



GOVERNMENT TECHNOLOGY 5.0

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Introduction

In 2006, when design thinking was only emerging as a trend, one of the initial projects developed was “The Wallet”. Workshop participants learned the practical aspects of design thinking by imagining new ways to carry cards, cash, and ID.

If you tried to run this exercise in 2024, you would confuse a lot of participants. Many of us do not carry cash or cards anymore. The world has moved on. You can pay for lunch, bus tickets, and even purchase a new wallet, by waving your phone or your watch, in front of a terminal at a retail outlet or restaurant.

Cash and cards are gone. But there is still one wallet inhabitant left to deal with: IDs. Unless you live in one of very few jurisdictions around the world, you still need to carry your plastic license when driving a car. You still need to carry a physical document to cross a border, buy alcohol, or enter a nightclub.

The wallet exercise is a litmus test of government innovation. The world outside the public sector has moved on and fully digitalized. Innovation inertia in the public sector is the reason why we still need wallets.

The gradual disappearance of cash and cards from our lives was not a result of one or two organizations pushing for change in this direction. It has been a result of many changes coming together: new technologies (such as RFID), new business models (such as microtransactions, and in-app purchases), and new social expectations (payment in the background, such as when using ridesharing services). While all of these new trends started emerging as early as the late 1990s, only the massive scaling of the past years has turned them mainstream. Likewise, the future of public services is already here. It’s just not evenly distributed.

The public sector today is learning fast, and embracing innovation in many sectors. While we might still be required to carry around physical plastic IDs for the foreseeable future, there are many new and exciting applications of the emerging technologies being driven by government forces.

The “Government 5.0” stage of evolution goes well beyond citizen-centric services, or whole-of-government approaches to service delivery and gravitates toward whole-of-life service delivery. Understanding the citizen model, not through a government lens, but holistically, is the focus. To achieve this, public service providers are asking where they can fit into their customers’ lives, rather than the other way around of “where do citizens fit in providers’ processes?”.

In this report, we will discuss 11 innovations from various countries: 2 from the UAE, and 9 from across the globe. These cases consider many different emerging technologies and their applications for government use, including: the metaverse, 5G, drones, blockchain, AI, machine learning, and autonomous vehicles.

Metaverse Seoul - South Korea: a metaverse ecosystem for a smarter city

In 2021, The Seoul Metropolitan Government (SMG) announced it would be the first major city to enter the metaverse. Provisionally called "Metaverse Seoul", it intends to create a virtual communication ecosystem for all areas of its municipal administration. This would include economic, cultural, tourism, educational and civic service, rolled out in three stages starting in 2022 and continuing until 2026.

In short, Seoul hopes to create a metaverse that allows citizens to conveniently meet with avatar officials to deal with civil complaints and consultations, which are currently handled only by visiting municipal offices. The long-term plan is to add support for business development services and education as well, on top of inquiring about real estate and filing taxes. There are even plans to reanimate destroyed historical sites in virtual space. Festivals, including the Seoul Lantern Festival, will be held in the metaverse so that everyone around the world can experience them, since physical distance is no longer a barrier. They are also hoping to operate the entire project as an open and free service for citizens.



Seoul is already one of the world's most connected cities, with over 95% of its ten million residents already connected to 4G or 5G services. In addition, the city government provides an extensive network of free Wi-Fi with over 100,00 access points.

The mayor said they have three main goals with the project. First, they want to make it easier for citizens to connect with government services and each other. Additionally, they want to overcome the constraints of time, space and language. They want to explore new ways to improve user experience and satisfaction.

The platform will help consolidate access to various city services. It will also make it easier to expand services that take advantage of 3D digital twins to improve access to local security footage, report fires and improve public infrastructure. For example, the S-Map service already provides a digital twin for urban planning, real-time fire monitoring and wind path analysis. A safety service called the Ansimi App connects users with Seoul police services, who can tap into local location data and camera feeds to speed investigations.

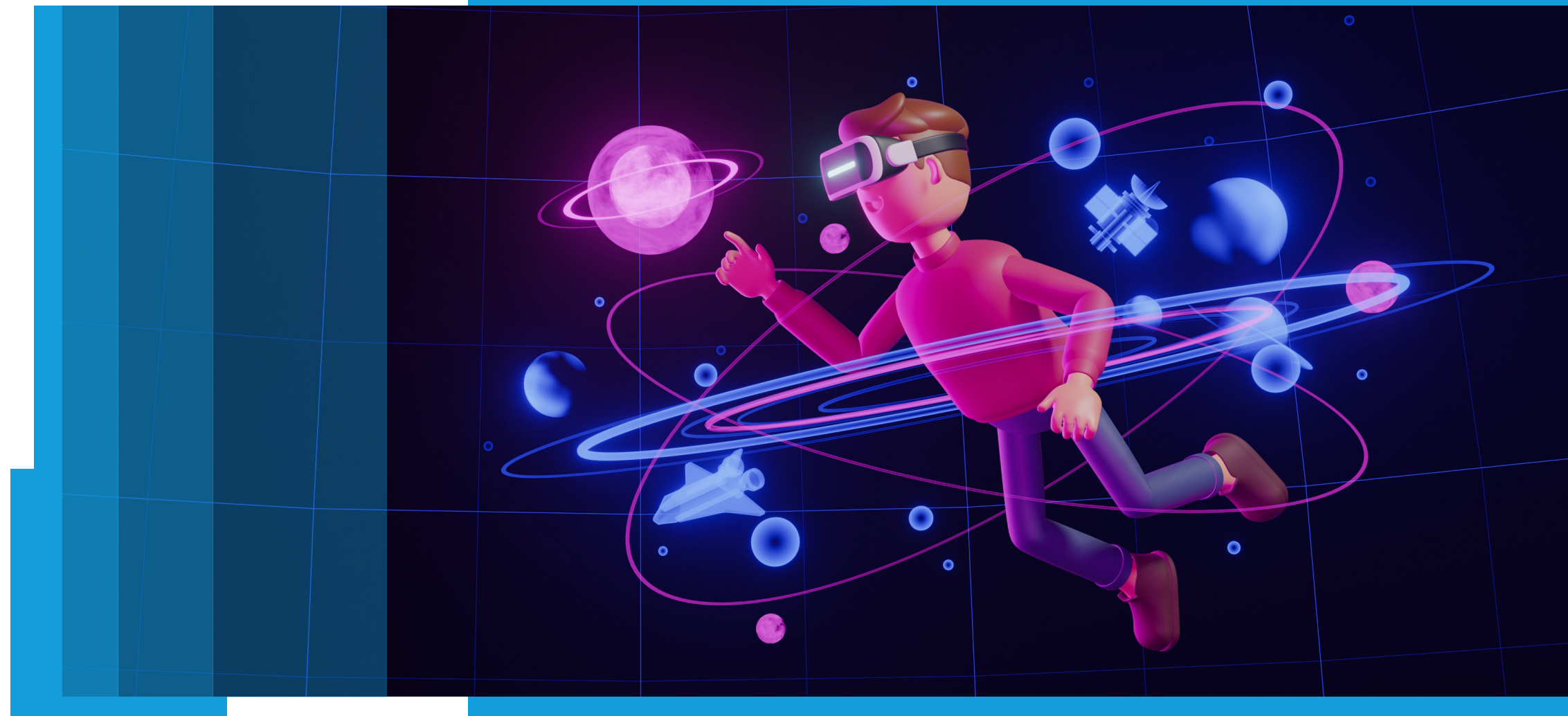
They are approaching this project with a five-year plan to provide increasing capabilities around several key areas. A business services portal is already providing startups a place to showcase new business ideas and services. An educational portal brings together 34 campus towns to provide coaching, collaboration and networking opportunities. Virtual tourism services allow locals and international visitors to explore current attractions and historical recreations. Down the road, they are working on the infrastructure to support large festivals and museum exhibits. Eventually, the project will also provide virtual coworking spaces to allow citizens to work remotely as if working in a real office.

The South Korean capital has invested almost \$3 billion into the project, as part of the city mayor's Seoul Vision 2030 plan. It aims to make Seoul a city of coexistence, a global leader, a safe city, and a future emotional city. If this project is fully realized, Seoul citizens will be able to put on their VR headsets to meet city officials for virtual consultations. They will even be able to attend mass events.

Seoul officials said they would invest approximately USD \$5.2 million in metaverse technologies as part of its digital transformation strategy. During its beta test period, selected users were able to Metaverse Seoul using a personal avatar and experience realistic virtual spaces of Seoul City Hall and Seoul Plaza. Students can also already meet with their mentors for virtual consultations; this online platform was launched by the Seoul Metropolitan Government to bridge the education gap for underprivileged students. City leaders hope this service, which was initially launched for about 3,200 participants, will help ease apprehensions of feeling uncomfortable speaking to a potential mentor in person.

Services that are next up include: Seoul Fintech Lab, Invest Seoul, and Seoul Campus Town.

Of course, South Korea's metaverse ambitions go beyond the capital city. Nationally, the government is expected to nurture 40,000 professionals and 220 companies specialized in metaverse technology, to achieve its goal of becoming the fifth largest country in the global metaverse market by 2026.





Project UBIN: Central Bank Digital Money using (Distributed Ledger) Technology

Project Ubin is a collaborative project with the industry to explore the use of Blockchain and Distributed Ledger Technology (DLT) for clearing and settlement of payments and securities. The project aims to help the Monetary Authority of Singapore (MAS) and the industry better understand the technology and the potential benefits it may bring through practical experimentation. This is with the eventual goal of developing simpler to use and more efficient alternatives to today's systems based on central bank issued digital tokens.

Project Ubin is a multi-year multi-phase project, with each phase aimed at solving the pressing challenges faced by the financial industry and the blockchain ecosystem. The project is now in its fifth phase, and has since published 6 project reports.



For Phase 1, MAS announced that it would be partnering R3, a DLT company, and a consortium of financial institutions on a proof-of-concept project to conduct inter-bank payments using Blockchain technology. The consortium included Bank of America, Credit Suisse, HSBC, Mitsubishi, and many others. Phase 1 successfully concluded. Deloitte was commissioned to produce a report that covers the aspects of DLT that are most suited to settlement systems and details the design principles used for the prototype; it also serves as an introduction to DLT, as well as provides an understanding of the prototype developed.



For Phase 2, MAS and The Association of Banks in Singapore (ABS) announced that the consortium which they were leading had successfully developed a software prototype of three different models for decentralised interbank payment and settlements with liquidity savings mechanisms.



For Phase 3, MAS and the Singapore Exchange (SGX) announced that they were collaborating to develop Delivery versus Payment (DvP) capabilities for settlement of tokenised assets across different blockchain platforms. This would allow financial institutions and corporate investors to carry out simultaneous exchange and final settlement of tokenised digital currencies and securities assets, improving operational efficiency and reducing settlement risks. Three companies, Anquan, Deloitte, and Nasdaq, were appointed as technology partners for this project. The successful conclusion of the DvP project was announced in November 2018. The project demonstrated that DvP settlement finality, interledger interoperability and investor protection can be achieved through specific solutions designed and built on blockchain technology.



For Phase 4, The Bank of Canada (BoC), Bank of England (BoE) and the MAS jointly published a report which assessed alternative models that could enhance cross-border payments and settlements. The report examined existing challenges and considers alternative models that could in time result in improvements in speed, cost and transparency for users. The report provides an initial framework for the global financial community to assess cross-border payments and settlements in greater depth. Specifically, it discusses how a variety of payment models could be implemented, from both a technical and non-technical perspective. MAS and BoC subsequently linked up their respective experimental domestic payment networks, namely Project Jasper and Project Ubin, and announced a successful experiment on cross-border and cross-currency payments using central bank digital currencies. MAS and BoC jointly published a report which proposes different design options for cross-border settlement systems.



For Phase 5, MAS and Temasek jointly released a report in July 2022 to mark the successful conclusion of the final phase of Project Ubin. The report provided technical insights into the blockchain-based multi-currency payments network prototype that was built and describes how the network could benefit the financial industry and blockchain ecosystem. Phase 5 continued the work from Phase 4 and explored the development of the multi-currency payments model. The Phase 5 network provides connectivity interfaces for other blockchain networks to connect and integrate seamlessly, and additional features to support use-cases such as Delivery-versus-Payment with private exchanges, conditional payments and escrow for Trade, and payment commitments for Trade Finance.

Beyond technical experimentation, this phase also aimed to explore and prove the business value of a blockchain-based payments network such as in enabling business opportunities that would benefit from or be made viable through greater cost efficiencies as compared to existing systems. Together with its partners, MAS conducted workshops and discussions with over 40 financial and non-financial firms to evaluate the potential benefits.

The completion of Phase 5 marked the end of Project Ubin, a five-year journey of practical experimentation on blockchain technology with the industry and understanding how it could be applied to payments and settlements.

The payments network prototype, developed in collaboration with J.P. Morgan and Temasek, continues to serve as a test network to facilitate collaboration with other central banks and the financial industry for developing next generation cross-border payments infrastructure. Technical specifications for the functionalities and connectivity interfaces of the prototype network have been made publicly available to spur further industry development.



BRAZIL

Blockchain App for community-driven smart procurement



SOL is the Portuguese acronym for Online Bidding Solution (“Solução Online de Licitação”). SOL is a GovTech solution for community-level procurements carried out under community-driven development (CDD) projects, and it addresses the procurement challenges that the communities usually face.

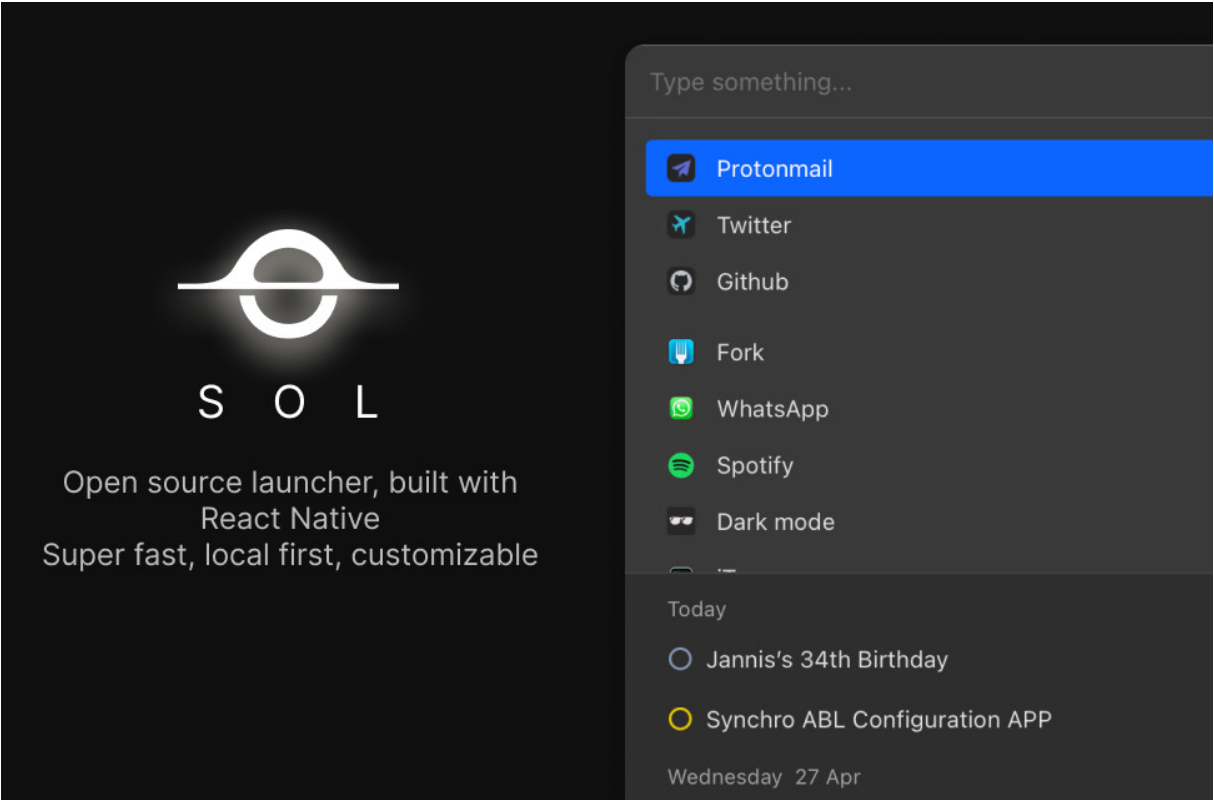
Piloting SOL in selected projects in Brazil showed the app’s potential to increase the efficiency, transparency, and governance of the procurement process. The app facilitates the connection between community associations and their suppliers and automates the full procurement process. In addition, as all procurement data is generated and safely stored in the app, the app enhances the audit capacity of governments and the World Bank.

Given the many positive results, SOL is to be upgraded with new features and translated into other languages to facilitate scale-up and use by other countries, including in Latin America and the Caribbean.

The idea of developing SOL emanated from how to ensure communities conducted procurement processes faster, more easily and efficiently for better results on the ground. As such, the project development objective is to scale up the adoption of open source electronic procurement software by governments for community-driven development projects in Brazil and other countries of the Latin America and the Caribbean region and to foster a collaborative community to maintain the software. The adoption of a GovTech solution provides communities with easier creation and launching of tenders, quicker access to contractors, suppliers, and providers and will enhance the ability of governments and the World Bank to have real-time information on all community-level procurement for their support, monitoring, and auditing functions.

The SOL app was developed by the Brazilian states of Bahia and of Rio Grande do Norte under the Bahia Sustainable Rural Development Project and the Rio Grande do Norte Regional Development and Governance Project. The SOL app covers all procurement steps, from advertising to signing contracts, replacing paper-based processes. Communities can create bidding notices and requests for quotation through SOL, which will notify registered suppliers automatically. All procurement documents are prepared in the app and filled out automatically as tenders are created, quotations are received, and contracts are awarded and digitally signed, reducing errors. In turn, suppliers can self-register in the app, access bid opportunities, submit their proposals and follow up the procurement process result. SOL also offers monitoring reports, dashboards, and a complete set of CDD-level procurement data for analytics. The SOL app has four main features: Automation, Integrity, Integration, and a Monitoring dashboard.

The SOL was developed as a custom software with a centralized web-based application and mobile app by a private solution provider. It launched in July 2021 after 15 months of development, with the cost of \$150,000 sourced from World Bank funding.



One notable detail is that the SOL app was developed as an open-source software, and its code is available for download from GitHub. This app development model enables governments to keep maintaining and enhancing the app through collaborating with developers in the community, thus, ensuring the sustainability of the app.

Moreover, blockchain technology based on a private network and Hyperledger was adopted into the SOL app to secure data. All transactions in the app are stored digitally in the blockchain, so the information can be protected against any attempt to corrupt the data. The blockchain makes the more transparent and secure environment for the procurement management.

Since the launch in July 2019, the figures show its successful implementation and impact on the community. As of November 2021, 1,391 associations and over 2,600 suppliers had registered, and 3,293 contracts concluded, with an estimated value of USD \$ 15 million in awarded contracts. With SOL, the community associations procured products and services faster, safer, and more efficiently through the automated creation of advertising of tenders, receipt and evaluation of bids, and contract awards. Suppliers also benefited by having access to a formerly restricted multimillion-dollar market of thousands of procurement opportunities simply by registering themselves in the app.

During the COVID-19 pandemic, the usefulness of the SOL app became greater since the app eliminated the need for face-to-face meetings. In contrast to other states that stalled or delayed their procurement processes during the lockdowns, community associations in Bahia and in Rio Grande do Norte could continue their project implementation activities by using SOL.

The SOL app has highlighted the value of an online procurement app in the normal context as well as during the pandemic. Public services are expected to transform into online service delivery with GovTech approach, and the SOL is a good example of it. The app shows some lessons from its planning and implementation processes, including:



Capacity building for successful implementation. As the capacity of communities to migrate to the digital way of working is typically weak, carrying out capacity building programs were as essential as developing the app. Therefore, the states and the Bank provided opportunities to learn about how to use the app and the rules of procurement.



Openness for scale-up. Technological features of the SOL are the open-source software and the blockchain which provides reliability and security. Developing the app as open-source contributed to having greater opportunities to expand into other states in Brazil and countries in the Latin America region and beyond.



User-friendly interface. The SOL was developed with user-friendly design, so community associations and suppliers registered in the app could use it more easily and conveniently. Since procurement procedures are usually regarded as difficult and complex, having a simple interface can be considered one of the successful factors.

Other states in Brazil as well as in other countries in the region plan to adopt the SOL app. Upgrades and translation into English, Spanish, and French will make SOL a global public good. With a little customization and connection to legacy systems, SOL can easily be adopted by virtually any other community driven project in the world. This scaling up and adoption by other projects will foster the growth of GitHub's community of SOL users, which is another important measure for ensuring the sustainability of the app by promoting an active development environment.



Autonomous Robotic Environmental Service Vehicles

In 2021, two driverless road sweepers that can be remotely controlled were trialed for the first time in Singapore. Normally it operates autonomously, but in case of an emergency, an operator located 20 kilometers away is on standby to take over. The project is one of the new applications tapping 5G mobile networks that the Government is testing in the resort island of Sentosa.

The project is led by the Government Technology Agency (GovTech), Sentosa Development Corporation and telecom operator Singtel. In addition, it is part of the National Environment Agency's Environmental Robotics Programme, as part of their continual efforts to better optimise resources, drive innovation, push technology adoption, and improve productivity across the Environmental Services industry.

The trials allow government agencies to track the capabilities of 5G for various smart nation applications with the goal of rolling them out on the mainland. Some applications, like the autonomous road sweepers, can offer manpower savings, improve safety at worksites, and deliver services to people more easily.



5G is necessary for handling the network operations, because it provides a superior connectivity channel to handle large amounts of data in real time without compromising the quality of the data transmitted. A 5G network is said to be 10 times faster than 4G and has more bandwidth, which means more devices can be connected to it. 5G also has lower latency than 4G, meaning response times on 5G are so fast that high-resolution videos can be streamed in real time with almost no lag compared with 4G.

The remote-controlled road sweeper tests, conducted by the National Environment Agency and Nanyang Technological University (NTU), are helping to pave the way for several vehicles to be deployed with just one remote operator as the safety emergency driver for all. This is helping save on manpower for the city government. The sweeper can send video feeds to the operator, so they can see in real time what is in front of the vehicle when taking over control.



Safeguards have been put in place for the tests, such as having a safety driver physically in the vehicle and a road marshal who can advise the public to stay clear. Both vehicles underwent rigorous safety assessments by the Land Transport Authority and were approved for public road trials in small-scale testbed environments. The various Sentosa trials were done during weekends and peak hours when there were fewer visitors, to minimize the potential complexity. Ahead of time, a series of scenario-based tests were also conducted in a controlled circuit environment at NTU.

The autonomous road sweepers themselves make street sweeping more sustainable and efficient in the following ways:



Zero carbon emission, less noise: they are fully electric and have lower ambient noise output compared to conventional sweepers.



System allows for dynamic route planning and remote operation to ensure they can handle all situations encountered.



Precise cleaning Ability to autonomously sweep along the kerb that allows for highly effective cleaning of heavy debris areas.



The vehicles are cybersecure to guard against malicious attacks on its sensors and actuation systems.



Tested on the NTU Smart Campus: A living testbed of innovative digital and tech-enabled solutions, the NTU Smart Campus is home to the Centre of Excellence for Testing and Research of Autonomous vehicles at NTU (CETAN), where public road trials for the road sweepers could be conducted in small-scale testbed environments.



Ability to completely eliminate fine particles compared to normal sweepers while saving up to 60% of water usage.



The unique mechanical filtering and suction system guarantees the total elimination of PM10 fine particles.



The vehicle's speed is automatically adjusted to maintain a safety distance between itself and external objects. Should an object enter its collision zone, the emergency brake will be activated to bring it to a safe stop.



They are equipped with a Cleanliness Performance Monitoring System which enables government officers to track the routes taken by the vehicles, and to monitor their cleaning performance by tracking the various cleaning functions of the vehicle.



If any of the cleaning thresholds have been breached, the system will generate alerts so that officers can immediately request the necessary rectifications from the cleaning service providers. The system also transmits video images in real-time to monitor the cleaning performance of these vehicles.



Road sweeper specifications:



Operating speeds:

- Manual mode: 40 km/h
- Autonomous mode: up to 15 km/h
- With sweeping mode: 10 km/h



8 hours sweeping range and 2.5 hour charge time



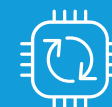
Equipped with 3D LiDAR sensors and cameras for localisation, kerb following and traffic navigation



Localisation accuracy up to 5 cm.



Vacuum-based debris collection system



Autonomous docking and hopper emptying



Remote monitoring and route planning



6000-litre waste container capacity; ability to operate in all locations including public roads.



Cyber security functions



JAPAN

Pioneers Drone Traffic Management Solutions



In early December 2022, the Japanese government approved “level-4” drone flights, which allow operators to pilot aircraft over residential areas, even where they have no direct line of sight. But to reach this point, some important testing had to be carried out over the last two years.

A key part of realizing the future of commercial drones will be drone traffic management: An integrated way to manage airspace for unmanned aerial vehicles (UAVs). That’s the goal of a recent trial in Japan led by the National Institute of New Energy and Industrial Technology Development Organization (NEDO), as well as the relevant aviation regulators, to develop a drone traffic management system for multiple drone operators to fly in the same airspace safely.

The testbed is part of an ongoing R&D effort led by NEDO with the aim of integrating drone traffic management and creating a blueprint for a nationwide traffic management system. The initial trial is focusing on the safe, simultaneous operations of multiple commercial drones in a shared airspace. Future use cases include drone-based logistics, disaster response, and inspection.

The trial, closely watched in the industry, brought together several prominent companies and consortiums, including ANRA Technologies, BIRD INITIATIVE, NEC Corporation, All Nippon Airways (ANA), and other partners. It took place above Wakkanai City in Japan using ANRA’s airspace and delivery management software platforms.

In Japan, ANRA’s decentralized traffic management platform will help to coordinate and negotiate the airspace used between operators to avoid collisions between drones. The project utilizes automatic negotiation AI technology, which is being researched and developed with RIKEN and Industrial Technology Research Institute, and digital twin technology, which is being researched with the National Institute of Informatics.

One of the most anticipated test cases is pharmaceutical delivery via drone.

Despite a slow start regarding drones, Japan is fully committed to being a major player in the global UAV sector. Successfully implementing a new drone traffic system is a major hurdle for the industry as a whole. Once completed, a clearer path towards Japan’s unmanned air revolution can be realized.

The results of this trial have significantly snowballed in the months since.

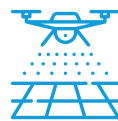
In December 2021, a joint venture between online retailer Rakuten Group and Japan Post successfully conducted a test in which a drone delivered goods from a distribution facility in Ichikawa, Chiba Prefecture, to a downtown apartment building in the city of Chiba.

The drone remained in visual range, flying in a straight line for 17 minutes over a distance of about 12 kilometers. Now, those deliveries can start to happen without direct line of sight.

Let's jump back for a moment: what is level-4 flight?
There are four types or "levels" of drone flights under Japanese regulations.



Level 1: is where the human pilot stays within visual range of the aircraft. These flights are typically for things like aerial photography and bridge inspections.



Level 2: flights are automated, with a programmed departure, speed, route and arrival that takes place within visual range. These flights are often conducted to spray crops or to survey land for civil engineering projects.



Level 3: flights are "out-of-sight flights over uninhabited areas." They are permitted in places where humans are not usually present, such as over rivers, the ocean or forests. Test flights conducted by Japan Post for transport between post offices in Fukushima prefecture, in northern Japan, fall into this category.



Level 4: refers to automated drone flights over residential and urban areas where the operator cannot see the vehicle. These will now be permitted, so long as the operator obtains permission from the central government for each flight. They could be used to deliver packages from warehouses to private residences or elsewhere.



These classifications were introduced through a June 2021 revision to the Civil Aeronautics Act. In conjunction with the lifting of the ban on level-4 flights in December 2022, the government established a certification system for aircraft safety and a licensing system for pilots.

There are two types of drone pilot licenses: first class, which allows the operator to conduct level-4 flights, and second class, which allows the operator to conduct drone flights of level 3 and below. Licenses are valid for three years. In principle, applicants must take a course at a registered drone school, including a flight test and a physical examination. The first exams for first-class licenses will be held starting in early 2023.

How will city life change as a result of the new drone flight rules? Drone transport systems are developing faster in rural areas than in cities, as elderly people in the countryside tend to need help with shopping and few stores are close at hand. Potential applications that could be seen as early as next spring include transport of food, daily necessities and medicine to sparsely populated areas and remote islands, as well as for agricultural shipments in rural areas where drivers are in short supply. In these cases, drones are more likely to fly along routes where there are relatively few people living nearby, such as near ports or in the countryside.

However, the government will not rush to issue flight permits over densely populated areas. Officials believe improvements in drone safety to reduce the risk of crashes and collisions with buildings are needed, as well as measures to reduce noise pollution for residents along the flight paths of drones. Cost effectiveness is another issue. In many tests in the logistics industry, each drone had to be handled by at least two staff members. Some analysts say that if a single operator cannot manage multiple drones, commercial drone flights will not be profitable.

There were about 320,000 registered drones in Japan as of the end of November 2022. The Japanese government plans to install devices on all drones that transmit location information and incorporate these drones into the national drone traffic management system.



UNITED KINGDOM

Smart Ambulance uses 5G and VR technologies to treat patients remotely



Ever since 5G was announced, connected ambulances have been hyped as the application of superfast connectivity that will bring about the next revolution in healthcare.

In November 2019, University Hospitals Birmingham (UHB) performed a live demonstration in which a clinician based at a workstation in a hospital assessed and diagnosed a patient in an ambulance located two miles away, over BT's 5G network (a UK-based telecom operator).

The demonstration, carried out in UHB by clinical director Tom Clutton-Block, showed an ambulance fitted with a 180-degree camera that the clinician can watch in real time on a high-resolution screen from his workstation in the hospital. The vehicle is linked to, and shares, live measurements of clinical data such as the patient's heart rate, as well as their medical records.

The ambulance also carries ultrasound technology for the doctor to perform a scan remotely. To do so, the clinician uses a joystick that controls the hand of the paramedic in the vehicle. Through a robotic glove, the paramedic's gestures can be guided, via vibrations triggered by the joystick.

"I need you to tilt it just a little bit more towards the liver," instructed a doctor remotely to the paramedic during the demonstration, who stated later that it felt "like having a hand in the ambulance." Both the doctor and the paramedic can also put on VR headsets, so that live videos and close-up images from inside the ambulance can be seen by the clinician.

Combined with real-time feeds of the patient's ultrasound scans, this lets the clinician recognise vital signs and decide whether a hospital intervention is needed, or if the wound can be managed directly in the vehicle. All of this allows the clinician to recognise vital signs, access medical records remotely and ultimately respond much faster.

This technology is thought to be particularly effective with future stroke patients, as irreparable damage to the brain worsens each minute that a bleed is left untreated. Every 15 minutes a stroke is untreated takes three years off someone's life. Imagine the difference it would make if you could start treatment in the ambulance.

The diagnosis was made possible by 5G's ultra-fast speeds and ultra-low latency. This made it possible for there to be a delay of mere milliseconds between what was happening in the ambulance and what the clinician could see from miles away, as the data was transmitted in real time.

Real-time connectivity could potentially be critical to NHS capabilities, helping first responders to act quickly in an emergency and opening up new possibilities for remote diagnosis and preventative healthcare.



Ambulance services in the UK, the US and across Europe are struggling to cope with the increased patient demand amid workforce crisis. Technology could be the key to maintaining optimum levels of care and ensuring patient safety.

To improve the efficiency of healthcare, we need to understand that not everyone needs to come to the hospital. With these innovative applications of new technologies, emergency healthcare personnel can decide a lot better whether a wound should be healed on the spot, or if it requires further assistance. If the patient needs to be operated on, clinicians can make sure that the hospital has surgeons ready as soon as the ambulance pulls in, since they are already physically located there.

It is slightly premature, however, to expect to see smart ambulances driving around every city corner anytime soon. Contrary to preconceptions, this is not because the technology is too immature. Those involved with early tests think the technology is ready to go, but regulators are not yet ready to sign off. In addition, compared to some hospital equipment, which can reach hundreds of thousands of pounds, a VR headset isn't very expensive either.

What will be trickier is to make sure that the new tools are completely safe to use. The nature of the UK NHS's work, indeed, means that the organisation can't afford technical glitches – and that the system must be entirely reliable. Doctors can never be unsure and question if they are looking at the right patient, in the right ambulance. These sort of logistical issues must be thoroughly handled.

There is also, unavoidably, the issue of privacy. Where doctors traditionally file physical documents describing illnesses and conditions, a smart ambulance involves filming patients – a much more personal form of information. Even if the appropriate safeguards are set up to protect the new data, as they should be, it is likely that patients will struggle at first with the idea of their doctor looking at them from afar, and with a VR headset.

Like many new technologies, it could require some convincing, therefore, before the connected ambulance wins the heart and trust of the public. This can only happen if patients understand exactly why the technology is used in the first place.



UNITED KINGDOM

Robotic Road Repair System, powered by AI and machine learning

A robotic roadworks system which could revolutionize the way roadworks are carried out in the UK has been trialed near London since April 2022.

The UK's Department for Transport estimates that 2.5 million roadworks are carried out in England each year. Aside from the obvious delays, delays cause pollution from heavy machinery and traffic queues, and can be dangerous for engineers digging below the surface of roads around cables and pipes.

The UK gas company SGN teamed up with New York-based robotics experts at ULC Technologies to come up with a solution. Following three years of development and funding from the government's energy regulator Ofgem, The Robotic Roadworks and Excavation System, or RRES for short, has been created. It's an all-electric autonomous robot which can carry out the

entire end-to-end excavation process. The robot was unveiled to stakeholders from across the country in April 2022 ahead of its first trial in the UK – on SGN's gas network in Epsom, Surrey.

Typically, accurate robotic systems are found inside protected and controlled environments. RRES takes this technology into the field, mounting a robotic arm on a track to make the system mobile. It will help reduce risks to engineers while providing them with new skills and state-of-the-art equipment.

Any industry which needs to scan below ground and carry out deep excavations will benefit from RRES, including other utility companies and the construction and development sector. SGN can then potentially reduce the time taken for a typical gas repair job from days to hours, which is great news for consumers, colleagues and the environment.

How does it work? Using a robotic arm on a mobile platform in an excavation environment allows RRES to improve efficiency and worker safety by automating parts of the operation. The precision and repeatability of the robotic arm provide highly accurate data to locate below ground assets and will help to identify the most strategic location to cut a keyhole excavation. Advanced AI is used to detect buried infrastructure and the target assets prior to cutting the road surface.

Equipped with a concrete cutting chainsaw, RRES can cut any shape into a road surface. It does this by sensing the hardness of the surface and adjusting the cutting speed and strength of the chainsaw. This is highly innovative for utilities firms, which have been developing keyhole strategies for excavations in recent years. These keyhole excavations allow SGN to carry out their operations from above ground using specialist tooling, significantly reducing the size of the excavation needed. The piece of road which is cut out can then be put back into the road at

the end of the operation, helping SGN to reduce waste sent to landfill. RRES also uses a compact, custom-designed vacuum excavation head with integrated super-sonic air nozzles to agitate and remove soil without the risk of damage to buried assets. Machine vision will be used during the excavation process to identify objects and guide activities through the excavated keyhole.

Utility excavations require multiple vehicles, heavy equipment and numerous teams. Since RRES is autonomous and can carry out the entire excavation process, it has a much smaller physical and carbon footprint. This, combined with using smaller keyhole excavations, will minimise the traffic management required for roadworks, reducing carbon emissions and delays.

RRES additionally utilizes machine learning. In order to embed the RRES with the ability to “see” its environment, the RRES team developed 3D visualization techniques to capture 3D point clouds of the excavation and surrounding site.

Over 60,000 accidental utility strikes take place annually in the UK, potentially causing service disruptions, serious damage and injury. To help prevent this, RRES can scan below ground using artificial intelligence to map underground pipes and cables before any digging takes place.

It also uses supersonic air nozzles to agitate the soil, which is then removed with vacuum suction. The tool head uses sensors to detect any asset close to it avoiding damage and keeping field teams safe.

So, to recap, the RRES system has six key benefits:



Improve Efficiency: RRES aims to expand the use of innovative core and vac methods to improve the efficiency of the operation, minimize time in the street and reduce costs.



Lower Risk of Damage: Using innovative soft-touch excavation technology and methods, artificial intelligence and machine learning, RRES aims to reduce accidental damage to buried utilities.



Enhance Safety: RRES will limit the need for utility workers to enter excavation to improve worker safety. Minimized risk of accidental damages also improves public safety.



Minimize Disruption: RRES project sites will take up less space in the street to minimize disruption to communities and local businesses.



Higher Repeatability: Automating methods of carrying out works on the distribution and transmission system ensure routine works are completed uniformly with high precision.



Reduce CO2 Emissions: By reducing the need for heavy construction vehicles on sites, the RRES project will enable gas networks to reduce carbon emissions.

SGN and ULC Technologies have hosted stakeholders from Transport for London as well as other UK utilities and construction companies to see the robot put through its paces. These public sector players are always looking for ways in which they can reduce the impact of roadworks, noise and pollution, and early feedback has been very positive.

 BULGARIA

5G Smart Grid Level Precise Distributed Generation Monitoring 5G Smart Grid

As the complexity of electric systems increases, so does the required effort for the monitoring and management of grid operations. To solve grid performance issues, smart grids require the exchange of higher volumes of data, high availability of the telecommunication infrastructure, and very low latency. 5G mobile networks seem to be the most promising technology to support such requirements, allowing utilities to have dedicated virtual slices of network resources to maximize the service availability in case of network congestion.

Regarding this evolving scenario, the EU's Smart5Grid project aims to revolutionise the Energy Vertical industry through the successful establishment of four fundamental functions of modern smart grids:



Automatic power distribution grid fault detection



Remote inspection of automatically delimited working areas at distribution level



Millisecond level precise distribution generation control



Real-time wide area monitoring in a creative cross-border scenario, thus assisting power grid operators and other energy stakeholders (e.g., smart grid operators, distribution system operators/transmission system operators, energy service providers, etc.)

Smart grids accomplish the required optimization of energy networks by the implementation of massive digitalization and other advanced technologies. They are necessary for the integration of growing amounts of variable renewable energy resources, such as solar and wind power, and of new loads, such as the charging of electric vehicles or bi-directional energy entities, such as energy storage units, while maintaining stability and efficiency of the system. Furthermore, smart grids enable the exploitation of remote distributed energy resources to provide flexibility services that are potentially available or that will become available in the future.

Over the course of the early 2021, multiple projects were set up across the EU to prototype different goals of the Smart5Grid program, with Bulgaria focusing on real-time monitoring. In total however, 7 countries, 15 companies, 3 power grid operators, and 24 different partners were needed for the full project.

Specifically, real-time monitoring was trialed on a wind farm located in southeastern Bulgaria. It is worth mentioning that while this initial test used the grid attached to wind turbines, it could be easily replicated for other types of renewable energy systems, such as solar panel arrays or hydropower plants.

The scope of this use case is to monitor, in real time and with millisecond-level precision, multiple remote distributed energy resources, mostly renewables, with the aim of providing reliable flexibility services for real-time balancing electricity markets. In order for an energy entity to be allowed to participate in the real-time market, they need to adhere to strict regulatory requirements set by power system operators. While the power output of renewable energy resources units is uncertain by nature (in other words, it cannot be predicted accurately a few hours ahead of the actual generation time), these power generation units do possess a reasonable level of operation flexibility for participating in real-time balancing market services, such as frequency control. However, for offering such services, they require reliable and accurate real-time monitoring.

This use case’s network application consists of two software components, namely the predictive maintenance enabler service and the real-time energy production monitoring service. Each one of these components is implemented as a different cloud-native virtual network function, which are interconnected, interact with the inputs, and provide the necessary outputs to fulfill the functional requirements of this use case, as can be seen in the image below.

The predictive maintenance and the real-time energy production monitoring have an external connection point, which receives field measurements via a 5G-powered module. This module enables the 5G communication with IoT devices. It is worth mentioning that many monitoring devices or measurement units for power grids available in the market

today, including wind turbine technology, are not 5G-ready. As such, 5G-enabling interfaces might be needed to facilitate the communication between the field sensor devices and the Smart5Grid platform in the future.

The main scope of the network application component that performs predictive maintenance is to enhance the awareness of the wind farm owner on the need to make changes in the operation of the wind farm or on the portfolio of the flexibility service it might offer in the real-time balancing market. Afterwards, this component collects the data and executes an internal process to assess the wind farm operation to conclude whether any predictive maintenance action must be taken. Thus, wind farm owners receiving the input from that component increase their ability to more properly operate the asset. The real-

time energy production monitoring provides an accuracy up to one millisecond to the owner of the wind turbine and to the system operators.

Because this project is still ongoing, it is unclear what the final results will be, as well as how it will be received by national or international leaders. But for the time being, all involved parties are satisfied with the progress on Bulgaria’s smart grid progress, and are excited for the system to be scaled in the future when proper testing and regulatory hurdles are cleared.



UAE

Global Blockchain Council

The UAE Government has been a strong pioneer in blockchain technology, including adopting it in conducting its official government transactions. To aid this move, it launched the Emirates Blockchain Strategy 2021 and Dubai Blockchain Strategy. The Emirates Blockchain Strategy 2021 aimed to capitalise on the blockchain technology to transform 50% of government transactions into the blockchain platform by 2021. The Dubai Blockchain Strategy was also anticipated to help Dubai to be the first city fully powered by Blockchain. The strategy uses three strategic pillars: government efficiency, industry creation, and international leadership.

Despite Blockchain being one of the most exciting technology trends over the last couple of years, it has often failed to move past hype and struggled to present tangible use cases that offered more benefits than centralised currency models. However, its root innovation – blockchain – continues to find new value. Governments and industries are still trying to fully understand the value of blockchain, but the market now appears to be moving toward actual successful implementations. Public blockchains offer open accessibility and transparency of transactions with anonymity of nodes, and private blockchains, including consortium Blockchains, can help enterprises collaborate with each other in an access-controlled environment.

By fully adopting blockchain, the UAE government expects to save:

- USD \$4 billion in transactions and documents processed routinely
- 398 million printed documents annually
- 77 million work hours annually

In Dubai, the lack of legal certainty around blockchain technology formerly made it difficult for businesses to form a clear strategy for its development and use. There was a need for a platform that opens the way for knowledge sharing and best practices. Thus, as part of its efforts to adopt the latest technologies and innovation practices at the global level, the Dubai Future Foundation established the Global Blockchain Council to explore, discuss current and future applications and organise transactions through the blockchain platform. Furthermore it provides ways to talk about Blockchain in accessible ways to non tech-savvy managers and decision-makers, by focussing on what the technology enables rather than what it is.

The Council facilitates transactions within the various sectors of financial and non-financial sectors as well as increase efficiency and reliability levels. The council consists of 46 members, which include government entities, international companies, leading UAE banks, free zones, and international blockchain technology firms.

Current members of the Global Blockchain Council include: Microsoft, Du, SAP, IBM, Cisco, TECOM, Dubai Holding, Dubai Multi Commodities Centre (DMCC), EmirateNBD, Emirates Islamic, Dubai International Financial Center (DIFC), Souq.com, Careem, Mashreq, InfoSys, Wamda, Propertyfinder.com, Kraken, BitOasis, Umbrellab, AstroLabs, YellowPay, SmartStart Fund, Etheruem, Viktor Koenig LLC, Privity FZ LLC, Digitus, Network int, Michael Mainelli, Vinay Gupta, Smart Dubai Office and Dubai Smart Government.

The establishment of the Global Blockchain Council comes in line with the efforts of Dubai Museum of the Future Foundation to promote

innovation and use the next generation of technologies to enhance UAE's position as a leading centre for innovation and knowledge economy. This forum also aims to facilitate the development of public-private partnerships (PPPs) while creating a stable ecosystem around blockchain. As a result of this initiative, 15 pilot projects were supported by the Dubai Future Foundation in its first 18 months.

For example, one early project the Council is overseeing involves automobile history. The Roads and Transport Authority (RTA) is working to create a vehicle lifecycle management system using blockchain. The project aims to provide car manufacturers, dealers, regulators, insurance companies, buyers, sellers and garages with a transparent record about the vehicle's history from the manufacturer to the scrap yard. This blockchain-based system will help boost transparency and trust in vehicle transactions, prevent disputes and lower the cost of services. It tracks ownership, sale and accident history to create smart and more efficient systems for supply chains.



UAE

Dubai Metaverse Strategy



In July 2022, Dubai's government unveiled a metaverse strategy that aims to create 40,000 jobs and add \$4 billion to the emirate's economy in the next five years as it continues to boost efforts to tap into the emerging digital space. The Dubai Metaverse Strategy is an "integrated plan" that aims to position the emirate among the top 10 cities that will shape the emerging technology's future globally.

The Dubai Metaverse Strategy seeks three main goals:



Foster innovation, enhance the metaverse's economic contributions through research and development collaborations, and promote advanced ecosystems utilising accelerators and incubators that attract companies and projects to Dubai.



Foster talent and invest in future capabilities by providing the necessary support in metaverse education aimed at developers, content creators and users of digital platforms in the metaverse community.



Develop metaverse-based technology and its applications to create new governmental work models and development in vital sectors, including tourism, education, retail, remote work, healthcare and the legal sector.

The strategy's key pillars focus on:



Extended reality (which blends the physical and virtual worlds)



Augmented reality (AR)



Virtual reality (VR)



Mixed reality



Digital twins (a virtual representation of an object or system)

The plan is to enable the next revolution in the technological and economic field that will affect all aspects of life over the next two decades.

This will be done by leveraging real-time data, using machine learning and IoT, and employing AI simulation and blockchain to enhance human thinking processes. Technology pillars of the metaverse strategy are data, network, cloud, and edge computing that focus on real-world data obtained, validated, stored, processed, and managed. Other pillars include promoting the full deployment of 5G networks to enable edge computing and provide on-demand computer system resources. Edge computing allows data to be collected, stored and processed locally via smart devices and local networks, instead of the cloud.

The initiative aims to double the number of blockchain companies and the metaverse by five times. It intends to cover all aspects of the metaverse's development, from formulating regulations and developing applications to nurturing talent and determining ways how these solutions can be used by government entities.

The initiatives aim to build the skills of Emiratis and create a large metaverse community in Dubai that includes metaverse companies, start-ups, investors and users. They also include strategic projects featuring partnerships with private sector players and events aimed at making the emirate a hub for regional and global metaverse-related events.

The UAE government seeks to develop a new model for the development of technology and futuristic sciences with a special focus on digital technologies. It aims to keep metaverse as part of its broader strategy to promote digital growth and innovation, which can be achieved through the goals of the Dubai Metaverse Strategy.

Already, there are about 1,000 companies in Dubai working in the metaverse, which contribute \$500 million to the national economy. The consequences of being a first mover in this space are huge: the value of the global metaverse market is forecast to exceed \$1.6 trillion by 2030, from an estimated \$40bn in 2021, according to Canada-based Precedence Research.

The UAE has taken a number of major steps to integrate the metaverse and its related technology, such as in May 2022, when Dubai's Virtual Assets Regulatory Authority (Vara) said it had entered into the metaverse with the establishment of its Metaverse HQ, making it the first regulator to have a presence in the emerging digital space. Vara itself was established in March 2022 under the Dubai Virtual Asset Regulation Law, the first law in the emirate that regulates virtual assets. The body aims to create an advanced legal framework to protect investors and provide international standards for virtual asset industry management to enable responsible business growth in the emirate.



UAE

Name IDEAS

1- Description

Name Ideas is a service that use generative artificial intelligence (AI) to suggest national domain names (.ae). An entrepreneur can obtain a domain name by simply providing a simplified description of his business activity, with the ability to register the domain immediately.

2- Objective

Name Ideas main goal is to generate domain names for users. Using generative AI technology, Name Ideas intends to;

- Promote the adoption of .ae domains.
- simplify the process of selecting and registering .ae domains using generative AI
- Increase user satisfaction by providing domain name suggestions, saving them the time and effort of brainstorming names themselves.

3- How to use it

The process of using Name Idea system is very straightforward and user-friendly:

1. Describe the business: Customers provide an overview of their business activities, in either Arabic or English language.
2. Submit the Request: Once the description is submitted, the AI analyzes the input and generates a list of available domain name suggestions.
3. Select and Register: the user selects the domain name and proceed to their registration page to complete the domain registration process in just a few minutes.

4 - In what year/month was the solution released to users?

The Name Ideas initiative was officially released to users on 14th April, 2023.

5 - Who benefits from the use of this solution?

Name Ideas initiative is designed to provide significant benefits across various segments of society. it supports entrepreneurs and business in establishing an online presence by providing a brief description of their business activity to get suggested domain name. small and medium-sized enterprises (SMEs) can benefit by finding domain names reflecting their business identity, thereby enhancing their market reach and visibility.

6 - The features, functionality and benefits of the solution

Name Ideas is the first government service based on Generative AI. The core features of the service include its user-friendly interface and seamless integration with domain registration services. Users have the option to describe their business activities in either Arabic or English language.

Additionally, the system automatically checks the availability of each proposed domain name to guarantee that only accessible options are recommended to the user."

Functionally, Name Ideas initiative makes it easier for users to choose a domain name, which's usually a task. Users just need to describe their business briefly. They will get a list of suggested domain names in few seconds. This saves time and avoids the trouble of coming up with ideas and checking if the domain is available manually. Moreover, once users pick a domain name they like they can register it immediately making the whole process smoother, from coming up with ideas to registering the domain.

By securing a domain name that stands out, Name Ideas can greatly improve a websites visibility and ensures the chosen domain name is memorable and aligns with the brand identity. Selecting the domain name is essential for brand recognition search engine optimization (SEO) and digital marketing strategy. This initiative provides an advantage by analyzing user description input to propose names that are not only creative but also have the potential to attract significant online traffic.

7 - The level of innovation, and AI maturity

Name Ideas is an initiative that revolutionizes the process of choosing domain names by incorporating Generative AI, making it the first government service of its kind. The innovation lies in its user-friendly interface, where users can obtain creative domain names by providing a simple description of their business activities, in either Arabic or English language. Name Ideas system is trained to generate 10 domain name suggestions based on user queries. It prioritizes suggestions that are short, memorable, and easy to spell. It does not suggest domain names related to prohibited topics in

the UAE, such as LGBT, pornography, nudity, vice, impersonation, fraud, phishing, insult, slander, defamation, invasion of privacy, drugs, discrimination, racism, contempt of religion, malicious software, gambling, terrorism, or infringement of intellectual property rights



TDRA هيئة تنظيم الاتصالات والحكومة الرقمية
TELECOMMUNICATIONS AND DIGITAL
GOVERNMENT REGULATORY AUTHORITY

aeda مبادرة من تدرا
إدارة أسماء نطاق الإنترنت
DOMAIN ADMINISTRATION

NAME IDEAS

The first UAE initiative to implement ChatGPT in the government

Supports entrepreneurs and owners of business ideas in choosing distinctive (.ae) domain names

8 - The technology used to develop the solution



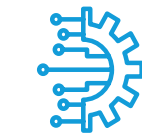
-Generative AI (GPT Model):

The core of the Name Ideas service relies on the GPT model, a natural language processing (NLP) technology. It can analyze business descriptions provided by users and generate a list of suitable domain name suggestions. The model is trained to prioritize names that are short, memorable, and relevant to the described business activity.



- Automated Domain Availability Check:

Name Ideas integrates with domain registrars to automatically verify the availability of suggested domain names. This feature guarantees that users only receive suggestions that can be registered immediately.



-API Integration

To enhance its capabilities, Name Ideas offers an API, for .ae Accredited Registrars. This integration enables registrars to integrate the service into their platforms making it convenient for users to access and utilize the domain name recommendations.



-User Friendly Interface

The app showcases a user interface that simplifies the process of submitting business descriptions and receiving domain name suggestions. The interface is user centric ensuring an experience for users throughout.

9 - project results and the level of impact along with supporting statistics

Since its launch in April 2023, the Name Ideas initiative has achieved remarkable results. The application has processed over 6035 queries, reflecting strong interest and demand from entrepreneurs and businesses. The total number of registered .ae domains has reached 349,727, showcasing the growing adoption and impact of the service. The service's integration capabilities have also expanded, with an API provided for .ae Accredited Registrars in August 2023 and the subsequent launch of the Name Ideas service by the accredited registrar "Tasjeel" in April 2024.



1- Description

U-Ask is an advanced AI-powered chatbot developed using Generative AI, specifically designed to provide comprehensive knowledge about all government services in the UAE. Launched in 2023, this innovative tool enhances the accessibility and efficiency of government service delivery by offering accurate, up-to-date information in a conversational manner. U-Ask bridges the gap between the public and the government, making it easier for citizens and non-citizens to navigate and utilize government services.

The primary objectives of U-Ask are to enhance efficiency by streamlining the retrieval of information about government services, build trust and transparency by providing reliable information, and encourage inclusivity by supporting multiple languages, including Arabic, English, and more than 30 other languages. Additionally, U-Ask seeks to increase user satisfaction by delivering personalized interactions that improve user engagement.

2- Objective

U-Ask main goal is to simplify how people access government services and information. Through generative AI technology, U-Ask intends to;



Improve efficiency by reducing the need to navigate multiple platforms for retrieving information.



Centralize government information into one platform.



Deliver accurate, real-time answers to user queries.



Build trust and transparency, in government services.



Support multiple languages, including Arabic and English.



Increase user satisfaction and involvement, with personalized interactions.



Enhance user experience with voice commands and predictive algorithms.

3- How to use it

U-Ask” is easy to use and simple. Individuals can interact with the chatbot, on the U.ae platform. The chatbot is capable of addressing an array of inquiries regarding government services offering suggestions direct links, for applications and timely contextually relevant responses. Users just need to type their queries or question. The chatbot will analyze the input using generative AI to provide accurate answers. Furthermore, users have the option to give feedback on the responses, which assists in enhancing and customizing the system to better cater to their requirements.

4 - In what year was the solution released to users? *

U-Ask was officially released in 2023, offering an AI-powered chatbot for accessing accurate, and up-to-date information about government services.

5 - Who benefits from the use of this solution? *

The U-Ask initiative primarily serves the citizens of the UAE by bridging the gap between citizens and the government using AI-powered chatbot. it provides a unified platform that offers user-friendly access to government services and information and eliminates the frustration of navigating multiple platforms. U-Ask also serves non-citizens by allowing them to access government services and information remotely, which helps anyone globally who want to learn more about UAE government, specially tourist, making it simpler for them to comply with UAE regulation, and stay up to date to all information. In addition, businesses will benefit by understanding more about government services and regulations, improving their communications with government entities. Unlike traditional chatbots that provide generic responses, U-Ask leverages advanced Generative AI to analyze users queries and provide personalized recommendations as well as direct links to services, improving user experience and satisfaction, while increasing trust and reliability in user interactions with government.

6 - The features, functionality and benefits of the solution

U-Ask designed to reshape the delivery of government data in the UAE. From simple questions to complex questions, U-Ask provides fast, accurate, and up to date answers about UAE government using generative AI.

U-Ask use advanced data-driven approaches, such as natural language processing (NLP) and machine learning to delivers precise answers tailored to each users' specific requirements. The responses can be in both Arabic and English, in addition to the ability of the platform to translate to more than 30 languages, benefiting wide audience inside and outside UAE.

Before U-Ask was introduced, citizens faced challenges in locating information as they had to search across multiples platforms and contact various entities leading to time wastage. U-Ask addressed this issue by centralizing government information in one chatbot that host all the government data.

U-Ask has had a revolutionary journey in its implementation, maturing into an outstanding generative AI solution. Recognizing customer preferences for Google searches using benchmarks, the implementation included advanced features such as knowledge coverage, location management, voice commands, and predictive algorithms, resulting in a multilingual, resourceful, and user-centric experience.

7 - The technology used to develop the solution

U-Ask use version GPT 4o. Notably, we are the first to utilize GPT4-Turbo 128K in our industry. This proactive approach ensures that we remain one step ahead in the evolving field of technology advancement, and aligns with our strategic objective of strengthening U-Ask's role as an industry leader.

U-Ask is designed to deliver accurate and up-to-date details about the diverse services provided by the UAE government. Users have the ability to provide feedback to responses, allowing the government to keep track of responses ensuring a seamless experience. An admin user portal has been developed with metrics to showcase queries, responses and feedback from users.

Not only can the chatbot provide answers to users question, but it also provides users with suggested question related to the original question to further deepen users search, and get the required information. In addition, users have the ability to start several conversations with the chatbot at the same time and navigate between.

With its friendly interface, users can either ask question in text format or start voice recording, with the options of speaking in more than 30 languages besides English and Arabic, ensuring inclusivity and accessibility. This intelligent AI chatbot saves users from navigating through different websites or waiting for a human operator, making their quest for information significantly more efficient.

8 - Project results and the level of impact along with supporting statistics

U-Ask went beyond UAE borders and gained international recognition. It won Gartner Eye on Innovation Awards for Governments 2023. This recognition signifies that U-Ask is the leading digital innovation by a government across the world.

Additionally, "U-Ask" has handled over 342,000 queries, achieving an exceptional 99.7% acceptance rate, showcasing its ability to manage large volumes of interactions without compromising performance. The goal is to become the primary trusted source for UAE government service information, gaining both national and international recognition.

u ask

TDRA ROLLS-OUT...

GENERATIVE AI
ON GOVERNMENT
WEBSITES





GOVERNMENT TECHNOLOGY 5.0