CTC #7

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As buildings and infrastructure become more connected in today’s world. There will be changes that occur in cyber conflict. Two areas that the conflict will change are the attacks themselves and the resources needed to conduct cyber attacks.

When we think of cyber-physical attacks we tend to think of Stuxnet. The Stuxnet attack revolutionized the world of cyber physical attacks in that it allowed for a level of destruction on a physical system that in the past had only been possible through a physical attack. As buildings and other elements of infrastructure become more connected and reliant on the internet, the attacks on these systems will change. The result of more elements of buildings being connected to the internet increases the attack surface that these systems have. Buildings and warehouses will become susceptible to things like DDoS attacks or viruses that could enter at any point connected to the internet.[[1]](#footnote-1)

The other element that changes with the increase in smart infrastructure is the amount of resources needed to carry out a cyber attack. With Stuxnet, considerable effort was needed to infect the Iranian nuclear systems. However, with the increased attack surface of smart infrastructure, getting to the devices inside a given area is much easier. Whereas before, buildings that weren’t connected to the internet could be trusting of devices inside their networks, now those buildings that do not take proper security measures can be easily compromised by implicitly trusting these devices.[[2]](#footnote-2) Additionally, the incorporation of common devices like IoT devices means that an attacker doesn’t have to necessarily attack the building or infrastructure itself but rather take out a critical part of it.

Baig, Zubair A., Patryk Szewczyk, Craig Valli, Priya Rabadia, Peter Hannay, Maxim Chernyshev, Mike Johnstone, et al. “Future Challenges for Smart Cities: Cyber-Security and Digital Forensics.” *Digital Investigation* 22 (September 1, 2017): 3–13. https://doi.org/10.1016/J.DIIN.2017.06.015.

“Security By Design - Only Way To Protect Smart Buildings From Cyber Attack.” Accessed October 27, 2018. https://www.memoori.com/security-design-way-effectively-protect-smart-buildings-cyber-attack/.

1. “Security By Design - Only Way To Protect Smart Buildings From Cyber Attack.” [↑](#footnote-ref-1)
2. Baig et al., “Future Challenges for Smart Cities: Cyber-Security and Digital Forensics.” [↑](#footnote-ref-2)