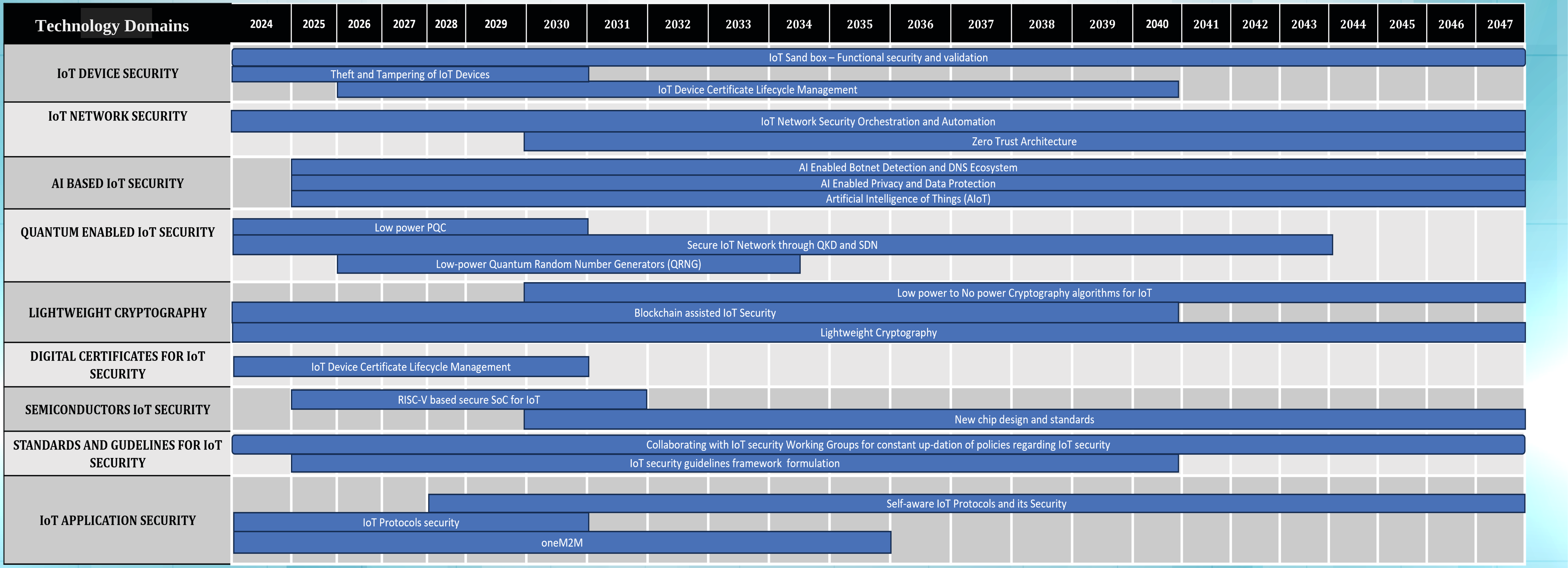
सत्यमेव जयते

इलेक्ट्रॉनिकी और
सूचना प्रौद्योगिकी मंत्रालय
भारत सरकार

Ministry of Electronics and
Information Technology
Government of India

National IoT Security Roadmap



IoT DEVICE SECURITY
- IoT Sand box – Functional security and validation
- Theft and Tampering of IoT Devices
- IoT Device Certificate Lifecycle Management

IoT NETWORK SECURITY
- IoT Network Security Orchestration and Automation
- Zero Trust Architecture

AI BASED IoT SECURITY
- AI Enabled Botnet Detection and DNS Ecosystem
- AI Enabled Privacy and Data Protection
- Artificial Intelligence of Things (AIoT)

QUANTUM ENABLED IoT SECURITY
- Low power PQC
- Secure IoT Network through QKD and SDN
- Low-power Quantum Random Number Generators (QRNG)

LIGHTWEIGHT CRYPTOGRAPHY
- Low power to No power Cryptography algorithms for IoT
- Blockchain assisted IoT Security
- Lightweight Cryptography

DIGITAL CERTIFICATES FOR IoT SECURITY
- IoT Device Certificate Lifecycle Management

SEMICONDUCTORS IoT SECURITY
- RISC-V based secure SoC for IoT
- New chip design and standards

STANDARDS AND GUDELINES FOR IoT SECURITY
- Collaborating with IoT security Working Groups for constant up-dation of policies regarding IoT security
- IoT security guidelines framework formulation

IoT APPLICATION SECURITY
- Self-aware IoT Protocols and its Security
- IoT Protocols security
- oneM2M

Vision: To Secure IoT Ecosystem through Development of Indigenous Solutions

Goals :

- **Indigenous security ecosystem for IoT security**
- **AI Powered self adapting IoT Security**
- **PQC enabled IoT systems**