

NEW SECURITY THREATS AND OPPORTUNITIES ALERT: THE OTHER SIDE OF THE SECURITY COIN

MONTHLY ALERT, JULY 2017

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The global commentariat has relentlessly bombarded international op-ed pages with accounts of crises, risks, and global dangers. And this is not without reason: we certainly live in times of great geopolitical upheaval. But we must not lose sight of the other side of the security coin, one that recognizes societal resilience as a counterweight to conflict and as a pillar of peace. This Monthly Alert counterbalances the gloom and doom that suffuses our current Zeitgeist. It flags 10 promising global trends and highlights the opportunities they yield for the global economy, security, governance, socio-economic development and global health. These trends pose groundbreaking possibilities for policymakers and can provide new avenues for future policies to make our world a better place.

Each trend description includes hyperlinks to articles that offer background information and a list of 'must read' literature discussing their opportunities within their wider contexts.

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ADVANCED TECHNOLOGIES REJUVENATING GLOBAL HEALTH

While their boons have been widely reported on for years, there is one field in particular in which advanced technologies are expected to have a profound effect on humankind: global health. Recent innovations in the domains of [psychiatric diagnosis](#), [virtual reality](#) and [computer-assisted protein design](#) have greatly improved global prospects for human health in the near future. Today for instance, using artificial intelligence to review and translate mammograms has made the breast cancer diagnostic process 30 times faster and ensures a 99% accuracy rate. The prospects of [AI therapists](#) or [doctors](#) will only grow in the near future, and health technologies may soon be able to leverage big data to project effective treatment options [under even the most challenging conditions](#). In the future, artificial intelligence – in the forms of robot assistants or even [specialized surgeons](#) – can be used to alleviate labor shortages in conflict-stricken areas, enhancing development initiatives at relatively low cost. By bundling these innovative developments in development and governance policies, decision-makers and industrial leaders can capitalize on the nexus between emerging advanced medical technologies and other development approaches. A development agenda centered around improving public health infrastructure such as water and sanitation facilities [can enhance livelihoods on numerous levels](#), while the use of advanced medical technology in short-term campaigns [can improve prospects on a short time frame](#). By deploying a two-pronged approach to improving global health, decision-makers can immediately improve access to livelihood-enhancing health services and facilities among citizens across the world while also laying the foundations for a more prosperous, and peaceful future.

Must Reads

Short Read: [Artificial Intelligence and the Coming Health Revolution](#) - Phys.org

Short Read: [Science and International Development Policy](#) - Project Syndicate

Short Read: [The Ripple Effect: Climate Change and Children's Access to Water and Sanitation](#) - UNICEF

Short Read: [Revolutionizing Global Health](#) - MIT News

Long Read: [What Doctor? Why AI and Robotics will Define New Health](#) - PricewaterhouseCoopers

TAPPING INTO REFUGEE FLOWS

With conflicts and instability surrounding the European Union, refugees fleeing war, massacres, genocide, famine, droughts, floods and overall scarcity have ignited debates among EU member states on how to address the social, political, and economic effects of these massive inflows.

The potential benefits associated with migration often get lost in these debates. Yet empirical studies have found that migrants are [net contributors to public budgets](#) and are [associated with innovation and productivity growth](#). In addition to their efforts to address labor shortages across various key national sectors, European governments and corporations can also tap into migrant perspectives to [improve disaster risk reduction initiatives](#), or [improve urbanization and spatial planning processes](#). Furthermore, smart migration regulations can be useful as policies attempting to block migration can [drive real wages down and impoverish labor working conditions](#). Training refugees can equip them with the necessary skills and experience to rebuild their home countries upon their return. Furthermore, the use of [advanced simulation technologies](#) in tracking refugee flows can anticipatively optimize policy approaches to more effectively mitigate security risks. If public discussions can [reshape their singular focus on the negatives and threats posed by these trends to also include the opportunity side](#), Europe could also leverage the current refugee crisis to its own benefit.

Must Reads

Short Read: [Refugees Are Not a Burden but an Opportunity](#) - OECD

Short Read: [Global Compact on Migration Should Focus on Harnessing its Win-Win Benefits](#) - United Nations University Centre for Policy Research

Long Read: [People on the Move: Global Migration's Impact and Opportunity](#) - McKinsey & Company

Long Read: [How Immigration Affects Investment and Productivity in Host and Home Countries](#) - IZA World of Labor

Long Read: [Explaining the Refugee Gap: A Longitudinal Study on Labour Market Participation of Refugees in the Netherlands](#) - Journal of Ethnic and Migration Studies

EMBRACING DIGITALIZATION TO REFORM THE FRAYING SOCIAL CONTRACT

The social contract is under direct pressure due to [digital globalization](#). Yet, the [innumerable benefits that the Internet yields](#) also pave the way for more direct forms of governance, offering an opportunity to reinvigorate the social contract between citizens and (political) leaders by [implementing open digital policies](#). Today, global leaders face the task of adapting the social contract to bolster state [legitimacy and accountability](#) in the eyes of its citizens – [especially millennials](#). Revitalizing and implementing value-driven agendas and leadership methods can re-establish trust between skeptical citizens and companies and governments. By combining new approaches with digital technologies, tailor-made policies can provide platforms for greater civic participation in the public domain. With full-scale shocks and schisms occurring across the globe, [the Internet's power as a catalyst for social change](#) must be nurtured responsibly to prevent it from developing disruptively. Leveraging the robust connections and access points of the Internet can create new, equal opportunities for citizens. By embracing digital technologies and the new-age attitudes that come part and parcel with them, policymakers can reorient the virtual tides to power innovation both at home and abroad, [create more targeted policy actions](#), and capitalize on digital technologies' potential to [engage citizens directly in governance affairs](#).

Must Reads

Short Read: [How to Be a Leader in the Digital Age](#) - World Economic Forum

Short Read: [Margrethe Vestager's Speech on Social Media and Democracy](#) - European Commission

Short Read: [Mark Zuckerberg Harvard Commencement Speech Emphasizing "New Social Contract of Equal Opportunity"](#) - Facebook

Short Read: [The Digital Demos: How the Internet is Transforming the Public Sphere](#) - The American Academy in Berlin

Long Read: [From the Trials of Democracy Towards Future Participation](#) - Sitra

ENERGIZING THE POPULAR EFFORT AGAINST CLIMATE CHANGE

Modern social initiatives and innovations to combat climate change have largely been taken on by private companies, while national governments tend to play a facilitatory role. In the near future however, individuals will become key players too. Together with the increasing affordability of renewable energy technologies, the accelerating uptake of microgrid technologies will soon cause [the majority of citizens in the developed world to become clean energy producers](#). Similarly, there are efforts [pursuing the same goal in developing countries as well](#). These initiatives can improve community resilience, citizens' livelihoods, local access to socioeconomic opportunities, and overall levels of stability and security. If coupled with other innovations such as those seen recently in [desalination technologies](#), development efforts can mitigate water scarcity stresses in arid regions and counter the effects of climate change. Further innovations in market-available [small-scale battery devices](#) will [accelerate innovation in the renewable energy industry](#) and empower local and individual efforts to combat climate change by reducing reliance on centralized hydrocarbon fuel-based systems. Already, battery costs have plummeted, decreasing from nearly 900€ per kWh to less than 205€ between 2010 and 2016 respectively. With the current trajectory of renewable energy and the rise of the "prosumer", we might soon live in a future where [ordinary citizens will have a transformative impact on the global energy landscape](#).

Must Reads

Short Read: [Battery Storage: The Next Disruptive Technology in the Power Sector](#) - McKinsey & Company

Short Read: [The Power of Mini-Grids](#) - Project Syndicate

Long Read: [The Race to Solar-Power Africa](#) - The New Yorker

Long Read: [Connected Customers: The Transformation Imperative for Utilities in a Digitally Disrupted World](#) - Deloitte

Long Read: [Renewables 2017 Global Status Report](#) - Renewable Energy Policy Network for the 21st Century

THINKING GLOBAL, STARTING LOCAL

Traditional high-level R&D processes today are struggling to find the [“next big thing”](#), while urbanization and digitization processes are [powering the world’s economic growth](#), fostering aspirations for greater community involvement in the policymaking process. Although national governments are expected to tackle critical issues as they precipitate at a local level, they often lack the local knowledge to make their policy outcomes efficient. While the *glocalization* process allowed governments to refine national policies according to local characteristics, the national, or even global agendas.

Future security and development strategies adopting a multi-stakeholder, ecosystem approach should provide policy mechanisms for community-level engagement to create more effective national policy frameworks and deepen policy effectiveness. Encouraging local uptake of digital and advanced technologies will more effectively circulate top-down strategies and policies aiming to stay ahead of disruptive trends such as climate change – [as illustrated by U.S. cities’ responses to the American withdrawal from the Paris Agreement](#) – and changing demographics. Some local governments have already proactively embraced their new roles as innovators to great effect, [tailoring affordable, community-based approaches to combatting climate change, implementing “intelligent infrastructure” designed to improve disaster responses](#), and [making city planning processes more transparent using crowdsourcing technologies](#). By embracing local perspectives and capabilities, the toolkits of national governments for city- and community-level affairs can broaden the effective approaches traditionally offered to policymakers at a national level.

Must Reads

Short Read: [Cities Reimagined: Crucibles for Innovation](#) - Accenture

Short Read: [Harnessing Technology and Innovation to Save the World’s Cities](#) - Newsweek

Short Read: [The Dutch Have Solutions to Rising Seas. The World Is Watching](#) - The New York Times

Short Read: [When Artificial Intelligence Rules the City](#) - CityLab

Short Read: [Ten New Cities Join the City Energy Project](#) - NRDC

Long Read: [Global Migration. Resilient Cities at the Forefront](#) - 100 Resilient Cities

DEPLOYING LABOR AUTOMATION TO ADVANCE HUMANKIND

Automation technologies such as machine learning and robotics play an increasingly important role in everyday life and on the work place. Labor automation creates an opportunity to rethink economic inequality on a global scale and could hold the keys to a global society of absolute empowerment. The boons of labor automation are easy to envisage, with emerging trends enticing today's workers with appealing, utopian visions: "[A future where 'jobs are for robots and life is for people'](#)". Policymakers are in a position that requires bold approaches to responsibly distribute wealth and keeping automation from deepening ongoing inequality trends. Decision makers can give impetus to a future in which human productivity and creativity can be powered by computers, and wealth inequality is reined in through careful regulations. Only then can once fringe concepts such as universal basic income become a political possibility and give rise to a new era of human productivity.

Must Reads

Watch: [The Rise of the Machines](#) - Why Automation is Different this Time - Kurzgesagt

Short Read/Watch: [Elon Musk: Automation Will Force Universal Basic Income](#) - Geek.com

Short Read: [Google's Eric Schmidt: We Need Critical Thinking Now More Than Ever](#) - The Guardian

Short Read: [The Real Threat of Artificial Intelligence](#) - The New York Times

Long Read: [Artificial Intelligence and Robotics and Their Impact on the Workplace](#) - International Bar Association Global Employment Institute

REAPING THE FRUITS OF THE GLOBAL FOOD REVOLUTION

In the face of growing burdens on existing food systems worldwide, recent innovations in the food production industry, such as [digital agriculture](#), [fractal farming](#) or [precision farming](#), could stop food-related crises before they arise. The uptake of [genetically-modified crops with improved disease-resistance](#) can also improve food security on a longer time horizon and can lessen the effects of other disruptive trends, such as [farmers' overuse of pesticides](#). Harnessing developments in the (smart) food sector devised to enhance development aid and mitigate impending shocks to our food supply systems that [affect political stability and security](#).

However, forward-looking measures aiming to improve food security must also be implemented at home. By encouraging the adoption of progressive dietary habits such as [plant-based meals that have less intensive production processes](#) or [insect-based protein alternatives](#), policymakers can directly involve citizens in their initiatives to combat climate change, and stimulate more sustainable demand patterns to alleviate stress on food production systems. Creating more comprehensive networks of expertise to bridge policymakers, industry leaders, and civic society (groups) can improve prospects for food security on both a national and global scale, and help prevent food crisis disasters.

Must Reads

Short Read: [Global Diet and Farming Methods 'Must Change for Environment's Sake'](#) - IOP Publishing

Long Read: [Innovation in Agriculture and Food Systems in the Digital Age](#) - The Global Innovation Index

Long Read: [The 2017 Global Food Policy Report](#) - International Food Policy Research Institute

Long Read: [Futures of Food Provision. Four possible scenarios for the AgriFood industry](#) - PricewaterhouseCoopers

LEVERAGING ARTIFICIAL INTELLIGENCE FOR A MORE SECURE WORLD

By incorporating current AI capabilities into security and defense practices, decision makers can [enhance baseline protections against cybersecurity threats](#) or [increase operational awareness more efficiently than ever before](#). However, with even advanced multidimensional AI systems becoming increasingly accessible, questions arise on how these technologies can be systematically integrated into a wider variety of processes serving both the private and public domains. Efforts to intelligently [automate intervention in high crime areas](#), [security processes safeguarding the financial industry](#), and [social media monitoring to prevent lone wolf attacks](#) have already found a measure of success. As AI becomes increasingly sophisticated, policymakers must ensure that it both effectively and ethically serves the individual and societal good.

Must Reads

Short Read: [Teaching Robots “Manners”](#): Digitally Capturing and Conveying Human Norms - DARPA

Short Read: [What’s the ‘Risk’ in China’s Investments in US Artificial Intelligence? New Bill Aims to Find Out](#) - Defense One

Long Read: [Making the AI Revolution Work for Everyone](#) - The Future Society, Harvard Kennedy School

Long Read: [Artificial Intelligence and the Future of Defense](#) - The Hague Centre for Strategic Studies

SMART TECHNOLOGY REVOLUTIONIZING OUR TRANSPORT SYSTEMS

Smart transportation technologies can enrich security and social development policies if they are geared toward other wider societal concerns. For instance, developments in different areas of the transportation industry such as [sea cargo shipping](#) and [postal delivery](#) have proven that using autonomous systems can drastically reduce costs and carbon emissions respectively. RethinkX's "transport-as-a-service" car-sharing approach projects that autonomous vehicles could allow users to travel at rates four to ten times cheaper per mile than possessing their own car, and two to four times cheaper than operating an existing vehicle by 2021. Drone technology is also increasingly used to [deliver medical supplies](#) to locations that are difficult to reach, improving global prospects for humanitarian and development aid. The economic and operational benefits of these technological opportunities can improve access to critical public services, slash carbon emissions, and reduce production constraints limiting the world market. Present-day advancements can yield considerable benefits to socioeconomic development at a national- and international level, and present exciting possibilities for policymakers today.

Must Reads

Short Read: [Technology Equals a Better Commute in Developing World](#) - Wall Street Journal

Long Read: [Accelerating the Future: The Economic Impact of the Emerging Passenger Economy](#) - Strategy Analytics

Long Read: [Rethinking Transportation 2020-2030. The Disruption of Transportation and the Collapse of the Internal-Combustion Vehicle and Oil Industries](#) - RethinkX

Long Read: [Land Use and Transportation Policies](#) - The 3 Revolutions Policy Initiative, University of California Davis

INVESTING IN INCLUSIVITY

Emancipation and inclusiveness is increasingly proving to be a ‘force for good’ in societies that include all communities in their processes and policies. Leveraging the huge untapped potential of inclusive entrepreneurship, participation and leadership initiatives significantly contributes to [creating and managing sustainable peace](#), developing more resilient economies, combatting poverty, and shattering glass ceilings globally. Global female entrepreneurship is [on the rise](#). Organizations such as the OECD [promote sustained, inclusive approaches to policy](#) as a means to address economic inequality and promote inclusive growth. Furthermore, it is estimated that raising the level of female economic participation to match those of men in the MENA region [could raise GDP by upwards of 10%](#). Even among OECD countries, a 25% reduction in the participation gap could provide 2% GDP growth. [More women](#) are also being involved in peace talks. [Over one-third of the participants in the FARC peace talks were women](#), and a growing proportion of peace agreements contain provisions in support of women’s human rights, [rising from 11% between 1990 and 2000, to 70% in 2015](#). International security institutions such as NATO have made strides in promoting – in particular – [gender inclusivity in their operations and policies](#), while inclusive approaches to policy making and leadership are of high value to other sectors as well. These trends present an immediate opportunity. By integrating inclusive approaches to peace and security on a whole-of-process basis, decision makers can not only achieve sustainable peace, but can also improve policy outcomes of initiatives launched in other sectors, which can further help attain other economic and social development objectives.

Must Reads

Short Read: [Inclusive Ceasefires. Women, Gender, and a Sustainable End to Violence](#) - Inclusive Security

Short Read: [Building Inclusive Economies](#) - Council on Foreign Relations (Full Report)

Watch/Read: [‘Cooperative Globalisation’ Requires Greater Women’s Economic Empowerment](#) - Global Foundation

Long Read: [Designing Inclusive Strategies for Sustainable Security](#) - OSCE

Long Read: [Making Women Count - Not Just Counting Women: Assessing Women’s Inclusion and Influence on Peace Negotiations](#) - Inclusive Peace & Transition Initiative & UN Women

ABOUT

In order to remain on top of the rapid changes ongoing in the international environment, the Strategic Monitor of the Ministry of Foreign Affairs and Ministry of Defence provides analysis of global trends and risks. The Monthly Alerts offer an integrated perspective on key challenges in the future security environment of the Netherlands along the following four themes:

- 1. Vital European and Dutch Security Interests*
- 2. New Security Threats and Opportunities*
- 3. Political Violence*
- 4. The Changing International Order*

The Monthly Alerts reflect the monitoring framework of the Annual Strategic Monitor report, which is due for publication in January 2018. Each Monthly Alert offers a selection of discussions of emerging developments by key stakeholders in publications from governments, international institutions, think tanks, academic outlets and expert blogs, supported by previews of ongoing monitoring efforts of HCSS and Clingendael. The Monthly Alerts run on a four-month cycle alternating between the four themes.