

Convergence: Identifying Critical Success Factors

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The blurring boundaries of security

- Organisations are broadening their attack surface by connecting an increasing number of systems to their networks.
- Such systems frequently control physical assets, such as Building Management Systems.
- This means that a cyber attack that targets or inadvertently impacts such systems could have a physical impact.

Convergence, a holistic approach to security

- Organisations need to adopt a more holistic approach to security, to better identify and mitigate threats that exploit gaps at the intersections of cyber, physical and personnel security.
- Convergence, which brings together different security disciplines, has been advocated as one way to do this.
- Yet there is little empirical, published guidance on how organisations can adopt a converged approach.

→ This research starts to build the empirical evidence base for convergence

Interviews

- Potential critical success factors were identified from the analysis of 5 in-depth interviews with senior security staff working within converged security organisations.

Literature

- 70 publications were selected from a rapid review of the industry and academic literature. Potential critical success factors were identified in 37 of the articles, books and journal papers.

Establishing the critical success factors that facilitate effective convergence

1. 23 potential critical success factors were identified from previous research and the literature.
2. The 23 potential critical success factors were presented to an expert panel who rated them on a 6 point likert-type scale based on their importance for effective convergence.

Delphi study

23 security professionals were recruited to an expert panel from:

- 10 countries;
- Industries such as Energy, Government, Banking, Finance, Healthcare, Telecoms, Technology, Police, Corrections and the Military.

Panellists have, on average:

- 26 years experience in security;
- 11 years experience in convergence.

Job roles include:

- Security Director, Executive, Manager, Engineer, Inspector and Consultant.

→ Round 1 of the Delphi study had a low drop out rate, with responses from 22 of the 23 members of the panel.

→ The panel agreed on the importance of 12 out of 23 critical success factors (based on dispersal of responses ≤ 1 IQR).

Critical success factors with the highest importance rating from the expert panel

A key person has a vision for convergence.

Senior management advocate for a converged approach.

Steps are made to engage with stakeholders

Staff all work to the same frameworks and standards.

Everyone within the security function is working to a common goal.

A key person directs the convergence approach.

The security function has a mindset of collaboration.

Converged security aligns with the business.

“...it shows the importance to which the converged function is a part of the organisations strategy and how it is supported by the c suite as an accountable and forward thinking function.”

“Understanding the business requirements and having a meaningful dialogue as equals at ‘C’ level is necessary to understand the business’ risk appetite”

“...having a champion who could clearly express the value in convergence and lead the project made a big difference”

“...none of the organisational staff will work if the various teams still see themselves as working in discreet stove-pipes, with an overarching but irrelevant (to them) management umbrella.”

Delphi next stages

- Critical success factors, where agreement on their importance has not been reached, will be presented back to the expert panel in Rounds 2 and 3.
- Panelists will be able to review the ratings and comments from fellow panelists, and will have the opportunity to revise their rating.
- At the end of the Delphi it is hoped that further consensus can be reached on how important the other critical success factors are for convergence to be effective.

Workshops

The next stage of this research aims to understand how organisations may implement some of these critical success factors. For more information on the workshops or to be involved, please email emma.boakes@port.ac.uk