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Network experts: Make the right call

An Indigo guide to successfully outsourcing network infrastructure support services

ENGINEERING A DIGITAL FUTURE

Business case grows for outsourcing support

For communication service providers, network operators and hyperscale tech companies that rely on fiber and network infrastructure to deliver their services, it's a challenging time where traditional business models may no longer apply. Increasing competition, narrowing margins, as well as seismic shifts in the geopolitical landscape, capital markets and changing consumer habits, call for a new type of agility.

On the upside, demand from consumers and businesses for digital services, hosted in data centers, and carried by fiber networks in particular, shows no sign of slowing down. The market is continuously evolving to meet growing global demand for faster and more reliable connectivity, with the global fixed broadband sector alone growing at just over 20 million connections per quarter.

To take advantage of the opportunities while mitigating the pressure points, owners and operators of digital infrastructure are devising leaner business models, where the core business is prioritized over lower value functions that can be outsourced or sold off. In the case of network infrastructure support – which encompasses everything from in-the-field maintenance to network performance monitoring – outsourcing is nothing new, there are just more reasons to do it.

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Six reasons to outsource network infrastructure support services

1. **Skills and resource challenges**
Engineering skills shortages are affecting network operators who find it increasingly hard to find and retain people with the expert technical knowledge they need. Supply and demand issues means experienced talent is expensive, while developing propositions for trainees and apprentices requires investment with long lead times before they see a return.

2. **Global reach is expensive**
Successful operators that run global networks must overcome the financial and technical constraints of managing and maintaining infrastructure in different countries. Economies of scale achieved by using the same technology must be matched by having a global footprint of field engineers who know how to fix and maintain it.

3. **Demands for higher service availability**
Network infrastructure is increasingly critical for public and private sector organizations, which is why they set demanding SLAs (Service Level Agreements). No operator wants to make support services a core expertise, but they can't afford to run the risk of paying excessive penalties or credits for outages. Outsourcing shares the burden of responsibility.

4. **Leverage leading-edge support technology**
A third-party provider that specializes in the support business will invest in solutions around ticketing systems, service desks, network monitoring and CRM (Customer Relationship Management). It's their job to keep up to date with leading-edge support technologies, not yours. Expect them to be constantly innovating to drive continuous improvement.

5. **Become a leaner enterprise**
Uber runs a taxi service without owning a car and the rise of virtual network operators shows that communication service providers don't have to own a network. What they must own is the customer experience and the service expertise that gives them competitive advantage. The technical support that enables it, however, can be outsourced.

6. **Focus on core business**
The evolution of networks is a non-stop process with new technologies constantly enhancing speed and capacity. Innovations in virtual networks, security and software defined services should be the focus for operators, finding new revenues streams and keeping customers satisfied, rather than the day-to-day business of monitoring and maintenance.

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Selection criteria: What to look for in a network support service provider

Network support can come in two flavors, field maintenance and network operations monitoring. Each has its own requirements, but you should look for service providers in both disciplines that have invested in digital tools and automation technologies that make support services more efficient. Expect their Service Desks and NOCs (Network Operations Centers) to be scalable, with tried-and-tested solutions, and well-honed processes that lead to faster issue resolution times.

Look for frontline agents in the NOC that are highly trained and technically knowledgeable, or comfortable with CRM and omni-channel communications in the case of service desk personnel. You will have your preferred channels for raising a ticket and communicating an issue – just make sure the service provider can accommodate it or has a compelling business case for you to switch to something else.

Matching needs and culture

Flexibility will also be important because every network operator has different needs. The geographical, technical and customer support requirements of a traditional telecom provider, for example, will be very different to those of a hyperscale company. The challenge for each is to find trusted third parties who have the scale, skills and agility to address them.

Effective communication and collaboration skills will be fundamental if a support provider is to succeed. Ideally there will be cultural similarities between your business and theirs – support is a team sport and the more you have in common, the better the chance of a successful partnership. Look too for a history of successful engagements, backed up with testimonials, evidence that the provider has experience in delivering the type of service it is offering you.

Digging into more detail, a capabilities checklist will be determined by the kind of the service they provide.

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Field maintenance support

The 24x7x365 Service Desk is the hub for co-ordinating the deployment of field engineers with the skills to fix an issue on site. Look for providers with wide-ranging competencies, including:

First-Line Maintenance
The distribution of 'remote hands' engineers with different skills must align with the location of your POPs, network cell sites, data centers, and in the case of subsea, cable landing stations.

Skilled Engineers
Some break/fix support will call for multi-vendor expertise and, depending on your statement of works, may require experience with legacy networks as well as new infrastructure technologies.

Global Service Desk
The center for engagement should leverage the latest CRM and digital tools, including omnichannel communications, facilitating contact over email and phone, or more directly via integrated systems.

End-To-End Ticketing Process
A state-of-the-art ticketing system integrated with CRM software identifies and classifies incidents, where the ticket is only closed when the engineer has been dispatched and the issue resolved.

SLA (Service Level Agreements)
It's not just the level of service, it's the consistency of delivery across multiple locations/regions that you should look for from a provider, including realistic timelines for how they would maintain more remote sites.

Scalable And Flexible
Choose a provider that has the ability to grow with you and support projects in new territories. They will need to have developed a highly distributed workforce of experienced engineers, always available to meet demanding SLAs.

Best-Practice Service Management
Maintenance work may involve change control and other IT service management processes, which is why you should go with a service provider that scrupulously follows a framework like ITIL.

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Network operations support

Run from a 24x7x365 NOC, look for providers with wide-ranging technical competencies, including:

End-To-End Ticketing Process
Every event on the network, in the data center or cable landing station is documented, classified, prioritized and tracked until the incident has been successfully resolved and the ticket closed.

State-Of-The-Art Monitoring Tools
A single pane of glass with automated features will track every component on the network and proactively diagnose faults, sending out alerts to trigger an agreed process of remediation.

First-Line Expertise
First-line support will ideally come from qualified engineers who are capable of root cause analysis and able to resolve most incidents first time, without further escalation.

Support Escalation
After first and second-line technical support there is the option of third-line escalation to vendors, build contractors and backhaul providers as required. The depth of response will be mapped to the SLA.

Proactive Support
New monitoring systems can help identify a performance pattern that indicates a piece of kit, such as a network card, that is about to fail. AI-powered tools are also starting assist in predictive maintenance.

Cyber Protection
Because of escalating cyber-attacks, NOC support should incorporate threat monitoring, logging events on every node and device connected to the network. Unusual activity should be documented and reported.

Reporting and Data Analysis
All ticketing and monitoring systems generate data that should be shared with you via reports or dashboards, ideally through a dedicated portal. Data analysis is a way to ensure continual improvement.

Best practice standards and frameworks

When looking for third-party support, make sure providers adhere to recognized standards and service management frameworks, and that they stay up to date with best practice.

An ability to respond to evolving security threats is a pre-requisite for any third party involved in network maintenance. ISO 27001 is the standard for information security management systems that shows a competency around risk, cyber resilience and operational excellence.

ISO 14001 and related standards address environmental management, and help companies pursue their sustainability agendas. Compliance with current health and safety legislation is also essential to daily operations, covered by ISO 45001. Quality management systems need to be in place that conform to the requirements of ISO 9001.

Adherence to ITIL is another way of ensuring service providers align with best practice service management. The latest version, ITIL V4, provides a more holistic approach with leaner ITIL processes that are easier to use. Look out too, for GDPR compliance, an information classification scheme, and a process for background checks on employees compliant to BS7858, the British code of practice for security screening, and similar regulations globally.

Why Indigo
From first-line technical support
to in-the-field engineers

Indigo provides the full range of network infrastructure support services, from a purpose-built Global Support Desk that coordinates a team of engineers to a dedicated NOC, where technically experienced agents provide first and second-line support. A spares management service and a finely-tuned logistics operation ensures the timely replacement of parts when necessary.

The company monitors, maintains and upgrades services around the clock, deploying multi-vendor engineers within hours to provide on-site fixes. The company has two NOCs across the globe which act as single points of contact for all reactive and proactive support and maintenance requirements. Fully staffed 24x7x365, the engineering team triage, troubleshoot and resolve faults, escalating to suppliers and vendors if needed.

Tailor Supports To Client Needs
Every network operator will have different demands of support services, reflected in their SLA. A priority for some will be a team of rapid response field service engineers, technically capable of solving issues quickly in remote locations. Others will want a network monitoring capability, with first-line support that has the skills to resolve most issues immediately and the option of escalating to deeper technical knowledge for more complex problems. Indigo facilitates all of these levels of service and everything in between.
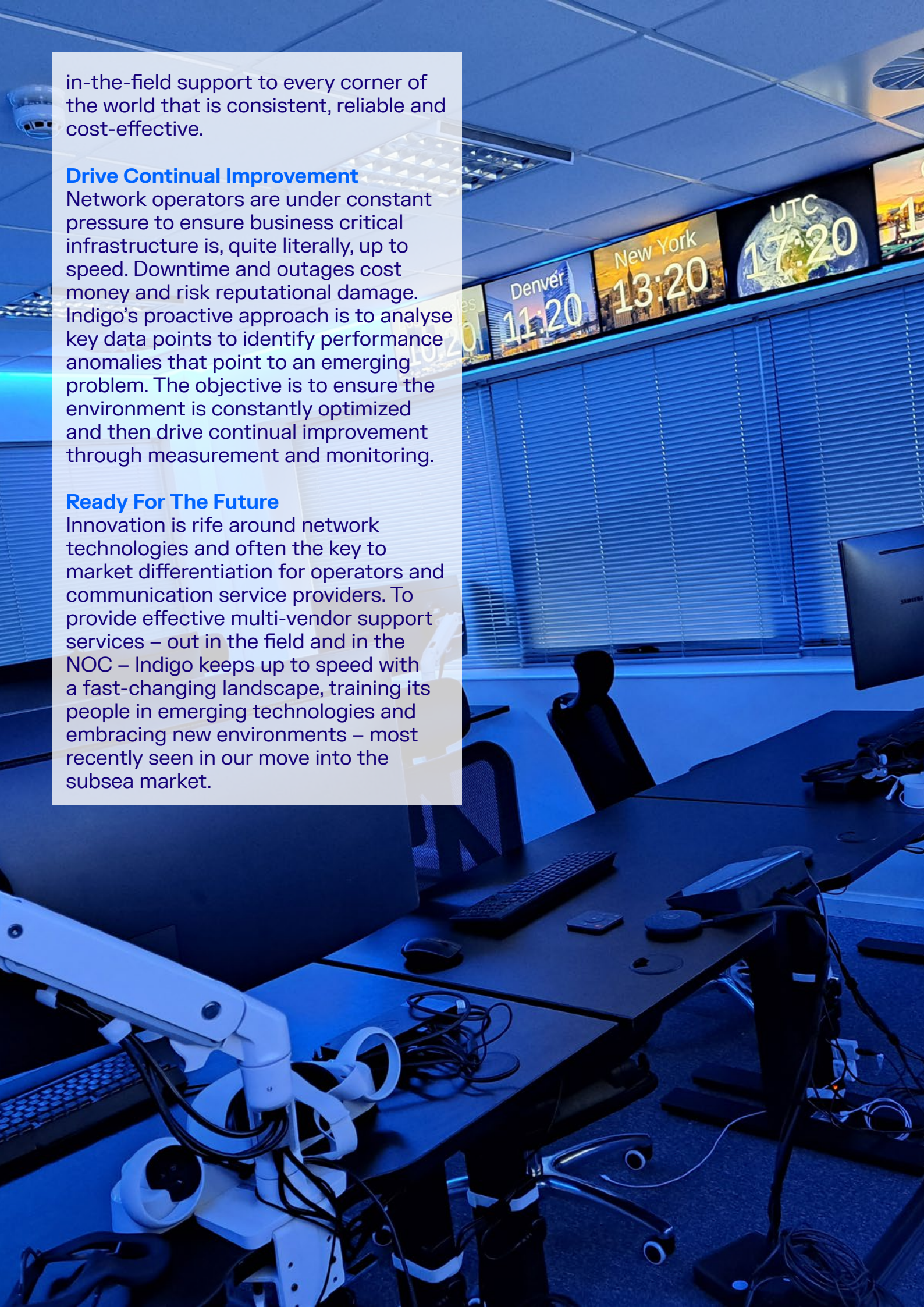
Meet Rigorous Regulatory Standards
Communications infrastructure is critical to public and private sector organizations that operate under increasingly rigorous regulations. Compliance is achieved through best-practice service management, governed by a growing number of standards. Indigo is certified to the highest standard ISOs and always compliant with local health and safety regulations. Quality management systems are used to stand over repairs, logistics and spares management processes.

Support Global Infrastructure
One of the biggest challenges for network operators is maintaining consistent field service standards across global infrastructure. Having the expertise to maintain various vendor technologies to the same level in different regions requires a level of expertise that is rare. Indigo has spent the last 25 years growing a global footprint in over 90 countries, with vendor agnostic engineers providing

in-the-field support to every corner of the world that is consistent, reliable and cost-effective.

Drive Continual Improvement

Network operators are under constant pressure to ensure business critical infrastructure is, quite literally, up to speed. Downtime and outages cost money and risk reputational damage. Indigo's proactive approach is to analyse key data points to identify performance anomalies that point to an emerging problem. The objective is to ensure the environment is constantly optimized and then drive continual improvement through measurement and monitoring.

Ready For The Future

Innovation is rife around network technologies and often the key to market differentiation for operators and communication service providers. To provide effective multi-vendor support services – out in the field and in the NOC – Indigo keeps up to speed with a fast-changing landscape, training its people in emerging technologies and embracing new environments – most recently seen in our move into the subsea market.

About Indigo

We design, deploy and support digital infrastructure owners and operators. Powered by the brightest minds and leading technical insights we maximize value in fixed line, subsea, wireless and data center networks.

Rapidly expanding our footprint across America and the world, we now operate in over 90 countries. We provide our international clients with a local and global presence, supporting infrastructure around the world through a single point of contact.

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