

## Market watch: IT/OT convergence – key takeaways

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IT/OT convergence starts becoming a hot topic to discuss with more public seminars held recently. In Vietnam, the convergence of IT and OT starts happening with number of driving factors such as:

- The government's FDI attract strategy and manufacturing shift from China.
- The modernization of Vietnam's manufacturing and industrial sectors
- The approval of a huge energy plan (PDP8) for the country



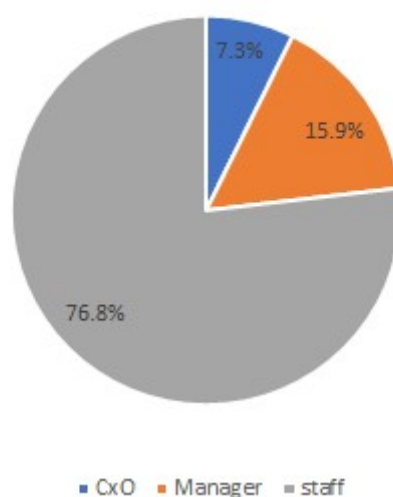
Photo: Assembly line of a smart electric device manufacturer in HCMC

We worked with customers, partners and vendors and have found key takeaways on the IT/OT convergence progress:

1. Cultural differences: as predicted, IT and OT professionals often have different cultures and mindsets, which can make it difficult to collaborate effectively. That's why we start seeing recruitments in the industry with new skillsets, combined IT/OT qualifications, we start seeing interesting requirements with combinations like CCNP/CISSP plus IEC-62443.
2. Security risks: Merging IT and OT can increase the risk of cyberattacks. Since traditional OT systems are often more vulnerable than IT systems, we have concerns for SMB manufacturers due to budget constraints to upgrade with proper protections.
3. Technical challenges: Integrating IT and OT systems can be complex and time-consuming. Hardware is purchased, but we rarely see new industrial protocols like IEC61850 and advanced security features being deployed. Standards like IEC62443 & IEC62351 compliances are still quite new to the operation team.

4. Long deployment time: IT equipment is purchased and kept in stock together with OT products, waiting for deployment in 1-3 years, such long deployment time is rarely seen in IT. This causes difficulty for contractors who traditionally work in IT sector
5. Market driving factors: There is more market in the south, probably because south of Vietnam is a major manufacturing hub, with a large number of MNC-owned manufacturing facilities. Demand is usually initiated from OT business, but IT contractors seem more excited with new opportunity. . Large investments, mostly coming from MNC or being financed by foreign banks help drive this trend adoption.
6. Industry activities: More seminars, customer workshops from vendors around IT/OT merging topics. CxO pay attentions at the technical level of the IT/OT convergence. In one of our technical workshop intended for engineers, 7% of participants are CxO level.

Participants



7. OT security awareness is rising: it attracts attentions from high ranking people. It is even understood in large accounts like EVN, PVN, MoD, ... as the national security
8. Cloud architecture: More industrial assets are getting connected. With SMB manufacturers, together with the steadily adoption of new industry protocols like OPC UA and MQTT, the traditional Purdue 5-layer model tends to be shifted into a more cost effective cloud architecture.
9. Active vendors: participating in the local market activities to drive IT/OT trend that we have seen are: Andritz, GE, Siemens, Schneider, Cisco, IBM, Microsoft, Fortinet... Smaller vendors represented by local distributors are also have activities to target niche markets.

We expect to see rapid market adoption of this technology trend in the years to come, that may create a surge in opportunities and workforce demands in the next 2-3 years.