CUSTOMER SERVICE FOR TELECOMMUNICATIONS

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Introduction

Leveraging a Modern GIS for Customer Service Strategies

Location intelligence is fundamental to all communication services—mobile and fixed, transport, and residential, as well as small and medium businesses (SMB) and enterprise business. Esri's ArcGIS® technology is a comprehensive geographic information system (GIS) for telecommunications empowering all aspects of an organization with a geospatial infrastructure. ArcGIS is a system of record, a system of engagement, and a system of insight leveraging the power of location intelligence to directly support planning and engineering, network operations and maintenance, customer service, sales and marketing, and information technology. With ArcGIS, you can meet your organization's customer service initiatives and digitally transform your business.

Quality real-time information and analytics can provide communications service providers (CSPs) and customer service teams with a comprehensive foundation for intelligent decision-making and a competitive advantage for the entire organization. Whether in customer interactions, planning and development of regional strategies, or the safeguarding of a good customer experience, ArcGIS is a collaborative ecosystem that provides the detailed understanding needed for effectively serving customers.

ArcGIS serves as a single, authoritative, interconnected, and integrated system for all workgroups in a telecommunications organization. Those responsible for enhancing the customer experience incorporate maps and location intelligence to

- Monitor quality of service (QoS).
- Measure customer sentiment.
- Deliver informative and intuitive self-service applications.
- Communicate service disruption and outage restoration efforts.
- Gauge customer characteristics, behaviors, and consumption.

With ArcGIS, all teams focused on customer service can be assured that they are making intelligent decisions, establishing competitive advantage, maximizing return on investments, and ensuring a long-term and positive customer experience.

A Comprehensive GIS

The challenges customer service teams face in the current telecommunications marketplace—combined with the immediate need to expand broadband availability—demand vastly better ways of monitoring and gauging consumer demands. Staff must be able to meet the quality of service and customer needs while creating and communicating vital business intelligence throughout the entire organization.

ArcGIS is a comprehensive GIS. *Comprehensive* means it contains all the elements needed to solve complex challenges throughout the company, not simply making conventional network maps faster. It maintains key information, analyzing and distributing it to teams needing real-time business intelligence.

ArcGIS executes tasks other traditional GIS mapping systems can't perform. It employs an unparalleled data model and consumes almost any form of external data. The rich data supports out-of-the-box analytics and the latest artificial intelligence (AI) and machine learning tools. ArcGIS is highly configurable to align with how people work today, providing focused capabilities so the right person can make the right decision at the right time.

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A Comprehensive GIS continued from page 4

These capabilities create a seamless experience for customer service teams when using the following systems needed to thrive:

- System of record–Data management and integration
- System of engagement–Sharing, collaboration, and dissemination
- System of insight–Analytics, models, and data exploration
- Real-Time Internet of Things (IoT)–Measurement and status
- Location Services–Developer tools for integration and customization

The telecommunications industry needs new digital tools that show the complete picture and provide powerful insights–insights that include exceptional visualization on any device, anywhere, at any time. As the requirements for GIS have evolved, so has ArcGIS. It delivers the power to increase the effectiveness of every workflow in a company.

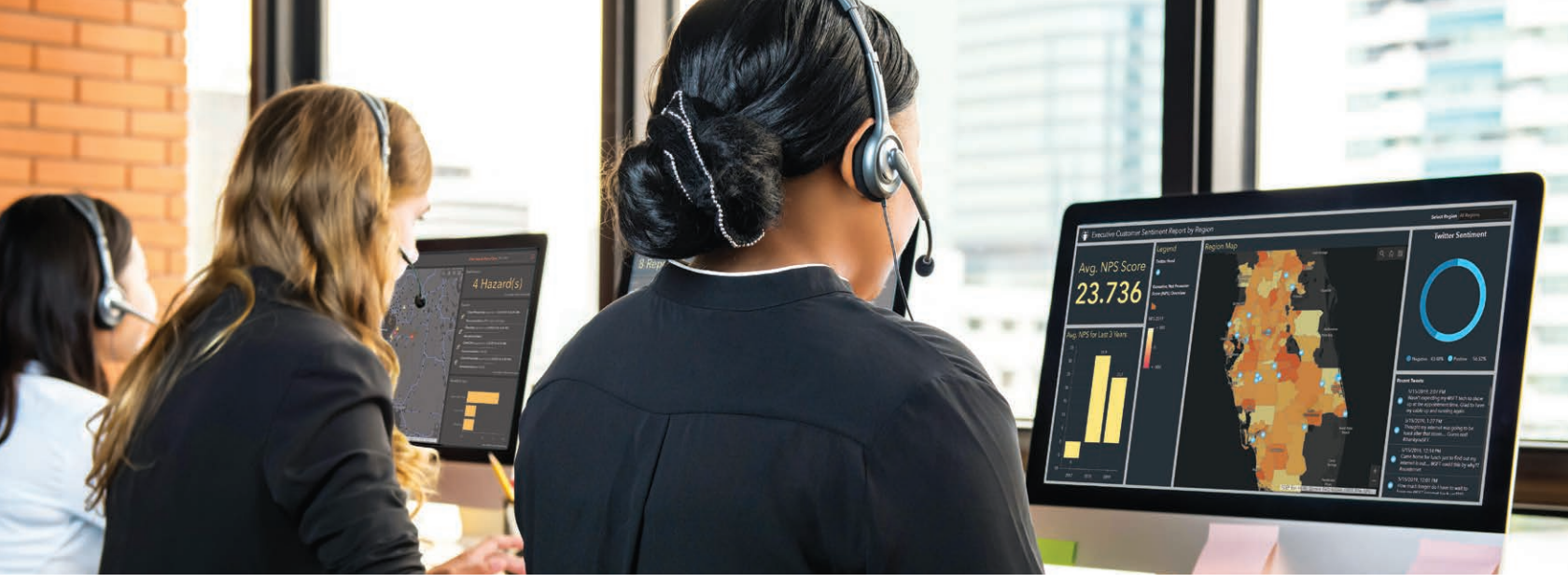
Customer Service with ArcGIS

What's just as important as broadband connectivity for today's communications service providers? The answer is customer experience. Whether it's the customer's experience related to initial service delivery, customer care and support, operations and maintenance, or service assurance, a customer's sentiment directly affects the organization's bottom line.

Meeting customers' growing expectations and changing needs is forcing CSPs to think differently and turn to new technologies to help them improve the customer experience. GIS technology provides essential tools and resources for visualization and analytics, purposely designed to streamline workflows and processes and increase communication and engagement.

Esri's ArcGIS technology can play an important role in helping CSPs improve their customer experience by refining their operations and maintenance efforts. ArcGIS delivers a suite of solutions designed to ensure faster disaster response, help reduce network downtime, and support location-based customer sentiment analysis.

Understanding what is happening in the network and how it impacts customers is key for organizations to maintain a high level of service reliability and provide a positive customer experience. Visualizing real-time network information on a map and analyzing services and where customers might be impacted by an oncoming storm or outage can allow CSPs to prioritize where network maintenance might be needed. Esri's ArcGIS technology is deployed in many CSPs' network operations to geoenable network capacity and network vulnerability analysis and configure real-time network operation views.



Communication and Engagement

Access to real-time data from field crews and integrated business systems provides customer service representatives with immediate answers to customer questions. This capability allows CSPs to share service information, coverage availability, and outage time to restoration through visual, easy-to-use maps. Access to real-time data also makes it easy for customers to report the location of service issues and coverage gaps while allowing management teams to visualize customer sentiments and impacts on the quality of service.

Sometimes it's not the actual outage event or late technician that upsets a customer. It is often the communication (or lack of) about the event that leads to unmet expectations. For instance, when customers experience a service disruption or outage, ArcGIS can be configured to message customers in real time while updating connection status and outage impacts, and engage with external stakeholders. This real-time collaborative approach leveraging GIS means less time for a CSP to troubleshoot and find the root cause of a network problem, and the happier a customer will be.

Everyone understands the context of a map. Esri's Outage Viewer & Issue Reporter solution allows CSPs to share service information, coverage availability, and outage restoration times through self-service web maps so customers can answer questions themselves. The Outage Viewer & Issue Reporter solution can also make it easy for customers to report locations of service and coverage issues. Additionally, Esri's Customer Sentiment Reporting solution allows management teams to analyze and visualize customer sentiment across geographic regions in real time.

Geoenabled Customer Care

It takes a lot of time and expense to gain new customers, and they have come to expect more from their service providers across the board. With a geoenabled customer care strategy leveraging GIS as a foundation, teams throughout communications service providers are best equipped to ensure the relationship they have with their customers is strong. ArcGIS helps CSPs gain the real-time insight and understanding needed to deliver the best possible quality of service while providing an excellent customer experience.

To develop a geoenabled customer care ecosystem, service providers can leverage the tremendous volume of location-based information in their operations support system (OSS) and business support system (BSS) and integrate with ArcGIS to create powerful resources for the entire organization.

ArcGIS is an enterprise system, like OSS and BSS, and serves as the mission-critical system for maps and geographic data, securely providing visibility throughout the organization.

Not only can ArcGIS help CSPs communicate with customers, but it can also provide better analytics such as to estimate the technician's arrival time or pinpoint the location of a fiber cut. With ArcGIS, teams can create powerful stand-alone web applications or maps for integration into existing websites, customers can easily visualize and determine service availability and estimated time to connect and see network outages, and customer service agents can gauge real-time customer location and status on web-based maps that integrate and unify existing customer experience management (CEM) systems with operations teams.

Case Study 1

Tunisie Telecom

Tunisie Telecom had several challenges—like many communications service providers throughout the world do and work to solve each day. The company wanted to grow its market share, simplify operational workflows, and improve the customer experience.

To address these challenges, Tunisie Telecom deployed ArcGIS Enterprise as a comprehensive ecosystem for its operations. This provided a powerful foundation for teams to leverage when creating purpose-built web applications and maps and utilizing out-of-the-box desktop and mobile applications, such as ArcGIS Workforce, ArcGIS Collector, or ArcGIS Field Maps.

Customer 360 View

Location-based customer sentiment reporting and a 360-degree view can give organizations better insight into their customers. Enrich the Customer 360 database with demographics and location intelligence while leveraging GeoAI to help predict the likelihood of customer churn and develop tactics for maintaining the relationship.

With ArcGIS, CSPs can integrate and leverage consumer and customer datasets such as demographics, population growth, customer satisfaction, quality of service, and product availability. Teams throughout the organization can perform consumer behavior analysis, model regional growth and forecast product demand, and gain detailed insight into the satisfaction and experience of their customers with ArcGIS Dashboards or easy-to-create custom web applications.

Organizations of any size can deliver a dashboard revealing customer trends and patterns while proactively predicting impacts of maintenance and operations activities and gaining insight and understanding. This is done by visualizing critical customer details such as the impact to quality of service, net promoter score, product take rate, customer sentiment and social media feeds, and consumer churn metrics. All these are delivered quickly and easily via secure access in ArcGIS Dashboards—in real time, in one location, throughout the entire organization.

Case Study 2

Vodafone UK

With millions of mobile customers in the UK, Vodafone can analyze vast amounts of time-sequenced geospatial data, indicating how groups of people move around a wide geographic area across the entire country. Realizing that it could use this immense data asset of anonymized and aggregated movement data to help organizations better understand their customer environment, Vodafone has been using the ArcGIS system to enrich its own data and build unique and comprehensive patterns of movement in real time. ArcGIS enables Vodafone to interrogate its big data assets, answer complex questions, and present the results of its analysis in a format that its customers can readily understand.

Summary

With ArcGIS as an integrated enterprise system, teams focused on delivering the best possible customer service are better prepared for the challenges they face. Whether striving to maintain long-term customer relationships, proactively monitoring the quality of service and customer experience, coordinating and communicating network outages, understanding consumer demand, creating integrated maps, or ensuring a successful customer journey, communications service providers can leverage ArcGIS as a solid foundation. With ArcGIS, organizations have the comprehensive ecosystem of resources needed for successfully meeting the needs of today's consumers while ensuring networks are capable of meeting the needs of tomorrow.

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Esri, the global market leader in geographic information system (GIS) software, location intelligence, and mapping, helps customers unlock the full potential of data to improve operational and business results.

Founded in 1969 in Redlands, California, USA, Esri software is deployed in more than 350,000 organizations globally and in over 200,000 institutions in the Americas, Asia and the Pacific, Europe, Africa, and the Middle East. Esri has partners and local distributors in over 100 countries on six continents, including Fortune 500 companies, government agencies, nonprofits, and universities. With its pioneering commitment to geospatial information technology, Esri engineers the most innovative solutions for digital transformation, the Internet of Things (IoT), and advanced analytics.

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