

IV NATIONAL CYBERSECURITY FORUM, BAKU (AZERBAIJAN)

# Digital Sovereignty in the Era of Global Challenges

- ◆ Redefining the Rules of Engagement in Global Cyberspace
- ◆ **A Holistic Approach to National Security:** Software, Hardware, and Cloud
- ◆ Public-Private Partnership (PPP) as the Cornerstone of Genuine Cyber Defense

# International Ecosystem of Trust: **TSARKA** and the OTS Cybersecurity Council



## TSARKA

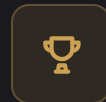
The Leading Cybersecurity Ecosystem in Central Asia (Est. 2015)



## Global Footprint



First 24/7 Commercial SOC in Kazakhstan



## Key Recognitions



TechCrunch

GISEC Cyber Drill Winners (Dubai)



## Strategic Vision

Initiation of a Cybersecurity Council for OTS Member States (Proposed by Kazakhstan's President Kassym-Jomart Tokayev at the 12th OTS Leaders' Summit in Gabala)

# The Core Postulate: Technological Independence = Political Independence



## Cyberspace as a New Theatre

of Inter-State Confrontation



## Foreign IT Stacks in Critical Infrastructure

A Hidden Systemic Vulnerability



## The Imminent Threat of External Paralysis

over State Governance

**Core Principle: No Country or Region Can Remain Politically Independent if it is Technologically Dependent**

# The Engine of Cyber Defense: Legalizing Crowdsourcing & Trusted PPP



## State Agencies Cannot Cover the Entire Perimeter Alone

The Need for Private Sector Agility



## Establishing Safe Harbor

Moving the White-Hat Community from a Legal Vacuum to a Validated Framework



## Institutionalized Interaction Rules

and Legal Vulnerability Payouts




## The Scientific Shift

Practical PPP Success Driving the State to Allocate Targeted Research Grants for Sovereign Cyber R&D



# The First Pillar: **Tumar.One** Platform & Open Source for the OTS

◆ **Tumar.One:** The Largest National Bug Bounty Platform in Central Asia (Covering )

## ECOSYSTEM SCALE

—  
**4,000+**

Researchers

—  
**7,200+**

Verified Reports

—  
**3,300+**

Critical Digital Assets Protected

◆ **Real-World Impact:** Prevented Takeovers of Capital Water Supply Infrastructure, eGov Portals, and Leaks of 7M+ Patient Medical Records



• **os.tumar.one**

**Free Open-Source Version**

# The Second Pillar: Hardware Sovereignty & Combating Hardware Backdoors

◆ **The Deep Threat:** Hardware-Level Implants and Hidden Kernel Backdoors Bypassing Software Defenses

## TAUTAN Secure Phone

Zero Trust Architecture

Isolated Environments

Bring Your Own Encryption

FPGA Shield Against Hardware Implants



## TAUTAN Security Key

Proprietary FIDO2 Hardware Token

Protecting VPN, SSH

Dev Pipelines (CI/CD, GitHub/GitLab)

Against Phishing and Social Engineering



◆ Full Sovereign Control Over the Engineering, Firmware, and Assembly Chain

būlt.ai

# The Third Pillar: Global Shift Towards Sovereign Clouds



## Value Migration

The Global Shift from Commodity Infrastructure (IaaS) to Managed Platform Services (PaaS)



## Strict Regulatory Mandates for Absolute Data Localization

Within National Borders



## Bult.ai (3 Years of R&D)

A Proprietary PaaS Platform Delivering 1-Click Code Deployment (Zero Config, Auto-Scaling)

◆ 08 THE FORMULA



# = Secure OTS Space

Driving Collective Cyber Resilience Across the Region  
Complete Readiness to Share Technologies, Source Code, and Practical Blueprints within the OTS