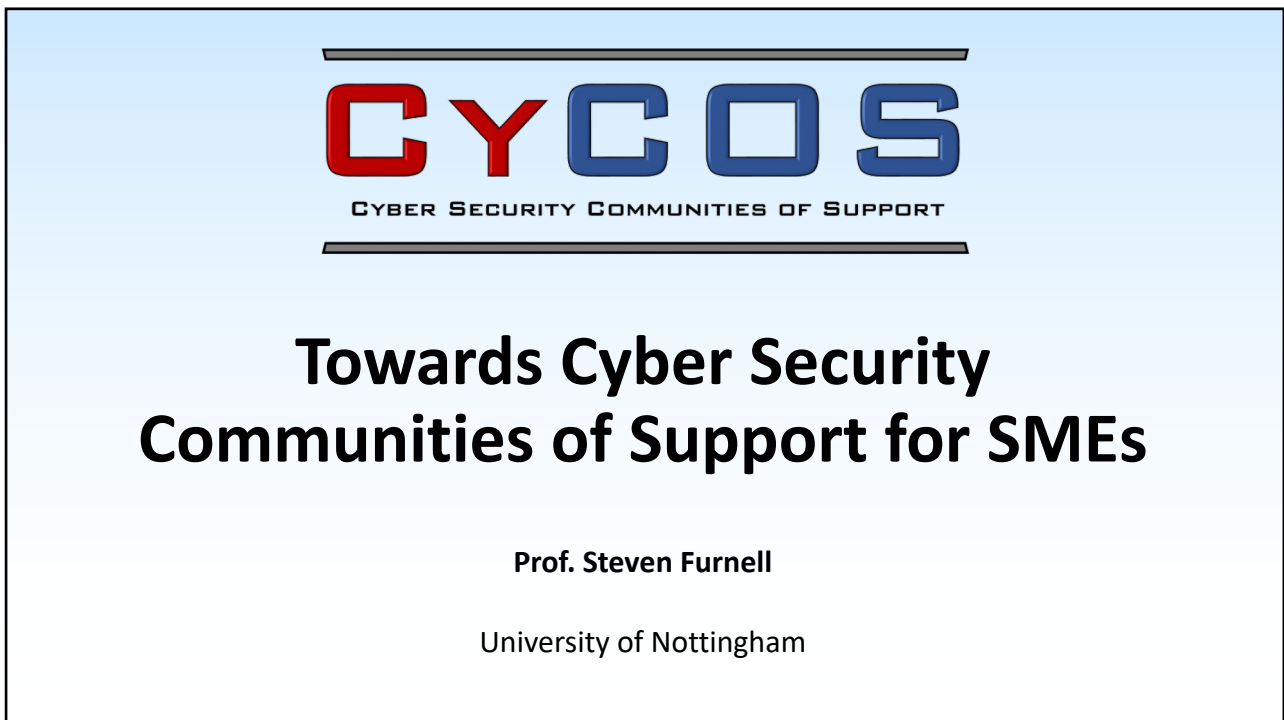




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## Outline



- The support needs of small businesses, including their current understanding and confidence around cyber security
- The coverage, consistency and accessibility of existing support routes available to SMEs
- The concept of Cyber Security Communities of Support, fostering localised collaboration between SMEs and advisory sources

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## The significance of SMEs



- ~5.5 million Small and Medium-sized Enterprises (SMEs) in the UK
  - account for 99.9% of businesses
  - generate three fifths of employment
  - combined turnover of £2.3 trillion
- SMEs are a vital element of the economy and a significant national asset
  - need to ensure that they are *protected*

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## SMEs and cyber security



- Small businesses are typically not well placed in terms of cyber expertise and capability
- Many (~50%\*) outsource their security
  - still requires knowledge of *where* to look and what to look *for*
- Others may be reliant on limited in-house knowledge
- Others are potentially overlooking things entirely

\*Cyber Security Breaches Survey 2023

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## A lack of skills?



- 50% of businesses have a **basic skills gap** in relation to technical cyber security (estimated ~739,000 businesses)
  - includes *configuring firewalls, detecting and removing malware, and choosing secure settings*
- The gap is lower in large businesses (18%)
  - SMEs face the more pronounced problem
- Many SMEs are ill-positioned to address their own needs
  - leaves them exposed and dependent upon further support in the event of incidents, or when making security related decisions (including those around technology adoption and procurement)

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## Dangerous decline?



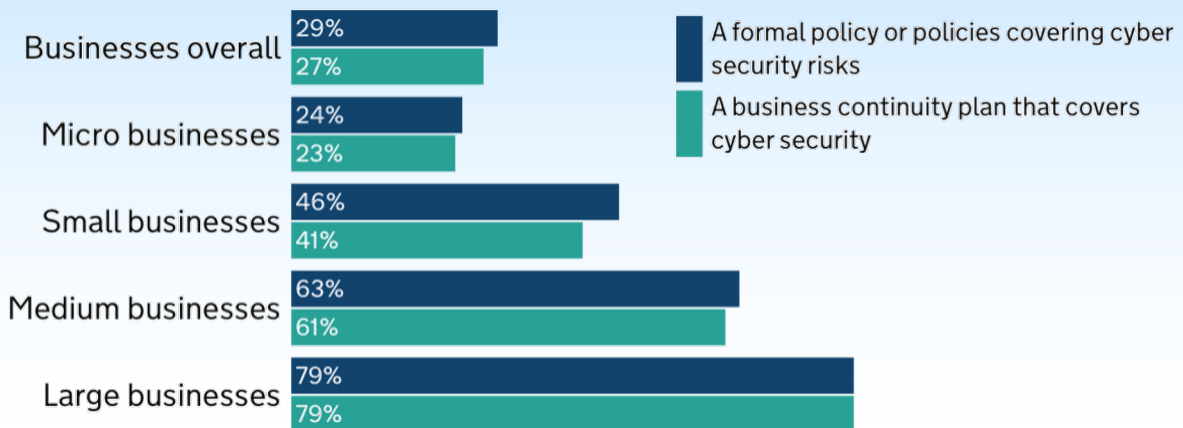
- The proportion of micro businesses saying cyber security is a high priority has decreased from 80% in 2022 to 68%
- Basic cyber hygiene practices have fallen:
  - use of password policies (79% in 2021, vs. 70% in 2023)
  - use of network firewalls (78% in 2021 vs. 66% in 2023)
  - restricting admin rights (75% in 2021, vs. 67% in 2023)
  - policies to apply software security updates within 14 days (43% in 2021, vs. 31% in 2023)
- **Large business have not changed**

Source: Cyber Security Breaches Survey 2023

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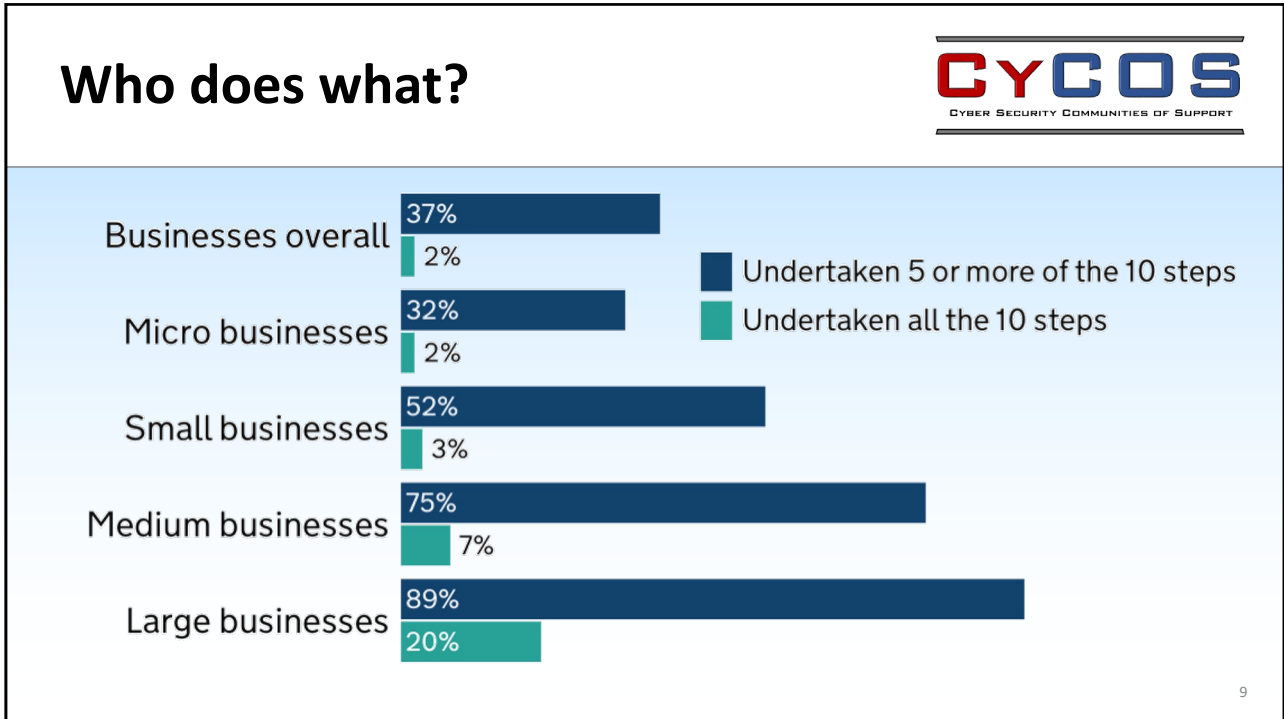
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## Who does what?

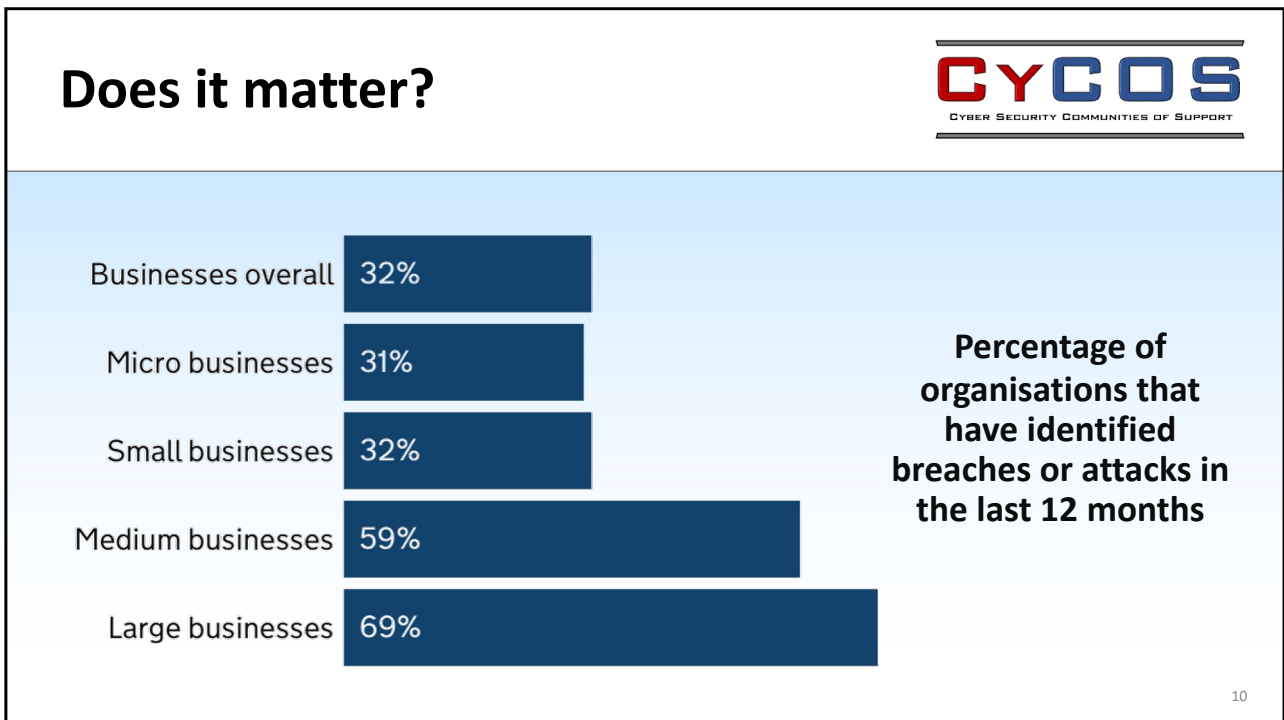


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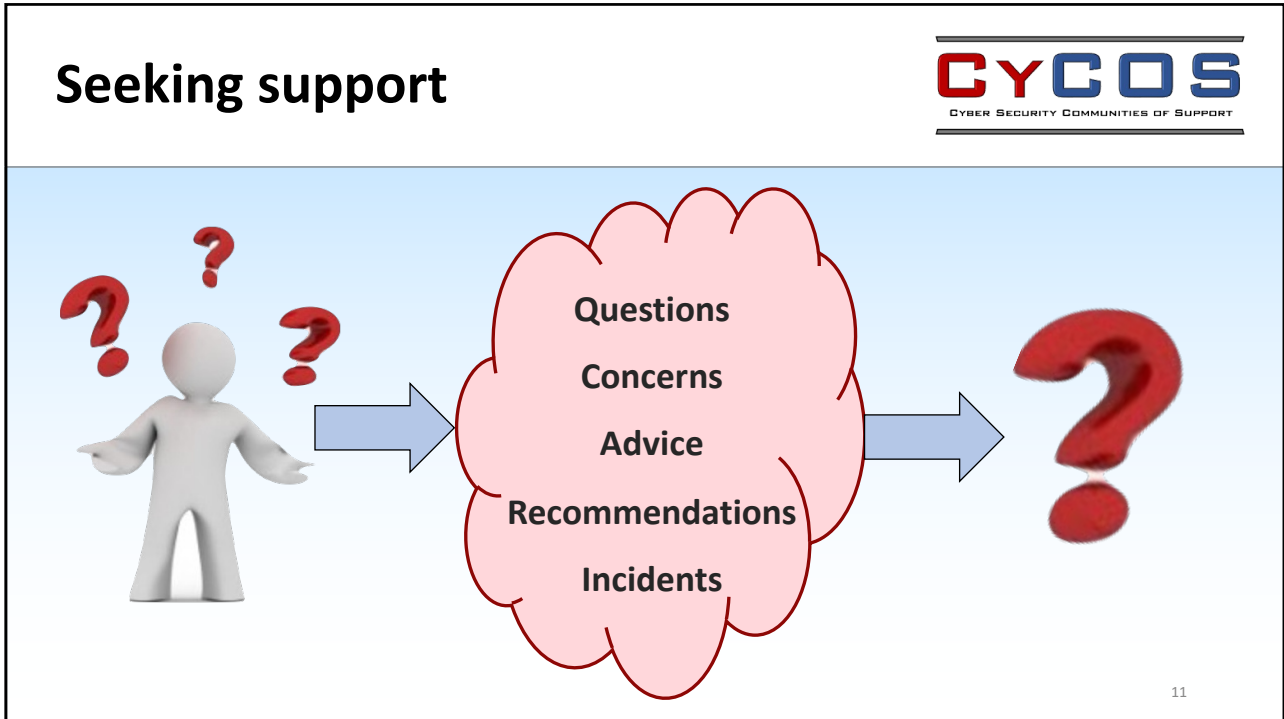
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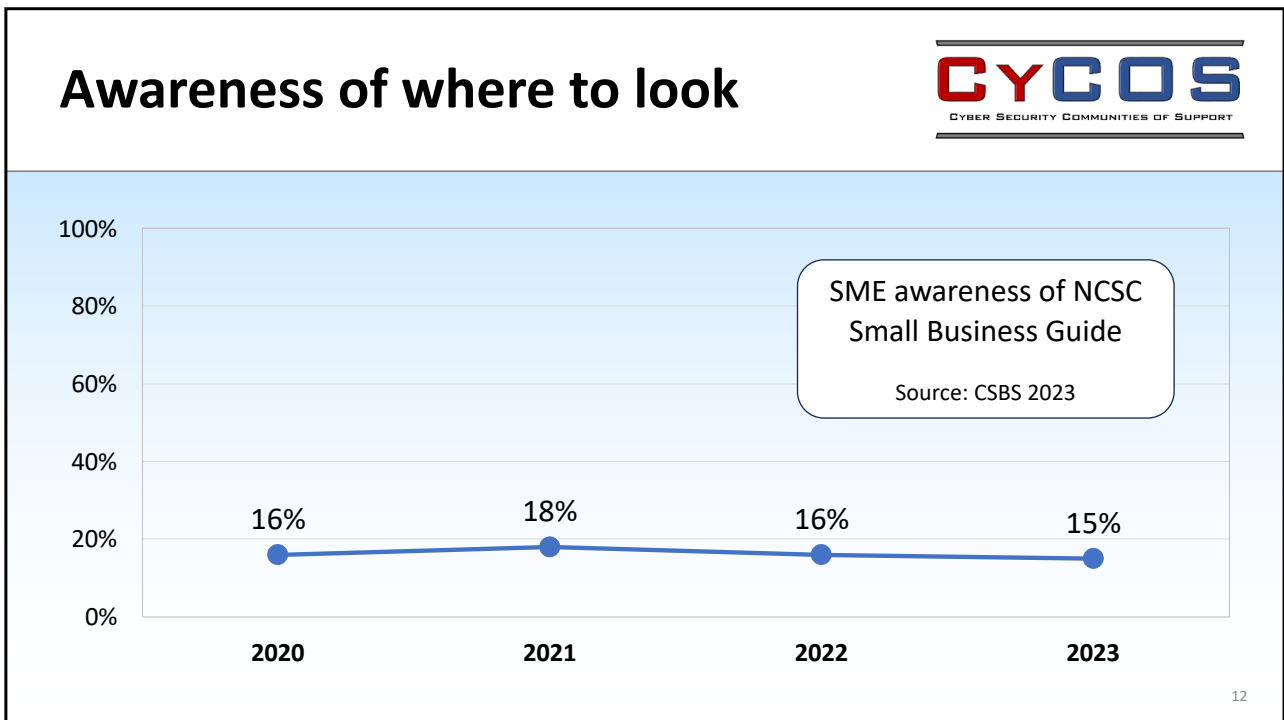
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# Guises of guidance NCSC



- Step 1 - Backing up your data
- Step 2 - Protecting your organisation from malware
- Step 3 - Keeping your smartphones (and tablets) safe
- Step 4 - Using passwords to protect your data
- Step 5 - Avoiding phishing attacks

[www.ncsc.gov.uk/collection/small-business-guide](http://www.ncsc.gov.uk/collection/small-business-guide)

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# Guises of guidance bsi website



## Managing your cyber security

- [Managing cyber security >](#)
- [Defining your cyber security policies >](#)
- [Identifying your key cyber risks >](#)
- [Proving your business is cyber-secure >](#)
- [Performing your own cyber-security audit >](#)

## Securing your IT equipment

- [Controlling access to your IT >](#)
- [Physically securing your IT hardware >](#)
- [Securing portable devices >](#)
- [Using wireless networks >](#)

## Securing your networks and connections

- [Securing your networks >](#)
- [Security and supplier relationships >](#)
- [Securing cloud-based services >](#)
- [Firewalls and secure network design >](#)
- [Preventing network intrusion >](#)

## Protection and recovery

- [Protecting your business from malware >](#)
- [Managing IT and cyber security incidents >](#)
- [Avoiding cyber fraud and scams >](#)
- [Using encryption to protect data >](#)

[www.bsigroup.com/en-GB/Cyber-Security/Cyber-security-for-SMEs/](http://www.bsigroup.com/en-GB/Cyber-Security/Cyber-security-for-SMEs/)

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# Guises of guidance Forbes website



- Conduct Real-Time Cyber Awareness Training
- Leverage The Latest Tech: AI Is Happening
- Acquire Cyber Insurance
- Safeguard Digital Assets Everywhere
- Mind Your Business

[www.forbes.com/sites/forbestechcouncil/2023/05/25/small-but-mighty-cybersecurity-best-practices-for-smes/](https://www.forbes.com/sites/forbestechcouncil/2023/05/25/small-but-mighty-cybersecurity-best-practices-for-smes/)

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# Journey's end?



How do they feel?



and has security been improved?

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## The CyCOS project



- 2.5 year UKRI-funded research project
  - led by the *University of Nottingham*, in partnership with *Queen Mary University of London* and the *University of Kent*
  - supported by a range of relevant external stakeholders
- The aims of the research:
  - to better understand the cyber security support needs of the SMEs (particularly those of smaller businesses)
  - to pilot a new approach that engages them in further supporting each other

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## Academic investigators



Prof. Steven Furnell  
University of Nottingham



Dr Maria Bada  
Queen Mary University of London



Dr Jason Nurse  
University of Kent

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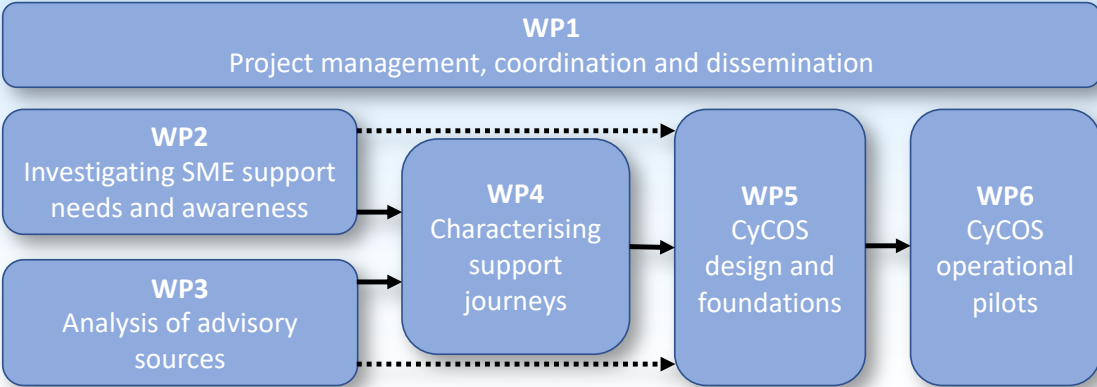

# Project partners



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# CyCOS timeline



```
graph TD; WP1[WP1: Project management, coordination and dissemination]; WP2[WP2: Investigating SME support needs and awareness]; WP3[WP3: Analysis of advisory sources]; WP4[WP4: Characterising support journeys]; WP5[WP5: CyCOS design and foundations]; WP6[WP6: CyCOS operational pilots]; WP2 --> WP4; WP3 --> WP4; WP4 --> WP5; WP5 --> WP6; WP1 -.-> WP2; WP1 -.-> WP3; WP1 -.-> WP4; WP1 -.-> WP5; WP1 -.-> WP6;
```

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## Building blocks Cyber Essentials



- Five technical controls
  - Firewall
  - Secure configuration
  - Security update management
  - User access control
  - Malware protection
- IASME Consortium (NCSC's delivery partner) is supporting the project

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## Building blocks ISC2 CC Certification



- Certified in Cybersecurity
  - Security Principles
  - Business Continuity, Disaster Recovery & Incident Response Concepts
  - Access Control Concepts
  - Network Security
  - Security Operations
- ISC2 providing 100 free places for participating SMEs

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## CyCOS Pilot Communities



- Findings will inform design, implementation and piloting of Cyber Security Communities of Support
- A basis for local collaboration and cooperation between SMEs and associated advisory source
  - SMEs identify and share their support needs
  - contact with advisory sources (which may include peer support)
- The project will trial the approach via three pilots
  - enabling a practical evaluation of the approach
  - a repeatable model that can be adopted more widely



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## Conclusions



- SMEs appear to be increasingly exposed to cyber incidents
  - a risk for them and within the supply ecosystem
- Advice and its utilisation can vary
  - SMEs also need the capability to act upon it
- CyCOS aims to
  - better understand the situation
  - trial a new approach to offer a further avenue of support

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# Want to get involved?

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