Optimizing for Telecom Network Deployment Services Opportunity in 2023 & Beyond





INTRODUCTION

The telecom infrastructure services (TIS) industry is a \$35 billion market that is expected to evolve and expand rapidly in the next 10 years. Government funding is driving network expansion projects by major telcos such as Verizon, AT&T and T-Mobile (as well as their international counterparts), and a whole ecosystem of large, established and interrelated vendors is jockeying for positions on deals.

That dynamic is making competition more challenging than ever. Labor shortages, wage inflation, workforce aging and other trends are pressuring vendors ability to stay above water, much less compete with peers.

TBR has helped telecom infrastructure services vendors navigate those dynamics for nearly 30 years. We publish research regularly that covers the TIS market and consult directly with hundreds of vendors.

In this white paper, we apply our expertise in the market and our learnings from those engagements to provide <u>a playbook for how TIS vendors can win in 2023 and beyond</u>. We analyze the trends facing the market, outline how we believe vendors can align themselves to compete, and share tactical steps on how to put this playbook into action.

SERVICES POWER THE BUILD-OUT OF GLOBAL COMMUNICATIONS INFRASTRUCTURE

It is easy to picture the infrastructure that powers our global wireless and wireline communications networks. Even for the uninitiated, communications technology is everywhere. Driving down the highway, wireless towers are visible. Walking through a city, the communications infrastructure is noticeable on the outside and inside of buildings. Although they are not visible, we can envision the technologies comprising those networks: the towers and all the associated hardware and software as well as the fiber optic lines that run on poles and underground.

What is obvious, but often less buzzworthy than the technology itself, is the vast number of interconnected labor-based services that are required to build out these networks. There are thousands of different types of services involved in building a network, and thousands and thousands of global companies that supply those services.

TBR covers these services activities in the Telecom Infrastructure Services research stream, which tracks all of the capital expenditures and operating expenditures on services by communication service providers (CSPs), which by our definition include telcos, cable companies and hyperscalers such as Amazon Web Services (AWS), Azure, Google Cloud Platform (GCP) and others. The research stream covers all services related communications and IT infrastructure.

To help us make sense of this market and track it on an ongoing basis, TBR devised a services taxonomy framework for TIS that covers the full life cycle of activities associated with launching global communications networks. TIS comprises four main segments, and each segment contains a multitude of subsegments:

- **Professional Services**, including consulting, network planning and design, network optimization, network infrastructure integration, OSS/BSS integration, application integration, security services, training services, and interoperability testing
- **Deployment Services**, including engineering, site location and construction, equipment installation, and project management
- **Maintenance Services**, including remote technical support, on-site technical support, repair and exchange, and installation of software maintenance releases such as updates and upgrades
- Managed Services, including network out-tasking, network outsourcing, managed security services, managed OSS, managed BSS, and managed applications (VoIP, unified communications, internet applications, and all other types)

This standard services framework allows TBR to consistently and repeatably estimate the current and future size of the services market opportunity, as well as the financial performance and operational strategies of the key vendors that provide these services.



TELECOM INFRASTRUCTURE SERVICES INDUSTRY OUTLOOK

After several years of declines, the global TIS market overall returned to a positive growth trajectory in 2018, in line with TBR's estimates in the *Telecom Infrastructure Services Global Market Forecast for 2018-2023*, now that the 5G cycle is underway and webscales continue to increase their spend on network technologies to drive their strategic initiatives. Leading operators globally have shortened their 5G timelines by up to two years, and this has correspondingly pulled forward the TIS market growth curve by two years. 2018 was a key year during which leading operators invested to prepare their networks for 5G and, in some cases, began deploying 5G technology. This trend will play out over at least the next five years as operators build out their 5G networks and continue their transformational journeys toward becoming digital service providers.



The North America region continues to drive much of the market activity in TIS. TBR estimates the market grew just under 3% in 2022, buoyed by 5G rollouts, hyperscalers' network investments, edge compute infrastructure build-outs, digital transformation projects, government stimulus, and greenfield network builds such as DISH's 5G deployment. On average, the benchmarked vendors in TBR's Telecom Infrastructure Services Benchmark increased revenue 7.2% year-to-year in 3Q22.

While growth will turn negative for the North America TIS market in 2024, TBR projects TIS spending in North America will remain elevated compared to historical figures. The U.S. government is injecting significant funds into the market to replace gear with that from trusted vendors and to bring broadband internet speeds to underserved and unserved areas. These forces will often offset headwinds and support significant telecom infrastructure services opportunity.



FOUR MEGACHALLENGES FACING TIS VENDORS

Given our research in the space, TBR has had the opportunity to engage with hundreds of vendors that provide TIS-related services and with operators and hyperscalers that buy from those vendors. This includes a broad swath of different types of companies: telecom equipment providers of all size and focus; IT professional services firms selling into telecom operators; engineering, procurement and construction (EPC) pure plays; smaller subcontractors working on behalf of larger vendors; Tier 1, 2 and 3 operators; cable companies; and hyperscale cloud providers.

When briefing these companies on our research and sharing our perspectives on the market, we often find ourselves in discussions about their challenges. While the specific challenges differ by vendor, geography and/ or TIS service line, TBR consistently hears about <u>four major pain points</u> that are broadly impacting most providers of telecom infrastructure services:



Wage and benefits inflation: The U.S. Social Security Cost of Living Adjustment for 2022 was 8.7%, and 2022 concluded with a 6.5% annual inflation rate as measured by the U.S. Consumer Price Index. Low unemployment for TIS-related labor, coupled with an expected increase in the demand for labor, points to a need for wage increases to attract workers. General costs beyond wages are rising for telecommunications vendors as well. They must grapple with higher costs by passing along those costs in pricing that is market competitive but margin optimized.

Worker and subcontractor shortages: The U.S. Government Accountability Office (GAO) published a report in December 2022 entitled "Telecommunications Workforce: Additional Workers Will Be Needed to Deploy Broadband, but Concerns Exist About Availability." The GAO studied Bureau of Labor Statistics (BLS) data and conducted interviews across the industry to forecast the state of telecommunications labor for a 10-year period. The analysis concluded that U.S. government, at its peak in 2023, would support 23,000 workers, but that conditions are ripe for potential labor shortages due to lower-than-national-average unemployment for telecommunications infrastructure services professions. Qualitative factors such as an aging workforce, training requirements and industry competition for this category of labor are also pressuring resource availability. As a result, vendors must figure out how to source their own FTEs to support build-outs, as well as determine the optimal manner in which to use third-party subcontractor services to augment their own resources and pursue available work.

Navigating government incentives and stimulus: The GAO analyzed eight programs that fund the deployment of fixed and mobile telecommunications infrastructure. These programs are not an exhaustive list but represent the largest ones available to support this type of buildout activity. The largest is the National Telecommunications and Information Administration's Broadband Equity and Access Deployment (BEAD) program, which will provide a total of approximately \$42 billion for broadband build-outs in underserved and unserved areas across the U.S. Collectively, these eight programs provide over \$75 billion in total available funding. Operators must navigate this environment to capture funding, and vendors in turn must position themselves effectively to win opportunities from operators that are generated from this funding.

Ability to differentiate: The available funding to support telecom network deployments is increasing the level of competition among the vendors that provide services to operators in support of these deployments. As noted above, competition for talent is intensifying rapidly, and it is becoming more difficult for vendors to compete on price. In many TIS segments, avenues for differentiation are also inherently narrow, and there is a tendency for many vendors and services to look the same. As many services are heavily based on labor, vendors must compete on talent to win. Talent defines key vectors of competitiveness such as delivery efficiency (time and resources required) and delivery quality. Increasingly, however, this is not enough, and at times is not a sustainable path to differentiation. Vendors must differentiate in areas such as delivery tools, automation, process rigor, reporting, commercial terms, partnerships, and other related factors to optimize delivery efficiency, provide cost-effective bids and stand out in a crowd of RFPs.



Estimated Number of Additional Telecommunications Workers Supported by Selected Federal Broadband Infrastructure Deployment Programs per Year Assuming 10-Year Funding Timetables

Note: At the time of our review, not all programs had set timetables for providing funds, and in these cases we assumed that the program's total funding would be disbursed in equal increments over a 10-year timeframe.

OVERCOMING TIS MARKET CHALLENGES TO PURSUE THE GROWTH OPPORTUNITY

Taken together, these four difficult challenges can quickly become a heavy burden for telecom infrastructure services vendors. Overcoming a vast industrywide labor shortage while also managing rapidly expanding costs is no small feat. It is difficult to find time, particularly as a Tier 2 or smaller services supplier, to work strategically rather than simply putting out fires. Lastly, there is a competitive dynamic; the top 10 suppliers make up approximately 65% of the TIS market by revenue, per TBR's Telecom Infrastructure Services Global Market Forecast.

How can companies begin in an effort to address these difficult challenges? TBR believes this process starts with research. Addressing each of these problems separately and collectively with a rigorous quantitative and qualitative research approach will help build a winning TIS market strategy rooted in competitive and customer insights and perspectives.



GETTING THE BIG PICTURE VIA TOP-DOWN ANALYSIS

As noted earlier, <u>TBR produces multiple recurring</u> <u>research reports</u> covering the TIS market. The research we specifically produce includes:

Telecom Infrastructure Services Market Forecasts, which provide regional and global estimates of fiveyear market size for telecom infrastructure services, with breakdowns by region and subregion, service segment, capex versus opex, and communications service provider type. These reports also provide estimated vendor share for each forecast and an

accompanying analysis of market trends.

Telecom Infrastructure Services Benchmarks, which provide estimates of revenue, growth and margin for a selection of leading Tier 1 and Tier 2 telecom infrastructure services suppliers. As with market forecasts, these reports break down estimates by vendor and vendor type, region and subregion, service segment, capex versus opex, and communications service provider type. These reports also provide analysis of vendor strategies in areas such as portfolio, resource management, alliances, acquisitions, and deals and contracts.



As extensions of these reports, many companies also conduct custom studies to go deeper on topics such as the following (not exhaustive):

- Market sizing and forecasting (geography, service, customer segment)
- Vendor revenue and profit modeling (geography, service, customer segment)
- Quantity of deployments and anticipated future number of deployments
- Customer (operator) capex and opex spending on TIS, including historical and forecasted
- Market pricing and costing trends over time

Compiling these types of insights from research suppliers, such as TBR and others, and integrating internal and other public data sources (such as the industry statistics referenced above from the U.S. Bureau of Labor Statistics) help vendors develop a top-down view of the telecom infrastructure services market segments that they care about.

Building a repository of top-down insights, leveraging whatever sources are available and consumable to a given vendor, also helps define key overarching strategic questions around priority markets, margin expansion opportunities, resource investments, and other areas.

Top-down research and insights can inform an overall strategic direction that begins to address the TIS industry challenges outlined earlier in this report. For example, one of the problems we outlined was the labor shortages across the industry. Top-down data from the BLS, coupled with reports from a research vendor, might help a vendor determine the major U.S. regions that have the largest availability of qualified labor resources. The vendor might compare that data with top-down data on the anticipated number of sites to be built by operators in a given region, as well as the anticipated market size of a particular region, and make a strategic decision on how much to invest in that region versus another potentially viable TIS market.

DIFFERENTIATING VIA BOTTOM-UP DISSECTION

Top-down insights are a critical starting place, but that big picture is not enough. A company needs to deal with realities too, and this is where bottom-up dissection comes in.

For instance, with the nascent technology of generative AI, top-down insights are sufficient. Between the recent launch of OpenAI's ChatGPT beta and the emergence of new vendors every day, everyone is vying to establish product market fit and determine the go-forward use cases for the technology. Understanding the overall state of play is the order of the day.

This is not the case with telecom infrastructure services. While the market and the underlying technologies continue to evolve, the competitive environment is intense; operators, suppliers and their subcontractors form relationships; and vendors are increasingly challenged to preserve margin. In this type of market, unlike in generative AI, top-down insights are important, but bottom-up dissection is where winners are separated from losers.

Bottom-up dissection is the process of collecting tactical data and insights on the strategies of competitors and/ or the needs of target customers, such that those insights can be put into immediate action for the purposes of pursuing and winning business opportunities. Given the tactical focus, bottom-up dissection efforts often focus on areas such as pricing, commercial terms, contractual terms, go-to-market strategy, sales compensation, sourcing strategy, delivery capabilities, and related topics.

In TIS specifically, TBR has directly supported hundreds of bottom-up dissection efforts, with granularity at a geographic, subregion, service line, service task/RFP task, customer segment, and competitive level. We have covered the following competitive and market topics:

- Fully loaded cost and billing rates (net and street) for job roles associated with a given TIS service; includes rates paid to end customers versus rates paid to subcontractors of different types
- Total services cost (per unit) and price for given TIS service; includes rates paid to end customers versus rates paid to subcontractors of different types
- Breakdown of labor rates into different loading factors, including margin
- Number of resources required and types of resources required to perform defined services tasks for a single crew and/or for an overall project (total number of crews per the crew structure defined that would be deployed on a project)
- Time required to produce one unit and/or all units of a defined service task
- Overall production efficiency, defined as the number of units of a service task that can be produced in a given period of time, such as a week or month
- On-site versus back-office mix of staff for specific service tasks
- Onshore versus offshore mix of staff for specific service tasks, with offshore locations and mix by specific offshore location
- Mix of vendor versus subcontracted resources, with breakdowns of which specific service tasks and roles are performed by vendor versus contracted resources



- Identification of preferred subcontractor engagement models, types and/or specific subcontractors by service task, region and/or other factor
- Contractual structures used for different types of services (such as fixed versus time and materials, and milestone-based)
- Contract lengths, payment models, invoicing terms, and contractual conditions/clauses
- Commercial tactics, including typical discounts and other incentives offered by customer situation and deal size for specified service tasks
- Service-level agreement (SLA) terms outlined in contracts
- Delivery and operational processes for managing service elements such as project management, quality assurance and testing, change requests, reporting, and acceptance
- Delivery and operational processes for managing subcontracted labor, such as identification and recruitment, commercial structuring, onboarding, governance, and annual reviews
- Delivery tools and assets leveraged in service delivery, and impact of tools on delivery timeline, efficiency and/or cost

Once digested, validated and distributed throughout a TIS vendor organization, these types of granular insights can be directly implemented into tactical functions such as pricing, sales, operations and sourcing. They directly impact how a vendor chooses to bid on deals, and what those bidding strategies infer for how that vendor evolves its overall pursuit strategy for winning TIS deals.



HOW TO EXECUTE ON BOTTOM-UP DISSECTION

TBR recommends companies take the following steps to collect bottom-up insights.

Define goals and outcomes

The first step is to define the company's goals and determine specific outcomes to drive based on the research. Define the audience for the information and how will they be served. Take a journalistic approach to determine the who, what, when, where, why and how of the bottom-up dissection effort. Think about breaking this phase into two interrelated parts: 1) the overall desired business goal or strategy and 2) the research goal and outcomes to implement on the path toward that larger business goal.

In terms of leading this process, larger companies that have a market and competitive intelligence team (or shared resources performing that function) and/or a corporate strategy team have a great start. One of those functions should own this process and likely already knows how to help steer an intelligence effort.

Companies without that type of team should consider developing a small, multifunctional stakeholder team that will serve as a research committee. Appoint a leader who is the overall project coordinator, but set up weekly huddles to make sure the effort stays on track.

Translate goals into a scope and objectives

In the previous step, the team probably established a high-level goal statement along the lines of (illustrative only): "We want to increase our win rate on rural fiber deployment projects by X% for the 2023 through 2025 build cycle." This goal is likely connected that to a research or strategy statement such as: "To achieve that goal, we need a deep understanding of the economics and strategies that make suppliers in XYZ rural build-out regions successful."

Once that type of framework is established, it is time to get more specific. To translate those goals into action, the team will need to start crafting a desired list of researchable objectives (e.g., data, insights), and establishing a research lens (scope) through which the research will be conducted. The research objectives might look like the large list in the previous section, with more or less specificity as needed (err on the side of specificity). Build as long a wish list as possible initially, as it can be pared back later. If possible, group questions into themes or major categories. At this stage, the focus should be on defining the ideal information to collect that would be as actionable as possible, meaning that with XYZ data you could definitively take ABC action.

After establishing objectives, define the scope for exploring those objectives. Some of the elements to consider as part of a scoping exercise include:

- Competitors, partners, and/or customers to evaluate
- Services to be included in the analysis (as granular as possible on services tasks)
- Geographic context: macro regions, subregions, countries, provinces and/or municipalities
- Customer context: Does this apply to a specific type of customer (size, relationship, deal, bidding scenario, other factor)?
- Deal/commercial context: Is this in pursuit of a specific bid, broad set of bids, or other type of opportunity? What is the size of that opportunity, as granularly as can be measured (for example, number of sites of XYZ type, miles of lines)?

As with determining objectives, a good place to start is to think about the necessary types of information to serve the stated goals. For example, deeply pursuing three or five key accounts will require gaining intelligence on those accounts versus gaining intelligence on a broad set of competitors that may serve those and other accounts. Similarly, if a company generates 80% of its business and has 80% of its resources in the U.S., launching a global study of country-level strategies is probably not a requirement. Those same basic questions — who, what, when, where, why, and how — can be used to inform a solid initial scoping definition for basic parameters such as competitors, customers and geographies.

Once the scope is defined, the next step is to get hyperspecific in a way that also represents the business opportunity broadly. For example, the team could try and benchmark labor rates for every region, role, seniority level, region, service line, customer, and deal type that applies to your business. While this information would be valuable, the cost, effort and complexity required to collect that information would be vast. On the other end of the spectrum, collecting high-level benchmarks on labor rates by role could be applied to any bidding scenario. This provides a data set that can be put into action but lacks precision and specificity, and thus is prone to errors and inaccuracies in practice.

TBR has determined that the best approach is to find the middle group. If the strategic priority for the next two to three years is to capitalize on rural fiber network deployments supported by BEAD program funding, a top-down analysis could be used to determine where the company is best positioned in terms of resources and what are the competitors, subcontractor partnerships, operator relationships, and other factors. This would inform a hypothesis about where the company is likely to win the most business. A bottom-up analysis could go deeper around this hypothesis. That might look like: "We want to benchmark our commercial strategy against these three competitors in the U.S. West region for greenfield fiber network deployment services that include XYZ services activities. These fiber network deployments are assumed to be of X to Y size, built between 2023 and 2025, and in service of Tier 3 operators such as A, B and C that have received government funding to build rural networks."

Determine a research collection approach

Compared to the previous step, the wish list is rather simple to compile. The budget, timeline and resources available for the research effort are key constraints that will help the team refine and execute on the scope. It is important not to set limits on scope and objectives prior to this phase, however, in an effort to understand the entirety of the challenge. Also, sometimes budget or resources can crop up midstream, so it is helpful to keep those options open.

At this stage, the team needs to review the scope and objectives and consider how it will collect these data and insights. The biggest overarching decision is whether the team will undertake the effort to collect the data or if a third-party analyst, research, consulting or other services firm will be engaged to help. Third parties can help expand the company's network, apply new methodologies, combine multiple data sources, provide objectivity, and add resources, but of course they come with an associated cost.

Another interrelated decision that will impact the overall feasibility of the effort, as well as the decision about whether or not to use a third party, is the methodology deemed necessary to gather the targeted information. By methodology, we mean the data sources and approaches to data collection that will be used to answer the research objective questions.

Even if the company does not have the budget to use a third party, it might be worth consulting with one at this point. Firms are generally willing to develop a proposal, which will include deep insights on the proposed methodologies for the project. Third-parties are effective at conducting feasibility testing to determine what data and information can be collected via best practice market research methodologies.

The first layer to evaluate when considering methodology is publicly available information. This could include secondary sources as well as primary sources. Run a scan of government databases, competitor investor relations and other resources, publicly available industry benchmarks, job boards and other related sites to determine the extent to which those resources cover the research objectives. Usually, these sources are insufficient, particularly if in the search for specific competitive insights on tactical topics such as pricing.

The next layer to evaluate is internal data. If the company already has competitive enablement content such as battle cards and/or has commissioned third-party work in the past, those are good places to start. Interview sales teams, delivery leaders, procurement professionals and business leaders to determine what level of intelligence may already reside in the organization, whether in people's heads or in various decentralized resources. Scour CRM, sales call recordings and whatever other win/loss resources the firm has at its disposal. Some baseline insights may be gleaned based on the feedback from the field. Part of the internal data evaluation process should also consider the company's customer base. Engaging the customer base for interviews or surveys is another option that could provide additional layer of information.

The last layer is external sources. This could include subscription research like TBR's TIS portfolio we described, other market and/or research databases and primary research. Most often with tactical studies like the ones needed by TIS vendors, primary research is the most suitable and effective methodology. This usually involves working with a third party to conduct a series of in-depth interviews with audiences such as customers, subcontractors, other partners and exemployees of competitors. The third part solely works for your company but in a double-blind manner to collect answers to the team's specific questions.

The benefit of using a third party for interviews is that respondents conduct an on-the-record discussion with an analyst firm, not a competing vendor or a customer. This can be structured as a two-way conversation in which the analyst shares insights and even reports in exchange for responses to questions. Analyst firms usually commit to aggregating and anonymizing interviewees. Interviews are a tool, not a deliverable. Firms often shade methodologies to favor customer and partner feedback, as these audiences are generally more comfortable sharing information. Analysts are also backed by a mountain of market data, so interviews can usually be framed more as a conversation to confirm the analyst's existing data rather than a data entry exercise to fill in the blanks. Interviews are deftly designed to include as many qualitative questions as requests for sensitive quantitative data to disarm respondents.

Collect the data

After determining a budget, timeline and methodology, it is time to collect the data. If the company has chosen to use internal sources only, the team can simply craft a data collection plan, establish a timeline with goals and get started. If the company has decided to work with a research provider, a standard process will likely ensue that includes soliciting proposals, short-listing firms, conducting review calls, selecting a vendor, negotiating price, executing a contract and getting started.

Regardless of methodology selected, a project like this generally requires an end-to-end timeline of 12 to 16 weeks for the core research and analysis effort, plus additional time on each end of that timeline for stakeholder buy-in and rollout of the results. The company should plan for at least a quarter, if not a half-year, for the process of collecting and analyzing the data, building consortium, and activating the data into intelligence for the team. With a small scope and/or a methodology that relies heavily on internal resources, this timeline might be shorter. Be realistic and allow for an extra buffer in addition to the contingency buffer.

During this time, it is best to collect, review and analyze the data frequently. Things change, so adopting an agile methodology is best. Bring stakeholders into the process early and invite feedback to shape the final product. If the feedback can be addressed, implement it into the research fielding process. Commit to weekly meetings and periodic deliverables. Publish the company's project timeline and make it clear when results will be ready so teams can begin thinking about how to act on results well in advance of receiving them.

Analyze results

It is hard to get too prescriptive about analysis, as it really depends on the type of study. But it is mostly about analyzing all the data, comparing qualitative versus quantitative findings, pressure-testing what the findings might mean, tearing it down and then doing it all again.

We generally find that it is best to create a "pillar report" with all the findings. This includes an executive summary of overall impressions and recommendations, deep-dive key findings comparisons of the topics and scope, and an appendix of even more data, competitive profiles, demographics information, definitions, and anything else to substantiate the study and make accessing the results as self-service as possible. A detailed Excel data file may also support the report.

It is important to ensure the creation of an apples-to-apples, consistent comparison of the results to internal business realities. For example, if the project is to benchmark competitive labor rates, make sure to compare your company's labor rates to the competitors', calculate the percentage difference, and establish hypotheses for the reasons behind the difference. Ensure this type of benchmarking comparison is created across all topics covered in the research. It will serve as the foundation to translating the research into actions.

Set up regular cross-functional presentations and invite as many colleagues as are interested to review and share questions. Start building interest in the findings, and encourage questions so the team starts to think about how to put the data and insights into action.

This report is a necessity, but it is also the starting line. Everything else becomes about action.

Act on results

There is an undefined number of ways the team might act on the results generated from a bottom-up research effort. At a minimum, in covering competitors, the team generated a lot of data to use in updating or building out battle cards. But more likely, the team created a data and insight platform that can be used to benchmark the company's performance and make tactical decisions in pursuing key TIS deals.

In the previous step, benchmarking the company's performance likely yielded some areas of strength versus peers, some other areas of sameness, and other areas where the company firm has gaps versus specific peers, customer expectations and/or industry averages. Revisit this benchmarking topic by topic and determine if action is needed for each item. In some areas, action will not be needed or will not be possible.

After identifying areas needing action, it is time to heat map the actions needed. Give each topic a rating from 1 to 5, where 1 is the least important or urgent, and 5 is the most important or urgent. For each area, brainstorm no more than three specific actions. Determine at a high level the effort needed for each of those actions, with an assessment of timeline, resources required and cost required.

This step translates research findings into a matrix. There will be urgent and important problems that are easy to address, urgent and important problems that are harder to address, and other things that are less important and urgent. The two former categories then become the priorities for taking action based on the bottom-up research.

The first category represents quick wins. This could look like the battle card update, as mentioned previously. Or perhaps it is a simple tweak: The company is 5% off market price in a particular market, and the research indicates the company can adjust to market pricing across job roles within the current margin guidance and approval thresholds. The pricing is updated going forward.

The second category is more difficult. Perhaps the research indicated the company needs to recruit an additional 20 subcontractors, or hire 100 tower climbers, to pursue targeted business in a particular region. Maybe the company is trenching for fiber at half the speed of the nearest competitors and with two additional resources per average crew. Figuring out what to do is the hard part, but at least the research has helped clarify where the company stands. Start by hypothesizing why and make plans for training, processes, tools, resources and/or other investments to close the competitive gap and boost the company's overall competitiveness.

CONCLUSION

Opportunity is everywhere in <u>telecom infrastructure services</u>, particularly in the U.S. market. Government funding will support major fixed and wireless network deployments in 2023 and beyond. As opportunity is increasing, so is the competitiveness for deals. This is creating a shortage in the critical talent needed to deliver the required services, which is exacerbated by lower-than-average unemployment rates and an aging workforce. At the same time, wage inflation and customer pressures are hampering margins.

Vendors can position to win by taking a detailed approach to assessing their competitive and market positioning in telecom infrastructure services, and then translating those assessments into regular actions. This is best executed through tactical bottom-up dissection of competitive strategy in areas such as pricing, go-to-market and delivery operations.



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