NEXT DIGITAL DECADE: POST-PANDEMIC FUTURES

KONRAD **ADENAUER** STIFTUNG

Years of Political Dialogue Asia

DIGITAL ASIA HUB

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CONGEXT

In 2021, Digital Asia Hub (DAH) and Konrad-Adenauer-Stiftung (KAS) Political Dialogue Asia Singapore launched a 2-part series, The Next Digital Decade: Case Studies from Asia.

Volume 1, titled 'Traces and Divides', traces the impact of the Internet on society, politics, and life in Asia, while identifying the many divides that persist. Volume 2, titled 'spaces and futures', examines the challenges of responding to the challenges of digital transformation with perspectives from Asia to highlight their relevance for global audiences.

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To mark the launch of the volumes, DAH and KAS invited the authors to participate in an in-person workshop in Singapore taking place 17-19 May 2022. The intention was to bring together a group of researchers and academics from across the region and beyond to participate in a workshop to highlight their collective experience, expertise, and diversity.

This workshop was the first international in-person event organised by DAH and KAS, after more than two years of Zoom-based collaboration. Together, we took stock of the many technological, societal, economic, and political changes in the past decade, to imagine and speculate on the possible futures of a world more centered on people and the planet.

APPROACH

Participants were tasked with sharing ideas from their research and experience which included 'values, principles, ideas, laws, and business models' from their own countries or across the wider region that were either:

- new, emerging or nascent; for example, blockchain based tracking in supply chains, or
- at risk of being eliminated or becoming less relevant; for example, decreasing trust in large social institutions.

Through a combination of facilitated group exercises, workshop participants then identified the missing tools, platforms or tactics that might enable the conditions for these trends to come into existence or be built. In the final part of the workshop, participants built on their insights and discussions to formulate a pitch in the form of a civil society focused "Dolphin Tank", a play on the popular "Shark Tank", for a new idea, concept or project presented to a panel of members.
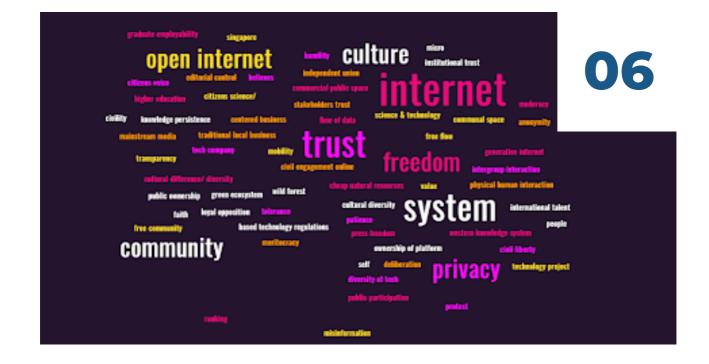
TRENDS

The workshop identified a total of 102 trends. These have been lightly edited for brevity.

Key highlights:

- **Trust**: This was considered to be the most featured at-risk trend. This can be interpreted as a loss of public trust in key institutions (public and private).
- **Public**: There was a convergence around digital spaces for the public e.g. "Community and culture centered businesses", "public ownership of platforms" and "non-commercial public spaces". This theme was later fleshed out into a project pitch during Dolphin Tank.
- **Semantics**: While there were similar ideas expressed about emergent technologies such as a 'generative' and 'open' internet, there is a lack of a shared vocabulary for future and emergent trends.
- **Specificity**: Emerging trends are much more specific in terms of behaviours, technologies, practices vis e.g. 'ideals or principles' like "trust"
- **Values**: Some emergent / at risk trends were the same. For example privacy or open Internet but seen from two different lenses,
- **Global/Local:** Although case studies and perspectives were focused on the Asia region, there was a clear global and international theme to the trends identified in the workshop – an observation that underscores the global interconnectedness of these issues.

AT-RISK TRENDS

The value of self-humility	Open internet
The value of patience and moderacy	Anonymity
Good old physical human interaction	Community and culture centered businesses
Values-based technology regulation	Privacy and Trust
Multi-stakeholder trust	Open internet
Privacy risks related to Covid contact-tracing technologies	Linguistic and cultural difference/ diversity
Infringement on civil liberties, including the freedom to gather/protest	Non-commercial public spaces
Misinformation spread via social media	Public ownership of platforms
Agreeing to disagree	Wild forests and green ecosystems
Tolerance	Cheap natural resources
Intergroup interaction	Press freedom

Deliberation	Editorial control
Civility	Mainstream media
Citizen voices	Diversity of tech companies
Generative internet	Internet-free communities
Institutional trust	Loyal opposition
Civil engagement online	Free flow of data
Knowledge persistence	Strong, independent unions
Cultural diversity and micro-cultures	Non-western knowledge systems
Traditional, local businesses, e.g., hawker centers or mom-and-pop businesses in Singapore's Little India / Chinatown, being displaced by larger chains and online stores	Mobility of international talent, as immigration becomes politically sensitive in Singapore
(Chinese) dialect groups in Singapore, as many from the younger generation only speak English and Mandarin	Communal spaces where diverse groups can interact, as society becomes more stratified / more interaction takes place online
Higher education that isn't solely focused with graduate employability and 'rankings'	Meaningful transparency from decision-makers and institutions
Citizen science/Public participation in shaping science & technology projects	Faith in meritocracy and the belief that "I can succeed in the system" / "the system works for people like me"
World Trade Organization	Small E-Commerce Platforms
Common Rules for Digital Trade	Government managed e-commerce platforms
Free Cross-Border Data Flows	

flexible hours   emic approach   public policy   different v
based technology   remote work   supplies chain   workpl
code of conduct   dispute resolution mechanism   contribu
free internet   taking & entrepreneurship   impact of ai
global south tech   online social contact   enviornmental impact
global internet code   tech labor protection   digital ecosystem
virtual space   connected network society   public digital infrastructure   ethical ai
algorithm audit   south tech regulations   distribution of aid   digital privacy
rights of privacy   vision of development   data provenance
ecological paradigm   friendly data centre   social welfare   jobs design
independent local journalism   human rights   predictive analytics
western epistemology   reflective practice   youth participation

EMERGENT TRENDS

Right of privacy generally (not data protection)	Emic approaches to tech futures which build on fundamentally different visions of development, progress and world-making
Global code of conduct for user behaviour on the Internet	Youth participation in imagining, designing and shaping tech futures
Societally-aligned incentives for technology companies (rather than profit)	Public Digital Infrastructures
A common dispute resolution mechanism for the Internet	Reduced barriers to entry in digital ecosystems for small players
Climate-friendly data centres	Non-virtual and digital spaces to stay connected and "earthed"
Technology transfers and knowledge sharing between countries	Flexible citizenship
Leverage predictive analytics to optimize supply chains	Global South tech regulation

Mobile wallets to facilitate distribution of aid/social welfare to vulnerable populations	Tech labor protections
Micro mobility	Digital privacy
e-CNY (and digital currencies more broadly) can increase transparency, but risks of privacy loss	Free internet
online social contact	Digital human rights
depolarization	Workplace democracy & cooperative ownership
depolarization	Cybernetics and/or automated decision-support for public policy (e.g. Cybersyn!)
connected network society	Contributory justice in job design -- each job should contain an equal mix of 'high-valued'/creative tasks (strategizing, decision-making, etc.), and repetitive, 'lower-valued' tasks (e.g. cleaning, filing, etc.)
serendipitous exposure	Terraforming/Geoengineering
Human-algorithm feedback loops	Lottocracy
Environmental impact of AI-based technologies	Independent local journalism
Data provenance	The right to privacy (which Singapore does not currently recognize)
Impact assessments and algorithm audits	Risk-taking & entrepreneurship in the vein of Silicon Valley-style innovation (as Singaporeans often put more stock in "not falling off the path" rather than building something new)
Interoperable standards for ethical AI	Remote work and flexible hours for employees
Non-western epistemologies in technology	Algorithmic fairness, especially w.r.t. race/ethnicity and policing
Regulatory paradigms for non-human actors	Inclusive Digital Growth
Native-web, an internet that works for non-English speakers by design	Low Cost SME Trade
Techno-ecological paradigms	Common Rules for Cross-Border Data Flows
Disconnection, leisure and self-reflective practices to pause, reflect and reground our relationship with our bodies, minds and the communities we inhabit.	Improved SME (women, indeigenous) participation on international digital trade
Consistent approach to taxing the digital economy and platforms	

DISCUSSION: FINDING THE MISSING LINK

A list of discussion points raised by workshop participants during a facilitated session are reproduced below. These have been lightly edited for brevity. It is also noted that the discussion presented a range of ideas and multiple perspectives that may be in agreement, or in tension with others points raised.

THE ENVIRONMENTAL IMPACT OF ARTIFICIAL INTELLIGENCE

- Values and principles
    - Technology companies could provide greater transparency and reporting on energy to better track their environmental footprint.
    - Creating standards for environmental impact would be beneficial.
    - Third-party regulatory bodies help promote the uptake of environmental impact assessments.

- Technology
  - Continue innovation and investment in quantum computing to create less energy intensive systems.
  - Increased optimisation of machine learning algorithms, as well as data processes.
  - Proof of work remains a fundamental issue in de-centralised technologies such as blockchain networks (e.g. Bitcoin).

- Business models & supply chain
  - Identify mechanisms that enable the traceability of export/imports and their origins.
  - Increased transparency framework for carbon offsets to prevent garbage dumping and activities that encourage 'paying to pollute'.
  - Introduce cost models for companies through financial and regulatory instruments to ensure compliance with environmental standards; e.g. specific levies, like a carbon tax, equivalent to the gross amount of compute.

PRESS FREEDOM

- Advertisement driven media and business models:
  - Work needs to be done to create new operations and business models for media that is less reliant on newspaper advertising
  - TikTok and Youtube - the middle value of journalism vs content; previously advertising in newspapers via subscription; with media companies the business model needs to evolve.
- Tools
  - Platforms to ensure that journalists have the freedom to do the work they do and unlock payment channels.
- Governance
  - Who determines the rules of the game? Should any organisation or state or corporate determine what is considered newsworthy?
  - Misinformation policy at large social media companies cause more harm through boosting certain information than content takedowns.

NON-WESTERN EPISTEMOLOGIES IN TECHNOLOGY

- Values and principles
  - Acknowledge, explicitly define and critically consider value sets and decision-making principles.
  - Question whether access to technology is 'good'; there is a general assumption that access to technology is always positive.
- Tools
  - Is there a particular way to help indigenous communities relate to each other and build community and the environment with community based initiatives. A community managed cryptocurrency may be designed to help address this.

MULTI-STAKEHOLDER APPROACHES

- Governance
  - Multistakholder dialogue has become a proxy for elite opinions, techno- solutionism and top-down approaches to governance.
  - Improvement in systems and organisations could bring in formal feedback loops/
  - Youth participation, and a focus around business practices is needed.

PUBLIC DIGITAL INFRASTRUCTURE

- <u>Technology</u>
    - Access to the digital ecosystem could have multiple layers so that small digital players can access a particular layer; e.g. payments via Whatsapp route through a particular protocol (that is linked with a payment/incentive), which intersects with government protocols that route through the network.
- <u>Values and principles</u>
    - Definition of 'public' should be determined by a specific list of values and agreed-to principles such as open source, radical transparency, and interoperability.
    - Definition of 'public' needs to evolve to go beyond only government-led public infrastructure to a more community based approach.
    - The neoliberal idea/concept of a 'small state' should be resigned.

- <u>Governance</u>
    - Competition law could be redefined to focus on public digital infrastructure.
    - Vulnerable groups and communities to be included in the design process.
    - The creation of auditing tools for algorithms and data in public digital infrastructure projects.

DIGITAL PRIVACY AND ANONYMITY

- Governance
  - Emergence of governments as the key mediators of digital privacy is not benign and poses risks to individuals.
  - Third-party data sharing without user or citizen consent needs to be targeted at technical and legal levels.
  - Meaningful remedies for data abuse for users who suffer from data breaches or losses could be managed by third party independent auditors.
- Values and principles
  - Need better narratives around privacy and why privacy matters packaged in ways that are accessible to users e.g. a privacy themed party that educates attendees on specific app-based risks, exploits, and fears.
  - More access controls offered to users as a default
  - To prevent context collapse it is okay to be anonymous on one site but not another. Preserve it in contexts where it is important, for instance an individual is at risk of being traced and punished despite their actions in the public interest e.g. whistleblowing.

INCLUSIVE DIGITAL GROWTH

- <u>Values and principles</u>
    - Need to evaluate stereotypes about 'digital natives' that can be outdated and problematic.This is important because there are knock on effects to the design of products and policy-making for these audiences
    - 'Techno-solutionism' is a problematic mindset that encourages the creation of new technology products built onto or from existing platforms without understanding the root social issues.
    - The deployment of 'parachute consultants' to diagnose problems and propose technology solutions needs to be discouraged
    - Rent-seeking taxes on digital transactions by governments that hurts users on the lower end of the social-economic base needs more attention.

DOLPHIN TANK

The final phase of the workshop is Dolphin tank. A play on the reality show Shark Tank, popular for a hostile startup pitch review, the Dolphin Tank can be seen as a more collaborative and open space for constructive dialogue and feedback for scholars and academics trying to think through and design solutions for difficult problems.

Participants were given the opportunity to choose one of three project types, for example:

- Build a product: an app, tool, platform
- Civil society tactic: an advocacy campaign, an organisation
- Academic proposal: a research proposal

They had a total of three hours to create their proposal and deliver their 10 minute presentations to a panel of two experts Jack Qiu, Professor, Department of Communications and New Media, and Malavika Jayaram, executive director, Digital Asia Hub.

GROUP 1

Members: Jennifer, Josephine, Cathy, Tristan, Sebastian, Shyam
Imagining Degrowth: co-creating a sustainable technological future

Statement of Problem

Young people are not engaging critically with their world and in particular with the things they consume. Take for example a smartphone. A device they use throughout the day, everyday, but they have little awareness about what goes into its production. For instance, the labor involved in mining and manufacturing, the minerals and natural resources inputs into the manufacturing of components like the chips, display, and batteries, the supply chain and mobility required in the process of getting the device into their hand, etc.

The spaces where decisions are made to shape standards, policies, and regulations that govern the manufacturing of smartphones tend to also be detached from the lives of people that are the end users of these devices. The lack of input or feedback from users into policy is a longstanding problem and contributes to the lack of sustainable solutions. We are losing spaces to build things together.

This is at the center of this initiative: how to create more sustainable long term solutions that ensure that all of the broad set of stakeholders, especially those that are often excluded from policy making spaces, can actually imagine and build a world that is more sustainable.

Initiative: A game to score smartphones on sustainability

A gamified score model for designing phones that are more environmentally sustainable. The score would consider all components of the phone:

- the main components such as chips, camera, display, battery, etc.
- Inputs such as the minerals, the location and extraction process, the processing power, etc.
- The ease of repairability.

A set of modules

We are proposing the creation of a set of modules that would allow anybody to think more critically about the iPhone parts, the UX, and any other parts of the tool.

Social Media campaign

The score will be something that they share quite easily on social media and customize. The campaign will initially be pushed by the team by bringing into play KOIs (key online influencers) to get people to engage with the content, share it with their networks, and bring people across different platforms and environments together.

Future vision and roadmap

The focus first is on the steps we need to take to be able to develop a successful version of this gamified smartphone score. We will focus on the ideation, design, and launch of the game, and then creating A/V content around the game, then we intend to connect this with the decision making spaces towards influencing institutions and policies.

Expanding our vision into the next decade, imagine a world where a majority of people are thinking more critically, not just about the way they develop their phones, but the supply chains of food, energy, semiconductors, etc. This is a collective attempt to consider and imagine different types of futures where people can compare products and services based on their adherence to sustainability and have more choice to build a more sustainable degrowth mode.

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GROUP 2

Members: Group members: Zach, Clara Gillispie, Devesh, Tatiksha, Cleve, Kathy
Public2: A framework for interrogating the 'public' in digital public infrastructure

Statement of Problem

Today many governments around the region are introducing technology platforms that are considered to be public digital infrastructure. However, there is a lack of a common consensus of what is "public" and ways to interrogate the degree to which a platform is "public". This brings several questions:

- power: who gets to build, who gets to decide what infrastructures get built, what kinds of things get left behind, whose rights are protected (or not)?
- where in the process – from design to implementation and maintenance– is there public consultation happening in any verifiable or meaningful way.
- data practices: What kind of data practices does a public infrastructure really have? Who does that data finally go to? Does it go to the government or private sector vendor? How are the relevant stakeholders held accountable?
- how do you account for the diversity of outcomes or and missions that different communities might want to have.

Initiative: Creating a framework of indicators and processes to help interrogate the 'public' in digital public infrastructure

Digital public infrastructure must be more than just a buzzword. Governments, or other communities, should not be able to simply put the stamp to declare a platform is 'public' with a variable consensus of the meaning behind it.

- Public2 is a series of indicators that are citizen led and dynamic that evolves over time.
- The indicators are designed to contribute to a productive on-going discussion among multiple stakeholder groups in civil society.
- They are meant to be multidisciplinary that reflect the complex inputs and interplay between humans and computer systems.
- Overall the framework makes space for different communities within Southeast Asia to create a conversation for what constitutes public in a regional and local setting.

Framework of Indicators that make up Public2

- **Feedback loops/consultation**: consultation mechanisms of feedback loops from users
- **Management:** Who actually owns the day-to-day operations? who are the people involved in its decision making/ agenda setting.
- **Openness**: How open is this infrastructure e.g. data, APIs, code, etc.
- **Auditability**: system of checks and balances in place once implemented through which people can interrogate practices constantly
- **Data:** Who does that data finally go to? Does it go to the government? How is the government being held accountable? Or does it end up in the control of third parties or private corporations that implemented a project
- **Non-excludability & access**: Which communities or individuals are unable to access the platform, either de-jure or de-facto.

Roadmap

We created a Google document to start collecting ideas. It will be made open to gather people's input towards shaping the indicator.

We envision the actual process of generating this framework to be open, transparent, and in consultation with as many groups and communities as possible. We plan to introduce different mechanisms such as opportunities for public voting, weighing in on categorizing, and feedback and comment periods. It is not just about the majority opinion but also capturing risk and the abuse of minority groups as well. We are aware that in these early stages the process is very public but over time, especially as it grows to different regions, it may end up as a very centralized top-down framework that benefits certain stakeholders. We will create a governance structure that will be designed to guard against this risk of centralisation.

WORKSHOP PARTICIPANTS

Clara Gillispie

Clara Gillispie is a Senior Advisor to the National Bureau of Asian Research (NBR). She is also a 2019–20 and 2020–21 recipient of the Korea Foundation's prestigious "U. S. Next Generation Research" grant., whose support helped to enable field interviews and other research for this report.

Ms. Gillispie's subject-matter expertise covers topics ranging from technology policymaking to energy security to geopolitical trends in the Asia-Pacific. She is the author of numerous policy essays and reports, including "Networked Benefits: Realizing the Potential of 5G in South Korea" (NBR, 2020) and "South Korea's 5G Ambitions" (Korea Economic Insti- tute of America, 2020). Ms. Gillispie is regularly called on to directly brief her research and analysis to U. S. and Asian government officials, senior industry representatives, and the media, including the New York Times, Washington Post, and NPR's Marketplace.

Cleve V. Arguelles

Cleve V. Arguelles is Assistant Professorial Lecturer at the Department of Political Science of De La Salle University.

His research on the varied challenges to democracy in Southeast Asia including cli- entelism, disinformation, and populism have been published in the journals Asian Politics & Policy, Democratic Theory, Philippine Journal of Health Research and Development, Refeng Xueshu, and Review of Women's Studies. He has a BA and MA in Political Science from the University of the Philippines and the Central European University, respectively. He is presently PhD candidate at the Department of Political and Social Change at the Coral Bell School of Asia Pacific Affairs of the Australian National University.

Devesh Narayan

Devesh is a Research Assistant at the Centre on AI technology for Humankind, at the National University of Singapore.

His background is in engineering and moral philosophy. His research focuses on the use of AI in workplace contexts, particularly on human-AI trust, AI fairness and ethics, and algorithmic management. He is particularly interested in how technology workers attend to the ethical aspects of their work, and how collective organizing efforts in the technology sector might influence the development and deployment of digital technologies towards prosocial ends.
He is also currently pursuing an MA in philosophy at the National University of Singapore, where he writes about the normative underpinnings of Explainable AI.

Jennifer Widjaya Yang Hui

Jennifer Yang Hui is an Independent Analyst working on risk-related issues at the intersection of technology and society. She was previously an Associate Research Fellow with the Centre of Excellence for National Security (CENS), S. Rajaratnam School of International Studies (RSIS), Nanyang Technological University (NTU), Singapore.

Her research interests are technology and crowdsourcing in the digital age, social media and digital politics in Southeast Asia, with a special focus on Indonesia.

Josephine Seah

Josephine Seah is a PhD candidate in the Department of Sociology at the University of Cambridge.

She is interested in smart cities, digital sociology, and algorithmic cultures. Her doctoral research examines how the "smart citizen" is constructed in the creation of the smart city and how residents in such cities make meaning out of data-driven technologies that make up smart city projects.
She holds a BSocSc in Sociology from the National University of Singapore and a MSc in Political Sociology from LSE.

Kathy Zhang

Kathy Zhang is the founder of "Mobility Futures", a research initiative at Columbia's Center for Sustainable Urban Development established to examine how proactive policies for emerging technology can support a more sustainable and equitable transportation system.

Sebastian Cortes

Sebastian Cortes-Sanchez is Associate Director at the Asian Trade Centre (ATC).

He manages and conducts trade policy and supply chain related research and works with clients on trade agreement optimisation and supply chain diagnosis, strategy and network design. As part of his work at the ATC, Sebastian is responsible for managing and developing research projects that assist the as- sessment and implementation of national and regional trade and logistics facilitation frameworks. Examples include the identification of barriers to the implementation and the development of reform frameworks for logistics and trade facilitation infrastructure at the ASEAN and ASEAN member state levels
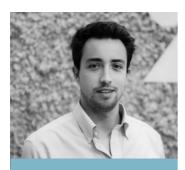
Shyam Krishnakumar is a technology policy consultant and researcher whose work engages with emerging technology in the Indian context.

He has worked with key Indian think-tanks and consults on technology policy for organizations including the Eurasia Group. Prior to this, he co-founded EduSeva, an ed-tech start-up focussed on providing world class- education at the grassroots. Shyam is a Computer Science graduate and holds a Masters in Political Science with a specialisation in International Affairs. He runs the InTech Dispatch, a fortnightly on emerging tech and society in India.

Shyam Krishnakumar

Titiksha Vashist is a researcher and consultant working on implications of emerging technologies in India. She is co-founder and Editor of The InTech Dispatch, a publication covering India's digital transformation and its impact on politics and society, covering tech and geopolitics, 5G, and fintech. She holds a Masters in Political Science and International Affairs from Jawaharlal Nehru University, New Delhi.

Titiksha Vashist

Tristan Chabas is pursuing a Masters of International Affairs at Columbia University's School of International and Political Affairs (SIPA), specialising in International Finance and Economic Policy.

He recently completed an internship at the United Nations Economic and Social Commission for Asia and the Pacific (UN ESCAP), where he researched the ways in which governments are using technology to combat COVID-19 and its adverse effects. Prior to SIPA, Tristan spent two years working at the French Embassy Trade Office in San Francisco, serving as a consultant to French technology entrepreneurs that were seeking to expand their businesses in North America.

Tristan Chabas

Zach Tan is a PhD student at Cornell University. His doctoral research focuses on data governance, digital platforms, and the organization of work and technology. He holds a MSc from the University of Oxford and a BA from Wesleyan University.

Zach Tan

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Years of Political Dialogue Asia

ABOUT KONRAD ADENAUER STIFTUNG

Named after its first chancellor of Germany, Konrad Adenauer Stiftung (Foundation) is committed to achieving and maintaining peace, freedom and justice through dialogues and education nationally and internationally. Together with regional actors from politics, business, academics and civil societies, KAS "Political Dialogue Asia" (KASPDA) promotes the exchange of knowledge and foster fruitful dialogues between Asia and Europe and within Asia. One of the core topic is digital transformation, in which KASPDA tries to deepen the understanding of the impact of the digital technologies and provide insights for diverse key stakeholders including government agencies, civil societies and citizens.