

EUROPE DIPLOMATIC

MAGAZINE



FROM ALLY TO
ADVERSARY

**Prigozhin's
rebellion and the
Putin paradox**



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FROM ALLY TO ADVERSARY

**Prigozhin's rebellion
and the Putin paradox**

Launching a war of aggression is one of the riskiest steps any political leader can take. Sixteen months after Russia's brutal invasion of Ukraine, President Vladimir Putin is facing the consequences of his reckless gamble. The war has exhausted the power and stability of his regime, and Russia's repeated military failures on the ground, as well as the high number of casualties and increasing economic hardship, have put his regime in grave danger.

The Russian invasion has also exposed the Kremlin's incompetence, corruption and poor governance. The war threatens to undermine Putin's legitimacy itself. The Kremlin has spent more than two decades modernising its military with huge investments and under the supervision of the president, but the performance of the Russian military has been disappointing.

Prigozhin's uprising - or coup attempt - is a real turning point for Russia and its president. It poses an unprecedented threat to Putin's power and, more importantly, to Putinism - Putin's personal system of semi-totalitarian state control. The consequences of recent events will be felt across Russia in the months and years to come, whatever the outcome.

Russia's enemies were to be found in the West. Now the greatest danger to Russia and Putin comes from Russians within. The narrative justifying the war against Ukraine is coming apart at the seams.

On Friday, 23 June, armed paramilitaries under the leadership of Yevgeny Prigozhin — the former convict cum caterer, turned commander of the Wagner Group — launched what very much looked like a coup against Putin's regime. At the height of the action, troops under Prigozhin's command first captured the strategic city of Rostov-on-Don and then barreled towards Moscow.

His men had fought the toughest battles of the 16-month Ukrainian war, including for the eastern city of Bakhmut. For months, he had railed against the military's top leadership, especially Defence Minister Sergei Shoigu and Chief of Staff Valery Gerasimov, accusing them of incompetence and withholding ammunition for his fighters.

In June he resisted orders to sign a treaty placing his troops under the command of the Defence Ministry.

He began the apparent mutiny on Friday, 23 June, after claiming the military had killed many of his fighters in an air



Wagner troops in Rostov-on-Don



Wagner soldier in Rostov-on-Don

strike. The defence ministry promptly denied this accusation.

He said he had taken control of the headquarters of the southern Russian military district in Rostov, which serves as the logistical centre for the entire Russian invasion force in Ukraine, without firing a shot. The nearby area is also a major oil, gas and grain region.

Residents of the town had been calmly walking around filming with their mobile phones while Wagner fighters in armoured vehicles and battle tanks occupied positions.

Wagner's rapid insurgency seemed to proceed without significant resistance from the regular Russian armed forces, casting doubt on Putin's grip on power in the nuclear-armed country, even after Wagner's advance came to a sudden halt.

Only after Wagner motorised columns reached the city of Voronezh, about 500 kilometres from Moscow did a Russian helicopter gunship attempt to attack them with rockets. According to some reports, a fuel depot exploded in a fireball and one of the helicopters was shot down.

Earlier, Prigozhin had called for a "march for justice" to depose corrupt and incompetent Russian commanders whom he blames for the failure of the war in Ukraine.

In a televised address from the Kremlin, Putin had earlier said that the Wagner uprising was endangering the very existence of Russia.

"We are fighting for the life and security of our people, for our sovereignty and independence, for the right to remain Russia, a state with a thousand years of history," Putin said, promising punishment for those who "planned an armed uprising".

But in an extraordinary turn of events, Prigozhin reportedly turned his troops around late on Saturday, 24 June, following a negotiated settlement, but it was the first major crack in the president's armour.

A notable feature of the rebellion and the ensuing chaos was the apparent peacemaking role of Belarusian leader Alexander Lukashenko. The Kremlin claims that Yevgeny Prigozhin surrendered, that his troops stopped their



Now, listen to me, you f*****g b*****s. These are someone's f*****g fathers and someone's sons.

© TELEGRAM

Yevgeny Prigozhin accusing Russia's military command for the death of his soldiers by starving the group of ammunition

advance on Moscow, and that he agreed to relocate to Belarus after speaking directly with Lukashenko. However, welcoming the renegade commander into Belarus could be dangerous for Lukashenko.

Although Belarus was one of the bases for Putin's war in Ukraine, and Russian missiles were launched from Belarusian airspace, Lukashenko managed to avoid sending Belarusian troops to fight in Ukraine. Now it may become more difficult for Lukashenko to stay out of the war or out of the political crisis in Russia.

By relocating to Belarus, Prigozhin will effectively be based abroad, but easily accessible to Russia. So, this can also be seen as an act of revenge by the Kremlin. Putin's promise to strengthen the police, helped secure Lukashenko's power in 2020, when massive protests against his re-election - widely condemned as rigged - threatened to topple him.

Lukashenko's fate thus seems closely tied to Putin's - he is one of the few foreign leaders Putin can trust, and Belarus, like Russia, is subject to extensive Western sanctions. Lukashenko's harsh, decades-long authoritarian rule is similar to that of Putin. Both follow the intolerant conservatism and militarism of the



Belarusian opposition leader Sviatlana Tsikhanouskaya

© EUROPEAN UNION

Soviet era. But the fact that it was the Belarusian "little brother" who stood by his Russian "big brother" in his time of need looks embarrassing to Putin.

Belarusian opposition leader in exile, Svetlana Tikhanovskaya, called Prigozhin a "war criminal" and said that his move to Belarus would "increase instability" in the country. Tikhanovskaya, in remarks quoted by the independent Belarusian news website Zerkalo, said her country did not need "more criminals and thugs" and added that Belarusian leader Alexander Lukashenko was "not a mediator but a courier" when he arranged a deal between Moscow and Prigozhin. "He was Putin's emissary" she said, arguing that this was to avoid embarrassing the Russian president. "The world has seen that Putin is not invincible, and not that strong. A weak Putin means a weak Lukashenko" she added.

She further accused Alexander Lukashenko of making Belarus a "pawn in other people's games and wars". Tikhanovskaya left Belarus in 2020 after challenging Lukashenko in an election that she was widely seen to have won. She was later sentenced in absentia to 15 years in prison by a Belarusian court.

The end of Wagner?

Yevgeny Prigozhin said in an audio message released on his Telegram channel on 26 June that Wagner's aim was not to overthrow the Russian government but to protest against the abolition of the private military company and to draw attention to the failures of the Russian military leadership in Ukraine.

The mercenary group had not wanted to fight the Russian military and had only fired on Russian troops and a helicopter after they had attacked the Wagner fighters from the air.

Prigozhin also pointed to the fact that Wagner columns advanced to around 200 kilometres of Moscow without any military resistance, highlighting the disarray in the defence ministry. According to Prigozhin, his troops had held a "master class" in how Russian forces should have taken Ukraine when they invaded in February 2022. He said that he ordered his troops back only so that no Russian soldiers would be killed or injured.

In the meantime, it is uncertain whether the Wagner Group will be disbanded and what impact such a move might have in Ukraine and other places where Wagner mercenaries have operated. Kremlin spokesman Dmitry Peskov has since announced that authorities would drop charges of "inciting armed insurrection" against Prigozhin and that Wagner forces who joined the march would also not be prosecuted. The Kremlin



© TELEGRAM

Yevgeny Prigozhin and his Wagner Group soldiers in Bakhmut

added that Wagner fighters who did not join would be able to sign contracts with the Russian defence ministry.

But whether Russia can afford to dissolve the Wagner Group was not immediately clear. The mercenary group did after all, help the country make profits in its war against Ukraine and was responsible for the much-publicised capture of the Ukrainian town of Bakhmut in May 2023. There are also those who believe that the Wagner Group allows Putin and other officials to deny the mercenaries' losses, and that by hiding them Russia can hide the true cost of the war. In fact, since 2014 they have remained Russia's weapon of choice.

Prigozhin, however, differs from other political rivals of Putin who have criticised the country's leadership, because he has a powerful army at his back and it is not uncommon for mercenaries to incite rebellions against the governments that have hired them.

Prigozhin is something of a Frankenstein monster that Putin has created for himself, with the Wagner Group that acted as a de facto force of the Russian state, but which was more independent than the military.

The Russian president may, at first, have thought that it may not be easy to disarm and disband the Wagner Group. The question would always remain: Will they cooperate and act in concert with the Russian military leadership to pursue Putin's military objectives in Ukraine?



© KREMLIN.RU

Belarus President Aleksandr Lukashenko and Russian President Vladimir Putin

Prigozhin and Wagner have not completely disappeared, but in an important development on June 27, the defence ministry announced that preparations were under way for the Wagner Group to be disarmed, handing over their heavy weapons to the Russian armed forces.

The FSB security forces also said that the case against the Wagner fighters - who were accused of armed insurrection - was now closed, as the rebels had not broken the law.

They can either join the regular army, return home or go to Belarus, President Putin said. He said the fighters were mostly "patriots" who had been led on a criminal adventure.

President Putin said this after an angry speech on Monday night in which he accused the rebel leaders of wanting to "make Russia suffer in a bloody conflict".



© UNDOC

Delivery of ten Russian BRDM-2 armored vehicles to Central African Republic



A soldier from the Central African Armed Forces wearing a Wagner Group patch

The Wagner militia's revolt has also created a diplomatic dilemma for Mali, Central African Republic (CAR), Mozambique and Madagascar among others, where the mercenary group's forces have been crucial in their internal conflicts.

If Wagner stops its operations in Africa, it would certainly hurt the group's finances.

The United States said in October 2022 that the mercenaries were using natural resources in CAR, Mali and other places to pay for fighting in Ukraine - a claim Russia denied at the time.

I The past catching up

Putin, who has presented himself as the successor to past Russian imperial glory, may end up with the fate of many tsars before him: a military revolt against his own rule, driven by the backlash of a failed war.

"This is a betrayal of our country and our people. This is exactly what happened in 1917 when the country was in World War I and victory was snatched away," Putin said in a speech on the evening of Friday, 23 June, comparing the revolt to the uprising that destroyed Tsarist Russia during the First World War. *"The intrigues and quarrels behind the army's back have proved to be the biggest disaster: Destruction of the army and the state, loss of vast territories, leading to tragedy and civil war"*



Wagner Group mercenaries in Mali

The far-right Wagner group has little in common with the left-wing Bolsheviks who seized power in the revolution that overthrew Tsar Nicholas and founded the Soviet Union. But the background conditions of the uprising that threatened Putin's regime - especially the discontent caused by a failed war - are nevertheless similar to those that triggered the revolt more than a century ago.

Although the tsar's enemies were strongly driven by the ideology of revolutionary communism, the revolution could not have taken place without the immense bloodshed of the First World War; the suffering during the war was the spark that ignited the uprising.

Russians, fed up with being thrown into the slaughterhouse of trench warfare for reasons that had little to do with their own lives or interests, finally turned against the tsar and supported



Russian Deputy Defence Minister, Nikolay Pankov who upset Prigozhin by saying that all military volunteer units would be required to sign a contract either with volunteer units or with the ministry of defence as servicemen

the movement that seemed most likely to bring a swift end to the conflict. The war eventually led to massive discontent with tsarist rule and gave impetus to the mix of angry populist movements that ultimately destroyed the regime of Nicholas II at the same time as convincing regular Russians that that they had little to advantage from protecting their monarch.

During this period, Russia was more unstable and had more serious internal problems than many other great powers, so the shock of war resulted in correspondingly greater chaos. But this description could also apply to modern Russia.

Putin's dictatorship is also characterised by a combination of incompetence, corruption and disregard for the suffering of his own people. Russian society has been rapidly impoverished by the invasion of Ukraine that began in early 2022. While wealthy Russians have fled the country to countries such as Turkey and Dubai, tens of thousands, perhaps many more, have been forced to die on the grim battlefields of war-ravaged eastern Ukraine, including thousands of former prison inmates recruited as fighters for the Wagner Group.

Just as the First World War was started in the interests of monarchs who cared little for the lives of those who fought, the reason for these deaths in Ukraine remains unclear to many Russians, while a resolution to the conflict remains elusive.

Instead of facing the harsh realities of war - such as military failures, sanctions, mobilisation, inflation and mass emigration - most Russians either blindly followed their government or looked the other way. The Kremlin's reluctance to escalate the war and slow progress in gaining territory have drawn increasing criticism from Russia's far-right bloggers, who are hugely

© PERSIANDUTCHNETWORK



Anti-Russian demonstration in Amsterdam, Netherlands

influential on social media. This will lead to more people doubting and questioning the Russian authorities.

Prigozhin's rebellion is more than an attack on the Russian army. It is an attack on Putin himself - the worst crime that can be committed in Russia. Putin, speaking to the nation on 24 June about the situation, called it "treason" and "high treason". It must have been hard for Putin to say these words publicly, because they show his personal failure. Putin has tried to avoid responsibility for the failure of the army, the Ukrainian drone attacks inside Russia and the invasion of the Belgorod region by blaming the military.

However, a rebellion on the Russian streets is not just about the war with Ukraine. It is about the entire system over which Putin rules. Prigozhin has long criticised the war, but when tanks move out and head for Moscow, it means Putin is no longer in charge. Even if Prigozhin's rebellion is stopped soon, it will be too late. For Putin and his system, the damage has already been done.

Prigozhin, who claimed to have at least 25,000 men under his command when he rebelled, took advantage of this unfortunate situation. He had not hidden the impact of the badly fought war in Ukraine on his thinking. The catastrophic loss of life over a small piece of territory in Ukraine last year is eerily similar to the senseless battles and trench warfare of the First World War. In places like Bakhmut, towns were destroyed at the cost of thousands of casualties on all sides. The head of the Wagner Group has accused the Russian military leadership of concealing the true cost of the war with falsified casualty figures and exaggerating the threat that Ukraine and NATO posed to Russia before the war began.

"Huge numbers of our fighters, of our combat comrades, have been killed," Prigozhin said in an audio message posted to Telegram. *"The evil that the military leadership of the country bears must be stopped. They neglect the lives of soldiers. They forget the word 'justice'".* Prigozhin called his revolt a "march of justice" rather than a coup d'état and promised to challenge Russia's military leadership.

Although details are still vague, some reports suggested that the Wagner chief received concessions in return for the withdrawal of his troops, including a change in the military staff running the war. The mercenary leader has been a vocal critic of the Russian military leadership, particularly Defence Minister Sergei Shoigu, since the beginning of the war. The Russian military offered only limited resistance to his offensive and avoided fighting the Wagner group in Rostov-on-Don.



© KREMLIN.RU

Russian defence minister Sergei Shoigu saluting President Putin during the Military parade at on Red Square

The Russian government nevertheless treated his uprising as a deadly threat, filed criminal charges against Prigozhin for "inciting an armed insurrection" and had military and police forces stationed throughout Moscow in preparation for the arrival of Wagner's troops. The charges, brought by Russia's Federal Security Service (FSB), can be punished with 12 to 20 years in prison. *"Prigozhin's statements and actions amount to calls for the start of an armed civil war on Russian territory and are a 'betrayal' of Russian soldiers fighting pro-fascist Ukrainian forces,"* the FSB said in a statement circulated by state agencies. And Kremlin spokesman Dmitry Peskov said President Putin was aware of the "developing situation" around Prigozhin and that "all necessary measures" would be taken.

If he had succeeded in taking power, Prigozhin would not have created a more liberal or progressive Russia. Given the terrible track record of his organisation, the opposite is more likely. Nor is there any evidence that he would have ended the war in Ukraine if he had had the chance.

Nevertheless, the leader of the Wagner Group posed the most serious challenge to Putin's rule since he took power more than two decades ago. Prigozhin owes this chance, which may not be his last, to a failed war and its impact on an autocratic regime. *"The war put Russian society in a state of extreme stress,"* Vladimir Lenin noted with delight a century ago, reflecting on the impact of the First World War on his tsarist opponents. *"The revolution drew its first breath from the war".*

Implications for EU and US policy

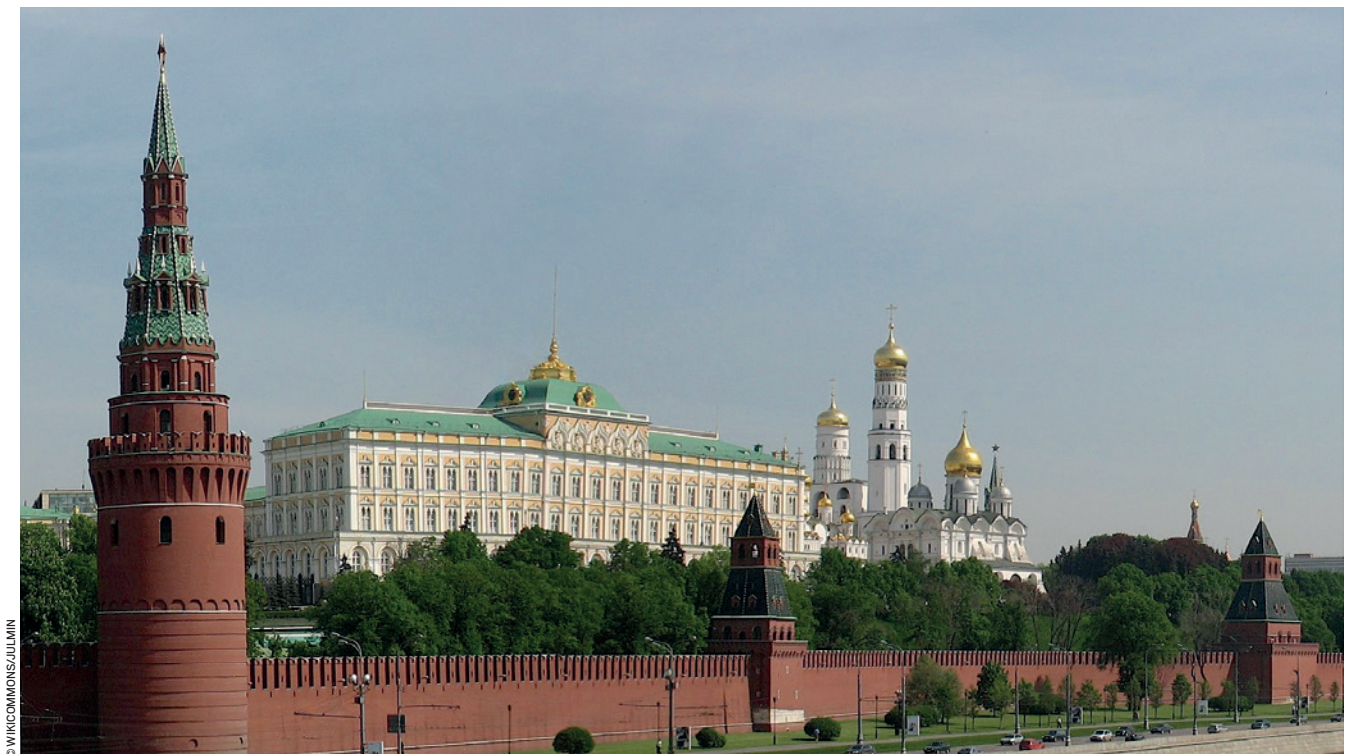
Developments within Russia will, of course, be determined by Russians. However, the West is in a position to influence the opinions of elites and the public about what a post-Putin Russia might look like, which could both increase pressure on the regime and help shape the opinions and aspirations of those who come after it.

For this to happen, however, Russia would have to end the war in Ukraine, open up political space and engage constructively with the West and Ukraine again.

But the Kremlin seems to find the idea that Russia will inevitably come into conflict with the West useful in justifying its isolation from Europe. Putin has even tried to create a "Eurasian" identity for Russia, contrasting the increasing liberalism of the West with Russia's traditional conservatism, for example on LGBTQ+ issues. The Kremlin's rhetoric and propaganda has changed perceptions; as a Levada poll from 2021 found, fewer Russians consider Russia to be a European country than they did in 2019 or 2008.

However, Russia is a European country in that it has historically oriented itself towards the West and been a major player in European affairs. The pre-Soviet tsars were strongly oriented towards Europe, and Russia's geopolitical, economic and cultural centre of gravity was also in Europe during the Soviet era, and even at the beginning of Putin's rule.

In other words, Putin's efforts to create a Eurasian identity, naturally in opposition to Europe, are on weak footing - even if his narrative has been strengthened by current tensions with the West.



© WIKICOMMONS/JULIAN

The Kremlin in Moscow, Russia



Germany has taken the lead of NATO's highest-readiness military force, placing thousands of troops on standby and ready to deploy within days

It could be effective to reject the notion that the West and Russia are inevitably in conflict and to emphasise that Putin is the one isolating Russia and preventing it from having a European - and thus more prosperous - future. Bringing such a message into Russian society and overcoming state propaganda is difficult, but not impossible. Messages and narratives can and will find a way to reach Russian elites and the well-connected public. Since the partial mobilisation in September, the broader Russian public is also looking for more reliable information about the war in Ukraine

A liberal democratic Russia?

There are good reasons to doubt the possibility of a liberal democratic Russia that is not hostile to the West. Putin is essentially a mirrored image of the Russian public, and he is popular not least because hardline nationalism is popular in Russia. Democracy has been badly battered by the political chaos and economic collapse of the 1990s, which led to the development of patronage capitalism rather than a strong and dynamic market economy. Much of the Russian public has also been subjected to anti-Western propaganda for most of the last century. Therefore, any new leader or regime might resort to a hard line nationalist stance to gain public support.

Moreover, Russia couldn't live on as a country without autocratic rule, because its multi-ethnic polity, built through imperial conquest, could fall apart without Moscow's uncompromising authority. Even if the Russian leadership strives for a democratic future, the country could still fall apart. Russia could revert to the lawless chaos of the 1990s, when mafia groups, armed oligarchs and separatist movements exploited the weakened state.

This is undoubtedly a cause for concern, but today's Russia is very different. In the early 1990s, it confronted a tough transition from a command economy to a free market economy, and the resulting economic collapse significantly weakened Russian state capacity.

In contrast, a departure from Putin could bring enormous economic benefits. A new, more liberal regime in Moscow would not face the same difficulties as in the 1990s. Moreover, while there is a real potential for a new wave of secessionist movements, this is offset by broader Russian patriotism, greater identity and stronger ties to the state.

The chances of Russia taking a liberal, democratic, pro-Western path are slim - even if the public had the opportunity to do so - but it is not impossible either. Although creating a multi-ethnic representative democracy in Russia, a country with an almost uninterrupted autocratic history, seems unrealistic, similar things were said about Germany after World War II. Europe, a continent that has been at war for most of its history, has united in a federal union. Even if Russian NATO or EU membership seems highly unlikely at the moment, the West should at least be open to this possibility, however small or distant.

Ultimately, Russia's future will be decided by the Russians, not by the West. However, it costs nothing to let the Russians know that the West will welcome them if they seek democracy. Such an approach could affect how Russians feel about the Putin regime and their future. As much as the rhetoric of retaliation may feel justified, as it did towards Germany after World War I and II, the wiser path focuses on rehabilitation and integration.

The West offered this not out of generosity but because of geopolitical competition with the Soviet Union. Similarly, encouraging and prodding a post-Putin Russia to abandon its anti-Western attitudes and vicious revisionist approach to the international order would have a big geopolitical impact on US-China relations, European security and the liberal world order in general.

There are two striking examples here: the Soviet Union did not collapse when Ronald Reagan or the West had an iron fist, but when they had an outstretched arm. The Green Movement in Iran did not erupt when the United States threatened to bomb the country, but after the newly sworn-in President Barack Obama addressed the Iranian people in a New Year's message offering a "new beginning" that became impossible when Mahmoud Ahmadinejad was re-elected president three months later, under highly dubious circumstances.

Correlation does not equal causation, but there is never just one factor that triggers a revolution. Providing a degree of hope for a better future, a more liberal future within even a small section of society can have the most powerful effect.

Hossein Sadre
hossein.sadre@europe-diplomatic.eu

NEWS IN BRIEF

I THE COMPUTER SAID NO

A German bank fined 300,000 euros after a lack of transparency about the automated rejection of a credit card application.



© JENS GYRMATY

Ulrich Kelber, Federal Commissioner for Data Protection and Freedom of Information

A Berlin based bank offered a credit card on their website. Using an online form, the bank requested various data about the applicant's income, occupation, and personal details. Based on the information requested and additional data from external sources, the bank's algorithm rejected the customer's application without any justification. The algorithm is based on criteria and rules previously defined by the bank. Since the client had a good credit rating and a regular high income, he refuted the automated rejection and complained to the Berlin data protection commissioner.

Even when the complainant requested an explanation, the bank only provided blanket information about the computerised procedure, detached from the individual case. However, it refused to tell him why it assumed a poor creditworthiness in his case. The complainant was thus unable to understand which data basis and factors formed the basis of the automated rejection and on the basis of which criteria his credit card application had been rejected accordingly.

Without this individual case justification, however, it was also not possible for him to meaningfully challenge the automated individual decision.

A bank is obliged to inform its customers about the main reasons for a rejection when making an automated decision on a credit card application. This includes concrete information on the data basis and the decision-making factors as well as the criteria for the rejection in the individual case. The Berlin DPA found that the bank had violated Article 22(3), Article 5(1)(a) and Article 15(1)(h) GDPR in the specific case. In imposing the fine, the Berlin DPA took into account in particular the high turnover of the bank and the intentional design of the application process and the information.

I THE PARTHENON MARBLES WILL NOT RETURN TO GREECE

It seems like Rishi Sunak's government has finally decided not to return the Parthenon's Marbles Back to Greece.

When Pope Francis decided to return to the head of the Greek Orthodox Church the Archbishop of Athens Hieronymus II all of Greece three fragments of the Parthenon that have been on display in the Vatican since several decades, the the Greek government was hoping that the Parthenon Sculptures, on display at the British Museum, would also be returned to their homeland.

A formal request for the permanent return to Greece of all of the Parthenon Sculptures in the Museum's collection was first made in 1983. There have been various meetings and discussions since then.

In March 2022, the president of the British Museum in London declared that he was open to an agreement to share the Parthenon Marbles with Greece. For Greece there was only one option: a permanent return of the sculptures to their homeland.

"We repeat, once again, our country's firm position that it does not recognize the British Museum's jurisdiction, possession and ownership of the sculptures, as they are the product of theft", the Greek Ministry of Culture said.

For UK Prime Minister Sunak "The Elgin Marbles are the country's great asset" adding "We share their treasures with the world, and the world comes to the UK to see them. The collection of The British Museum protects the law, and we have no plans to change it"



© BRITISH MUSEUM

Figures of three goddesses from the east pediment of the Parthenon

The Parthenon Sculptures are from Athens, Greece. When, in 1834, Athens was officially declared the capital of the newly established independent Greek State, most of the post-Roman period structures on the Acropolis were removed, to accommodate further archaeological exploration.

By the early 19th century, the Ottoman Empire had been the governing authority in Athens for 350 years. Lord Elgin was the British Ambassador to the Ottoman Empire and successfully petitioned the authorities to be able to draw, measure and remove figures.

He was granted a permit (firman), and between 1801 and 1805 acting under the oversight of the relevant authorities, Elgin removed about half of the remaining sculptures from

the ruins of the Parthenon. He also obtained permission to have removed sculptural and architectural elements from other buildings on the Acropolis, namely the Erechtheion, the Temple of Athena Nike and the Propylaia.

All of Elgin's collection of antiquities was then transported to Britain. His actions were thoroughly investigated by a Parliamentary Select Committee in 1816 and found to be entirely legal, prior to the sculptures entering the collection of the British Museum by Act of Parliament.



The Trustees of the British Museum, as well as the painter (right, sitting), are depicted pondering the artistic and humanistic value of the Parthenon sculptures (1819), on display in "The Temporary Elgin Room" of the museum as of 1817

EU DEFENCE SPENDING IN THE ECA'S SIGHTS

Adaptive camouflage, bullet-proof vests, laser systems: these were some of the projects funded as the EU used its common budget, for the first time in history, to support research and development in the defence industry. Our auditors found that expectations were only partially met.

Historically, European defence investment was mainly intergovernmental, but is now becoming more supranational. One important aim of the €90-million pilot programme for preparatory action on defence research (PADR) was to prepare the EU for a significant defence spending hike and pave the way for the €8-billion European Defence Fund (EDF).

The European Court of Auditors found that the EU still lacks a long-term strategy for defence spending. Such a strategy should aim to increase the presence of technology developed by the EDF in the EU defence sector, and strengthen the bloc's technological and industrial defence base. As the EDF's precursor, the PADR has yielded scant results so far, and there is no plan to make subsequent use of the results of research projects.

The auditors are currently looking into EU spending on military mobility. They will assess whether the EU's action plan – which is a prerequisite for the bloc's strategic autonomy – is on track to facilitate rapid and seamless military movements within and beyond the EU.



JUDGMENT OF THE COURT OF JUSTICE OF THE EUROPEAN UNION

The cancellation of a flight due to the unexpected death of the co-pilot does not exempt the airline from its obligation to compensate passengers

Such a death, whilst tragic, does not amount to an 'extraordinary circumstance' but is, like any unexpected illness which may affect a crew member whose presence is essential, inherent in the normal exercise of the activity of the airline.

On 17 July 2019, TAP Portugal was to operate a flight at 6.05 from Stuttgart (Germany) to Lisbon (Portugal). On the same day, at 4.15, the co-pilot of the flight in question was found dead in his hotel bed. Shocked by that event, the whole crew declared itself unfit to fly so that the flight was cancelled. A replacement crew left Lisbon at 11.25 and arrived in Stuttgart at 15.20. Next, the passengers were transported to Lisbon on a replacement flight scheduled at

16.40. Certain passengers of the cancelled flight assigned their rights arising from that cancellation to companies which provide legal assistance to air passengers. TAP refused to pay those companies the compensation provided for in the Air Passengers Rights Regulation, 1 claiming that the unexpected death of the co-pilot was an extraordinary

circumstance which exempts the air carrier from its obligation to pay compensation.

The Stuttgart Regional Court, before which the case was brought, asks the Court of Justice to interpret the Regulation.



A hearing of the Court of Justice - Grand Chamber

By its judgment, the Court recalled that measures relating to the staff of the operating air carrier, such as those concerning crew planning and staff working hours, fall within the normal exercise of that carrier's activities. Since the management of an unexpected absence, due to illness or death, of one or more members of staff whose presence is essential to the operation of a flight, including shortly before the departure of that flight, is intrinsically linked to the question of crew planning and staff working hours, such an absence is inherent in the

normal exercise of the operating air carrier's activity and therefore does not fall within the concept of 'extraordinary circumstances'. It follows that the air carrier is not exempted from its obligation to compensate passengers.

The Court points out that, however tragic and final it may be, the situation of an unexpected death is no different, from a legal point of view, from that in which a flight cannot be operated when such a member of staff has unexpectedly fallen

ill shortly before the departure of the flight. Thus, it is the very absence and not the specific medical cause of that absence which constitutes an event inherent in the normal exercise of that carrier's activity, with the result that the carrier must expect such unforeseen events to arise in the context of planning its crews and the working hours of its staff.

The Court adds that the fact that the crew member concerned had fully completed the regular medical examinations prescribed by the applicable legislation cannot call into question that conclusion since any person may, at any time, unexpectedly fall ill or die.

On those grounds, the Court (Third Chamber) ruled:

Article 5(3) of Regulation (EC) No 261/2004 of the European Parliament and of the Council of 11 February 2004 establishing common rules on compensation and assistance to passengers in the event of denied boarding and of cancellation or long delay of flights, and repealing Regulation (EEC) No 295/91, must be interpreted as meaning that the unexpected absence – due to illness or death of a crew member whose presence is essential to the operation of a flight – which occurred shortly before the scheduled departure of that flight, does not fall within the concept of 'extraordinary circumstances' within the meaning of that provision.

EU SANCTIONS: COUNCIL FINALISES POSITION ON LAW THAT ALIGNS PENALTIES FOR VIOLATIONS



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Gunnar Strömmer, Swedish Minister for Justice

The Council today settled on its negotiating position (general approach) for an EU law which introduces criminal offences and penalties for the violation of EU sanctions. This directive, when adopted, will be an important tool to ensure that violating sanctions does not pay off.

Sanctions are one crucial tool in the EU support of Ukraine and its fight against the Russian illegal aggression. This new law will make it easier to investigate, prosecute and punish the breaking of sanction measures throughout the EU.

The draft law defines the conduct member states will need to criminalise. Actions which member states will label as criminal

offences include: helping persons subject to Union restrictive measures to bypass an EU travel ban, trading sanctioned goods and running transactions with states or entities which are hit by EU restrictive measures.

Dissuasive penalties

The Council also wants member states to ensure that violating EU sanctions is punishable by effective, proportionate and dissuasive criminal penalties. The draft directive foresees penalties to vary depending on the offence.

Member states will also have to update their national laws so that aggravating circumstances are taken into account when determining the penalty. An aggravating circumstance for instance would be that the offence is committed in the framework of a criminal organisation or by a public official.

Stricter enforcement

Member states should also step up their efforts to make sure that EU sanctions are respected. For that they will be obliged to provide for a limitation period that allows for proper law enforcement. Member states also need to take measures to freeze and confiscate the proceeds from violating sanctions.

EU countries will furthermore be required to guarantee cooperation and coordination between its various law enforcement and judicial authorities. Cooperation on criminal investigations into sanction violation will also happen at European level – between member states, the Commission and EU agencies such as Europol or the European Public Prosecutor's Office.

Background and next steps

Restrictive measures are an important component of the EU's foreign and security policy toolbox. They can consist of for instance asset freezes, travel bans and import/export restrictions.

The enforcement of EU sanctions is a member state responsibility. But the types and levels of penalties in member states can vary because – so far – national systems that deal with the violation of EU sanctions differ significantly. Currently, member states are not required to criminalise violations and may thus apply administrative sanctions instead, and maximum criminal penalties range from 2 to 12 years of imprisonment.

In order to limit sanctions circumvention and tighten their enforcement, the Commission – on 5 December 2022 – proposed the present draft directive on the definition of criminal offences and penalties for the violation of Union restrictive measures.

The general approach agreed on today is the basis for negotiations with the European Parliament to reach a common position on the draft law.

HUNGARY: ANTI-CORRUPTION GROUP CALLS FOR MEASURES TO PREVENT CORRUPTION IN CENTRAL GOVERNMENT AND LAW ENFORCEMENT

The Council of Europe's Group of States against Corruption (GRECO), in a new report, calls for determined measures to prevent corruption in Hungary in respect of persons with top executive functions, including the Prime Minister, ministers, commissioners, political state secretaries, political advisers, the

Prime Minister's agents, as well as members of the Hungarian National Police and of the National Protective Service (NPS). (see also report in French and Hungarian: unofficial translations as provided by the authorities of Hungary).

In its evaluation report, GRECO notes that a common and general feature of public administration and law enforcement agencies in Hungary is that most integrity and corruption prevention measures target low and mid-level officials. The integrity framework applicable to persons with top executive functions is very weak and the conditions for the appointment of senior managers in the Police and the NPS carry risks of politicisation.



Hungarian Parliament Building (Országház) and Margaret Bridge in Budapest, Hungary

GRECO notes that persons with top executive functions are not subject to a code of conduct, to awareness-raising and confidential counselling on integrity, to rules on lobbying or the acceptance of gifts and invitations, nor to rules on post-employment restrictions. The anti-corruption strategies and action plans do not cover these persons. Their assets declarations are not filed in electronic format, which greatly limits their exploitability. Only declarations by senior political leaders are public and the verification of declarations is clearly insufficient. GRECO calls for all these gaps to be addressed as a matter of priority.

GRECO also notes a lack of transparency around the composition of ministerial cabinets and the role and remuneration of their members, the agendas and meetings of ministers and political advisers, the employment of the Prime Minister's agents, persons with top executive functions' salary system as well as more generally, increasing difficulties in accessing public information and exercising public participation in the legislative process.

The implementation of the recommendations addressed to Hungary will be assessed by GRECO in 2024 through its compliance procedure.

ASL GROUP DOUBLES DOWN ON SUSTAINABLE AIR MOBILITY, SIGNS AGREEMENT FOR DELIVERY OF SIX LILIUM PIONEER EDITION JETS

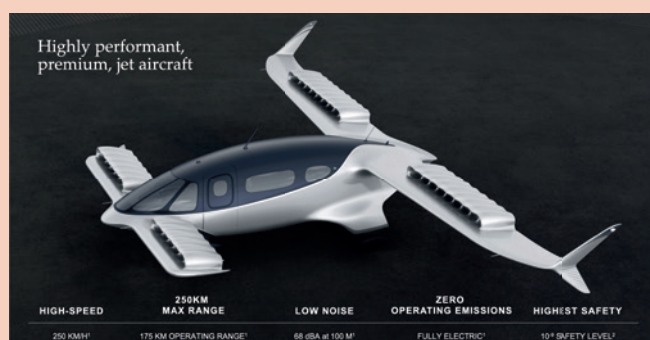
Lilium N.V. developer of the first all-electric vertical take-off and landing jet, has signed an agreement with Benelux-based business jet operator ASL Group for the delivery of six Lilium Pioneer Edition Jets. The agreement, which includes deposit payments to Lilium, converts an earlier Memorandum of Understanding between the two companies, disclosed last year during the Farnborough International Airshow.



ASL Group is a leading business jet operator in the Benelux and the owner of the first electric aircraft in Belgium. ASL Group intends to manage and operate the aircraft for its customers as part of a sustainable, high-speed network connecting major hubs across Belgium, Netherlands, Luxembourg, and Western Germany.

Philippe Bodson, owner and CEO of ASL Group said: "Our company is constantly seeking new ways to operate responsibly and contribute to a healthy future, both socially and ecologically. The Lilium Jet is a great opportunity to provide better value to our customers in a sustainable way. With zero operating emissions, vertical take-off landing capability, and a spacious premium cabin, Lilium represents the best option on the market."

Klaus Roewe, CEO of Lilium said: "The conversion of our MOU with ASL shows the strength of our continued partnership. ASL Group is a truly innovative company with a vision to provide the best services for its customers. With the highest population density in Europe, Benelux represents a perfect use case for the Lilium Jet, with its expected high aerodynamic performance and low noise profile. We are proud to support ASL's development in the region."



CENTRAL EUROPE DEFENSE CONFERENCE ALIGNS ALLIES, STRENGTHENS RELATIONSHIPS

U.S. Army Gen. Christopher Cavoli, commander, U.S. European Command, co-hosted the two-day 2023 Chiefs of Defense Conference alongside Romanian Gen. Daniel Petrescu, Romanian Chief of Defense Staff, in Bucharest, Romania, from June 8-9, 2023.

The event drew representatives from Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia, in addition to National Guard leadership from Alabama, Colorado, Illinois, Indiana, Minnesota, Nebraska, Ohio, Tennessee and Texas. Seven of the eight European nations in attendance are original members of the State Partnership Program and are celebrating 30 years of partnership.



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Cavoli thanked Petrescu and the Romanian Armed Forces for their contributions to collective defense. "You host U.S. and NATO forces, and you do so much in the larger effort to deter Russian aggression," said Cavoli.

Cavoli also lauded Romanian Armed Forces' leadership in this year's DEFENDER exercise series, consisting of three linked training exercises with Saber Guardian as its third and final training event.

"They are leading tactical employment in combined military training events to include joint forcible entry and wet gap crossings," added Cavoli. "This combined training in Saber Guardian makes the alliance stronger, and demonstrates the speed and effectiveness of our deployable forces."

During the event, leaders discussed logistics and support to Ukraine, combined operations, and intelligence sharing. It also provided a venue for leaders to strengthen military-to-military relationships toward solving complex, regional challenges.

Petrescu emphasized that the Bucharest meeting aimed to achieve a harmonized military approach on the Eastern flank, as part of the allied defensive thinking, which will be finalized at the NATO Summit in Vilnius in July.

"The Black Sea region is an area of strategic interest for NATO. The consistent presence of Allied structures, especially American ones and countries like Romania with close proximity to the war contributes to the success that deterrence plays in a security equation," said Petrescu.

Regularly hosted by Allies throughout Europe, Chiefs of Defense conferences are a key component of EUCOM's comprehensive approach to regional security. Through continuous engagement, EUCOM and its Allies foster enduring partnerships and strengthening cooperation among Allied nations.

OLAF INVESTIGATIONS UNCOVER OVER €600 MILLION AFFECTED BY FRAUD AND IRREGULARITIES

In 2022 the European Anti-Fraud Office (OLAF) protected €600 million of EU taxpayers' money by recommending the recovery of over €426 million to the EU budget from fraud and irregularities, and by safeguarding a further €200 million.

OLAF also stopped a number of smuggling, counterfeiting and customs fraud schemes, helped enforce EU trade defence measures, and continued to devise policies to prevent and counter evolving fraud patterns. As every year, OLAF also investigated suspicions of misconduct by staff and members of EU institutions. In total, OLAF concluded over 250 cases last year.

The OLAF Report 2022 published today provides insight into the main trends and operations last year, ranging from the fight against counterfeiting and smuggling to the protection of EU funds – including the Recovery and Resilience Facility – and fraud prevention mechanisms to protect EU financial assistance for Ukraine. For the first time, the report is presented in an interactive virtual format.

OLAF Director-General Ville Itälä emphasised: "OLAF's accumulated knowledge, expertise and operations provide tangible results – we protect both the EU budget and EU citizens. The protection of EU taxpayers' money for infrastructure and digitalisation, the seizure of 531 million illicitly traded cigarettes, an international action against adulterated honey, and the recovery of almost €3 billion to the EU budget from a customs undervaluation case are just a few examples of the spectrum of OLAF's impact."

Prevention remains the most effective tool to tackle fraud. OLAF strives to ensure that the EU's financial assistance and investments in Member States and third countries are spent as intended. We strongly believe that cooperation is key to our success and in 2022 OLAF has intensified its engagement with national authorities, international organisations and EU partners. OLAF's ability to join the dots for multiple players and to provide the bigger picture remains our unique and distinguishing quality that adds value to the fight against fraud in the European Union and beyond."

OLAF'S investigative performance in 2022:

- OLAF concluded 256 investigations, issuing 275 recommendations to the relevant national and EU authorities.



OLAF Director-General Ville Itälä

© TWITTER.COM/VILLE.ITALA

- OLAF recommended the recovery of €426.8 million to the EU budget, and prevented the undue spending of €197.9 million.
- OLAF opened 192 new investigations, following 1,017 preliminary analyses carried out by OLAF experts.

OLAF reported 71 cases with possible criminal offences to the European Public Prosecutor's Office (EPPO), 16 of which on behalf of the European Commission.

FOURTEEN STOLEN CULTURAL ARTEFACTS RETURN TO ITALY WITH EUROJUST SUPPORT



Some of the returned artefacts

The ancient artefacts, of considerable economic and cultural value, had been stolen from museums in Italy or illegally excavated and smuggled into Bavaria in Germany. The seizure and final handover of the cultural goods is the result of the cooperation between the Carabinieri Command for the Protection of Cultural Heritage (Italy), the Bavarian State Criminal Police Office (BLKA) in Munich (Germany), and the respective Ministries of Culture. Eurojust provided legal assistance to the authorities involved and facilitated the conclusion of the agreement.

The handover took place on 5 June at the headquarters of the Operational Department of the Carabinieri Command for the Protection of Cultural Heritage, 'La Marmora', in Rome, between the Commander Brigadier General, Vincenzo Molinese, and the Police Vice-President of the BLKA, Guido Limmer. The ceremony was attended by representatives of the German and Italian National Desks at Eurojust, as well as members of the German police and the German Federal Ministry of Culture.

The cultural assets recovered include an Attic black-figure kylix, from 540-530 BC; a Corinthian bronze helmet from the 4th century BC; several Roman bronze coins (68 BC - 3rd century BC); four gold coins of Valentinian II from the mint of Trier, era 367-385 AD; and an ivory box dated to the late Middle Ages.

The coins and the medieval box were all stolen from two different Italian museums located in Parma and Milan. Eurojust, through its Italian and German National Desks, provided advisory support to the national authorities involved to facilitate the seizure and return of these cultural assets. A coordination meeting was hosted by the Agency to find solutions to the legal problems related to the different national laws.

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YOUNG SCIENTIST
AWARD 2023

2 prizes open to PhDs, undergraduates
& masters students

EUROPEAN PARTNERSHIP

Co-funded by
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APPLICATIONS OPEN FOR THE SESAR YOUNG SCIENTIST AWARD 2023

Are you a young scientist active in the field of air traffic management (ATM) and aviation? Are you looking for the perfect opportunity to showcase your talent and advance your career? If yes, then look no further... the SESAR Young Scientist Award is for you!

The SESAR Young Scientist Award recognises young scientists, who have demonstrated excellence in ATM and aviation-related research fields. The award also provides researchers starting out in their career with an opportunity for further professional development.

A further objective of the award is to showcase the potential of young talent to formulate fresh ideas and solutions to the challenges facing ATM and aviation.

The 2023 edition of the award has widened its scope from previous years and is now open to two categories:

- PhD scientists; with the chance to receive a prize of EUR 5 000
- Undergraduate or Master students; with the chance to win a prize of EUR 1 500

Contributions are welcome from citizens or residents in an EU Member State or an Associated Country to the Horizon Europe Research and Development Framework Programme (Horizon Europe).

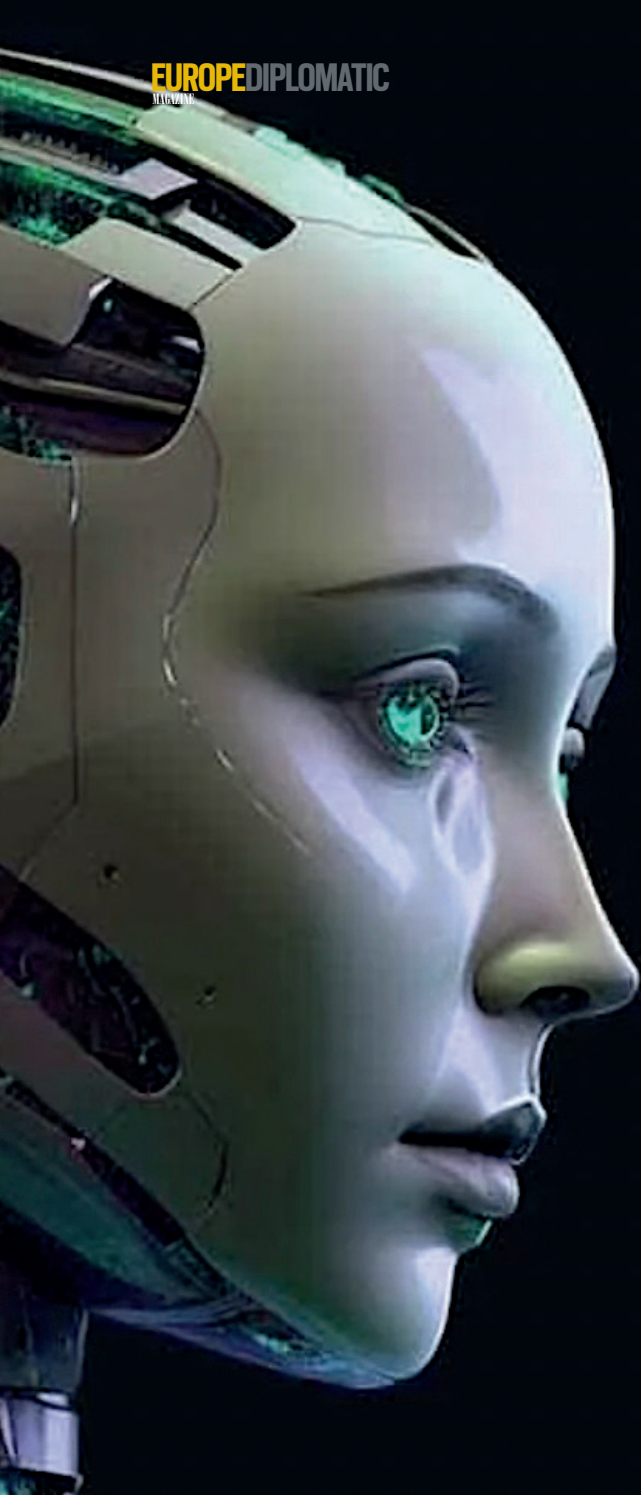
Up to three short-listed candidates for each category will be invited to join the SESAR Innovation Days 2023 from 27-30 November in Sevilla, where the winner of each category will be publicly announced during a dedicated ceremony.

Contest rules and how to apply?

If you wish to apply for this Award, please:
Read the Contest Rules (S3JU/LC/014-CNT)

Complete the application form and
declaration of honour and send them to:
youngscientist@sesarju.eu

The deadline for applications is
8 September 2023, 24.00 CET.



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 OpenAI



GPT-4

**WHO
(OR WHAT)
ARE YOU
TALKING TO?**

**Artificial intelligence
gets to play a bigger
rôle**



Giacomo Miceli

Back in the days when computers and space exploration were solely within the realms of science fiction, nobody could imagine having a chat with a machine, at least not outside the pages of a comic book. Not any more. Artificial Intelligence (AI) is real. It's now relatively simple for tech-savvy people to create a conversation between characters who don't exist or who died some time ago and even their closest relatives are unlikely to spot that it's what's called a "deepfake". How can anyone know if they're talking to a real person or not? Giacomo Miceli is an Italian-American computer scientist who created a totally false conversation between the Slovenian philosopher Slavoj Žižek and the German film maker Werner Herzog that sounded so much like them that even their close friends and relatives would probably have been convinced. The computer imitates accents, speech mannerisms and even occasional mispronunciations with stunning accuracy, enabling the programmer to make the subjects say whatever he or she may choose, and say it convincingly. Miceli initiated what he calls the "Infinite Conversation", using cloned images and cloned voices. "We're about to face a crisis of trust," Miceli warned in the science magazine *Scientific American*, "and we're utterly unprepared for it."

Just take a look at ChatGPT, an artificial intelligence chatbot developed by OpenAI and released in November 2022, which put such accurate fakery within the grasp of anyone who wants to create conversations that never really happened. Assuming they possess the necessary skills, of course. Whatever we may think, the companies and people involved in technology development see it as very much the future. Whatever Miceli may think about it, it's the next big thing, and getting bigger all the time. Quite apart from OpenAI, lots of tech companies are either striving to catch up or to get into the lead. OpenAI now has the backing of the giant Microsoft, while Google has published a paper about how a similar programme can create music. It goes without saying, of course, that China is trying to get in on the act, too, through its tech developer and search engine researcher, Baidu. It's the field that seems to be attracting technology's brightest and best, because of its obvious interest. Using ChatGPT, somebody could create a convincing but totally fake chat between, say, someone's political rivals, making them say dreadful things that could be illegal and certainly misleading.

This presents a problem for the European Union, which wants to be at the forefront with AI and chatbots but also realises that it will have to introduce regulations of some sort. On the other hand, it doesn't want to frighten developers away. Europe has already seen a temporary ban on ChatGPT imposed by the Italian data protection authority, Garante, which was growing concerned about potential breaches of its data protection legislation.

That seemed to be more of a concern than that a real person – perhaps a senior figure in politics – could be made to commit libel or some other speech crime without the supposed speaker even being aware of it. Garante told OpenAI that it must be more transparent about how the information of the programme's users is processed. Concerns have also been raised in France and Spain, but as of yet, the EU has no regulation on the uses to which AI can be put, although it's been under discussion for more than two years. It's not expected to be ready to go onto the statute books until at least 2025. That may not be soon enough, according to German MEP Axel Voss, who is one of the main drafters of the EU's Artificial Intelligence Act. He has pointed out that AI itself was nothing like as advanced two years ago as it has become since and in two more years it will have advanced further still. It could mean that whatever legislation is agreed will be out of date and relatively useless before it can even be fully enacted.

The Infinite Conversation

About FAQ Contact Share

Here, again, we encounter different theories of tragedy: the theory of excess (like in Didi-Huberman's reading of Gauguin from which I took my name for the new journal) where everything that you desire is present in the beginning and then, on account of its own excess it has to be lost.

When the courtesan Violetta drinks the glass of champagne "as fresh as dew" that's it.

That is what she loses; there is some kind of original naive innocence that she cannot regain.

Or, on the contrary, the theory of the Hegelian remembrance of the loss. The point of death is not to get rid of a certain excess but to remember what you've already lost. Death is the return to this moment of loss.

Welcome to the Infinite Conversation:

an AI generated, never-ending discussion between Werner Herzog and Slavoj Žižek. Everything you hear is fully generated by a machine. The opinions and beliefs expressed do not represent anyone. They are the hallucinations of a slab of silicon.

Play audio

The fake, online conversation between the Slovenian philosopher, Slavoj Žižek and the German filmmaker Werner Herzog, created by computer scientist, Giacomo Miceli



© LABS OPENAI.COM

A digital image generated by OpenAI's DALL-E

AI has to learn its trade, too. It takes developers a long time to teach it the skills it needs, even though, as Miceli told Scientific American, machine learning is an AI technique using vast quantities of data to 'train' an algorithm so that it can perform the task it's required to do. He also said that he'd built his endless conversation as a warning, because it's getting easier and easier to create realistic but fake images, videos or speech, and they could swamp us with even more fake information than most politicians can manage. He also warned that language-generating AI "can quickly and inexpensively generate and churn out reams of text". It may not always generate an opinion that the fake speaker would endorse in real life. The real Herzog, for instance, dislikes chickens in the real world but in the fake computer-generated conversation, he seems to express compassion for them. That's quite alright by me: I like chickens, too. Indeed, according to the fascinating book "The Secret Life of Cows" by Rosamund Young (read it and you'll never see farm animals in the same light again) hens like playing most of all. "In fact, that is all they ever do," Young writes, "apart from eating, which they also seem to do non-stop. They enjoy everything, sing happy little songs and just have fun." How could anyone dislike an animal that plays all the time and has fun? That would be the sort of idyllic existence many of us crave. However, to get back to AI, there are still problems, with a risk that Sam Altman, the CEO of OpenAI, may take his company out of the EU's jurisdiction if the new (as yet undecided) laws are seen as too restrictive. He has since downplayed the risk of leaving Europe, however, during a worldwide promotional tour. But most Europeans would probably agree that such potentially dangerous capabilities need to be governed by some kinds of regulation if they're to be allowed to operate at all. A free-for-all wouldn't help anyone.



© TECHCRUNCH

Sam Altman, CEO of OpenAI, developers of ChatGPT

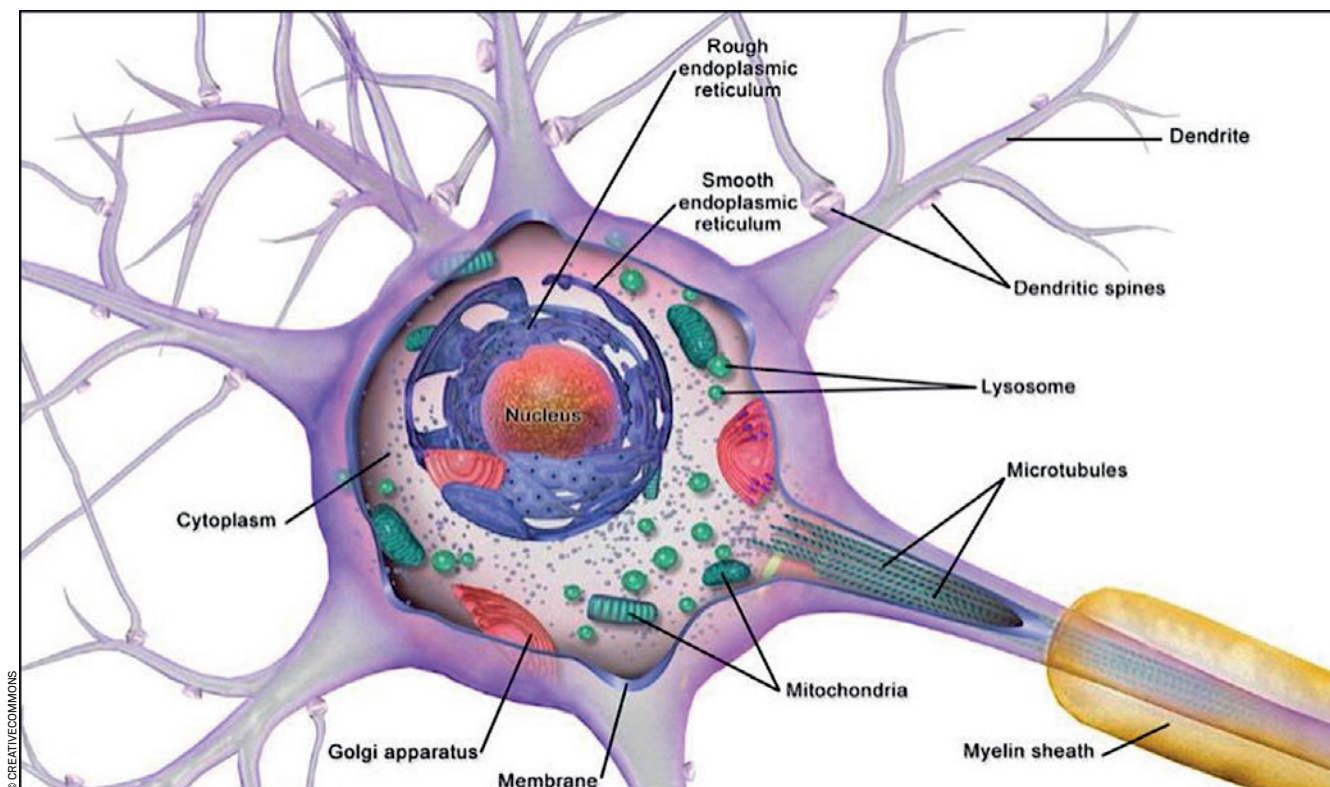
Today: politics; tomorrow: the world (and beyond)

It's clear that AI is the future and nobody wants to stand in its way. Countries that fail to embrace this exciting new technology will get left behind in the great march of progress. World leaders are seeking (and holding) meetings with senior figures in programme development, such as Google's Chief Executive, Sundar Pichai, who is also Chief Executive Officer of Google's parent company, Alphabet Inc. UK Prime Minister Rishi Sunak, for instance, met with him to discuss the need for "safe and responsible" AI amidst concerns that the technology could prove to present "an existential threat". It's already agreed that the development of AI that out-performs human intelligence is "inevitable". AI will be essential for decision-making on the planned missions to visit Jupiter's various moons. It is such a long way that it will take the six-ton JUICE spacecraft (the name stands for Jupiter Icy Moons Explorer) eight years to arrive and, once there, it will have to make its own decisions as it seeks ways to examine more closely the plumes of water seen escaping from Europa or taking a dip in the sub-surface oceans suspected of existing on, say, Ganymede or Callisto, or even further afield among the many moons of Saturn, such as Titan and Enceladus. Saturn is the clear leader in the "moons" race, with 146 of them now having been identified at the time of writing, although only 82 of them have been given names so far. There could be many more.



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CEO of Alphabet (Google) Sundar Pichai



The Anatomy of a Multipolar Neuron Synapses Microanatomy of neurons shows such microscopic evidence that it's sometimes surprising that such small things can have such a big impact on how a person lives and functions

Meanwhile, back down on Earth, AI promises faster, cheaper and much more accurate weather forecasting. It could prevent a repetition of a notorious example of inaccurate forecasting in the UK, where in 1987 a well-known television weather forecaster assured viewers that rumours of an impending hurricane were false. In fact, they were all too real and he was never allowed to forget the incident. AI may be able to prevent such incidents, but it can, in the wrong hands, be used for all sorts of other purposes. TikTok, for example, is accused of having been designed to secretly siphon off vast amounts of information from users that have nothing to do with the app's prime purpose. You may wonder why, and you would not be alone in that. Information is always useful, but if you think about the messages you have sent or received from friends and family, it's hard to see any monetary value, isn't it? But it's the permanency of the app's working, not unlike the clock in the song, that sits at the heart of the piece (written, incidentally, in around 1876 by Henry Clay Work): "Ninety years without slumbering, Tick, tock, Tick tock". An "Infinite Conversation" indeed, or almost.

In fact, despite a massive amount of research down the years, the human brain is still in some ways a thing of great mystery. The striking advances in artificial intelligence are largely down to computers' ability to engage in "machine learning", in which they effectively teach themselves complicated and difficult tasks by running through all the available data over and over again. Computers, unlike their users, don't get bored (at least, not as far as we can tell). The process involves what are called "artificial neural networks", based theoretically on the networks of neurons in a human brain. Experts, both in electronic brains and human brains will tell you very firmly that it's only a very loose comparison. The result is something called "artificial neural networks", or ANNs. The real ones between our ears are much, much more complicated, of course, but they are already proving useful as analogues for the real thing. The very best ANNs appear to work very much like their biological counterparts. And they can be taught skills. The Economist reports

on a study conducted at Massachusetts Institute of Technology (MIT) in 2014 by neuroscientist Daniel Yamins for a study published in 2014 in Proceedings of the National Academy of Sciences, in which an ANN was taught to pick out individual objects from a crowded photograph, such as an individual cat. The researchers, says The Economist, compared what had been happening inside the ANN with what had been going on inside the brains of macaque monkeys performing (or attempting to perform) the same tasks. They matched surprisingly closely, with the layers of artificial neurons working in exactly the same way as their biological counterparts.

Yes, but can it jump through hoops?

Doctor Yamins' report was later described as a "gamechanger", and scientists have since said that OpenAI's GPT-2 came closest to matching human brain activity. Research conducted at Columbia University at MIT in 2022 found that an ANN trained on image-recognition tasks produced a group of artificial neurons that could identify various foodstuffs. No-one at the time was aware of any part of the human visual system that could be said to be analogous to this food recognition system, but the following year one was found that fired off neurons more often when pictures of food were being shown. And there's more. Researchers at the University of



Neural network in the human brain

Texas in Austin set up a neural network to follow brain signals from people in an MRI scanner. Using nothing more than the MRI scan data, the ANN was able to produce a rough summary of a story that the test subject was listening to, and also a description of a film the subject was watching and even the “the gist of a sentence they were imagining”. That sort of thing has been the dream of researchers for decades, albeit more of a nightmare for some. What’s more, it’s something that somewhat unexpectedly provides a useful analogue for further research. Mind reading? Whatever next?!

Something known as Machine Learning (ML), apparently. The use of ML in conjunction with AI is becoming increasingly common, it seems. And it’s best done up close, not by relying on data in the cloud. Up close and personal is more effective and likely to be less expensive, too. There are several companies that specialise in facilitating such data transfers. As *The Economist* points out, ANNs make mistakes that no human would do but it’s easier (and rather more ethical) to poke and prod an ANN than a real human brain. It provides what *The Economist* calls “a useful alternative”. And let’s be honest: most of us would rather have a scientist poking around in an artificial neural network than using a scalpel on that mysterious material between your ears.

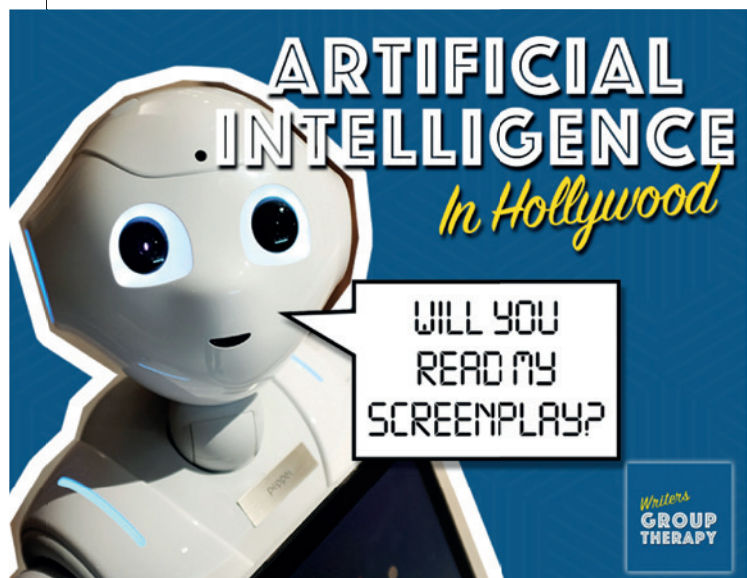
You may not be surprised to discover that AI is being used in the movie industry, and no longer as a persuasive motif for the storyline. In fact, some are describing it as “a gamechanger” in many areas, transforming the way movies are written and made, not just through clever special effects. Movie makers can save time and money by using machine learning algorithms to go through pre-existing scripts, harvesting data that can then generate new stories. It can even help with casting decisions, using its ability to process huge volumes of data to analyse previous performances and public reactions to them, including mentions on social media. AI could also help to speed up the film-making process by, for instance, finding objects needed for a particular scene by examining and analysing previous scenes from previous movies. It sounds as if it’s all positive, but there have been fears expressed that as AI gets

ever-more sophisticated it could displace humans from the process altogether, with AI ultimately replacing human screenwriters, as well as creating ever-more impressive sci-fi movies through stunning special effects. As in other fields of endeavour, AI could lead to job losses, even if that material generated by AI lacks the emotional depth and human perspective that only real people can provide.

Let’s take a look at just a few of the implications. Well, for a start it means you can cast in a prominent rôle an actor or actress who is no longer alive. AI can copy that person’s looks and voice so perfectly that people are unlikely to realise they’re looking at and listening to a fake. It could lead to job losses in the industry, as AI has already done in such areas as design and manufacturing, for instance. What if your proposed movie requires music to match the on-screen mood?

AI can do that, too. One movie insider pointed out that AI can change everything by its ability to create something that doesn’t exist. Yes, it arouses deeply divided view about the underlying ethics of it all, but that is unlikely to produce a permanent barrier, and companies specialising in AI products and services for the movie industry are already rubbing their hands with glee in anticipation of the money to be made from what is already being promoted as a way to save money in carrying out the task.

AI can already be used to help plan filming schedules, in identifying suitable shooting locations, or even in analysing real world data against the requirements of the script, as well as helping editors to find particular scenes or camera angles. I’ve worked with a lot of cameramen and not all of them have that natural gift, although some undoubtedly do. AI’s main advantage, it would seem, is in saving time, whilst also ensuring smooth transitions and effective use of people and equipment in the operation. AI can automatically perform colour matching and put in place masks where required, even changing the facial expressions of the actors on screen. AI can also help to restore old film by taking out or covering up scratches, dirt, warping and flicker from old film stock. From an actor’s point of view AI can perform another task they may be pleased about by making them appear younger and by restoring their youthful vigour. If only that was possible in real life the entire world would be beating a path to the developers’ door. It’s called “de-aging” and I wish it worked in the real world! Sadly, it doesn’t.



A banner on the US Writers Group Therapy internet site

In tune? Who can tell?

As for the musical score, AI can help there, too, composing original works that match the cuts, breaks, romance and excitement-generation of the images. After all, you don't want romantic music to be playing as the background to a murder.



Glenn Marshall won the Jury Award at the 2022 Cannes Short Film Festival for his AI film *The Crow*

It wouldn't work. It's rare, of course, to come across a movie made entirely through the use of AI or by employing ANNs, although one computer artist has won the Cannes Short Film Festival Jury Award for his text-to-video production, "The Crow". Other people have also used AI to produce video, and it's a skill that looks set to expand more in future. We're not quite there yet, however. Those involved in the process know that we're not quite ready to drop human beings from the equation. AI can undoubtedly speed up the process, and that will almost certainly improve the profit margin. Film-making, though, is still an expensive activity and likely to remain that way, however much AI can save time and resources. AI can improve the accuracy and efficiency of casting decisions and there are fears that AI could displace human participants such as screen writers, casting directors and others involved



In 2019 Anton Khmelnskiy, Russian founder of AI Studio revealed plans for a new Media City in central Saint Petersburg

at the coal face of making movies. Some who are deeply involved have also expressed the fear that AI will almost certainly lack the human touch that comes from personal experience. AI, after all, is not strictly human, however clever the app developers have been in trying to make their creation reflect the real world. Some jobs would simply be impossible – or certainly extremely difficult – for an AI to perform convincingly. Such tasks could include displaying human empathy, social skills or even human dexterity. It's too early to write off the enormous contribution that living, breathing human beings can bring to the world of making movies.

According to *The Hollywood Reporter* magazine, AI is now involved at every conceivable level of the movie industry, and the Writers Guild is pushing for protection from its invidious invasion of creative space. Even more threatening than chat bots and AI-generated videos, the paper reveals, the worst things of all are the black box algorithms that decide what is popular. "In Hollywood," the paper reveals, "producers are rewarded with lucrative film deals for developing projects that feed the black box AI at studios and streaming platforms, which keep valuable viewership data insights to themselves."

The article continues: "That viewership data is built via feedback loops created by recommendation engines reinforced by the very viewer behaviours they shape in the first place." The article claims that while the Writers Guild is right to push for protections against AI, "nowhere are these protections more urgent than in the documentary and non-fiction space," which is where the writer of the article works. Amit Dey, Executive Vice President for non-fiction at MRC, said: "It's one thing if human-made films are competing in the market against robot-made films. It's another thing entirely when data in the form of artificial intelligence, or proprietary algorithms, shape the decisions around what human audiences are exposed to." His point, of course, is that it cannot be right to have the decisions about what we get to see made by robots somewhere. But that is what's happening right now. And it shouldn't be, in the view of *The Hollywood Reporter*. "Without smart (human) executive intervention," it warns, "challenging our basic instincts as viewers to tap relentlessly on puppy videos, is viewership engagement on the majority of these platforms even that great? For TikTok, maybe. From a more sophisticated aesthetics standpoint, the unchecked race to maximise viewer engagement is a race to the bottom." It's hard to argue convincingly on that point.

T. Kingsley Brooks

T.Kingsley.Brooks@europe-diplomatic.eu



CHINESE WHISPERS GET LOUDER

**China stands accused
of eavesdropping on its
perceived enemies (but may
get the message wrong)**

There is a children's party game called "Chinese Whispers", although it has nothing to do with China. The Americans call the game "telephone", anyway, which clearly has no Chinese implications. The game involves one participant whispering a message to the person next to them, who then passes it on, also in a whisper, with the idea being to see how hugely different the message gets to be by the end of the circuit. It can (I'm told) lead to some "hilarious results" for gatherings of people who are easily amused. The game has existed for years under a variety of names and first assumed its "Chinese whispers" title (according to some sources) in 1964. It has no more to do with China than "Postman's Knock" has to do with the mail services, although postman's knock is much more fun to play than Chinese Whispers, involving, as it does, kissing instead of whispering.

The modern version of "Chinese whispers" is very different and much more dangerous, involving the theft of cyber-information using the latest technology. The perpetrator places a hidden programme in the victim's computer or communication system which then surreptitiously harvests all the data that seems likely to be of interest to the programme's creator or their employer, possibly by means of targeting "key words". Strange as it may seem, espionage is not against international law, while interference in another country's affairs is. But the Internet is a very vulnerable area in which to work. Committing vital secrets, whether scientific, political, strategic or whatever, to the Internet is an invitation to tech-savvy outsiders to look through your private papers at will and copy (steal) those that are most interesting. Today's spies don't wear fedoras and raincoats with turned up collars; they're not even people. They're invisible programmes, hidden away among the components of your trusty computer, safe from prying eyes. Safe from your prying eyes, anyway. But is time starting to run out for Chinese cyber-espionage? Well, time is certainly passing: tick, tock, or should I say TikTok?



The cameras, night vision, and radar system of a Remote Video Surveillance System

Sometimes, the "victims" of spying invite those that want to spy on them to do exactly that. Take the British police, for instance, most of whose surveillance cameras were made in China or at least contain Chinese-made components. As a result, Chinese camera systems are banned from British government premises and UK Prime Minister Rishi Sunak has authorised the shooting down of any Chinese spying balloons that appear in UK airspace. Clearly, the ban doesn't apply to traffic control. There is something of an ethical conundrum, too, because the same identical cameras are used by Beijing to monitor the camps where China detains Uyghurs in Xinjiang province. Is it right to provide custom to a regime whose actions meet with widespread condemnation? China needs such trade; the prediction by Goldman Sachs that it would overtake the United States economically by 2026 now seems to be in some doubt, with Goldman Sachs revising its prediction to say that China's economy won't outgrow America's until 2035, and even then, not by much.

But there again, the government in Beijing regularly interferes with local authorities (who are responsible for much of China's infrastructure and its dubious quality) and also with its various private enterprises (yes, China has private enterprises, but they face extortion by local and national authorities which holds them back). What's more, there is a serious risk that some potential "customers" in the West may decide to shun Chinese-made goods, especially in the security



A monitor wall with fifteen 42-inch monitors for 176 on-street cameras in a public space CCTV control room

field. Certainly, Western nations are getting increasingly wary of Chinese cyber-goods, and several have banned or at least downsized TikTok's involvement in daily life.

Too much knowledge is a dangerous thing (but valuable)



New Zealand's Prime Minister, Chris Hipkins

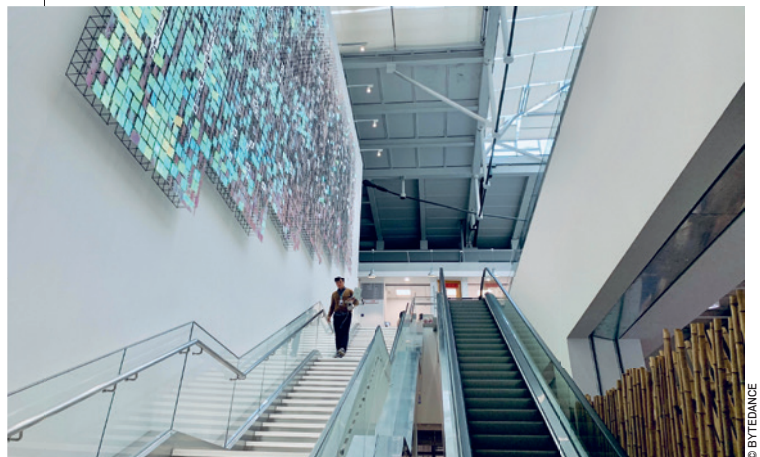
Perhaps I should begin by explaining what TikTok is; even its regular users sometimes don't appear to know. It calls itself a "short-form mobile video hosting service" and describes its mission as being "to capture and present the world's creativity, knowledge and moments that matter in everyday life". It's the leading example of this sort of facility in the world, but several countries have banned it, (or at least banned its use on government-owned premises or devices) including the United States, Australia, Norway, the EU institutions, the UK, France, Canada, India, Taiwan and Afghanistan.

That's a pretty eclectic list and in reality much longer than the examples I have provided. New Zealand's Prime Minister, Chris Hipkins, told the media that he doesn't have TikTok on his phone because "I'm not that hip and trendy". Afghanistan banned it and one of its "games" to protect young users from "immoral content", although Afghanistan considers anything immoral that suggests there are any parts of the

human body that are not to be mentioned. I don't have it on my phone either, because I can't see the point in it anyway; I would never use it, even if I could work out how to. It finds its biggest usership among the relatively young; some 40% of its clients are aged between 14 and 40. But it is enormously successful: in 2021 Android phone users around the world spent 16.2 trillion minutes on TikTok, which is quite a lot; almost two thousand years, in fact, by my calculation.

According to Reader's Digest, the application can boast some 800-million subscribers, which is impressive. The app, which is known as Douyin in China, is owned and was first developed by a Chinese company called ByteDance and it has been a runaway success, to the extent that Microsoft have been trying to buy it, at least partially. Hacking is simply a fact of our interconnected lives and as of now there is no way effectively to completely combat it. One problem is that users have to sign up in a way that grants ByteDance permission to access a lot of personal details. Reader's Digest quotes Doctor Darren Hayes, the Director of Cybersecurity and Assistant Professor at Pace University, who said: "We are particularly concerned about the extraordinary amount of personal data being collected, about the user, in plaintext...the app stores user data in an unencrypted format on the device." Which, of course, means all that information is open and available to anyone with the technical skills to obtain it. Data can be monetised, if you know how and have the inclination.

Information is power, of course, and the more you know about someone the more power over them you will have. This rather brings into question Chinese President Xi Jinping's recent meeting in Xian, in western China, with a number of Central Asian leaders. Xi told them he wanted to help them by, for instance, improving law enforcement, security and their capabilities in terms of defence. It's part of Xi's current interest in "global security", which seems to be mainly aimed against the United States. Some Western observers also saw his rhetoric as part of a Chinese push towards Central Asia while Russia's attention is distracted with Ukraine. Xi told his fellow delegates that China believes in "state sovereignty" just at a time when a number of Central Asian countries are starting to look for a reliable security partner because of Russia's preoccupation elsewhere. When Xi talks about supporting "global security", he primarily means protection from the influence of Washington. At the same time, experts say, these same Central Asian leaders are not seeking a partnership with countries that are against Russia.



Headquarters of ByteDance, owner of TikTok in Beijing, China



When it comes to CCTV cameras, Chinese state-owned Hikvision holds a market share of over 31% worldwide. Through its subsidiaries and partners, the Chinese CCTV producer deployed more than 36 million cameras in 2020, largely outside of China. Some of these cameras are positioned in significant government structures that frequently handle sensitive information

Xi's China should fit the bill nicely. Their friendship suits him, too. At the summit in Xian, several Central Asian countries – especially Kazakhstan – praised Beijing and expressed their support for Xi's position as he continues to dismiss allegations of human rights abuses and measures to counter religious issues as simple movements to eradicate terrorism. It remains an odd thing, though, that even countries with Muslim leaderships prefer friendship with Beijing to supporting the Uyghur Muslim minorities. Those same states must also cope with a suspicious public who would like to see more visible and clear-cut support for Uyghur fellow religionists. Some express their concern, too, about the presence of Chinese troops on their territory. Truth, of course, has long disappeared from Turkish news, it seems. Turkey's Interior Minister, Suleyman Soylu, said on CNN Turkey that the US is trying to gain control of Baghdad's domestic policies by using the Uyghur situation to pressurise China. Soylu's comments failed to please the Uyghurs themselves because it only repeated Beijing's own narrative, using the Uyghur genocide for his own political purposes. Uyghur activist Dolkun Isa, who lives in Germany, claimed afterwards that Soylu was trying to politicise the genocide and other human rights abuses to distract attention during national elections.



Uyghur activist Dolkun Isa

China has branded Isa “a terrorist” for speaking out. “The human rights violations committed by China should be a concern to everyone, including Turkey,” Isa told the media. “This is not an issue to advance political agendas, this is a human issue.” Of course, in the eyes of China's leadership anyone who disagrees with Chinese policies is a terrorist. They seem to have forgotten what the word means.

Xi reminded delegates in Xian that “a prosperous Central Asia will meet the aspiration of people of different countries in the region for a better life, and inject strong impetus into world economic recovery.” He said ethnic conflicts, religious disputes and cultural division are “not the main theme in Central Asia, while solidarity, inclusiveness and amity are the pursuit of the Central Asian people”. China and Central Asian countries should deepen strategic mutual trust, Xi said, “and always offer clear and strong support for each other on issues of core interests such as those involving sovereignty, independence, national dignity and long-term development”.

Don't laugh (you probably won't anyway)

There is concern, too, that ByteDance may seek to suppress any content that could be seen as critical of China's leadership. China remains fervently anti-American, putting out endless propaganda in favour of Russia at America's expense. It has also been revealed that Beijing leaders simply can't take a joke, nor possibly understand what a political joke is. According to the Foreign Policy Chief's Brief, a Chinese



A graphic from the Nomura group internet site

comedian's joke about the People's Liberation Army (PLA) led to his entertainment company being fined \$1.9-million (€1.76-million). In point of fact, the joke itself was in no way critical of the PLA nor anti-Beijing. It wasn't funny, either. The comedian merely said that while watching his dogs chase a squirrel, he was reminded of the PLA battle-cry, "Fight to Win". Hilarious, isn't it? No, of course it isn't, but nor is it in any way dangerous to the Chinese government and nor is it subversive. It clearly doesn't pay to be a comedian in a country whose government lacks any sort of sense of humour, or even understand what humour is. And if that huge fine isn't enough, the comedian's company is now under investigation for insulting the PLA and causing a "bad social impact", whatever that means. Comments that the measures imposed on the comedian were "too harsh" were met with censorship and a surge in official nationalism. China also suspended the Weibo and Bilibili accounts of a well-known British Malaysian comic because he had made a joke about Chinese surveillance. But Chinese surveillance and censorship are no laughing matter, and they certainly happen. Beijing should perhaps recall the old British saying, "laugh and the world laughs with you; cry and you cry alone". (Please note: it says the world laughs with you, not at you, although it may laugh at over-reaction.)

But the accusations levelled at TikTok are not at all funny really. IT security expert Stefan Strobel told the German media company Deutsche Welle that although the TikTok app appears to be just an amusing way of exchanging information and sending videos, "The developer of the app built back doors, spy functions and other things into the app from the outset and took great care to ensure that no one would notice." At the time of writing, it is not known (at least, not publicly) if TikTok had any involvement with the malware that China has targeted on Guam. It first came to the attention of US intelligence at around the same time that the FBI was examining equipment found on the Chinese spy balloon that had been shot down off the coast of South Carolina in February.



TikTok CEO Shou Zi Chew testifying in front of the US Congress to address lawmakers' questions about the app's Chinese ownership and its relationship with the Chinese company ByteDance

US intelligence, assisted by Microsoft, have found what could be an unwelcome intruder in some inexplicable computer code that has turned up in telecommunications systems in Guam and in some other parts of the United States. Microsoft says it was installed by a Chinese government hacking organisation, while Guam is significant because it is home to a massive US airbase. Put that together with its various Pacific ports and it becomes clear that Guam would be central to any American military response to an attempted invasion or a blockade of Taiwan.



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Headquarters of Tencent Holdings, owner of WeChat, in the Nanshan District of Shenzhen, China

Strobel is the founder and CEO of the IT security company Cirosec, and he explains that Chinese apps are very different from Western software, in which users are sometimes offered updates which they are free to decline if they wish. Chinese apps don't give the users the chance to say "no thanks" and they can make big changes to ways in which their apps operate without users even being aware of it. Changes

can be put in place even while the app is in use. According to Strobel, the whole operation to put the system in place that targets Guam was carried out in a very clandestine manner, even using home routers and other consumer devices with Internet connections as part of the network. The Chinese government had put a lot of effort into developing this malicious spyware, but Microsoft has now published the details of a code that should enable users to see it and to get rid of it.

Certainly, China seems determined to spy on our most mundane activities, not just on the sorts of things you might imagine would interest a government, or at least its spies. TikTok and other popular Chinese apps have been shown to be clever vehicles for getting malware onto people's mobile phones and other devices. However day-to-day you may think your on-line activities to be, the programmes are able to syphon off vast amounts of data about the equipment's user for no obvious reason. But information, of course, is money, or at least it can be monetised by people with evil intent. As an example, let's take a look at another popular app that was developed in China, WeChat, which can be used in making payments, among other things. All the data passing through it is almost certainly going to be harvested by Beijing, while the app itself has an amazingly sophisticated firewall around it to prevent any deeper investigation into what it's doing.

I Taking care

You should not imagine that you're safe because you don't install new software when it's offered. Often the smartphones made in China or built elsewhere but with Chinese components come with the malware already built in. With the surge in demand for artificial intelligence – AI – there is likely to be a steep increase in demand for Chinese-made components.



© WILLIAM PUGH/DOD

A B-52 Stratofortress undergoing maintenance at Andersen Air Force Base, Guam, April 11, 2023

Jensen Huang Jen-hsun, the CEO of Nvidia, an American multinational technology company, has said that China is a “very important” market for tech, as well as a prominent supplier. There is a rapidly expanding market for all AI-related technology. For example, two small programmes supplying alternative fonts in actual fact encrypted packets of data which it then sent to a server in Shanghai when the device wasn’t being used. There is also a warning not to turn to the grey market for cheaper alternative apps. For example, China was behind the “ghost” version of the Apple Xcode, which inserted malicious software into the devices of anyone trying to use but who only chose it because it was cheaper than the official version. It had been expertly done, according to experts and it contaminated thousands of apps. The soundest advice may simply be to avoid Chinese-made appliances, but avoiding equipment containing a Chinese-made component will be harder. You should also, perhaps, think twice before installing a new programme that looks like being fun but which is not an official product.



CEO of Nvidia, Jen-Hsun Huang

Arguably the best-known modern Chinese ‘fairy tale’ is about three sisters from Shanghai, born near the end of the 19th century and all of whom became famous for different reasons. They were born into the privileged and wealth Soong family and went in different ways. The Soong family were devout Christians, their father having been converted by missionaries in the deep south of America. The girls’ names were Ei-ling, which means “Kind Age”, Ching-ling (meaning Glorious Age), and May-ling, which translates as Beautiful Age. Their life



Ei-ling, May-ling and Ching-ling Soong

choices divided them in time. Sun Yat-sen fell first of all for Ei-ling, then for Ching-ling before leading the revolution that got rid of China’s monarchy. He died in 1925 and his place politically fell to Chiang Kai-shek, who married May-ling, the Little Sister, going on to rule the country until the Communists drove him out in 1949. The other sister, the widow of Sun Yat-sen, joined the Communists and became the country’s vice-chairman under Mao Zedong. She became known as “Red Sister”. She also lived with her chief bodyguard, who was less than half her age, something that was practically unheard of in puritanical Communist China. The point I’m making (needlessly dragging it out) is that individuals could lead individual lives, even under Mao.

With the central control now imposed on what the people of China are meant to do, there is little chance of three such different siblings being allowed to live such different lives today, it would appear. Perhaps fairy tales are not encouraged in the China of today. The book about the three – Big Sister, Little Sister, Red Sister – was written by Jung Chang, whose books have sold more than 15-million copies outside mainland China, where – not surprisingly, perhaps – they are banned. Individualism is not encouraged under Xi Jinping. The stories of the three sisters are still told, however, so perhaps the thirst for individualism is still there, if firmly suppressed.

China, of course, is not alone in frowning on freedom of thought. Many tech users have been expressing their surprise that Microsoft is said to be planning to invest in a new cloud data centre in, of all places, Saudi Arabia. The plain fact would seem to be that the many and various countries of the world, wherever they may be and whatever their official religion may be, appear to worship money above all. But if everything is for sale, it behoves us all to take extra care. “Political power,” wrote Mao Zedong, “grows out of the barrel of a gun.” We cannot change that, but it should not grow out of over-stuffed bank accounts financing high-tech theft that leaves no room for individuality. Mao would have agreed, it seems, or he never would have written: “Letting a hundred flowers blossom and a hundred schools of thought contend is the policy for promoting the progress of the arts and sciences and a flourishing culture in our land.”

Jim Gibbons

Jim.Gibbons@europe-diplomatic.eu



Going for a coffee? ... Lock your desktop first!

SI VIS
PACEM,
FAC
BELLUM

**“Let he who desires peace,
make war”. That’s what’s
happening in Kosovo and
Serbia but there’s still no
sign of peace**



Serbian Special Forces poster



© KRYEMINISTRIKUS-GOV.NET

Kosovo Prime Minister Albin Kurti

How can you tell the difference between an arrest and a kidnapping? An easy question, you might think. Not on the border between Kosovo and Serbia, it seems. Kosovo Prime Minister Albin Kurti has warned that he will step up security along this most difficult of frontiers, accusing Serbia of “kidnapping three police officers”. Kurti is also angry at NATO for failing to explain how it happened. The three were, Kurti says, patrolling along Kosovo’s side of the border. Belgrade says they were arrested for straying into Serbia’s territory. At the time of writing it’s impossible to know who’s telling the truth, and to be frank it doesn’t really matter much. Kosovo will continue to argue that its officers have been illegally seized by the Serbs, who will doubtless claim that they were only protecting “their” territory. Meanwhile, for now, and despite Kurti’s demands for their release, the three officers remain in Serb custody, which is frankly ridiculous but in a way that is, one might say, “par for the course” along this frontier. As anyone (who is neither Kosovan nor Serb) can clearly see: the situation is almost laughably ridiculous. Or it would be if real people’s lives and freedoms were not at stake. Any sensible country would swiftly repatriate the three, whoever was at fault, in order to preserve a vestige of peace. It could be with a slap on the wrist for poor map reading (whether it was or not). But on the border between what would seem to be two of the most irrational countries in the Balkans, anything could happen. It’s the sort of thing that has happened before, of course. Look back at ancient India, China or Imperial Rome and you can find any number of examples of pointless wars over where to draw the border on a map. In India, the Brahmin even stated exactly what work a member of a particular caste could undertake. Mostly, the rows were settled eventually, if only at the cost of quite a lot of blood and broken lives. Humankind doesn’t change.

Publius Flavius Vegetius Renatus wrote in the 4th century of the present era: “Let he who desires peace, prepare for war”.

The man himself, about whom little is known, is generally referred to simply as Vegetius, a writer about military affairs and, strangely, veterinary medicine. The German-Jewish pacifist Richard Grelling took his aphorism further, saying that only actual war can secure peace and he suggested changing it to read: “Let he who desires peace, make war.” In other words, the only way to stop your enemy from defeating you is to enter into a conflict with him (or her) – and win! But if a country seriously wants peace, it needs first of all to set aside the rivalries and hatreds among the various ethnic groups that call it home. Poor old Kosovo never

had a chance, its population being made up of Serbs, Albanians, Hungarians, Bosniaks, Slovaks, Bulgarians and the Gorani, a Slavic Muslim ethnic group who live in the triangle of land bordered by Kosovo, Albania, and North Macedonia. There are some 60,000 of them, it seems. There are also some Egyptian and Ashkali communities, too. Try keeping that range of ethnicities in a constant state of peaceful mutual understanding; you might as well try preaching love and friendship to a tank full of piranha fish. Peace-making there is further complicated by neighbouring states, who interfere on the side of whichever ethnicity they most favour. All of this, of course, is meat and drink to Russia, which loves to exploit built-in tensions to stir up the odd armed conflict or two, hoping to benefit from the bloodshed they’ve caused.



© PETER MENZEL

Novak Djokovic

Kosovo has been strongly urged to preserve its multi-ethnic character ever since breaking away from Serbia in 2008, an act of independence that Serbia still does not recognise. Russian attitudes towards death and casualties are different from those in the West and there have been reports of Russia sending mobile crematoria into Ukraine because it may play better with the public than the return of dead soldiers in body bags. But the conflict between Serbia and Kosovo is centuries old, with Kosovo seen by many Serbs as the birthplace of their country. Novak Djokovic got an angry response to his clear support this year for Serbia in its ongoing row with Kosovo. He wrote a political message about Kosovo on a television camera lens as he began his battle to win the Grand Slam singles title at the French Open. He beat the American Aleksandar Kovacevic comfortably before writing “Kosovo is the ♥ of Serbia. Stop the violence” on the camera lens. That was just before he began his quest for a record 23rd men’s Grand Slam singles title by winning the French Open.

Serbia has long treasured past battles and acts of heroism. Take the Battle of Kosovo, for instance, fought on 15th June 1389, when the Serbs, under Prince Lazar Hrebeljanović, met in battle with the Ottoman Turk invasion forces of Sultan Murad I, in a confrontation that led to years of brutal Ottoman rule for the entire region. Even so, it aroused enormous national pride, which was still celebrated each year until fairly recently. It nearly led to the Ottoman forces going on to seize Vienna, too, but their heavy ordnance got bogged down in muddy conditions following a number of unusually severe storms. Otherwise, the history of Europe might have been very different. It's part of Serbia's proud – if frequently somewhat nationalist – history, and another reason why the Serbs don't ever want to let Kosovo go. Lazar's forces won the battle – sort of – but at such a high price that effective victory went to the Ottomans. In fact, most members of both armies died in the fight, including both Lazar and Murad, so for the Serbs it was a somewhat Pyrrhic victory, but as Peter Frankopan puts it in his wide-ranging book on global history, "The Earth Transformed – An Untold History", that battle for Kosovo: "acquired totemic status in later Serbian historiography." It certainly did and remains an obstacle to peace. At least the Serbs (and the Kosovans) know where (and why) the battle was fought. In England's old legends there is still disagreement over the site of the legendary King Arthur's castle, Camelot. If it existed, that is, and if he existed, too. If he did, he led the original Britons (basically the Welsh) against the Angles and Saxons who would eventually take over England. Caerleon in South Wales is one of the favourites and is probably the most likely candidate, while South Cadbury in Somerset is another. A 1500-year-old piece of slate bears an inscription suggesting it was at Tintagel in Cornwall, while Winchester holds a round table that some say was Arthur's (although it was apparently painted in the 16th century as a piece of unconvincing propaganda for King Henry VIII).



European Commission President Ursula von der Leyen and Brazil's President Luiz Inácio Lula da Silva

Taking sides



Serbian President Aleksandar Vucic and Russian President Vladimir Putin

Even up-to-date news can be interpreted in different ways. Ukraine's President Volodymyr Zelensky has said that his country "has united the world", but it hasn't. It has united the West, perhaps (in the main) but it has left much of the world dangerously divided over Russian President Vladimir Putin's extraordinary territorial ambitions. He is now insisting that Ukrainians living in the regions his troops and mercenaries have captured must apply for Russian citizenship. If they don't, they could be deported, which would mean leaving their homes and their country, which surely must be against international law. The longer he remains in power the more and more Putin's policies come to resemble those of Adolf Hitler, despite his claim to have been "de-Nazifying" Ukraine. At this rate, it will be "Heil, Putin!" before very long. But although the West seems united, at least up to a point, much of the rest of the world is not. "I am struck by how we have lost the trust of the global South," warned French President Emmanuel Macron at the Munich Security Conference, back in February. He's right, and much of the blame must rest with the failure of so many Western countries to tackle issues such as the downside of globalisation in ways that satisfy their populations. A vote at the UN General Assembly in March condemning Russia's invasion was won by a large margin, but, as Foreign Affairs magazine noted in its May/June issue, few non-European countries followed up with sanctions. Nobody wants to risk annoying Vlad, it seems. Some leaders, such as Luis Inácio Lula Da Silva of Brazil, for instance, have said that President Volodymyr Zelensky is as guilty of the war as Putin, even though he did not order his troops to invade someone else's country.

Whichever way you look at it, however, Kosovo hasn't always played the most sensible card. The problem is that the country's ethnic Albanians, who are narrowly in the majority, and ethnic Serbs (the largest minority) don't see eye-to-eye on virtually anything. The most recent tensions stem from municipal elections, held in April, when almost all of the 50,000 people resident in Kosovo's four northern districts, 95% of them ethnic Serbs, boycotted the vote, resulting in four ethnic Albanians being elected as mayors, despite each of them having attracted only a few hundred votes.

Kosovo's prime minister, Albin Kurti, who sees himself as a defender of democracy, insisted on installing the four mayors, despite their lack of electoral support, and against the advice of the United States, the UK and the European Union. Kurti's forces were excluded from Nato-led military exercises as a punishment for his intransigence, which he considers unfair. He is firmly opposed to Aleksander

Vucic, the prime minister of Serbia, whom he sees as an autocrat and an ally of Putin. He seemed to think the new mayors could work from home, since it clearly wouldn't be safe for them to occupy the offices they were supposed to hold. The mutual ethnic dislike led in the past to a bloody civil war in which some 13,000 people were killed, until an intervention by NATO forces brought it to an end. Even so, the Serbs still don't recognise Kosovan independence and encourage other countries to reject it, too. In Serbia's case, its attitude towards the independence of Kosovo will decide its possible future EU membership. Serbia wants to join but recognition of Kosovo's independence is a condition it must meet first.

Towards the end of the First World War, the word "Balkanisation" was coined for the first time. It means the breaking up of a single but multi-ethnic state into smaller individual states, each of them representing only one ethnicity. It was first used to describe the fragmentation that resulted from the breakup of the Ottoman Empire, most especially in the Balkans. It's perhaps not so surprising that a word meant to denote such fragmentation based on ethnicity should make reference to the Balkans. In terms of attitudes, it would seem that not much has changed there since the word was first used. It's why, no doubt, Prime Minister Kurti was so determined to appoint the new mayors, despite their evident lack of popular support. The outcome was inevitable.



© NATO

NATO reinforcements arriving in Kosovo in June 2023, following the violence which left almost 40 KFOR peacekeeping troops injured in clashes when ethnic Serbs in northern Kosovo were trying to take over the offices of one of the municipalities where ethnic Albanian mayors took up their posts

Mobs of ethnic Serbs attacked the town halls and the NATO peacekeepers sent to restore order were themselves attacked by men wearing masks. Quite a few people were injured in the ensuing violence. Many western envoys blamed Kurti for his insistence on appointing people who clearly didn't have popular support. He claimed he was defending the rule of law and democracy (albeit a somewhat truncated form of democracy) but the mayoral rôles of people for whom hardly anyone had voted seem like a pretty thin excuse to provoke bloodshed and to intensify the underlying hatred. Kurti argues that he is taking his harsh line over the municipalities because if he doesn't, or if he shows irresolution or weakness, Vucic will exploit it and weaken him further. The West, by and large, hopes that one day in the not-too-distant future, Vucic will accept Kosovo's status as an independent country and all the hatred will fade. It rather sounds like wishful thinking, unless, of course, Kurti honours the "normalisation agreement" signed in 2013, under which Serbian municipalities can join together as a "community of Serbian municipalities", as they were promised. It has never come to pass and

although Kurti acknowledges that it's a failure that must be dealt with, there would appear to be no sign of it happening any time soon.



© INF

Slobodan Milosevic during his trial in The Hague

Kurti himself recalls all too clearly how, as a student activist, he was sent to prison by Slobodan Milosevic. It was the uprising against Milosevic, of course, that led to Kosovo breaking away and thus gaining its independence in 1999. Kurti insists that the Serb leadership hasn't changed, at least in attitudes, which is how Vucic remains a close friend of Vladimir Putin. Kurti's western allies and backers, however, are determined to avoid another confrontation, especially over such a minor matter as municipal elections. Back in April, Serb voters boycotted them. We have to wonder if they would have done if they could have seen the prospect of a stronger Serb voice in municipal affairs afterwards, or whether they would have satisfied themselves with simply waving Serb flags? On the other hand, a close relationship with Putin earns Vucic few friends in the west. Kurti's bid to position himself as Kosovo's answer to Volodymyr Zelenskyy is unlikely to succeed either, because the political situations in Kosovo and Ukraine are very different. Kurti is seeking a way out of the current impasse, however, promising fresh elections as long as the Serbs promise not to boycott them. He is still not addressing all the problems, however, such as the criminal gangs who take up arms against any authority with which they disagree. It's not easy to tackle them, although doing so would be popular in some quarters, especially since similar gangs were involved in the various wars in the 1990s. He has been accused of turning a blind eye to the problems in the country's north, however, and until all the issues are seen to be being addressed, Kurti cannot really win. He makes the point – and a fair point, too – that at least he has an opposition, which means his country is a democracy, unlike the Serb areas, where Vucic rules unopposed. Perhaps that's why Putin likes him: he can sense that here is a leader with a fellow-feeling. Kurti can argue (and does) that Kosovo is the most democratic country in the region – once again, he's right – but he'd be more popular in the West if he could find a way to be less confrontational.



During the 50th Munich Security Conference in 2014, the two Prime Ministers from Serbia and Kosovo, Ivica Dačić and Hashim Thaçi, came together and discussed the reconciliation between the two countries, which in 2013 had led to the signing of the normalization Agreement, under the moderation of Catherine Ashton, High Representative of the Union for Foreign Affairs and Security Policy. Both leaders reaffirmed their intention to seek solutions, "that advance the two nations". Photo: Catherine Ashton (Vice President of the European Commission; High Representative for Foreign Affairs and Security Policy, EU), Ivica Dačić (Prime Minister, Serbia), Hashim Thaçi (Prime Minister, Kosovo)

History haunts the present day

Kosovo is still an international protectorate under United Nations resolution 1244 and it's widely believed that it could not tackle a war with Serbia if one should arise. Serbia is unlikely to be in favour of a war either, though, because that would put an end to its aspirations to join the EU, as well as being seen as a sign of failure for the EU and the United States. The deal that secured an end to fighting in 1999 has actually turned it into a 'frozen conflict' and, as such, it is being used (albeit somewhat obliquely) by Russia as one of the justifications for its continuing war in Ukraine. What's more, war in Kosovo would benefit neither Kosovo nor Serbia. Kosovo's allies – the United States and the EU – do not want to see a war there. Serbia has much more powerful forces at its disposal, but Russia, always looking to seek advantage from Balkan affairs, is unlikely to gain much from an armed confrontation there. In any case, it has its hands full with Ukraine. From the point of view of Kosovo, to initiate a war with Serbia would be disastrous. Quite apart from lacking an army that's up to the job, it would show disrespect to its principle backers, the EU and US. Kurti is already fairly unpopular in Washington and Ramush Haradinaj, who chairs the Alliance for the Future of Kosovo (as well as being a former prime minister) sees few signs of improvement. The U.S. ambassador to Pristina, Jeffrey Hovenier, said that the U.S. would "cease all efforts to assist Kosovo in gaining recognition from states that have not recognized Kosovo and in the process of integration into international organizations". Strong stuff, indeed. As for Serbia, it received \$2.9 billion (€2.71-billion) as development aid in 2020, for accession talks with the EU.

The EU is keen to diffuse the tension, and Kosovo's Vjosa Osmani and Serbia's Aleksandar Vucic met briefly in the presence of French President Emmanuel Macron, German Chancellor Olaf Scholz and the European Union's foreign policy chief, Josep Borrell Fontelles, on the sidelines of a summit in Moldova. "It's important that everyone involved does everything possible to get to a de-escalation," said Scholz after the summit of the European Political Community.

The United States agrees: Kosovo must give its Serb citizens more autonomy, allowing them to seek membership of NATO and the EU. Based on recent experience, a bid for NATO membership would appear unlikely, although the EU could be a possibility. Something must be done too to remove the Albanian mayors Kurti installed, and who were elected in an April vote on a turn-out of just 3.5%. That is the demand of Gabriel Escobar, the US Deputy Assistant Secretary overseeing policy towards the countries of the Western Balkans as well as the Office of Press and Public Diplomacy. Escobar urged Kosovo to withdraw the police and mayors from their offices in Serb-dominated areas and then hold fresh municipal elections in which Serb citizens would participate. The President of Kosovo, Vjosa Osmani, told Reuters news agency that Kosovo could trigger fresh elections if 20% of voters sign a petition asking for them. Escobar told a press conference at the US embassy in Belgrade that Kosovo will need to move towards Euro-Atlantic integration by establishing an association of Serb municipalities, as they were once promised, although whether it will happen under this government or the next remains a moot point. Escobar pointed out that northern Kosovo's 50,000 or so Serbs will have to ensure their participation in a new set of elections, but that may be a tricky one to achieve, since many of them view Belgrade as their capital and simply defy the government in Pristina. They still want an Association of Serb Municipalities, as foreseen in the EU-sponsored agreement of 2013, with the association theoretically working on education, healthcare, land planning and economic development. Ethnic Albanians, however, fear it could allow for the formation of a pro-Serbian mini-state.



Units of the Kosovo Armed Forces, Kosovo Police and Correctional Services paraded in "Zahir Pajaziti" square for the sixth anniversary of the declaration of independence of Kosovo

Escobar has told Prime Minister Kurti that he must respond to requests coming from the EU in order to calm the situation on the ground because unless he starts complying with the West's demands, he could face sanctions, rather than just warnings. Escobar and EU special representative for Kosovo-Serbia dialogue, Miroslav Lajcak, met Kurti on June 5, outlining three demands aimed at calming the situation in northern Kosovo, organising new elections, and resuming the dialogue with Serbia. At the time of writing, we don't



Miroslav Lajčák as the EU Special Representative for the Belgrade–Pristina Dialogue

yet know if Kurti has been listening, or if he'll give a favourable response. Escobar and EU mediator Miroslav Lajcak have been in talks with both Serbian and Kosovan leaders on how to restart negotiations between the old foes, urging both sides to de-escalate the simmering ethnic tensions with a view (admittedly a long-term one) to both joining the EU one day. Hopefully. Now both the EU and the US have warned the Kosovo administration to back down in its stand-off with the Serbs or "face the consequences". Kurti has told the media that such threats of possible (if unspecified) reprisals don't achieve anything. In fact he seems to be doing quite a job himself of keeping the pot simmering.



Kosovo's prime minister recently complained that the United States and the EU are "biased against his administration" and are both too tolerant of what he called "Serbia's authoritarian regime." Kurti said his cabinet has a different point of view, adding that: "We insist that behaving well with an autocrat doesn't make him behave better. On the contrary." His words suggest he has a firm policy of total intolerance of his old enemy. He told Escobar and Lajcak "Come to us with demands, with requests of the other side" he said. Not much sign of conciliation there and seemingly

no hope of a peaceful solution that keeps both sides happy. After all, there is still no sign of that 2013 "normalisation agreement", allowing Serbian municipalities to set up their "community" being honoured any time soon, or even at all. One might be tempted to think Kurti favours warfare over peace, but in any case we should surely not be surprised that the Serbs don't trust him. Just in case of trouble, both Kosovo and Serbia have put their troops on high alert. Of course, there's always hope that common sense will prevail. The Prime Minister of Albania, Edi Rama, for instance, recommended at a press conference in the Albanian capital, Tirana, (as did that agreement in 2013) the formation of an association of municipalities where Serbs are in the majority. Rama argues that this would de-escalate the crisis and "normalise" Kosovo's relations with the international community.



Prime Minister of Albania, Edi Rama

He told the media: "Yesterday, I forwarded to President Macron and Chancellor Scholz, the two 'godfathers' of the Franco-German proposal, a draft of the association, for which I informed the president of the European Council, Charles Michel, as well as the American side." He admitted that it's only a draft document and probably not the perfect solution, "But I assure you that it is a document of the highest international level that takes into account all the reasons for the creation of the association and definitely takes into account that the association is part of the organization of life in the Republic of Kosovo by addressing all the recommendations or conclusions of the Constitutional Court of Kosovo." Whether or not Kurti will take any notice this time we cannot tell. He has failed to act on similar ideas in the past, like a man who wants victory, not peace. Perhaps he and the Serbs are simply following that old advice of Publius Flavius Vegetius Renatus, who wrote in the 4th century, you may recall: "Let he who desires peace, prepare for war", with the all-new war-cry, "Ready when you are!" Vegetius would have understood.

Robin Crow
Robin.Crow@europe-diplomatic.eu

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NIST specialist Jason Coder sets up an experiment in an anechoic chamber to use Wi-Fi to sense breathing. The manikin is used to train medical professionals, and simulates a number of breathing scenarios

WI-FI COULD HELP IDENTIFY WHEN YOU'RE STRUGGLING TO BREATHE

Wi-Fi routers continuously broadcast radio frequencies that your phones, tablets and computers pick up and use to get you online. As the invisible frequencies travel, they bounce off or pass through everything around them — the walls, the furniture and even you. Your movements, even breathing, slightly alter the signal's path from the router to your device.

Those interactions don't interrupt your internet connection, but they could signal when someone is in trouble. NIST has developed a deep learning algorithm, called BreatheSmart, that can analyze those minuscule changes to help determine whether someone in the room is struggling to breathe. And it can do so with already available Wi-Fi routers and devices. This work was recently published in IEEE Access.

In 2020 NIST scientists wanted to help doctors fight the COVID-19 pandemic. Patients were isolated; ventilators were scarce. Previous research had explored using Wi-Fi signals to sense people or movement, but these setups often required custom sensing devices, and data from these studies were very limited.

"As everybody's world was turned upside down, several of us at NIST were thinking about what we could do to help out," says Jason Coder, who leads NIST's research in shared spectrum metrology. "We didn't have time to develop a new device, so how can we use what we already have?"

Working with colleagues at the Office of Science and Engineering Labs (OSEL) in the FDA's Center for Devices and Radiological Health, Coder and research associate Susanna Mosleh advanced a new way to use existing Wi-Fi routers to measure the breathing rate of a person in the room. In Wi-Fi, the "channel state information," or CSI, is a set of signals sent from the client (such as a cellphone or laptop) to the access point (such as the router). The CSI signal sent by the client device is always the same, and the access point receiving the CSI signals knows what it should look like. But as the CSI signals travel through the environment, they get distorted as

they bounce off things or lose strength. The access point analyzes the amount of distortion to adjust and optimize the link.

These CSI streams are small, less than a kilobyte, so it doesn't interfere with the flow of data over the channel. The team modified the firmware on the router to ask for these CSI streams more frequently, up to 10 times per second, to get a detailed picture of how the signal was changing.

They set up a manikin used to train medical professionals in an anechoic chamber with a commercial off-the-shelf Wi-Fi router and receiver. This manikin is designed to replicate several breathing conditions, from normal respiration to abnormally slow breathing (called bradypnea), abnormally rapid breathing (tachypnea), asthma, pneumonia and chronic obstructive pulmonary diseases, or COPD.

What alters the Wi-Fi signal is the way the body moves as we breathe. Think of how your chest moves differently when you are wheezing or coughing, compared with breathing normally. As the manikin "breathed," the movement of its chest altered the path traveled by the Wi-Fi signal. The team members recorded the data provided by the CSI streams. Although they collected a wealth of data, they still needed help to make sense of what they had gathered.

"This is where we can leverage deep learning," Coder said.

Deep learning is a subset of artificial intelligence, a type of machine learning that mimics humans' ability to learn from their past actions and improves the machine's ability to recognize patterns and analyze new data.

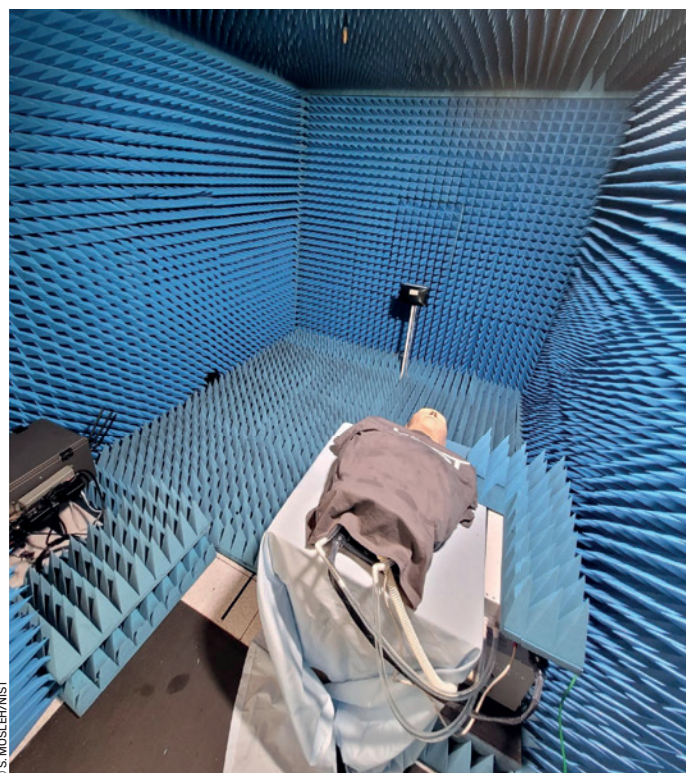
Mosleh worked on a deep learning algorithm to comb through the CSI data, understand it, and recognize patterns that indicated different breathing problems. The algorithm, which they named BreatheSmart, successfully classified a variety of respiratory patterns simulated with the manikin 99.54% of the time.

"Most of the work that's been done before was working with very limited data," Mosleh says. "We were able to collect data with a lot of simulated respiratory scenarios, which contributes to the diversity of the training set that was available to the algorithm."

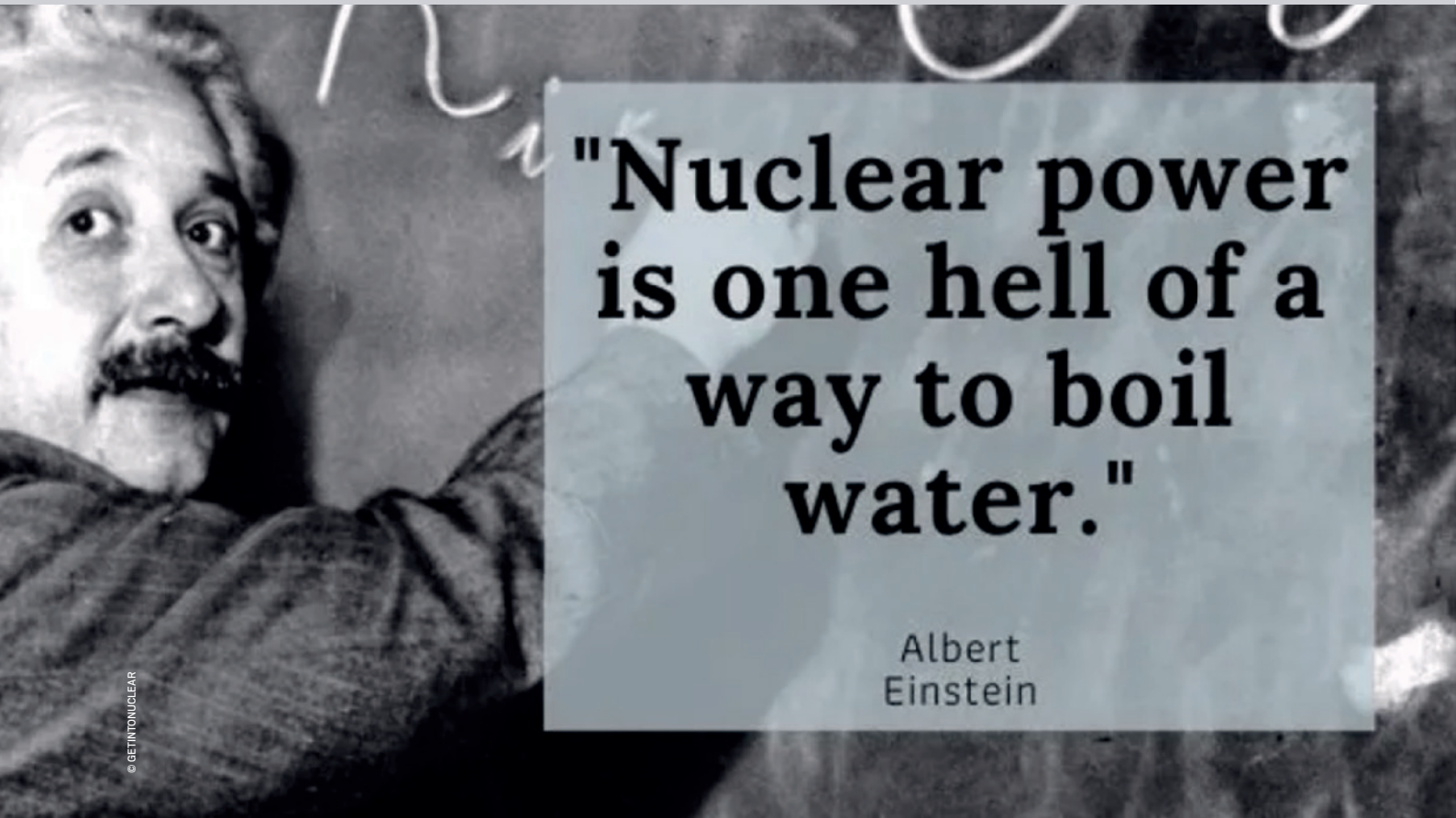
There has been a lot of interest in using Wi-Fi signals for sensing applications, Coder says. He and Mosleh hope that app and software developers can use the process presented in the work as a framework to create programs to remotely monitor breathing.

"All the ways we're gathering the data is done on software on the access point (in this case, the router), which could be done by an app on a phone," Coder says. "This work tries to lay out how somebody can develop and test their own algorithm. This is a framework to help them get relevant information."

*Susanna Mosleh, Jason B. Coder,
Christopher G. Scully, Keith Forsyth,
Mohamad Omar Al Kalaa/NIST*



Complete setup for the experiment using an off-the-shelf Wi-Fi router and receiving device. Using these commercial devices, NIST and its FDA collaborators were able to measure the manikin's simulated "breathing," differentiating between troubled and normal respiration



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**"Nuclear power
is one hell of a
way to boil
water."**

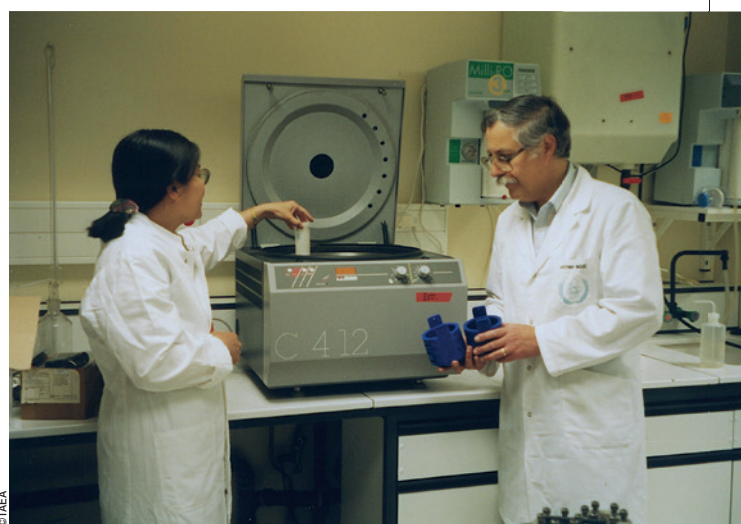
Albert
Einstein

**ONE HELL
OF A WAY
TO BOIL
WATER**

**That's how the "father"
of nuclear physics, Albert
Einstein, described
nuclear power**

We should never forget that boiling water is what we want nuclear energy (or any other kind) to do. It heats it up and the steam thus generated is then used to drive machinery, just as it did for the inventor Robert Stephenson when he entered his exciting new engine, Rocket, in the Rainhill Trials in England in 1829 (which it won, of course). It did what he expected, allowing his source of heat to generate the steam that facilitated movement along two iron rails, spaced 1,435 millimetres apart at what quickly became known as the 'standard gauge'. But the width of the track and the sizes employed are a hangover from the width of Britain's old tramways, used because it saved having to re-tool the workshops involved in manufacture. Anyway, it worked, and it worked because of heat. After all, the railway engine back in those days was more-or-less a kettle on wheels: provide enough heat to make water boil and the resulting steam can be used to achieve mechanical motion.

As the International Atomic Energy Agency (IAEA) wrote on its website in September 2021: "Since 1961, the IAEA Environment Laboratories have advanced and enhanced the use of nuclear applications to inform evidence-based strategies for the sustainable management of the marine environment. The occasion of this 60th anniversary presents an opportunity to recognize the generosity of the Principality of Monaco in hosting them, to take stock of achievements to date, and to consider new opportunities for the IAEA in the future, especially in light of the United Nations Decade of Ocean Science for Sustainable Development (2021-2030)." The occasion for this congratulatory comment was the anniversary of the IAEA opening its facility in the Principality. After all, it's quite an achievement: talk of nuclear power and of all the world's administrations, Monaco is not the first to spring to mind. It has, however, done some extremely worthwhile and valuable work since it opened its facility there, and the Monaco Environment Laboratories remain a vital part of the IAEA's work worldwide.



Scientists working in the Monaco Environment Laboratories in 1998

Most of us accept the generation of energy by nuclear means without asking ourselves how it happens. There are two ways: by nuclear fission – the splitting of an atomic nucleus – or by the more difficult method of getting the nuclei to fuse together, which can also produce energy. Nuclear fission is a reaction where the nucleus of an atom splits into two or more smaller nuclei, while releasing energy. Yet again, we are using the natural behaviour of nuclear material to generate heat.



Marie Skłodowska-Curie

We're back to the boiling kettle again, producing heat in much the same way as we do with wood, coal, oil, or gas, in order to heat water and utilise the resulting steam. From 2020 onwards, as in other walks of life, work has been interrupted and made harder by the COVID pandemic that continues to trouble us and by other global political (and military) events. But there were achievements, none-the-less, like welcoming the first one hundred female students from around the world under the new Marie Skłodowska-Curie Fellowship Programme (MSCFP), in an attempt to help close the gender gap in nuclear science and technology. Marie Skłodowska-Curie, you may recall, investigated x-rays and radioactivity and made a lot of discoveries towards the end of the 19th century, including radium, which she successfully isolated. Together with her husband, Pierre, who always acknowledged her lead in the partnership, she published 32 scientific papers in 1902, receiving her doctorate the following year. She was also the first woman to receive the Nobel Prize in Physics, awarded to her and to her husband and their research partner, Henri Becquerel, whose name is still used as a measuring unit of radioactivity. One becquerel is defined as the activity of a quantity of radioactive material in which one nucleus decays per second.

| Smart lady

Skłodowska-Curie would have appreciated the International Symposium on Naturally Occurring Radioactive Material, held in May 2022 in the Netherlands but organised by the IAEA in Monaco. Other topics examined included the management of land and water "for Climate-Smart Agriculture", the various

applications to which radiation science can be put, protection of those whose work involves handling radioactive materials, the safety of “Evolutionary and Innovative Reactor Designs”, an event held in Vienna but again organised by the IAEA in Monaco. 2022 was a busy year. Despite the extra problems, the year saw considerable progress, such as the Rays of Hope initiative on World Cancer Day (4 February), focusing on increasing the access to cancer care in countries and regions that lack access to radiotherapy facilities.



© FRANÇOIS OBERHAENSLI AND HUGO JACOB / IAEA

Nuclear techniques reveal how microplastics pollute our oceans

The actual 60th anniversary was the occasion for speeches by experts and those involved in the work, all of them full of praise for the team working in Monaco. “I pay my highest tribute to the International Atomic Energy Agency,” said Ban Ki-Moon, Secretary General of the United Nations. “The Agency was founded during the darkest days of the Cold War. Since then, it has valiantly fulfilled its mission, first to ensure that advances in science benefit all humankind, and second, to ensure that the destructive potential of nuclear energy remains under effective international control.” That control, based on experience, would seem to be most safely exercised by the IAEA. The work in Monaco helps to ensure world peace. “We have had highly important contributions for international peace, security and development,” said Petteri Taalas, Secretary-General of World Meteorological Organisation, paying his own tribute to the IAEA’s work.



© IAEA

**Current location of the Environment Laboratories in Port Hercules
The Marine Environment Laboratories are outlined in red**

How can anyone square the peaceful and scientific endeavours of the IAEA with the dangerous actions of Russian forces, aiming to take over Ukraine? IAEA Director General Rafael Mariano Grossi has been in talks with both Ukraine and Russia, trying to halt the military action that endangers Ukraine’s various nuclear facilities. He met with Russian officials in Moscow just before Christmas to discuss the situation at the Russian-occupied Zaporizhzhia Nuclear Power Plant in Ukraine.

Grossi afterwards described his trip to Russia as “another round of necessary discussions” to protect the area around the plant amid reports of Russian shelling in the area. “It’s key that the zone focuses solely on preventing a nuclear accident,” Grossi Tweeted. “I am continuing my efforts towards this goal with the utmost urgency.” He met with Aleksei Likhachev, who is in charge of Rostekhnadzor, the Russian government body supervising nuclear energy. Ukraine’s state energy company, Energoatom, later claimed that two employees at the Zaporizhzhia Nuclear Power Plant had been kidnapped by Russian forces. The company also claims that Russia has placed rocket launchers at the facility, which leaves Ukrainian forces unable to target them without endangering the nuclear plant and the region. Russian troops have occupied the site since March last year.



© IAEA

Rafael Mariano Grossi

Grossi is a firm believer in nuclear energy as a means of protecting the world environment, as he made clear at a conference in Washington last October, where he expressed high hopes for using nuclear energy to tackle major challenges “from climate change to sustainable development”, as he joined U.S. Energy Secretary Jennifer Granholm for the opening of the IAEA International Ministerial Conference on Nuclear Power in the 21st Century.



Marine Environment Laboratories were inaugurated on 5 October 1998 by H.S.H. Prince Rainier III of Monaco and the IAEA Director General, Dr. Mohamed ElBaradei. Pictured also is H.S.H. Prince Albert II of Monaco

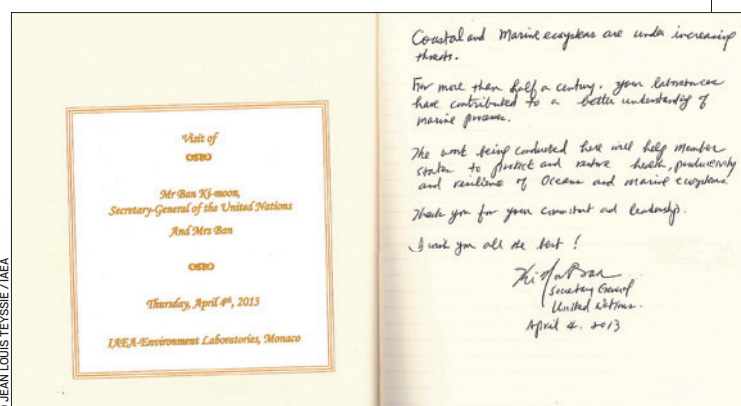
I Hope among the ruins

Despite all the multifarious global challenges, Grossi said he saw “great hopes” that the world “can realize this imperative of the time: to bring the solutions in terms of prosperity, in terms of growth, in terms of caring for the common house, our planet, through the beneficial uses of nuclear energy,” adding: “That is the challenge.” It certainly is, and with war and verbal threats to use nuclear weapons, it’s a big one. The fact is that nuclear power is the second largest potential source of low carbon electricity after hydroelectric. Grossi has the not inconsiderable support of Bill Gates and US Energy Secretary Jennifer Granholm in his efforts to increase the use of nuclear energy through the spread of what are called “small modular reactors” (SMRs) that should allow more countries to move

towards using nuclear energy and in that way reduce pollution.

Of course, Russia’s aggressive assault on Ukrainian infrastructure continues, with attacks on nuclear plants and other facilities. Grossi reminded the media that: “It shows the potential nuclear safety and security risks facing all of Ukraine’s nuclear facilities during this terrible war, not just the Zaporizhzhya Nuclear Power Plant. While off-site power is now back at the Khmelnytsky Nuclear Power Plant, yesterday’s power loss clearly demonstrates that the nuclear safety and security situation in Ukraine can suddenly take a turn for the worse, increasing the risk of a nuclear emergency.” As agreed by Grossi and Ukraine’s Prime Minister, Denys Shmyhal, during a meeting in Paris, the IAEA will press ahead with plans to establish a continued Agency presence at the country’s four nuclear sites. “Our mission at the Zaporizhzhya Nuclear Power Plant has shown the vital importance of the IAEA being there to monitor the situation and give technical advice,” Grossi said afterwards. “Thanks to this presence, the IAEA is providing the world with impartial, technical and factual information about developments on the ground.”

Yet again, the IAEA is offering proof of its indispensability in a dangerous world. Monaco has a lot to offer.



UN Secretary General Ban Ki-moon's comments and signature in the visitor's book after his official visit to the IAEA Environment Laboratory in Monaco, 4 April 2013

Martin Gardiner
martin.gardiner@europe-diplomatic.eu



UPTOWN BRUSSELS: UNVEILING THE TRANSFORMATION

The rise and fall of Brussels' Champs- Elysées

The Avenue de la Toison d'Or and Boulevard de Waterloo which run side by side, together form one of the most emblematic parts and one of Brussels' main commercial hubs.

Often compared to the legendary Champs-Élysées in Paris, it is an iconic artery in Brussels, with its lined trees and high-end retail shops, great architecture and a pretty little park off the Boulevard de Waterloo.

Sitting in one of the cafés in the area, you can experience the hustle and bustle of the boulevard, but also have a great view of the Porte de Hal, a beautiful, mediaeval city gate.

This wide, multi-lane boulevard, which connects the Chaussée d'Ixelles with the Porte de Hal, is quite central in the heart of the city. The avenue is part of the inner ring road designed by engineer Jean-Baptiste Vifqua in 1819 to replace the second city wall of Brussels, which was demolished in 1785. The design of this large boulevard linking the old city gates of Namur and Hal began in 1823, coordinating with and forming an integral part of the plans for the elegant Louise district.

The avenue was formerly called Esplanade, Glacis de Waterloo, then Boulevard extérieur de Waterloo and Boulevard extérieur du Régent. In 1851, it received its current name in reference to the Order of the Golden Fleece, founded in Bruges in 1430 by Philippe le Bon, Duke of Burgundy.



Jean-Baptiste Vifquin

In the late 1850s, the boulevard was planted with trees and the area thoroughly levelled and cleared of the old remains of former 16th and 17th century defensive bastions.

The oldest buildings in the street were those on the Avenue Louise side, on the old bastion of Sainte-Gudule. Between 1860 and 1870, a particularly intense building phase began, with neoclassical town houses and eclectic mansions. The oldest building on the avenue is the Church of the Discalced Carmelites, built in 1861. The neighbourhood

was mainly inhabited by the upper middle classes and people with liberal professions, attracted mainly by its proximity to the Palace of Justice (located at one end of the avenue).



Entrance to the Toison d'Or shopping mall, 2023

At the beginning of the 20th century, the residential character of the avenue began to fade. The old bourgeois houses and villas were gradually replaced by fancy retail shops, offices, cinemas and hotels. Unfortunately, many of the trees of the old promenade disappeared to make way for large traffic lanes in the 1950s.

Only a few of the old buildings remain today. The Cinéma Capitole, number 8, was designed by the architect Gaston Ide in 1918, renovated and extended several times and now houses the UGC Toison d'Or cinema. However, most of the buildings, such as the Palais de Trocadéro with its magnificent façade in the style of Louis XVI, designed in 1864 by the architect Wynand Janssens, were demolished to make way for more modern and functional buildings. At the end of the 1930s, the first residential buildings were erected on the boulevard. (Source: monument. heritage. brussels).

The demolition frenzy in this area was also encouraged by the success of the Louise Galleries project. Designed by architects Ide, Somers and de Montigny, the Louise Galleries were a modern



Entrance to the Galerie Louise shopping mall, 2023



© EDM



Empty corridors in the Galerie Louise, 2023

covered shopping street with about fifty shops and a two-storey car park. The Porte Louise galleries on Avenue de la Toison d'Or followed in 1963-1964 and formed a large covered shopping and pedestrian area linking Place Stéphanie, Avenue Louise and the Toison d'Or.

Although the Louise Galleries are a significant and iconic part of the heritage of this Upper Town business district, they have lost their appeal over time. In recent years, an extensive renovation process has been initiated, with architect Francis Metzger appointed to lead this important project for the city's image. His aim was to preserve the original touch of the work, also using noble materials (cream-coloured stone, carbon steel frames and brass surrounds), perfect lighting and graphic harmony. Some of the spaces were merged

to create larger areas for today's commercial needs. The project was scheduled for completion at the end of 2020. But we are now in 2023, and the Louise Galleries are still closed to the public... construction work is still under way.

But what most visitors and tourists to the region may not know is that the renovation of the Louise Galleries is just the tip of the iceberg.

In a press release from 2022, the office of Pascal Smet, Brussels Secretary of State for Urban Planning and Heritage, announced that the permit application submitted in 2019 for a new redesign project for the Boulevard de Waterloo and the Toison d'Or has been validated.

Pascal Smet tweeted on 20 July 2022: 'Building permit 'Toison d'Or' granted! One of Brussels' most important shopping areas will become a high-quality promenade with more space for pedestrians, cyclists and trees.'



© D.R. PIERRE ALLEMAND

Architect Pierre Allemand's « Demain Egmond » projects for the Toison d'Or area



Brussels State Secretary for Town Planning and Heritage, Pascal Smet

According to these plans, the upper part of the city will radically change its face in the coming years. The Brussels Region has obtained planning permission for the transformation of the two major axes in the upper part of the city. This urban motorway will be transformed into an urban boulevard where most of the space will be given back to cyclists and pedestrians at the expense of car traffic.

"It has not been easy, there have been many obstacles since I presented the project in April 2019," explained Pascal Smet. "It is a real change that will take place in this area. The city of tomorrow will take shape. Priority for pedestrians and cyclists. With this project, we will move to a city on a human scale. This street, intended for luxury shops, has a right to a high-quality transformation. It is also a question of the attractiveness of our region on a national and international level. Today's approval is the result of intensive and discreet consultation with the owners of the shops, hotels and car parks, as well as the three municipalities concerned. The project is now ready for implementation. With Schuman and Place Royale, the entire neighbourhood is about to be revamped," Pascal Smet added in an interview at the time.

Indeed, the road to this project was not an easy one, for there were, and still are many who are against it.

An opinion poll in which 4,568 voters participated showed that only 26 per cent saw the project as a great one that would restore the upper part of the city to its former glory. Most people (52 per cent) responded that they were ashamed of the idea as it would most likely lead to more congestion. About 19 per cent were still reluctant and wanted to wait for the results before forming an opinion.

The promoters claim that an active dialogue and public survey took place in February 2021 and that the plans were changed following these meetings to best meet the public's wishes. After community validation and informal consultations with traders, hoteliers and car park owners, the amended plans

were presented in March 2022 and received urban planning approval.

The Brussels Region wants to give a new face to the Avenue de la Toison d'Or and the Boulevard de Waterloo between the Porte de Namur and the Louise roundabout. The idea is to transform the neighbourhood according to the needs of residents, business people and tourists, while strengthening its role as a landmark in the capital.

The aim is to give pedestrians and cyclists back the space currently monopolised by cars. And also to nature; 47 additional trees will be planted. The redesign project aims to create a new vision of car use, provide more safety when approaching intersections and drastically reduce parking spaces. I think this is exactly why many of the project's opponents, and especially shop owners are against it. Since the boulevard is full of high-end retail shops, it is assumed that many of their customers will arrive by car and then conveniently park nearby. With the removal of these parking spaces, some may change their minds.

The main aim of this project is to make the upper part of the city, which has long suffered from comparison with the lower part, more pedestrian-friendly and attract more people and visitors. According to the architects, the final project will also make car traffic more fluid, with two lanes planned between the Cliquet and Louise roundabouts and a wide strip between Louise and the Porte de Namur. Car traffic will be concentrated in the middle of the boulevard, leaving plenty of space on the sides for pedestrians and cyclists (two bi-directional cycle lanes four metres wide to complete the cycle path along the 'Petite Ceinture').



A project by architect Francis Metzger and Ma' for the new shopping mall

The project, led by Brussels Mobility as part of the Region's Good Move and Good Living plans, is being implemented by the federal body Beliris (a collaboration between the federal authority and the Brussels Capital Region to promote the image of Brussels as the Belgian and European capital). The initial cost of the work is estimated at 16 million euros and it is unlikely to be completed before the end of 2025.

Elke Van den Brandt, Brussels Minister for Mobility and Public Works, said in a statement to 7sur7.be: *"After very long consultations, I am really happy that this project will soon be completed. The Avenue de la Toison d'or is a very important artery for the attractiveness and*



© FACEBOOK

Brussels Minister for Mobility and Public Works, Elke Van den Brandt

the economy of Brussels. This project will make it possible to give much more space to customers, visitors and residents. By transforming this impassable urban motorway into an inviting urban boulevard, the new Toison d'or will also bring the upper and lower parts of the city closer together”.

The project includes resurfacing, reorganisation of car, bicycle and pedestrian traffic, creation of new green spaces, new public lighting and installation of one or more works of art. The final redesign project was selected from five proposals after a major architectural competition.

Among the main stated objectives of the urban development was the need to create a public space with a strong identity and landscape quality adapted to today's functions. The new design will create a better connection between the two sides of the inner ring road and the neighbourhoods, between the eastern part of the 'Petite Ceinture' and Egmont Park, the Sablon and the city centre, boost trade in the area and attract new businesses, and hopefully create an attractive tourist environment.

The project aims to breathe new life into the area and make it welcoming for all. Pedestrians will be able to move around most of the space between the façades as well as in the new square that is being created, making it easier to get to the other side. The space will be enhanced by new trees and flowerbeds, pedestrian areas, kiosks and small pavilions that will house small shops.

In order to remove ambiguities and perhaps gain the approval and support of as many citizens of the Belgian capital as possible, the initiators and promoters of this far-reaching project have set up a website <https://toisondorguldenvlies.brussels>, which collects information about the project and makes it possible to follow the various phases of the project.

Good Move is the regional mobility plan for the Brussels-Capital Region. Adopted by the Brussels government in 2020, it sets out the main policy guidelines in the field of mobility, aiming to improve the living environment of the Brussels population while supporting demographic and economic development in the capital. The plan envisages peaceful neighbourhoods connected by intermodal structural corridors, with efficient public transport and improved traffic flow.

However, the Brussels Liberals are often criticised for launching new mobility projects without offering a real alternative to car transport. The measures are sometimes seen as too drastic and radical.

Therefore, even in the case of this redevelopment project for an emblematic area of the Belgian capital, the ideas met with rejection and even fear. The traders and economic actors of the neighbourhood asked the Agora research office to carry out a count of the vehicles passing or parking in the area to check the feasibility of the project. The conclusions were apparently disastrous, as the project raises fears of traffic clogging the neighbourhood due to the single one-way street planned along the two arterial roads. Even more reasons, then, to reject the project. Only time will tell which part was right.

Change is generally viewed with suspicion and resistance, but it is the only way to progress.

Alexandra Paucescu



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A view of Place Louise, 2023



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© NHS

A NHSS Magnetic resonance
imaging scanner

**NUMBER OF PATIENTS
RECEIVING LIFESAVING
NHS CANCER CHECKS HAS
DOUBLED IN A DECADE**

Double the number of patients are receiving potentially lifesaving NHS cancer checks in England now than they were a decade ago, new analysis shows today.

As the NHS approaches its 75th milestone birthday, the latest figures show an astounding increase in demand for cancer services with 114,108 more people checked for cancer in the last month than in the same month a decade ago.

In April 2013, there were 103,952 urgent referrals for cancer, which has skyrocketed to 218,060 in April 2023.

Likewise, in November last year when we saw the highest ever number of checks for cancer in one month – over a quarter of a million (264,391) – this has more than doubled on a decade ago (107,122 in November 2012).

The NHS is also treating more and more people for cancer, and thanks to efforts to bring more people forward for checks, more people than ever before are being diagnosed at an earlier stage (57% at stage one and two) – when prior to the pandemic it had remained at around 55%.

Thanks to advances in treatments and technologies, while the numbers of people being seen for cancer has been growing, cancer survival rates have also been rising steadily over the last decade.

Health chiefs have doubled the spending on cancer awareness campaigns and continues to encourage people to come forward for checks if invited by the NHS or if they have experienced any worrying symptoms.

To meet the increasing demand for cancer services, the NHS is investing £2.3 billion to expand diagnostics services and £1.5 billion for treatment over the coming years.

Local NHS services have expanded their diagnostic capabilities through one stop shops for tests, mobile clinics, accelerating the rolling out of 'tele dermatology' services and created cancer symptom hotlines, to ensure people are diagnosed and treated as early as possible to give them a much better chance of beating the disease.

Since 2021, the NHS has rolled out 108 community diagnostic centres (CDCs) across England to offer more scans, checks and operations as soon as possible. Latest data shows that CDCs have carried over four million additional checks for cancer and other major diseases.



Dame Cally Palmer, National Cancer Director for NHS England

Dame Cally Palmer, National Cancer Director for NHS England, said: "We are committed to checking and diagnosing more cancers at an earlier stage so that we can save more lives.

"There is still a long way to go, but the NHS is making great progress in cancer care, and advances in diagnosis and treatment have driven an increase in cancer survival rates over the last three decades.

"Due to the hard work of NHS staff and the impact of our public awareness campaigns, last year alone more than 2.8 million people received urgent diagnosis for cancer, with over 328,000 starting treatment and a higher proportion than ever being diagnosed at an early stage – making it a record year for delivering cancer care.

"As the NHS turns 75, it is also continuing to roll out innovations, such as CAR-T therapies and specialist drugs like olaparib for inherited breast and prostate cancers, which are leading the way on care for patients, potentially saving thousands of lives."

Cancer experts believe that with life expectancy increasing and a rapidly soaring population of older people, a looming increase in elderly patients with cancer is expected.

Up to one in four GP referrals a month for cancer, thanks to the success of the NHS public awareness campaigns and early diagnosis drives.

The NHS Long Term Plan has an ambition to see 55,000 more people each year surviving their cancer for five years or longer by 2028 and three quarters of people with cancer being diagnosed at an early stage by 2028.

Common symptoms of cancer include lumps or bumps, unexplained weight loss, bloating, fatigue, itchy or yellow skin, and changes in bowel habits.

Leading charities, such as Cancer 52, the common voice for rare and less common cancers have welcomed this growth in the number in the number of people getting checked



Jane Lyons, Chief Executive of Cancer 52

Jane Lyons, Chief Executive of Cancer 52, said: "The faster and earlier that cancer is caught, the better chances of treatment and positive outcomes, so all of us who work for cancer patients welcome this sustained year-on-year growth in the number of people getting urgent cancer checks after seeing their GP.

"The NHS needs to expand its capacity to rise to this record level of demand – it is encouraging to see new community diagnostic centres opening and NHS bosses being directed to make sure they're prioritising suspected cancer patients."

When the NHS turns 75 years-old (5 July 2023), the health service will celebrate its achievements, such as treating millions of people a day for cancer and other medical conditions. The NHS will also use its birthday to look ahead to the opportunities it has to shape the future of healthcare for the benefit of patients and the wider public.



Central Business District (CBD) in the
New Administrative Capital of Egypt

FROM PYRAMIDS TO SKYSCRAPERS

**Egypt's new capital
rises as a symbol of
power and modernity**

Egypt, the land of the pharaohs and the millennia-old monuments has captivated all humankind with its stories shrouded in mystery. Even today, there are countless theories about how the pyramids were built, and a multitude of books and films have captured people's imagination with stories about the ancient Egyptian world to this day.

But Egypt is so much more than that. Located in the north-eastern corner of Africa, it was home to one of the most important civilisations of antiquity and one of the world's earliest urban and literate societies. Alternately conquered or occupied by Greeks, Romans, Arabs, French and British, it borrowed from all these civilisations and eventually became one of the intellectual and cultural centres of the Arab and Islamic worlds and the complex society it is today. According to official figures, Egypt was ranked 8th in the Quality of Life Index for the Arab world in 2021. With over 109 million inhabitants, a growing GDP and a strategic geographical location, Egypt is now a non-negligible player on the international stage.

Over the millennia of its existence, Egypt has located its capital in various places, from the oldest capital, Memphis, to Thebes, Tell el Amarna, Alexandria and Cairo, all of which have played a significant role in Egyptian history.

Cairo, today's capital, is one of the largest urban agglomerations in the world, home to around 20 million people. It is also one of the fastest-growing cities in the world and is expected to double its population by 2050.



Muhammad Ali Pasha by Auguste Couder

Cairo experienced an era of great development after Muhammad Ali Pasha, the founder of modern Egypt, came to power in 1805. His visit to the Paris World's Fair in 1867 was one of the most important milestones for the city. After his return, a new urban plan was drawn up for the city.



Mostafa Madbouly, Prime Minister of Egypt

The opening of the Suez Canal two years later also contributed to the further development of Cairo. The old part of the city was complemented by a new, western side, characterised by large squares and bridges, green gardens and stately buildings. The 'Paris of the East', as it was soon called, housed the largest national library in the region and also a smaller version of Milan's opera house, La Scala.

But as in the 1800s, it's time for change again. Cairo is crowded and traffic is often hectic and congested. A lot needs to be invested, but even so, the city has its limits.

The economic conference in Sharm el-Sheikh (March 2015) was the turning point and the starting signal for a 15-year development plan, the 'Egypt Vision 2030'.

The expansion of Cairo's infrastructure was decided, but the idea of a new capital city also came up, announced by Egypt's then-Housing Minister, Mostafa Madbouly (now Prime Minister). Before embarking on this huge project, experience was gained from previous capital relocations. Egyptian officials met with representatives of Astana, the new capital of Kazakhstan, which replaced Almaty in 1997.

Although Chinese and Emirati investment consortia are involved in the project, the Egyptian government is financing and managing most of the construction through the Administrative Capital Urban Development Company (ACUD), an Egyptian joint stock company whose main shareholders are the Ministries of Defence and Housing.

ACUD manages the planning and construction of the infrastructure, but also most of the sales of land and housing units in the new capital.

The state-owned construction company Arab Contractors is responsible for building the water supply and sewerage systems in the new capital.

The army has already built the roads to the new capital before the official announcement of the project.



Dr. Badr Abdelatty, Ambassador of the Arab Republic of Egypt to Belgium and Luxembourg

Construction of the new capital began rapidly in 2018, and the entire project was expected to be completed in several stages. The Covid 19 pandemic slowed down the pace a bit, but the project is gradually being completed.

H.E. Dr. Badr Abdelatty, Egypt's Ambassador to Belgium and Luxembourg, described to me, during a very pleasant and detailed conversation, the many planning and execution phases of the new capital, which he said is already 80-90 per cent complete.

He added, "Only about 4 per cent of Egypt's land is currently inhabited, so there is a real need to expand the populated areas. The entire development master plan aims to build 14 new smart cities from scratch, one of which is the 'new capital'".

The new capital is a massive development project. The city will be the new administrative and financial capital of Egypt. It has a unique geographical and strategic location, being only 45 km east of Cairo (just outside Cairo's second major ring road) and thus closer to the Suez Canal and the port of Ain Sokhna.

The new capital is considered one of the most ambitious projects in the region. The plan is to create a modern, sustainable and high-tech metropolis with a focus on green spaces, smart infrastructure and efficient transport. It will be divided into 21 residential districts.

The name of the city has not yet been decided, but a competition has been launched to find the best name and logo for the city. A jury of experts has yet to evaluate the proposals, but so far all we know is that the city could be called 'Egypt'.

The total area of the new capital is about 714 square kilometres and it is estimated that the total population will reach 6.5 million people when the project is completed.



Model of the New Administrative Capital presented in 2017

"We hope that the cost of living in the new capital will be lower, that it will offer modern housing, public transport and a much better quality of life for its new citizens. It is also estimated that 2 million new jobs will be created in the process." (Dr Badr Abdelatty)

The new capital will be a smart, digital city prepared for the future. More than 6,000 surveillance cameras will monitor the streets, it will have an advanced system for sanitation (as water is scarce on the African continent), and it is said that residents will be able to file complaints directly through a mobile app.



Siemens High-speed trains for Egypt

The city will be equipped with advanced technologies, including a high-speed rail system, smart interconnected roads and a centralised traffic management system. The Cairo Light Rail Transit will connect the new administrative capital to Cairo. A monorail line is also currently under construction. It will provide a fast connection between the new capital, Cairo and Giza. For transport within and to the new capital, not only the monorail but also inner-city trams and an electric bus network will be used.

In January 2021, Egypt signed a contract with the German company Siemens to build a high-speed line running from the city of El Alamein (northern Mediterranean) to Ain Sokhna on the Red Sea, connecting the new capital with Alexandria, the other major city in Egypt. The 450 km long line is scheduled to be completed this year. The plans go even further, with an additional 1 750 km of high-speed rail linking the new capital to other cities such as Aswan in southern Egypt.

There is also a new international airport for the new capital, which will partially relieve the Cairo International Airport and the Sphinx International Airport.

When you look at the plans and pictures of the city, you understand the scale of the project. All administrative and political power will gradually be transferred here. By May 2023, 14 ministries and government offices have already been moved to the new administrative capital.

Moving the entire government from Cairo to the new capital is expected to cost over 100 million USD. 30 ministries, embassies and government offices, the Egyptian parliament and the presidency will move to the new capital. In the first phase, 50,000 government employees will be relocated and provided with new housing.

The Octagon (State Strategic Command Centre) is the headquarters of the Egyptian Ministry of Defence in the new capital. The building is the largest in the Middle East and one

of the largest in the world, comparable only to the Pentagon in the United States of America (the similarity of the names is certainly no coincidence).

Forty-five African countries will move their embassies to the new city this year, and the embassies of the Gulf states will soon follow, but for most diplomatic missions, planning and talks for the move have already begun. Basically, it is only a matter of time before they will all move out of Cairo. The new capital will have a diplomatic quarter (as in other major capitals), an administrative quarter and a large United Nations headquarters.

"The Egyptian government has offered the EU a plot of land to build its new EU mission in the new capital. The city is to become a regional centre for business, innovation and culture. Both the largest cathedral and the largest mosque in Africa are to be built in the new capital, to set an example of tolerance between religions." (Dr Badr Abdelatty)

Al-Fattah Al-Aleem Mosque, the grand mosque of the new city, located on a hill, covers a total area of more than 455,000 square metres and can accommodate up to 17,000 worshippers. It was inaugurated in 2019 by the Egyptian president, Abdel Fattah el-Sisi.

The mosque is the second largest in the world in terms of total area.

The Cathedral of the Nativity of Christ is the largest cathedral in the Middle East, covering 63,000 square metres, and will serve the Coptic Orthodox community in the city.



The Al-Fattah Al-Aleem Mosque in Cairo's new capital

An innovation park, 18 new hospitals, artificial lakes, 90 square kilometres of solar parks, 40,000 hotel rooms, 1,250 mosques and churches, theatres and the largest opera house in Africa and the Middle East are just some of the facilities in the new capital.

It is also worth mentioning that several international universities have announced the opening of branches in the new city, which will attract even more people.



© EDM

Great Sphinx and Pyramid at Giza

The new capital has been designed as a model for sustainable urban development in the region. In an effort to reduce pollution and make Egypt 'greener', the government has committed to providing 15 square metres of green space per inhabitant in the new capital. In addition to many parks and gardens, the city also has a 'Green River'.

The plan is that all districts of the new capital will be connected to the Green River, which will imitate the course of the Nile River through the middle of Cairo. The water of this long canal will be completely recycled. On the banks of the river, picnic areas and outdoor sports activities, a mosque, a botanical garden, a Bedouin camp, restaurants, shops, an open library with reading gardens, a sculpture garden, a Ferris wheel and a large square are planned.

The infrastructure of the Green River is accessed by a network of pedestrian paths, cycle tracks and green bridges. All university campuses in the new capital are to be connected to the Green River in some way.

Central Park is the largest green space in Egypt (35 km long, larger than Central Park in New York).

The city also has an Olympic sports village, a 93,440-seat stadium and a large theme park four times the size of Disneyland.

"About 30 skyscrapers are currently under construction, including the Iconic Tower, which will be the tallest building in Africa". (Dr Badr Abdelatty)

Obelisco Capitale, a skyscraper resembling a pharaonic obelisk is also in the planning stage. It will be the tallest building in the world (surpassing the Burj Khalifa and the Jeddah Tower), following its scheduled inauguration in 2030.

The Museum of Egyptian Capitals, located in the City of Arts and Culture in the new capital, tells the story of several Egyptian capitals and their development throughout history. This unique

museum mainly focuses on nine Egyptian capitals: from the oldest, Memphis, to Thebes, Tell el Amarna, Alexandria, Fustat or Cairo, to the latest capital under construction.

Each of them played a significant role in the country's history, which is presented in the museum's two main galleries, also highlighting Egypt's main role in establishing successful administrative systems over the centuries.

The second section of the museum focuses on the meaning of life after death in ancient Egypt (mummies, coffins and canopic vessels). The outdoor area of the museum consists of green meadows planted with papyrus and lotus flowers, the symbols of the north and the south in ancient Egypt.

This is perhaps the way forward and an example for other overly polluted and overpopulated metropolises in the world. Perhaps it is cheaper and easier to build a new city from scratch, a city worthy of the 21st century, equipped with all that the best technology can currently offer and with opportunities for constant improvement, than to try to 'fix' the old cities.

Nevertheless, some fear that the price the Egyptian people will have to pay may be too high (after all, it is a project worth an estimated \$40 billion, largely financed by the state).

However, the effort to build a new city from scratch is also a great economic opportunity. Although the project represents a significant financial burden, it offers the opportunity to create many much-needed jobs and boost Egypt's core industries and private sector, such as construction, while generating high tax revenues.

There are voices arguing that the price of housing in the new capital will be too high for most Egyptians or that the effort of resettlement is underestimated. Only time will tell the pros and cons of this project.

Until then, Egypt is looking forward to this achievement, which, like other gigantic projects, will have to prove itself over time. However, Egypt's new capital has come out of the woodwork in a relatively short time and promises a higher quality of life for many people.

"It is a complex vision" (Dr Badr Abdelatty).

Alexandra Paucescu

alexandra.paucescu@europe-diplomatic.eu

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M'GOUNA : A tribute to the Moroccan Valley of Roses

Inspired by the wisdom of ancient traditions and cultures, Rituals creates collections of luxurious yet affordable cosmetics. The latest limited edition, the M'Gouna Collection, pays homage to the Moroccan Valley of Roses with ten body care products and room sprays that put the spotlight on three iconic Moroccan ingredients: Damascene Rose, Prickly Pear and Argan Oil. (rituals.com)



© RITUALS

Pamper your skin with the luscious body cream, make every shower a refreshing moment with the foaming shower gel, or bring a fragrance evocative of the Moroccan Valley of Roses in your sanctuary with the scented sticks

Flip-flop on top

This summer, expect rubber flip-flops that are slim and flat and go beyond the classic item. Some models are made of chunky leather and in some cases, like Miu Miu and Max Mara, of hide that covers a large part of the foot. (esteelauder.com)



© HAVAIANAS

Havaianas Slim Square. With their square and sophisticated design, these flip-flops are versatile and can be worn on the beach or with city outfits (havaianas.com)



© MAX MARA

Max Mara toe-loop sandals. Made of soft leather, featuring a wide band that wraps around the instep, crossed ankle straps and a small buckle fastener at the side (maxmara.com)



© MIU MIU

Miu Miu leather thong booties. This model, worn on the catwalk at the Spring-Summer 2023 show, features an original design and a bold take on femininity (miumiu.com)



© ESTÉE LAUDER

One-way ticket to the Maldives

Inspired by the luminous radiance of a sunrise, the new **Estée Lauder Limited Edition Bronze Goddess L'Eau de Lumière Eau de Parfum** is a burst of sensuality and a wave of refreshing fragrance. Reminiscent of the colours of the Maldives, this limited-edition fragrance exudes a mesmerizing glow with its warm, sensual and floral amber scent. (esteelauder.com)

50 shades of yellow

From sweet pastels to funky fluo - welcome summer in your favourite shades of yellow.



© MYTHERESA

1 This wool-blend twill blazer from Stella McCartney is a single-breasted design with notched lapels and flap pockets (spotted on mytheresa.com)



© BOTTEGAVENETA

2 Braided, glazed, embossed leather, top handle bag with single compartment and zipper closure (bottegaveneta.com)



© FARFETCH

3 95mm high stiletto heels featuring open toe and ankle strap with buckle fastening (spotted on farfetch.com)



© SWAROVSKI

4 Spice up a simple outfit with this eye-catching "cocktail ring" made from glowing coloured crystals for a distinctively chic look (swarovski.com)



© GUESS

5 Sleeveless slipdress with spaghetti straps (guess.eu)



© CHANEL

6 "Ovni" is a long-lasting nail colour that creates a glossy shimmer with each application. An essential accessory that adds the finishing touch to any look (chanel.com)

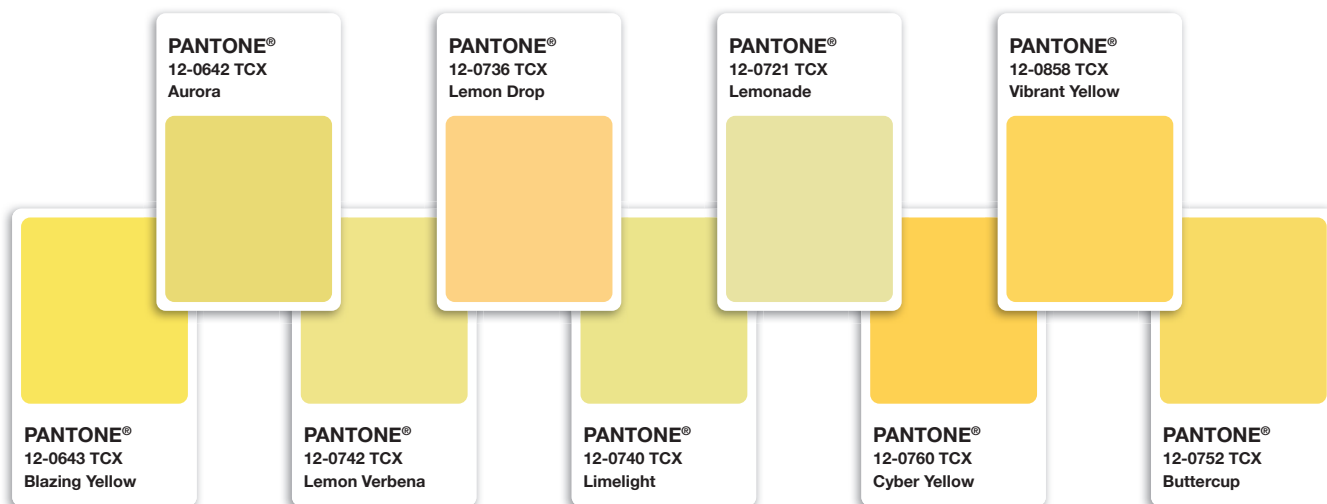


© TORYBURCH

7 The Kira Bracelet combines smooth enamel with a bevelled Double-T. Pair it with other bracelets or wear it alone for a classic look (toryburch.com)

What's the name?

What better way to refer to our favourite yellow than by its 'official name' with Pantone's Color Chart?





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