



Society of Actuaries in Ireland

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# **An overview of effective cyber risk management**

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13<sup>th</sup> October 2017

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# Disclaimer

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**The views expressed in this presentation are those of the presenter(s) and not necessarily of the Society of Actuaries in Ireland**

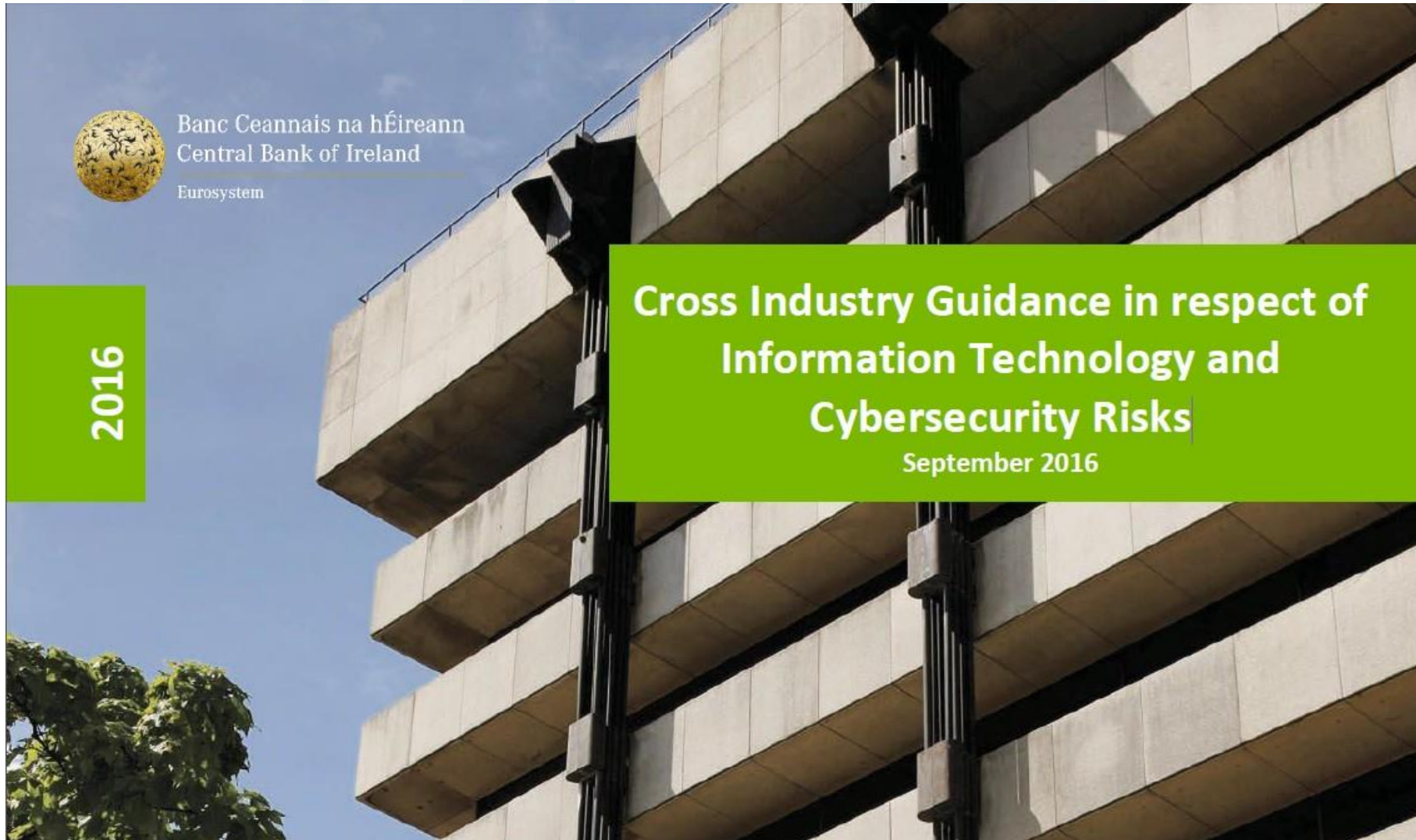
# Introduction and Overview

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- Conor McGoveran
  - Director – EY FSO EMEIA
  - Cyber Security
- What is cyber risk?
  - Why is it an issue now?
  - How can we assess this risk?
  - What risk treatment options are available?

# Recent CBI Guidance

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# What is 'Cyber Risk'

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- Risk – *'The effect of uncertainty on objectives' \**
- Cyber Risk – *'The effect of hostile threats exploiting vulnerabilities in information systems with the intent to cause harm to the organisation and limit the ability to achieve objectives' \*\**

\* Source ISO 3100

\*\* Conor Mc Goveran 2016 – 'Adapted from ISO 27005'

# Why is it an issue now?



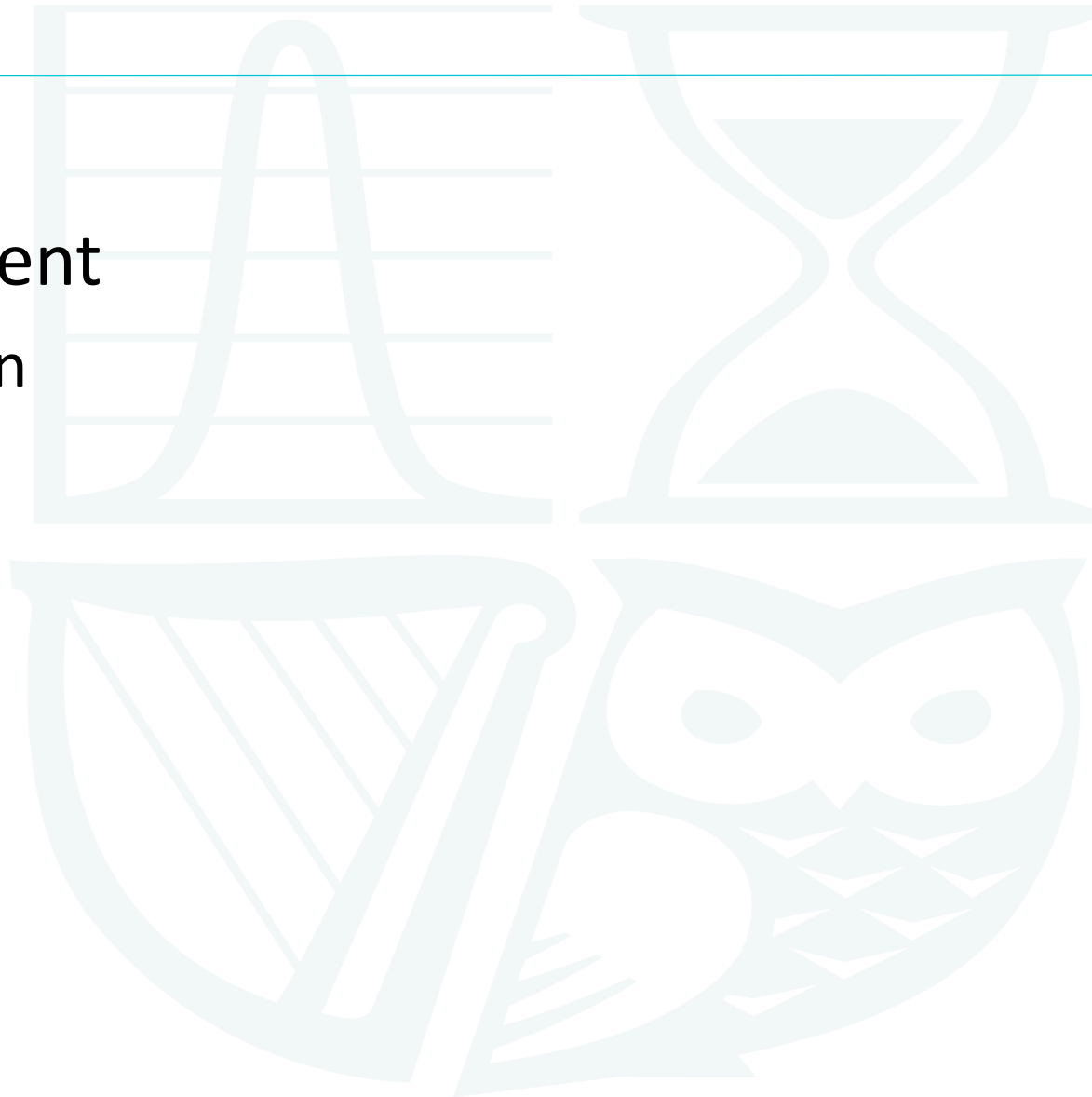
*"If we want people and businesses to make the most of digital services, they need to trust them.  
A Digital Single Market can only be created in a secure online environment."*

Andrus Ansip - European Commission Vice-President and responsible for the Digital Single Market

# How can we assess this risk?

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- Risk Assessment
  - Identification
  - Analysis
  - Evaluation



# Risk Identification

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- Hostile intent
  - What assets do I have that are of interest?
  - Why would they be the subject of hostile intent?
  - What are my threats and vulnerabilities?
  - What are the motives of the hostile attacker?



# Case study – Serious and Organised Crime

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## ■ IOCTA 2016

INTERNET ORGANISED  
CRIME THREAT ASSESSMENT

# How can we assess this risk?

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- EU Payment Card Number With CVV2: \$25-\$30 \*
  - Plus Bank ID Number: \$35
  - Card Number with all details about the card and owner: \$45
- Online Payment Service Account: \*
  - \$400-\$1000 Balance: \$20-\$50
  - \$1000-\$2500 Balance: \$50-\$120
  - \$2500-\$5000 Balance: \$120-\$200
  - \$5000-\$8000 Balance: \$200-\$300

\* McAfee – [The hidden data economy](#)

# Risk Analysis

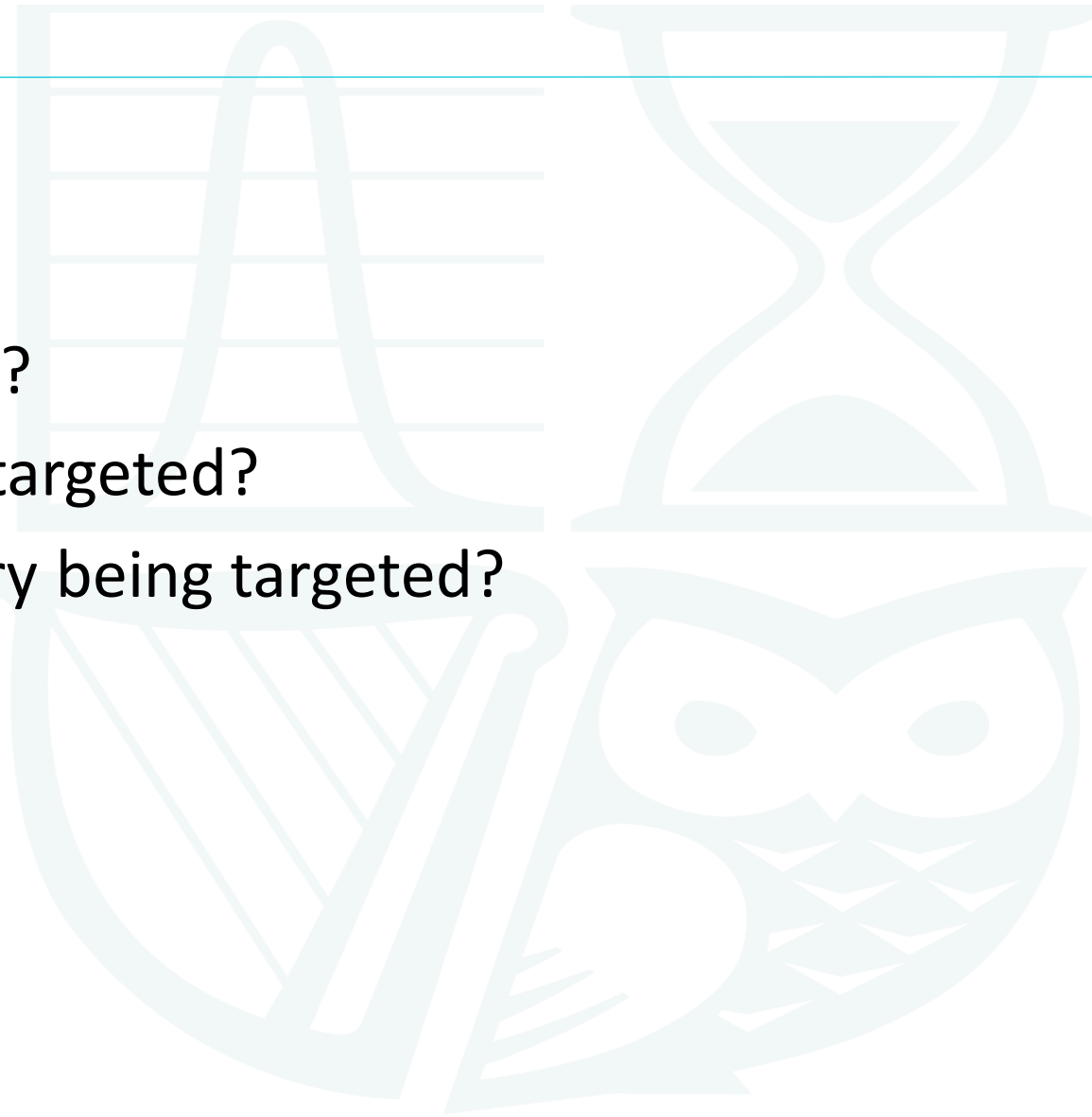
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- Event - Theft of customer data by a criminal organisation with the intent of financial gain
  - Personal, Payment or Medical
- Consequences
  - Forensic investigation
  - Mandatory disclosure to 'Competent Authorities'
  - Censure and fines
  - Remediation activities
  - Reputational damage

# Risk Analysis

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- Probability
  - Am I a target?
  - Have I been targeted?
  - Is the industry being targeted?



# Risk Evaluation

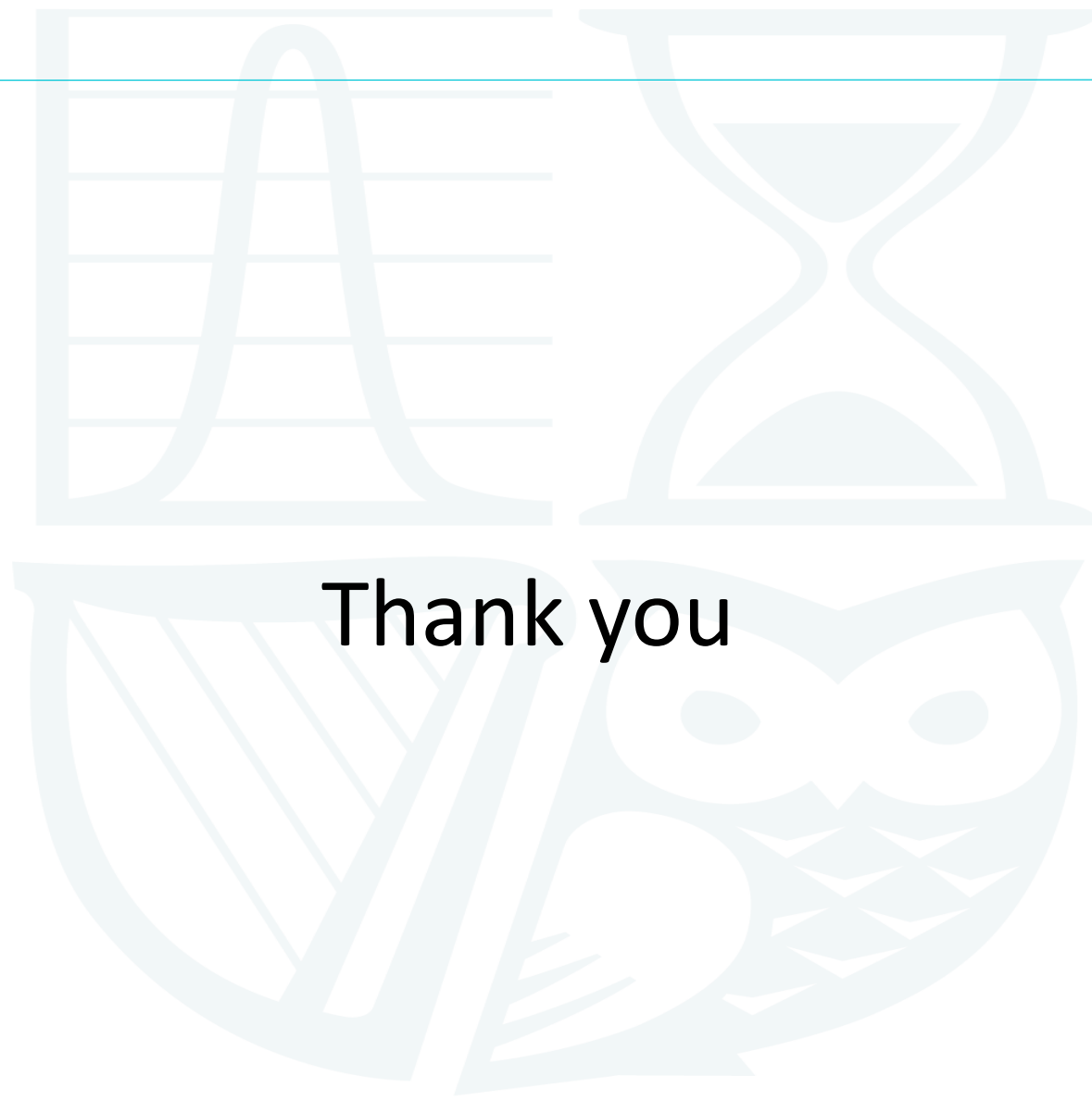
Table E.1 a)

		Likelihood of occurrence – Threat	Low			Medium			High		
		Ease of Exploitation	L	M	H	L	M	H	L	M	H
Asset Value	0	0	1	2	1	2	3	2	3	4	
	1	1	2	3	2	3	4	3	4	5	
	2	2	3	4	3	4	5	4	5	6	
	3	3	4	5	4	5	6	5	6	7	
	4	4	5	6	5	6	7	6	7	8	

# Risk Treatment

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- Reduce
  - Improve information security maturity
    - Encryption, Malware Defence, Training & Awareness
- Share
  - Insurance
  - Cloud (3<sup>rd</sup> Party – Security at Scale)
- Avoid
  - Data retention and destruction



Thank you