

Manufacturing and Logistics Connectivity & IT Infrastructure **Playbook**

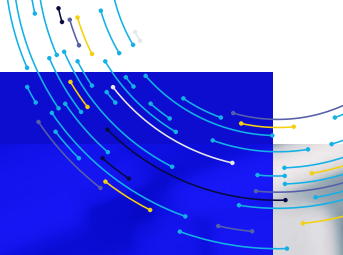
Keeping production and logistics running at peak efficiency starts with a **solid IT foundation.**

The “one-size-fits-all” approach does not work when choosing IT infrastructure services intended to keep manufacturing and logistics operations ahead of the competition. Having the right combination can be a competitive differentiator, but it’s important to choose wisely. With so many options, analysis paralysis can set in fast.

Let the nature and purpose of your business be your guide.

There’s one thing successful organizations all have in common: a winning technology game plan focused on connectivity, cybersecurity, voice, cloud, and colocation. We created this playbook to help you sort through the noise.





A Winning Technology Lineup.

Choosing the right IT foundation for your business is critical. Given the high stakes, it can also be intimidating. There are many options to build your foundation across four key domains.

THE PLAYING FIELD



CONNECTIVITY

The foundational network infrastructure connecting production operations, supply chain systems, and IoT-enabled equipment for real-time manufacturing and logistics.



CYBERSECURITY

Robust security solutions to protect sensitive data and critical systems from accidental exposure or malicious exploitation.



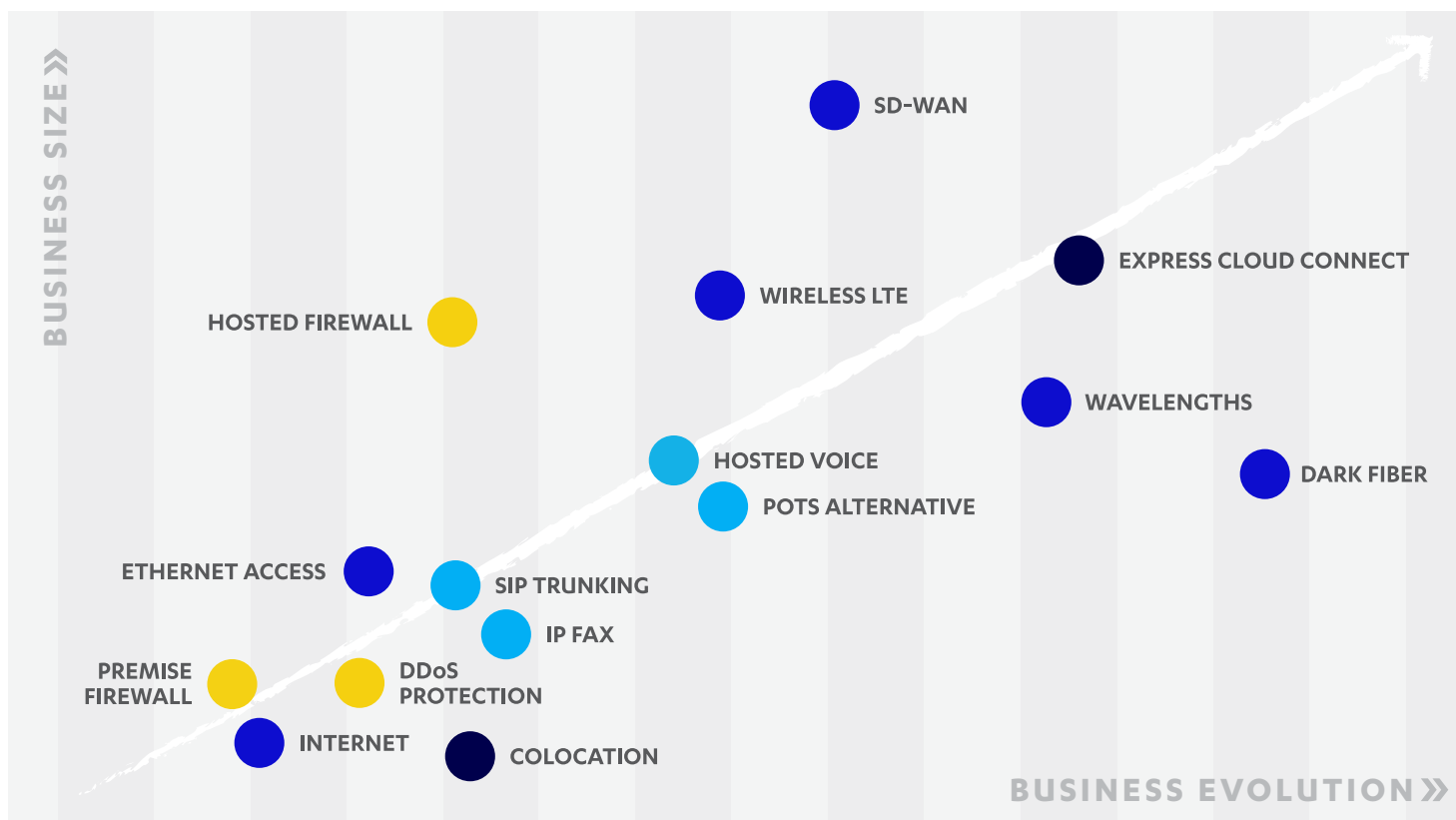
CLOUD & COLOCATION

Secure, reliable data center solutions for traditional and hybrid environments, and a fast, dedicated connection.



VOICE

Combined voice and data solutions and tools to enable shared, seamless conversations across multiple platforms.





Efficiency and quality are the standards that modern manufacturing and logistics are measured against. The technology that supports their pursuit of continual improvement requires reliable, fast, secure IT.

- Keeping connected equipment fully operational with reliable wireless access across the production floor
- Integrating AI and automation tools for predictive maintenance, quality control, and production optimization
- Adopting IoT sensors and devices for real-time monitoring and data-driven decision-making
- Protecting business-critical information and proprietary data as manufacturing ranks as the most targeted industry for cyber attacks
- Managing IT/OT convergence to bridge operational technology with enterprise systems while maintaining security
- Using real-time analytics and digital twins to find opportunities that cut costs and boost efficiency
- Supporting Industry 4.0 initiatives with edge computing, robotics, and cloud-based manufacturing execution systems
- Enabling seamless communication across all departments, from the factory floor to headquarters

Successful execution across these strategic imperatives supports growth while maintaining regulatory compliance and business resilience.

A solid IT infrastructure foundation must be flexible enough to support evolving demands, scalable enough to accelerate data transfers and secure enough to thwart bad actors.

USE CASE 1: Smart Factories with Just In Time Capabilities

Data is everywhere and next-generation technologies make it possible, even easy, to adapt to changing demands on the fly. Keeping all stages of production and fabrication running smoothly calls for high-performance, future-ready IT and networking solutions.

● **CONNECTIVITY:** Internet + Wavelengths + Wireless LTE

- Fast, secure internet powers Industry 4.0 by supporting sensor-driven automation, remote machine optimization, and digital quality control.
- Devices used by staff and guests need a reliable wireless connection free from dead zones and network congestion.
- High-volume production, a dedicated fiber connection with speeds up to 400 Gbps ensures sufficient bandwidth for bandwidth-intensive applications and equipment.

● **CLOUD:** Colocation + Express Cloud Connect

- Data-driven manufacturing requires handling massive data volumes for real-time optimization and seamless operations. Secure, scalable off-site storage protects mission-critical information while ensuring accessibility.
- Dependable data management is crucial for adjusting throughput and maintaining quality in real-time, making the robust infrastructure of data centers essential for smart-factory operations.

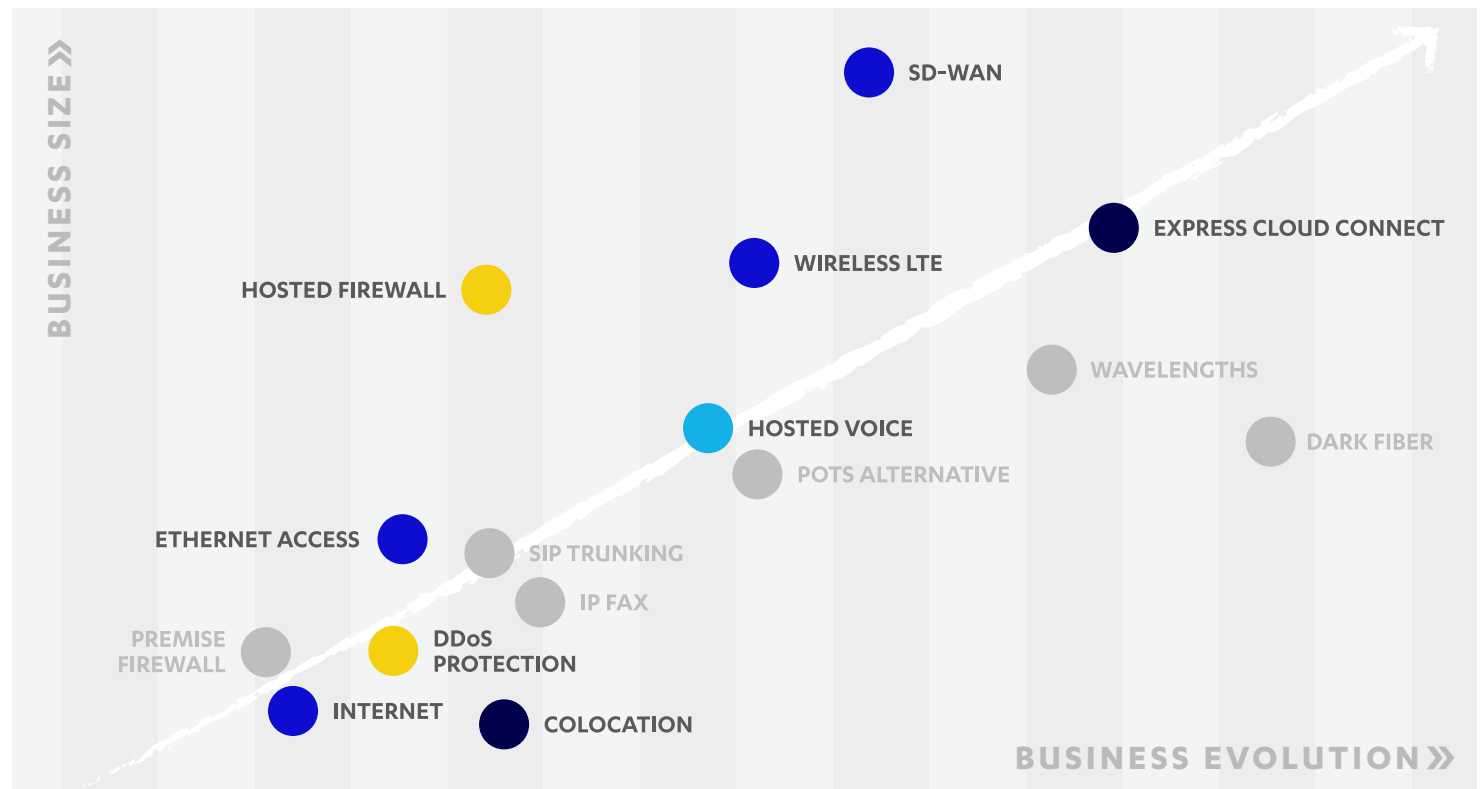
- Access cloud services with guaranteed performance and security for efficient data transfer and application hosting.

● **CYBERSECURITY:** Firewall + DDoS Protection

- Your website is more than just a digital footprint. It's also a prime target for bad actors who will use any means necessary to gain access to your network. DDoS protection repels malicious traffic in real time so you can remain focused.
- The effects of a data breach can be costly and crippling. The best way to ensure sensitive data doesn't fall into the wrong hands is with rock-solid defenses at your network's edge.

● **VOICE:** Hosted Voice

- Sometimes the best way to take care of business starts with picking up the phone. For employees, vendors and customers alike, crystal-clear call quality guarantees you can send the right message at the right time.



USE CASE 2:

Regional Logistics and Warehousing

There's a lot of activity behind the scenes involved with keeping distribution and fulfillment operations on track. The right IT strategy does more than just keep your devices connected: it has a direct impact on your ability to track the thousands of SKUs in your inventory and ensure every shipment goes out the door on time.

● **CONNECTIVITY:** Internet + SD-WAN + Wireless LTE

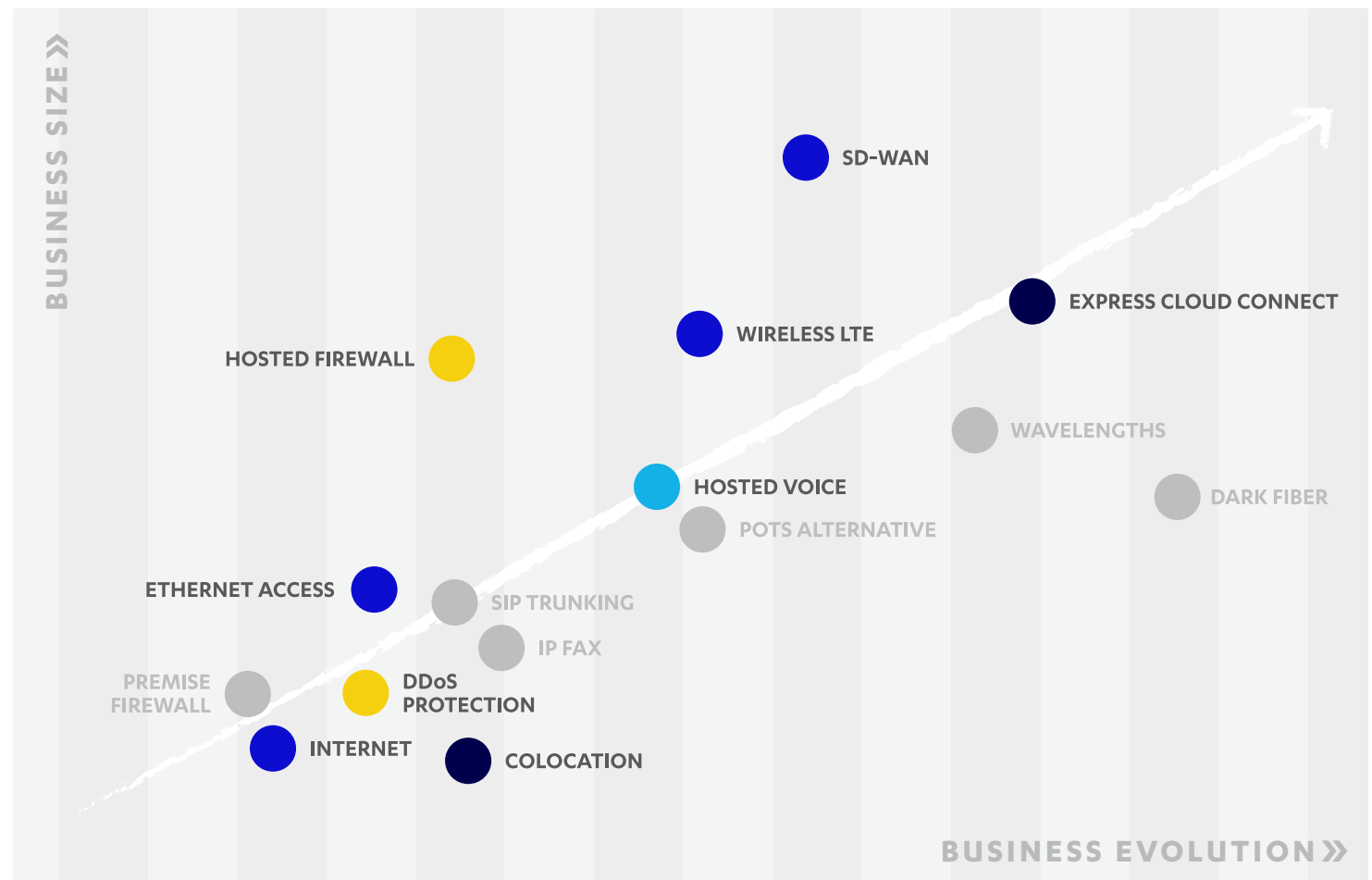
- Your IT network could span multiple locations across a broad territory. Uniting off-site storage, dispatch and distribution centers on a single secure channel boosts your efficiency and resilience while cutting down on tech disruptions that can derail prompt shipments and deliveries.

● **VOICE:** Hosted Voice

- Clear, timely communications is not optional for busy freight operations. Effective dispatch-to-drive communications starts with streamlined, interruption-free calls and high-quality video.

● **CYBERSECURITY:** Firewall + DDoS Protection

- Taking your website down is a favorite tactic used by bad actors to spread chaos and create a cover for more devastating attacks. DDoS mitigation protects your website from malicious traffic in real time so you can maintain your digital presence without lifting a finger.
- Cyberattacks are a constant threat that stands much closer than many people might believe. Protecting your operations and the confidence of your customers from the devastating effects of a DDoS attack successfully requires security systems that go beyond conventional methods to quickly respond and neutralize an attack before it strikes.



What's **Your Play?**

These are the most widely used connectivity plays successful manufacturers and logistics companies swear by. Refer to this playbook every time you're thinking of adopting new technologies and use these plays as building blocks to put together your technology game plan. It can help you think through every move to ensure your business is set up for success.

The plays contained in this document address broad use cases. Some products in a play may not be ideal for specific use cases or situations, and some products not included in the play may work better for other business scenarios.

Segra offers a broad portfolio of technology services and will help you design a winning technology game plan tailored to your unique business need

Let's start a conversation today.