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PIPELINE / VOLUME 22 / ISSUE 4

PL

Unified Orchestration for
ENTERPRISE AI
WITH: **ORACLE**

Accelerating
AUTONOMOUS NETWORKS
WITH: **ERICSSON** 

O-RAN & DAS
Transforming
Indoor Connectivity
WITH: **SOLiD**



6G
& WIRELESS
TRENDS

RF COVERAGE
FOR NEXT-GEN IoT

PERVASIVE MOBILE
CONNECTIVITY

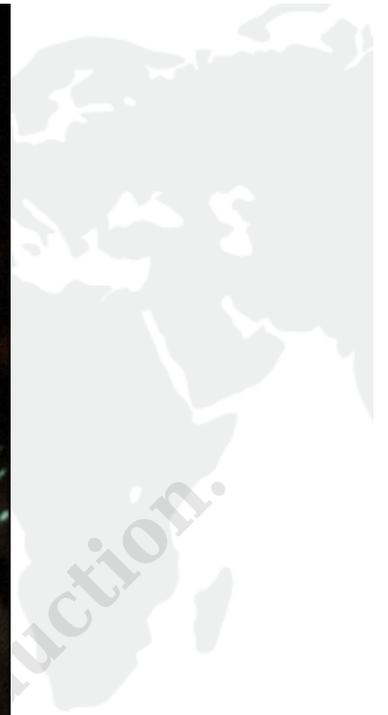
5G SA & AI-NATIVE 6G
MOBILE MESSAGING

MOBILE & WIRELESS

MOBILE AI • INTERNET BACKUP • ROAMING INTELLIGENCE

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A Dynamic Panel Discussion
Featuring Industry Leaders

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The Impact of Transformation



A Dynamic Panel Discussion
Featuring Industry Leaders

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AOK Bayern Deploys NiCE CXone

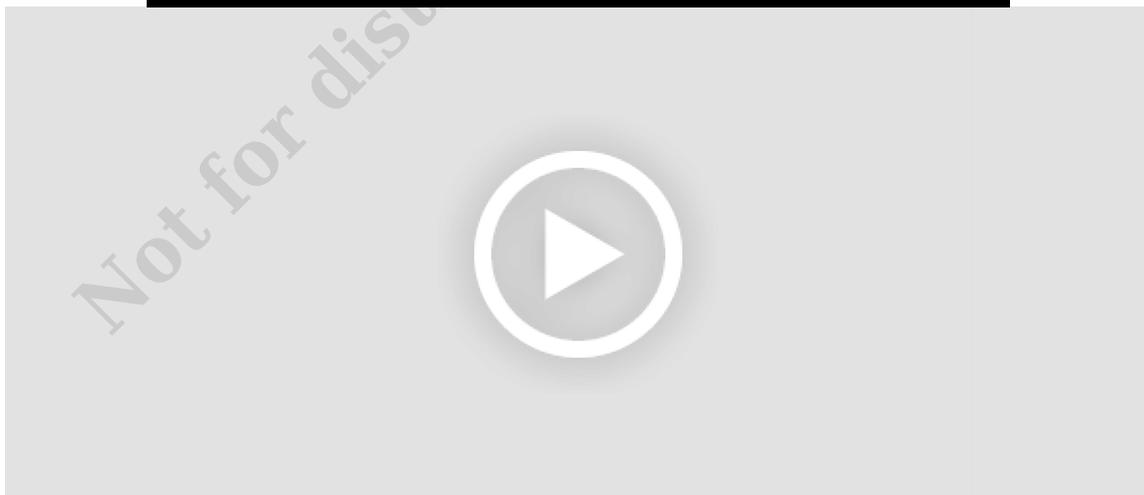
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Cloudflare Report Warns of a Technical Glass Ceiling

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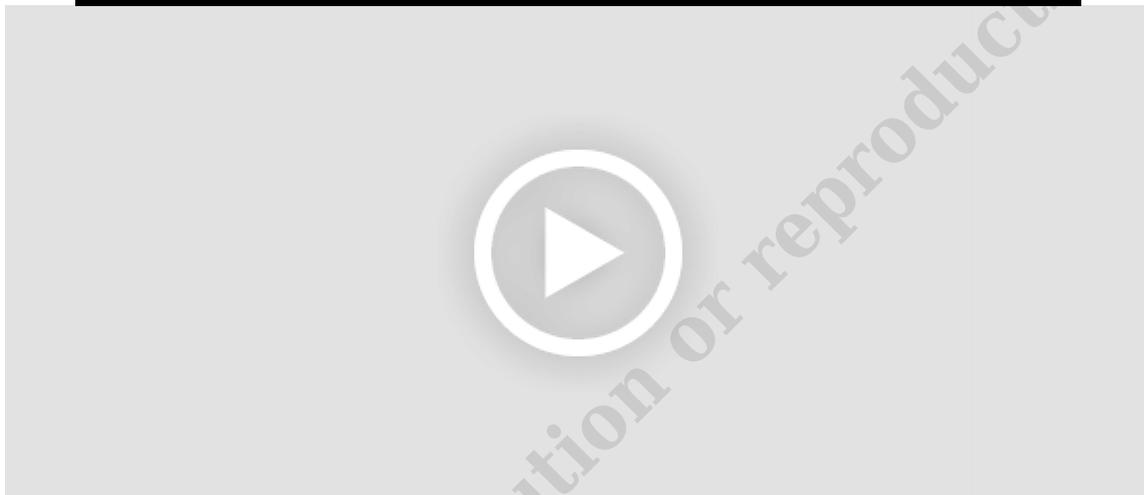
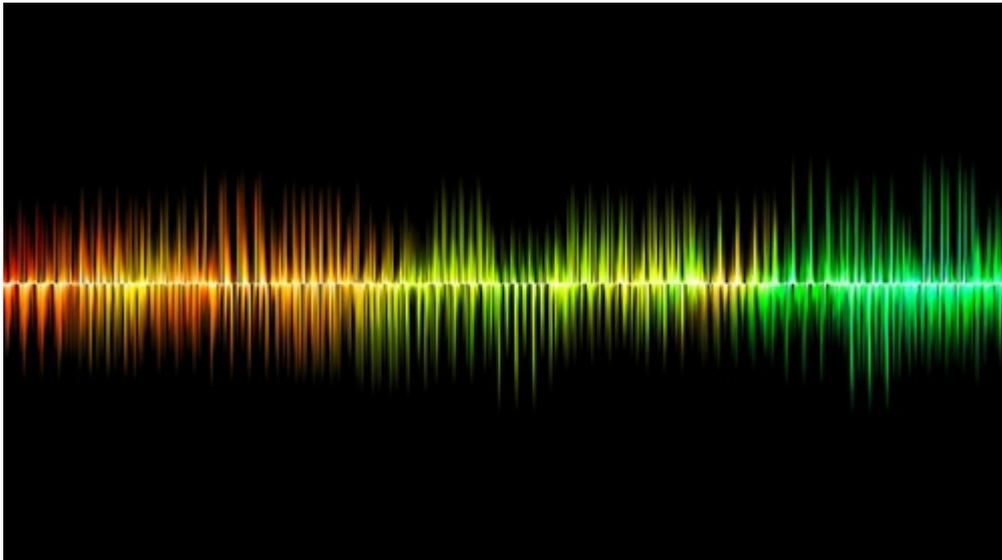
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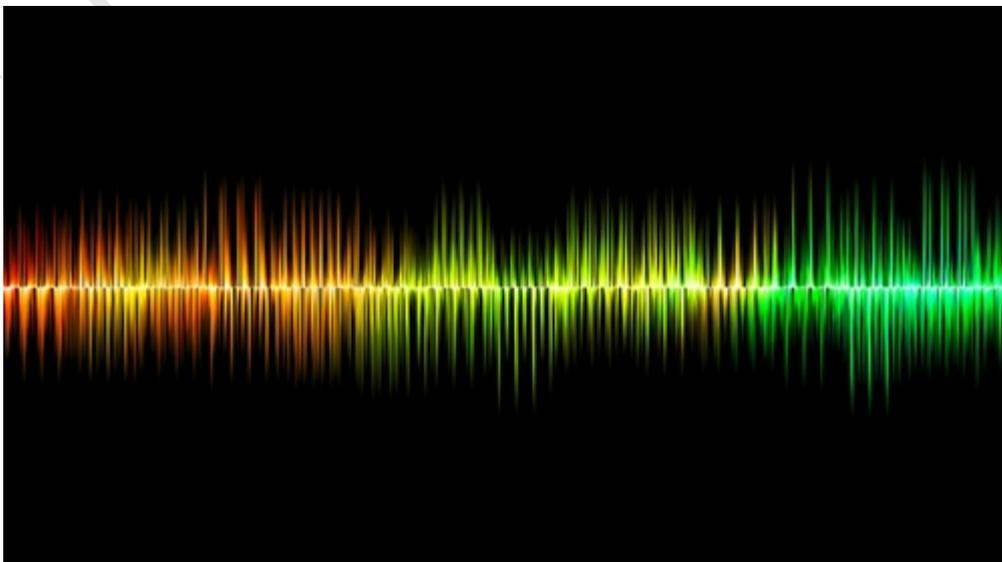
End-to-End Solutions for Broadband Networks

In case you missed Lindsay Broadband - a division of Technetix group at the SCTE Cable-Tec Expo, this video highlights the must-have, end-to-end solutions for your network.



Predicting Colonial Pipeline: Mitigating Risk and Compliance

Mitigating risk and compliance for lawful intercept using lawful intelligence is explored in this Pipeline article feature SS8. Learn how CSPs can comply with lawful intercept regulation, while empowering law information with critical, real-time data.





Podcast: The Evolution to 6G

The world's eyes are already looking forward to the potential of 6G. Demands resulting from innovative use cases, for instance specific requirements from different industries and other user groups, as well as overarching goals like sustainability, are driving the standardization and development of mobile technologies.

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**“DIGITAL TRANSFORMATION
FOR TELCOS: A 101 GUIDELINE”**



The Impact of Transformation

*A Dynamic Panel Discussion Featuring
The Industry's Top Thought Leaders*



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The Network Transformation Imperative

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The Industry's Top Thought Leaders*



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Agile Architecture for Digital Innovation

*A Dynamic Panel Discussion Featuring
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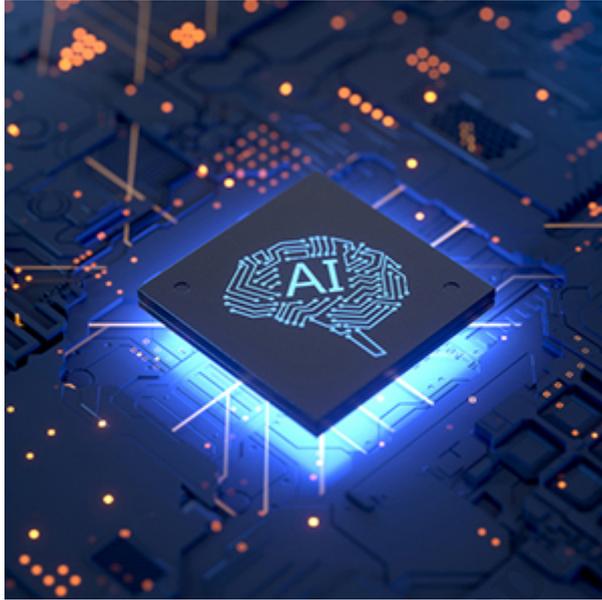
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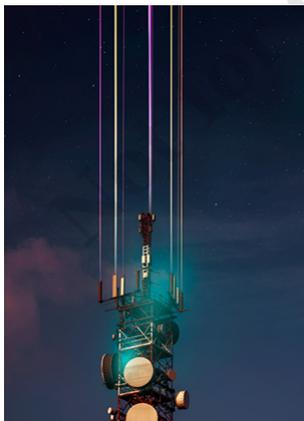
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5G NTN Satellite Networks



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Letter from Editor



IT & Telecom Technology News



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CloudSmartz
SMARTER TRANSFORMATION

CloudSmartz' mission is to help Communications Service Providers (CSPs) transform and innovate faster by making it easy to optimize business intelligence and generate revenue through a unified digital experience.

Acumen360™ Foundational Platform

Digitize Operations & Enable New Revenue Streams

SEGRA | | | | | |

Acumen360 Overview

Acumen360 enables an end-to-end customer experience portal that provides a multi-dimensional view into on-demand services as well as traditional products, including hooks into all legacy systems. Enterprise and SMB users will have self-service activities at their fingertips, including service ordering, customer care, provisioning status, network visibility, billing, ticketing, reporting, and more. Acumen360 allows for a 360° view into the customer and the business, enabling an award-winning customer experience platform unique to the telecommunications industry.

Pains That Weigh Down Service Providers

- Lack 360-degree visibility into customer touchpoints
- Lack overall digitization & automation strategy
- Provisioning time is way too long
- Net Promoter Score continues to decline with CX
- Need to drive revenue from new services & solutions
- Internal teams lack time or skillset to innovate

A SINGLE-SOURCE-OF-TRUTH FOR END-TO-END INTELLIGENCE

The diagram illustrates the Acumen360 Marketplace Platform architecture. At the top, four icons represent 'ENTERPRISE CUSTOMER', 'EMPLOYEE OPERATIONS', 'PARTNER ECOSYSTEM', and 'SALES/AGENT'. Below these is the 'ACUMEN360 MARKETPLACE PLATFORM' which 'DELIVERS A 360° UNIFIED SERVICE EXPERIENCE'. The platform is divided into three main functional areas: 'DIGITAL EXPERIENCE' (with sub-points: Personalized Self-Service, Business Customer Support, and Self-Service), 'MARKETPLACE EXCHANGE' (with sub-points: Multi-Channel Product Management & Monetization, and Multi-Channel Service), and 'SERVICE ACTIVATION' (with sub-points: Product Catalog, Service Management & Deployment, and Self-Service Provisioning). The platform is supported by 'NETWORK / CLOUD' and is flanked by 'OSS' on the left and 'BSS' on the right. At the bottom, the website 'www.CLOUDSMARTZ.COM' and the text 'ACUMEN360™ | FOUNDATIONAL PLATFORM SOLUTION' are displayed.

www.CLOUDSMARTZ.COM

ACUMEN360™ | FOUNDATIONAL PLATFORM SOLUTION

ENGINEERING SERVICES

**DATA DRIVEN. RESULTS ORIENTED.
YOUR BROADBAND SUCCESS.**

Rural America needs access to broadband. But closing the digital divide can be complicated—and with so many service providers facing increased competition, mounting costs, supply chain issues and eroding revenues, you need more than a quick fix.

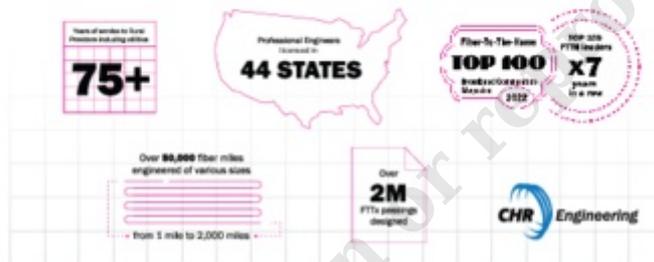
CHR Solutions has the technology and the expertise to help you make informed decisions that enable you to get the job done efficiently, on budget and on time. From feasibility studies to network design to construction, we partner with you every step of the way to optimize your operation and increase your speed to market.

“

CHR helped to train and guide us through the fiber-to-the-home design, engineering and permitting processes. They have become my go to liaison with city, county and state permitting authorities. If you want to work with people that are willing to help and get your foot in the door in your state right-of-ways, I highly recommend CHR (they even do wireless & tower engineering too)!

-Jason Pond, CEO, Grizzly Broadband, LLC

Our Experience. Your Advantage.





Introducing our New State-of-the-Art Geographic Platform

One of the ultimate goals of Broadband providers is to bring fast, reliable service to their customers, who are often located in rural parts of the country. Connecting unserved or under-served communities through broadband technology improves their way of life and closes the digital divide. But doing so can be costly and time consuming.

What if there were a way to make it all easier by streamlining each phase of your network implementation, improving decisions by using real-time data and therefore optimizing your current and future operations?

CHR Solutions is a proven industry leader with over 75 years of experience and we have found a way to expedite your builds, decrease labor costs, forecast in real-time, and increase monetization to speed up broadband access to rural America.

Geospatial Data is Not New— But the Way We Use It Sure Is.

By using Geospatial data in a unique way, we provide our clients with a platform that utilizes real-time information to improve efficiencies, take the guesswork out of decisions, and ultimately increase speed to market. The platform features a customizable dashboard that enables all aspects of your business to format and display the data in a way that optimizes its use in their specific operations.

CHR's Geographic Platform

- Improves efficiencies
- Takes the guesswork out of decisions
- Increases speed to market

chr.solutions.com | 713.351.5111

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CYBERATTACK:

IT'S A QUESTION OF **WHEN**, NOT IF



TOP TEN PREDICTIONS FOR THE TELECOMMUNICATIONS INDUSTRY IN 2011

For B/OSS, Managing the Manager is #1, says Progress Software

Progress Software Corporation (NASDAQ: PRGS), a leading software provider that enables companies to be operationally responsive, predicts that telecommunications service providers will increasingly be able to detect technology problems that might affect customers, solving them before the customers even know they exist.

Sanjay Kumar, Industry Vice President for Communications and Media at Progress Software, said, "The telecommunications field is very competitive, and service providers have to do what they can to differentiate their offerings. Solving problems before they happen goes a long way toward managing the customer experience." The firm also predicts that mobile service providers will have to build stronger relationships with customers, mainly by providing unique offerings to grab and hold their attention.

Progress Software's Telecommunications predictions for 2011:

1. **For B/OSS, managing the manager is key.** Traditional business and operational support systems (B/OSS) will require systems to manage the systems. Most service providers have invested so much in their B/OSS infrastructure assets that they cannot be easily replaced and need an adapted layer to respond to real-time business demands and reenergize the existing B/OSS infrastructure's value.
2. **You will predict problems before they come to light.** Telco service providers will be able to predict when there is a potential issue that will affect customers—and correct it before it happens. The pre-emptive correction of problems before the customer knows they exist will become a key factor in differentiating service providers and improving the customer's level of service.
3. **Loyalty program.** Mobile service providers facing mounting competitive forces will have to build stronger relationships with their customers. They will need to provide customers with unique, interactive experiences to build stronger loyalty by tapping into customer call patterns and locations, correlating with customer preferences and providing value-added services to customize each customer's experience in a unique way.
4. **Partly cloudy.** As communication service providers head for the cloud, they will struggle with data interoperability between cloud and non-cloud environments. Operators will need advanced data transformation and adaptive technologies to take full advantage of cloud-based applications.
5. **Mind the gap.** Operators will be increasingly trapped in the gap between customer expectations for flexibility and speed, and the limitations in existing B/OSS infrastructure. This will drive demand for new business user toolsets to overlay B/OSS, enabling service providers to respond and deploy new solutions faster.

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ZPE Systems Network Infrastructure Management Platform

Built for enterprise, trusted by tech titans

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Real Time Service Visualization
For Your NOC

Make it easy, empower your operations, delight your customer.

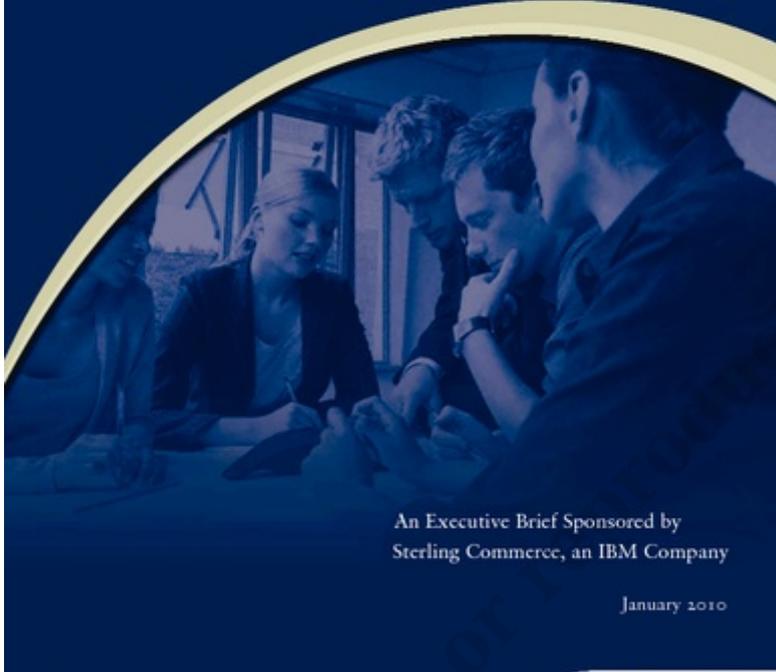


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CUSTOMER ORDER ORCHESTRATION –
CROSS-INDUSTRY 2.0 BUSINESS MODEL ENABLEMENT



An Executive Brief Sponsored by
Sterling Commerce, an IBM Company

January 2010

www.frost.com

"We Accelerate Growth"

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Customer Centricity in the Telecommunications Industry

Transformation from Product-Centric to Customer-Centric
and Creating Competitive Advantage Along the Way

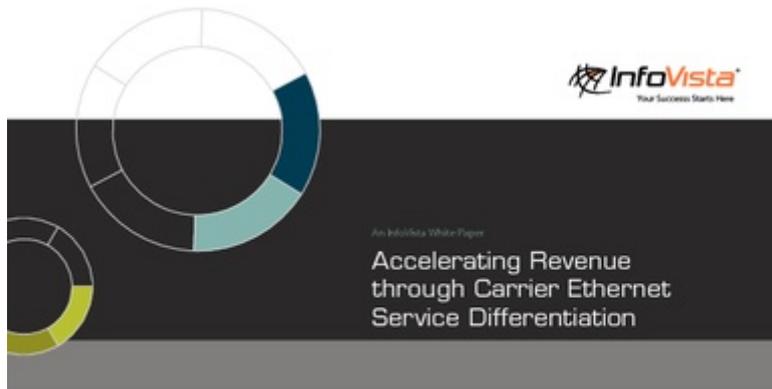
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TELECOMMUNICATIONS

Kayla McShane • Vice President, North America
Pitney Bowes Software



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DIGITAL **TRANSFORMATION** FOR TELCOS:

101 guideline

November 2023

Brochures

Artificial Intelligence (AI) has become one of the most powerful, transformative technologies that enable the development of new business models, new product/service offerings, and business ecosystems in many industries. AI technologies help organizations to enhance performance and productivity by enabling effective automation which provides larger revenue increases, greater cost reduction, and higher customer loyalty.

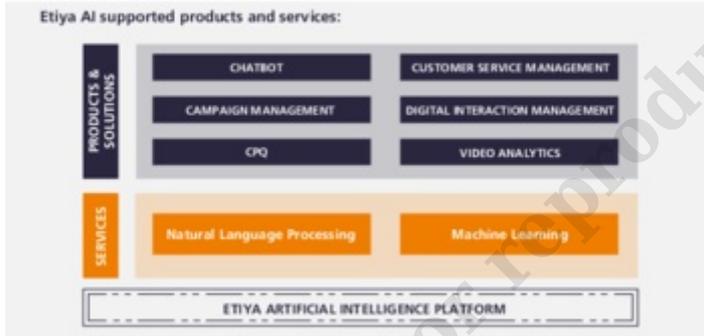
Why Etiya's AI Platform?	Etiya uses the building block of future technology, artificial intelligence technologies, and enables automation between service and operation processes. It allows companies to be able to offer personalized services and propositions through emotional, contextual predictions and recommendation mechanisms.
---------------------------------	---

Advanced capabilities with ML & NLP	Etiya AI Platform, Cognitus, is an advanced artificial intelligence platform that provides standardization, simple and centralized management, monitoring and improvement, easy ROI detection and measurement, fewer implementation failures, and scaling with its advanced capabilities along with advanced machine learning and natural language processing services.
--	---

Multi-language Support	The platform currently supports Turkish, English, French, and Spanish languages. In addition to these, developments continue to support more languages in a short time.
-------------------------------	---

Increasing Revenue & Reducing Costs	Etiya also offers innovative and experience-oriented approaches that will contribute to the digital transformation of the corporate processes of companies and create cost advantages with Artificial Intelligence-Cognitus supported products and solutions in its product portfolio. At this point, Cognitus which is also located at the heart of Etiya product architecture, works in harmony with all Etiya's products, solutions, and services and enhances their features with AI capabilities.
--	--

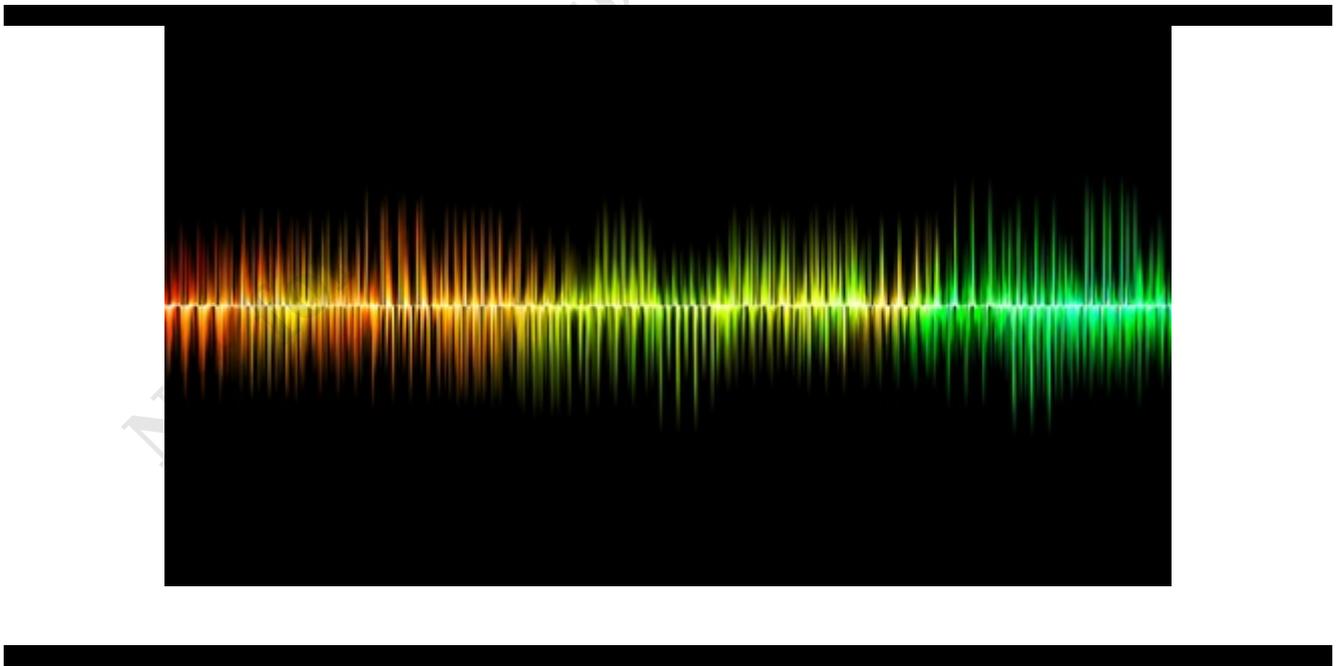
These AI-supported Etiya products and solutions enable effective automation and operational productivity by making information understandable in different business areas.





The Cable Customer of the Future:
More Autonomous, Mobile & Personalized
3 Key Trends that will Dramatically Change the
Cable Industry Over the Next 5 Years
CSG International | May 2012

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DATA 03

LINDSAY
BROADBAND
a division of technetix group

SCTE CABLE-TEC
EXPO 22

PLAY VIDEO

The image shows a video player interface for Lindsay Broadband. The background is a dark blue, abstract digital scene with glowing lines and data points. In the top left, there is a small box with the text 'DATA 03'. The main content area features the Lindsay Broadband logo and the text 'a division of technetix group'. Below this is the 'SCTE CABLE-TEC EXPO 22' logo, which includes a play button icon. At the bottom center, there is an orange button with the text 'PLAY VIDEO'.



**Strategic Insights:
Private 5G Deployment
Considerations for
Manufacturing CIOs**

Rajeev Shah
CEO, Celona

celona

REPORT

The image shows the cover of a report titled 'Strategic Insights: Private 5G Deployment Considerations for Manufacturing CIOs'. The background is a photograph of two people, a man and a woman, wearing hard hats and safety vests, looking at a tablet in a factory setting. The Celona logo is at the bottom left, and the word 'REPORT' is in a teal box at the bottom right.



TRIBOLD 3.0™

The communications industry's most advanced Enterprise Product Management software solution

TIME TO TAKE CONTROL

These are challenging times for the telecoms and media sectors. Fierce competition is lowering margins. Converging technologies are making product differentiation problematic. Cost pressures are mounting. Customers are treating products as disposable commodities while brand loyalty is fast becoming a thing of the past.

Facing these difficulties, Communication Service Providers (CSPs) are discovering that delivering innovative, profitable products is an increasingly demanding task, but one that has become paramount to their ability to effectively compete and deliver in this fast evolving industry.

Enterprise Product Management is about taking control over these challenges and providing the key to how CSPs go to market and with what products and services.



WHY TELCOS ARE GETTING
BETTER AT DELIVERING
INDIVIDUALIZED
CUSTOMER EXPERIENCES?





CASE STUDY: MULTI-CHANNEL CUSTOMER INTERACTIONS



Client: Leading Retail Entertainment Provider (The Company)

CHALLENGE

The Company was looking for a single vendor to deliver a comprehensive solution that combined agent-led customer care, multi-channel inbound and outbound customer interaction management, 1st and 3rd party collections, in-store data lookup (Reverse Phone Append), and consolidated customer reporting while simultaneously reducing overall customer care costs. The initiative was to consolidate services being handled by two vendors and connect one of the Company's selected in-house operations.

CROSS-CHANNEL SOLUTIONS PROVIDED

- Inbound Store and Customer Care
- 1st and 3rd Party Notifications and Automated Collections
- Past-due Postcard Reminders
- Interactive Self-help IVR
- Secure Payment IVR
- Customer Satisfaction Surveys

SOLUTION

CSG deployed inbound and outbound self-service customer care and collections solutions that utilized two of its direct customer interaction delivery channels: Interactive Voice Response (IVR) and direct mail (postcard notifications). By utilizing these proactive customer interaction delivery channels, CSG was able to supplement current agent activity with a automated self-service interactions, which helped the Company control costs and increase agent productivity and customer convenience.

- Speech-enabled inbound IVR solution for in-store and online customers, which supports self-inquiry and self-resolution
- Integrates with the Company's historical database for customer identification
- Dynamic customer routing to the appropriate associate based on skill set to facilitate first call resolution
- Designed an enhanced pre-collection strategy that leveraged outbound interactive voice messaging and Postcard Reminders for past-due videos and games
- Secure Payment IVR (CSG is a PCI-DSS Level 1 Service Provider) for customer self-resolution of past-due accounts
- In-store account lookups based on home telephone number (Reverse Phone Append)
- Customer Satisfaction Surveys allow the Company to improve the customer experience based on customer feedback
- 1st and 3rd party Automated Collections (outbound & inbound) for self-care within the automated call (Secure Payment IVR)
- Delivers reporting to separate corporate and franchisee store collections
- Integrates with the Company's collection associates to augment automated systems
- Past-due Direct Mail Postcard Reminders deliver a hard-copy written format reminder that an item is past-due and gives the customer self-service options to purchase the past-due item immediately by calling into CSG's self-service Secure Payment IVR

RESULTS

- Implementation of Automated Collection Solutions reduced the Company's annual collection costs by \$1.7 million
- 1st party Automated Collections notifications and self-care options significantly reduced the number of accounts being sent to 3rd party collections — cutting average collections costs per customer by more than 50%
- Solution generated approximately \$2.9 million in additional collections
- Solution decreased the Company's client roll rate by 3% as well as its days sales outstanding (DSO) and delinquency rates

csgi.com

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eliminate the
guesswork with
**GIS/CAD
services**



Accurate and up-to-date mapping is crucial to nearly every element of your business. Everything from network maintenance, emergency response, budget forecasting, and company valuation require these records to keep your company on course.

Relying on single point dependencies and perishable paper records create vulnerabilities for your customer, community and company. CHR's GIS/CAD Services take the guess work out of geospatial management and ensure your business is on the right path.

MANAGED GIS/CAD SERVICES

- Data extraction and normalization from paper to CAD
- Database and coordinate creation (lat/long, roads, hydrology, landmarks, row)
- Data exports to OneCall-Clicks & Google Earth
- Data imports (FEMA, soils, DFW, FCC)
- Graphical object assignment (Routes, pads, C&G)
- Aerial Imagery and GPS
- Ongoing system updates and support of geospatial data
- Report, query and analytic capabilities
- Data files hosted on CHR servers
- Facilities management systems integration
- Advisory support and recommendation of network improvements



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