

Secure Local 5G Networks

More than just a Nice-to-Have

Dr. ir. Anand R. Prasad
Founder & CEO



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About wenovator



About the Company

- Private company, founded in 2019
- Built around the concept of **holistic security**
- Specialization: Mobile Networks & related emerging technologies
- Areas of practice
 - Security Strategy & Design
 - Solution Assessment & Enhancements
 - Advisory on Strategic Partnerships



Leadership Team



Anand R. Prasad

Founder & CEO

- Senior Security Advisor, *NTT DOCOMO Inc.*
- Chief Information Security Officer, *Rakuten Mobile Inc.*
- Chairman Security Working Group, *3GPP*
- Chief Advanced Technologist, *NEC Corp.*
- Distinguished Member of Technical Staff, *Lucent Tech.*



Hans Christian Rudolph

Technical Director

- Section Manager Fraud Intelligence & Platforms, *Rakuten Mobile Inc.*
- Rapporteur on 5G SBA & Interconnect Security, *3GPP*
- Security Expert & 3GPP Security Working Group Delegate, *Deutsche Telekom AG*



Noboru Matsumoto

Chief Customer Officer

- Member of Steering Committee, *JAIPA*
- Over 30 years of experience in mobile communications (2G, 3G, 4G/LTE, 5G, IoT)
- Strong network in the industry – ICT, Cloud, Customer Success, Marketing



Global Engagement & Contribution



3GPP

- Chairman 3GPP SA3
- Vice-Chairman 3GPP SA3
- Rapporteurs of several WIDs & SIDs
- Key contributors of 4G & 5G security

ETSI

- Contributor & participant of ETSI NFV, ETSI TC Cyber
- ETSI Security week committee member
- Speaker at ETSI events

IEEE

- Senior Member
- Keynote IEEE 5G Forum
- IEEE 802.11 and 802.15 contributor

GSMA

- Speaker at GSMA events including MWC Barcelona
- Contributors to GSMA FASG

TSDI/GISFI

- Member of GISFI Governing Body
- Member of TSDSI Governing Council
- Founder & Chairman of Security and Green ICT working groups, GISFI



Technology Focus Areas



Connectivity (4G, 5G)

The Next Generation
of Mobile & Fixed
Communication



Cloud & Edge Computing

Distributed Compute
and Storage at the
Network Edge



Open vRAN

Technology Liberation
for the Radio Access



Private Mobile Networks

Reliable Wireless
Networking in most
demanding Scenarios



Internet Of Things

Creating Intelligent
Distributed Systems

Security Services Spectrum



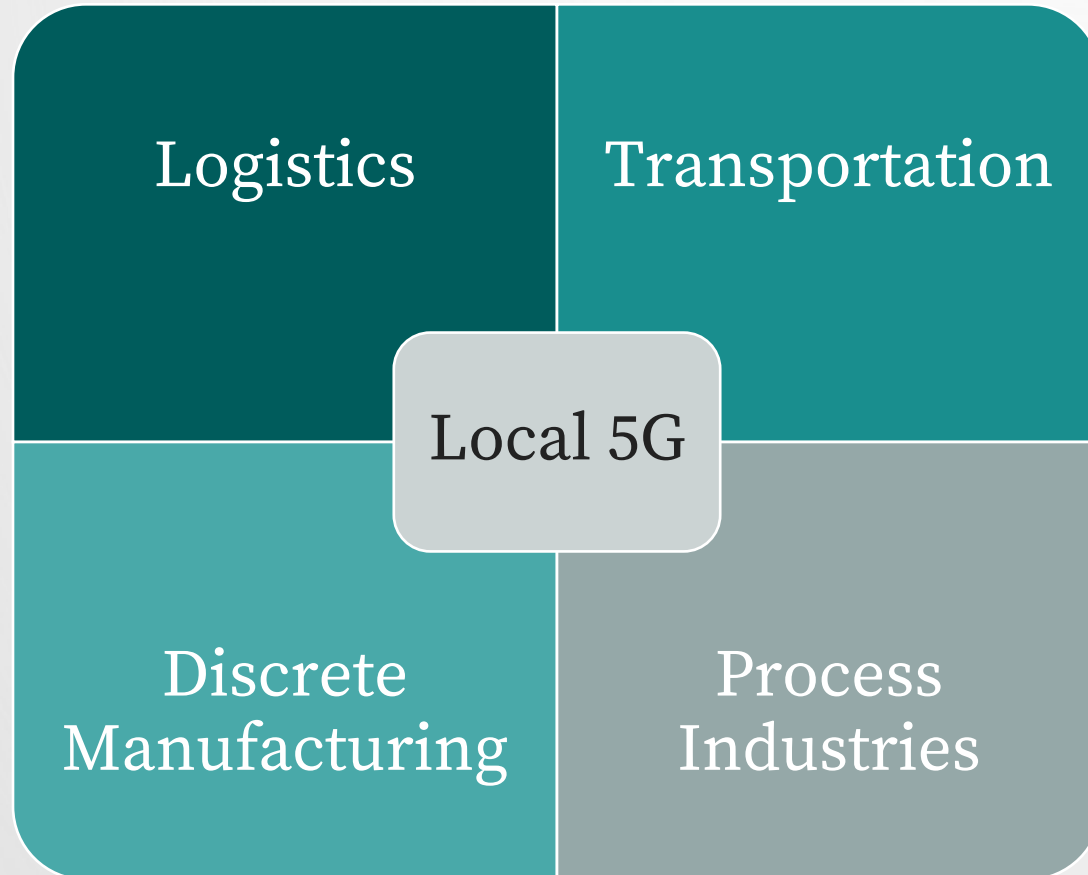
Our Take on Local 5G



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Local 5G Use Cases



- While exact applications vary, most uses cases classify as Operational Technology (OT)
- Motivation for these industries to consider 5G technology:
 - Seamless mobility
 - Global availability & roaming
 - **Reliability and security**
- Potential impact associated with OT incidents renders **safety and security mandatory**



Security Challenges

Technology Perspective

- As OT and IT grow to be **more connected**, exposure of production facilities is steadily increasing
- At the same time, fundamental security best practices are **not widely enforced**
- Although awareness is growing, technical controls and processes are still lacking in many areas



44% of OT players **do not track & report compliance** with security standards



9 out of 10 organizations **experienced at least one OT intrusion** in the past year



51% of incidents resulted in an **operational outage that affected productivity**



OT Security Challenges

Human Perspective

Limited
Awareness

Lack of
Visibility

Resource
Shortages

Insufficient
Incentive

- Some industry players still don't consider security an issue because
 - OT exposure points less apparent
 - Unawareness of exploit possibilities
 - Little visibility on incidents/anomalies
- Even if they do, requirements and priorities are often unclear
- Security resources hard to come by:
 - Scarce expertise in Japanese market
 - Distinct OT & IT security requirements
- Moreover, too few industrial customers request security



Key Takeaways

- New technology: 5G and associated services still evolving
- New operational modes: Verticals running own 5G networks
- MNO service offerings and security controls yet to mature
- Small margin of error regarding safety and security
- High impact in case of security incidents



Where We Can Support You

- Understanding of unique challenges of both domains
- Sizable team of seasoned security professionals

Extensive expertise
in 5G and OT
Security



- No matter where you stand in your Local 5G journey, wenovator helps you secure it
- Initial threat modeling, security design, gap analysis, improvement

Security services
offering from design
to operations



- Successful track record with large enterprises as well as SMBs
- Existing ecosystem of specialized partner solutions

Proven ability to
execute



Our Services



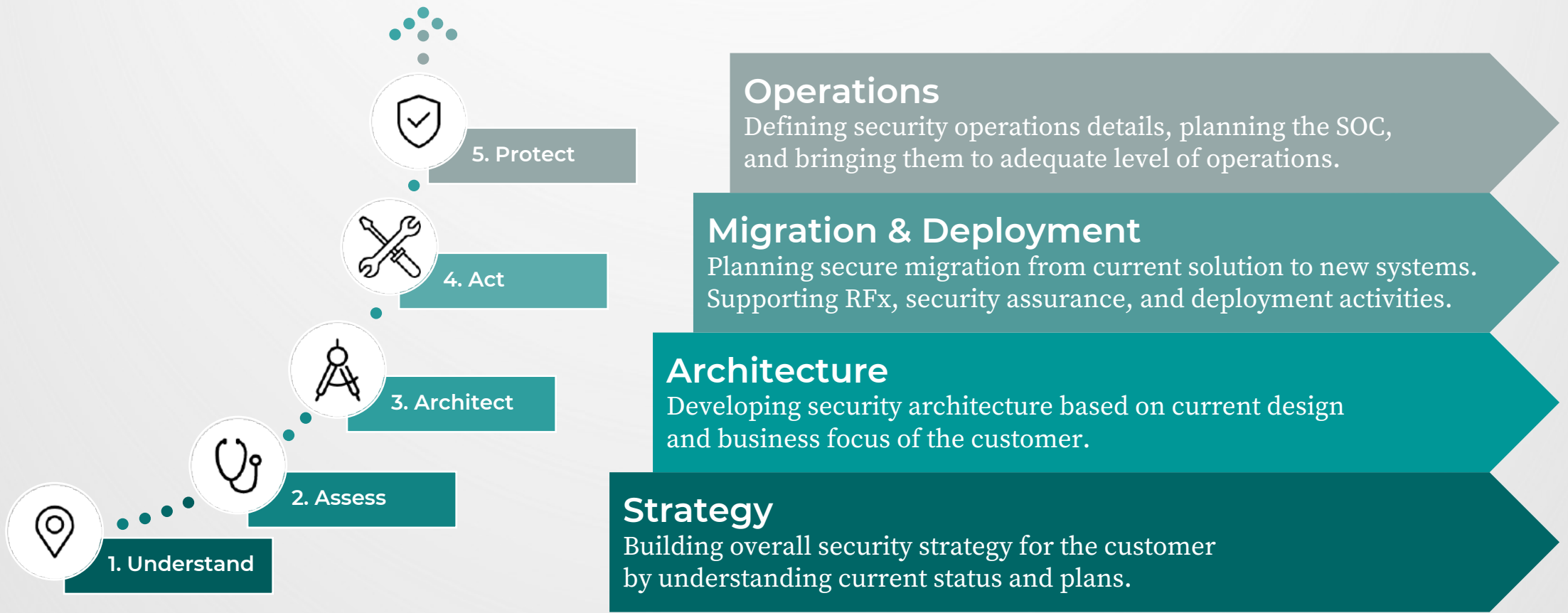
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wenovator Service Offering

Consulting, Implementation, Operations



Case Study 1 – Asset Management

Enabling Multi-Cloud Visibility

Customer Challenges

- Limited visibility on software assets, incl. installed packages, patch versions, and system configurations, in an expansive multi-cloud ecosystem
- Requirement: Addressing challenge with an in-house solution

wenovator Solution

- Collaborated with engineering teams in designing and developing a tailored inventory and asset management solution
- Created automated enrolment and maintenance processes

Results

- Enabled complete visibility across internal and external cloud deployments
- Automated Identity and privilege management



Case Study 2 – ISMS Rollout

Implementing Security Governance

Customer Challenges

- Ensuring essential security certification for subsidiary company
- Augmenting and extending corporate policies, and procedures accordingly

wenovator Solution

- Preparing client for ISMS assessment, incl.:
 - creation of security documentation
 - execution of internal security trainings
 - design and implementation of missing security controls

Results

- Company-wide security framework established
- Client successfully obtained ISMS certification



Case Study 3 – Security Operations

Benchmarking A Modern Telco SOC

Customer Challenges

- Existing Security Operations Center of leading MNO not delivering expected results
- Required an independent, end-to-end assessment and improvement plan

wenovator Solution

- Performed a detailed gap analysis of customer SOC
- Provided complete set of process including those for incident response
- Proposed step-by-step path towards developing a world class SOC






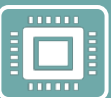

Results

- Implementation of telecom associated solutions for monitoring in SOC
- Greater visibility, enabling swift detection and incident response



Partner Solutions & Services

Complementing Our Core Services

-  Security Assurance (Vuln. Assessment, Pentest, etc.)
-  Security Operations Center
-  Security Monitoring (MSS, ATO, Device Security)
-  Security Tooling for Continuous DevSecOps
-  Threat Intelligence
-  AI, ML, Blockchain, and Web Development
-  AI and Big Data Expertise



Need more details?

Find more details on how the 5G standard is facilitating industrial deployments and what is needed to implement them securely in wenovator's latest white paper:

[wenovator.com/private-5g-security](https://www.wenovator.com/private-5g-security)



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