



WE ARE A THINK-AND-DO-TANK SPECIALIZED IN QUESTIONS OF IMPACT AND GOVERNANCE OF EMERGING TECHNOLOGIES THAT FUNDAMENTALLY TRANSFORM THE WAY WE LIVE. WE HELP DECISION-MAKERS CAPTURE THE UPSIDES AND LIMIT THE RISKS OF HIGHLY DISRUPTIVE TECHNOLOGIES.



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Nicolas Miailhe
President & Co-Founder

Dear Friends of The Future Society:

Welcome to our inaugural Future Society annual report!

We are excited to bring you a round-up of the progress our team has made in 2017, which brought us closer to a future we collectively desire and made us deeply reflect on our human identity.

In many ways, 2017 was a revolutionary year for Artificial Intelligence. We became palpably aware of its massive benefits and challenges, in particular to maintain individual privacy and dignity as well as to manage the transition to a new economic paradigm. We have been hard at work through our research, convenings and educational programs to advance collective understanding on these key questions.

Our research projects continue to reverberate global attention with the publications of our report to the OECD, on "Making the AI Revolution Work For Everyone", our FACTS Report 2017 that focused on "Artificial Intelligence & Robotics in the City" as well as Nicolas Economou's, Chair of our Science Law and Society Initiative, publication of how "A 'Principled' Artificial Intelligence Could Improve Justice."

Over the past year, we have also been expanding our work in the field of bioethics. Through active participation in discussions on impact of synthetic biology, speaking engagements on gene editing, helping design a research program at Harvard on Bio & Society and publishing a range of articles on bioethics, The Future Society is poised to lead a global discussion on this rapidly evolving subject. In the coming year, we look to build out our capabilities in bioethics through dedicated research and convenings.

Finally, we made strong headway with in expanding global partnerships, especially in China and the UAE. Through our rich presence at forums, such as Bytedance/Toutiao Global Festival for AI, and working with Tencent and Alibaba, The Future Society established itself as a pioneering think tank that connects global thought on AI.

Looking to 2018, we are excited to continue this vital momentum. With several global convenings, events and research projects already in the pipeline, we are certain this is going to be a landmark year for The Future Society to shape global dialogue, produce actionable insights and be a key proponent of navigating the emerging techno-sciences towards a future that works for all.

From the entire The Future Society team, we wish you a great year ahead!



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Al Initiative in 2017

The Al Initiative, created in 2015 within The Future Society, has now reached a truly global level and recognition.

MARCH 2017



We attended the "International Forum Toward AI Network Society" held at the University of Tokyo on the invitation of Japan's Ministry of Internal Affairs and Communications (MIC). The event was held shortly after Japan introduced the concept of "Society 5.0" "as a way by which to guide and mobilize action in science, technology, and innovation to achieve a prosperous, sustainable, and inclusive future that is, within the context of ever-growing digitalization and connectivity, empowered by the advancement of AI"

JUNE 2017

The Al Initiative was heavily featured in the French Parliament Report: "Toward a Controlled, Useful and Demystified Artificial Intelligence" written by the Parliamentary Office For Scientific and Technological Assessment (OPECST).

MAY 2017



We partnered with the Robert Strauss Center, the IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems held its second face-to-face meeting to iterate their document Ethically Aligned Design: A Vision for Prioritizing Human Wellbeing with Artificial Intelligence and Autonomous System.

The Al Initiative was present through Cyrus Hodes and Nicolas Economou as well as other Al Initiative Advisors, including Arisa Ema (Tokyo University), Nell Watson (Singularity University), Richard Mallah (Future of Life Institute) and John Haven (Executive Director of the IEEE Global Initiative for Ethical Considerations in Artificial Intelligence and Autonomous Systems).



SEPTEMBER 2017

On September 21st, we had the 3rd Harvard Kennedy School Forum on the topic of future of work titled "Will you still have a job when the robots arrive? Al & its impact on the workforce." Our panel included Jason Furman, Professor of the Practice of Economic Policy, Harvard Kennedy School, Chairman, White House Council of Economic Advisors (2013-2017), Francesca Rossi, Al Ethics Global Leader, IBM Research, Wilson White, Public Policy and Government Relations Senior Counsel, Google, Greg Ip (Moderator), Chief Economics Commentator, The Wall Street Journal.



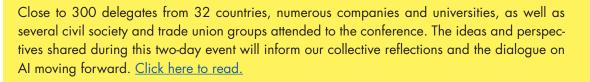
OCTOBER 2017

The Al Initiative was a partner of Al and Society: Symposium on Al and Society taking place in Tokyo on "Creating a Global Al Community and Bridging Academia and Industry." Al Initiative Advisors John C. Havens (IEEE) and Arisa Ema (Tokyo University) where there among leading Al experts and researchers.

The Al Initiative submitted written evidence to the UK House of Lords Select Committee on Artificial Intelligence: <u>Click here to read.</u>

The Al Initiative at the OECD conference on "Al: Intelligent Machines, Smart Policies".

Nicolas Miailhe made the case for Regulatory Sandboxes: a set of rules that allows innovators to test their products/business models in live environment without following some or all legal requirements, subject to predefined restrictions.





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Al Initiative in 2017 and 2018

NOVEMBER 2017



The Al Initiative at the Digital Society Conference with the Bundeswehr at ESMT in Berlin. Cyrus Hodes moderated a panel discussion: "Should we allow Al in defense technology?" Click here to read.

DECEMBER 2017





Al experts and innovators from China and around the world gathered in Beijing for a day-long forum on the future of artificial intelligence and the responsibility of global corporates and industry leaders to responsibly manage the application of these technologies. The inaugural Global Festival for Al Ideas was organized and hosted by Bytedance, the industry leader in Al technologies on content platforms enabled through machine learning.

The exclusive gathering brought together leading international and local scientists, policy makers and bodies, government entities, industry executives, investors and key thought leaders in the field of artificial intelligence technology, ethics and policy, women in tech, education, as well as music, arts, the future of AI and the future of humanity.

FEBRUARY 2018

Cyrus Hodes moderated at the Milken Institute MENA Summit in Abu Dhabi a panel on "The Inclusive Digital Revolution: Making A.I. and Next-Gen Tech Work for Everyone". Panelists consisted of: Iyinoluwa Aboyeji, Co-Founder and CEO, Flutterwave; Co-Founder, Andela, Court Coursey, Managing Partner, TomorrowVentures, LLC, Daniel Goldin, Founder and CEO, KnuEdge; Former NASA Administrator, David Kenny, Senior Vice President IBM Watson and Cloud Platform, IBM. The panel discussed the dramatic impact of the digital revolution as well as its vast, untapped potential to change lives through advances in AI, to better understand where the next wave of opportunities and challenges present themselves, and how can the ongoing transformation to the way we work, live, thrive and communicate be shared globally. Click here to read.



FEBRUARY 2018

The Al Initiative helped convene the 1st Global Governance of Al Roundtable at 2018 World Government Summit, led by the UAE Minister of State for Artificial Intelligence. Preeminent global Al experts from over 20 countries gathered in the UAE to launch the inaugural Global Governance of Al Roundtable, a day-long forum organized under the auspices of the UAE Minister of State for Al. The Al Initiative of The Future Society was invited to contribute to the organization and deliberations of this groundbreaking convening.

Organized as part of The World Government Summit, the Global AI Governance Forum took place on February 10 in recognition of rapidly evolving AI technology and its implications for government, business and society. In organizing the roundtable, the UAE and The AI Initiative sought to facilitate dynamic policy recommendations and create a roadmap for ultimate adoption by nations around the world. The roundtable included almost 100 of the world's foremost thinkers, leaders and practitioners of AI in one room – to contemplate and develop ways to help guide thinking about how to navigate the technological explosion.



OUR TEAM







Global Civic Debate on Artificial Intelligence

On September 7th, we launched a global civic debate (www.aicivicdebate.org) on the governance of artificial intelligence to better discuss and understand what the AI revolution is, how it is playing out and its consequences. Our goal is to create a global conversation that seeks to align value systems and transcends civilisational boundaries in order to govern AI in a manner that maximizes benefits, minimizes risks and ensures that these benefits reach everyone.

We asked a community of experts, academics, policymakers and civil society tough questions on how AI is impacting all of us. For instance, how can we apply AI to increase access to credit, insurance or personalized medicine for instance without sacrificing our privacy and dignity? How do we revamp our labor markets and education systems to deal with this massive automation wave? How do we prevent an arms race or ensure that these systems are safe and benefit humanity?

> The **7 month** long collective intelligence exercise garnered significant attention from key stakeholders across the world;





To ensure our debate captured diverse perspective, our platform was available in

5 KEY LANGUAGES

ENGLISH, FRENCH, JAPANESE, CHINESE AND RUSSIAN.

Through a series of online and offline events, the civic debate has so far engaged

OVER 400 DIVERSE THOUGHT LEADERS

posting over 2,500 PROPOSALS on our curated online forum, with over 1000 LEARNING HOURS spent on the platform.



We are proud to have assembled **17 PARTNERS** from across the world who are avidly helping us drive the discussion.

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Our initiative is scheduled for completion in March 2018, after which we will harvest, synthesis and create actionable policy recommendations. This will culminate into a report deliverable presented to various national and international governing bodies, whom we are already working closely with, to shape the governance of Al. We are also excited to continue our work in engaging informed citizens on this topic, with the aim of producing short video synthesis that layout key insights revealed through collective intelligence, so watch this space!

STATS

Over 5.5 million impressions and 1.3 million accounts reached on Twitter with

#AlforGood &

#ImaginariesofAl



"Although the strong A.I. would not emerge in this century, the weak A.I. could transform the day life of our human beings and the economic system of capitalism, and the meaning of humanity."

KeeYoung Yoon

"I agree that allowing a greater "flow of data" will help limit A.I.'s vulnerabilities to false data, in addition to the equally important implementation of "critical thinking" skills."

— Ria

OUR TEAM









Follow



Launch of Science, Law & Society Initiative

The Science, Law & Society Initiative (SLS) is dedicated to ensuring that the legal system harnesses the power of techno-sciences, including artificial intelligence, and mitigates their risks to the citizen. We do so through broadly inclusive consultations, research, advocacy, and the design and implementation of real-world projects aimed at assessing the impact, benefits and risks of delegating to machines decisions that affect humans. In November, a Science, Law and Society Initiative was launched in Brazil which includes Federal Judges Isabela Ferrari, Rafael Leite Paulo, Pedro Felipe Santos and Erik Navarro Wolkart.

SLS articulates its vision as

A world where shared moral norms and the effective governance of techno-sciences safeguard and foster the fundamental rights, dignity, and freedom to flourish of all humans."

We have established a framework to approach the governance of AI, and, within that framework, specify the core values that motivate SLS's AI governance efforts as well as the high-level principles that are the touchstones for more specific governance codes.

ABA Journal published the first SLS-branded thought leadership piece on AI, the law, and ethics titled <u>A 'principled' artificial intelligence could improve justice</u> and written by Nicolas Economou, the Chair of the SLS initiative. Additionally, <u>AI-Ethics</u> published a post to round up some prominent draft principles and thoughts on AI and Law, including <u>reference to the ABA publication</u>.

Currently, Dr Mark Munoz and Professor Al Naqvi are co-editing a book titled "Handbook of Artificial Intelligence and Robotic Process Automation: Policy and Government Applications." for which Nicolas Economou, is contributing a chapter on "Law and liability in the era of Al".



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Our Recent Publications

OECD

The Future Society was commissioned by the OECD to produce a robust analysis and a guiding practice report titled "Making the AI Revolution work for Everyone". Our analysis, which covered a range of topics from definitional boundaries of AI to addressing the policy challenges this revolution presents, provided detailed insights on AI advances to help shape economic policies. This high-impact, multi-disciplinary research informed policy makers confronting technological change and was distributed to all 35 member states. Read the full report here.





FACTS Report

FACTS Reports is an international, peer-reviewed journal, devoted to promoting field-based activities with open access around the world. In 2017, alongside the Veolia Institute, we published a report on "Artificial Intelligence and Robotics in the City," which focussed on understanding what the AI revolution means for our cities; both in terms of opportunities for sustainable urban development as well as the risks it presents. Our analysis brought together thought leadership from AI experts, academia, civic tech and public sector to holistically assess implications of this revolution for future cities. Read the full report here.

AI Principles

ABA Journal published our Science, Law & Society Initiative's thought leadership piece on AI, the law, and ethics titled <u>A 'principled' artificial intelligence could improve justice</u>, written by Nicolas Economou, the Chair of the SLS initiative. These principles explore the extent to which societies should delegate to machines decisions that affect people. This question permeates all discussions on the sweeping ascent of artificial intelligence. Additionally, <u>AI-Ethics</u> published a post to round up some prominent draft principles and thoughts on AI and Law, including reference to the <u>ABA publication</u>.



2017 annual report

The Future Society at Harvard Kennedy School



Silicon Valley Trek

Our Silicon Valley Trek saw 27 Harvard and MIT students engage with organizations, and innovation and tech leaders in San Francisco city, and Silicon Valley over three days in January. This exciting learning expedition consisted of a day hosted by Mozilla, where participants met with representatives from Wikimedia, Github, Freedom of the Press, Urban Innovation Fund, Mozilla, and many more tech-stars! The team visited Facebook, Google, and the NASA Ames Research Center and had the privilege to talk with venture capitalists at forward-leaning 8VC, Mapbox, Internet Archive and Uber.



Sunday Salons

Taking inspiration from the philosophers of France, and coffeehouse gatherings throughout history, TFS@ HKS regularly convenes to discuss the future of today's cutting-edge issues. In Fall 2017, the student society held three Sunday Salons around Cambridge, exploring "The Future of Privacy", "The Future of Medicine," and "The Future of Capitalism."

OUR TEAM





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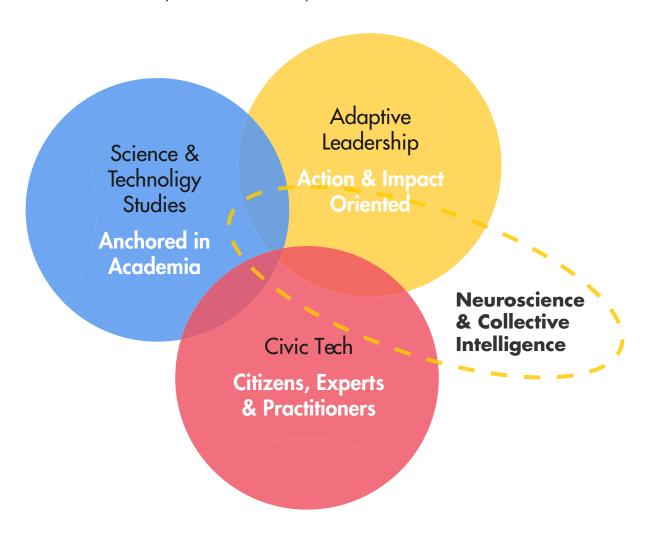


Research Methodology

We at *The Future Society* are committed to producing high quality research to advance the global understanding of the context, dynamics and consequences of emerging technologies, including artificial intelligence, biotechnology, blockchain, neuro-technologies, and others.

We have developed a methodology that relies on the integration of three complimentary pillars:

- 1. Academic anchoring in the field of "<u>Science & Technology Studies</u>" acknowledged for its excellence;
- 2. Action-oriented focus building upon the "Adaptive Leadership" framework and change management pedagogy widely acknowledged for their impact;
- 3. Deep interdisciplinarity through a combination of the latest civic technologies, open-innovation tools and collective intelligence frameworks that expands the scope and depth of our research well beyond traditional expert circles.



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This unique methodology unlocks the potential for a rigorous understanding of governance and impact of the techno-scientific revolution. With the expansion of digital and social media to all corners of the world, we believe that the power of collective intelligence is a ripe opportunity to engage large and diverse communities to shape our future.

Conducted through a variety of on-line and off-line initiatives, such as discussion forums, workshops and roundtables, we curate unique collaborations by bringing together stakeholders from diverse backgrounds. We seek deep insights through constructive cross-pollination of views, knowledge and expertise. We engage in collective intelligence through pro-active community building that brings together a diverse set of renowned scholars, scientists, practitioners, policy-makers, entrepreneurs, designers, thought-leaders, artists, activists, regulators, investors, and industry leaders from around the world.

As a respected global forum, *The Future Society* has a strong presence in Europe, Asia, the Middle East, North and South America, as well as an ongoing base of support and engagement at Harvard, MIT, IE Business School, Science Po, ESMT Berlin, the Wilson Centre, University of Tokyo, Tsinghua University and many others leading academic institutions and think-tanks. Through this vast network, we are primed to bring a unique interdisciplinary and trans-civilizational approach to each of our projects.

Over the past year, our various research activities have culminated in high profile conferences and workshops with world leading governments, pioneering research reports, policy papers and op-eds submitted to global leaders, as well field trips and collaborative research projects around the world.







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The Future Society around the World

SLS launch event (Brazil)

SEPTEMBER 7, 2017

Debate Launch (Global)

DECEMBER 18, 2017

IEEE Webinar (Global)

Harvard Forum

SEPTEMBER 7, 2017

Will You Still Have A Job When The Robots Arrive? Al & Its Impact on the Workforce¹

SPRING 2017

Artificial Intelligence & Bias:
Past, Present & Future²

OCTOBER 17, 2017

Al Panel (Harvard)

OCTOBER 21, 2017
OECD Panel (Paris)

DECEMBER 11, 2017

Barcelona Presentation

OCTOBER, 2017

AI & Conflict Panel (London)

NOVEMBER 23, 2017

WFS Panel (London)

Workshops with Alibaba (London)

DECEMBER 8, 2017

Ditchley Conference (Oxfordshire)

SEPTEMBER 3, 2017

Japan Workshop

SEPTEMBER 16, 2017

Japan Al Dialogue

SEPTEMBER 16, 2017

Japan Al Dialogue

Working with the Minister for AI to develop national AI strategy (UAE)

Speakers: Jason Furman, Professor of the Practice of Economic Policy, Harvard Kennedy School, Chairman, White House Council of Economic Advisors, Francesca Rossi, Al Ethics Global Leader, IBM Research, Wilson White, Public Policy and Government Relations Senior Counsel, Google, Greg Ip (Moderator), Chief Economics Commentator, The Wall Street Journal

²Speakers: Iris Bohnet Professor of Public Policy, Harvard Kennedy School, Cynthia Dwork Gordon McKay Professor of Computer Science, Harvard Paulson School of Engineering Alex "Sandy" Pentland, Professor of Media Arts and Sciences, Massachusetts Institute of Technology, Sheila Jasanoff (moderator), Pforzheimer Professor of Science and Technology Studies, Harvard Kennedy School

Launch of CitiX

CitiX is a non-profit interdisciplinary observatory on the potential and challenges at the heart of tomorrow Smart Cities. CitiX particularly focuses on understanding the transformative potential of technology, through its publications, and the constant update of its Innovation Radar, that maps the landscape of urban innovation.

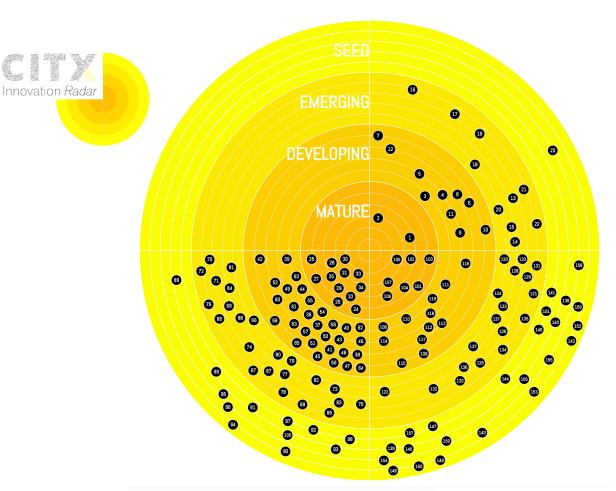
The CitiX initiative's mission is to promote inclusive and sustainable urbanization in challenging environment. It does this through advising urban stakeholders to become more innovative at delivering intelligent, inclusive and sustainable urban development at scale, especially in challenging contexts. This includes helping cities build the capabilities needed to harness strategically the power of innovation labs, data driven strategies, collective intelligence, open government, civic tech and the collaborative economy.

Benefiting from its Board of Advisors, the group gathers global leaders and experts from a wide variety of fields. Citix' members work with academics, scientists, technologists, practitioners and politicians to develop policy recommendations and design pilot projects to test out multidisciplinary innovations.

Overall, CitiX is at the forefront of innovation in the urban realm, and aims at fostering initiatives and gathering knowledge about the Smart Cities of tomorrow. Explore more at www.peopleforglobaltransformation.org



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B₂B

MATURE 1. Changing Environments

EMERGING

13. BlueLine Grid

14. CityTrackerX

16 LocalData

7. Mark43

SEED

18. Seamless Docs

21. Urban Engines

19. SeeClickFix, Inc.

DEVELOPING 3. Greater Places 4. LocoMobi Inc

5. Loveland Techn 6. MuniRent 7. OpenGov 8. PublicStuff, Inc.

9. Snaplnspect 10. Transitmix 11. Urbanflow Engine 23. Metrotech Net 12. Vacant Voices

B₂C MATURE

24. Birdi 25. Bright Farms	66. Bandwagon.io 67. Bikespike 68. Civico
26. Compology	
27. Farmigo	69. Dash Labs Inc
28. FusedCow	70. HDscores
29. HandUp	71. Kiwi Ki
30. More Aqua Inc	72. LocalMotion
31. OndaVia	73. Metropia
32. Provender	74. Mind My Business
33. Reaction	75. Modria
34. Tevatronic	76. Mozio
35. thewinddrinker	77. Park Jockey
	78. Pink Park Itd
	79. ProductBio
DEVELOPING	80. RelayRides, Inc.
36. Airware	81. Revivn
37. Architizer	82. RubyRide
38. BRCK	83. Senseware
39. ca biotics	84. Smartmumbaikar
40. e-Chromic Technologies	85. Social Bicycles

41. Enertiv 42. FirstFuel Software 43. Goal Zero 45. HEVO Powe 46. Light Sail 47. Mapillary 48. Neighbor.ly 49. Nuleds 51. Paracosm 93. Placemeter 52. Plugsurfing

53. PlumLife

54. Power Station

55. Radiator Labs

87. UniKey Technologies 88. Weathermob Inc. 89. Bridj 90. Helmet Hub 91. LOCK8

95. ShareRoller

96. Skycatch

EMERGING

B2G

114. Nest Labs 115. Notion 116. Opower 117. tado° GmbH

MATURE 101. Ag Local 102. CINTEP 103. Dropcountr 104. Lagoon 105. Rach.io 106. Sust. MicroFarms

124. Citymapper 125. DriveSafe 126. Fuse from Kynetx 127. Future Motion DEVELOPING

129. Lyft 130. ParkWhiz

EMERGING

120. August 121. Buzzcar, Inc.

122. Caarbon 123. Chai Energy

108. Acadia Energy 109. Cligk 131. Rides 132. Sidecar 133. Skylock 111. Flair Vents 112. Keen Home 113. mPowerd 134. Superpedestria 135. Waze Mobile Ltd

SEED 138. Astro 139. Automatic 140. Bitlock / Mesh Motion Inc. 141. BlueLight 142. Canary 143. Carvoyant 144. Chariot 145. ClearPath

146. Dropcam 147. Flykly 148. Fortified Bicycle 149. Getaround, Inc.

150. GetTaxi

OUR TEAM





Get in Touch

For all inquiries or requests directed to The Future Society, please send an email to info@thefuturesociety.org or visit our website at http://www.thefuturesociety.org.



