

ITU Workshop on “Building an AI-native Future of Industry”

**21 September 2026
Beijing, China**



Session 1: Fundamental Technologies for AI-Native Architectures

Takeaways and Conclusions

1 AI Native has infrastructure implications

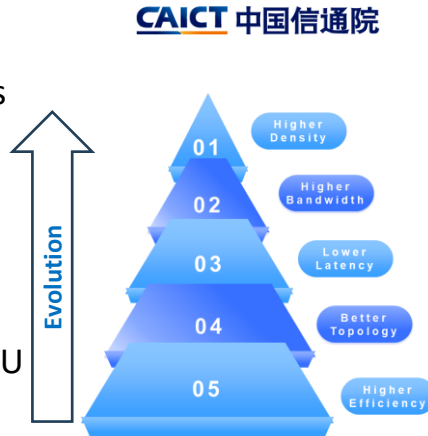
Challenges to traditional computing architectures

- limited single-node performance
- cluster-scaling bottlenecks,
- low resource utilization

Requirement: architectural upgrade

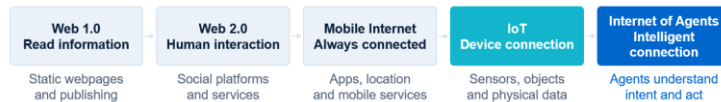
Solution: **SuperPod technology**

- large-scale computing unit integrating GPU/NPU
- high-speed interconnect technology
- unified memory with memory-semantic access



2 Internet of Agents: both requirements and opportunities

Internet Evolution



AI Explosion towards Agents: **IoA** era Arrives, **huge business potentials**

Solutions:

- **Net4AI Agents: XiRang AI Infrastructure** 5-in-1 Intelligent Capability: Computing, Platform, Data, Model, Application
- **AI Agent4Net: QiMing** network LLM: from single AI Agent to Digital Employee with multi-agent collaboration.

Suggestions for AINN standardization

Infrastructure requirements relating to

- **Computation** and **memory** for agents
- Inter Agents **connectivity**

might require higher emphasis and reassessment

Agentic AI specific capabilities and requirements, including

- **Hardware platform architecture**
- Integrated **Connectivity, Computing, Data** platforms
- **Multi Agent** collaboration models

might be key enablers for further analysis and development in standardisation perspective, possibly focus of **future developments**



Session 2: AI-Native Networks: Architecting the Future of Intelligent Telecommunications

Takeaways and Conclusions

1 Agents/Agentic AI take a central stage in the future of telecom

- **NetNexus technology:** Agentic Platform for Telecom O&M
 - Agentic RAN Dual Brain Architecture
 - Two closed loops



- from autonomy to **L4 with Agentic AI**

- **Agent centric L4 architecture**
- "Four Zeros" for Users, "Four Selfs" for Operations
- **CubeMap** – protocol for Agents networking



2 Digital Twins and World Model also playing a pivotal role

- **Digital Twin**-aided Agentic network management



- **Multi-modal Wireless Foundation Model**

- Model pre training → PHY performance improvements
- Higher layer state transition prediction → MAC/QoS improvement
- OAM impact:
 - intent-Driven Fault Diagnosis for 5G Private Networks
 - industrial Network Quality Management

Suggestions for AINN standardization

Agents/Agentic AI has very high relevance for telecom network management, FG-AINN output deliverables will get attention

- Harmonization between *TS - Architecture Framework for Artificial Intelligence Native Telecommunication Networks* and *TS - AI Agent enabled Management and Orchestration for AI Native Networks* to be carefully considered
- Completion with the right level of details of *TS - AI Agent enabled Management and Orchestration for AI Native Networks* to be carefully considered

Agents/ Agentic AI application **within telecom network** appear at an early stage of development

- This aspect may deserve further analysis and development in standardization perspective, possibly focus of future developments
- **Coordination and assurance of AI agents across supplier and technology boundaries in an operator network, e.g. KPIs to bound agent behaviour, may be considered for further study**



Session 3: AI Agents in Enterprise Applications

Takeaways and Conclusions

- **Agents are becoming accountable executors, not just advisors**

They now enter real production systems — enterprise organizations (3.1), OS distribution engineering (3.2), long-chain knowledge-intensive R&D (3.5), team collaboration (3.6), regulated on-device work (3.4).

- **The bottleneck is the control structure around the model, not model capability**

Deterministic workflows handle predictable tasks, while the LLM operates as a constrained explorer for ambiguous scenarios; humans focus on goal setting, control gates, approval and ultimate accountability. (3.5: four control planes; 3.2: dual loops; 3.1: 1+7+1 framework; 3.6: human sign-off gates).

- **Trust is engineered, not claimed.**

Reliability is achieved through data-in-boundary constraints, sandboxing, and full-chain audits (3.4); evidence chains with confidence-tiered verification and explicit human-exit conditions (3.5); and revocable identities backed by four distinct ledgers (3.1).

- **Knowledge becomes a managed runtime asset**

Enterprise intelligence requires versioned, addressable, machine-readable, and human-signed "Knowledge as Code" (3.6), alongside structured context and capability assets verified by six foundational checks (3.1).

Suggestions for AINN standardization

- AINN standardization could consider addressing the **control and management** around LLM and AI agents to enable deterministic workflows in telecommunication network.
 - Inference control plane (e.g. including routing, disaggregation, autoscaling)
 - Agent execution plane (e.g. including harness control, execution)
 - Management plane (e.g. including identity, ledgers, lifecycle, knowledge)
- AINN standardization should enhance collaboration with open source practices



Session 4: Trends in the Token Economy

Takeaways and Conclusions

- A new economic and governance layer, rooted in token economy, is forming above the agents. This layer provides the foundational framework necessary for cross-agent coordination, compliance, and value exchange
 - Tokens now represent a multidimensional convergence of technology, economy, institution, and society (4.1).
 - This architecture relies on semantic agent discovery, endpoint resolution, and identity management. Consequently, governance must span the full lifecycle: identity and permissions before access, data and content controls during execution, and audits and accountability after execution (4.2).
 - Agents are transitioning from passive software tools into self-governing economic institutions (4.3). Equipped with financial primitives, agents are shifting from mere task executors to independent economic actors capable of managing capital and resource allocation (4.3).

Suggestions for AINN standardization

- AINN standardization could consider addressing AI-native networking for massive interconnection of Agents, e.g., agent discovery and routing.
- AINN standardization should further study impact of tokenization on AINN capabilities and requirements

