IPLOOK

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1 Company Profile

Who We Are

Founded in 2012, IPLOOK is a global leader in end-to-end, cloud-based **mobile core network solutions**. Specializing in full-stack **3G/4G/5G/IMS** core network technologies, IPLOOK provides carrier-grade and high-performance solutions for **Mobile Operator,** and **MVNO**...

Zhengzhou
Beijing
Xian
Chengdu
Nanjing
Milan
Shanghai
Guangzhou
Dakar
Istanbul
HongKong
Kampala
Phnom Penh
Nairobi

13+
Years Experience

70%
R&D/Technical Engineers

50M+
Subscribers

50+
Users Covering Countries

500+
Commercial Deployments

Certificates

- **2G/4G/5G full core network** elements access certificate

- Holds **CMMI-3** and **ISO9001** certifications

- **70+** software copyrights and **500+** patents in core network field

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Products & Solutions

Product Lines

2G/3G Core

SMSC, USSD, GGSN, STP, HLR, IWF

4G Core(EPC)

User Plane
Control Plane

SGW, PGW, PCRF, MME, HSS, EPC, UE, eNB, DN

5G Core(5GC)

User Plane
Control Plane

NSSF, UDM, NRF, PCF, AUSF, AMF, NEF, SMF, 5CC, UPF, AF, UE, (R)AN, DN

Integrated CSFB & PSHO Support for Legacy Compatibility

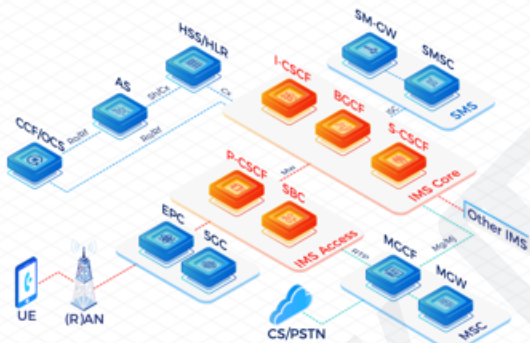Smooth Migration or Upgrade from 2G/3G(Huawei/ZTE/Nokia...) to 4G/5G Core Networks

Advanced Resource Management with Real-Time Optimization

Million-Scale Capacity for Massive User Concurrency

Product Lines

IMS(VoLTE/VoNR)

ePDG(VoWiFi)

Satellite Core

Standardized Interfaces Ensuring Multi-vendor Compatibility

Service Continuity Between LTE & WiFi

**Open, Automated & Secure OM with Visual Analytics**

Enabling Direct 5G Connection to LEO Satellites

Cloud-native Core for High Capacity

IPLOOK's iMANO solution delivers customized deployment designs based on a fully cloud-native architecture, providing customers with reliable **4G/5G core networks, IMS, SMSC, and OSS systems**.

Key Features

- Scalability for millions of subscribers.

- Comprehensive management and orchestration based on **NFV** architecture.

- Integrated **Kubernetes(K8s)** and **OpenStack** to improve resource management.

iMANO System Architecture
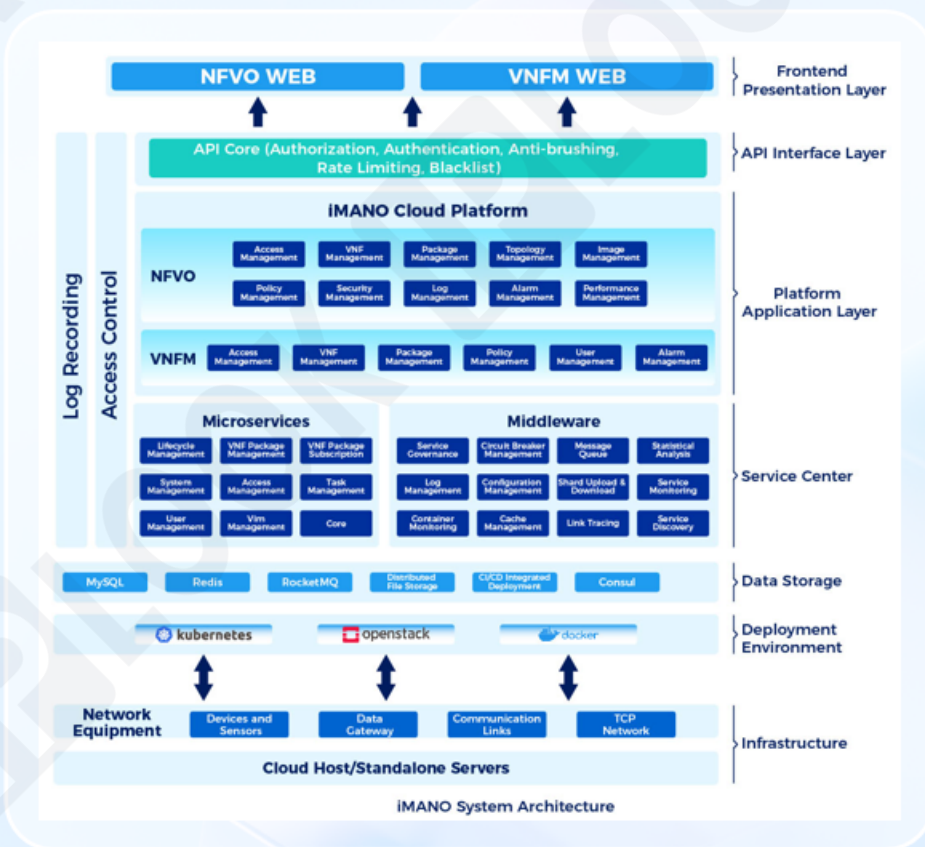
4G/5G Converged Solution

End-to-End Wireless Infrastructure:

- Radios, Core Network, BSS/OSS, and CPEs.
- Seamless 4G/5G services with VoLTE and VoNR.

Performance-Driven and Scalable Design:

- EPC/5GC on X86/ARM bare metal or cloud-native.
- Multi-vendor compatibility.
- Millions of subscribers supported.

Application Scenarios:

MNO

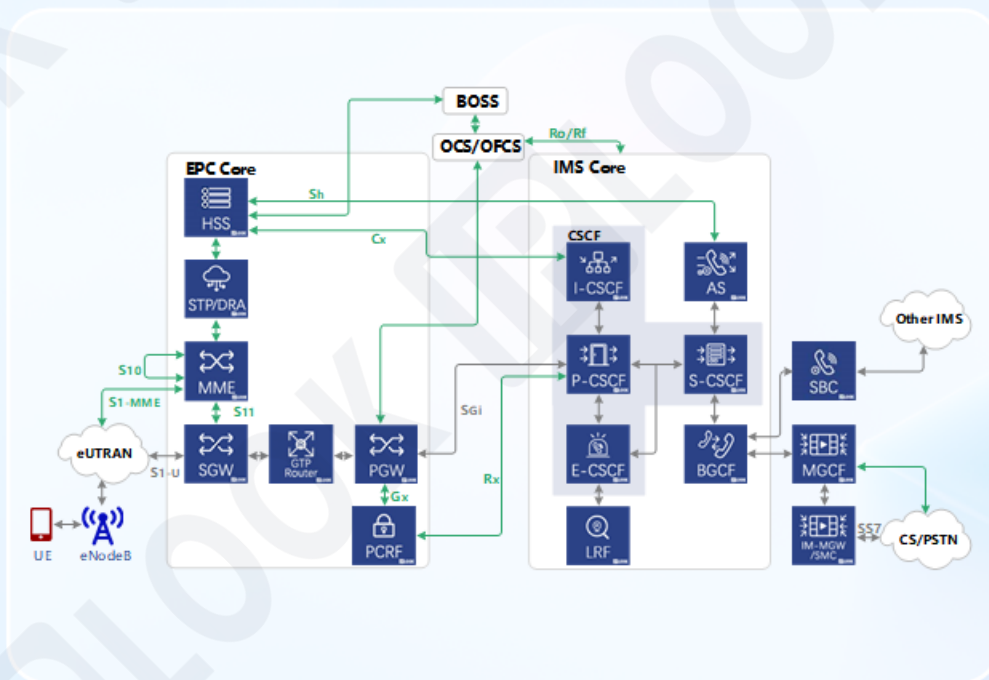MVNO

FWA

Solution for MNO

Added 4G Site:
- Cooperation with existing 2G/3G sites by multi-band 4G base stations.
- Seamless integration of STP/DRA for efficient signaling and routing.

Core Network Cloud Transformation:
- Pre-integrated 5G NSA/SA core, software-upgradable for 5G activation.
- 4G/5G converged architecture enabling smooth transition and coexistence.

OSS/BSS Intelligent Upgrade:
- OCS + PCRF integration for optimized charging and policy control.
- Enhanced DRA-based routing and policy enforcement for improved service delivery.

Throughput of user plane

2G/3G phase-out timeline

New service go-live cycle
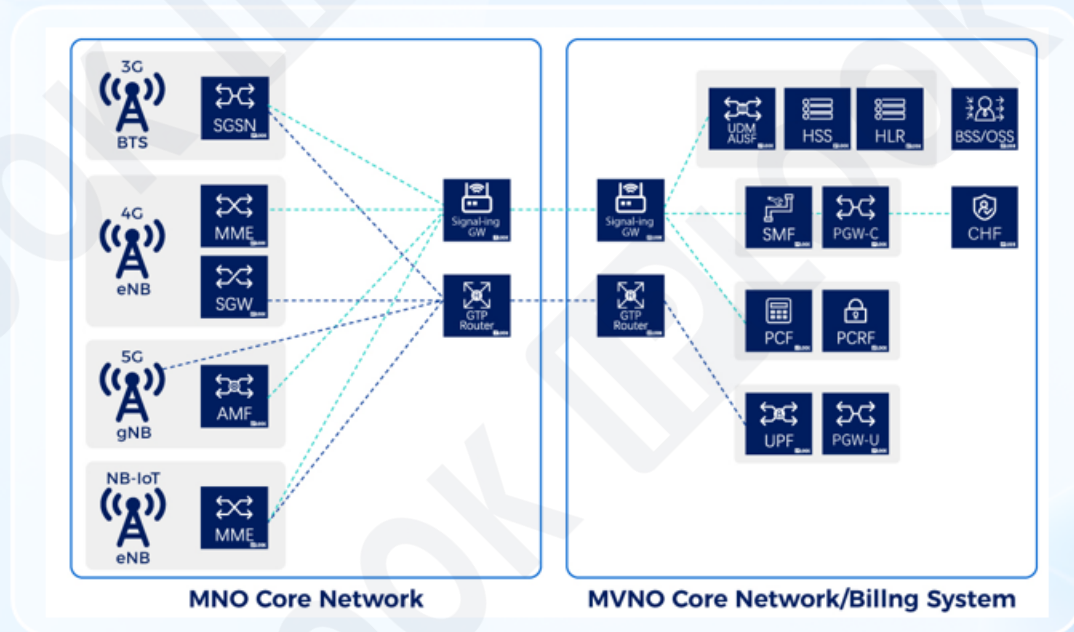
Solution for MVNO

- ## Light MVNO:
  - **Core NEs:** HSS/HLR + BOSS
  - **Capabilities:** Basic Subscriber Management & Billing operations

- ## Full MVNO:
  - **Enhanced NEs:** STP + DRA + GTP Router + PGW/GGSN + PCRF + SMSC/USSD Platform
  - **Extended Capabilities:** End-to-End Network Control & value-added Service Development

- ## MOCN Operator-Grade Deployment:
  - **Core NEs:** MME + SGW + AMF + SMF + UPF
  - **Scenario Adaptation:** Autonomous Network operations & multi-operator resource sharing

MNO Core Network

MVNO Core Network/Billng System

Application Scenarios:

International roaming for tourists

Retail

Machine to Machine (M2M)
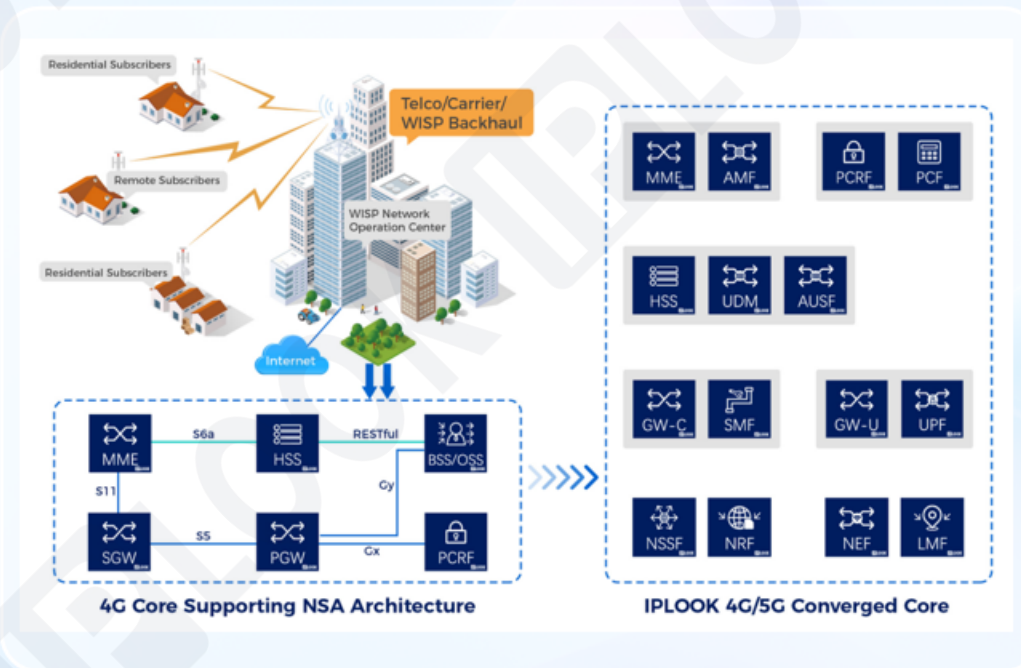
Solution for WISP

● **Fixed Wireless Access Deployment:**

• 4G&5G-based data service as an alternative to FTTX, LAN, or ADSL.

● **Optimized Coverage for Various Scenarios:**

• Remote rural areas with limited fiber infrastructure.

• Residential broadband services for urban and suburban users.

● **Enhanced Network Capabilities:**

• Supports multi-vendor eNodeBs, enabling flexible deployment.

• Integrates seamlessly with RADIUS, OCS, and CG systems for adaptable billing.

4G Core Supporting NSA Architecture

IPLOOK 4G/5G Converged Core

Solution for Private Networks

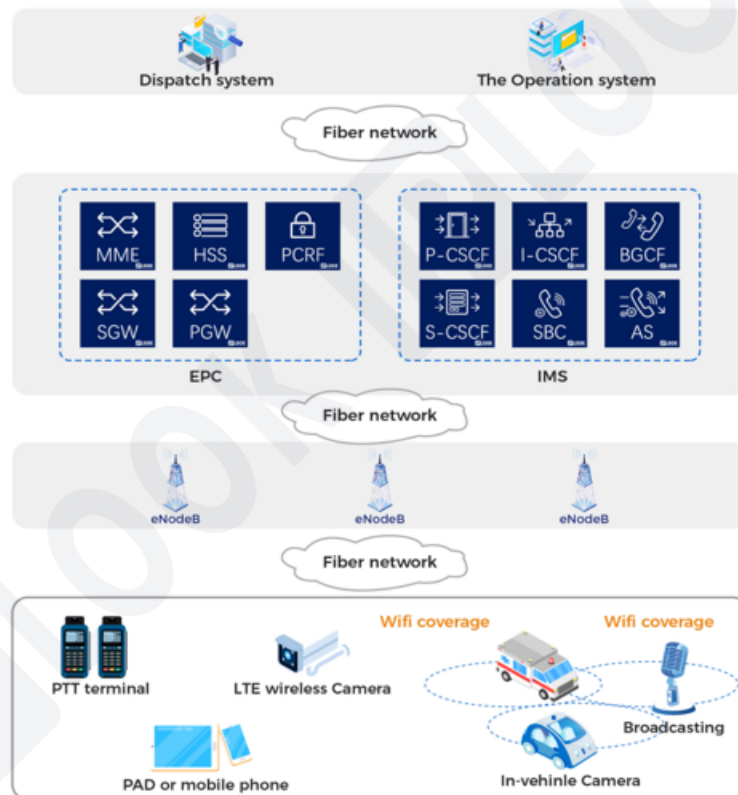**Full-stack R&D Capabilities:**

• Cloud-native 5GC + Compact DU/CU + Intelligent O&M Platform.

• Deterministic network slicing with latency optimized to <5ms.

Flexible Deployment Architecture:

• Hybrid Cloud/On-premise/MEC-ready deployment models.

Visualized Management:

• Visualized management achieving 90% fault self-diagnosis rate.

The end-to-end solution for Police or Mining

Solution for Islands

- **Application Scenarios:**
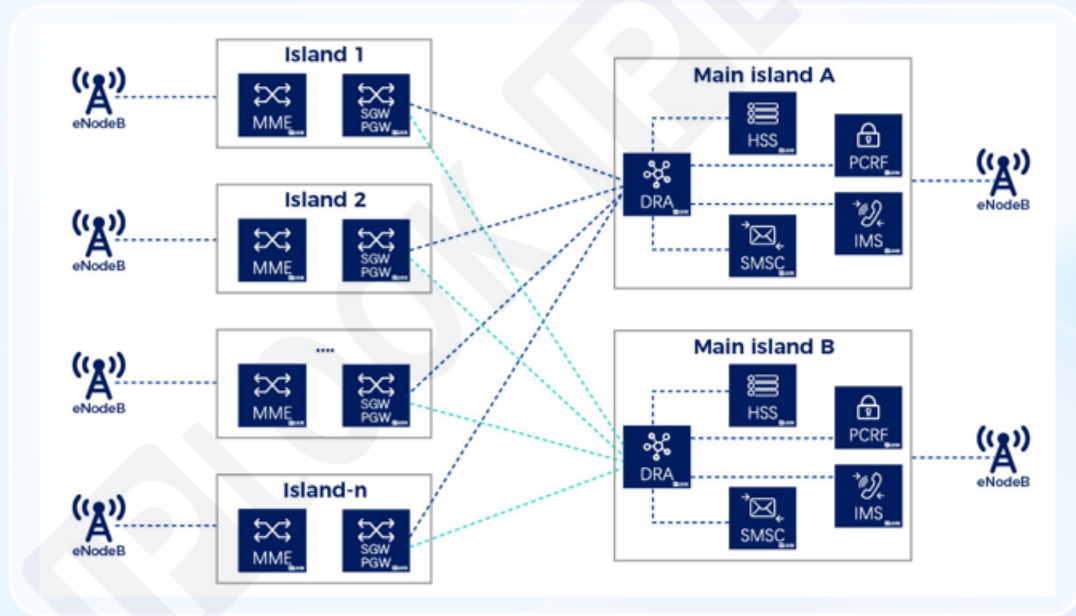
  LTE network customized for island environments.

- **Services:**

  Data, VoLTE, CSFB, SMS

- **Key Benefits:**

  • High-quality network services optimized for long-latency transmission environments

  • Rapid deployment of new 4G Networks

  • 1+1 standby mode for enhanced reliability

  • Efficient resource sharing to maximize network efficiency

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Advantages & Innovations

Key Advantages

Full-Stack Core Network Integration:

End-to-End **3G/4G/5G/IMS** solutions with **50-70%** CAPEX reduction vs. traditional vendors.

Flexible Deployment & Fast Delivery:

Enable **72-hour** cloud/on-premise deployment, cutting time-to-market **40%** via modular pipelines.

Carrier-Grade Reliability:

13+ years expertise ensuring **99.999%** uptime and **zero-touch** automatic operation and maintenance.

Future-Ready Architecture:

Pre-6G and LEO satellite-ready, supporting edge-cloud convergence and global coverage.

Product Release

R8/R13	R4/R14	R15	R16	R16	R16/R17	R17+	R17+	R17+

IMS → | | | | | IMS/SMSF → |

ePDG → | ePDG/N3IWF → |

NRF/NSSF/NEF/SCEF/LMF/SEPP → |

PCRF → | PCRF/PCF → | PCRF/PCF/BSF → |

HSS → | **HLR** → | HSS/HLR/UDM(AUSF) → | HSS/HLR/UDM(AUSF)/UDR → |

PGW → | GGSN/PGW → | UPF → | UPF/SGW_U/PGW_U → | UPF/XGW_U/GGSN_U → |

SGW → | SMF → | SMF/SGW_C/PGW_C → | SMF/XGW_C/GGSN_C → |

MME → | AMF → | MME/AMF → | MME/AMF/N3IWF/ NWDAF → |

2015 — 2017 — 2018 — 2019 — 2020 — 2021 — 2022 — 2023 — 2024 — 2025 →

Roadmap

~R4.0.0 — Before 2025
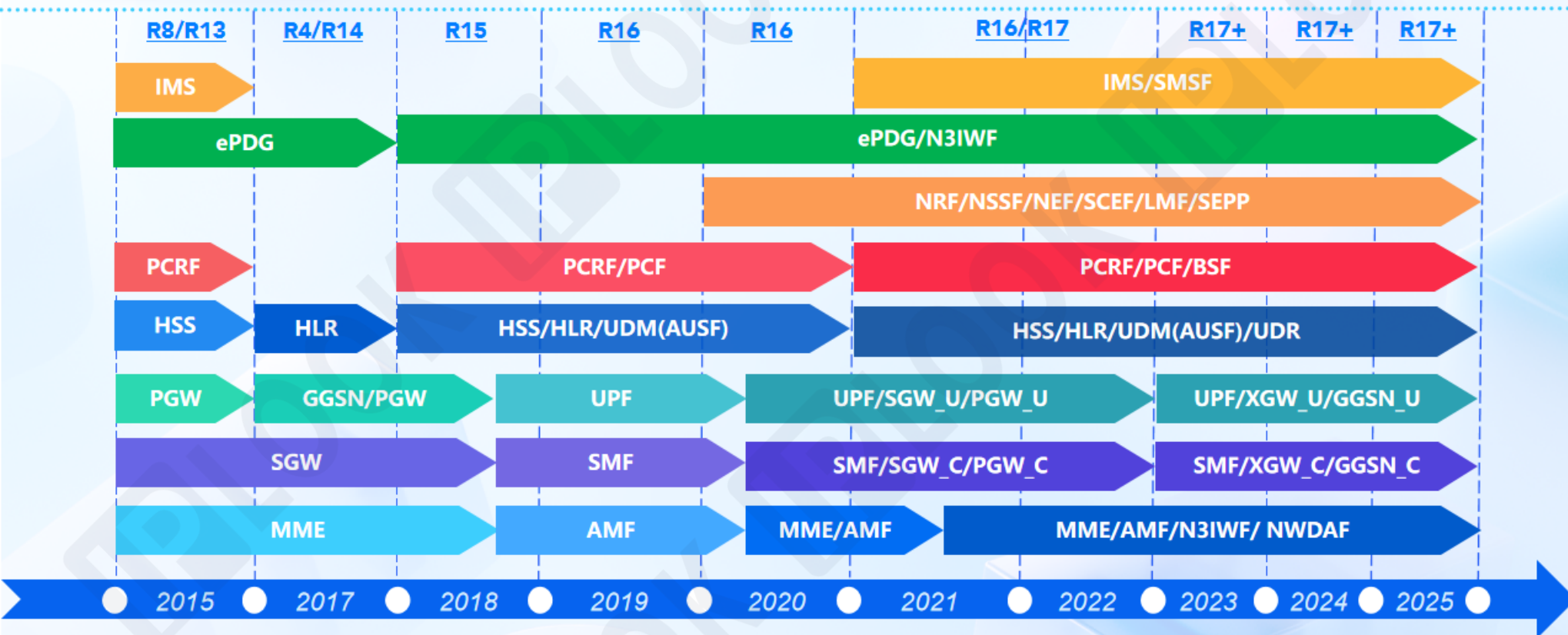
EPC/5GC

Features:
- EPC/5GC NEs commercial release | SMSC commercial release | VoWiFi support | Intra/Inter AMF handover, Inter RAT handover | X86/ARM CPU compatibility

Platform&HA
- Unified web O&M | Platform migration from CentOS7 to Debian12 | NF capacity enhance - Phase 1
- iMANO commercial

IMS

Features
- IMS Core NEs commercial Release | VoLTE & VoNR support | Multimedia priority service voice | Converged charging

R5.0.0 — 2025

EPC/5GC

Core Capabilities
- VoWiFi & 5G handover | Satellite UPF edge computing | Non-3GPP access emergency services | 5G LAN multicast/broadcast

Platform Upgrade
- Cloud-native VNF platform | Optimized microservice governance

Network Enhancement
- NR satellite access | Enhanced network openness | Intelligent paging strategy

IMS

Features
- IP-SM-GW | Voice mail server | Customized multimedia alerting server | Missed call alert server | Multimedia priority service | Enhancement of user-level log tracing

R6.0.0 — 2026

EPC/5GC

Core Innovations
- Enhanced VoWiFi roaming, AI-Driven O&M | Satellite 5GC deployment | 5G access-aware communication

Platform Evolution
- Unified cloud-native CNF/VNF platform

Network Optimization
- ATSSS traffic scheduling | IAB backhaul support | NWDAF intelligent analysis

IMS

Features
- eSBC | Satellite voice communication | Performance collection and intelligent analysis

R7.0.0 — 2027

EPC/5GC

Core Breakthroughs
- XR/interactive media low latency support | Network slicing intelligent management and control

Network Expansion
- Non-terrestrial network (NTN) emergency service enhancement | Energy efficiency optimization (EIF)

IMS

Features
- VoNR+ based on IMS data channel support
- Enhancement of AI-based operation and maintenance

4 Industry Collaboration

Strategic Partners

Asia's Top 5 Telecom Equipment Vendor:
Strategic investor driving R&D collaboration

Global Leading LEO Satellite Company:
Joint deployment of satellite core networks

Asia's Largest Mining Solutions Integrator:
Industrial private network support

Asia's Largest LEO Satellite Operator:
Space-ground integrated communication solutions

Operator

Industrial

Satellite

Global Clients

Industry Ecosystem

Voice & Message

FTS · 牛信云 NXCLOUD

RAN

BTI WIRELESS · Airspan · HUAWEI
Hytera · ZTE · ERICSSON
Comba · NOKIA · SAMSUNG · CableFree
ArrayComm · BAICELLS · BLiNQ NETWORKS · 中信科移动 CICT Mobile

Chipset

MEDIATEK · 紫光展锐 UNISOC · Qualcomm
arm · AMD · intel

Other equipment

H3C · Accton · ribbon

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Roaming

syniverse · bics · 中国移动 China Mobile International

Terminals

TECNO · SAMSUNG · mi
OPPO · vivo ·

Billing

AsiaInfo 亚信科技 · SigScale · Junosoft
NEWare · DR.COM 城市热点 · PortaOne

IPLOOK

THANK YOU

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