Distinguished Lecture

Rethinking Cyber Security Onboarding

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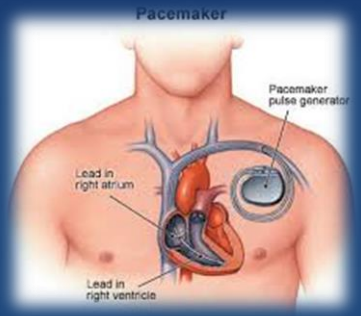
Agenda

- Cyber Security Benefits & Challenges
- Cyber Security Operations Centre
- Challenges to Cyber Security Onboarding
- Rethinking Cyber Security Onboarding
- Recommendations
- Conclusions
- Q&A

Cyber Security, then What?



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Cyber Security Challenges

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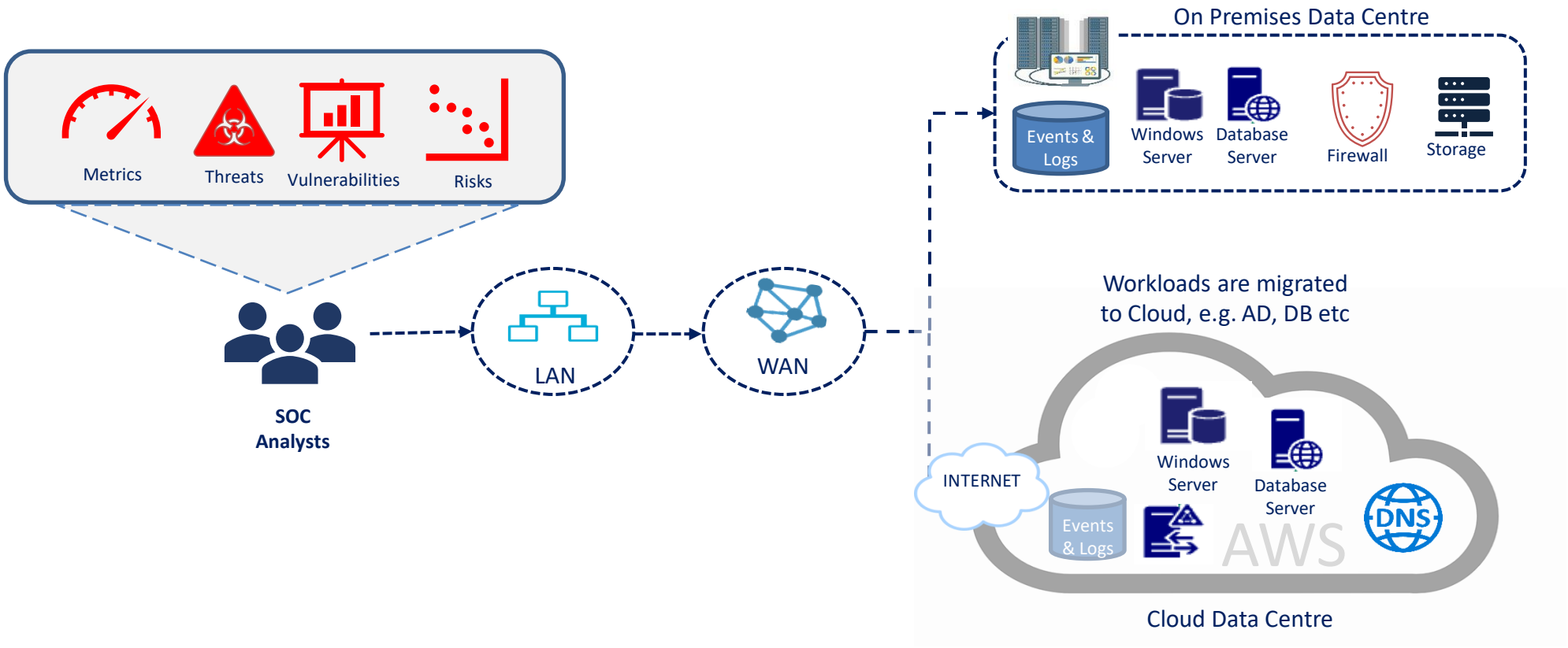
Cyber Security Operations Centre

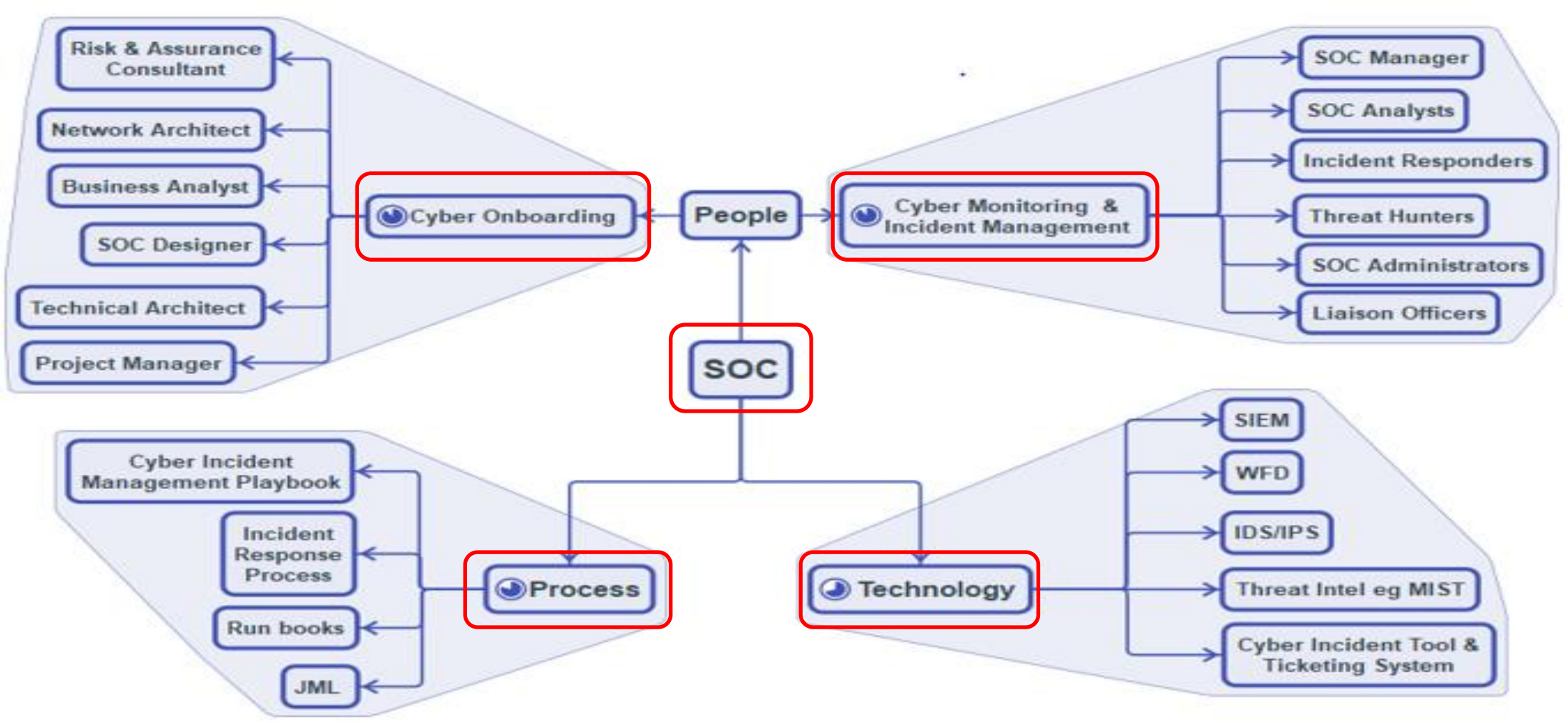
Building a CSOC comprises two key aspects:

1. **Cyber Security Onboarding**
2. **Cyber Security Monitoring**

Cyber Security Monitoring



Functional Representation of SOC



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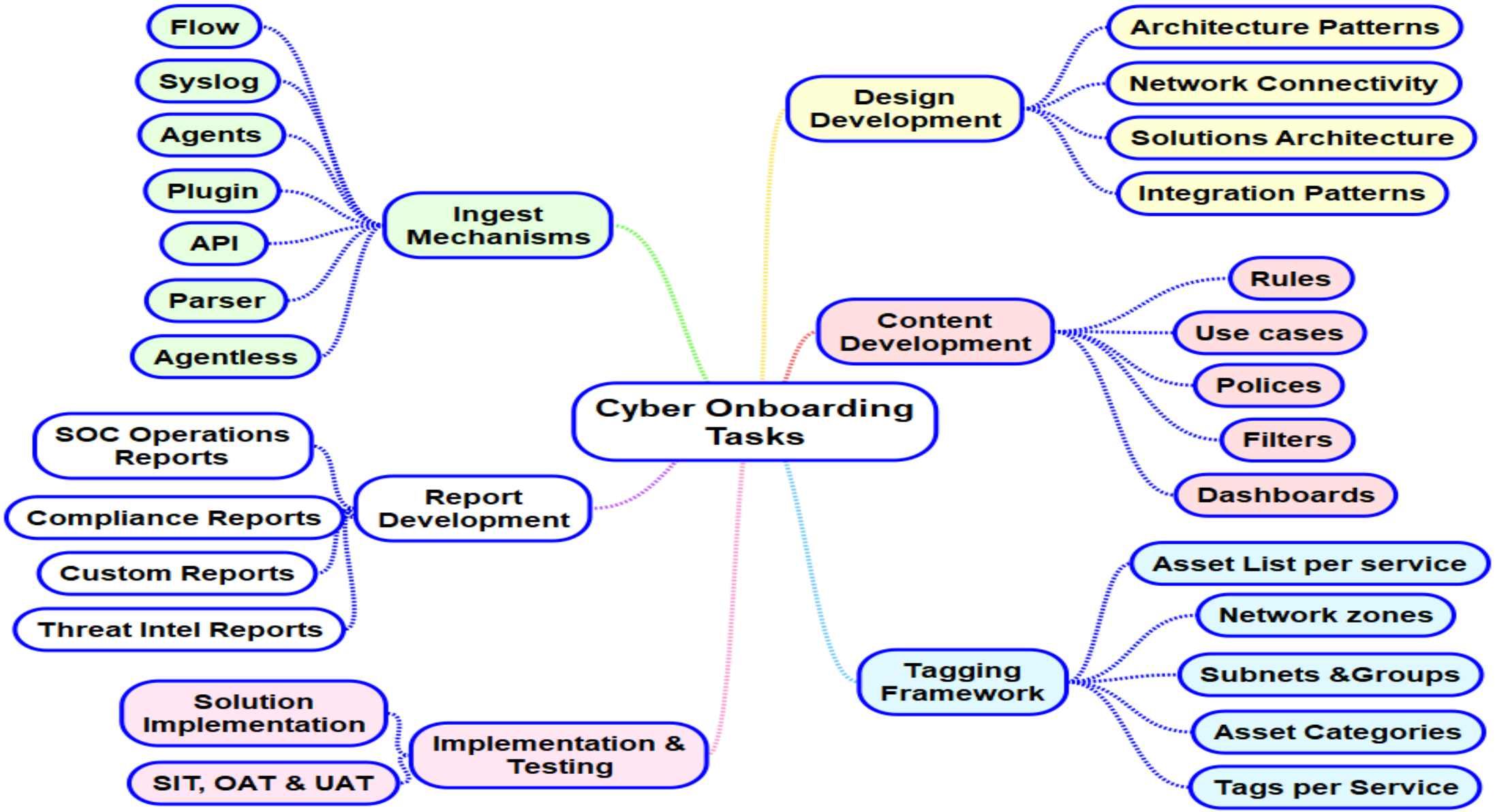
Cyber Security Onboarding



Cyber Security Onboarding Reframing Matrix

CSOC Perspective	Client Perspective
• Not enough feeds to monitor • Poor quality of onboarding e.g. missing parsers & plugins • Incomplete documentation • Too many dashboards	• Lack of funds • Wrong funding model • Lack of return on security investment (ROSI) • Time consuming

Cyber Onboarding is 'Broken'

Onboarding Perspective	SMT Perspective
• Lack of SMT support • SOC maturity • Onboarding is complex • Dependency issues e.g. lack of business resource	• Too expensive and inconvenient (painful) • Lack of clarity • Governance • Structure

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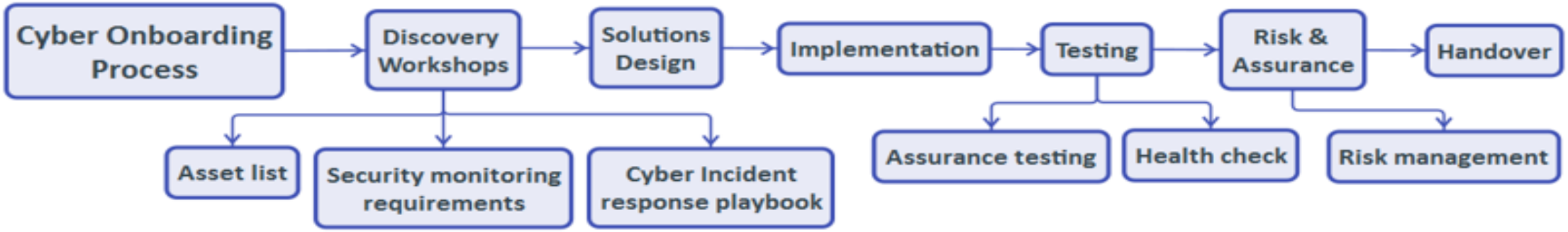
Rethinking Cyber Security Onboarding

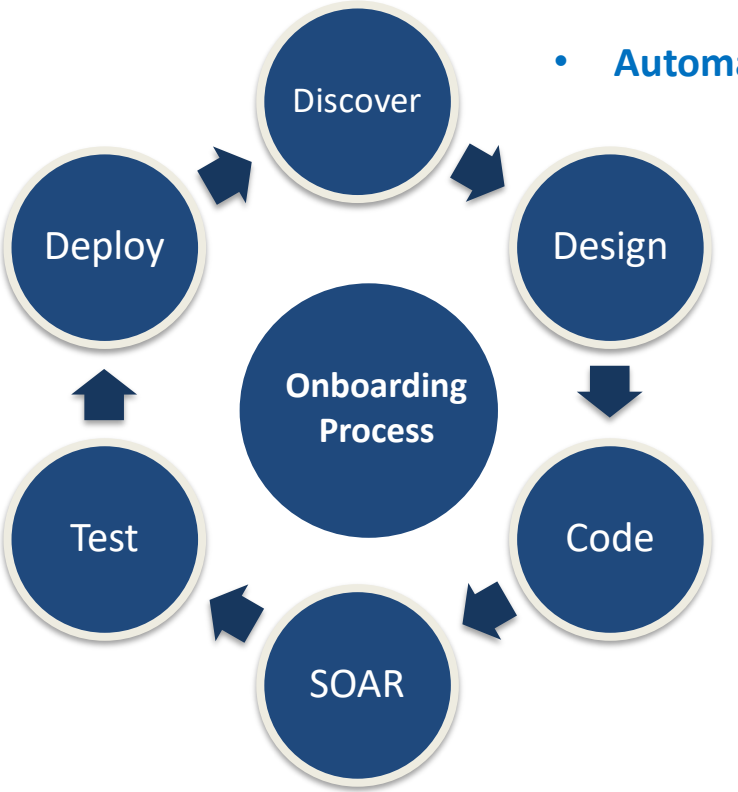
Current State



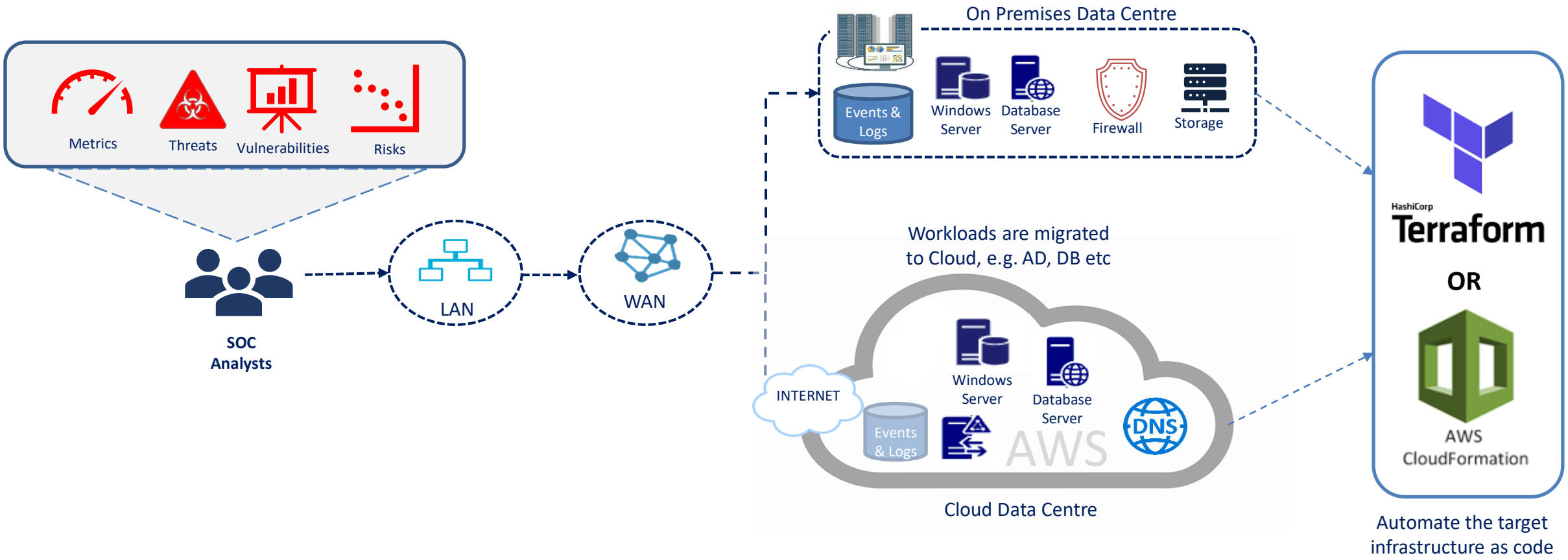
- Linear
- Takes between 6-36 months depending on size
- Process intensive
- Waterfall and onerous

- Cyclic
- Takes Days and Weeks
- Automated
- Agile and straightforward

Future State



Cyber Security Monitoring – Automating Infrastructure as Code



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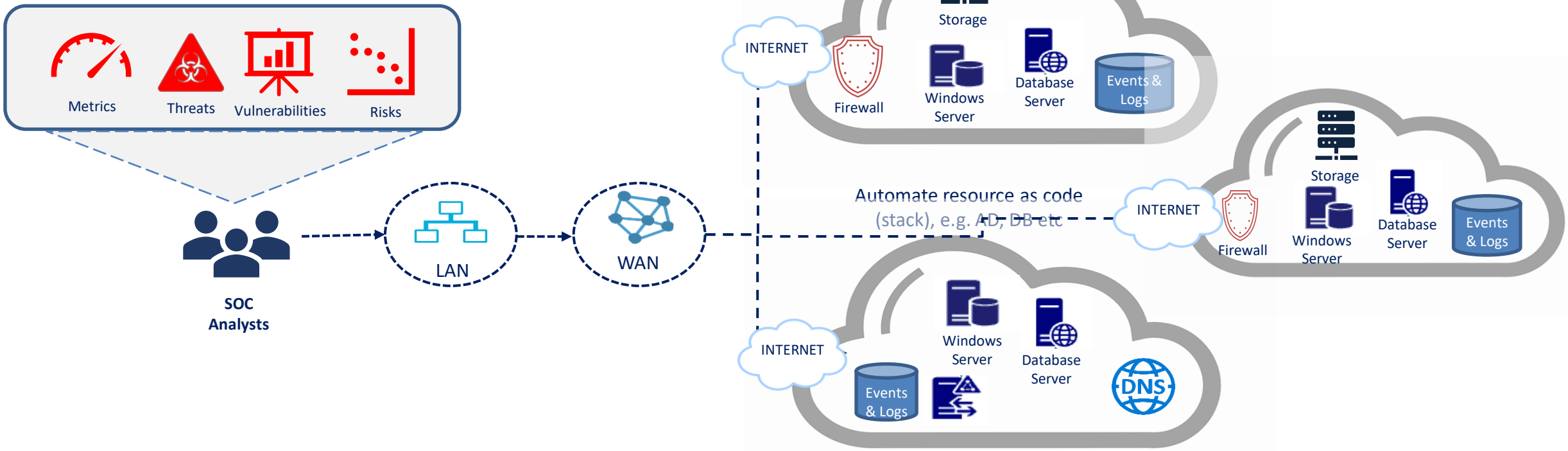
Automating & Orchestrating Cyber Security Onboarding



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Recommendations (MoSCoW)

Return on investment (RoI) and return on cyber security investments (RoSI)

Prioritise the onboarding effort based on risk

Business functions must be appropriately aligned

A cyber strategy upon which SOC strategy and other programme-level strategies align to

A cyber strategy must enable and support overarching business mission

Governance structure must exist to ensure business strategy is successful

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Conclusions

1. SOC is a significant Organisational Investment

2. 3- Key Drivers: Business Requirement, Security & Compliance

3. Building efficient SOC takes Time & Effort (Complex)

4. Create Standard Operating Procedures, Playbooks & Run books

5. Leadership Support

6. Train and Develop your SOC Staff

Conclusions

7 Automate Threat Intelligence with SIEM

8 Automate SOC Processes & Techniques

9 Conduct Continuous Vulnerability Assessment

12 Build Cyber Resilience & Recovery Capability

11 Automate Incident Response

10 Use Artificial Intel & Machine Learning Tools

References

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3. C. Onwubiko (2018): **"CoCoa: An Ontology for Cybersecurity Operations Centre Analysis Process"**, Proceedings of the 2018 International Conference On Cyber Situational Awareness, Data Analytics And Assessment (Cyber SA), DOI: 10.1109/CyberSA.2018.8551486 [Download] [Presentation]
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Thank-You ☺

Q&A

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