure and enhanced cybersecurity across multiple strategic sectors, including energy, mobility, agriculture, and finance
 - *Leap Tech Enablers* — Emerging AI, quantum computing, in silico biology, and impossible materials technologies that can accelerate forward progress across various sectors
 - *Connected Health* — Converging biopharma, medical technology, and care delivery with software-driven AI, IoT, data analytics, and robotics

The task forces each met numerous times virtually over six months, generating a series of recommendations for public-private partnership and pre-competitive innovation.



II. Recommendations

1. *Infrastructure Development and Protection*

The U.S., Japan, and Israel can work closely together to accelerate solutions for smart, connected, safe, and resilient infrastructure, leveraging digital economy,

greater autonomy, and automation. The three nations can collaborate to develop technologies essential to realize affordable and scalable mobility, manufacturing, agriculture, and logistics solutions across both the developed and developing world, particularly given the challenges posed by climate change:

- A. Green-energy generation and smart power distribution to achieve carbon neutral/negative outcomes
 - Examples include environmentally sustainable hydrogen production, energy fusion, next generation, safe, nuclear fission, off-shore wind, smart grid, and smart networks for greater stability and efficiency in distribution.
- B. Environmental technologies to combat climate change
 - Examples include carbon capture, water management, conservation, and carbon exchange.
- C. Communications networks to enable new services
 - Examples include the promotion of standardized 5G networks and deployment of Open RAN technologies, together with early discussion of 6G development.
- D. Cybersecurity to ensure safe, networked connectivity
 - Examples include harmonized standards and methods for protecting connected health information and medical devices, networked infrastructure, autonomous transportation, and personalized management of carbon emissions.
- E. Harmonization for enhanced sensitive information and technology sharing and security
 - Examples include exploring the feasibility of a trilateral General Security of Military Information Agreement (GSOMIA) with elements of industrial cooperation, participation, and security to foster greater collaboration, innovation, and research and development in areas of critical and emerging technologies. Such efforts can establish foundational and mutually equivalent security standards for shared sensitive information and technologies that are protected by exemplary information security policy, practices, and measures that will greatly enhance collaboration on a full range of projects.

F. Supply chain coordination and cooperation to promote greater stability and resilience

- Examples include establishing mechanisms to coordinate and plan for, and more effectively mitigate risks associated with, future supply chain disruptions.

G. Space exploration and maintenance for peaceful commercial applications

- Examples include next-generation satellite development, propulsion, near-orbit clean-up, and the creation of habitable, self-sustaining communities.

2. *Leap Tech Enablers*

The U.S., Japan, and Israel each bring deep strengths in technologies with the potential to transform industries and approaches to development, products, and services. These include, for example, AI, quantum computing, in silico biology, and impossible materials:

A. Trusted data transfer and governance to accelerate services

- Examples include data sharing initiatives via smart contracts to promote trust and protect privacy in data transactions, through initiatives such as the Data Free Flow with Trust (DFFT).

B. Anonymized blockchain technology to support efficient data networks

- Examples include pilot projects and public-private testing of use cases that have significant potential for greater efficiencies in both private and public sector systems.

C. Advanced simulation for better prediction and modeling of pandemic threats

- Examples include developing more effective predictive tools utilizing machine learning and other AI technologies to better enable health systems to plan for crises and to allocate resources.

D. In silico biology and artificial intelligence to speed development

- Examples include utilizing new levels of computing power, emerging AI-based methods, and materials to transfer more clinical development in-silico and accelerate significant reductions in drug development cost.

3. *Connected Health*

U.S.-Japan-Israel cooperation can accelerate the convergence of digital technologies, data, robotics, and new materials with biopharmaceutical and medical technologies to help foster the next generation of breakthrough innovation in global health:

- A. Enabled “small data” analytics for enhanced point-of-care solutions
 - Examples include incubating and accelerating the use of AI and machine learning on large medical data sets to create point-of-care applications that strengthen physician-patient collaboration and relationships.
- B. Data sharing to strengthen public health decision making and bio-convergence
 - Examples include combining large medical data sets from each country in areas of shared priority, analyzing them, and then providing tools to policy makers to enable more informed planning and coordination.
- C. Smart health infrastructure for enabled connectivity with the home
 - Examples include creating special innovation zones to test connected health between medical institutions and residences in ways that contribute to better decision making, stronger outcomes and advances in quality of life.
- D. Incubation of aging-in-place solutions for greater independence
 - Examples include research and development of aging-in-place solutions for elderly citizens that result in longer independence in the home via tools requiring no direct interface with technology.



III. **Moving Forward**

1. All of the above area recommendations share several characteristics. They contain pre-competitive research and development that can be efficiently promoted by trilateral collaboration, with relevance across the private sector, public sector and academia. They represent major new markets across the globe, and they address cross-border challenges that must be successfully confronted for global prosperity and security.

2. The foundations for these initiatives have already largely been established within the bilateral relationships between the three nations. As stated above, trilateral cooperation can now evolve alongside, or on top of, these existing initiatives.
3. These initial recommendations represent a starting point. The K3 Council will now initiate a series of discussions and dialogues with stakeholders in each country to explore specific ideas within each of these areas over the course of 1-2 years. The objective of the interactions is to illuminate potential pathways forward to achieve this collaboration.
4. Ultimately, advancing these ideas into implementation will help to create a new cadre of thinkers and stakeholders who see the many benefits in this new geometry. The K3 Council is also focusing on how best to foster this development.
5. The word *kizuna* emerged to be used in the way it is today as a direct result of the March 11, 2011 disaster in Japan. In the aftermath of the catastrophic earthquake and tsunami that followed, Japan was overwhelmed by the love and warmth it received from nations all over the world. The United States and Israel were at Japan's side instantly. Out of crisis, alliance. Out of loss, strength. This same genesis can and should form the basis of a new bond, one that draws on shared values, interests, hopes, and aspirations and leads to benefits far beyond three nations. The time has come to think bigger and enable this trilateral relationship to meet the great challenges of our time.

Appendix 1 - K3 Council Members

Yo Akatsuka, President and CEO, Nomura Holding America Inc.

Roy Amir, Co-Founder, Intuition Robotics

Peter E. Berger, Co-Founder and Managing Partner, Siris Capital Group, LLC

Frank J. Cilluffo, Director, McCrary Institute for Cyber and Critical Infrastructure Security, Auburn University

Philip M. Darivoff, Chairman, Vibrant Capital Partners, Inc.

Dr. Chris Fall, Vice President for Applied Sciences, The MITRE Corporation

Dr. Kathy Fields, Co-Founder, Proactiv Solution and Rodan and Fields, LLC

Shachar Hefetz, Head of Innovation, Soroka Medical Center

Tetsuro Hisano, Senior Executive Vice President, Mitsubishi Heavy Industries America

Jamie Kebely, Senior Director for Asia Pacific Government Affairs, Varian Medical Systems

Dr. Paul M. Linehan, CEO, Secure Knowledge Consulting LLC

Dr. Shin'ichiro Matsuo, Research Professor and Co-Director, CyberSMART Research Center, Georgetown University

Galia Mor, Vice President and Head of Citi Accelerator, CitiBank

Dr. Atsushi Nagahisa, President, DNA Partners, LLC

Masaki Nakajima, President and CEO, Sumitomo Corporation of Americas

Christine Parthemore, CEO, The Council on Strategic Risks

Dr. Garry A. Rayant, BDS, DDS, LDSRCS, MS

Andrew M Saidel, President and CEO, Dynamic Strategies Asia, LLC

Marc A. Spilker, Founding Member of GPS Investment Partners, LLC and Executive Chairman of Merchant Investment Management, LLC

Shinsuke Takahashi, Chairman and Head of Government Relations, NEC Corporation of America

Ron Tiberg-Shachar, Vice President of Corporate Development, Cortica

Joshua W. Walker, Ph.D., President and CEO, Japan Society

Andrew C. Weber, Senior Fellow, The Council on Strategic Risks

Adam F. Weissenberg, Vice Chairman and Chief Global Officer Audit and Assurance, Deloitte

Tsunehiko Yanagihara, Corporate Advisor, Mitsubishi Corporation

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