



Industrie 4.0

A viewpoint

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Disclaimer

All opinions expressed are my own and not necessarily shared by my employer

Background

Cyber-Security

Product Quality Assurance

The Ethical Dimension

Background

- Politically Driven
 - Manufacturing ~22% of GDP
- Aspirational
 - “to become a global leader in innovative, internet-based production technology and service provision.”
- Is it revolution or evolution?



Components

- Cyber-physical systems & marketplace
- Smarter robots & machines
- Big data
- Better connectivity
- Energy efficiency & decentralisation
- Virtual industrialisation

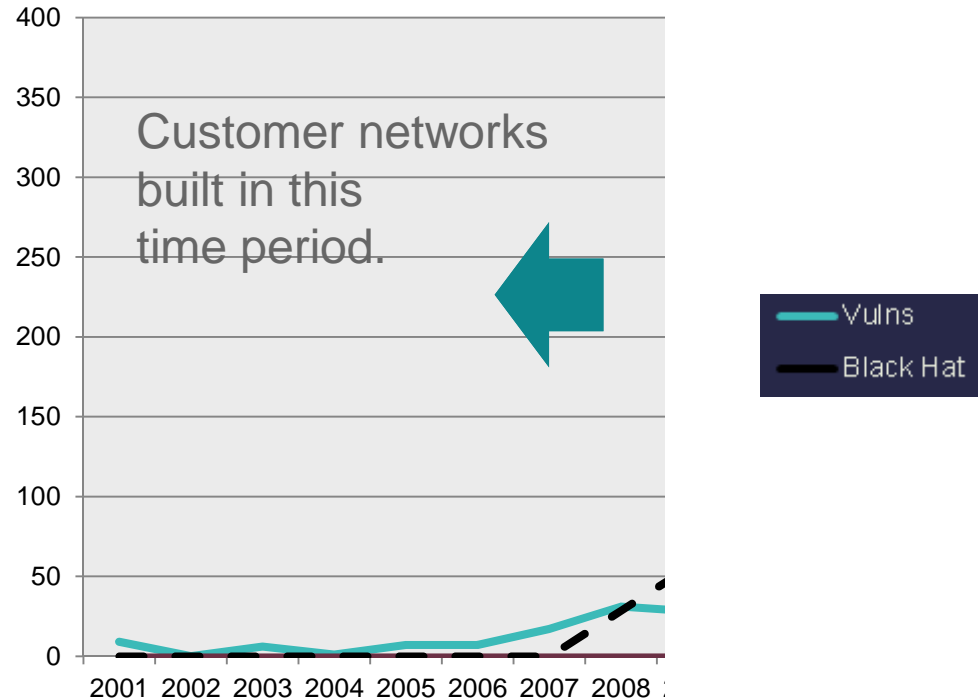
Cyber Security

- Gaining importance
- Old thinking
 - Air gapped
 - Security by obscurity
 - Limited impact



Why OT Security Must Change

- Trends in discovery and correlation with external events.



Cyber Security

- Gaining importance
- Old thinking
 - Air gapped
 - Security by obscurity
 - Limited impact
- The enemy within
- Point solutions are easy, across the supply chain is hard



Product QA

- 3D Printing for MRO
- How does OEM ensure QA?
- Where does liability lie?



Ethics?

- Do they matter?
- Impact of 3D printing on Supply Chain?
- Impact on emerging economies
- Company or Government issue?
- Sometimes it's the least-worst option



Conclusion

- What we are seeing is evolution not revolution
- We can further exploit technology
- A strategic approach is required
- A collaborative approach is required
- The security, QA and ethical questions need to be considered

