THE DIGITAL STATE PROJECT

Contents

00 EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Multipolitan's Digital State Project is a flagship report exploring where statehood is headed as AI, Metaverse and blockchain reshape identity, trust, and the machinery of governance.

The report dives into world-changing ideas such as on-chain citizenship, e-governance protocols, agentic nation states, orbital infrastructure, space sovereignty, and metaverse as a medium for human connection.

The report also highlights a major shift in how the world governs itself. Jurisdictions are learning to think like startups, ministries are working as design labs, and citizens with digital IDs expect not just faster paperwork but smarter services that fit their lives. From Palau's digital residency to Tuvalu's plan for digital nationhood to Ukraine's AI-enabled governance, a physical-digital fabric is taking shape that links virtual and real life. Through global research, expert dialogues, and cross-sector collaboration, the report asks one central question: what does it mean to be a citizen, a state, or a society in the digital age, and how does sovereignty look when it's no longer tied to geography?

Introduction

This report brings together eight pieces - eight ways of imagining the future of governance and statehood. Real experience speaks louder than numbers, and here, human insight takes the lead. Each contributor stands at the front of innovation, showing us what the digital state looks like when it's built by those who dare to reimagine it from the inside out.

NIRBHAY HANDA

Co-founder & CEO of Multipolitan

Formerly Group Head of Business Development at Henley & Partners

Sovereign innovation advisor to governments

Nirbhay Handa opens with Nations as a Service: The Next Frontier of Governance. He starts with a simple but radical idea: "We will soon log into nations, not just fly into them." As digital identity and on-chain citizenship spread, sovereignty begins to stretch beyond territory. In this Web3 era, resources are built in code rather than mined from the ground, and states compete on new markers of appeal: connectivity, neutrality, and fiscal intelligence. Citizenship starts to look like a portfolio of affiliations that reflects who you are, what you value, and where you can thrive.

WILLIAM WANG

Chief Executive Officer, Cryptic Labs

Mentor, Harvard Blockchain

Advisor, Stanford Digital Transformation Institute and IoTeX

William Wang brings that idea to life through Palau's experiment in digital nationhood. In Palau's Digital Residency: A State-Backed ID for a Borderless Economy, he shows how a Pacific island nation is building sovereignty in the cloud - with a government-issued ID anyone on Earth can apply for.

Introduction

JAMES ELLSMOOR

Founder & CEO, Island Innovation

Chair of the Board, Solar Head of State

Sustainability Contributor, Forbes

James Ellsmoor, founder of Island Innovation, shares a more urgent perspective. In Innovation Born of Necessity: How Islands Like Tuvalu Are Shaping the Future of Digital Nationhood, he writes from a world where digital transformation is driven by survival. For Tuvalu, building a digital nation is a way to ensure continuity when land disappears beneath rising seas. He explores how technologies like AI and blockchain could help small island states preserve the most sacred - identity, and culture - creating digital continuity where physical permanence can no longer be guaranteed. His work reminds us that innovation doesn't always come from abundance. Sometimes, it's born from the need to endure.

BRIAR PRESTIDGE

Founder & Chief Executive Officer, Prestidge Group

Advisory Board Member, INTERPOL – Metaverse Forensics & Investigation

Executive Producer, "48 Hours in the Metaverse"

Briar Prestidge, CEO of Prestidge Group and advisor to INTERPOL, brings a human lens to the digital revolution. In The Future Is Virtual - and Deeply Human, she looks at the metaverse as a space where empathy, identity, and creativity evolve in unexpected ways. Can a virtual world heal loneliness? What does it mean to lose your digital self? Her story shows how technology can become a medium for connection, helping us rediscover the emotional depth that makes us who we are.

Introduction

OLEKSANDR BORNYAKOV

Deputy Minister, Ministry of Digital Transformation of Ukraine

Formerly Co-Founder at Adtelligent

Formerly Partner at Intersog

Oleksandr Bornyakov, Ukraine's Deputy Minister of Digital Transformation, reflects on the milestones that turned Ukraine into one of the world's leading examples of digital governance. In "A State in a Smartphone," he describes how the country built Diia, a platform that made public services accessible to millions, and how Diia.AI marks the next step - a government that can understand, respond, and act through artificial intelligence. His story describes a nation building its digital future piece by piece, guided by the belief that technology should make the state more open and interactive.

HRISH LOTLIKAR

Co-Founder & CEO, SuperWorld - building a global AR/AI metaverse mapped onto the real world

Mentor, Harvard Blockchain

Advisor, Stanford Digital Transformation Institute and IoTeX

Hrish Lotlikar, co-founder of SuperWorld, takes us further into the fusion of physical and digital. In Inside SuperWorld's Vision for the Digital Layer of Reality, he shares his vision for Superworlds, where every place on Earth has a programmable twin, where AR, AI, and ownership turn geography into an interactive layer of reality. What if you could own your favorite street corner in the metaverse? What if digital actions could change physical outcomes?

Introduction

LUUKAS ILVES

Former CIO, Government of Estonia

Advisor, Ministry of Digital Transformation of Ukraine

Chair, EU Council Working Party on Telecommunications; Senior roles at the European Commission and Guardtime

Luukas Ilves, one of the architects of Estonia's digital success and now an advisor to the Ukrainian Ministry of Digital Transformation, In his article he looks ahead to the next frontier in What It Takes to Build the Agentic State. His vision is bold: governments that think, reason, and act through AI agents; policies that adapt in real time; systems that learn as fast as their citizens.

ANNA HAZLETT

Founder & CEO, AzurX - UAE-based advisory firm for space and strategic technologies

Country Representative, Blue Origin (UAE)

Advisory Member, Mohammed bin Rashid Innovation Fund and Global Space Awards Steering Committee

Finally, Anna Hazlett, founder of Azure X, makes the case for Orbital Infrastructure as a Pillar of the Digital State, showing how space now powers communications, Earth observation, AI, and mission services - and how the Gulf is making it investable with sovereign capital and rapid procurement.

Together, these 8 contributors capture a crucial moment in history, where technology is rewriting the logic of governance and trust. Their stories stretch from Pacific islands to Eastern Europe, from virtual worlds to real ministries, but they share one belief: the digital state is empowering modern institutions to design systems that feel human, that learn, and that last.

01 NATIONS AS A SERVICE

About Nirbhay

Nirbhay Handa is the Co-Founder & CEO of Multipolitan, The Platform for Borderless Living. He co-founded Multipolitan in 2024 with Lee Smith (Co-founder and CTO of Japanese Unicorn Paidy). Together, they're building freedom infrastructure for global living - combining a product-led immigration platform with a mobility application that makes it effortless to live, work, move, and thrive anywhere. Nirbhay formerly served as the Group Head of Business Development & Asia Head of Private Clients at Henley & Partners. Nirbhay has advised presidents, ministers, and governments on sovereign innovation strategies that generate tangible FDI.

As a globally cited authority on cross-border living, Nirbhay's commentary appears in publications such as BBC, CNBC, Bloomberg, and Forbes. Governments, Universities and wealth management forums invite him to speak on the evolving dynamics of international mobility, foreign direct investment, and sovereign strategy.

"We will soon not just fly into nations. We will log into them."

That idea no longer sounds like science fiction. When a digital artwork, a JPEG by Beeple, sold for 69 million dollars, it did more than shake the art world. It marked a turning point: value officially became verifiable without borders. It signaled that trust, once grounded in geography and physicality, could now exist entirely online.

The same technologies that once authenticated a JPEG are now being used to authenticate people, credentials, and even residencies. Governments from Estonia and Ukraine to Tuvalu and Palau are experimenting with digital identities and blockchain-based governance frameworks. Many of these initiatives are making it clear that sovereignty no longer has to be tied to geography, contrasting with how, for centuries, nations have always been defined by their physical territory.

The question is no longer whether this shift will happen, but how prepared we are to navigate it. Because as identity becomes portable and governance programmable, the idea of a nation itself begins to evolve - from something we are born into to something we choose, log into, and help build. This transformation will likely mirror the industrial revolutions of the past. Just as the industrial age helped resource-limited nations like Singapore and Taiwan rise through infrastructure and smart policy, the Web3 era will create a new generation of winners. Only this time, resources will not be mined from the ground but built in code - in data, design, and digital infrastructure.

Nations will compete not on natural resources or military might, but on connectivity, neutrality, and fiscal intelligence.

In a world where belonging can be digital and borders can be optional, these will become the new metrics of global appeal - and perhaps, the new foundations of power itself.

The Network State of Mind

Geo-arbitrage is becoming a way of life for many. Entrepreneurs today maintain homes in multiple countries, manage teams across continents, and feel more connected to global communities than to a single nation. For them, governance is no longer a single template. So why should identity and belonging remain static? We are moving towards a world where citizenship or residency is not just a legal formality but a choice, a portfolio of affiliations that reflects who you are, what you value, and where you can thrive.

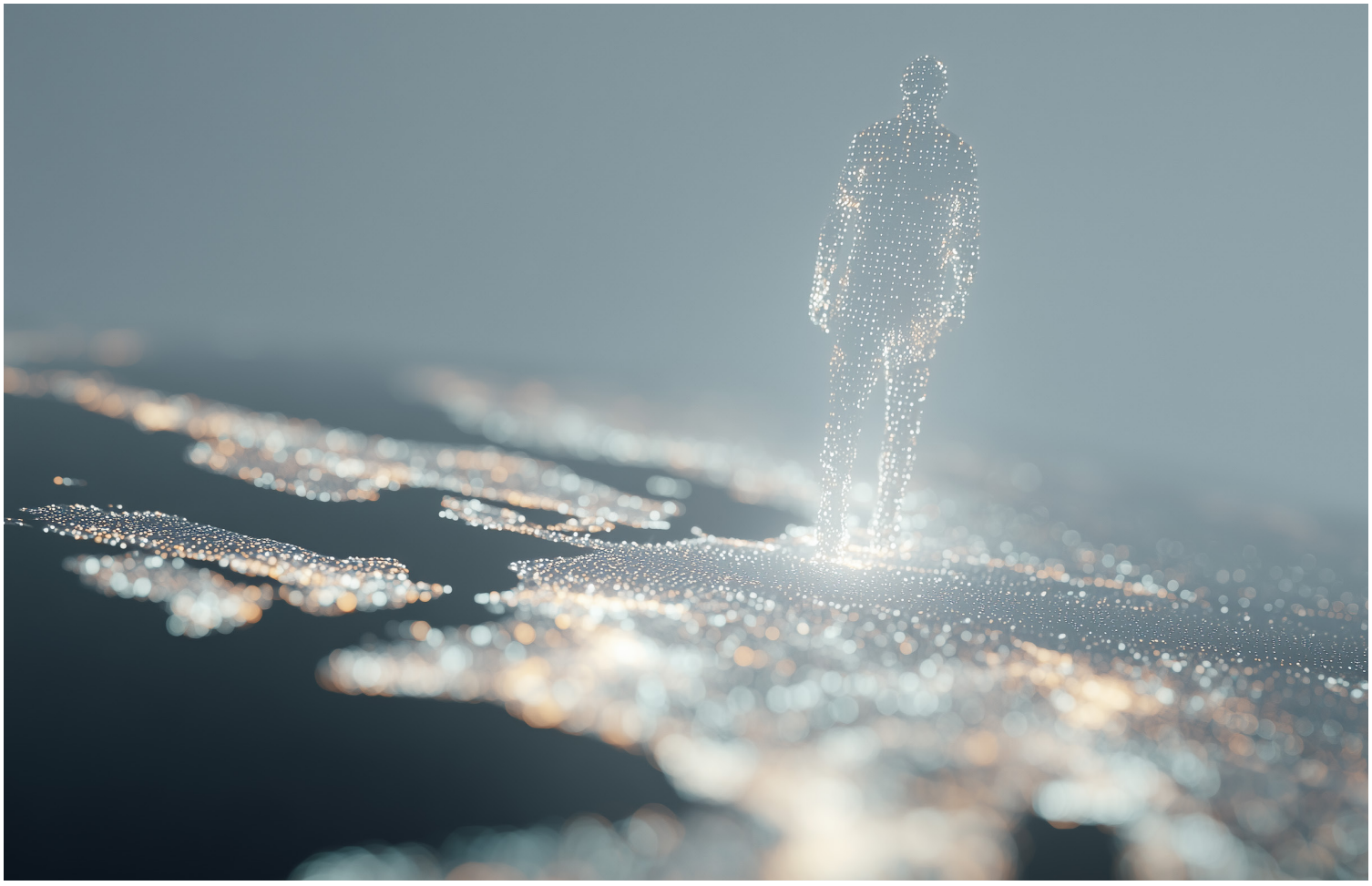
Early experiments are underway. Charter cities and purpose-built communities such as Prospera in Honduras are piloting blockchain-based identity and legal frameworks, while Zuzalu, a pop-up “network state” initiated by Vitalik Buterin, explores how governance and community can exist natively online. For a generation weary of bureaucracy and rigid systems, these prototypes represent something larger: the pursuit of more freedom, more transparency, and the ability to build society with intention.

The Onchain Citizens

A few years ago, I met a 35-year-old software developer from Bengaluru. He was supporting 2 different DAOs, held a Portuguese Golden Visa, and had just moved to Bali for the next few months. “I don’t really belong to one country anymore,” he said. “I think I belong more to the networks I help build.”

His outlook captures a defining sentiment among Millennials and Gen Z: that identity and community can very well migrate to decentralized networks. Blockchain technology - once narrowly seen as financial infrastructure - has the potential to help us reimagine citizenship, governance, and belonging in the digital age. Blockchain offers a way to create ledgers and systems that are decentralized, transparent, and tamper-resistant. For finance, this means digital currencies and decentralized finance (DeFi) protocols that allow value to move without traditional banks. For governance, this means the possibility of smart contracts running organizations or even entire communities, where rules are enforced automatically and transparently. The on-chain citizens will be internet-first and territory-second.

The on-chain citizens will be internet-first and territory-second.



And with the rise of these on-chain citizens, the world will likely be less about where you come from but more about where you are headed.

Bankless by design: Lifeline for the un-bankable

Billions of people in developing countries lack access to banking or identity documents. Young populations in places like Sub-Saharan Africa or South Asia are ironically some of the most tech-savvy, leapfrogging to mobile phones without ever having had landlines or traditional bank accounts. Blockchain-based solutions can give these “unbanked” individuals a way to save, borrow, or prove their creditworthiness with only a mobile phone. Initiatives for blockchain land registries, for example, aim to secure property rights for people in countries where title deeds are unreliable. If you’re a young farmer in rural Kenya and you can secure your land title on a blockchain, you suddenly have collateral to get a loan – a potential game-changer for upward mobility. It’s easy to see why youth in emerging markets often embrace blockchain:

> it’s a chance to build trust where institutions are weak, effectively skipping to a more advanced model of governance and finance.

The Architecture of Smart Governance

Across the world, apart from blockchain-based protocols, governments are increasingly incorporating AI agents into the architecture of public administration to transform how states deliver services and manage complex processes. While decentralized technologies reshape how trust is built, AI is transforming how governments execute it. From Estonia's long game in digital governance to Ukraine's AI-assisted workflows, you can spot the pattern: code taking on the routine tasks so humans can focus on critical tasks. The concept of an Agentic State is fast developing with the rollout of State-backed AI agents such as Ukraine's Diaa.ai that anticipates needs, cuts bureaucracy, and lets citizens interact with government like they do with a friend or an app. Albania has taken this logic from the back office into the political spotlight, unveiling an AI-generated "minister" to advise on public tenders, scan contracts for red flags, and symbolically signal that algorithms, not just officials, will be watching over corruption risks. In UAE, At GITEX Global 2025, the Ministry of Human Resources and Emiratisation, MoHRE, presented Eye, an agentic AI system that handles all 13 categories of work permits, verifying passports, certificates, and contracts with minimal human touch. Approvals that once took weeks now complete in hours. Eye represents a philosophical shift: a government system that does not just use AI but is actually acting through it, delivering tangible outcomes.

Identity Turns into Infrastructure

Digital identity is shifting from policy talk to production. Governments are wiring up common standards so people can prove who they are once, sign once, and reuse those proofs across services and borders. The European Union has locked in a legal and technical framework for national-scale wallets. Member states are working toward broad availability by late 2026. The goal is a verified wallet that residents can use for banking, healthcare, travel, university enrollment, and everyday signatures.

The World Wide Web Consortium approved Verifiable Credentials 2.0 in May 2025. The standard lets issuers create portable proofs that can be checked anywhere. Users can reveal only what is needed. Show that you are over 18 without sharing your birth date. Prove a professional license without exposing your full file. The model is privacy-preserving and machine-verifiable, which lowers friction for both sides.
As adoption of digital identity grows, projects like World.org also gain traction as a proof-of-personhood layer, preventing bots from stealing your digital identities, which is going to be an important area to watch.

Why It Matters Now

A shared trust layer compresses onboarding from days to minutes, cuts fraud by design, and smooths cross-border transactions. Sectors that run on verification see the gains first. Banks, telcos, insurers, universities, and employers can plug into a common stack rather than build one-off integrations for each market. Several countries and platforms already show what good looks like in this arena.

01

Singapore's Singpass serves more than five million users across thousands of services. It handles tens of millions of monthly transactions for taxes, health bookings, insurance renewals, and more.

02

UAE PASS reports millions of users and thousands of public and private services. Its e-signatures carry legal force.

03

Estonia's X-Road connects hundreds of databases and adds a national tamper-evidence layer so records cannot be quietly altered.

04

MOSIP (Modular Open-Source Identity Platform) offers a vendor-neutral ID stack that governments can adopt and adapt. Deployments now span more than two dozen implementations and well over one hundred million issued IDs.

05

Ukraine's Diia kept core state functions running during wartime stress. Digital ID's gained legal standing and dozens of services moved online.

Across the globe, the shift to true digital economies begins with a strong and trusted national ID system. Once that layer is in place, states can develop accurate civil registries and efficient public services that reach people in many ways, enabling quicker disaster relief, greater climate readiness, easier company formation, and broader access to finance, health services, and schooling.

Conclusion: The Nations You Can Log Into

We are not far from a world where you will log into nations instead of landing in them. Your identity will live in a secure digital wallet, and your citizenship may be something you choose, not something you inherit. Communities will form on-chain, cities will be built through code, and network states will rise from shared values rather than shared borders. The metaverse will not replace our physical lives, but it will expand them, offering new spaces to live, work, and connect across continents.

In this new era, belonging will be less about where you are born and more about what you believe in. You might hold one passport but several digital ones. You might be part of a city that exists both in a skyline and in the cloud. You might trust a network more than a government department. This is the next phase of human organization, where the building blocks of governance, identity, and community are reprogrammed for a connected planet. Geography is no longer destiny.

> The next generation will not just inherit nations; they will log into them.

02 PALAU’S DIGITAL RESIDENCY

About William Wang

William Wang is the CEO behind RNS.ID, the technology partner powering Palau's first-of-its-kind Digital Residency program. Under Palau's Digital Residency Act, the program issues a government ID as both a physical card and on-chain KYC credentials available for anyone to check. He works at the intersection of sovereignty, identity, and Web3 infrastructure.

Digital residency is emerging as a new way to think about identity in a borderless world, with government-backed and verifiable credentials at the center of this transformation. To learn how Palau's Digital Residency program is putting that vision into practice, we spoke with William Wang, CEO of RNS.ID.

QUESTION

What problem did you set out to solve with Palau's Digital ID-based residency, and how did that problem statement evolve from idea to implementation?

When we set out to build Palau's Digital Residency program, our goal was simple: solve the problem of access and equality. Palau, a Pacific island nation with a history shaped by outside powers, is now exploring sovereignty in digital form. The nation understands constraints on freedom, having been colonized by more than four powers in its history.

Today, many people face a digital version of the same constraint: they lack a recognized, sovereign identity that lets them access services on an equal footing. Our answer to this challenge is a government-issued identity that anyone, anywhere except sanctioned countries, can apply for, bridging global access with legitimacy while ensuring residents still comply with the rules and regulations of whatever services they use.

QUESTION

Can you walk us through the key design choices, including how you decided what should live on-chain vs off-chain and how you approached the choice of blockchain infrastructure and potential multi-chain support?

When identity goes digital, the first question is what belongs on-chain, and what stays off? We chose a structure that maximizes decentralization and security without sacrificing practicality. Non-private claims (like "over 18 = true") are stored on-chain. Sensitive personal information, such as exact birthdates, is kept off-chain or not stored at all.

The program was launched on Ethereum for credibility and security, then expanded to Solana for lower transaction costs and scale.

QUESTION

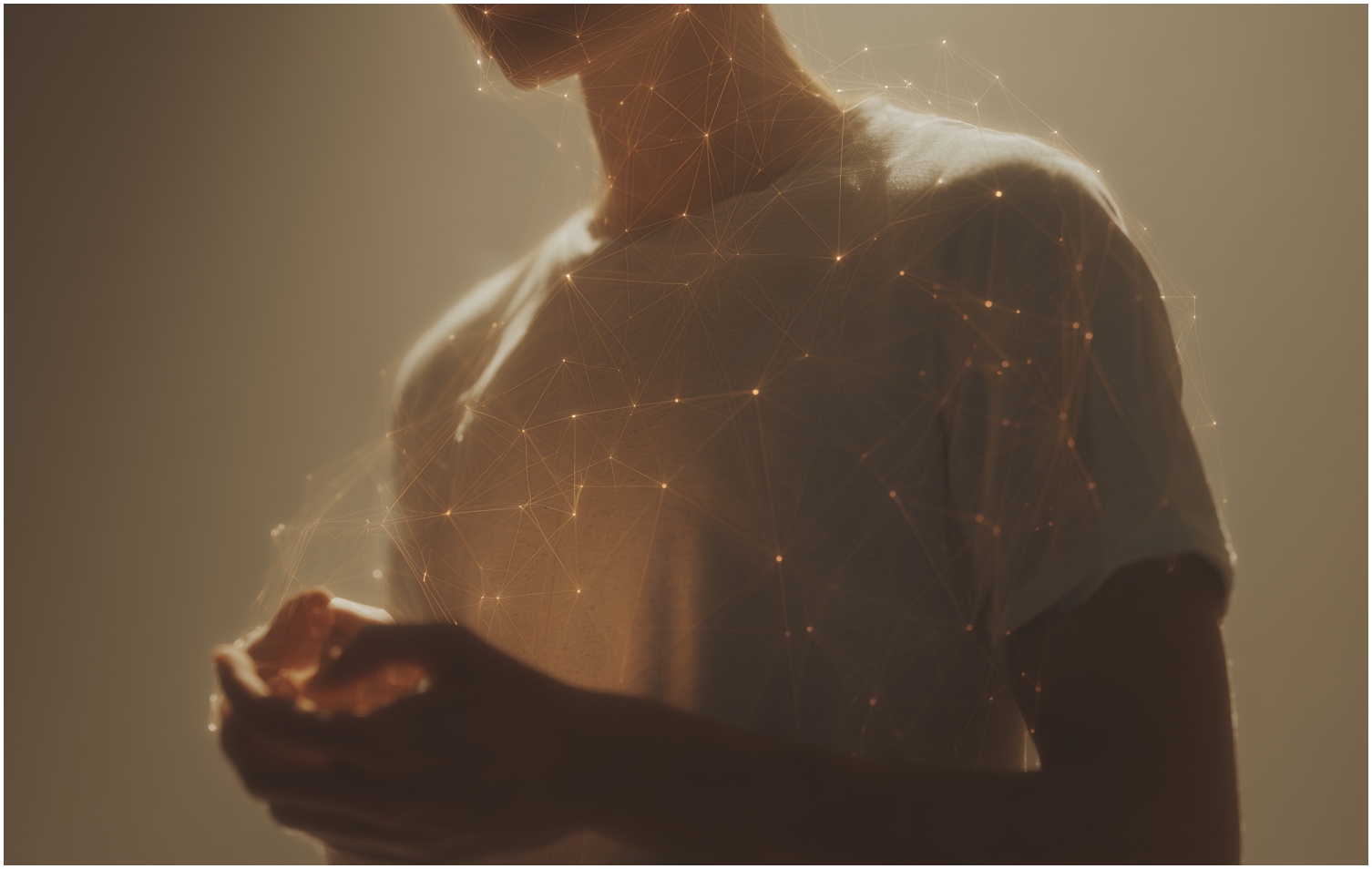
How do you balance robust identity assurance and compliance with privacy by design, including techniques like selective disclosure or zero-knowledge proofs?

We built selective disclosure and zero-knowledge proofs into the system. That way, a bar doesn't need to see your full ID - just proof that you're over 21. This design satisfies KYC regulations while giving residents control over what they disclose.

QUESTION

What does the trust model look like in practice? Who are the trust anchors, how are attestations governed, and how do you handle revocation, recovery, and key rotation for residents?

Trust is not anchored in one place. It's distributed across issuers, verifiers, witnesses, and auditors. If something goes wrong, a device is lost, a key is compromised, or an attestation becomes invalid, the credential can be revoked and reissued under a new key. Residents don't lose their identity just because something breaks. That resilience was essential from day one.



QUESTION

How did you translate Palau's legal and policy framework into product requirements and user journeys, and what compromises or innovations were needed to make it work in the real world?

Translating Palau's legislation into a functioning system required real-world problem-solving. The process flows from application, through RNS-led KYC/AML checks, to government approval or denial. Some elements, like zero tolerance on compliance, are rigid. Others needed flexibility. For example, physical card shipments often ran into customs delays, so we built reprint-and-reship processes. This balance between strict compliance and practical delivery was essential.

QUESTION

Which interoperability standards are most important for you and why, for example, W3C DIDs and verifiable credentials, eIDAS class signatures, or ISO mobile ID standards?

Future-proofing the program meant aligning with international standards: W3C DIDs and VCs, EU eIDAS signatures, and ISO mobile ID standards, so that Palau's credential is recognized across ecosystems, not trapped in a local silo.

QUESTION

Looking at adoption and behavior, what benefits are residents actually using most? What surprised you after launch, and which metrics do you rely on to measure success and inform iteration?

Adoption has been broader than we expected. Residents are using the IDs mostly for KYC access-from opening accounts to verifying for platforms that require compliance. What surprised us most was the span of users from very different backgrounds, as adoption wasn't limited to one region or demographic. We measure success not just in sign-ups and renewals, but also in user feedback and integrations with platforms that accept Palau IDs.

QUESTION

Critics often raise concerns about misuse and regulatory arbitrage. What safeguards, audits, and policy levers have you put in place to deter abuse while preserving legitimate access and innovation?

Critics have raised concerns about misuse or regulatory arbitrage. Our safeguards address those risks: every applicant goes through KYC/AML, and geoblocks cover sanctioned-country IPs, ID blocks, and physical addresses, with audits providing oversight. The principle is straightforward - support legitimate innovation while shutting out abuse.

QUESTION

How did you structure the public-private collaboration and economic model so that value accrues sustainably to Palau, to residents, and to the broader ecosystem?

For Palau, digital residency has already become one of its top external economic drivers, while giving the nation steady revenue, global visibility, and a new digital economy. Residents benefit from practical perks like flight and hotel discounts, mailing addresses, and upcoming digital services such as eSIMs. For platforms, Palau's residency provides a government-backed trust anchor that speeds up onboarding and reduces fraud risk. It's a public-private model where value flows to all sides.

QUESTION

If another country or a special economic zone wanted to replicate or adapt this model, what prerequisites, governance choices, and pitfalls would you highlight, and what would you do differently if you were starting from scratch today?

For other governments considering something similar, a few lessons stand out. Political will, legal authority, and compliance readiness are non-negotiable. Governance matters too: governments provide legitimacy, while private partners handle execution.

We also learned the hard way that services need to be aligned before launch. Palau's program began three years ago but was slowed by dependencies on external partners for features like mailing addresses and eSIMs. If we started again, we would ensure all affiliated services were locked in before launch, so residents had a smoother experience from day one.

What Palau's program demonstrates is that sovereignty, once bound to geography, can be extended into the digital domain. The experiment is still young, but it is already reshaping how identity, compliance, and access to opportunity might work in a borderless world.

03 INNOVATION BORN OF NECESSITY

About James Ellsmoor

James Ellsmoor is the Founder and CEO of Island Innovation, a global consultancy connecting island and remote regions to share knowledge and scale sustainable solutions. He also co-founded Solar Head of State, an NGO partnering with governments to advance renewable energy across small island developing states.

Recognized in Forbes 30 Under 30, James holds a Master's in Island Studies from the University of the Highlands and Islands and has worked across more than 60 countries. Named to Forbes 30 Under 30 and Renewable Energy World's Solar 40 Under 40, James continues to build "digital bridges" between islands, advocating for resilience, innovation, and a sustainable future for small island developing states worldwide.

When Tuvalu announced it would become the world's first digital nation in the face of rising sea levels, many viewed it as a symbolic act of cultural preservation. But this bold move signalled something deeper: a reimagining of what statehood, sovereignty, and continuity can look like in the digital age. For Small Island Developing States (SIDS), where the climate crisis is not a future threat but a daily reality, innovation has become a strategy for survival.

We sat down with James Ellsmoor, Founder and CEO of Island Innovation, to discuss how islands are redefining sovereignty, governance, and resilience through digital transformation. From Tuvalu's leap on digital migration to the broader lessons of community-driven innovation, James shares why islands - often seen as vulnerable - may, in fact, hold the blueprint for the future of the state.

QUESTION

What precedents does Tuvalu's digital nation set for other climate-vulnerable states?

We need to be honest about what Tuvalu's digital nation initiative really represents: it's an act of cultural survival in the face of catastrophic loss - a remarkable exercise in resilience and innovation born of necessity, but not a triumph to be romanticized.

Tuvaluan leaders and community members have spoken of this transition not with excitement, but with grief. For many Pacific Islanders, land is not property in the Western legal sense but the foundation of identity, ancestry, and spirituality - where umbilical cords are buried, ancestors rest, and children are meant to grow. For some, the notion of replacing this with a digital space represents not empowerment, but a profound, generational trauma. Many Tuvaluans describe the painful paradox of preserving their culture in digital archives while still living it - preparing their children for the possibility of displacement from their ancestral homelands.

That said, Tuvalu's response does establish precedents. There are two distinct strands of Tuvalu's "digital nation."

First, there's the digital preservation and infrastructure work: creating digital archives of Tuvaluan culture, developing digital government services, and building virtual representations of the islands. This strand is about maintaining cultural memory and administrative functionality, not about redefining legal statehood.

Second, there's the legal claim about continuity of statehood: the assertion that Tuvalu will remain a state under international law even if its physical territory becomes uninhabitable. This isn't about existing "digitally" in a science-fiction sense - it's about whether the loss of habitable territory should extinguish sovereignty, a question now reshaping international legal discourse.

The Montevideo Convention (1933) defines a state as requiring a permanent population, defined territory, government, and capacity to enter relations with other states. Tuvalu is now testing what those definitions mean when physical territory is threatened by sea-level rise. In October 2023, Tuvalu amended its Constitution to declare that its statehood "shall remain in perpetuity… notwithstanding any loss of its physical territory."

This asserts legal continuity even if the land itself becomes uninhabitable. International law has not yet determined whether such continuity can exist without physical territory - but Tuvalu's stance is shaping that debate. Other low-lying atoll nations, such as the Maldives, Kiribati, and the Marshall Islands, face similar existential questions. But let's be clear: these nations would prefer to remain on their islands. Digital nationhood is a last resort, not a first choice.

QUESTION

What message does this project send to the world about the issues facing island nations?

Through its approach, Tuvalu asserts that small states should not be erased by a crisis they did not cause. Its emissions are statistically negligible, yet it is being forced to pioneer the legal and diplomatic terrain of statelessness in the Anthropocene. The Falepili Union Treaty with Australia, signed in November 2023 and entering into force in August 2024, recognizes Tuvalu's ongoing statehood and creates a special mobility pathway for up to 280 Tuvaluans per year. Though the agreement has raised domestic debate about sovereignty and security clauses, it reflects international acknowledgment that Tuvalu will continue to exist as a nation even if its population must relocate. Through our work at Island Innovation, particularly at forums such as COP, I've witnessed how island nations leverage moral authority despite limited economic power. Digital nationhood becomes the next evolution of that advocacy - not just demanding that the world act on climate change, but asserting sovereignty and identity even when the world fails to act in time.

Tuvalu's response shows that adaptation can extend beyond seawalls and resettlement - encompassing the preservation of sovereignty, culture, and identity even as physical territory is threatened.
This broadens how we think about adaptation finance and policy. But we should be uncomfortable with this expansion: it implies accepting that some places will be lost, rather than fighting harder to prevent it. If Tuvalu can maintain democratic institutions, deliver public services, and conduct diplomacy primarily through digital channels, it will validate a new governance model. E-Estonia demonstrated that digital governance could enhance efficiency and resilience; Tuvalu may prove it's essential for survival. Yet this "validation" comes at an extraordinary cost - the loss of place-based governance and of leaders who live among the people they serve.

These precedents exist because wealthy nations have failed to adequately address the climate crisis they primarily caused. Tuvalu's carbon emissions are negligible, yet it is being placed in the position of pioneering 'solutions' to problems it did not create.

In our consultancy and capacity-building programs, we support islands in developing climate adaptation strategies, including digital infrastructure where appropriate - but always with a clear acknowledgment of the injustice of the situation. Islands shouldn't have to become innovation laboratories for surviving a climate catastrophe. They should receive the climate finance, technology transfer, and emissions reductions that would allow them to remain on their lands. When we convene stakeholders at the Global Sustainable Islands Summit or connect communities through the Virtual Island Summit, we create space for islands to share not just technical solutions but also their grief, anger, and demands for justice. Digital platforms can't replace physical homelands, but they can amplify voices demanding that those homelands be protected.

QUESTION

What lessons can other vulnerable nations learn from Tuvalu's leap into the digital sphere?

The first lesson is about agency. Rather than waiting to be victims, Tuvalu seized the initiative.

"This reflects something I've observed repeatedly across island communities: constraints drive innovation. When conventional options are limited, islands find unconventional solutions."

Second, early action creates negotiating leverage. By moving first on digital nationhood, Tuvalu shapes the conversation. By acting first, Tuvalu is establishing its own facts, or rather, its own presence, in the cloud, rather than waiting for external validation. Other nations can learn that being proactive in defining new paradigms beats being reactive to frameworks designed by larger powers.

Third, the diaspora matters more than ever. Many island nations have significant populations abroad - often larger than those at home. Tuvalu's digital nation concept recognizes that these communities aren't lost capacity, but distributed assets. If you can maintain citizenship, voting rights, and economic participation digitally, geography becomes less determinative. This lesson applies to any nation experiencing climate migration or economic emigration.

Fourth, partnerships are essential but must preserve sovereignty. Tuvalu didn't build its digital infrastructure alone - it required technical expertise, funding, and platforms from partners. But the governance of these systems must remain Tuvaluan. Other vulnerable nations must learn to structure partnerships that accept assistance without ceding control. This is precisely the challenge we see in climate finance access, where the administrative burden often creates dependencies rather than building capacity.

Fifth, dual-track strategies are necessary. Tuvalu hasn't abandoned physical adaptation - they're pursuing both seawalls and servers, both coastal protection and cloud preservation. Other nations should resist either/or thinking. Digital infrastructure complements, not replaces, physical resilience.

Sixth, start with fundamentals. Digital identity, digital land registries, digitized government services - these aren't exotic innovations for most developed nations, but they're transformative for small states with limited administrative capacity. The lesson for other vulnerable nations is to focus first on digital basics that enhance governance capacity, then build toward more ambitious visions.

Finally, narrative matters. Tuvalu framed digital nationhood as an innovation born of necessity, not a gimmick or surrender - a framing that echoes a broader narrative many island advocates share: that islands can be lighthouses of innovation, not laboratories for crisis response. That narrative shift is itself a lesson in how vulnerable nations can reclaim agency in climate discussions.

The most vulnerable nations often lack the resources that Tuvalu deployed, which highlights the need for pooled regional approaches.

QUESTION

What are the most striking differences between how remote islands and mainland countries operate, and what lessons can larger nations learn?

The fundamental difference is that islands can't rely on size to solve problems - they must rely on ingenuity.

In large bureaucracies, specialisation creates silos. Different departments pursue contradictory objectives. Islands can't afford this luxury. An official in the Cook Islands might need to address tourism development, environmental protection, and climate finance - all simultaneously. This sounds like a constraint, but it creates natural coordination that larger nations struggle to achieve despite massive investment in "whole-of-government" approaches.

The lesson for larger nations: cross-functional teams and generalist expertise can accelerate coordination. Don't always optimise for specialisation.

In a society where the environment minister and the fisherman are cousins, and both attend the same church, accountability can be more apparent. Policymakers see the impacts of their decisions in their daily lives. This intimacy creates both benefits, such as genuine responsiveness, and challenges, such as potential conflicts of interest. Large nations lose this direct feedback loop.

The lesson: finding ways to reconnect policy makers with policy impacts improves governance. Digital tools enabling direct citizen engagement can help replicate some of the islands' natural accountability.

QUESTION

Will island resilience increasingly require digital tools like AI and blockchain?

Not just “will require” - they already do require. The question is whether islands get these tools on their terms or on terms dictated by external providers.

Small islands can’t afford extensive physical monitoring infrastructure, but AI processing satellite imagery can detect coral bleaching, track illegal fishing, predict hurricane intensification, and model sea level rise impacts. The Pacific’s scattered geography makes AI-driven monitoring not optional but essential.

We’re seeing early applications: AI analyzing weather patterns for agricultural planning, machine learning optimizing renewable energy microgrids in island communities, and algorithms identifying optimal locations for marine protected areas.

The challenge is ensuring islands control these systems rather than depending on external AI services that could be withdrawn, compromised, or used to extract value rather than generate it.

QUESTION

Can islands serve as laboratories for new forms of digital democracy? Have you worked on such cases?

Islands possess distinct advantages for democratic innovation. Their small population size creates intimacy between policymakers and citizens that's impossible to replicate at scale. In a nation of 10,000 people, representatives personally know their constituents. This creates both challenges around conflicts of interest and opportunities for authentic participatory democracy.

The administrative burden of traditional democracy, maintaining voter registries, operating polling places, and counting ballots, is proportionally more expensive for small populations. But digital systems can reduce these costs while potentially improving participation. An island nation implementing e-voting isn't radically transforming its democracy; it's finding a more efficient way to conduct familiar processes.

The social trust necessary for democratic innovation exists more naturally in small communities. When people know each other and their leaders personally, trust (or distrust) is based on direct experience rather than media narratives. This can accelerate adoption of new systems - but also means failures are highly visible and personally felt.

Islands' practice of multi-functionalism, where officials serve multiple roles, creates a natural understanding of policy interconnections. This suits digital democratic tools that could enable more integrated, systems-level decision-making rather than siloed voting on individual issues.

For Small Island Developing States (SIDS) like Tuvalu, where the climate crisis is not a future threat but a daily reality, innovation is not a luxury; it's a strategy for survival. States and territories on the geographical and political periphery are pioneering new approaches to governance in the digital era. And islands are at the forefront.

Looking Ahead

Islands have always been at the edge. Geographically remote, often politically dependent, and frequently overlooked. But they are now becoming central to one of the most important transformations of our time: the redefinition of the modern state. In responding to the urgency of climate change, demographic shifts, and technological disruption, islands are showing the world what governance could look like in a distributed, digital, and uncertain future.

As the global community looks ahead to COP30 and beyond, we should be listening closely to island nations. Because in their constraints, we may find creativity. And in their experiments, we may find blueprints for the digital state.

04 THE FUTURE IS VIRTUAL - AND DEEPLY HUMAN

About Briar Prestidge

Briar Prestidge, CEO of Prestidge Group, is an award-winning documentary producer, Web3 evangelist, and futurist. She is also a metaverse board advisor to INTERPOL's Investigations and Forensics team, as well as a board advisor to Humanity+, the Metaverse Fashion Council, and serves as a strategic advisor for Imagin3 Studio.

In 2016, Briar founded Prestidge Group, a leading executive personal branding, PR, and speaker relations agency. The company manages HNWIs, C-level executives, technology experts, celebrities, government officials, and investors, with offices in Dubai, New York, and London.

In her award-winning documentary '48 Hours in the Metaverse', Briar spent 48 hours non-stop on VR and metaverse platforms interviewing 21 experts across 33 virtual worlds. The documentary was awarded five laurels from major film festivals and was featured in leading publications such as Forbes and WIRED. As a tech-fashion designer, Briar has a futuristic fashion label for avatars and a shopping empire on Roblox under her tech-fashion house OLTAIR. In 2021, her first phygital fashion label, inspired by her luxury suit collection (now closed), was showcased at the world's first Metaverse Fashion Week on Decentraland.

Briar aims to influence a new generation of creative thinkers who dare to envision humanity's next steps. To learn about how we can elevate the human condition, find solutions to world problems, and find a balance between opportunity and risk, she hosts exclusive discussions with visionary CEOs, tech experts, scientists, inventors, futurists, and philosophers on her podcast HYPERSCALE: The Podcast of the Future, and on her upcoming documentary, Cyborg To Be.

Briar was named one of the 'Top 100 Most Influential' people in the United Arab Emirates by Ahlan! Magazine, and has been featured in Entrepreneur, Forbes, OSN, Emirates Woman, Marie Claire, Grazia, WIRED, and The National, among others, in recognition of her work.

As the boundaries between physical and virtual life blur, we're beginning to reimagine what it means to exist. Few people have explored that shift more deeply than Briar Prestidge — CEO of Prestidge Group & OLTAIR, award-winning producer and INTERPOL metaverse advisor — who sees simulations as catalysts for human potential. In this Q&A, we ask Briar to share how her work with digital fashion label OLTAIR and her award-winning documentary 48 Hours in the Metaverse reveal a future where governance, identity, and empathy will increasingly be built inside immersive worlds.

QUESTION

INTERPOL's 2024 report on the metaverse explored how simulations could help us prepare for large-scale emergencies. From your perspective, where else do you see simulation playing a transformative role (whether in business, education, culture, or even governance)? Which use cases of the metaverse do you believe have the greatest potential to revolutionize how today's world functions?

While using simulations for disaster preparedness is a brilliant and necessary step, what truly fascinates me is their quieter, far more personal potential.

The practical use cases are exciting. For example, a young surgeon perfecting a complex procedure in a zero-risk Virtual Operating Room, or a city council walking through a digital twin of a new community park, feeling the flow of the space before a single shovel hits the ground. That's foresight on an entirely new level.

As a digital fashion designer with my label OLTAIR on Roblox, I've experienced the incredible creative freedom of this space myself. We can design dresses made of fire or melting ice, limited only by imagination. I'm excited to see nations like the UAE launching a formal Metaverse Strategy, aiming to create 40,000 virtual jobs and add $4 billion to its economy. They understand this is the new frontier for culture and commerce.

But the applications that truly move me are the ones about the human spirit. This became the heart of my documentary, '48 Hours in the Metaverse'. To find these stories, I journeyed across 33 virtual worlds - from Burning Man, Nikeland, and Fashion Avenue to MetaDubai and the digital twin of Dubai's Al Wasl Plaza, and even Australia's Uluru-Kata Tjuta National Park. I also virtually met and interviewed 21 metaverse leaders from around the globe. It was an intense experience, requiring me to navigate basic needs like eating and sleeping while remaining fully immersed with a VR headset on. I believe the film resonated so deeply, earning five laurels from major festivals, precisely because it showcased this incredible, often unseen, side of the metaverse.

I will never forget meeting a support group of chemotherapy patients. In the physical world, they were isolated, confined to hospital beds. But in the metaverse, they gathered on a serene virtual beach as avatars, sharing stories and finding strength in each other. In that moment, for them, that connection was real. It was hope.

I've also seen how these worlds can be a lifeline for kids on the autism spectrum. Communicating through an avatar can remove so much of the anxiety of face-to-face interaction, offering them a space to build confidence and friendships on their own terms.

They give us new ways to connect, heal, and understand one another across any physical barrier. That's the future I'm most excited to help build.

QUESTION

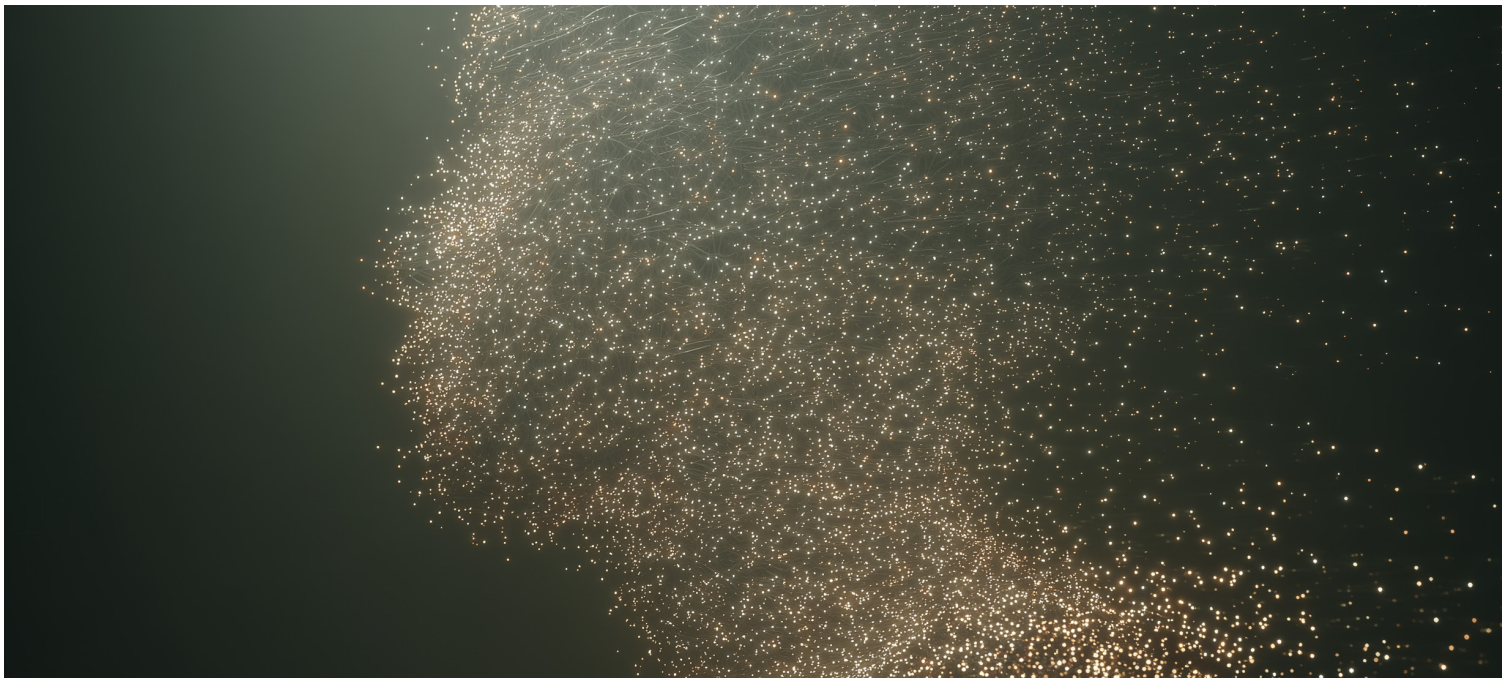
You have a digital twin, Wolfgang Cynthia. What risks do you see around digital identity being hacked, corrupted, or deleted, and how could states or governance systems respond to these scenarios?

My digital twin, Wolfgang Cynthia, is part of my presence, my brand, and my creative alter-ego in these new worlds. The thought of someone hijacking or corrupting her feels deeply personal; it would be a violation of my identity.

And this isn't a theoretical risk. A story that has always stuck with me is that of a boy who had built a genuine empire in the metaverse. He had status, virtual wealth, and a vibrant community of friends. Then, while he was on a family holiday, a hacker got in and took everything. He was emotionally wrecked. For him, and for so many others, the connections and achievements in these spaces hold genuine emotional weight. That loss was absolutely real. And this isn't an isolated case; it reflects a massive generational shift. A recent study found that 56% of Gen Z users said styling their avatar is more important to them than styling themselves in the physical world.

Our legal frameworks lag behind this reality. We need fundamental rights for every "digital citizen," protecting virtual assets and identities. I imagine governments operating digital embassies inside major platforms to provide real protection.

Until stealing a digital identity is treated with the same gravity as stealing a physical passport, we leave a generation vulnerable in the worlds they call home.



QUESTION

You've worked with global leaders on personal branding. How do you imagine "nation branding" or digital-state identity will evolve in a world where reputation is built in both physical and virtual spaces?

Right now, a nation's reputation gets built by what it broadcasts: carefully crafted tourism campaigns, diplomatic messaging, and media coverage. The country tells you who they want you to believe they are.

But we're entering a fundamentally different era. Soon, people will visit the metaverse of nations and form opinions based on the experiences these countries actually offer. They'll judge based on what they feel, what they discover, and how they're treated in these virtual spaces. This represents a profound shift from passive viewing to active participation.

QUESTION

In your documentary 48 Hours in the Metaverse, what surprised you most about how virtual communities organize themselves without formal governments?

I was genuinely struck by the pockets of beautiful, organic order. I saw communities with no formal leaders or rulebooks that ran on consensus and shared respect. Leadership would just... emerge. Social norms were built together. It was proof that people can create functional, positive societies from the ground up.

But it doesn't come without downsides. A conversation with a friend of mine really brought this home for me. His sister, a mother of three, had to pull her kids off Roblox entirely. They worry that behind any one of those kid-friendly avatars could be an adult with malicious intent, and their child would have no way of knowing.

This creates a genuine social dilemma, and it's one I relate to personally. I was the last kid in my class to get a mobile phone, and I remember how isolating that felt. It started to genuinely affect my social life and my confidence. So when we tell parents to just take their kids off these platforms, we're asking them to potentially cut their children off from where their friends are building their social lives.

So what's the solution? To start with, we need to be creating a new layer of digital infrastructure: a universal, transparent rating system for virtual spaces.

Think of it like movie ratings. We need a way to clearly designate worlds as 'E for Everyone,' 'T for Teen,' or 'A for Adults Only.' But this wouldn't be just a label. These zones would come with different rulesets. 'E-rated' spaces could require verified identity for creators and have proactive, human-led moderation. This would create certified "safe zones" where parents could feel confident letting their children explore and socialize.

This approach empowers parents. It moves them away from a simple "yes" or "no" and gives them the tools for an informed "yes, but only in these areas".

QUESTION

From a strategic lens, what parallels do you see between how companies build digital infrastructure today and how nations may need to build theirs tomorrow?

When looking at digital strategy, the core parallel is simple: both companies and countries are building the environments of the future. But their strategic goals must be completely different.

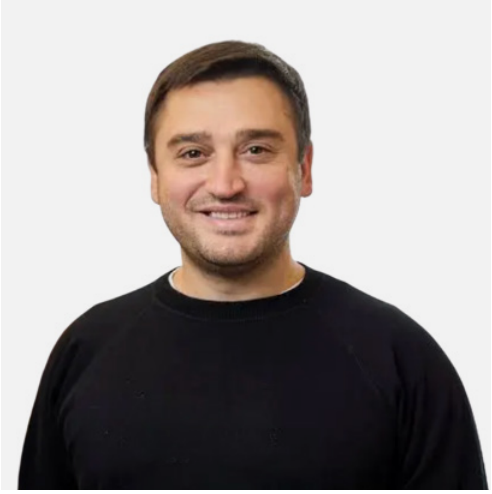
Companies today focus on building massive, closed platforms. They want to own the entire user experience. They control your data, the currency, and the identity system. Their success relies on keeping you inside their specific walls.

A nation must take a fundamentally different path. Its job is not to build a single corporate headquarters or a giant walled garden. Its job is to build the public roads, the trusted legal frameworks, and the open infrastructure that everyone needs to thrive.

The strategic goal for a country is to become the most reliable and attractive place for others to build and create in it. This means focusing on the foundations of trust. They must help set universal standards for digital assets so that a fashion item from my label, OLTAIR, can be worn in any virtual world, not just one.

A company builds a destination that it ultimately controls. A nation must build the foundation of trust and clear law that allows thousands of independent, innovative destinations to flourish safely.

05 A STATE IN A SMARTPHONE



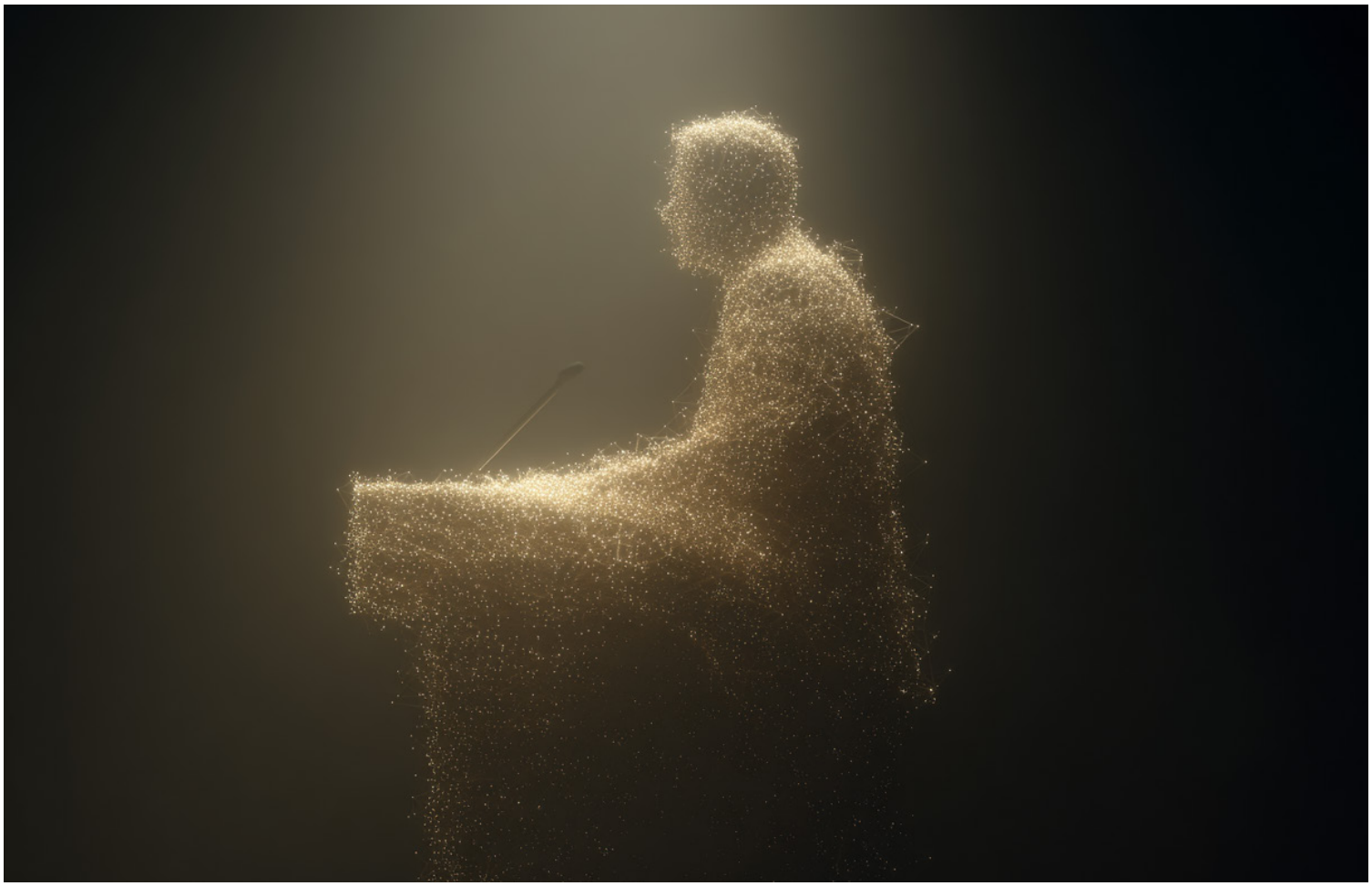
About Oleksandr Bornyakov

Oleksandr Bornyakov has been serving as Ukraine's Deputy Minister of Digital Transformation since 2019. He was one of the visionaries and architects behind the Diia.City and Brave1 projects and is now driving the development of Ukraine's venture ecosystem through the Diia.City Invest initiative. Before entering public service, he built a successful career in the global tech industry, founding VertaMedia (later Adtelligent), one of North America's fastest-growing ad tech companies recognized by Deloitte and Inc. 5000.

He holds a Master of Public Administration from Columbia University's School of International and Public Affairs, an MBA in Economics from the University of New Brunswick, and a Master's in Marketing from the National Aviation University in Kyiv.

Oleksandr is recognized among Ukraine's Top 25 Trailblazing Business Leaders by KyivPost and frequently contributes to global conversations on digital policy, innovation, and the future of governance.

Ukraine is writing one of the world's most compelling stories of digital transformation - a story where government works at the speed of technology. From launching Diia, the "state in a smartphone," to advancing AI-driven public services and a national LLM, Ukraine is pushing the boundary for what digital governance can look like. In this Q&A, Ukraine's Deputy Minister of Digital Transformation, Oleksandr Bornyakov, reflects on how the country became a digital leader and what's next for a state powered by AI and innovation.



How Ukraine Became a Leader in Digital Transformation

QUESTION

Many countries are still debating digital identity. Ukraine gave digital documents the same legal force as physical ones. What were the turning points that made this possible, and how do you see digital IDs evolving globally?

Six years ago, Ukraine made a bold decision to embrace digital transformation - an idea championed by President Volodymyr Zelenskyy: to build a state in a smartphone - one without bureaucracy, queues, or paperwork. To make this vision real, the Ministry of Digital Transformation was established. In just five years, Ukraine has climbed from 102nd to 5th place globally in the digitalization of public services. Our goal remains unchanged: to build the most convenient and citizen-oriented state for people and businesses alike.

One of the key steps on this journey was the creation of Diia - a platform that allows citizens to access government services quickly and easily online. In just a few years, Diia has evolved from a few digital documents on a smartphone into a full-fledged ecosystem of public services. Today, it offers more than 200 services through the app and the portal, serving over 23 million Ukrainians who can now access what they need in a few clicks - no queues, no paper bureaucracy. We achieved these results under far from ideal conditions - first during the COVID-19 pandemic, and then amid Russia's full-scale invasion. Yet despite every challenge, we continue to move forward.

At the heart of our progress lies a human-centered approach, embedded not only in our digital products but also in how we design state systems themselves. This philosophy has helped us earn public trust and create a model that other governments can adapt to their own realities. By making services simpler, transparent, and truly focused on people's needs, we've built the trust of millions of Ukrainians who use Diia every day. The turning point came when Ukraine decided to treat digital technologies not as an add-on, but as a full-fledged alternative. Four years ago, we became the first country in the world to grant digital passports on a smartphone the same legal status as physical documents - a shift I believe is irreversible.

By the end of 2026, Ukrainians will be able to use their digital documents across the entire European Union, and Europeans will enjoy the same access in Ukraine. This became possible thanks to successful interoperability testing conducted by the Diia team and the Ministry of Digital Transformation, ensuring full compliance with EU eIDAS 2.0, the new European standard for secure digital identity and wallets.

Meet Diia.AI: The World's First National AI Assistant

QUESTION

What types of government services can Diia.AI already complete end-to-end? How do you imagine AI changing the very nature of governance in the coming decade?

Over the past six years, Ukraine has transformed itself into a Digital State. Now, we are entering the next phase - building an Agentic State: a government where AI works as a personal agent, proactively delivering personalized services to citizens. For us, AI is not about hype or buzzwords - it's about solving real problems in public services and state processes.

Ukraine is moving toward a model where the interaction between the state and a citizen takes just one message - from request to result. AI agents will anticipate people's needs, offer relevant services, and automatically complete the necessary steps on their behalf. Our goal is to transform Diia from a digital service into a full-fledged AI agent, available 24/7, without filling forms or extra paperwork - making access to public services as simple as ordering a taxi or food delivery.

We've already taken the first step by launching Diia.AI - a personal AI assistant on the Diia portal that both consults and provides services. Visually, it resembles ChatGPT or other AI chatbots we already use, but with one crucial difference: Diia.AI is the first national AI assistant in the world that doesn't just advise - it delivers actual government services. For example, you can get an income statement just by asking for it in chat. It's a new paradigm of interaction between citizens and the state. Our next goal is to bring Diia.AI into the mobile app and expand the number of AI-powered public services.

Ukraine is taking a long-term approach to AI development. We are not just building individual products - we are building an ecosystem. Our mission is to become one of the top three countries globally by 2030 in AI integration across the public sector. To achieve this, we are now developing a National AI Strategy, which will define how we integrate AI into key areas such as governance, defense, education, science, and agriculture.

At the core of this vision is building AI sovereignty. We have already started developing a national large language model (LLM) - our own foundation model that will power government, business, and citizen-facing applications independently. The Ukrainian-language model will be based on an open-source framework and fine-tuned on unique Ukrainian datasets - capturing our language, history, and cultural context. It will be trained on massive volumes of Ukrainian text: news, analytical materials, literature, educational content, and more. The process involves a broad coalition of partners - from government institutions and universities to libraries, cultural organizations, and media outlets. We plan to release the first version of the model by the end of 2025.

The second pillar of AI sovereignty is infrastructure. Soon, Ukraine will launch a powerful national platform called the AI Factory - designed to support the development of state and defense AI systems. With it, all data powering national AI services will be processed inside Ukraine, ensuring data sovereignty and stronger cybersecurity. The AI Factory will combine high-performance computing clusters, water-cooled servers, data storage systems, and software environments for model training and deployment. It will also include training programs for AI engineers who will develop and implement AI solutions for the public and defense sectors. As a result, Ukraine will gain full control over its data, enhance cyber resilience, and scale national AI solutions without relying on external providers.

We are also actively developing a regulatory framework for AI. As a candidate for EU membership, Ukraine is aligning its future legislation with the EU AI Act. We've adopted a bottom-up approach, outlined in our White Paper on AI Regulation. This model helps local companies prepare for international standards while maintaining a balance between innovation and human rights protection.
The implementation will unfold in two phases: first, a 2–3 year period of self-regulation, during which businesses adapt, and we engage stakeholders in shaping the regulatory framework. The second phase will be the adoption of Ukraine's own version of the AI Act, which will legally codify the developed principles. This phased approach allows us to prepare businesses for regulation without stifling innovation. In parallel, we are studying how Ukrainian companies adapt to European standards, and only then will we introduce additional legal requirements.

Big Vision for Blockchain in Governance

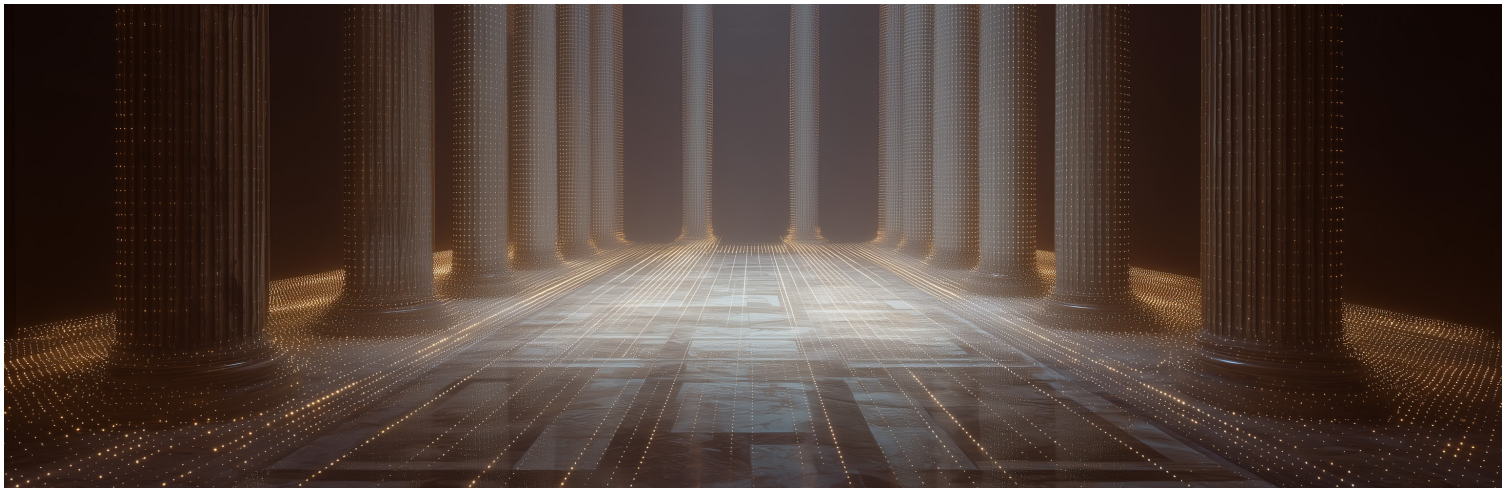
QUESTION

Ukraine has tested blockchain for land registries, auctions, and other state functions. What do these experiments suggest about the real potential (and limits) of blockchain in government?

The potential of blockchain technology has always been clear to us. To explore how it can be applied effectively, Ukraine has already implemented several pilot projects, from maintaining the land cadastre and recording the results of public procurement auctions to other initiatives primarily focused on research and experimentation. These projects have shown us that full-scale implementation is not yet feasible, as blockchain is not suitable for all types of government projects. When it comes to centralized blockchain, its implementation is technically possible but extremely costly. As a result, in most cases, the technology proved unnecessary. At the same time, these experiments were valuable - they helped us better understand how blockchain works and identify the areas where its application is truly justified.

In the summer of 2022, Ukraine joined the European Blockchain Partnership as an observer. The long-term goal of this initiative is to create a pan-European blockchain infrastructure, integrating Ukraine into the EU's digital economic space. For us, this is a unique opportunity to study Europe's best practices in using blockchain for public administration - a technology that ensures data integrity and protection from unauthorized changes. Blockchain demonstrates its full potential when it serves as a common technological foundation for various elements of a country's digital economy. That's why we were particularly inspired when the National Bank of Ukraine introduced the concept of the e-hryvnia - a digital version of the national currency which could be issued by the central bank in the near future.

However, there are still major challenges related to data ownership and node governance, which significantly limit further development of blockchain-based solutions. In a decentralized system, it is often unclear who owns the data, who controls the nodes, and who is responsible in case of errors or misuse. This ambiguity creates legal and operational risks, especially for government projects where data integrity, sovereignty, and compliance with national legislation are critical. Until a clear legal and institutional framework is established to regulate data ownership, node management, and liability, blockchain will likely remain a promising but largely experimental technology within the public sector.



Defining the Digital State of 2030

QUESTION

From e-Residency to agentive AI, Ukraine is often described as a testing ground for the future of digital governance. Looking ahead five to ten years, what does the idea of a “digital state” mean to you - and what will distinguish the leaders from the laggards?

Ukraine has truly become a test ground for digital governance, where bold ideas are tested in real-world conditions. Among all emerging innovations, I believe the agentive AI model will spread the fastest as it represents one of the most promising directions of digital evolution. Agentive AI is the next logical step in the evolution of digital public services. It meets the core demands of our time: speed, personalization, and minimal effort from the user. Instead of citizens searching for the right service, the system proactively offers it at the right moment. For example, reminding someone to renew their documents or automatically processing benefit payments. This fundamentally simplifies the interaction between the state and its citizens, making it more seamless, intuitive, and human-centric.

In January 2025, the Government approved the WINWIN Strategy for Digital and Innovation Development of Ukraine until 2030. The document envisions Ukraine as a nation of innovation and outlines the key directions, principles, goals, and tasks of state policy in digital innovation. One of its strategic priorities is to develop domestic infrastructure for research, innovation, and AI implementation. Of course, the path forward is not without challenges: limited funding for AI innovations, lack of infrastructure, brain drain, outdated educational programs, and intense global competition in the AI market. To overcome these barriers, we are focusing on capacity building, infrastructure development, government support, and effective regulation to stimulate growth in the AI sector.

International cooperation and promotion of Ukrainian AI solutions on the global stage are also key priorities. One of our major steps in this direction was launching the WINWIN AI Center of Excellence, an initiative under the Ministry of Digital Transformation focused on developing and integrating AI products for the public sector and defense. The Center operates as a project incubator, accepting proposals for improving public services, co-developing solutions with the private sector, testing them, and integrating successful cases into government systems. This year, we also launched an experimental AI & Blockchain Sandbox, a two-year program that allows Ukrainian startups to have their products evaluated by top experts. The Sandbox acts as a safe testing environment where companies can validate their technologies before going to market or being implemented in the public sector, saving resources and minimizing operational risks.

Looking ahead to the next five to ten years, the concept of a “digital state” will mean a government seamlessly integrated with technology, where citizens, businesses, and public institutions interact through efficient, transparent, and proactive digital systems. It’s a vision of a country where access to services, information, and decision-making is frictionless, secure, and deeply personalized.

Designing a Startup-Friendly Framework

QUESTION

You've said, 'Ukrainian code is literally everywhere.' Ukraine's startup ecosystem is growing even under extraordinary pressure. What are the key conditions that allow innovation to flourish in such an environment, and how can government frameworks - from policy to legal infrastructure - nurture and sustain that entrepreneurial mindset?

According to the latest industry research, Ukraine is currently home to over 2,100 active, verified IT companies and around 2,000 startups, together employing approximately 302,000 IT specialists. The IT sector ranks second in the country's export structure. Ukraine's startup ecosystem has also been gaining international recognition. In the Global Startup Ecosystem Index 2025 by StartupBlink, it ranked 42nd among the world's top 100 startup ecosystems, climbing four positions compared to last year. Recently, Ukraine was ranked fourth in Europe for startup support by the European Startup Nations Alliance. Currently, there are about 30 startups per one million citizens, and the country aims to reach 500, which further strengthens Ukraine's position as a major exporter of IT services.

Several initiatives have been key to developing Ukraine's startup ecosystem. Diia.City offers the most advanced legal and tax framework in Europe for IT companies, providing not only favorable taxation but also flexible employment models for building transparent corporate structures, elements of English law to attract investment, and robust protection of intellectual property. Each month, around 200–300 new high-quality companies join the project, bringing the total number of resident companies to nearly 3,000, employing roughly 130,000 IT specialists. Another focus is supporting defense tech development. For this, we created the Brave1 cluster, which has become the single-entry point for defense technology developers and has significantly simplified bureaucratic procedures. Now, innovators can access comprehensive support from the initial idea to a market-ready product. More than $80 million has already been invested in Ukrainian defense tech projects, with over 290 investment partners engaged. The UK–Ukraine TechBridge initiative focuses on four areas: education, innovation, investment, and trade. Ukrainians benefit from free training provided by leading global companies, participate in workshops with British investors, and startups supported by the UK–Ukraine TechBridge Accelerator have already raised over $12 million. The program also opens access to new markets, enabling Ukrainian companies to travel to the UK for meetings with local businesses.

Together, these initiatives create the necessary conditions and legal foundations for the growth of Ukraine's startup ecosystem, helping local companies scale globally and strengthening the country's position as a competitive tech hub.

06

INSIDE SUPERWORLD’S VISION FOR THE DIGITAL LAYER OF REALITY

About Hrish Lotlikar

A lifelong traveler and digital nomad, Hrish Lotlikar has built his career at the intersection of technology, creativity, and global culture. From Kyiv to San Francisco, Miami to Stockholm, his journey across continents shaped the vision behind SuperWorld - a platform reimagining the planet itself as a programmable, interactive layer. Mapped across 68.4 billion virtual plots, SuperWorld transforms every place on Earth into a canvas for creation, connection, and ownership in augmented reality.

Before founding SuperWorld, Hrish co-founded Rogue Initiative Studios, a Hollywood-based immersive entertainment company partnered with director Michael Bay. His career has spanned Wall Street, Silicon Valley, and Hollywood, with previous roles at Eastlabs, Toptal, Spencer Trask Ventures, UBS Investment Bank, and HSBC Securities.

Hrish holds a BA in Political Science from Rice University, and both an MBA and MPH from the University of Illinois at Chicago.

QUESTION

SuperWorld envisions a world where the digital and physical seamlessly merge. How do you see this convergence transforming how people experience place, culture, and community?

At SuperWorld, we see the world itself becoming a programmable layer of information and interaction - where every physical location has digital value and meaning. By merging the physical and digital, people can share personal stories, cultural heritage, and local experiences directly on the map. This creates a new sense of presence and belonging. Communities can preserve traditions, highlight local businesses, and connect globally through shared interests tied to real places.

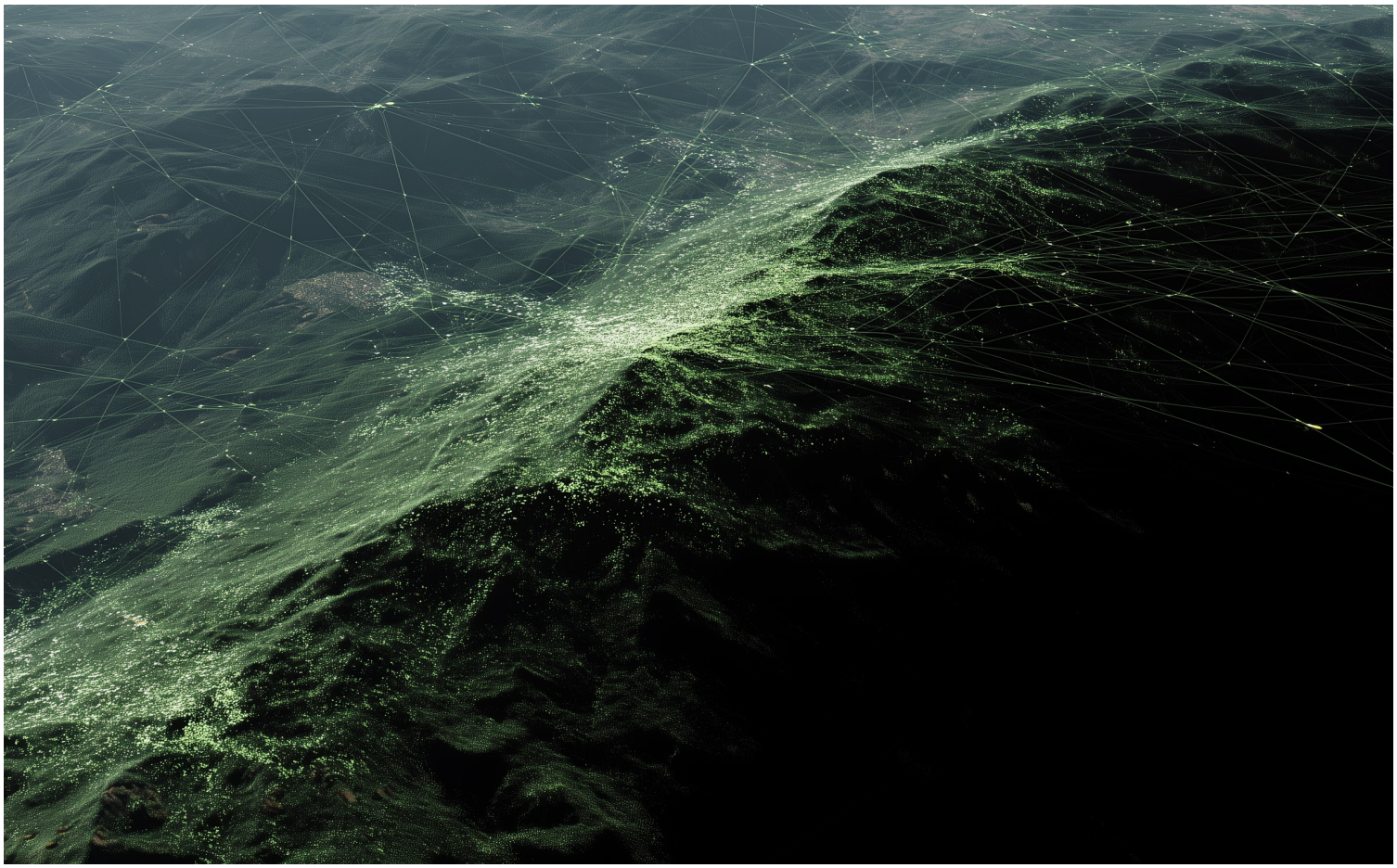
QUESTION

You often speak about "phygital ownership." How does the concept of owning part of the digital world, mapped to real space, change our sense of belonging and identity?

Phygital ownership brings digital empowerment to the physical world. When someone owns virtual real estate in SuperWorld - mapped to a real-world location - they become a stakeholder in that place's digital future. It's about identity, connection, and stewardship rather than speculation. People begin to care more deeply about the places they own, share, and interact with - both online and offline - fostering a stronger emotional and cultural bond with the real world.

What makes this even more powerful is that digital interactions can now shape physical outcomes. Through technologies like DePIN (Decentralized Physical Infrastructure Networks), AI, and immersive experiences, ownership in SuperWorld enables users to participate in the evolution of real-world infrastructure, sustainability efforts, and community development.

In fact, we're pioneering a new category called Real World Locations (RWL) - where immersive tech, Web3, AI, Real World Assets (RWA), and DePIN converge. RWLs represent the next frontier of ownership and engagement, connecting digital actions directly to real-world impact. Beyond digital property - it's about co-creating the future of Earth itself through technology that enhances how we live, connect, and build together.



QUESTION

As virtual worlds evolve into global ecosystems, what role do you see for digital sovereignty - both for individuals and communities?

"We're creating the framework for bottom-up, participatory governance."

Digital sovereignty must start at the individual level. Users should own their data, digital assets, and identities. Communities should govern their local digital ecosystems - from how cultural content is represented to how monetization flows. In SuperWorld, ownership and governance are decentralized and location-based, empowering people to shape their digital presence and earn from activity within their geography.

QUESTION

Could decentralized, creator-led environments like SuperWorld inspire new governance models that differ from those of traditional states?

Yes - SuperWorld acts as a decentralized map of the world where creators become governors of their digital locations. Instead of top-down control, governance emerges from collaboration among stakeholders - creators, businesses, residents, and visitors. It's a new model of local digital democracy where creativity and participation define how communities thrive.

Beyond this, SuperWorld is enabling individuals and communities to establish sovereign individuality and network states - self-organized, value-driven communities that operate globally while being rooted in real-world locations. These decentralized digital societies can form around shared interests, missions, or identities, and also engage physically through local hubs, events, or projects.

We're also soon launching our own currency, $SPWR, which will serve as the economic engine powering this new layer of governance. $SPWR will enable our SuperCitizens to execute payments, receive rewards, stake tokens, and participate in decentralized decision-making across the SuperWorld ecosystem.

In this way, SuperWorld becomes an infrastructure for a new kind of global governance - one that merges economics, identity, and community in both digital and physical contexts. It's a framework for bottom-up, participatory governance where every individual and community can shape the world around them - and share directly in the value they help create.

QUESTION

How might nations or cities use platforms like SuperWorld to extend their digital presence or engage citizens in novel ways?

Cities can use SuperWorld as an immersive civic engagement layer - to promote tourism, events, sustainability initiatives, or cultural preservation. Governments could showcase public projects, host virtual town halls, or integrate digital IDs and smart infrastructure within their mapped geography. This creates transparency, inclusion, and real-time participation.

QUESTION

SuperWorld enables users to monetize digital content linked to real-world locations. How do you envision this redefining the economy of place (from tourism to urban development)?

"Every real-world location becomes an active digital economy."

Every location on Earth becomes an economic node. A restaurant, museum, or park can host immersive experiences, AR activations, and bookings for real-world services - all visible through SuperWorld. This redefines "place" as an active digital ecosystem where interaction equals economic value. Urban development will increasingly integrate digital layers that drive engagement, commerce, and cultural tourism.

These integrations also extend to physical interactions - where users can engage with content on-site through AR, QR codes, or AI-powered assistants, enabling seamless transitions between digital and physical experiences. Whether it's booking a hotel, attending an event, or interacting with a local business, every real-world action becomes part of a shared digital economy.

In essence, SuperWorld turns the physical world into an interactive marketplace, where people, places, and technology work together to create economic opportunity, enhance culture, and redefine the value of location itself.

QUESTION

What new kinds of value exchange or commerce could emerge when virtual real estate mirrors real-world geography?

We're building a new economic layer where ownership and participation are rewarded. Value exchange can come from advertising, bookings, e-commerce, gaming, and creator interactions tied to physical coordinates. Imagine walking through a city where every business, landmark, or event has its own digital economy, owned and monetized by its stakeholders.

Beyond that, businesses and creators can design new forms of phygital commerce, offering both physical experiences and services alongside digital ones. Someone could access an exclusive in-person event, restaurant experience, or local service by being at that physical location, while others participate remotely through live streams, immersive content, or AR/VR interactions.

This creates a powerful new model of hybrid engagement, where local activity generates global participation, and both on-site and online audiences contribute to a shared economy. SuperWorld enables this convergence, transforming every real-world location into a dynamic marketplace of experiences, interactions, and opportunities that extend far beyond geography.

QUESTION

SuperWorld integrates AI and AR in ways that make the physical world programmable. What's your vision for how AI agents or digital twins will interact with our daily environments?

AI agents will become our personal guides to the real world, curating experiences, recommending places, and enabling us to interact with data and people contextually through AR. Digital twins will mirror and enhance physical locations, helping businesses optimize operations, travelers explore intelligently, and citizens engage meaningfully with their surroundings.

QUESTION

As AR glasses and spatial computing go mainstream, how do you see the map of the world itself becoming a living interface for creativity and connection?

The map will become a shared canvas for expression. Anyone can layer art, education, commerce, or community projects directly onto real places. Imagine looking at your city through glasses and seeing its stories unfold - every wall, park, or monument alive with digital meaning. That's SuperWorld's mission: to make the Earth itself interactive, creative, and human-centered.

QUESTION

How do we ensure that the metaverse (and platforms like SuperWorld) remain inclusive and accessible, not just for early adopters but for communities worldwide?

"Accessibility and decentralization are the keys to true inclusion."

Inclusion starts with accessibility and representation. SuperWorld is designed so anyone, anywhere, can participate, whether they own virtual real estate or not. People can create "Worlds" (their own interactive maps), share recommendations, and earn through real-world interactions. It's free to access and free to create, ensuring that participation isn't limited by wealth or geography.

SuperWorld is decentralized by design, meaning ownership, governance, and value creation belong to the community. While virtual real estate ownership allows individuals to become stakeholders in specific locations, benefiting from all digital and physical interactions that occur there, it also creates a partnership model with creators, businesses, and communities. Property owners don't gate access; instead, they share in the success of the activity and engagement happening in those places.

Our upcoming currency, $SPWR, reinforces this inclusivity by enabling anyone in the world to participate in the global SuperWorld economy. Token holders can use it for payments, rewards, staking, and governance, and benefit from collaboration across the ecosystem, connecting businesses, creators, organizations, and communities worldwide.

Through this structure, SuperWorld ensures that the platform remains open, equitable, and participatory - empowering people everywhere to create, contribute, and thrive across both digital and physical worlds.

QUESTION

As activity in SuperWorld expands (from transactions to social interaction), how do you think about security, accountability, and legal jurisdiction in a decentralized environment?

We're focused on transparent smart contracts, self-sovereign identity, and ethical data use. Decentralization must come with shared standards and accountability. That's why we're working with legal, academic, and government partners to help define frameworks for digital property rights, dispute resolution, and compliance that protect users while preserving innovation.

QUESTION

What excites you most about the next five years in the convergence of AI, Web3, and spatial computing?

"We're building toward a future where technology helps humanity thrive - not escape reality, but enhance it."

The convergence will make the real world intelligent. Every place will become discoverable, interactive, and monetizable, forming a decentralized, user-owned layer of the internet over Earth. I'm excited to see how people use these tools to improve lives, empower local economies, and preserve culture.

QUESTION

If you could design one policy or public initiative to accelerate responsible innovation in this space, what would it be?

I would create a Global Digital Stewardship Framework - a collaboration among governments, creators, and technologists to establish shared standards for digital property rights, ethical AI, and data ownership. It would ensure that individuals benefit directly from their participation in the digital economy while encouraging open innovation and cross-border collaboration.

This framework would also promote decentralization as a guiding principle, empowering people and communities to control their digital assets, identities, and data without dependence on centralized intermediaries. It would recognize digital assets and digital currencies as legitimate forms of ownership, exchange, and governance, laying the groundwork for a fair and transparent global digital economy.

Ultimately, the goal is to align public policy with technological progress, fostering a world where innovation is both responsible and inclusive, and where every individual has the ability to participate meaningfully in shaping the digital and physical future of our planet.

07 WHAT IT TAKES TO BUILD THE AGENTIC STATE

About Luukas Ilves

Luukas Ilves is a technology and policy leader shaping the next generation of digital governance. As Advisor to the Deputy Prime Minister and Minister of Digital Transformation of Ukraine, he works on advancing AI-driven public services, national digital infrastructure, and the development of Ukraine's Agentic State. Formerly Undersecretary for Digital Transformation and Government CIO of Estonia, he helped drive the country's digital transformation and strengthen its leadership in cybersecurity, connectivity, and e-governance.

He is also a Non-Resident Fellow at the International Centre for Defence and Security and a mentor at Creative Destruction Lab Estonia. His work bridges technology, policy, and governance, exploring how AI can renew democratic institutions and state capacity for the digital age.

Behind the world's most advanced digital nations are the people who built them. In this Q&A, we speak with Luukas Ilves, one of the driving forces of Estonia's e-state and now an advisor to Ukraine's Ministry of Digital Transformation. Having helped make Estonia one of the world's leading examples of e-governance, Ilves is now guiding Ukraine's next leap - toward the Agentic State, where AI agents become an active part of governance itself.

QUESTION

You've been doing a lot of work around the "Agentic State." How do you personally define it, and how can it transform government or governance in practice?

AI agents combine the 'brain' of reasoning systems (LLMs) with the 'hands' of automation (APIs, RPA, digital tools), creating software that can perceive, reason, and act with minimal human supervision. Agentic systems can manage end-to-end processes, learn, self-optimize, and collaborate with humans and other agents.

The Agentic State is about using AI agents throughout public administration - and enabling individuals and businesses to interact with public services using AI agents.

In practice, this means services that flow around people's lives rather than forcing them through bureaucratic mazes. When someone says, "I need help after my house was damaged," agents orchestrate responses across insurance, housing, permits, and utilities without requiring the citizen to understand which department does what. Workflows become self-orchestrating, regulations adapt based on real-world outcomes rather than waiting years for legislative updates, and compliance shifts from periodic audits to continuous monitoring.

The transformation is from doing things right - following procedures perfectly - to doing the right things - achieving the outcomes citizens actually need. This isn't about replacing humans but freeing them from routine tasks to focus on judgment, empathy, and strategic thinking.

QUESTION

Should we imagine the digital state as a single, intelligent system, or as a network of smaller, domain-specific agents working together?

With the current state of technology, I would say it's going to be a network of networks, with humans setting up complex multi-agent systems. We also need to look at the bigger picture, which isn't just the footprint of agentic systems operated by public administration, but also the agents acting on behalf of enterprises and individuals that will talk to those systems.

QUESTION

Beyond Ukraine and Estonia, where else do you see the Agentic State taking shape?
Are there any emerging or unexpected cases globally that inspire you?

All over the world. The barrier to entry for building a standalone agent for a specific function is minimal. There are cool projects in Latin America, Africa, and Southeast Asia.

The hard thing will be to scale those into production (with issues of interoperability, data quality). Here, established govtech powers have an advantage, but we will also see some surprising new entrants, both emerging markets and mature countries that have not been previous govtech leaders. In large, federal countries (like the US and Brazil), some of the most innovative uses will be at the state and local levels.

QUESTION

You helped build Estonia's digital foundations and are now helping Ukraine design its AI-driven future. What lessons from Estonia's experience are most relevant, and what should be done differently now?

On a human level, building digital government in Estonia was a massive collaborative effort, without multiple owners and power centers. To build a successful digital state and society over the long run, you need to have initiative and strong delivery all over government, at the national and local levels, and a strong will for everyone to collaborate. In Estonia, this collaborative element comes from the pressure of being small. In larger systems, you have to engineer that collaboration more consciously, or everyone ends up working in their silos (as is the case in most countries).

Today, Estonia is no longer the world's fastest-moving govtech ecosystem. We have a group of established vendors and bureaucratic planning and procurement processes. Don't get me wrong - it's still much more agile than most countries - but Estonia doesn't move at the speed of startups and agile enterprise IT - or at the speed of Ukraine - anymore. We saw this during COVID, when the Estonian tech sector and volunteers built amazing tools in days, but it took months for the public sector to figure out how to properly procure these solutions.

QUESTION

The WINWIN AI Center of Excellence has set an ambitious goal to transform public administration, defense, and industry through AI. What makes Ukraine uniquely positioned to lead this effort?

Ukraine's superpower, developed over the last 5 years, has been its ability to turn challenges into an impetus for innovation and broad diffusion. This was true already before Russia's large-scale invasion: Diia reached nearly 50% of the adult population in 1.5 years (an amazing adoption curve!) because it had a "killer" function - Ukraine tied its COVID pass to the app. Over the past three years, Ukraine has done the same in defense. In the coming years, we are making the bet that Ukraine can repeat this challenge-to-innovation cycle in areas of major national challenges - reconstruction, health, education, energy, mobility - and turn this into growth.

Of course, none of this comes from simply having a difficult situation. You have to combine this with top talent, visionary leadership, and strong execution.

QUESTION

How does WINWIN's focus on AI sovereignty (developing a national LLM and domestic AI infrastructure) connect to broader questions of national security and independence?

Sovereignty (digital or otherwise) isn't about building everything yourself - that is a surefire route to failure - it's about meaningful control over your tech and your long-term development. You achieve this through a combination of your own innovation and control over systems, and using the best that global tech has to offer without ending up dependent on any one provider.

In the past three years, global technology providers have been massive enablers of Ukraine's sovereignty. Cloud, satellite communications, and cyber tools have kept Ukraine's society running. Similarly, Ukraine is leveraging global tech (like LangChain and Gemini) to build its public sector agents.

Ukraine's LLM and domestic AI infrastructure are complements, not replacements, to cloud services and AI models developed by major labs. They will build deep operational understanding in Ukraine, fill in gaps (like understanding the nuances of Ukrainian language), and hopefully incubate niches where innovative Ukrainian solutions conquer the world.

QUESTION

Could Ukraine's Agentic State model become a new exportable framework, much like Estonia's e-governance once did?

Yes, but with a twist. Estonia's e-government model really grew on its own for the first 5-10 years. That made it internally coherent but also made it harder to translate to other countries. The world is much more networked and connected today than in the early 2000s. So I think the model of an Agentic State will co-evolve among a group of leading countries - it won't be uniquely Ukrainian. But the size of the opportunity (the public sector is more than 30% of world GDP) means that the group of countries that are early in this development will all have massive global opportunities.

QUESTION

You've described government as a system made up of many interconnected layers - from how services are delivered to how decisions, budgets, and procurement are managed. Which parts of that system do you think are most in need of reinvention today?

Our Vision Paper on the Agentic State identifies 12 layers of how governments operate and organize themselves that need to be reinvented for the Agentic State.

First, government workflows - the invisible plumbing that determines whether a permit takes days or months. Most are digitized paper trails with bottlenecks hard-coded in. Agents can dynamically sequence tasks, route based on complexity, and continuously optimize processes.

Second, regulatory compliance and supervision. Today's episodic enforcement catches violations after harm occurs. Agentic systems enable continuous monitoring where firm-side agents generate compliance proofs while regulator agents verify in real-time, creating "minimal disclosure, maximal assurance", protecting trade secrets while ensuring oversight.

Third, the data and tech stack of the government are going to need to be reorganized to support the Agentic State. Without reliable data and technical infrastructure (e.g. APIs, model and agent registries, identity systems) that can work with agents, it will be very difficult to scale up agentic systems that really improve on current workflows.

QUESTION

In practical terms, how could AI help fix what's "broken" in government - not just speeding things up, but changing how public administration works at its core?

Agentic AI works by inverting the relationship between citizens and bureaucracy. Instead of forcing people to understand government structure, agents translate user intent into action.

Take procurement: today's months-long RFP cycles exclude small firms and inflate costs. Agentic procurement can, in contrast, continuously scan markets to find market offerings, negotiate at machine speed within policy constraints, and adapt contracts based on performance.

Or a complex life event like the birth of a child. When you have just gotten home from the hospital, tired and ready to start life with a new family member, the last thing you want to think about is scheduling doctors' appointments or filling out forms for different government registries.
The agentic solution just says, "Solve this for me."

QUESTION

You've highlighted Ukraine's "build-in-the-open" approach with public betas on Diia and other platforms. Why is transparency so critical in developing AI for government?

Transparency in AI development serves three critical purposes:

01

First, it builds trust - citizens see not just decisions but the reasoning behind them. When an agent denies a benefit application, it must show what rules it applied, what alternatives it considered, and how to appeal.
This is more transparency than most human bureaucrats provide.

02

Second, public betas create rapid feedback loops. When thousands of users test a service simultaneously, edge cases surface immediately.

03

Third, openness prevents capture. When code, training data, and decision logs are public, vendors can't lock in governments, special interests can't hide influence, and civil society can verify that systems work as claimed.

QUESTION

What have you learned about citizen engagement and iterative design from this process?

User and customer feedback are one of the most valuable signals in building any product. It's the difference between a good idea and one that people want to use.

The Agentic State (in Ukraine and globally) is a brand-new idea - Ukraine's first agent launched this autumn - so we are now only starting to get that feedback. I am sure many of our concepts and ideas of where AI agents add value will turn out to be wrong.

QUESTION

If you were designing a digital state from scratch in 2025, what would be the core architecture or principles you'd start with?

We've already touched on them:

01

Data governance that powers reliable automation. Are the data good enough that good algorithms and systems will also produce the right outcome?

02

Composability that leads to a broad community of builders. Is the barrier to entry low enough that my entire ecosystem can contribute to building new solutions?

03

Failure tolerance that leads to reasonable risk-taking. Are safeguards and redress mechanisms good enough that the human consequences of the system making a mistake are minimal, which allows us to make more mistakes and learn faster?

QUESTION

What will success look like for Ukraine in 5-10 years, and what would make it truly agentic rather than just digital?

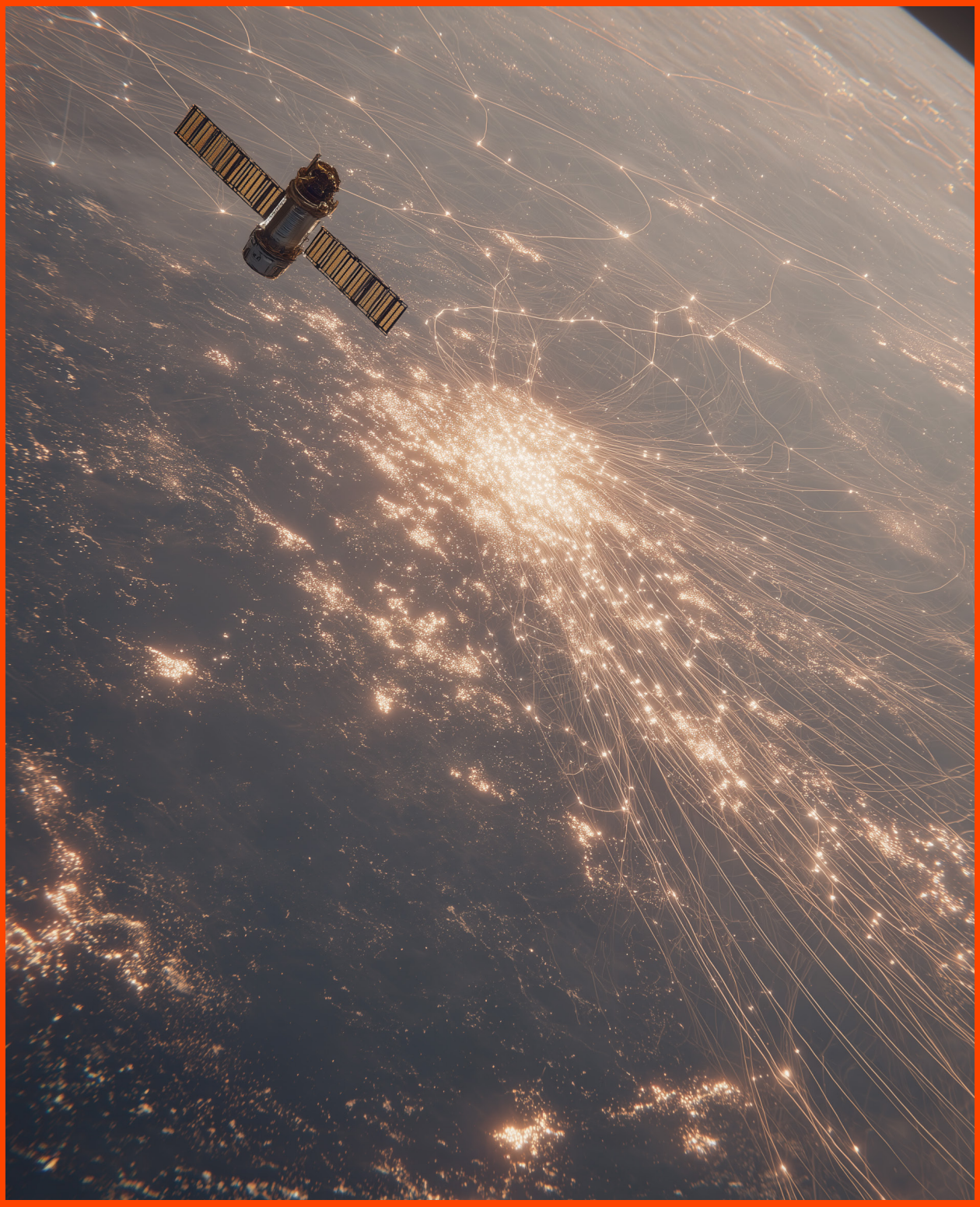
Success means every Ukrainian interacts with the government through conversation, not forms. You tell Diia what you need - start a business, get medical care, report infrastructure damage - and services assemble themselves. And the government anticipates needs before citizens ask: Your business gets regulatory guidance before compliance problems arise. Benefits arrive when circumstances change, without applications. Infrastructure repairs are scheduled before failures occur.

Behind this simplicity, agents continuously optimize. Reconstruction funds route automatically to verified needs. Defense systems coordinate autonomously while preserving democratic oversight. Regulations adapt to rebuild the economy without enabling corruption.

This contributes to building the society and economy Ukrainians deserve - free, open, prosperous, with institutions that enable, protect, and are accountable to citizens.

The question isn't whether it's possible, but whether we move fast enough to make Ukraine the global model rather than a follower. Success means other countries come to study the "Ukrainian Model" the way they study Estonia today.

08 ORBITAL INFRASTRUCTURE AS A PILLAR OF THE DIGITAL STATE



About Anna Hazlett

AzurX is a leading UAE-based advisory and venture firm focused on scaling space and space-enabled technology companies. AzurX works at the intersection of strategy, investment, and innovation, supporting governments, sovereign funds, and private firms in building sustainable, high-impact space ecosystems. Anna serves on the Fund Advisory & Decision Committee of the AED 2 billion Mohammed Bin Rashid Innovation Fund (MBRIF), mentors Saudi Arabia's CST Space Entrepreneurship Bootcamp, is a board observer for Space Intelligence, and sits on the Global Space Awards Steering Committee.

As Multipolitan curates its fourth flagship publication, The Digital State Project, it highlights how nations are redefining sovereignty, governance, and industrial strategy in the digital age. In this context, orbital infrastructure is no longer a niche asset; it is now a core component of a nation's digital stack, underpinning communications, Earth observation, AI-driven analytics, and space-enabled services that are critical for both security and economic growth.

From a space-sector perspective, the Gulf is emerging as a proving ground for these principles. Sovereign capital, strategic procurement, and regulatory innovation are combining to create investable, high-impact space ventures. Recurring revenue from tasking contracts, data subscriptions, hosted payload slots, and mission services, coupled with declining launch costs and modular satellite platforms, is transforming one-off projects into predictable, bankable operations. Government anchors, industrial partnerships, and blended finance mechanisms further de-risk investment, while initiatives like Space SEZs, orbital residency programs, and networked governance models point to a future where space stations, orbital tourism, and the broader orbital economy are integral to a nation's digital infrastructure, though in orbit, different rules may apply, and the market itself can experiment, innovate, and coordinate activity even before formal nation-state frameworks are fully defined.

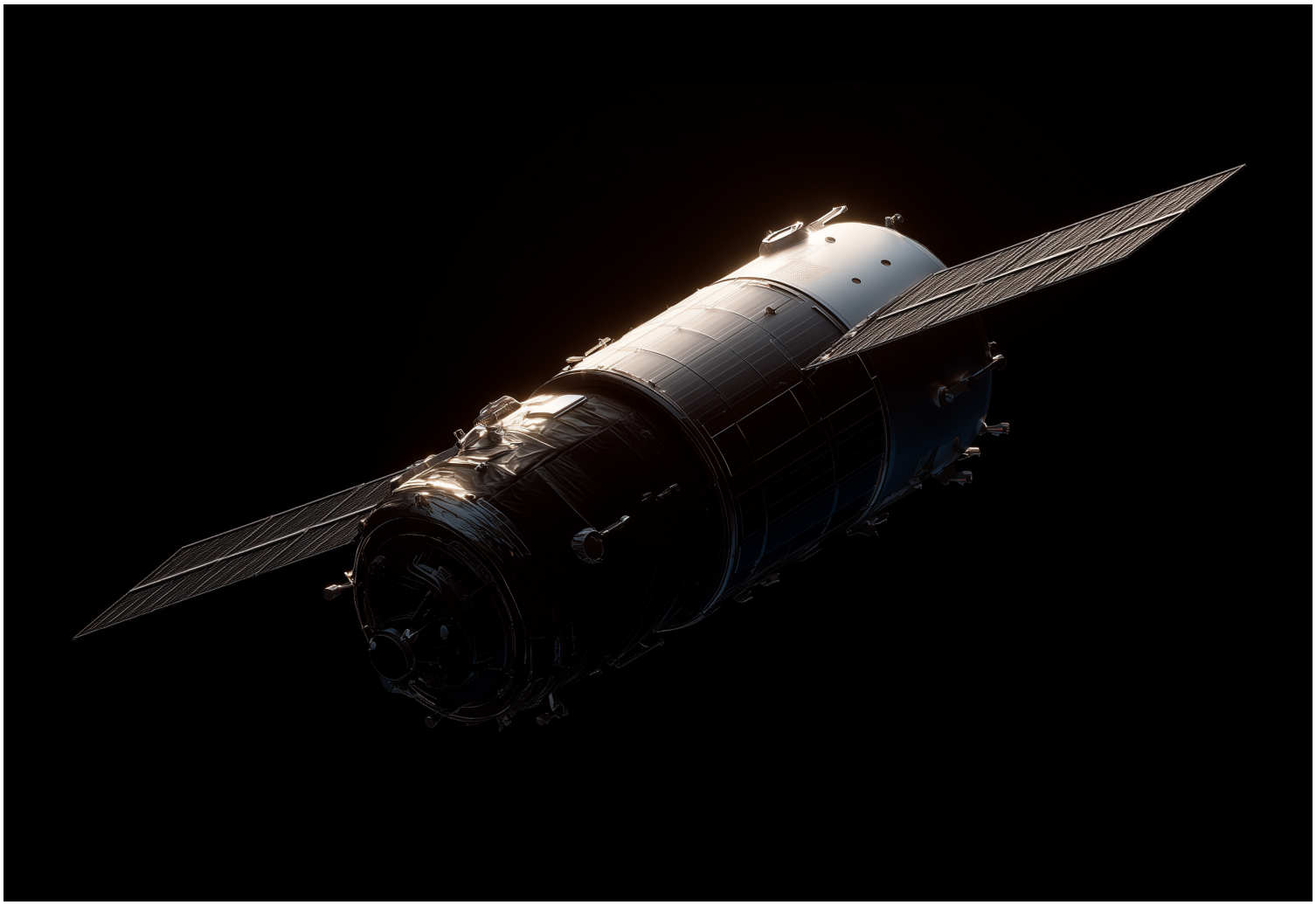
Taken together, these trends suggest that investing in space is now inseparable from investing in the digital state itself. Whether through sovereign-led projects or market-driven, decentralized frameworks including DAOs, tokenization, and on-chain governance, the Gulf and similar regions are demonstrating how orbital capabilities can deliver both immediate operational value and long-term industrial and economic leverage, making space a foundational layer of national digital strategy.

QUESTION

What are the strongest triggers driving investment into space ventures right now?

There are a few big triggers we are seeing today. First is the shift toward data-as-a-service, high-frequency Earth observation, persistent communications, and sensor fusion are turning what used to be one-off missions into recurring revenue streams for governments and enterprises. Second, declining launch and platform costs are a game-changer: small-sat rideshares, higher flight cadence, and modular satellite platforms mean ventures can reach product-market fit faster and with lower upfront capital. Third, government anchor demand is huge; when defence, mapping, or emergency response agencies step in early, they de-risk the investment and give companies scaling visibility. And finally, sovereign capital and industrial policy are increasingly strategic drivers, with nations investing not just for returns but for jobs, data sovereignty, and long-term industrial capability. Layered on top, enabling infrastructure and standards, cloud-native ground systems, software-defined satellites, and clearer regulatory pathways make the whole ecosystem investable.

Taken together, these factors are driving the global space economy toward over $1 trillion by 2030, making it one of the fastest-growing sectors for private capital, public policy, and cross-border partnerships.



QUESTION

What does a bankable project look like today for private investors? Who is the anchor customer? How should risk, liability, and insurance be structured?

A bankable project is one where the revenue is predictable, the margins are defensible, and there is a credible path to exit. Investors (like in any other sector) are looking for recurring, contractable revenue, such as tasking contracts, data subscriptions, mission services, or hosted payload slots backed by technical de-risking, such as flight heritage or short demonstration missions. Strong commercial routes to market matter too, whether that's government MOUs, integration with analytics platforms, or strategic partnerships. Financial discipline and staged funding tied to milestones are key.

In terms of anchor customers, governments often play that role, such as defence agencies, civil authorities, or national space agencies, because they provide early revenue and credibility. We also see large infrastructure and energy firms, as well as airlines and hyperscalers, buying imagery or communications capacity. Essentially, government or sovereign customers de-risk the early stage, which then attracts private capital.

We can think about risk in layers. At the project level, manufacturers and operators typically carry workmanship and launch insurance. At the mission level, in-orbit operational risk is covered for the life of the asset, including third-party liability. Then, contractually, you need clear indemnities and performance SLAs with customers, especially around spectrum, export control, and cybersecurity. For strategic national assets, partial sovereign guarantees or regional pooled risk facilities can dramatically lower capital costs for early missions.

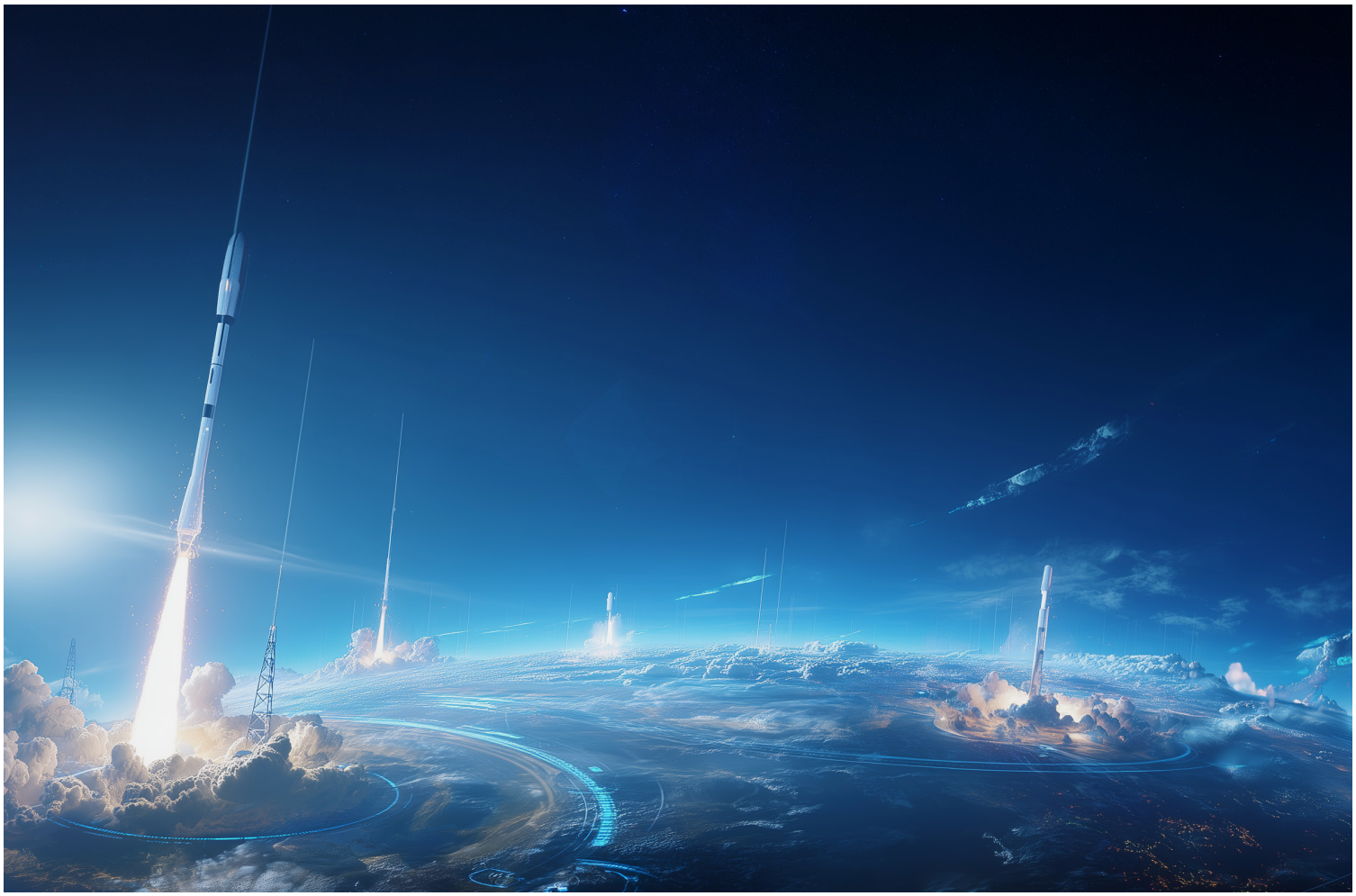
The rapid expansion of commercial space activities is creating a major opportunity for the insurance sector. As satellites, reusable launch systems, and in-orbit services multiply, new coverage areas are emerging across launch, data, and liability risks. Insurers can play a pivotal role in enabling investment confidence and operational continuity, while addressing emerging challenges such as space debris, cybersecurity, and climate-linked data systems. Ultimately, insurance stands to become a cornerstone of a secure, sustainable, and investable space economy.

QUESTION

In a multipolar capital world, which regions are taking the most proactive stance on space investment, and where do you see meaningful cross-bloc collaboration?

We see real momentum from the US - both venture and defence markets; Europe with industrial-policy-backed investment, China and India with state-led scale, and the Gulf with sovereign capital and rapid procurement appetite. The United Arab Emirates (UAE) is particularly proactive: they have forged strong international collaborations to get its national space programs off the ground. Partners from South Korea, France, the US, and other nations were instrumental in providing technical expertise, mission support, and training to the Mohammed Bin Rashid Space Centre (MBRSC) and the UAE Space Agency during the early development of the country's national space initiatives.

The UAE's Comprehensive Economic Partnership Agreements (CEPAs) also create structured pathways for cross-bloc collaboration, lowering regulatory friction for joint projects and investment. Cross-bloc collaboration tends to be most productive where commercial incentives align - in commercial data markets, co-invested infrastructure like launch and ground stations, and standards around spectrum or debris mitigation. Bilateral industrial MoUs and public-private partnerships that clearly separate strategic control from commercial provision are often the most pragmatic way to cooperate, and the UAE's CEPA frameworks are helping pave the way for closer cross-bloc space collaboration.



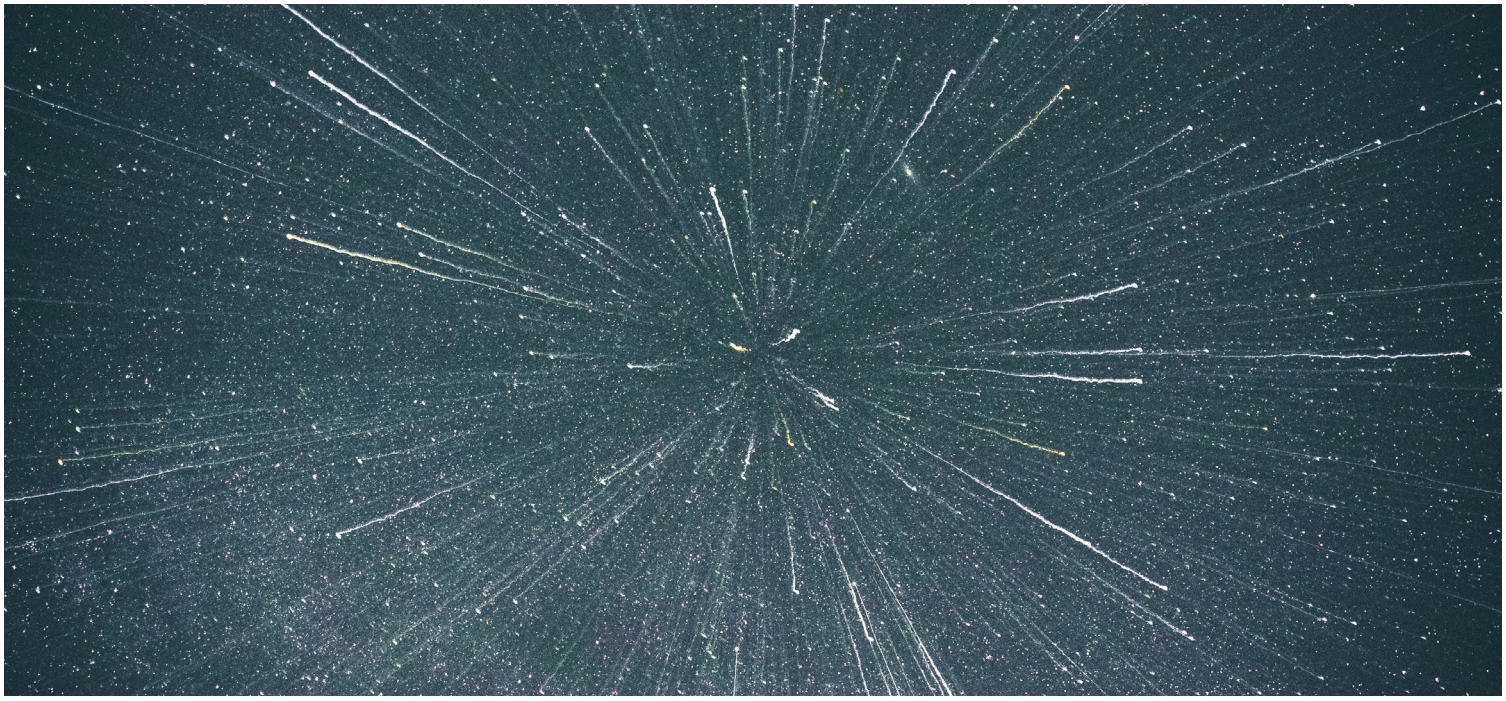
QUESTION

How do you read the Gulf today: where is the GCC strong, and where are the gaps for investors and operators?

Among the fastest-growing space sectors in terms of budget and expenditure can be found in the Gulf. Here, nations are building ambitious space programs - particularly in the UAE and Saudi Arabia - investing billions of dollars in satellites, advanced space technologies, and critical infrastructure in one of the most geopolitically consequential regions in the world. What makes the Gulf unique is its crossroads between continents and markets; it's the most cosmopolitan region I have ever lived in! The geography is highly strategic for equatorial and hemispheric coverage, and proximity to Africa, Asia, and Central and Eastern European, Middle East markets, with 80% of the world's population within an eight-hour flight, making it incredibly attractive. Capital meets political will here: the region can stand up supply chains, manufacturing, and supporting infrastructure rapidly, while also having the means to export to global markets.

Investors can benefit from the region's strong financial, legal, and arbitration frameworks, such as ADGM, BFH, DIFC, and KAFD, combined with reliable local insurance capacity and visibility into upcoming projects. This creates the confidence needed for long-term investment. Technical ecosystems are still maturing, and a clear strategic roadmap for space is in some cases still in progress across the Gulf, which can make securing anchor customers and funding more challenging. Legal and regulatory harmonisation across the GCC is limited, and uncertainties remain around spectrum allocation, O&M, and export control alignment.

The Gulf is ideal for blended finance, combining sovereign anchor capital with private upside, and for running fast pilot projects. But capturing long-term value requires deliberate capability-building: training, supplier development, and R&D-to-commercialisation partnerships.



QUESTION

As space reshapes geopolitics and economics, what concrete steps can economies take to turn space spending into near-term security gains and long-term industrial edge?

In the near term, governments should prioritise dual-use services that deliver immediate security value, for example, persistent ISR, maritime domain awareness, or resilient communications. Procuring these initially from commercial providers allows services to scale while helping to meet local requirements. Close collaboration with providers to design and execute pilot projects is where we are seeing strong foundations being formed. Demonstrators should be integrated into both defence and civil operations from the outset, as we are seeing with the UAE's national space champion Space42 and ICEYE's partnership, as well as FADA's upcoming Sirb SAR constellation in the UAE.

Looking further ahead, long-term advantage comes from building domestic capabilities and laying the foundation for sovereign systems. This includes investing in workforce pipelines, insisting on local content in procurement, and seeding industrial corridors spanning propulsion, structures and composites, avionics, payloads, software, ground systems, and manufacturing infrastructure, with grants or concessional capital. For emerging space nations like the UAE, Bahrain, Oman, and Saudi Arabia, procurement should be explicitly tied to technology and knowledge transfer, with measurable KPIs to ensure tangible local value creation.

This is where we (AzurX) add real impact: advising commercial space enterprises, governments, and sovereign funds on structuring blended finance, anchoring localisation, supporting early procurement with private co-investment, and facilitating partnerships for high-technology access and deployment. By connecting local stakeholders with global technical and industrial partners, AzurX ensures that space spending supports the development of sovereign systems, delivering immediate operational capability and building a sustainable industrial base for the future.

QUESTION

What governance and security frameworks would keep access to orbit safe, open, and investable? And how can the GCC earn a meaningful seat at the rule-making table on spectrum, debris, and cyber?

Access to orbit will remain investable only if there are clear, enforceable, and internationally recognised rules for safety, liability, and operations.

Including orbital traffic management, debris mitigation standards, spectrum allocation, and cybersecurity protocols. The GCC is already taking meaningful steps in this direction. For example, Saudi Arabia hosts an annual Space Debris Conference in Riyadh, bringing together international experts and stakeholders to discuss responsible orbital behaviour and policy frameworks. Organized with the Saudi Space Agency and supported by the United Nations Office for Outer Space Affairs (UNOOSA), the event highlights the Kingdom's leadership in promoting sustainable space operations and global cooperation. The UAE Space Agency addresses space debris and space situational awareness through its National Space Debris Monitoring and Mitigation Program, a network of observatories, and international collaborations. Dubai's DIFC Courts of Space initiative is pioneering a legal framework for dispute resolution in space-related commercial activities, while Bahrain is actively engaging with the International Telecommunication Union (ITU), the UN agency responsible for global spectrum allocation and satellite coordination, to shape spectrum rules and promote international cooperation.

By actively engaging in multilateral bodies, leading regional conferences and initiatives, and strengthening domestic frameworks, the GCC can build credibility and influence. This demonstrates to international investors and partners that the region is taking proactive steps, aligned with global norms, to make the space domain safer, more transparent, and more investable.

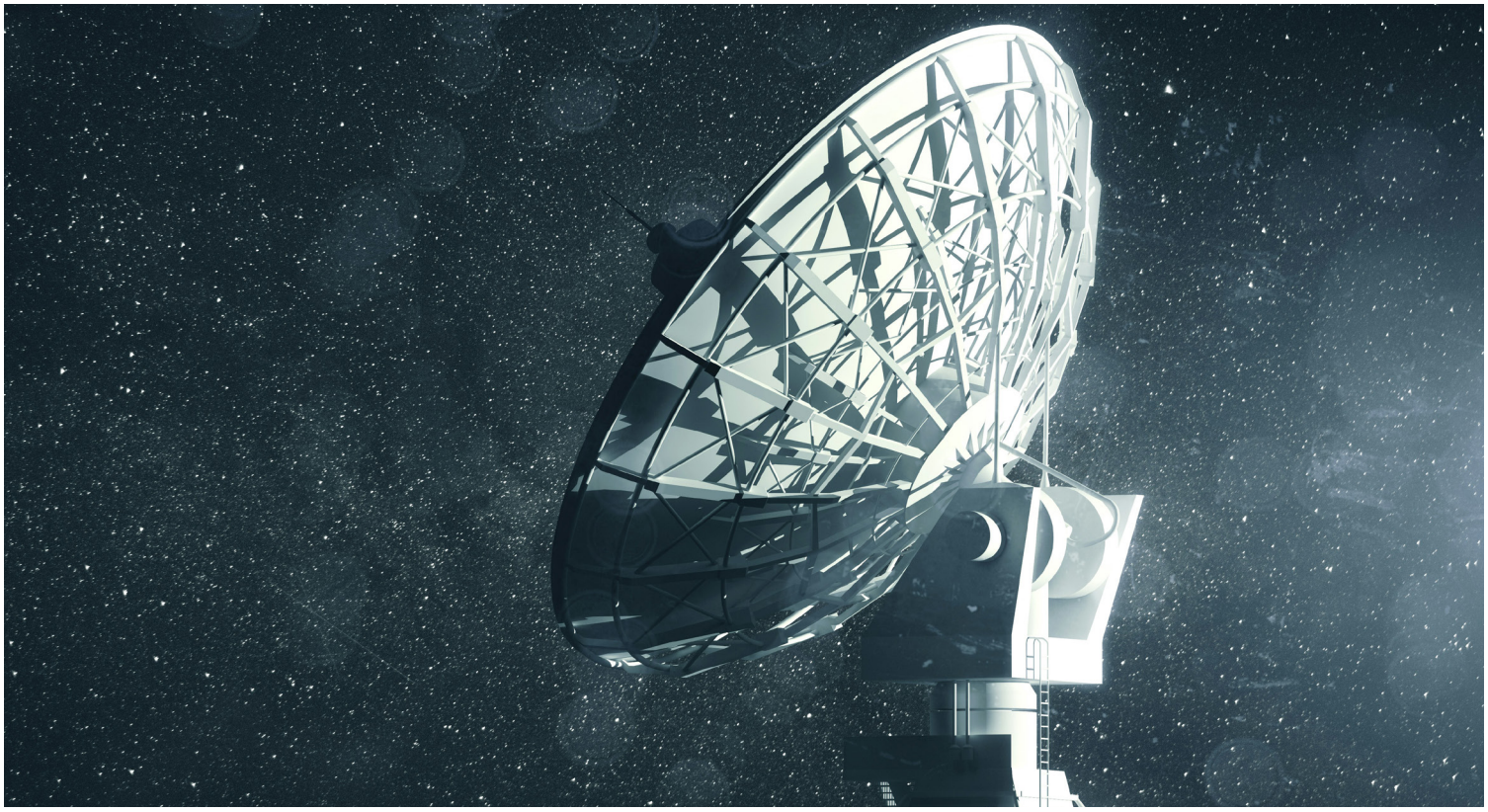
QUESTION

What should data sovereignty look like end-to-end (tasking, downlink, storage, processing, and cross-border distribution), and which elements must remain under local control?

Data sovereignty should be approached through a risk-tiered framework. Critical control points, such as tasking authorizations for national security imagery, initial downlink of regulated data, custody of sensitive raw feeds, and accident or incident logs, must remain within national jurisdiction to ensure trust and security. Non-sensitive processing, including aggregated analytics, commercial workflows, and AI-enabled insights, can be conducted in the cloud or cross-border under robust contractual and technical safeguards. The principle is clear: keep the control plane local, allow the data plane to be hybrid, supported by strong SLAs, encryption, and independently audited transfer frameworks.

For example, when it comes to Earth Observation (EO), this approach ensures that imagery for defense, environmental monitoring, disaster response, or infrastructure planning remains under sovereign control while enabling broader analytical applications, commercial services, and climate monitoring to scale internationally. For LEO constellations, it allows nations to manage tasking, telemetry, and sensitive payloads locally, while supporting high-throughput communications, data aggregation, and cross-border cloud processing to optimize global coverage and efficiency.

By applying this model, space-faring nations can protect critical national intelligence and strategic assets while unlocking commercial innovation, international collaboration, and investment. Satellites and sensors thus become engines of insight, industrial growth, and regional leadership, making the space data ecosystem both secure and scalable across EO and LEO operations.



QUESTION

How would you design a partnership architecture between governments, sovereign funds, and private firms so the region can move fast now while building durable sovereign capacity?

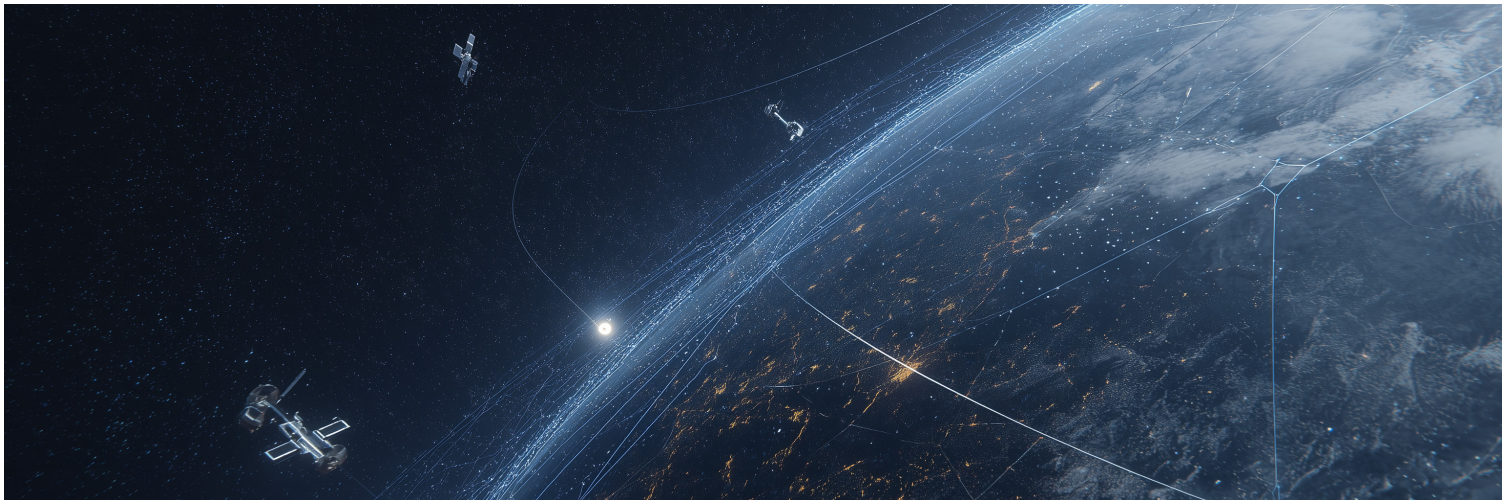
From AzurX's perspective, the fastest way for the Gulf to establish a resilient and investable space ecosystem is through partnerships that combine rapid execution with long-term sovereign impact. Governments and sovereign funds should provide early-stage capital to kickstart rapid demonstrators and pilot programs, while multi-year contracts give operators the stability needed to scale operations and attract talent. Private investors are then brought in once initial milestones are achieved, aligned through equity participation, revenue-sharing, and co-investment structures that incentivize both performance and long-term growth.

Every partnership we design goes beyond funding. We focus on transferring technical expertise, developing local talent pipelines, and establishing shared industrial and operational infrastructure. This ensures the region not only moves quickly to capture near-term opportunities but also builds durable sovereign capabilities, creating a foundation for decades of innovation, economic value, and strategic autonomy in space. AzurX plays a central role as the connector, linking regional stakeholders with global technical and industrial partners, ensuring that every dollar of space investment delivers both immediate operational impact and sustainable industrial growth.

QUESTION

If you would like to wear your imaginative hat, we would like you to explore some more of the concepts below.

These ideas collectively outline a practical architecture for a space ecosystem that balances sovereignty, innovation, and commercial opportunity. They offer a blueprint for how we could operate both on Earth and in orbit, unlocking pathways to a thriving, investable space economy.



Space SEZ / Regulatory Sandbox

In the UAE, space economic zones are emerging across the seven emirates to distribute the industry's economic impact, clustering specific activities and subsectors based on location. A one-stop virtual zone for satellite operations, Earth observation services, launch testing, and orbital station support could fast-track approvals, spectrum allocation, safety permits, and export controls, reducing friction for operators while enabling cross-emirate and cross-bloc alignment with partner organizations and allied nations. This applies both on Earth and in space: the space economy will require economic zones and regulatory sandboxes, not just terrestrial ones. The UAE's existing regulatory sandbox (which is sector agnostic) already serves as a hub for rapid demonstrators and commercial pilots, while safeguarding strategic interests. In orbit, similar principles could apply: orbital platforms could host SEZs and regulatory sandboxes to accelerate the growth of the space economy while protecting national and commercial priorities.

Alternative Residency & Orbital Resident Card

In my work on space stations and designing mixed-use business parks and new markets in orbit, we have been exploring the idea of an alternative residency and "Orbital Resident Card." This concept extends the notion of digital citizenship into the orbital environment itself. A digital state in space could become a hub for founders, entrepreneurs, operators, and investors, offering a form of digital residence on purpose-built space platforms or "orbital nations" connected to cross-bloc allied platforms in orbit or on Earth. Residency could be linked to sponsoring operators or states, supporting both short-term missions and long-term programs, and enabling a flexible, investable pathway for talent and enterprise in the orbital economy. Back on Earth, residents could gain access to know-how, labs, training, orbital station modules, and expedited clearances through Earth-based programs, encouraging clusters of space-tourism operators, researchers, scientists, and private astronauts while maintaining regulatory oversight.

Citizenship in a Spatial Body / Network State

Members could co-fund missions, co-manage shared orbital assets, or operate orbital platforms, creating a digital-state-like governance structure in space. Open calls, small bounties, and standardized protocols enable startups, station projects, and tourism initiatives to scale efficiently, while agreements with sponsoring states or allied blocs provide legal clarity and enforceable rights. Citizenship could also confer access to shared resources, voting on operational decisions, and revenue or tokenized ownership of outputs, aligning incentives across participants. By combining collaborative governance, programmable rules, and transparent asset management, this approach creates a flexible, investable, and resilient framework for orbital activity that complements sovereign oversight without replacing it.

Domicile & Rulebook in Space

Companies could register on Earth but operate under a clear, pre-agreed legal framework for orbital station activities, for instance, specifying court jurisdiction, safety standards, insurance requirements, and commercial rights. This approach makes complex operations from orbital hotels and research labs to logistics hubs and manufacturing platforms, or even space resource mining, legally and financially tractable, while giving investors and insurers the certainty needed to support growth. By codifying rules upfront, it also enables cross-border collaboration, standardizes operational protocols, and reduces friction for new entrants, helping to build a resilient and scalable orbital economy.

Travel & Work Credentials

Imagine a digital-state visa for space: a single credential that bundles visa, access, crew license, medical clearance, and insurance.

Mutual recognition across jurisdictions and orbital platforms would allow tourists, researchers, and crew to move seamlessly between Earth and orbit, supporting orbital tourism, scientific missions, and commercial operations. Beyond logistics, this digital credential becomes a gateway to participation in the orbital economy, enabling a mobile, legally recognized workforce and creating a foundation for investable, cross-border space ventures.

Together, these concepts create a layered, scalable orbital ecosystem: sovereign oversight secures critical operations, streamlined pathways attract top talent and investment, and infrastructure supports space stations, orbital tourism, and the broader space economy, positioning the Gulf as a potential hub for next-generation space activity if adopted. Alternatively, market-driven models could emulate these principles using network-state frameworks, DAOs, tokenization, and on-chain governance, enabling decentralized coordination of orbital projects, shared ownership of assets, and programmable operational rules. Exploring these intersections between sovereign authority, private enterprise, and decentralized architectures could unlock both new governance models and the economics of space, creating scalable, investable pathways for orbital activity.

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