Company Profile

ALTIMA
BUSINESS INTEGRATOR

VERSQ
THE NETWORKING POWERHOUSE
We’re doing the right things right!

CLIENT

is focused on its business vision, business goals and core competencies.

VERSO

is focused on design, development, implementation, maintenance and management of advanced ICT solutions that support customer’s business model.
We continuously grow our sales, capabilities and geographical footprint

HQ in Croatia
8 Country Offices
120+ Employees
120+ Customers in 31 Countries
40+ mio. EUR Revenue

ALTIMA
Our Customers
Globally successful companies recognize us as a reliable partner.

Financial sector
- Popular
- Raiffeisen Bank
- Hypo Group Alpe Adria
- Merkura Osiguranje
- VB Leasing
- UniCredit

Energy and gas
- HEP
- KEK
- PEMEX
- Tifon

Transportation
- DHL
- Sarajevo International Airport
- Zračna Luka Zagreb
- Abertir
- Autopistas

Telco
- AliBank
- ALBtelecom
- Eagle Mobile
- Avea
- Turkcell Superonline
- Metronet
- TurkTelekom
- SWAN Telecom
- Telecom Egypt
- Tiscali
- Fastweb
- Telekom Slovenije
- Telefonica
- AOL
- Amis
- SoftBank
- Velnet
- Telekom Austria

ALTIMA
Our solutions are tailored to fit our customer’s needs

Government

HJPC BiH

Enterprise

AGROKOR
ArcelorMittal
ELKA
TDR

Media

ALJAZEERA
HRT

Retail

KONZUM
OPREGA
Our Partners
We carefully choose our Partners, Technologies and Methodologies always having our strategic positioning in mind

Our cornerstone partnerships:

![Partnership Logos]

Vendors/technologies integrated in our solutions:

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Global Subcontractor Engagements for SAP Billing and Revenue Innovation Management
Our Portfolio
Verso/Altima Service Portfolio

**Business Support Systems**
- Customer Relationship Management
- Service Management & Operations
- Resource Management & Operations
- Supplier & Partner Relationship Management
- Customer Financial Management
- Convergent Mediation, Rating & Charging

**Professional & Support Services**
- Consulting
- Assessment & Optimization
- Design
- Project Management
- Deployment
- Knowledge Transfer
- Support & Maintenance

**ICT Infrastructure Solutions**

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<td>• IP telephony</td>
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<td>• Collaboration in the Cloud</td>
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**SECURITY & COMPLIANCE**
- Network Security
- Mail & Internet Communications Security
- Safe Mobility
- Disaster Recovery
- Lawfull Interception

**NETWORK MANAGEMENT** (Operational Support Systems)
- Fault Management
- Performance Management
- Network Operations Center
- Data Center Operations
Our support and maintenance services guarantee smooth and reliable performance of the most complex ICT systems.

- **Highest partnership level** with all vendors included in customer’s solution
- **Single point of contact** for all technical issues
- **Ready to provide** 3-tier support using ITIL compliant service desk and processes

**Support service levels:**

**24 × 7**

24 hours per day, 7 days of the week, including weekends and holidays

**8 × 5**

Standard business hours on working day

**On-demand**

Best effort
Knowledge Transfer

Through consulting and education we have become a trusted advisor to our customers.

- Education and trainings for technical, sales, marketing and backoffice staff (“On the Job” trainings)
  - Cisco Technologies
  - SAP Solutions
- Technical consulting
- ITIL Service Level Management consulting
- Business Continuity Management consulting

Partnership with University of Zagreb, Faculty of Electrical Engineering and Computing

References
Key findings

Leading global ICT vendors are our strategic partners - Cisco, SAP, EMC, MS, VMware, Palo Alto.

We cover full life-cycle of ICT services, starting from consultancy, planning and design, implementation, maintenance and support, education and training.

We’ll continue to grow in sales, size and geographical coverage, organically and through M&As.

Our portfolio and business practices effectively support Service Providers’ business model.

We have mastered our practice in Next Generation Networks, Managed and Cloud Services, IPTV Solutions, Mobile Packet Core, OSS/BSS Solutions.

We are thinking globally, supporting our customers locally, serving more than 120 customers in more than 30 countries worldwide.
Our Technologies and Reference Solutions
Professional & Support Services cover full life-cycle of our solutions and ensure support

**Consulting** – advising our customers on technology and business developments and benefits they can gain

**Assessment & Optimization** – detailed assessment and analysis of existing ICT platforms, delivering recommendations for improvements

**Design** – design of complex ICT solutions tailored to fulfill our customer’s needs

**Project Management** – managing deployment in accordance to global PM standards

**Deployment** – HW/SW delivery, implementation and go-live of delivered ICT solutions

**Knowledge Transfer** – taking care that customer understands technology trends and choses right solutions

**Support & Maintenance** – taking care that delivered ICT solution performs efficiently and without disruptions
Converged fixed and mobile infrastructure for data, voice and video traffic as a platform for managed/hosted/cloud services

NGN solutions
- IP/MPLS core networks
- Metro Ethernet access networks
- Enterprise Unified WiFi/LAN
- Enterprise WAN

Mobile Packet Core solutions
- 3G mobile packet core
- 4G evolved packet core
- WiFi offload

Data center solutions
- Servers
- Storage
- Security
- Virtualization
Managed/hosted/cloud services business model for IP Communications

IP voice solutions
- Class4/Class5 softswitch
- SBC
- IP PBX
- IP Call Center

IPTV and video solutions
- IPTV
- Over-the-Top IPTV
- DVB – C/T
- Videoconferencing and Telepresence
- IP videosurveillance

Managed/Hosted/Cloud Services
- Data/Internet/Voice/Video
IP NGN – converged infrastructure for data, video, mobile, managed and cloud services

Key business objectives
- consolidate all networks into one multiservice platform in order to
- enable new services
- increase productivity
- increase efficiency
- decrease OPEX

Key network services
- Voice (Fix&Mobile)
- Data
- Internet
- Video
- Management

Key technologies
- IP MPLS
- Metro Ethernet, Cable
- Cable, xDSL, WiFi
- Backhaul

References
Managed Services - grow revenue, create deeper and more loyal relationships, and reach new segments

Key business objectives

• get more revenue with higher margins
• enable customer to focus on core business (decrease CAPEX/OPEX)
• reach deeper into customer’s LAN and get higher margins
• improve service quality
• facilitate up-sell & cross-sell

Key services

• Voice (Business Trunking, IP Centrex)
• Data (E-Line, E-LAN, IP VPN)
• Internet
• Video (IPTV, Videoconferencing, Videosurveillance)

Key technologies

• IP MPLS
• Metro Ethernet, TDM, xDSL, Wi-Fi
• MPLS-TP

References
Cloud Services – deliver new generation IT services on demand, economically, without compromising security or functionality.

Key business objectives
- get more revenue with even higher margins
- enable flexible business models
- launch new services more rapidly and efficiently
- provide dynamic, on-demand delivery of services regardless of the geography or size of the business
- use assets efficiently → reduced CAPEX/OPEX

Key services
- VDI
- Mail
- CRM/ERP
- Service Desk
- Office Suite
- Call Center
- Data Center

Key technologies
- Cloud Applications
- Unified Computing – Cisco UCS, EMC, VMware
- Cloud Intelligent Network – Nexus
Our Cloud & Datacenter Stack

- Database/Middleware: Microsoft, Oracle
- Enterprise Applications: SAP, Microsoft, Oracle
- Operating Systems: Red Hat, Microsoft, Solaris
- Servers, Network, Security: Cisco, IronPort, Solaris, EMC²
- Virtualization: Microsoft, VMware
- Storage: EMC², VMware
- Management: EMC², VMware
- Rating, Billing, Invoicing: SAP
Cloud Platform for Service Providers

Key Benefits for Customer

- New Economy
  - Pay per use
  - CapEx shift toward OpEx
  - Agility and faster „Time To Value”
  - Reduced risk
- Enhanced Management
  - Less downtime due to maintenance
  - Reliability and failure resilience
  - Centralized backup
  - Robust multi-layer security
- Increased Productivity
  - Access from anywhere, anytime, any device
  - Instant self-provisioning

Key Benefits for Service Provider

- New revenue stream
- „Sticky” services, deep integration with business customer’s ICT and business processes → prevent churn
- Centralized management (patches, upgrades, backup...) → Reduced operational costs
- Efficiency savings
  - consolidated and virtualized assets
  - reduced power and cooling
  - less space occupied
- Economy of scale → Optimized productivity
- Fast provisioning → Agility
- Scalable → Easy to grow
- Secure → Customer trust

References
Key business objectives
- introduction of new services
- reduce churn
- gain new customers

Key services
- Multichannel Live TV offering
- Video on Demand (VoD)
- Targeted advertising
- Any Video/Any Time/Any Place/Any Device
- Interactive services
  - xPVR
  - Catchup TV
  - Voting
  - Betting
- Social networks

Key technologies
- IP MPLS Network
- H.264 Video
- Cisco VQE
- Multicast/Unicast Video delivery
- Adaptive bitrate streaming
- Content delivery network
- Encryption
- Cost-efficient CE devices with HW decoding/decrypting
- PCs/Smartphones/Tablets/Connected TVs/Game consoles

References
Our IPTV Ecosystem

Middleware

Video Acquisition & Processing

CAS/DRM

VoD

STB

Video Monitoring

Netgem

viaccess-orca

BeeSmart

harmonic

CISCO

Appear TV

verimatrix

edgware

Amino

Motorola

CISCO

Sagem
IPTV OTT Ecosystem
(Web TV ▲ Mobile TV ▲ Connected TV ▲ Game Console)

- Middleware
  - Cisco
  - More Screens

- Adaptive transcoding
  - Harmonic
  - Cisco
  - Appear TV

- CAS/DRM
  - Microsoft
  - Verimatrix

- Media streaming & CDN
  - Anevia
  - Microsoft
  - Cisco
  - Wowza Media Systems

- OTT STB
  - Cisco
  - Netgem

- OTT Web/Mobile Clients
  - Apple
  - Android
  - HTML5
  - Microsoft Silverlight
Our DVB-C/T Solutions

Key business drivers
• Acquire new customers
• Centralized management (patches, upgrades, backup, ...)
• Operational flexibility
• Reduced complexity
• Security

Key services
• Content packages
• More TV/radio channels in the network

References
DVB-C/T Ecosystems

- **Video Acquisition & Processing**
  - ANEVIA
  - CISCO
  - ROHDE & SCHWARZ
  - Appear TV

- **CAS/DRM**
  - Conax
  - CISCO
  - Abel
  - Verimatrix

- **STB**
  - Netgem
  - CISCO
  - Techno Trend

- **Video Monitoring**
  - bridge technologies

- **Hospitality TV**
  - CISCO
  - VESTEL
  - SAMSUNG

- **Transmission Infrastructure**
  - ROHDE & SCHWARZ
  - MOTOROLA
Our Security Solutions

Key business drivers

• Information access control
• Consistent security policy throughout the whole ICT environment
• Creating a robust and scalable security architecture using a business-focused, risk avoidance approach
• More effectively protecting infrastructure by identifying architectural vulnerabilities and deviations from security best practices
• Solving compliance requirements
• Protecting ICT investment

Key services

• Security planning, design and implementation service
• Security architecture assessment
• Secure access control
• Network and application level security solutions

Key technologies

• Firewall
• IPS/IDS
• Log Management
• DDOS prevention

References
Our Security Solution Stack

Security Consulting
- Security planning, design and implementation service
- Security architecture assessment service
- Security audit, vulnerability scanning, penetration testing
- ISO 27001 – ISMS (information security management systems) consulting

Log management and SIEM

Secure access

Web and e-mail security

Network and application level security devices
- Integrated network security
- VPN and intrusion prevention
Mobile and Evolved Packet Core Solutions

Key business objectives

• provide customers a true mobile experience with persistent IP device authentication and roaming
• increase revenue and market share through subscriber retention
• integrate network and user intelligence at the access edge
• Simplify and flatten network topology
• Optimize transport backhaul
• Converge mobility and policy control

Key services

• 3G/4G packet core network

Key technologies

• Cisco ASR5K

References
**Service Provider Wi-Fi Offload Solution**

**Key business objectives**
- provide customers a true mobile experience with persistent IP device authentication and roaming
- increase revenue and market share through subscriber retention
- increase capacity of the licensed network using unlicensed spectrum
- lighten mobile network congestion using Wi-Fi data offload
- reduce the complexity and cost of managing and deploying a Wi-Fi network with centralized configuration and management

**Key services**
- Mobile data services
- Charging integration
- Location Based Services (LBS)

**Key technologies**
- 802.11n standard
- HD WiFi – stadium venues
- Cisco Aironet Outdoor/Indoor APs
  - Cisco Clean Air, ClientLink, BendSelect, VideoStream, Wireless Mesh
- Centralized Wireless Controller
- Next Generation Hotspot (HS 2.0) – 802.11u standard; automatic roaming
- Cisco Intelligent Services Gateway (ISG)
- Mobile Packet Core integration (ASR 5000) – seamless mobility

**References**

*TURKCELL*  
*ALBtelecom*  
*ipico*
Our Service Provider Wi-Fi Offload Ecosystem

- Services
- Distribution
- Access
- Backhaul
Network Management System Solutions

Key business objectives

• Increase business agility and service availability
• Accelerate time to revenue for new services
• lower TCO
• Simplify network deployment and management
• Increase service availability, reliability, and operational efficiency
• Support multivendor environments

Key services

• Managed NOC
• Managed SOC
• Users Self-care portal

Key technologies

• Cisco Prime Networks
• EMC Smarts
• Infovista
• SevOne
• UMBOSS

References
Our Network Management Ecosystem

Fault Management
Cisco Prime Network

Performance Management
Cisco Prime Performance Manager

Element Management
Cisco Prime Network

Inventory Management
Cisco Prime Fulfillment

Configuration Management
Cisco Compliance Manager

Provisioning Management
Cisco Prime Fulfillment
Converged charging and billing solution with SAP BRIM

Unique experience from global projects
Added value in ready-made product catalogue components
Mitigated risk and increased speed of implementation, integration and migration

References

SAP Offer-to-Cash
- Offer Management
- Order Capturing
- Order Processing and Monitoring
- Fulfillment
- Convergent Charging
- Convergent Invoicing
- Receivables Mgmt. and Payment Handling
- Credit and Collections Management
- Financial Customer Care and Dispute Mgmt.

SAP Offer-to-Fulfill

SAP Consume-to-Cash

CRM
- Campaign Management
- Product Management
- Product Catalog

ERP/Service Ful.
- Sales and Change Order Capture
- Contact and Account Management
- Order Distribution Infrastructure
- Order Monitoring

Convergent Charging
- Sales and Distribution
- Logistics
- Technical Activation

Convergent Invoicing
- Price & Rate
- Price & Simulate
- Account Balance Management

Customer Financials Management
- Revenue Management
- Credit Management
- Financial Customer Care
- Dispute Management
Verso Customer Care Extensions (VCCE)

Own development – a complete modular CRM system consisting of...

- Fraud Detection & Management
- Web 2.0 integration framework
- Customer information and history
- Ticketing & Service Management
- Workflow and Provisioning engine
- Business Sales Module
- Resource and Inventory Management
- Order Management
- Accounting and Collection Management
- Dunning Management

References
Altima’s BSS Ecosystem

- CRM
- Customer Financial Management
- Convergent Rating & Charging (retail & wholesale)
- Online Charging Systems
- Mediation
- Application Engineering
Relevant Case Studies
**IP MPLS Core Assessment**

**Project Purpose** – identify key points for improvements to prepare network for NGN migration

**Key facts** - 2.500 P & N-PE devices; 40.000 PE-Agg devices; Alcatel, Cisco, Huawei equipment

**Deliverables** – detailed network analysis and recommendations for improvements

**Customer Benefits** – deployment ready recommendations for migration to multi-services NGN

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**IPTV Platforms Assessment**

**Project Purpose** – identify key points to enable access to content anytime, anywhere, on any device

**Key facts** – IPTV, WebTV and Mobile TV platforms; 4.5M users; multiple vendors of IPTV elements

**Deliverables** – detailed platforms analysis and recommendations for improvements

**Customer Benefits** – deployment ready recommendations

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**IPTV Operational Support**

**Project Purpose** – provide expert assistance on high-profile problems and tasks: VIP customer troubleshooting, monitoring platform upgrade project, reorganization of operational teams

**Key facts** – IPTV, WebTV and Mobile TV platforms; 6M+ xDSL customers; multiple vendors of IPTV elements: SeaChange, Verimatrix, Envivio, IneoQuest, JDSU, Argela, AirTies, Vestel, Motorola

**Deliverables** – Problem analysis documentation, follow through of implementing fixes on the platforms, networks, etc. Follow through of implementation of new monitoring platform, etc.

**Customer Benefits** – Increased reliability of the platform(s), decreased number of customer complaints, improved day-to-day operational procedures
**WiFi Assessment**

**Project Purpose** – identify key points for improvements to prepare wireless network for expansion

**Key facts** – 6000+ Access Points

**Deliverables** – detailed WiFi network analysis and recommendations for improvements

**Customer Benefits** – deployment ready recommendations for WiFi network and services expansion

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**SP WiFi Offload**

**Project Purpose** – efficient use of licensed radio spectrum through WiFi offloading of mobile data

**Key facts** – Cisco WiFi core and access; 100 Aps, Altima Verso PCRF solution

**Deliverables** – Proof of Concept

**Customer Benefits** – deployment ready WiFi offload solution

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**Managed WiFi project**

**Project Purpose** – provide Internet access in dormitories, government project

**Key facts** – 15000+ Access Points, 1000 buildings, 350 dormitories on 500 locations

**Deliverables** – design, implementation, OSS/BSS integration

**Customer Benefits** – WiFi Internet access for students
WiFi Analyze and Redesign

**Project Purpose** – identify key points for improvements to prepare wireless network for expansion

**Key Facts** – 6000+ Access Points

**Deliverables** – detailed WiFi network analysis and recommendations for improvements

**Customer Benefits** – deployment ready recommendations for WiFi network and services expansion

KYK (Kredi Yurtlar Kurumu) Managed WiFi Program

**Program Purpose** – provide Internet access in student dormitories, government project

**Key Facts** – 2 million+ students, 25.000+ access points, 1.000+ buildings, 500+ dormitories,

**Deliverables** – design, implementation (central system and all dormitory locations), OSS/BSS integration including SAP convergent charging functionality, operational support

**Customer Benefits** – WiFi Internet access for students with seamless future integration

IPTV Cisco FEC & VQE design and deployment project

**Project Purpose** – improve IPTV QoE by implementing error repair solutions

**Key facts** – 150+ TV channels, 6M+ DSL customers, 11 geographical regions, 300k IPTV subscribers, 5 different STB models, 3 STB vendors

**Deliverables** – fully implemented Forward Error Correction platform and Cisco VQE platform, integration with existing STB base

**Customer Benefits** – improved customer satisfaction, increased service reachability, decreased number of customer complaints
ALBtelecom and Eagle Mobile

**IP MPLS Core Deployment**

**Project Purpose** – design and build IP MPLS core network

**Key facts** – Cisco CRS-1, ASR9K, 7600 and ME platforms; 74 locations throughout Albania

**Deliverables** – fully operational IP MPLS network

**Customer Benefits** – network platform ready for deployment of advanced data/voice/video services

**3G Mobile Packet Core and Backhaul**

**Project Purpose** – design and build 3G mobile core (SGSN&GGSN) and RAN backhaul

**Key facts** – Cisco ASR5K, ASR901, ASR903; 200 NodeB locations, 3 core and 41 aggregation site

**Deliverables** – fully operational 3G mobile core and RAN backhaul

**Customer Benefits** – ready to offer broadband mobile services

**SP WiFi Offload**

**Project Purpose** – increase capacity of licensed spectrum through WiFi offloading of mobile data

**Key facts** – Cisco WiFi core and access; 200+ APs, Altima Verso PCRF solution

**Deliverables** – fully operational WiFi Offload solution

**Customer Benefits** – cost savings through efficient use of licensed spectrum; congestion avoidance
**IP MPLS Core Assessment**

**Project Purpose** – identify key points for improvements to prepare network for NGN migration

**Key facts** – 300 P & N-PE devices; 38,000 U-PE devices; Juniper, Cisco, Huawei equipment

**Deliverables** – detailed network analysis and recommendations for improvements

**Customer Benefits** – deployment ready recommendations for migration to multi-services NGN

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**IPv6 RFP specifications**

**Project Purpose** – identify key points to prepare network and services for IPv6 migration

**Key facts** – mobile company owned by Turk Telecom, lack of IPv4 address space

**Deliverables** – RFP documentation including key information for network and services assessment

**Customer Benefits** – Vendor independent RFP specification - analysis, design, migration plan
Project Purpose – charge all services on one billing platform and invoice on one bill

Key facts – existing billing platform inflexible and expensive; deploy SAP BRIM solution

Deliverables – deployment of convergent charging and invoicing platform

Customer Benefits – fast & simple modeling and roll out of new tariffs, services and service packages

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Project Purpose – increase efficiency and effectiveness of the sales process in all stages

Key facts – deploy SAP CRM solution

Deliverables – fully operational SAP CRM solution

Customer Benefits - increased revenue and reduced churn through improved customer relationship
SPM (Subscriber Policy Management)

**Project Purpose** – provide centralized platform for subscriber policing and policy management

**Key Facts** – user friendly PCRF GUI

**Deliverables** – customized subscriber management platform integrated with system

**Customer Benefits** – complete customer management and policing from one point

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Element Manager Deployment

**Project Purpose** – increase reliability of network platforms and availability of services

**Key facts** – different element managers; inefficient troubleshooting; deploy Cisco Prime Networks

**Deliverables** – fully operational Cisco Prime Networks NMS solution

**Customer Benefits** – decreased OPEX; increased productivity; increased customer satisfaction
Thank you for your attention!