

**We're all in
this together**



Flip a coin up in the air.
Call it. **Heads or tails?**



Let's face it.

Information Technology (IT) and Operational Technology (OT) are different sides of the same coin.

They each have similar concerns; however, the priorities of each may differ.

- IT traditionally focuses on data protection, following a priority model of Confidentiality, Integrity, then Availability (CIA).
- OT, on the other hand, has traditionally prioritized Safety, then Availability, Integrity, and Confidentiality (SAIC).



When it comes to ensuring your critical infrastructure network is up, running and secure...**it's the coin that matters, not which side (IT or OT) happens to land face-up.**

It's important to remember IT and OT share at least three common objectives.

1. Identifying and authenticating all devices within a system
2. Encrypting all communications between devices to ensure privacy of transmitted data
3. Ensuring the integrity of all data that's generated



For years, there's been discussion around the convergence of IT and OT, as network operators look for better **performance, visibility, flexibility, and security.**



But just as important as convergence is collaboration.

Here are four practical steps to foster collaboration relative to critical infrastructure networks and the move towards full digitization.

collaboration / kəˌlɒr.əˈreɪ.ʃən

1 to work together to produce
achieve something: She often co



Step #1: Bring all stakeholders to the table.

- All relevant stakeholders must have a seat and voice at the decision-making table
- Consensus must be found on what metrics matter most and need improvement
- Focus on operational requirements while managing downtime and security risks



Step #2: Provide cross functional education on the differences between IT & OT networks - striving for regular, on-going training between teams.

IT teams need vital education on OT real-time requirements and the issues that come with traditional IT security solutions:

- Guaranteed deterministic communication requirements
- Maximum latencies in specific network segments
- Support Service Level Agreements (SLAs) often with requirements for fast response, on a 24/7/365 basis
- Availability focused monitoring and patching programs



OT teams need formal education on networks and cybersecurity:

- Network Architecture (Segmentation schemes, Layer 3 routing, wide-area networks)
- Next Generation Firewalls with Deep Packet Inspection (DPI)
- VPNs
- Patching
- Syslog servers
- Intrusion Detection Systems (IDS)



Step #3: Promote Active Cross Functional Collaboration.

Real collaboration means bringing the OT and the IT teams together and getting the best from both worlds to improve operational resiliency and security.



OT teams must share the principles, protocols and functional requirements to operate, maintain and troubleshoot OT networks. This means taking the time to explain the reasons behind all the requirements, so the IT team fully understands the operating environment.



While IT teams bring deep understanding and experience of network architecture, formal governance policies and procedures, wide-area networking (cross-site communications), disaster recovery, and typically more experience with cybersecurity controls.

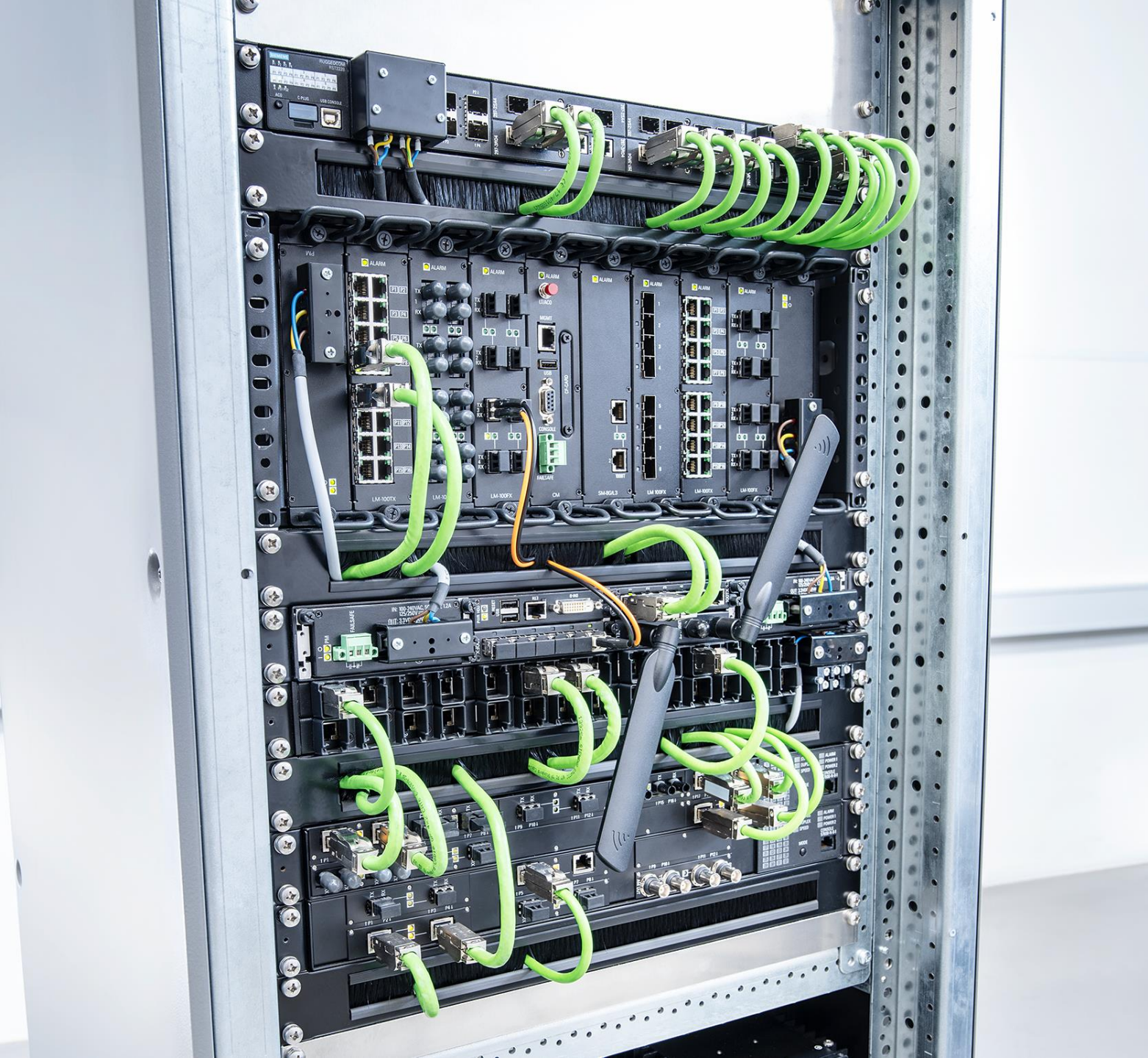


Step #4: Partner with an expert to facilitate the conversations that lead to solutions and success.

Discussions between IT and OT can be challenging. The Siemens team can help. We've experienced and bridged the IT/OT divide in our own global operations. We can help you and your teams do the same.

Siemens can play an important “objective” neutral arbiter role to promote IT/OT collaboration. Siemens and its RUGGEDCOM family of products and services provide complete solutions to meet needs of both functions, helping utilities maximize system uptime while ensuring performance reliability”.





The RUGGEDCOM open architecture enables interoperability with other branded equipment.

RUGGEDCOM hardware designs allow for future technology changes to be accomplished without wholesale replacements that create their own sets of issues and challenges.

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When it comes to designing and building future-ready networks, don't leave it up to chance with a coin toss. Promote collaboration between IT and OT and if you are in need of some guidance, reach out today.

Email us at **siemensci.us@siemens.com**.

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