Living under the reality of a global pandemic, the world has turned to digital tools to maintain a sense of normality. As Europe charts its recovery from the coronavirus, there is a renewed sense of purpose with regards to the importance of technology in our everyday lives, as well as the need to employ various technologies in order to meet wider political goals.

This is a new reality for Europe, but also other parts of the world, including China, who now find themselves with similar goals in terms of benchmarks for the future.

This special report, sponsored by Huawei, looks into the synergies at play between Europe and China and examines how both parties are now likely to look to next-generation technologies as a means to meet their shared objectives.
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Telecoms giant Huawei is keen to work alongside European companies to help the bloc achieve ambitious new benchmarks for semiconductors by 2030, as the firm continues to face challenges resulting from US trade restrictions.

Since being put on a US export blacklist by the Trump administration in 2019, China’s Huawei has faced obstacles in sourcing components required in the development of its own chips.

Speaking at Huawei’s global analyst summit on Monday (12 April), rotating Chairman Eric Xu warned of the damage that the continuation of these restrictions could do to global semiconductor supply chains, and said that ongoing sanctions on Huawei’s business with American firms could raise costs within the industry across the globe.

“In the coming years, higher costs for the semiconductor industry is something we’re pretty sure of. The unwarranted US sanctions undermined our company,” Xu said.

Huawei had “no expectation” of being removed from the US entity list under the Biden government in the future, he added.

Many of Xu’s comments chime with a study published in early April by the Semiconductor Industry Association (SIA), which found that new supply chain vulnerabilities have emerged in the sector, requiring government intervention in the form of “funding incentives” that may be required to “boost domestic chip production and research.”

The US sanctions, the report notes, have resulted in a landscape that is “fueling a desire to develop self-sufficiency in semiconductors.”

“The concepts of semiconductor ‘self-sufficiency’, or technology ‘independence’ or ‘sovereignty’, are being discussed as potential...
The firm “stands ready to work with all our European partners on helping Europe attain genuine technology sovereignty and competitiveness,” a Huawei official informed EURACTIV. “Part of this is helping to strengthen Europe’s independent semiconductor capabilities.”

Earlier this year, the Commission unveiled its Digital Decade targets, a list of objectives to be achieved by 2030. In the connectivity domain, the bloc’s build-up of high-end microprocessors was highlighted as an area in which the EU needs to make progress.

While Europe already designs and manufactures high-end chips across several EU nations, the Commission recognized that “there are important gaps, notably in state-of-the-art fabrication technologies and in-chip design, exposing Europe to a number of vulnerabilities.”

As a result, one such target included in the Digital Decade 2030 plans is to ensure that the production of cutting-edge and sustainable semiconductors in Europe including processors is at “at least 20% of world production in value”.

Huawei smells an opportunity as part of the bloc’s new benchmarks, hoping to claw back some of the business lost following the restrictions imposed stateside. “The EU has leading semiconductor manufacturers, from a range of member states, and Huawei is keen to partner with them and help them further develop their world-beating innovations where we can, to enhance Europe’s tech ecosystem,” the Huawei official said.
China’s third way on data governance

By Luca Bertuzzi | EURACTIV.com

Last year, China launched its bid to shape global data governance, eager to create its own approach alongside those created by the United States and the EU. Since then, it has been working on a comprehensive data protection framework that could be a game-changer for potential Western investors.

In September, China launched its Global Initiative on Data Security. A month later, Beijing presented the draft Personal Information Protection Law (PIPL), a set of privacy rules experts say are inspired by the General Data Protection Regulation (GDPR), the landmark EU privacy law.

The second draft of the Personal Information Protection Law (PIPL) was published at the end of April for public consultation.

Alicia Garcia Herrero, chief economist Asia Pacific at Natixis and Senior Research Fellow at BRUEGEL, told EURACTIV there are significant similarities between PIPL and GDPR.

However, she also pointed out that “there are important differences, such as the provision related to national

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security. This means that European companies will still need a China PIPL compliance strategy in their operations in China”.

Article 27 of the PIPL in fact provides the legal basis for collecting images and data for reasons of public security, without the person concerned being informed. This provision might lead to abuses if there is no independent control over the work of the public authorities.

Asked about the Comprehensive Agreement on Investment (CAI), Herrero said ‘no agreement has been reached on cross-border services. This means that the issue of data localisation remains and that European investors will find it difficult to compete with local cloud giants with no guarantees on data transfer and storage.’

The CAI is a proposed investment deal the European leaders agreed in principle.

Pending approval by the European Parliament, the ratification of the agreement has been officially suspended following an exchange of sanctions between the European Union and China over the human rights violations in the Xinjiang province.

Beijing retaliated by sanctioning, among others, prominent Members of the European Parliament. The quarrel over Beijing’s treatment of the Uyghur minority is part of broader tensions between the West and China.

The United States, in particular, has been engaged in a technological competition with the Asian giant, which has escalated into a trade war and economic sanctions. For Herrero, “as the world’s only economy that can balance the power between the US and China, the EU should pursue strategic autonomy and remain neutral between the two.’

International data transfers remain a major cause of concern for international trade, especially since the Schrems II ruling invalidated for the second time the EU-US framework data transfer agreement, the Privacy Shield.

Similarly, “although China’s draft PIPL shares a few similarities with the EU’s GDPR framework, it doesn’t mean that the EU could easily find a global agreement on data governance as China’s version still differs from both the US’ the EU’s framework and in fact represents a third way,” Herrero said.

One of the points Western policymakers reproach to Chinese tech companies is that they are too close to the government.

However, last month the Chinese authorities issued a record fine on e-commerce giant Alibaba, while the PIPL would for the first time regulate data protection. Several observers interpreted these moves as attempts to regain control over companies that are now perceived as too powerful.

Similarly, Herrero added, “the activism highlights the increased security concerns as the digital economy expands. The draft law is an important step in the government’s efforts to consolidate its data governance and to strike a balance between data protection and technological improvement”.

At the same time, the PIPL also imposes restrictions on public authorities, which is a fundamental aspect since the Chinese state is the largest data processor in the country.

Herrero also noted that “any personal identification equipment in public areas must serve the purpose to safeguard public security and shall not be provided to others without consent by individuals or regulations”.
Global data transfer uncertainty undermines EU digital ambitions

By Luca Bertuzzi | EURACTIV.com

Three years after the EU’s flagship GDPR data protection regulation came into force, confusion over international data transfers following the landmark Schrems II ruling is threatening to hamper new technologies and jeopardise the bloc’s digital agenda.

On 16 July 2020, the Court of Justice of the European Union ruled for the second time that the EU-US Privacy Shield Framework was invalid as the United States did not ensure a data protection level comparable to the EU’s GDPR.

The Schrems II ruling, as it came to be known, has far-reaching consequences not only for EU-US data relations, but for all third countries as it requires European firms to assess if the country they are transferring data to provides adequate protection under EU law.

“Schrems II invalidated one transfer mechanism and cast serious doubts over the others. It left businesses with no clear path to transfer data to the US – or other countries that haven’t been deemed adequate. It weighs heavily [on] the most important channel of global trade and the global economy,” Omer Tene, vice president and chief knowledge officer at the International Association of Privacy Professionals told EURACTIV.

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UNSETTLING UNCERTAINTY

In November, the European Data Protection Board (EDPB) issued a series of recommendations detailing how to ensure an “EU level of data protection.” The EDPB also gave its opinion on data protection offered in third countries, which although not legally binding is a key step for formal recognition.

If a third country does not provide the minimum data protection level required by GDPR, the data processor must either enact additional protection measures or stop the data transfer altogether. The most recent example is the Portuguese Data Protection Authority, which on 28 April requested the National Institute for Statistics stop the transfer of personal data to the United States.

GDPR enforcement is left to the member states’ Data Protection Authorities (DPAs). For third countries where data protection level is not considered adequate by the EU, the individual DPAs are left to interpret the requirements on their own. Too loose an interpretation is a risk to GDPR, while too strict an interpretation risks creating additional barriers to global data transfer.

EUROPE’S GAMBLE

The EU is essentially asking third countries to comply to its data protection rules or it will halt data flows with them, effectively putting GDPR forth as the global standard. Several countries have followed the GDPR example in their data protection regulation, notably Japan, Brazil and South Korea.

Europe’s pulling power comes from the size of its economy, which represents 15% of the world’s GDP. However, projections show the bloc’s economic importance will shrink in relative terms as growth concentrates elsewhere. Brussels’ influence is likely to wane as a result.

What’s more, legislative ambiguity or strict regulation might create barriers or raise the cost of accessing the EU digital market. Data transfers are at the core of international trade and technological exchanges. Unpredictable data flows could marginalise European technological development and jeopardise the bloc’s digital ambitions.

ATLANTIC DEALIGNMENT

The uncertainty following the Schrems II ruling has proven massively disruptive in terms of EU-US data transfer, the largest data flow in the world.

“Virtually all industries that conduct transatlantic business are affected by this uncertainty,” wrote Jason Oxman, president and CEO of the Information Technology Industry Council (ITI), in a blog post.

“Avoiding disruptions to data flows is key to minimize any negative economic consequences, particularly in the wake of the COVID-19 crisis and the ongoing economic recovery in both Europe and the US,” he added.

Members of the European Parliament have urged the European Commission to provide clear guidelines for the data transfers with the US. Negotiations are in fact taking place already, ahead of the EU-US leaders’ meeting taking place next month.

“We have seen enough with the Cambridge Analytica, hacking and data leakage scandals to understand that data protection is not a luxury, it is a must [...] the European Union is focusing on the protection of fundamental rights in all different areas, including the digital world,” European Commission Vice-President Věra Jourová told a recent Digital Europe event.

CHINA’S MOVE

In September, China issued the Global Initiative on Data Security, a global data governance proposal aimed at assuaging Western and Chinese mutual distrust. This move intended to counter the Trump administration’s Clean Network initiative, which explicitly mentioned the Chinese Communist Party as an “authoritarian malign actor”.

Beijing tried to dissipate the distrust in Chinese tech companies, detailing measures against “back doors” that would enable surveillance by public authorities. Tech giant Huawei was recently excluded from 5G infrastructure projects across Europe on the back of such allegations.

A Huawei spokesperson told EURACTIV that the company “is fully supportive of the EU’s European data strategy as this will allow Europe to unleash the potential of data for European people, business, researchers and public administration.”

Some observers have been sceptical of the intentions behind the Chinese move. Rebecca Arcesati, an analyst with MERICS, wrote in
a blog post at the time that the Chinese global data initiative was “not so much a concrete proposal as a rhetorical exercise,” and argued China was trying to take advantage of “transatlantic divergences” on data governance.

China followed up with a draft Personal Information Protection Law (PIPL), a privacy framework broadly inspired by GDPR. The second draft of the law was published for comments at the end of April, and includes obligations to have individual’s consent for data collection, limits to data processing and the institution of independent privacy committees for large online platforms.

Experts note that PIPL, if adopted in its current form, would see China ensure greater data protection than in the US, as well as limit the power of Chinese public authorities.

However, Teme of the International Association of Privacy Professionals said the proposed Chinese framework would not solve the issues raised by Schrems II because it would protect data transferred to Chinese businesses but not apply to the Chinese government.

GLOBAL DATA GOVERNANCE

Observers continue to call for a global agreement on data governance to clarify issues related to Schrems II and GDPR.

“So far … most countries have made an effort to avoid shutting down opportunities to transfer data,” Frederik Erixon, director of the European Centre for International Political Economy (ECIPE), told EURACTIV.

However, “as regulations change, and as we move into more applied areas for personal data in AI, the frictions will only grow larger. There is a serious risk that cross-border exchange will suffer pretty badly,” he warned.
5G: A critical technology for our Green future

It’s high time policymakers recognized the value of next-generation telecommunications in delivering on the EU’s long-term sustainable objectives, says Luis Neves. [Shutterstock]

INTERVIEW

It is high time policymakers recognized the value of next-generation telecommunications in delivering on the EU’s long-term sustainable objectives, says Luis Neves.

Luis Neves is the Global CEO of GeSI, the Global e-Sustainability Initiative. He is responsible for the establishment of the Initiative’s strategic goals and for overseeing all GeSI’s activities.

You’ve been keen to make the case for telecommunications innovation helping to achieve our sustainable goals. Thinking specifically about 5G, how can next-generation networks help us to pursue our climate ambitions?

In 2019, GeSI launched its Digital with Purpose report, which presents how digital technologies can support achieving the SDGs and at the same time mitigate the current negative trends. In our report, 5G is one of the seven digital technologies identified as having a critical influence on the world, including: Artificial Intelligence, Internet of Things, Cognitive technology, Cloud, Digital Access, and Blockchain. In the case of 5G, our report goes into extensive detail on its role in greening the world.

The 5G share in traffic and data transmission has the potential to increase efficiency and will only continue to grow faster—this means better connectivity, higher speeds, and reduced latency that can enable things like digital twins, IoT devices and other applications to amplify efforts for a greener digital transition. While this indeed will mean the

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multiplication of IoT devices, there are very strong incentives for governments like the European Union and for manufacturers as well to keep these products energy-efficient.

Our report also has multiple case studies from our member companies illustrating 5G in action but what also really needs to accompany these types of technologies are political will, leadership, and stronger corporate commitments to shifting to clean energy.

*Could you provide any concrete examples worldwide of 5G being employed to reduce emissions, for example?*

5G needs to be accompanied by other digital technologies for its capacity to be fully realised and adequately deployed.

AT&T, for instance, utilises 5G and IoT in curbing GHG emissions using its Smart Irrigation solution, in collaboration with HydroPoint. The technology allows customers to track and manage their water usage with greater speed and precision, which uses cloud-based water management systems. The GHG emissions savings arise from the reductions in process and pumping of the water.

Taiwan Mobile, uses remote detection devices to monitor base station energy consumption, gathering real-time data without manual meter-reading, thus reducing emissions from travelling. The use of Smart Meters also allows Taiwan Mobile to accurately anticipate and predict the consumption of energy, providing valuable information for optimisation and efficiency. Taiwan Mobile reports that it has so far saved about 25.4 tonnes per year in CO2 emissions and reduced manual meter trips by 8,439.

Looking at the potential in smart cities, Verizon offers an advanced traffic management service for public agencies using 5G and IoT devices, leveraging in-ground wireless vehicle detection sensors and cloud-based data collection systems. These sensors provide real-time road traffic data and follow-up studies conducted have shown 40% fewer traffic delays, 25% less travel time, 10% fuel savings, and 22% fewer emissions.

*But what about other technologies that have come in for criticism for their ecological footprints, such as data centres and cloud computing sites, these aren’t regarded as particularly environmentally friendly, are they?*

The ICT sector has a great responsibility to ensure that what it is deploying is sustainable. Recognising the energy consumption of data centres and cloud computing, the Commission and our sector have been making great efforts in exploring the ways in which we can make data centres greener.

We have been giving special attention to conversations related to the ICT sector footprint. In this regard since 2007, GeSI has been conducting deep research with recognised and credible consultants such as Mckinsey, Boston Consulting, Accenture Strategy and Deloitte on the sector global footprint, as well as its “enabling” impact in making other sectors more efficient, through our so-called “Smart Reports”. We have published 4 reports so far, presenting arguments on why reducing emissions and being sustainable need to be priorities for companies globally.

What the research is showing is that the sector global footprint remains stable at 2% of the global emissions, while its enablement potential has been increasing. Our Smart2030 report shows that ICT can reduce 20% of global emissions. These reports go into extensive detail on how sectors like Agriculture, Health, Education, Manufacturing and others can cut costs by deploying ‘green solutions’ like SMART buildings and mobility, and e-services. The aforementioned report also found that ICTs could generate $6.5 trillion in revenues and result in $4.9 trillion in cost-saving opportunities. We also have findings that talk further about the return on investment and the greater efficiency that comes as a result of green ICT solutions.

*How much has Europe’s 5G rollout been impacted by external factors such as the ongoing disinformation campaign against the technology, as well as the coronavirus pandemic?*

We are at a critical stage in society where the lines between reality and fiction are increasingly blurred – this is certainly the case with the COVID-19 crisis and the on-going disinformation campaign against 5G.

At GeSI, we believe that all technology must be deployed with great purpose in mind and there are
countless resources and data, such as our Digital with Purpose report, that go into detail about how the ICT sector can accelerate a green, digital recovery not only for Europe but for everyone. I believe our sector is confident in allowing the science and hard data to speak for themselves, but there is also an opportunity for governments to support the efforts of the wider ICT sector by advocating policies, funding programmes, and engaging with stakeholders so we can rebuild our society and our planet together.

The European Union needs to come out of its “a la carte” approach and take bold steps aligned with its core values and interests with the main purpose in mind of ensuring its positioning as a credible, solid and fundamental player in the global arena in order to offer the European economy and its citizens with top of the edge digital services. Technology can accelerate action, but it requires a robust, shared ambition. Critical to a shared ambition is strong leadership to secure it. For this to happen strategic vision and ambition is required.

Everything today depends on digital technologies. Digital technologies have been the engine of growth and prosperity. The challenges our society is currently facing and will continue to face requires smart, innovative minds working together to find impactful solutions – and fast.

It is imperative for Europe to urgently find its own space in the current geopolitical context – “The third way”. The recent outcome of the American elections represents an opportunity that might help.

**Have these well-publicised concerns overshadowed 5G’s potential for helping Europe to achieve its sustainable goals?**

5G is a fundamental catalyst for the digital transformation of businesses, cities and public services. It is a catalyst for Industry 4.0, bringing sensibility, intelligence and automation to new generation production processes for greater competitiveness. It is the catalyst for the transformation of cities into smart and inclusive cities that improve the quality of life of their citizens.

It is the catalyst for more efficient and more comprehensive public services that educate better, offer better health to more people through the remotisation of less critical care and better use of resources in more critical care, accelerate transactions in the economy, maximise the use of resources and provide greater security for all.

The greatest value of 5G is that it is a transformation agent. For people, the immediate promise is greater speed and performance on the Internet and more immersive content, but for companies and institutions, the promise is a huge transformation of their operating models and improved quality of their products and services.

In launching the strategy for a single digital market, the European Commission stated that “a European approach to digital transformation means strengthening and including citizens, strengthening the potential of all companies and responding to global challenges through our core values”.

There are great developments in the works, such as the European Green Deal and the EU Taxonomy, but programs like green public procurements (GPP) and a recovery plan that leverages technology are critical next steps.

**Where are we to go from here? Is 5G a critical technology for the Green Deal?**

Without a doubt. The examples from our members and the work of the ICT sector have shown how 5G and accompanying technologies can lead us to an inclusive, green digital recovery that the Green Deal envisions.

Technology has touched every single corner of society and no entity or sector can go it alone. What needs to follow is greater collaboration between the public and private sectors, as well as other stakeholders. We all need to align on the ambitions of the Green Deal, the Sustainable Development Goals and the Paris Agreement – we have these frameworks in place, and I believe digital technologies are the perfect tools to get us there.
Cybersecurity, like vaccines, requires the cooperation of all governments together with the right experts to deliver best practices to the Industry to keep citizens safe, writes Sophie Batas.

Sophie Batas is Director for Cybersecurity at Huawei EU.

In 2021 the world is more interconnected and interdependent than ever before – not that you’d necessarily realize that at the moment. We are still mostly locked in our own houses, with no prospect of travel anytime soon.

The current health crisis has dramatically exposed our dependencies on a virtual, connected and intelligent world. But there is a glimmer of hope – some light at the end of the tunnel – in the shape of the vaccines that are now coming on stream. Through joint collaboration across all continents, within months, and against most predictions, scientists have been able to come up with numerous vaccines against Covid-19. How was this possible? Only through international collaboration.

In this short time, no single country would have been able to come up with a vaccine on its own. What is true for the pandemic response also applies to technology: no one is better off attempting to decouple and to

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undermine global supply chains, and going their own way. Less uniformity in the world’s tech architecture would lead to increased strategic competition between different countries and powers – in this case the US and China. Neither the European Union nor my own company, Huawei, would like to see this happening.

Europe in particular has a crucial role to play when it comes to balancing the US and China on technology. As a private company operating in 180 countries across the globe, Huawei is the EU’s natural industry partner, especially as the EU has an immense opportunity to cement its global influence through developing the right standards for emerging technologies.

Huawei is also aligned with European industry when it comes to ensuring highest cybersecurity and privacy standards. As the world’s most scrutinized, verified and transparent company, Huawei excels in cybersecurity and has not had one single major cybersecurity incident in the last three decades.

The EU is currently adapting and strengthening its legal framework on cybersecurity to prepare the ground for the deployment of Artificial Intelligence into areas such as mobility or cloud computing. Huawei has top expertise in these areas and shares Europe’s values of fairness, inclusiveness and competition. This is why we participate closely in the upcoming regulatory discussions on proposals like the Network Information Security Directive (NIS2) that aims to bring the right common standards from industry to citizens.

Cybersecurity, like vaccines, requires the cooperation of all governments together with the right experts to deliver best practices to the Industry to keep citizens safe. Like the National Security Agency’s recent guidance on a “zero trust approach” – we strongly believe that “embedded trust” actually makes us less safe. This has been exposed time and again with various cyberattacks of trusted vendors, and we expect attackers will continue to exploit a “trust-based” ICT supply chain unless the EU legislators intervene and write rules using a zero-trust mindset.

The European Way of Life will continue to inspire people around the world tomorrow if today, the right policy actions are taken. We at Huawei stand ready to make our contribution as we want Europe to build its strategic autonomy to play its rightful role in tomorrow’s intelligent and interconnected world.