

Your strategic network, Telecommunications Systems and IT partner.

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Expertise without limit

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Today, the evolution of technological needs require that communication solutions are constantly adapted.

Positioned as a **center of excellence** specializing in networks and telecommunications, KAÏNA-COM brings together a team of **experts** who have been supporting the **development of network infrastructures** in France and abroad for more than ten years.

From markets in Europe to North America and Africa, passing by of the Pacific and the Caribbean, KAÏNA-COM builds on its rich experience to **address the current challenges and needs of the telecom networks industry with consistency.**



01. VISION

**Offering tangible solutions
to the constantly evolving
world of telecommunications
for immediate and effective
results.**

01

KAİNA-COM's primary mission is to eliminate boundaries with the goal of opening up to the world and improving the quality of information transmission, making it increasingly fast and effective.

As a reliable **strategic partner** for our customers, **our organization offers a specialized mix of theoretical and operational expertise**, and we are committed to build lasting partnerships, consider new directions and continually improve information transmission.

Our first priority remains customer satisfaction, so we implement a stringent **quality policy**, which is central to our strategy, dedicated to strengthening trust with and responsiveness to our customers. From first contact to project launch, we commit to responding within less than a month, prior to drawing up a precise specifications document and beginning operations.



KAÏNA-COM, has over 12 years of experience all over the world

+ Europe

- 01. Germany
- 02. Belgium
- 03. Cyprus
- 04. France
- 05. Netherlands
- 06. Romania
- 07. Serbia
- 08. Sweden

+ North America

- 09. United States

+ South America

- 10. Brazil
- 11. Costa Rica
- 12. Paraguay

+ DOM/TOM/ROM

- 13. Aruba
- 14. Guadeloupe
- 15. Guyana
- 16. Reunion Island
- 17. Tonga island
- 18. Martinique
- 19. Mayotte
- 20. St Pierre & Miquelon
- 21. Tahiti
- 22. Vanuatu

+ Asia

- 23. Bangladesh
- 24. China
- 25. India
- 26. Japan
- 27. Thailand

+ Afrique

- 28. South Africa
- 29. Algeria
- 30. Cameroon
- 31. Ivory Coast
- 32. Egypt
- 33. Ghana
- 34. Guinea
- 35. Madagascar
- 36. Malawi
- 37. Mali
- 38. Namibia
- 39. Niger
- 40. Nigeria
- 41. D. R. of Congo
- 42. Senegal
- 43. Sudan
- 44. Tunisia

02. EXPERTISE

Improving performance through optimal process control.

02

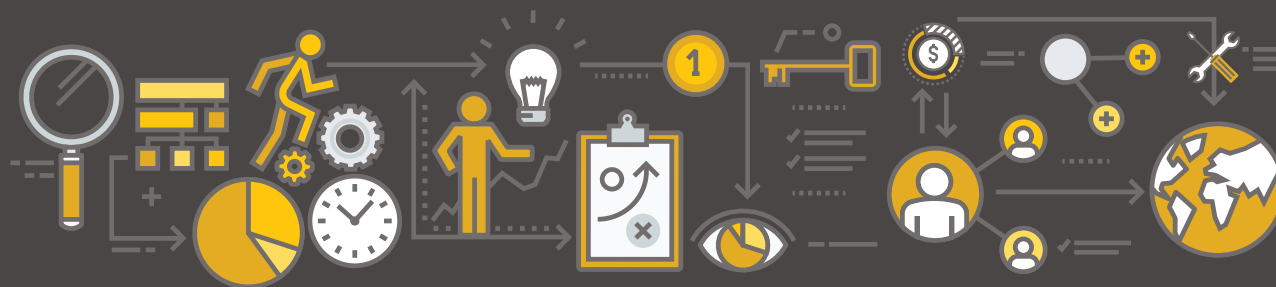
KAÏNA-COM offers global support for all of its projects.

From strategic pre-project **consulting** to **roll-out** and follow-up of the best **technical solutions**, we ensure that our customers benefit from immediate and lasting effectiveness at every step of the collaboration, which is carried out in Project mode (manufacturers and operators).

Our “**E2E**” **expertise**, structured around various focus areas, builds on a team of experts (RAN / CORE / TRANSMISSION / IP) fully dedicated to conducting the project. This skill constitutes the foundation of KAÏNA-COM's identity and has allowed us to develop a double expertise: **Multi-Manufacturers** (ALU, E///, NOKIA, HUAWEI...) and **Multi-Operators** (Orange, SFR, Bouygues...).

This definition of expertise is woven into KAÏNA-COM's DNA.

- + 2G, 3G, 4G
- + Transmission
- + Core Network
- + IP
- + Virtualization of Networks Elements (through VMWARE & Openstack)
- + Big Data
- + Dematerialization
- + IT Tools Development
- + Network Optimization & Benchmarking



Process

Pre-project

- Audit phase
- Feasibility studies / Resource mobilization
- Implementation of suitable processes

Project

- Planning
- Cost and resource management
- Resource Coordination
- Technical implementation

A center of excellence specializing in telecommunications.

03

03.1 SERVICES

Building on unique expertise we offer tailor-made solutions.

03.1

KAİNA-COM develops multiple types of turnkey expertise to serve its customers, including Training, Consulting, Operations & Maintenance, Installation and Integration.



Training



Consulting



O&M — Operation & Maintenance



Installation & Integration



Network Optimization Services





Training

- + Telecoms
(RAN / CORE NETWORK)
- + IP Network / IP Security
- + Business Intelligence
- + Virtualisation
- + Big Data
- + Web - Digital
- + Microsoft
- + Project management

The KAİNA-COM team is composed by multicultural and multilingual expert trainers, entirely committed to our customer requirements and satisfaction. We are able to provide to your teams, several specific training courses on different areas such as computer networks, telecommunications, IT and management.





Consulting

+ AUDIT

+ PROJECT MANAGEMENT

Our professionals, who have achieved their expertise through over 10 years spent on the field and in design offices, have **unrivalled experience in project management and telecommunication network auditing.**

Project leaders, project managers and technical experts work hand in hand in KAÍNA-COM teams to conduct many risky projects under significant time and budget constraints.





O&M, Operation & Maintenance

O&M? A simple abbreviation for Operations & Maintenance. This KAĪNA-COM service covers the core activities that are essential to **optimal telecom network management**.

KAĪNA-COM is responsible for **investigation, analysis** and **resolution** of complex network incidents. Our specialists also provide comprehensive support to level 1 maintenance technicians in charge of network maintenance, and liaise in real time with subsystem experts (e.g. CORE and RAN experts).

To ensure that you receive an efficient and tailor-made service, KAĪNA-COM builds on the following activities:

DAILY MAINTENANCE

KAĪNA-COM handles the **operation and maintenance of your network** on a daily basis:

- Constant monitoring and control
- Site creation or deletion
- Site densification and migration

UPGRADE/MIGRATION

Manufacturers are continuously developing their features, which means that operators have to migrate to more recent versions of software, firmware or even hardware. This upgrade requires regular **data migration** (Data Base and other material) from a release N to a release N+1.

Our team of specialists fully masters and **understands the processes imposed by a variety of manufacturers**.

RNE / RNO

Radio features are no secret to KAĪNA-COM RNEs (Radio Network Engineering).

As experts in **analysis and review of KPI** (key performance indicators) and network performance, they can advise and guide you, and recommend the best solutions to achieve optimal performance.

SUPPORT TECHNIQUE

KAĪNA-COM offers two different kinds of technical support:

- **L1 First level KAĪNA-COM HOT LINE**
A simple and easy telephone and email assistance service.
- **L2 Second level KAĪNA-COM INTEGRAL**
A comprehensive and tailor-made assistance service.



Installation & Integration

+ ROLL-OUT

+ SWAP

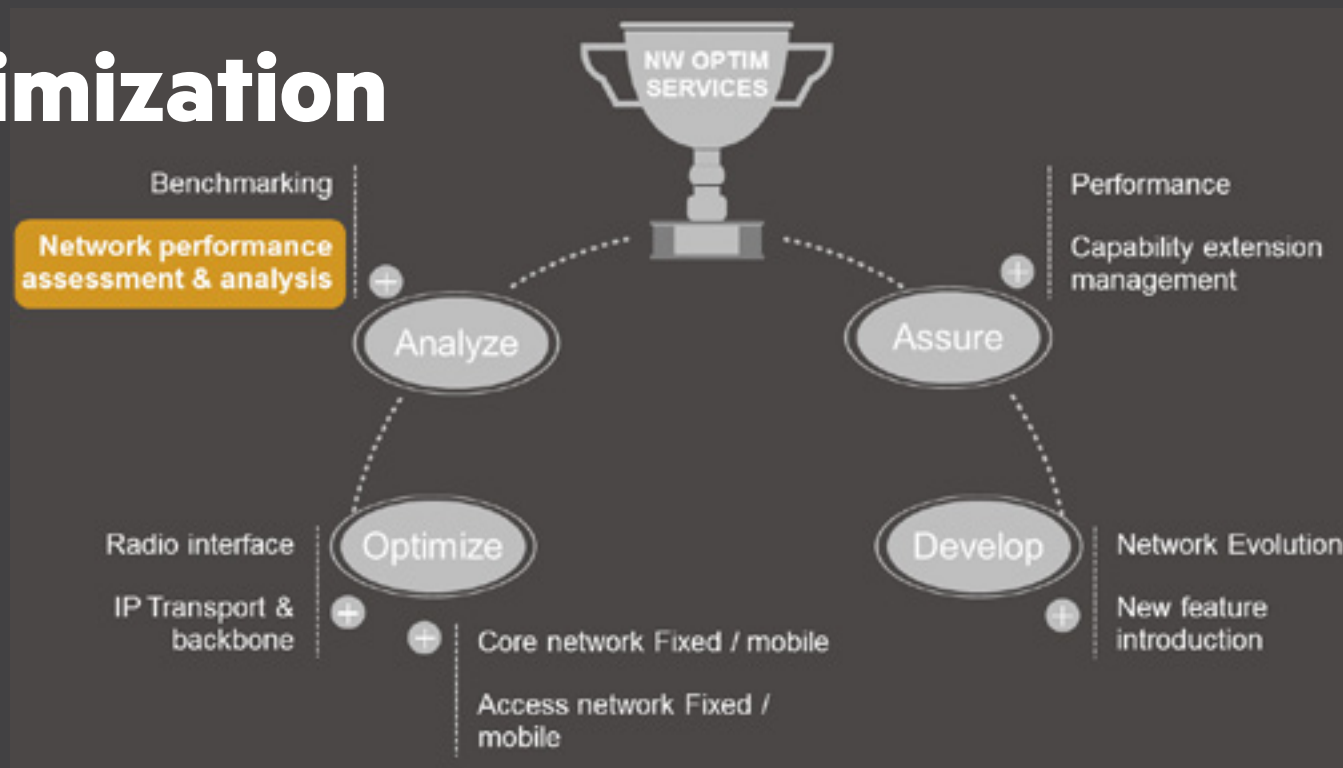
We are perfectly comfortable with **roll-out** and **SWAP** of 2G / 3G / 4G / Core Network and Transmission networks, our teams are skilled in the full range of methodologies and processes applied and approved by telecom manufacturers and operators.



Network Optimization Services

Our network optimisation services aims to maintaining service quality and end user experience with a complete portfolio of services and tools, we have capabilities to deliver high value-added services.

Our services involve everything, from deployment, network transformation, benchmarking and network optimization in order to assure an optimal end user experience.



03.2 PARTNERS

Join the growing list of manufacturers and operators who trust KAÏNA-COM.

03.2



ERICSSON



ALCATEL-LUCENT



HUAWEI



ORANGE



BOUYGUES



GUILAB



SPM TELECOM



VODAFONE



VINI



NOKIA



SKYFive



GFM



Sofrecom



Orange GOS



Camusat

04. 2019 PROJECTS

2019 was a big year for KÄİNA-COM.

04

APAC

PACIFIC ZONE

VINI

Support provided to U900 MC-TRX (Multi-Standard-Radio) roll out

Support provided to activate AUPoIP feature

VODAPHONE

Technical support level 2/3 NSS CS and PS (core) in Tahiti (Alcatel – Lucent)

ALU INTERNATIONAL

Generalization of GboIP / AsigoIP / AUPoIP features

Carrying out design and dimensioning for the roll-out of 70 U900 MC-TRX sites (MSR mode)

Implementing MOP (Methode of procedure) and completion of U900 deployment, managing spare cards, stock and equipment return.

Training (Train the trainer) – Features implementation LR14.3G – BSSoIP/MOCN/LCS/SB-RRH.... given to ALU trainers and support staff (TAC).

OPT

Training session on RAN 2G/3G for a team of 20 technicians dedicated to network maintenance: theory and “on-the-job training” practice.

NOKIA-KR/Séoul

Korean Air Force

- Remote support on Micro-Core LTE equipment (Virtual 4G CN)

EMEA

EUROPE ZONE

AINMT

Training course on 4G, level 1, in Sweden, for the operator AINMT (Alcatel-Lucent)

ALU FRANCE

Within their strategic workforce (GPEC), KAİNA-COM trainers achieved the following:

- Training (Train the trainer) – Features implementation LR13/LR14 – BSSoIP/MOCN.... given to ALU trainers and support staff (TAC).
- Creating and validating document resources for Features LR14.3G (Alcatel-Lucent), SB-RRH 1800 in 2G and 2G/3G modes.

NOKIA UK

On site Training for Installation and Commissioning, on ALU equipment (LRI/LRO/RRH).

NOKIA ROUMANIA

GSM On site Training for RITC Team « Remote Integration Test center »: BTS integration and BSS SW upgrade.

GSM On site Training for RITC Team : BTS integration, swap scenario and troubleshooting to support OCA (orange caraibes).

NOKIA FRANCE

Training (Train the trainer) – Features implementation LR14.3G – BSSoIP/MOCN/LCS/SB-RRH.... given to ALU trainers and support staff (TAC).

NOKIA GERMANY

EAN - (Air to Ground) - E2E solutions architecture service for the ACGC project

The objective of this project is to provide end-to-end solution architectural service an for the ACGC / EAN (European Aviation Network) project.

The deliverables include all the documents necessary to describe end-to-end solution for design and architecture, as well as the acceptance documents in accordance with the requirements of the project documentation.

EMEA

AFRICA ZONE

ORANGE IVORY COAST

- Support provided to Orange's NSS team on the Ivory Coast to solve quality problems encountered on the network (HUAWEI).
- Training "DIAMETER & SIP" (Theoretical and Practical)
Advanced level expert course on the DIAMETER & SIP protocol
 - Basic + Advanced SIP Signaling
 - Basic + Advanced DIAMETER Signaling
 - Practical exercises with case studies via our Virtual Lab
- Operational Maintenance service offer OCB equipment (RCX) and CTI (HC3.3) for company Orange Ivory Coast in the territory of the Ivory Coast.
Maintenance Contract CTI & OCB (24H/7)

CAMUSAT IVORY COAST

Site Surveys, Installation and commissioning 2G – 3G – 4G of NOKIA BTS Flexi Multiradio

GUILAB GUINEA CONAKRY

Support provided to the GUILAB technical team on SDH, WDM and microwave transmission technologies (Alcatel-Lucent):

- Study and commissioning of a Meet-Me-Room
- Study and commissioning of microwave transmission pylons
- Study and commissioning of terrestrial fiber-optic cables (FTTx, FTTh)
- Studies relating to the implementation of an Intranet and a POP-IP

ORANGE GOS IVORY COAST

Technical expert on BIG Data, BI

Senior DBA Experts / Consultants in charge of the administration and maintenance of high performance and availability operational conditions, integrity and security of a large number of databases on sensitive systems such as LAB / CFT, Nomad subscriber identification, USSD and SDP, IFRS

NOKIA IVORY COAST

Project Mosaic OCI (NOKIA LTE Overlay) :

- On Site Investigation and inspection
- Bref document HW FMR 10 Nokia Solution
- Nokia FMR 10 Installation Processes and recommendation.

NOKIA CAMEROUN

Project SWAP / Deployment LTE in OCM (Orange Cameroun) :

- Site Auditor & Quality (Field Auditor Engineers)

AMERICA

NORTH AMERICA ZONE

SPM TELECOM

Selected as the contracting authority in charge of the E2E renovation of SPM Telecom's network (RAN & CORE). Technical study, high-level design (HLD), advice.

Technical support for "E2E" maintenance (RAN & Core Network) for the network of operator SPM Telecom (Alcatel-Lucent).

SETAR

Upgrade of the 2G network access part in LR13G (ALU):

- OSS
- MFS/BSC/BTS

SETAR 2G network upgrade : GSM 2G BSS LR14.3G Software Migration Alcatel-Lucent equipment.

NOKIA MEXICO

Introduction and deployment of the first IMS (IP Multimedia Subsystem) network in South

- America (Mexico) with Nokia at the operator AT&T
- IMS & VoLTE On-site Support – Managed Services Review IMS HLD and LLD
- Support for normal operations doubts on how to use the VoLTE Management system
- Local and Remote support for corrective actions and notifications to TAC care maintenance during high priority events in the system.
- Correction actions support during Management system fault events For OJT purposes Remote KPI IMS report (IMS Network SWAP program)
- Support 24/7 and troubleshooting – Network Surveillance
- Change Management – Performance & Capacity

05. COMING UP IN 2020

2020 : a year of unlimited potential.

05

Following 2019, a year bursting with new projects, KAİNA-COM continues to forge ahead and has defined two main areas of development for 2020.

Among these, we are planning to **roll-out new IT services: BIG DATA**, with a study from DATA Center that meets the highest ISO / ANSI / TIA-942, BICSI standards, **dematerialization services** and **reinforcing Research & Development**.

Accelerating our innovation center: KAİNA-LAB our laboratory promoting the emergence of new ideas, concepts and innovative projects with the development of new technological partners but also start-ups, universities, incubators and competitiveness clusters ..."

Big Data

The first line of approach will be to more efficiently manage the explosion of data through a progressive move towards a fully digital environment.

This key step for KAĪNA-COM will drive us to imagine and implement specific services to better assist players in this growing market, in particular through:

- data management and analysis.
- simultaneous processing of a significant amount of data, that will be stored in top-tier ISO / ANSI / TIA-942, BICSI, ... certified **data centers**.



Dematerialization

The second line of approach will revolve around dematerialization : **the transformation of all or any physical/ analog files into digital files and e-content** applied to many areas such as orders, invoicing, public markets and e-administration.



Research & Development

Among KAĪNA-COM's future development plans is to give more prominence to Research & Development for strategic projects (network convergence, full IP transformation, virtualization, switch to 4,5G and to 5G, the next generation of networks, etc.) and strengthen our partnerships with telecom market players, leading universities and engineering schools.

Within KAĪNA-LAB, our Innovation Center is open space for creation and learning, a community, social and cooperative laboratory sharing resources and knowledge whose only goal is to bring collective intelligence to life.



06. CONTACT

**If you have any questions,
requests or needs,
KAİNA-COM teams are
on hand to respond.**

06

For any additional information about our offers and services, please feel free to contact us.

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