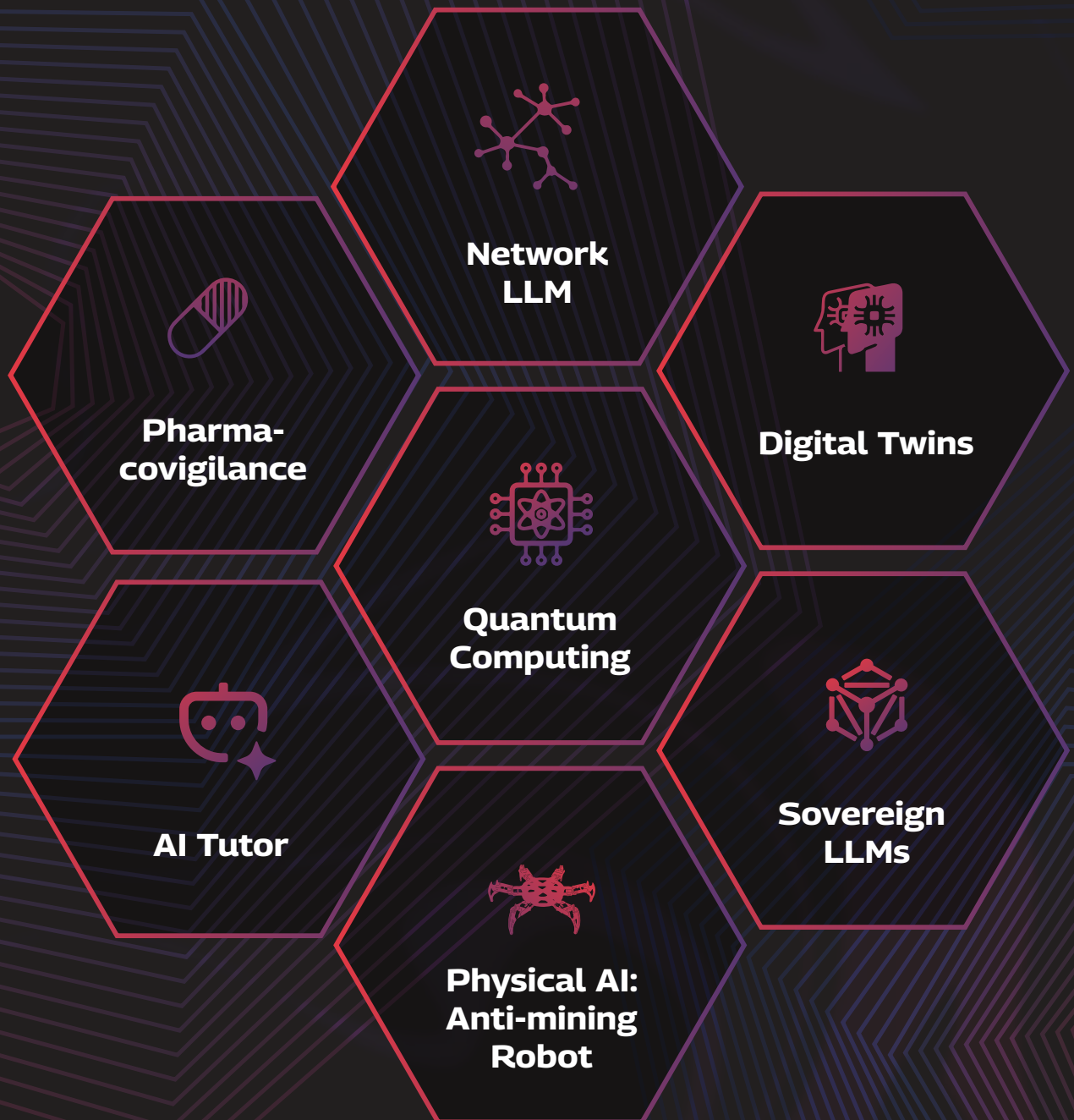


## OUR AI SOLUTIONS



# Network Language Model for Diagnostics and Resolution

with NVIDIA AI Enterprise and OMNIVERSE

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## THE CHALLENGES

- High MTTR
- Capacity concern
- Fast-changing telecom technology
- High cost of operations
- Network operations dashboard is static in nature
- No customized querying possible on the dashboard
- Lower insight = lower NPS. This leads to Improper highlighting of problems



## OUR SOLUTION

- » Allows for faster RCA and remediation
-  Has a dynamic Intelligent dashboard
-  *Can understand the language of networks and answer any specific query*
-  *Uses agentic AI for real-time data extraction = faster problem resolution*
-  *Can be applied to existing dashboards to capture the network pulse in real-time*
-  Connected digital twin for solution planning and what-If analysis

# Network Language Model for Diagnostics and Resolution

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## DIGITAL TWIN built on NVIDIA OMNIVERSE



Processes and analyzes data in real time through IoT sensors



Incorporates ground clutter & customer data



Uses ray tracing to visualize interaction of network with surrounding



Simulates and tests flaws & blind spots even in offline mode



Monitors potential outages & network challenges in real time



Swifter networks due to faster delivery of insights into where to install what products



## BUSINESS BENEFITS

Prediction of procurement cycles saves **15-20%** of CAPEX

Accuracy of up to **6mm at 120m** distance

Design document errors and omissions reduced by **80%**

**95%** reduction in asset and location data creation

**80%** time saved and truck rolls avoided for field engineering

Reduces network design time by **70%**

Tower rollout project costs, acquisition and validation reduced by **50%**

Overall lifecycle costs reduced by **15+%**



## THE CHALLENGES

- The current case intake process is manual and inefficient
- **Data Overload** - 1000+ adverse events (AEs) reported daily for major drugs, creating analysis bottlenecks, resulting in higher costs and potential delays in safety case processing and reporting
- **Global Regulatory Complexity** - 30% increase in regulatory updates annually.  
Over 60 regulatory authorities with differing standards complicate compliance
- **Resource Constraints** - 25% PV budgets spent on manual tasks.  
Shortage of skilled professionals, with 20% higher demand than supply

## OUR SOLUTION

An application that enhances existing pharmacovigilance (PV) case intake processes by utilizing open-source generative AI models and Agentic AI frameworks

This application integrates with the company's email system to automate the monitoring, classification, prioritization, and verification of PV emails using LLM-based Multi AI agents



## KEY FEATURES

### Email Monitoring and Classification

- Integrates with the existing PV Intake email system (e.g., Microsoft Outlook)
- Real-time analysis of incoming emails with AE information or ICSRs as "Valid Case" and those without as "Non-AE Emails"
- Categorizes AE and non-AE cases into a designated folders

### Automatic Prioritization

- Valid cases prioritized on severity of reported events
- Priority labeling for easy identification

### QC and Verification

- Automatically verifies classifications and prioritizations made by the AI Agent-based framework
- Sends it for human review if there is a discrepancy in the result

### Administrative Interface

- Configuration of classification tasks, prioritization criteria, agent and agent prompt management, and other business settings
- Possibility of fine-tuning for client specific scenarios
- Displays daily, weekly and monthly metrics to track performance and compliance



## BUSINESS BENEFITS

Faster Processing: Streamlines case handling, reducing turnaround times by up to **40%**

Enhanced Accuracy: Minimizes errors, improving data reliability by **30%**

Cost Savings: Eliminates repetitive manual tasks, reducing operational costs by **25%**

Improved Compliance: Ensures timely, accurate reporting to regulatory authorities

Proactive Risk Mitigation: Early identification of safety signals enhances patient safety and trust

## Project Indus



**India's first** Sovereign Large Language Model (LLM)



Capable of understanding and interacting with users in **Hindi and its 37 dialects**

**1.2 Billion** Parameter model doing better than larger models on **ARC challenge**

## Sahabat.AI



**Sovereign LLM** for Indonesia



Aims to preserve **Bahasa language of Indonesia**



Built and trained on **NVIDIA Stack of NVIDIA NeMo™**



Available to all Indonesians in **English and Bahasa languages**

**8 Billion parameter model** to serve the needs of Indonesia

# Why Quantum Computing Requires Security Regulations?

2022

ENTIRE TECH WORLD AT RISK

2025

Chinese researchers claim they can break 2048-bit RSA using quantum computers

President Biden Signs Quantum Computing Cybersecurity Preparedness Act

2023

The Global Risk Institute estimates that by 2030, there will be an 31% probability that quantum computers will be able to break our most prevalent cryptographic methods



We provide Consulting, Assessment and Implementation services for Quantum Security.



We have a healthy partner ecosystem for Quantum Hardware.

## Addressing Current And Future Quantum Resilience Security Needs



### TRUE RANDOM NUMBER GENERATION

- Strengthening security of high value digital assets and critical systems
- Highest security random generator through quantum computing



### ENTERPRISE KEY MANAGEMENT AT SCALE

- High performance quantum enabled management of encryption, signatures and certificates
- Agility to rapidly adapt to new security threats and regulatory compliance



### POST QUANTUM CRYPTOGRAPHY

- Integration of NIST's quantum resilient recommendations
- Security further enhanced when combined with Quantum Key Distribution (QKD)



### QUANTUM SECURE COMMUNICATION LINK

- Provably secure cryptographic building block
- QKD for parties to exchange cryptographic keys
- Ability to detect and address attacks on communication links in real time

STRONG ENTROPY SOURCE

AGILE KEY MANAGEMENT

POST QUANTUM CRYPTO DEFENCE

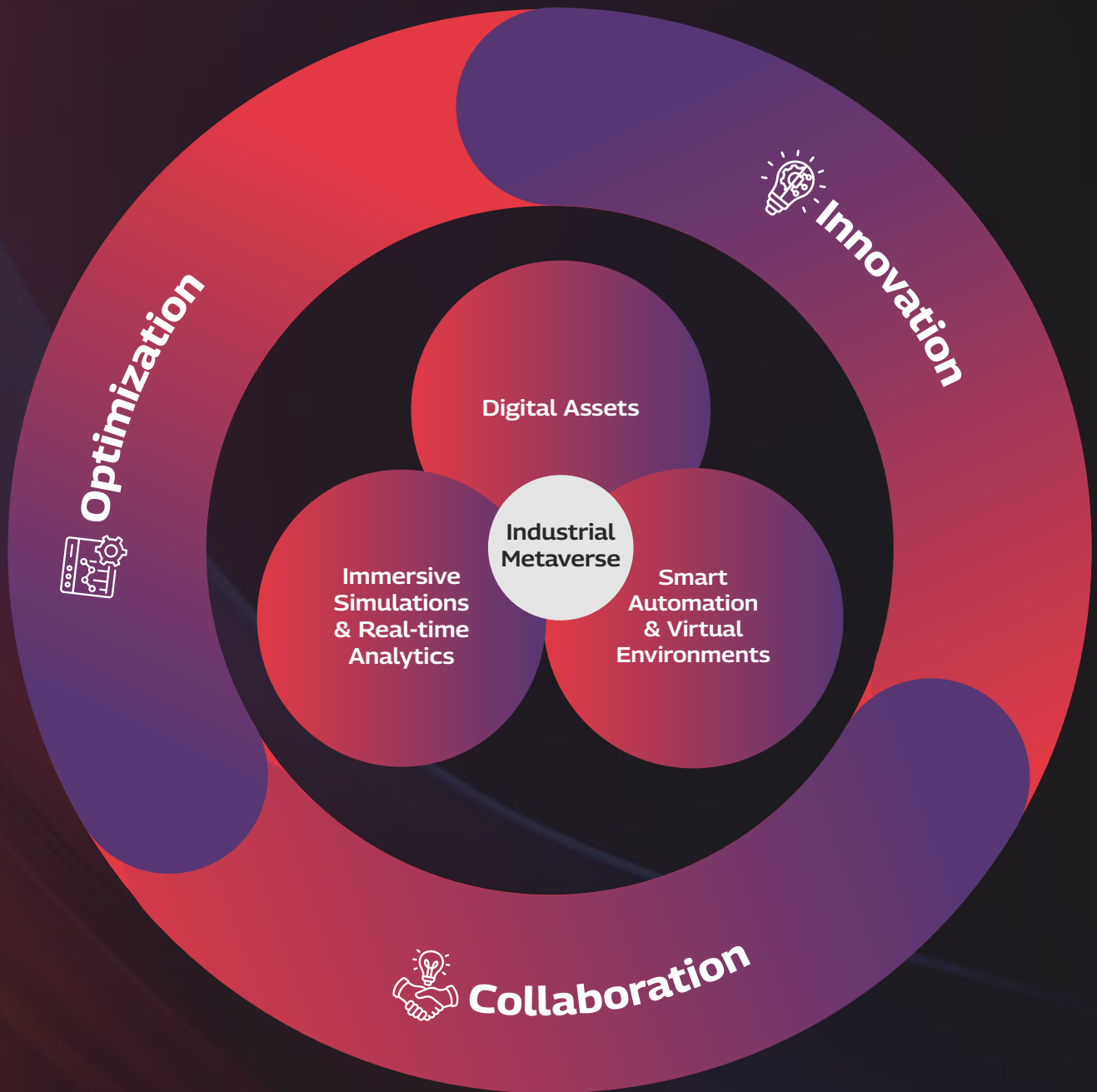
MINIMISE RISK OF STORE-NOW-DECRYPT-LATER ATTACKS ON COMPANY AND CUSTOMER DATA



# Digital Twins: Industrial Metaverse

Powered by NVIDIA OMNIVERSE

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## Factors driving Industrial Metaverse growth

- Advancements in AR/VR, AI and IoT technologies
- Demand for greater efficiency
- Integration of AI and Machine Learning enabling predictive analysis and automation
- Enhanced connectivity with low-latency 5G networks
- Optimization of resource consumption to reduce environmental impact



## Benefits of Tech Mahindra's AI-powered Digital Twins

- ⚡ Better efficiency
- ⚙️ Faster market deployment
- ⬇️ Reduced costs allowing scaling up on demand
- ⚙️ Optimized resource allocation for enhanced planning and execution



Factory  
Digital Twin



Telecom  
Digital Twin



Real time- Auto  
Design Collaboration

## AI Tutor the future of Education

Say "Hello" to MANAV,  
your personal learning AI tutor.



MANAV AI Tutor provides **high-quality education**,  
**is time-saving and cost-effective**, providing  
flexibility to the end user.

### Our solution for Digital Humans



Use of Gen AI to create course content from any  
information source



Power your digital persona with MANAV AI



Generative AI-enabled Agent



Ability to work with your own Enterprise Content



Real-time Lip Sync Makes MANAV Hyper-real

## KEY FEATURES

### Ask Questions to Increase Engagement

Engage in natural conversations, just like you would with a human tutor

### Interrupt for Enhanced Learning Outcomes

Interrupt or pause the lesson at any time to clarify or explore specific topics in detail. MANAV Virtual AI Tutor empowers learners to achieve better flexibility and clarity

### Personalized Guidance for Extra Motivation

Receive tailored explanations and guidance that cater to your unique learning style and pace to keep you motivated

## What Powers MANAV Virtual AI Tutor?

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>● NIM Inferencing</li><li>● NVIDIA RAG</li><li>● NVIDIA Guardrails</li><li>● TechM-MANAV Lightweight Metahuman Solution</li></ul> | <ul style="list-style-type: none"><li>● AWS Polly: Speech-to-Text and Text-to-Speech Service</li><li>● AWS EC2 for Hosting Solution</li><li>● AWS GPU (NVIDIA)</li></ul> |
|---|--|

MDR (device built by Makers Lab, Tech Mahindra) will navigate the area in swarm, detect the mines and neutralize them thus saving precious lives. The device is built like a 6-legged spider, to enable it to balance on any terrain. It can also function to its fullest capacity in spite of two of its legs being shot.

During a war, soldiers can use a Mine-Detecting Robot to remove mines before an army personnel moves. This Robot can reduce the loss of lives and lower the overall cost of defense for managing post-war trauma.



**Powered by NVIDIA ROS**

## KEY FEATURES

- Extremely agile & responsive
  - Lightweight with low center of gravity
  - Fully functional even after losing two limbs
  - 4 Unique gaits-tripod, tetrapod, cyclic, wave
  - Has swarm capabilities for extensible coverage
  - Forelimbs can transfer full weight to one
  - Parallel load distribution
  - 8 degrees of freedom (3 on each leg)
  - Built-in camera, sensor port
- 
- **Optional Autonomous Mode and Manned Mode up to a distance of 50 meters**
  - **In-built Ground penetrating radar system (GPR) to detect mines**
  - **Neutralizes mines with a force equivalent to 7.5 Kilograms**



# *Scale at Speed*<sup>TM</sup>

Our promise to help enterprises transform at speed, bring agility, resilience and efficiency to their businesses.