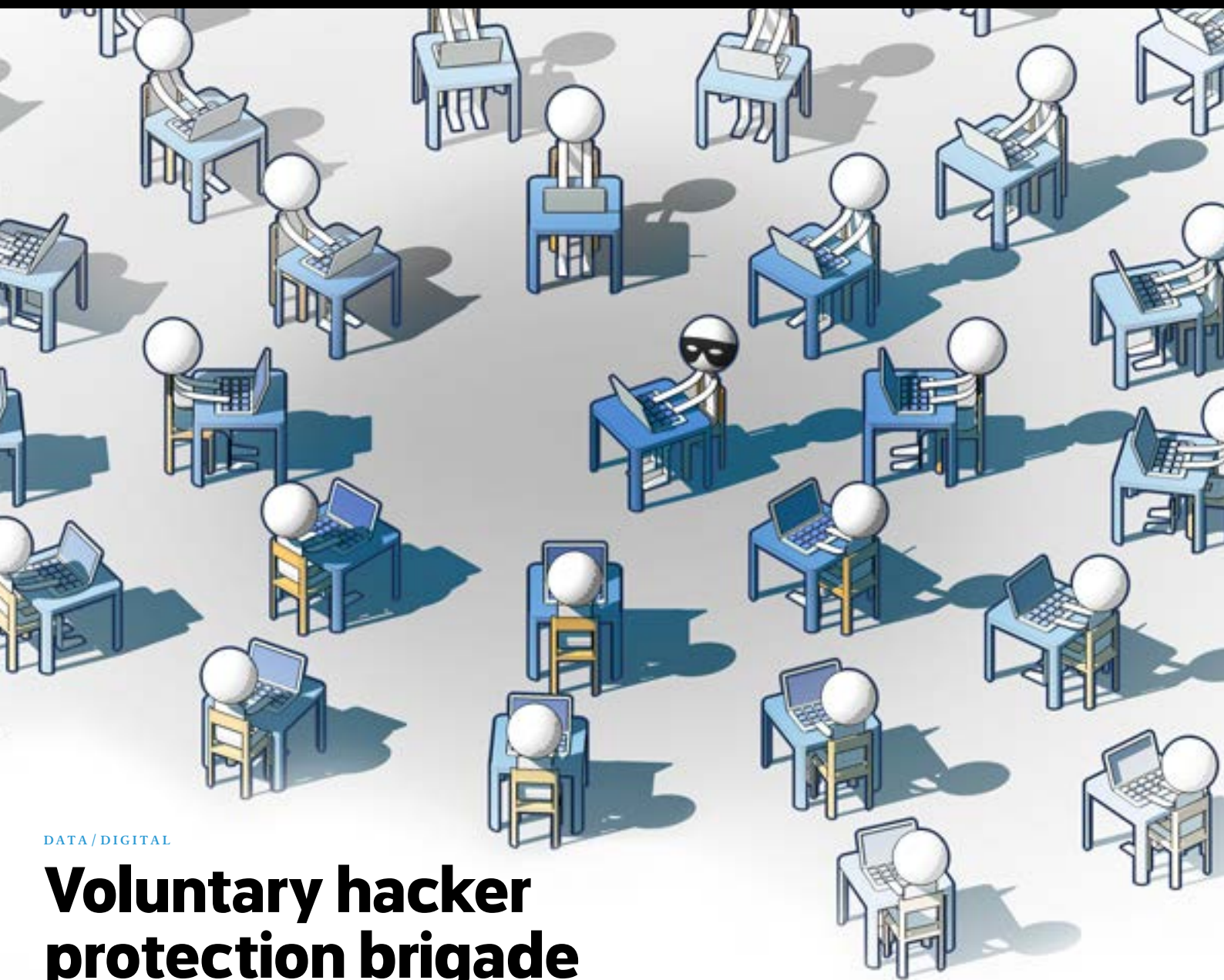


Think Tank Report

1/2019 Insights into the agendas of international think tanks



DATA / DIGITAL

Voluntary hacker protection brigade

Citizens hack for a good cause

A great deal of sensitive private and governmental information is insufficiently protected from hackers: Financial data, biometric information, passwords, and technical infrastructure are easy pickings. The worst case would be for cybercriminals to threaten an entire country. This scenario poses a serious problem for gov-

ernments. That is why the *Centre for International Governance Innovation (CIGI)* is calling on countries to train their populations to be proficient hackers. Only those who understand digital technology can truly protect it. The Centre is calling for a digital voluntary fire brigade – decentralised and organised locally, but ready to go at any

time. The new study from Canada shows specifically how it can work. *Centre for International Governance Innovation*, Waterloo, Canada

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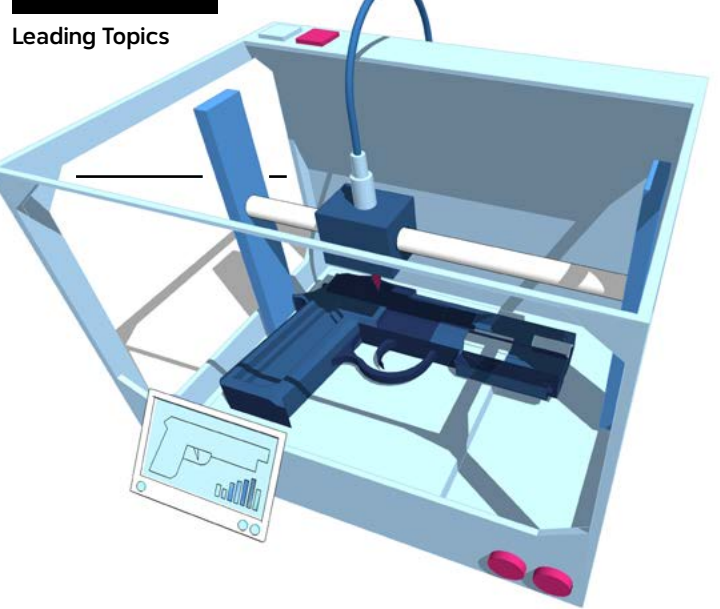
[@CIGIonline](https://twitter.com/CIGIonline)

DATA / DIGITAL

Printing without borders

Export controls on 3D printable guns relaxed

In 2013, Cody Wilson and his company, Defense Distributed, developed and tested the first 3D-printable gun, the “Liberator”, made entirely from 3D-printable plastic. The design was made available online free of charge, triggering a legal battle with the US State Department, and Defense Distributed was ordered to take the design down. In a surprise move, the US government has now settled the case: For the time being, Wilson will be allowed to



make the document in question available without restrictions. This will likely have little effect on the availability of small arms, but might undermine overall controls in the area of 3D printing for military technology, according to the *Stockholm International Peace Research Institute* (SIPRI) in Stockholm, Sweden.



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@SIPRIorg

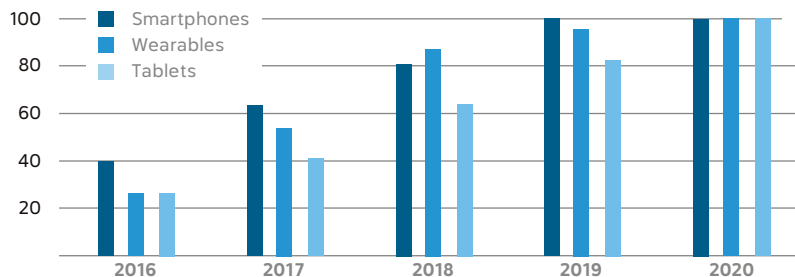
DATA / DIGITAL

Your number and you

What biometric identification could achieve in India

India's population continues to grow. The country needs new adaptive digital structures to keep track of everyone. That is why India is now considering creating the largest biometric identification system in the world. Each resident is to receive a twelve-digit “unique identification number” linked to individual data from an iris scan, fingerprints, and a facial image. Supporters of the project argue that it will allow social benefits to reach the right people, prevent fraud, and provide India with an effective administrative system. Critics think that the project represents an “Orwellian vision” of total surveillance. The new paper from the Center for Asian Studies at the *Institut français des relations internationales* (Ifri) in Paris, France, shows the course of the discussion and the advantages and limits of such a system.

The future of mobile biometrics



Forecast share of devices sold worldwide with biometric technology, by type

Source: Statista (2017)



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@IFRI_

DATA / DIGITAL

Digital collateral damage

What triggers cybercrime laws on the Arabian Peninsula

Most of the Gulf Cooperation Council countries have enacted laws in the last few years to combat the spread of cybercriminality. These laws are limiting freedom of speech, and *Chatham House* believes that this is no coincidence, but a conscious effort. The focus is not necessarily on preventing cybercrime, but on further limiting the freedom of speech and the press. The new study from London shows how these laws deviate from the internationally practiced legal framework for combatting cybercrime and details how they are set up and how they function. *Chatham House*, London, United Kingdom



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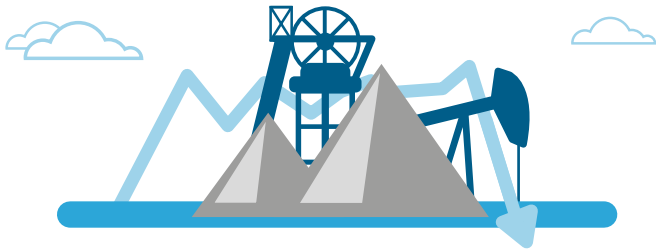


@ChathamHouse

ENERGY

Stop the dirt

Lessons from Ireland's divestment bill



Ireland has become the first country in the world to commit to divest from fossil fuels and withdraw all public funds from investments in coal, oil, and gas companies. While the national investment fund is relatively small at eight billion euros, the government is now required to sell all its investments in fossil fuels. Ireland joins a global divestment movement made up of 800 institutions (including the Norwegian central bank and the *Church of England*) and almost 60,000 individuals. Altogether, more than five trillion US dollars has already been pulled from the fossil fuel sector. A *Chatham House* study from London, United Kingdom, explains how states can approach this debate and what it might mean for other countries.



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ENERGY

When the price of oil becomes predictable

Why cyclical oil price changes may well be a thing of the past

In the last two decades, crude oil prices rose from 20 US dollars per barrel (WTI) during the 2001 recession to a brief peak of 140 US dollars early in 2008. They then fell back to 40 and rose back to 120 US dollars in 2014. Is there a pattern to this development? The *Brookings Institution* says no. The oil price did collapse again after 2014, but not because of another recession. Instead, it was fracking, which keeps providing new sources of oil. Nevertheless, these developments can tell us something about the probable future of oil: The economic cycle will continue to cause fluctuations in the oil price, but if lots of shale oil continues to reach the market, the average price of oil may well remain low compared to those we have seen since 2000. Large supply shocks will lead to lower price peaks and therefore noticeably reduce the average price of oil over the next 20 years. The *Brookings Institution* in Washington D.C., USA, considers what the reaction to all this should be.



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[@BrookingsInst](https://twitter.com/BrookingsInst)

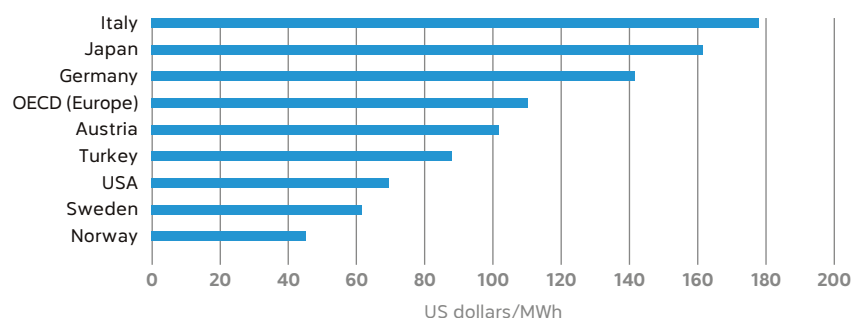
ENERGY

Forward hydrogen!

How the Japanese hydrogen strategy could enhance the country's energy security

The *Institut français des relations internationales* (Ifri) reports that Japan intends to tackle energy and climate challenges with energy from hydrogen. This would foster deep decarbonisation of the power, industry, and residential sectors. However, it requires a comprehensive strategy that establishes an integrated hydrogen economy to reduce rates to a competitive level in the medium term. To this end, the Japanese government has dedicated approximately 1.5 billion US dollars to research and development over the past six years. The new study from Paris describes what these efforts have achieved and how Japan could become a model for the world. *Institut français des relations internationales, Centre for Energy*, Paris, France

Commercial electricity prices in selected OECD countries



Source: OECD Data (2017)



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ENERGY

The power of water

How a cross-border cooperation in the use of water along the Mekong can be successful

Solar energy and water power are the champions of renewable energies. Today, more than 60 countries generate at least half their power from water power. Nevertheless, water power projects involve complex geopolitical problems, especially if they have social, economic, and ecological consequences beyond the borders of the country implementing them. An excellent example is ongoing along the Mekong, which flows across six international borders in Asia and supplies 72 million people. The [Australian Institute of International Affairs \(AIIA\)](#) in Canberra, Australia, shows how water power can nevertheless be effectively extracted according to ethical principles from such an important river.



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@AIIANational

INTERNATIONAL RELATIONS / SECURITY

Achieving peace – maintaining peace

Military cooperation with African countries must be fundamentally reformed

In the past, Western states, especially the United States, have concluded targeted security agreements with several African countries. Such efforts are intended to meet potential security threats, especially from terrorists. The *Rand Corporation* from California does not believe that this approach has proven effective. For one thing, there are simply too many security-relevant loopholes in Africa, and for another, the incentives for individual countries to participate sustainably are insufficient and the rate of success in combatting terrorism too low. That is why the development of national defence institutions and structures with a continental focus are needed – that is the only way that Africa can become a partner in the international security regime in the long term and help close the many loopholes. The new study from the US shows how this might work. [Rand Corporation](#), Santa Monica, USA



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@RANDCorporation

INTERNATIONAL RELATIONS / SECURITY

Nothing quiet on the eastern front

Russia and China forge strategic alliances

Little was reported to the public about Russia and China signing a new program on trade development and economic cooperation that will last from 2018 to 2024. The new agreement is less extensive than the document it replaces, but is also more implementable and more relevant, the *Carnegie Moscow Center (CMC)* believes. This makes 2018 an important milestone for Russian-Chinese cooperation in the Far East. Moscow has thus centralised regional cooperation with China at the highest level, and with this concentrated power and a cooperation mechanism outlined, it is now in a position to resolve complex trans-border agenda issues quickly. The new study by the *Carnegie Moscow Center* in Moscow, Russia, shows where all this might lead.

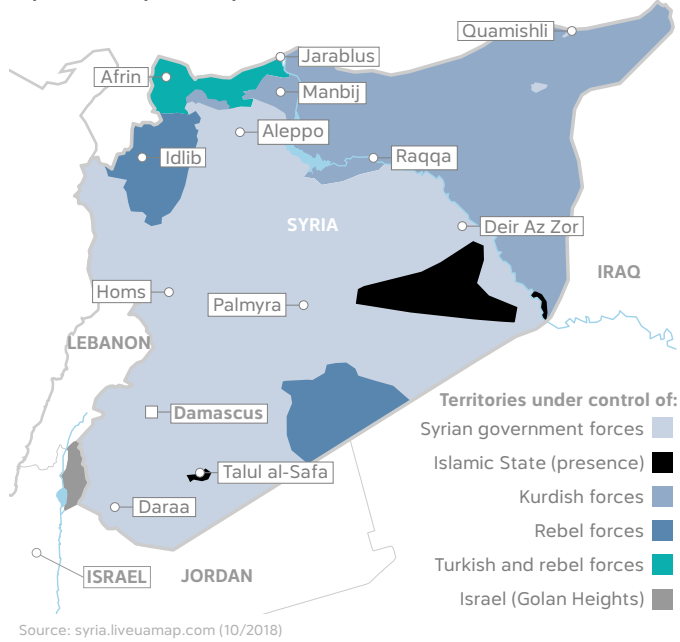


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@CarnegieRussia

Syria: Military territory control (2018)



Source: syria.liveuamap.com (10/2018)

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[@BrookingsInst](https://twitter.com/BrookingsInst)

INTERNATIONAL RELATIONS / SECURITY

Restart without a system?

How international think tanks are tackling Syrian reconstruction

As early as 2012, the Bashar al-Assad regime prepared the legal framework conditions for Syria's reconstruction: a process of authoritarian stabilisation. Its goal was complete social and economic control of the country. Today, more than six years later, the war continues, and the question of what post-conflict Syria might look like remains unanswered. In a new paper, the *Brookings Institution* in Washington calls for fundamental rethinking: The international political system must recognise that the consolidation of the Assad regime is now far advanced, and the regime will have unchallenged control of the reconstruction process. The new study from Washington shows what should be done to prevent this reconstruction from becoming a process of authoritarian stabilisation. *Brookings Institution*, Washington D.C., USA

INTERNATIONAL RELATIONS / SECURITY

More desk warriors

Functioning bureaucracies are the foundation of security architecture in the 21st century

The EU's security environment is facing an unprecedented challenge. High sustained migratory pressure, hybrid technical threats, cross-border criminality, and international terrorism require countries to completely reassess their own security architectures, which must combine civil, military, economic, and political concerns. Enhancing the interface between internal and external security must therefore lead to better cooperation among the various players in European institutions. This has so far failed primarily because of questions of bureaucracy and responsibility, the *Danish Institute for International Studies* (DIIS) in Copenhagen says. This failure need not continue: A new paper shows how bureaucratic structures can be better pooled, competencies distributed, and civil security policy improved from an EU point of view in future. The paper is timely considering the current discussion of responsibilities among Frontex, Europol, and the European External Action Service (EEAS). *Danish Institute for International Studies*, Copenhagen, Denmark

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[@diisdsk](https://twitter.com/diisdsk)

INTERNATIONAL RELATIONS / SECURITY

Greetings from Moscow

How Russia is continuously expanding its sphere of influence in Africa

The involvement of Russian private military companies in a wide range of security operations in Africa is growing rapidly. The intention behind this development is the expansion of their own political and economic influence. Russia is increasing its trade with African countries: the value rose from 3.4 billion in 2015 to 14.5 billion US dollars in 2016. The Kremlin is also actively cooperating with various African dictators that the West has targeted with economic and political sanctions. Sudan plays a key role here. In addition to its variety of natural resources (especially oil) and its demand for infrastructure investment, Sudan has a geographical advantage: It commands the critical Horn of Africa, and thus would make an excellent location for a Russian naval base on the Red Sea coast. The *European Council on Foreign Relations* (ECFR) in Brussels, Belgium, shows where Russia's path is taking it.

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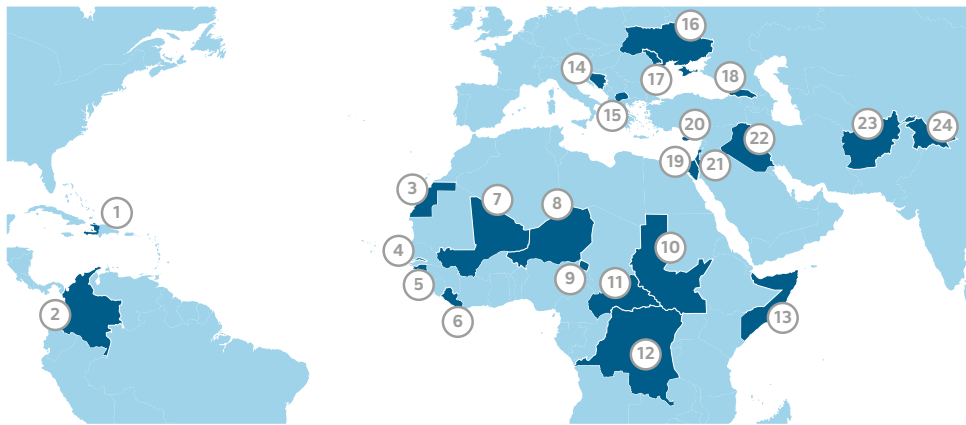
INTERNATIONAL RELATIONS / SECURITY

Predictive Peacekeeping

How UN peacekeeping missions could become more secure

The time is ripe for an early warning tool that estimates the likelihood of military clashes in areas in which UN peacekeepers operate. In recent years, scientists have developed better and better analytical

UN peacekeeping missions 2017/2018



Country / Region			
1 Haiti	9 Boko Haram region	15 Kosovo	23 Afghanistan
2 Colombia	10 Sudan/Darfur	16 Ukraine	24 Kashmir
3 Western Sahara	11 Central African Republic	17 Moldova	
4 Gambia	12 DR Congo	18 Georgia	
5 Guinea Bissau	13 Somalia	19 Israel	
6 Liberia	14 Bosnia and Herzegovina	20 Cyprus	
7 Mali		21 Lebanon	
8 Niger		22 Iraq	

Source: zif-berlin.org

INTERNATIONAL RELATIONS / SECURITY

Agile terrorism against high-tech military

Terrorist threats are becoming increasingly agile – unlike state defences

Salafi-jihadi movements transform commercially available items into weapons, enabling them to cheaply wage lethal campaigns against the most modern military in the world. They have succeeded in attacking the US and various European

tools to predict armed violence. These tools still cannot be utilised to their full potential because of insufficient data. More and better-quality data is needed to better train the algorithms. Only the United Nations has such data. Military personnel, police forces, and civilians involved in peacekeeping missions can use the *Situational Awareness Geospatial Enterprise (SAGE)* system to exchange information. Making this information available to predictive peacekeeping could give rise to a global early warning system, the *Norwegian Institute of International Affairs (NUPI)* in Oslo, Norway, believes.

countries with improvised weapons. Their innovations are not limited to weapons, however; they adapt to new opportunities in all areas of war as well. Highly developed militaries have so far failed to find an answer to this agile learn-and-adapt strategy. It is becoming increasingly difficult for the United States to keep pace with the enemy's strategic and operational transformations. The new study from the *American Enterprise Institute (AEI)* in Washington D.C., USA, shows what must change for military and defence institutions in Europe.

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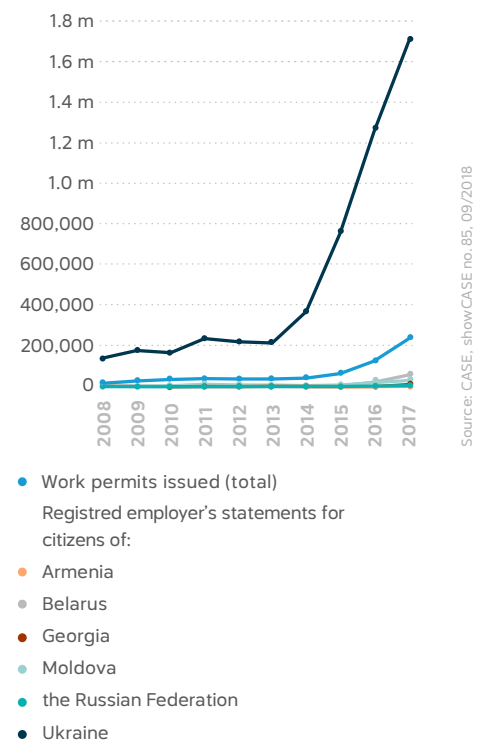
MIGRATION / DEMOGRAPHY / HEALTH

Popular Polish employers

A look at the labour market of tomorrow – and what it tells us about Poland

The European Commission estimates that the EU's working-age population will decline by 17.5 million in the next decade. Poland has already thought about how to attract a foreign workforce and, interestingly, its targeted recruitment of foreigners has contributed to reducing its own emigration. This makes Poland more attractive, from inside and out. It has also made Polish employers more attractive internationally. The reason is the simplification of bureaucratic processes and targeted labour-market policy measures. A new study by the *Center for Social and Economic Research (CASE)* in Warsaw, Poland, shows exactly how this works.

Number of issued work permits and registered employers' statements (2008–2017)



bit.ly/TTR1-2019_17 @CASE_research

INTERNATIONAL RELATIONS / SECURITY

The technology dragon weakens

Will China really be on top of the technology world in 2025?

The “Made in China 2025” (MIC2025) initiative is aimed at assuming global leadership in technology in strategic sectors by 2025. “Made in China” is to be a synonym for the best technology in the world. In reaction, the United States has triggered a trade war that it seems very uncertain to succeed in. At the moment, punitive tariffs are flying between the two countries. Twenty years after that the 2025 deadline, China’s military power is to set global standards. But the Italian Institute for International Political Studies (ISPI) does not believe that this policy is necessarily destined to succeed. Its success would require the pooling of civil and military efforts. The new dossier from Milan indicates the prospects for various scenarios. *Italian Institute for International Political Studies*, Milan, Italy

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[@ispionline](https://twitter.com/ispionline)





INTERNATIONAL RELATIONS / SECURITY

Better than its reputation

The German healthcare system comes off well in an international comparison

Everyone has an opinion about the healthcare system in his own country – there is always something to complain about, and “the other ones” are often better anyway. Comparing the performance of different countries’ health-care systems therefore provides an opportunity to determine more precisely how the national health-care system is performing. The *Fraser Institute* in Canada has now presented a comparative study in which the Canadian health system does not fare well, especially with respect to expenses, waiting times for doctor’s appointments, and rural care. The country could look to the German healthcare system for ideas for improvement, the researchers in Vancouver think. The new study from Canada provides a comprehensive overview. *Fraser Institute*, Vancouver, Canada

Performance of selected countries’ health-care systems

	 Health-care spendings total (28 countries)	 Doctors (28 countries)	 MRI units (27 countries)	 Queue time (10 countries)
Switzerland	1 st	5 th	7 th	4 th
Canada	4 th /28	26 th /28	22 nd /27	10 th /10
Netherlands	6 th	13 th	19 nd	3 rd
Germany	8 th	8 th	3 rd	1 st
Australia	11 th	7 th	11 th	5 th

* Health-care spendings related to GDP (rank) ** Queue time for a medical specialist appointment = /> 2 months

Source: fraserinstitute.org

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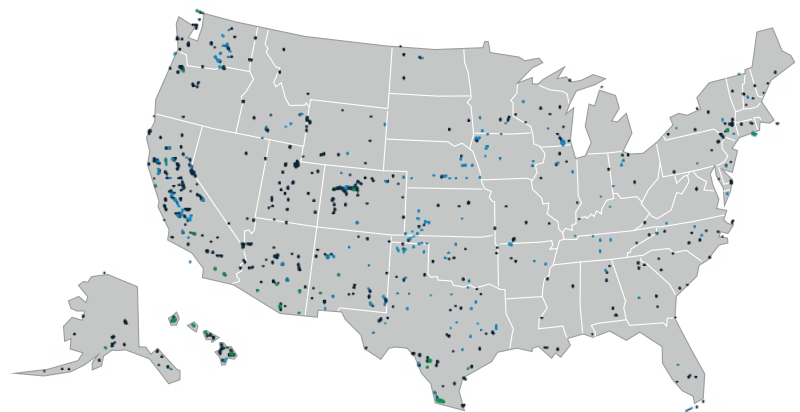
MIGRATION / DEMOGRAPHY / HEALTH

Moving to the countryside!

Positive effects of migration can be measured especially well in rural regions

In the past few years, rural America has become a symbol of US President Donald Trump’s anti-migration policies. These areas, far from metropolises, are just where immigration has positive effects, the Centre for American Progress believes. In a new study, its researchers compared data from 2,767 rural places in the United States. On average, the adult population declined four percent – a combination of a twelve percent decline in the American-born population and a 130 percent growth in those with migration backgrounds. The *Centre for American Progress* shows that it is precisely the newly-

US areas with general population increases between 1990 and 2012–2016



- Areas with an increase in foreign-born population and a decline in American-born populations
- Areas with an increase in American-born population and a decline in foreign-born population
- Areas with an increase in American-born and foreign-born populations

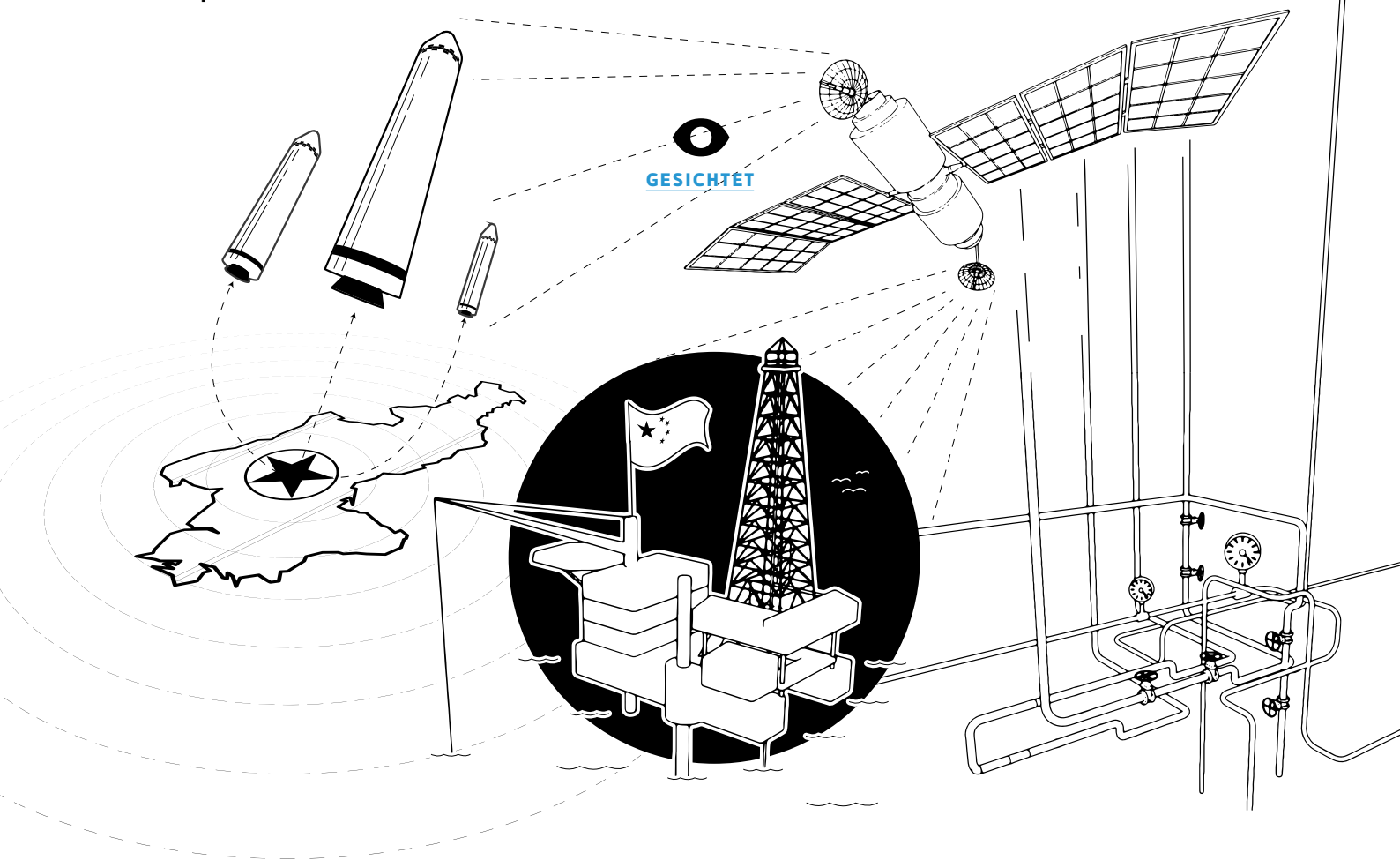
arrived immigrants that revitalise rural communities and local economies. Migrants open most new businesses, keeping the local infrastructure alive. This is giving rise to a new lifeline in rural regions that will fundamentally change the country.

The new study from Ontario considers where all this might lead. *Centre for American Progress*, Waterloo, Canada

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[@amprog](https://twitter.com/amprog)

Source: CAP (2018)



A look at the refinery

How China's oil industry can be better controlled

China's increasing dominance in the global crude oil market is affecting energy and environmental issues around the globe. Nevertheless, comprehensive, high-frequency, reliable, publicly accessible data about Chinese oil flows and storage movements are inaccessible; China cites security concerns. Public satellite data could allow circumvention of Beijing's secrecy strategy. *The James A. Baker III Institute's* easy-to-implement model shows that freely available high-resolution satellite images are enough to keep an eye on China's most important refineries and tank storage. This would allow better estimation of output and consumption of crude and refined oil products and would attenuate price fluctuations. [James A. Baker III Institute for Public Policy](#), Houston, USA

iDEAS Lab

Easier visual comprehension of complex subject matter

The *Center for Strategic and International Studies* (CSIS) *iDeas Lab* combines the latest capabilities of Big Data research, web development, and visualisation in order to better explain complex relationships. One of the projects is Missile Threat: Data and information from all over the world is collected here in the interest of better documenting the proliferation and use of ballistic missiles and air-defence and missile defence systems that use them. The focus is on missile and missile defence activities in the Persian Gulf (the war in Yemen), a chronology of missile launches and nuclear detonations in North Korea, and the new so-called anti-access/area denial strategy (A2/AD) used by Russia in Eastern Europe. It all sounds complicated, but is easy to communicate visually. [Center for Strategic and International Studies, iDeas Lab](#), Washington D.C., USA

Where to put the litter?

How cities can get more from their rubbish

REVAMP is a new buzzword; it stands for Resource Value Mapping. It is designed to allow urban planners to monitor their resource planning and utilisation in real time and, depending on conditions and requirements, reorganise them. According to researchers at the *Stockholm Environment Institute* (SEI), REVAMP will allow new, targeted recycling and greatly reduce wastewater and other organic waste flows. Based on the data on the volume of various waste flows, REVAMP calculates the advantages of individual reuse scenarios, such as composting faecal sludge for agricultural fertilisers and reusing such sludge as biogas and solid briquettes. Data on energy and nutrient content are collected in real time and used to calculate optimal recycling cycle. [Stockholm Environment Institute](#), Stockholm, Sweden



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@Missile_Defense



bit.ly/TTR1-2019_G3



@SEIresearch



GESICHTER



LUC BERLIN

Miigle+

Luc Berlin, founder and CEO of *Miigle+*, calls his corporate form “social impact technology”. The goal of *Miigle+* is making consumption a sustainable social movement in which consumers first discover sustainable brands and then make their purchases. To this end, *Miigle+* has developed a Chrome browser extension that is easy to install and use. Whether via online shopping or in large portal searches, *Miigle+* can sort products according to their sustainability and thus show the consumer the effects of his purchase. This means that, before the “Pay now” button is clicked, it is clear what the transaction will trigger.

 bit.ly/TTR1-2019_G5



SEBASTIAAN DE NEUBOURG

w.r.yuma

W.r.yuma is looking ahead. The start-up takes its name from Yuma, Arizona, the sunniest place in the United States. But the founders, led by Sebastiaan de Neubourg, are located in Antwerp, Belgium. There, *w.r.yuma* produces sunglasses made of plastic recycled from either car dashboards or old refrigerators. The founders’ background is not fashion, but 3D printing and materials science. Their new printing process enables them to create a completely reusable materials cycle, reducing material waste in their company virtually to zero. This makes *w.r.yuma* an excellent representative of a number of young start-ups that are initiating new recycling circuits and stemming resource waste.

 bit.ly/TTR1-2019_G6



SAUMYA

Kheyti

The team Saumya, the founder, has assembled intends to develop cheap agricultural solutions to help small farmers to increase the quantity and quality of crop yields despite area limitations. To this end, the team has developed *Greenhouse-in-a-Box* – an affordable, modular, functional greenhouse that uses 90 percent less water and can produce seven times as many nutrients as a comparable conventional area. This offers small farmers in particular a stable, reliable income. Saumya also offers the farmers corresponding coaching so that they can produce and economise more sustainably in future.

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