

# LOCATION INTELLIGENCE FOR TELECOMS



esri UK



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***Location Intelligence  
in telecoms is valued  
at \$3.3 billion by  
2023***



## Legend

- Extension, Completed
- Extension, In Progress
- Extension, Near Completion
- Extension, Planned
- Network, Existing



Network data is fictional.

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# Introduction

## *Delivering a location intelligence strategy for telecoms*

Succeeding in today's highly disruptive, competitive market requires strategic investments that deliver new services, grow revenue and improve customer experience.

To help determine where and when to make these investments, successful companies in many industries are implementing a location intelligence strategy that leverages geospatial technology.

Telecoms organisations can realise a complete understanding of market potential, existing network capabilities and competitive threats which allows them to invest for maximum return on their investment.

Conveying this critical information and turning it into actionable intelligence can best be achieved through Esri's ArcGIS geospatial tools and visualisations in the form of live maps.



# ***Asset Optimisation***

Asset optimisation extends beyond optimising the physical network, to the people, processes and systems that maintain and manage telecom networks. Geospatial technology can help telecom organisations and Communication Service Providers (CSPs) optimise their resources using location intelligence.

For example, ArcGIS, Esri's market leading GIS platform, provides: advanced network modelling capability, geospatial mapping, analytics and mobile apps that leverage an open and interoperable complete Solution.

***Drive insights by  
understanding  
proximities and  
spatial relationships***



## *Strategic network planning & modelling*

ArcGIS offers the ability to combine datasets such as demographics, addresses, fibre speeds and existing infrastructure to allow organisations to strategically plan their new networks. ArcGIS models the entire network with spatially accurate data. It has the tools to model fibre, COAX, wireless and hybrid networks in two and three dimensions, supporting best practices and industry standards.



## *Service fulfilment*

Location Intelligence is required for service fulfilment to allow data transparency throughout the organisation. In addition, it enables marketing and sales teams to understand where best to market new network products and propositions, in order to maximise return on investment (ROI).



## *Assurance*


Realtime network operations, proactive maintenance and field force empowerment all require location intelligence to maximise operational efficiencies. Location Intelligence also enhances decision making and communication across the enterprise, by unlocking access to your business information.

# Revenue Growth

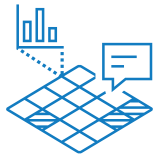
Communication Service Providers (CSPs) are always looking for ways to increase revenues. Revenue growth starts with understanding market demand and performing sales analytics. Next, it moves into ensuring a successful customer journey by accurately qualifying a prospect and the potential for service fulfilment.

Finally, it goes into upselling to customers for continued revenue streams. Geospatial technology can help CSPs increase revenue by leveraging spatial analytics with existing marketing and sales analysis to locate high-growth areas and upsell opportunities.

ArcGIS can enable presales engineers and customer sales representatives (CSRs) to qualify customers significantly more efficiently and effectively. It provides geospatial tools and maps to the organisation for improving customer retention and minimising churn.

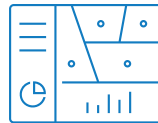


***Geo-enable business intelligence to target opportunity with confidence***



## *Market Demand*

Understanding market demand allows for the right product or service to be offered to the right customer at the right time. Improve market and revenue forecasts with geospatial insights provided by ArcGIS, which enhances geotargeted marketing campaigns with spatial analytics and rich demographic datasets.



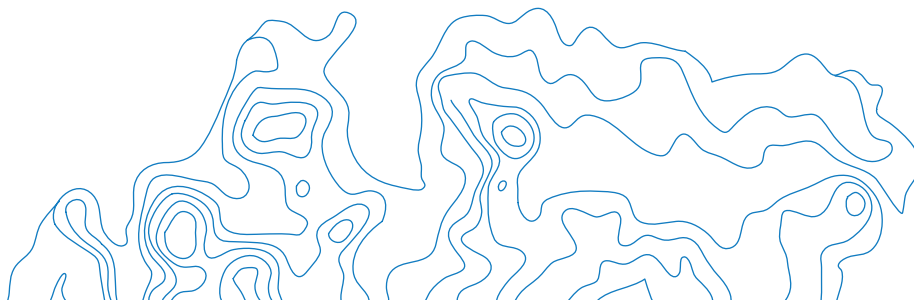
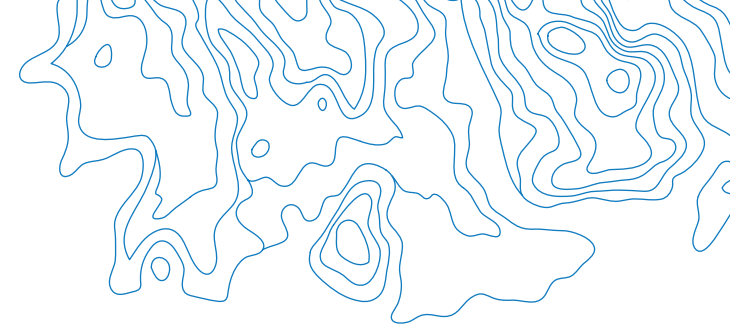
## *Sales Analytics*

Spatial analytics supports sales forecasting in many ways - from retail analysis and customer behaviour to service qualification. ArcGIS offers hundreds of ready-to-use spatial analytical tools to geographically analyse customer data and qualify customers faster.



## *Customer Retention*

Reducing churn and upselling customers drives revenue growth. Boost customer engagement and improve the customer journey with ArcGIS, which allows CSPs to geographically monitor Net Promoter Score (NPS) and customer sentiment, as well as to better understand the demographic characteristics of their customers.



# ***Customer Experience***

What's just as important as download speeds for today's telecom organisations? The answer is customer experience. Geospatial technology can play an important role in helping a telecom organisation improve its customer experience by refining its operations and maintenance. ArcGIS can support faster disaster response, reduce network downtime, upsell new local services and support location-based customer sentiment analysis.

***Geo-targeted  
services for  
proactive customer  
engagement***







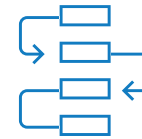
## *Communication and engagement*

ArcGIS allows CSPs to share service information, coverage availability and outage time to restoration through visual, easy-to-use maps. This can make it easy for customers to report locations of service issues and coverage holes while allowing management teams to visualise customer sentiments.



## *Service delivery*

Location Intelligence offers the ability to understand spatial trends and insights in service delivery and reliability. In addition, spatial analysis on network performance can help improve the customer experience which has a positive impact on NPS scores.



## *Workflows & processes*

ArcGIS enables improved resource allocation through routing and automated scheduling so that network installation intervals are met as planned, improving customer experience.

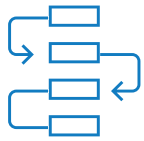


# ***Network Transformation***

Telecoms organisations need new tools to help them be more strategic in their planning; reduce their time to market through remote engineering; and maintain better operational awareness as they invest in new 5G, software-defined networks (SDN) and expanded fibre to deliver next generation services.

ArcGIS provides the essential tools to identify market opportunities and assess existing capacity, helping decision-makers invest where they can maximise their return on investment (ROI).

***Using the power  
of location to  
revolutionise your  
business***



## *Strategic Planning*

Whether telcos are planning a greenfield area or upgrading networks in an existing service area, they need to evaluate revenue potential against legacy network capacity and capability. ArcGIS is ideally suited for this analysis with optimised tools for big data geospatial analysis.



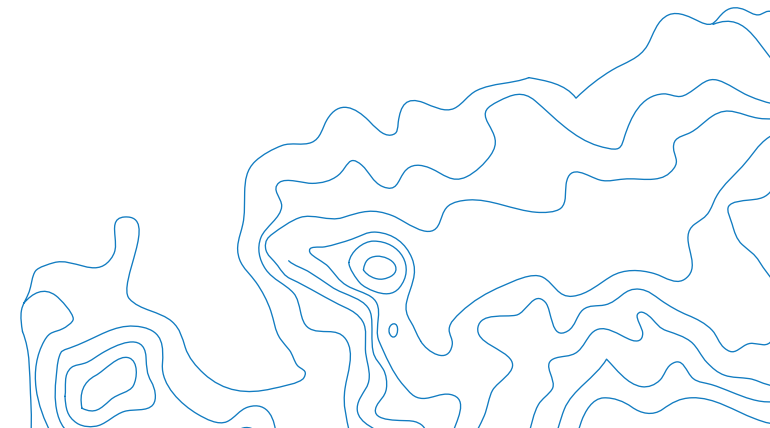
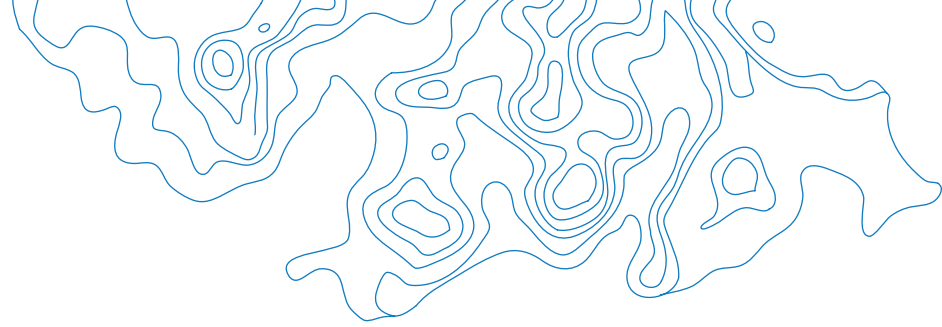
## *Remote Engineering*

Reduce the number of engineering field visits by bringing the field to the engineer. Fortunately, by leveraging ArcGIS, telcos are delivering field information directly to the engineer's desktop. It is now possible to remotely collect field data, develop designs, create final engineering documents and submit permits with a minimum number of field visits.



## *Operational Awareness*

A key component of any successful network build is the ability to track progress to ensure on-time service delivery. Knowing exactly when new services are available reduces time to billing and the faster revenue is collected, the higher the ROI for any given project.



*Build for the future  
with location  
intelligence*

# Digital Services

Keeping up with competition and customer expectations means Communication Service Providers (CSPs) are having to digitally transform to become the telecom of the future.

CSPs are turning to location intelligence and GIS to help them transform faster while giving them a competitive edge by leveraging location-based services and maps in new Internet of Things (IoT) products and services.

ArcGIS, the only complete cloud ready GIS, enables CSPs to be more strategic about where and when they transform their software-defined networks (SDN), Operations Support Systems (OSS) and their Business Support Systems (BSS).

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## *Digital transformation*

With limited CAPEX, CSPs need to be strategic with what products and services they offer where and when. ArcGIS supports geographic-based market demand and strategic planning analysis. The solution leverages Artificial Intelligence (AI) and Machine Learning to automate SDN functions at a geographic level and even assists with proactive network maintenance (PNM).



## *Mobile commerce*

Business intelligence and smarter Operational Support and Business Support Systems are becoming critical needs for telcos. The common denominator across the business is location. ArcGIS spatially enables line of business systems and brings business data together through an open web services architecture that is cloud ready. This enables omni-channel spatial analysis, big data analytics and a 360 view of the customer.



## *Data monetisation*

The emergence of everything IoT is creating new opportunities for telcos. New digital products and services for consumers, commercial businesses and cities can be enhanced location intelligence and maps. ArcGIS offers an open and strong developer framework to build GIS capabilities into your products and services, giving you a competitive edge and enabling new data monetisation revenue streams.

# About Esri UK

Esri, the global market leader in geographic information systems (GIS), offers the most powerful mapping and spatial analytics technology available. Since 1969, Esri has helped telecommunications customers unlock the full potential of data to improve operational and business results. Today, Esri software is deployed in more than 350,000 organisations including the world's largest cities, most national governments, 75% of the Fortune 500, and more than 7,000 colleges and universities. Esri engineers the most advanced solutions for digital transformation, IoT, and location analytics to create the maps that run the world.

## ► Esri UK supports telecoms businesses with:

- Network Strategy and Market Analysis
- Infrastructure Design and Planning
- Field Workforce Management
- Operational Intelligence
- Performance Management and Optimisation

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