# BS 7799-2

## Inception to Certification


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Chair – BS7799 User Group (Hong Kong)

Member - Australian Standards IT/12/4

Member – ISO/IEC JTC1 SC27

Principal Security Consultant

Risk Management & Compliance

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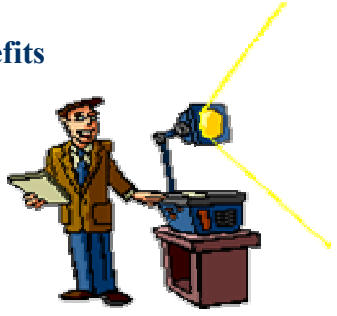
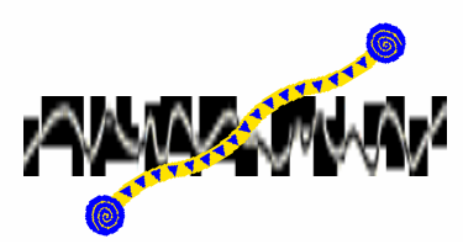
5 December 2002

## Agenda

- What is BS7799?
- History of BS7799-1
- History of ISO/IEC 17799
- History of BS7799-2
- Current Status
- Future
- International User Group
- Roadmap to Certification
- Benefits



## WHAT IS BS7799 ?





## What is BS7799 ?

- **Aim**
  - Build on a Common Basis for Organisational Security Standards Development
  - Enhance Security Management Practice
  - Increase Confidence and Trust in Inter-Organisational Dealings
- **Defines**
  - Desired Best Practice Methods for Controlling (Protecting) Information

    (a) Confidentiality (b) Integrity & (c) Availability
- **Consists of Two Parts**
  - Part 1 – Code of Practice for Information Security Management
    - *Represents Best Practice Guidance Based in Practical Industry Experience*
  - Part 2 – Specification for Information Security Management Systems
    - *Forms the Basis by Which Compliance Certification Can be Performed Against a Management Systems Standard*

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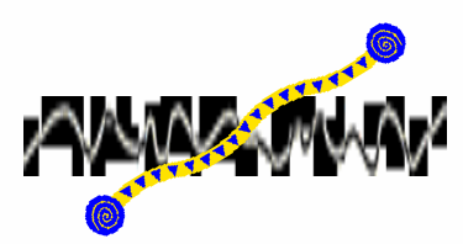
# HISTORY OF BS7799
# PART 1





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## History of BS7799 (Part 1)

- **Early 1990s**
  - Industry Need Determined for Best Practice Controls
  - To Support Business & Government in the Implementation & Enhancement of Information Security
  - Department of Trade and Industry (UK) established a Working Group Comprising Experienced Information Security Managers
  - Information Security Management Code of Practice Produced
- **1992**
  - Published as an Industry Code of Practice (September)
    - Provided a Structured Framework for an Organisation to Examine & Improve the Security of their IT Systems Environment
  - Originally published as a BSI-DISC publication
  - Forms the Basis of British Standard 7799

## History of BS7799 (Part 1)

- **1995**
  - BDD/2 Committee Revises Code suitable for publication
  - BS7799 Published as a UK Standard
- **1996 - 1997**
  - Need to increase level of confidence in BS7799 identified
  - Industry called for a means of certifying against the Code
  - Steering Committee Formed
    - UK Accreditation Service (UKAS)
    - International Register of Certified Auditors (IRCA)
    - Department of Trade & Industry (DTI)




## History of BS7799 (Part 1)

- ***1998 (April)***
  - *UK ISMS Certification Scheme Launched*
- **1999**
  - Revised and updated
  - New Controls Added:
    - E-commerce
    - Mobile Computing
    - Third Party Arrangements
  - UK Specific References Removed
  - Overall General Improvements Made
  - Second Edition Published (BS 7799-1:1999)

## History of BS7799 (Part 1)

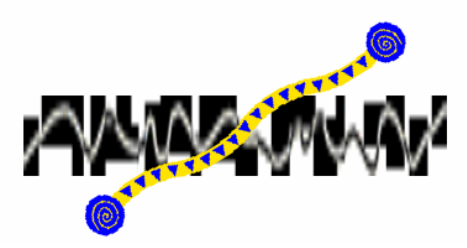
- **Many Countries Adopted BS7799 for Domestic Use:**

| | | | | |
|---|---|---|---|---|
| Australia | Germany | Japan | Norway | Switzerland |
| Brazil | Iceland | Korea | Poland | Taiwan |
| Czech Republic | India | Malaysia | Singapore | UAE |
| Canada | Ireland | Netherlands | South Africa | UK |
| Denmark | | New Zealand | Sweden | |

- **BS 7799 Translated Into Many Different Languages:**
  - Danish
  - Chinese
  - Dutch
  - English
  - Finish
  - French
  - German
  - Icelandic
  - Japanese
  - Korean
  - Norwegian
  - Polish
  - Portuguese
  - Swedish




## HISTORY OF ISO/IEC 17799



## History of ISO 17799

- **April 2000**
  - Given Strong International Interest - BDD/2 Recommended BS7799-1 be submitted to ISO for Development as an International Standard
  - BSI Submitted BS7799-1 to ISO using a 'Fast Track' Procedure
    - Allows International Standard to Be Published in 12 months
- **October 2000**
  - International Standard ISO/IEC 17799 Was Approved
- **December 2000**
  - International Standard ISO/IEC 17799:2000 Published
  - Some Minor Editorial Amendments




## History of ISO 17799

- **April 2001**
  - ISO/IEC JTC1 SC27 'IT Security Techniques‘ Committee Assigned Responsibility for Maintenance & Further Development
  - Call for Revision Comments Issued
- **October 2001**
  - Revision Commenced by ISO Committee
  - 151 Pages of Comments Received
- **October 2002**
  - Revision Continues by ISO Committee
  - 666 Comments Spread Across 170 Pages Received

## ISO 17799 Structure

- 10 Detailed Control Clauses

1. **Security Policy**
2. **Security Organization**
3. **Asset Classification & Control**
4. **Personnel Security**
5. **Physical & Environmental Security**

36 x CONTROL OBJECTIVES

127 x CONTROLS

6. **Communications & Operations Management**
7. **Access Control Security**
8. **System Development & Maintenance**
9. **Business Continuity Planning**
10. **Compliance**



## ISO 17799 Topics

**Scope** **Terms & Definitions** **Security Policy** **Information Security Policy Document** **Review & Evaluation**

**Security Organization** **Information Security Infrastructure** **Security of Third Party Access** **Outsourcing**

**Asset Classification & Control** **Accountability for Assets** **Information Classification** **Personnel Security**

**Security in Job Definition & Resourcing** **User Training** **Responding to Security Incidents & Malfunctions**

**Physical & Environmental Security** **Secure Areas** **Equipment Security** **System Planning & Acceptance**

**Communications & Operations Management** **System Audit** **Operational Procedures & Responsibilities**

**Protection Against Malicious Software** **Housekeeping** **Network Management** **Media Handling & Security**

**Exchanges of Information & Software** **Security of System Files** **Business Requirement for Access Control**

**User Access Management** **Application Access Control** **Security Requirements of Systems User Responsibilities**

**Network Access Control** **Operating System Access Control** **Security in Development & Support Processes**

**Security in Application Systems** **Monitoring System Access & Use** **Business Continuity Management**

**Mobile Computing & Teleworking** **Cryptographic Controls** **Compliance with Legal Requirements**

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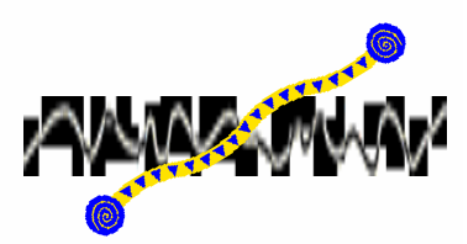
# HISTORY OF BS7799
# PART 2





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## History of BS7799 (Part 2)

- **1998**
  - Process for Establishing an Information Security Management System Identified
    - Developed by BDD/2
    - Published as BS 7799-2:1998
  - BS 7799-2:1998 Specifies Controls to Be Implemented
    - According to Security, Legal and Business Requirements
  - Specification Can be Used to:
    - Conduct Internal Audits to the Standard
    - Enable Third Party Certification to the Standard
- **1999**
  - Published as BS 7799-2:1999
    - Alignment of Controls With BS7799-1
    - Joint Publishing of New Part 1 → Re-issue New Part 2

## History of BS7799 (Part 2)

- **Late 2001**
  - Revision of Standard Commenced
- **Main Drivers of Revision**
  - Harmonise with other Management System Standards
    - ISO 9001 & 14001
    - Assist with Integration and Operation of Organisation's Management Systems
    - Facilitate Combined Third Party Audits
  - Need for Continual Improvement Processes
  - Corporate Governance
  - Information Security Assurance
  - Implementation of the new 2002 OECD Principles
    - Security of Information Systems and Networks

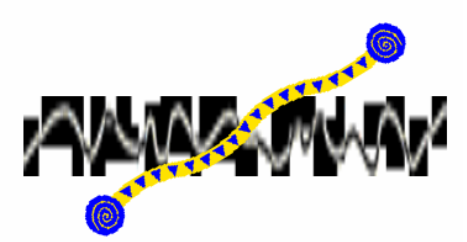



## History of BS7799 (Part 2)

- **January – September 2002**
  - Draft for Public Comment Issued
  - BSI Committee BDD2 & International User Group
  - Finalised & Revised Version Completed
- **Contributors**

| | |
|---|---|
| Australia | Korea |
| Brazil | Netherlands |
| Germany | Norway |
| Hong Kong | Singapore |
| Ireland | Sweden |
| Japan | UK |

## CURRENT STATUS OF BS7799-2





## Present - BS7799 (Part 2)

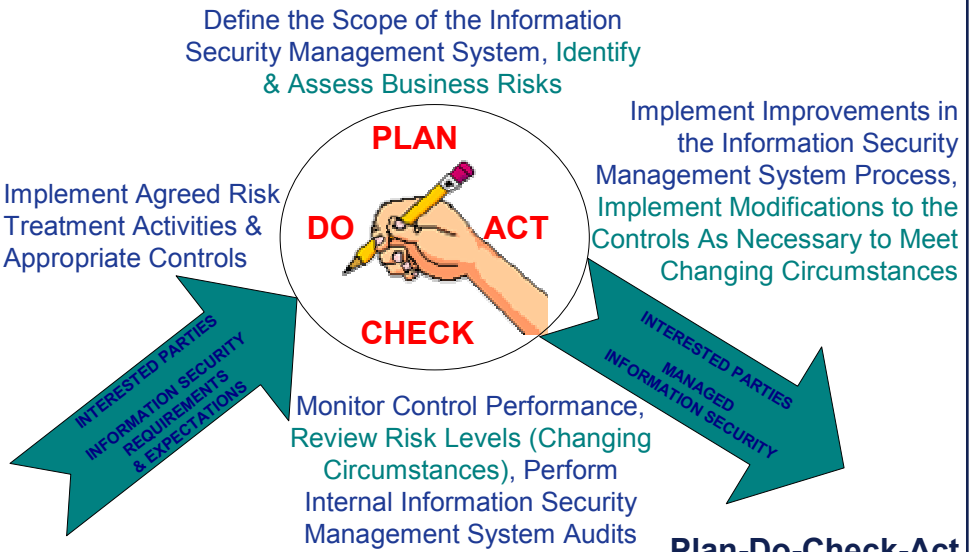
- **5th September 2002**
  - BS 7799-2:2002 Launched / Published in the UK
- **Major Updates**
  - Plan, Do, Check, Act (PDCA) Process Model
  - Process based approach based on PDCA Model
  - Improved definition and clarification of the links between:
    - Risk Assessment Process
    - Selection of Controls
    - Contents of the Statement of Applicability
  - Importance of Continual Process Improvement to the ISMS
  - Clarified Requirements for Documentation & Records
  - Enhanced Risk Assessment & Management Process
  - Controls from ISO 17799 Included as a Normative Annex
  - Annex Providing Guidance on New Version's Use
  - Annex Showing correspondence with BS7799-2; ISO 9001; & ISO 14001

## Present - BS7799 (Part 2)

- **Provides**
  - Guidance on Creating an ISMS
  - Critical Success Factors to Successfully Implement Information Security
  - Ability to Harmonise With Other Management Systems
  - Plan-do-check-act Model for Creating and Maintaining an Effective ISMS
  - Ability to Continually
    - Improve Process of Security Management
    - Assess Security Procedures in the Light of Changing Business Requirements, Technology Threats and New Circumstances
  - Clarity of Relationship with:
    - International Standards
    - Newly Revised Guidelines From the Organisation for Economic Co-operation and Development (OECD)



## Present - BS7799 (Part 2)



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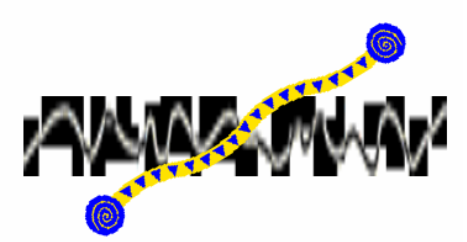
## ISO 17799 & BS 7799-2
## FUTURE





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## Future of ISO 17799

- **October 2003**
  - ??? Comments
  - International ISO Voting
- **October 2004**
  - ??? Comments
  - International ISO Voting
- **2005 Aimed Publication Date**
  - Revised and Updated With a New Look
  - Contain New Additional Material
  - New Controls Will be Included
  - May even Include a new Major Topic Section
    - 10 → 11 Sections

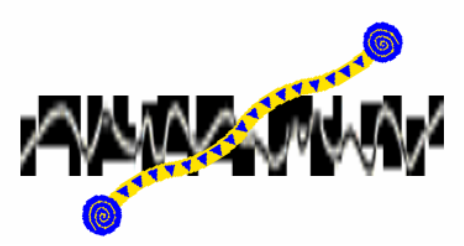
## Future of BS 7799-2

- **October 2002**
  - Study Period Commenced Within ISO
  - Review Need for an Information Security Management Systems Standard
  - International Countries Expected to Contribute to Study Period
  - Several Countries Have Already Indicated Very Strong Support
  - BSI (UK) Yet To Decide their form of Contribution (e.g. BS7799-2)
- **Expectation**
  - New Version to Be Issued Either by:
    - BSI

      or
    - ISO
  - Within Six Months of ISO 17799 Being Republished



## BS 7799
## INTERNATIONAL USER GROUP
## (IUG)



## International User Group

### Countries Represented

| | | |
|---|---|---|
| Australia | Japan | Singapore |
| Brazil | Korea | South Africa |
| Canada | Malaysia | Sweden |
| Germany | The Netherlands | Switzerland |
| Hong Kong | New Zealand | Taiwan |
| Iceland | Norway | UAE |
| India | Poland | UK |
| Ireland | | USA |

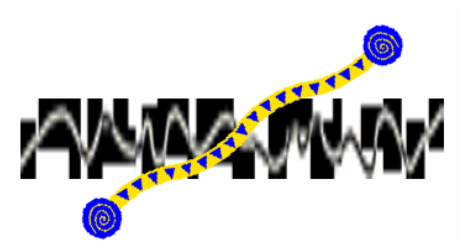
### IUG Chapters

**Australia**
**Canada**
**Germany**
**Hong Kong**
**India**
**Singapore**
**Sweden**
**Taiwan**
**UK**



## ROADMAP FOR CERTIFICATION

*(ONE EXAMPLE)*



## Requirements

- **BS7799-2 Standard Specifies Requirements for Establishing, Implementing and Documenting an ISMS**
  - Define Security Policy
  - Define the ISMS Scope (Boundary)
  - Identify Assets
  - Undertake Asset Risk Assessment
  - Identify Asset Weak Areas
  - Make Decisions to Manage Risk
  - Select Appropriate Controls
  - Implement & Manage Selected Controls
  - Prepare Statement of Applicability

**Option of Formal Certification Now Available**



## Audit Objectives

- Audit Objectives
  - Review Compliance to BS 7799-2
  - Review Degree of Implementation to BS 7799-2
  - Review the Effectiveness and Suitability in meeting:
    - Security Policy
    - Security Objectives
  - Identify Security Holes & Weaknesses
  - Provide an Opportunity to Improve ISMS
  - Meet Contractual Requirements
  - Meet Regulatory Requirements


TO ACHIEVE CERTIFICATION

## Approach

- **Preparation**
  - Understanding of the effort required
  - Clear that it is a continuous effort
  - A key operational champion is identified
  - People Resources are available (minimum 6 months)
  - Budgetary Resources are available
  - Identified the end goals to be achieved (why proceed)

- **Management Commitment**
  - Key management champion is identified
  - Understanding of what will be achieved
  - Support to make it happen
  - Ability to prioritise the commitment (e.g. high)



## Approach

- **Day 0**
  - Determine details of ISMS Certification Process

- **Day 1**
  - Map out a project plan
  - Determine key milestones
  - Select key people resources
  - Form project team (Security Forum)
  - Commence documentation (e.g. minutes)
  - Determine and allocate a budget
  - Determine what professional assistance/advice is required

## Approach

- Day 2-5
  - Plan major activities
    - Information Security Policy
    - Asset Identification
    - Risk Assessment
    - Training and Awareness
    - Scope of assessment
      - (e.g. physical, people, shifts etc...)

- Week 1
  - Project Team Meeting
  - Initial Scope of Assessment Determined
  - Asset Identification Process Commenced
  - Gap Analysis of ISMS Requirements within Scope Completed



## Approach

- Week 2-4
  - Project Team Meeting (held fortnightly)
  - Plan/Update Project Plan/Milestones
  - Develop security organisational structure (Security Forum)
  - Develop/update information security policies
  - Commence Risk Assessment (determine methodology)
  - Identify weak and strong security areas/risks
- Month 2
  - Finalise information security policies (ready for approval)
  - Review scope of assessment
  - Commence risk management process (safeguard selection)
  - Commence development of Information Security Manual
  - Continue to document your efforts

## Approach

- Month 3
  - Project Team Meeting (held Monthly) (Security Forum)
  - Submit Information Security Policies – Senior Mgt Approval
  - Commence/continue safeguard (control) implementation
  - Continue to monitor Gap Analysis Study (from week 1)

| 7799 Part 2 Clause | Statement | Comply | Non-Comply | Exclusion | Control Objectives, Controls & Reasons for Selection or Exclusion |
|---|---|---|---|---|---|
| 4.1.1.1 | **Information security policy document**<br>A policy document shall be approved by management, published and communicated, as appropriate, to all employees. | √ | | | Developed, approved and communicated information security policy to all employees. This policy has been developed in accordance and supports the information security policies of its parent organisation.<br>The Policy is readily available to all employees via the company's intranet. |
| 4.1.1.2 | **Review and evaluation**<br>The policy shall be reviewed regularly, in case of influencing changes, to ensure it remains appropriate. | | √ | | No formal process has yet been established to regularly review the organisation's security policies and procedures.<br>The assignment of ownership and responsibility of Policy review has not yet been assigned to dedicated personnel. |
| 4.2.1.1 | **Management information security forum**<br>A management forum to ensure that there is clear direction and visible management support for security initiatives shall be in place. | | | √ | Security is a topic that is constantly reviewed and promoted not only by management to the organisation's employees, but additionally encouraged throughout the organisation's customer environment.<br>Given the small size of the organisation a management forum dedicated to information security is not deemed necessary. |

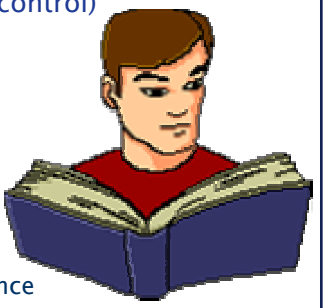


## Approach

- Month 4
  - Continue safeguard (control) implementation (risk mgt)
  - Ensure personnel awareness/training of information security
  - Ensure management approval of Information Security Policy
  - Continue development of Information Security Manual
    - Document what you actually do – not what you should do !
    - ISM forms a key element in the certification audit
      - (As do) – Meeting Minutes
      - Risk Assessment documentation
      - Organisational structure
      - Statement of Applicability
  - Continue to review/revise supporting documentation
    - Not necessarily security related
    - But support of security safeguards/controls

## Approach

- **Month 5**
  - Commence development of 'Statement of Applicability'
    - Progressive update from Gap Analysis document
  - Continue Information Security Manual
  - Continue implementation of safeguards (control)
  - Commence process of:
    - Continuous review
    - Continuous documentation
      - Perform (2nd) Risk Assessment (if applicable)
      - Visitor's log etc…
  - Engage internal auditors (if available)
    - To assist in reviewing work to date
    - To provide an element of increased confidence
    - To determine any non-conformities earlier in process
  - **Engage External (Accredited) Certification Body**





## Certification Audit – Phase 1

- **Month 6**
  - Commence Phase 1 – Desktop/Documentation Audit#
    - Review ISMS Management Framework
      - Security Organisation
      - Security (Committee) Meeting Minutes
    - Assess Scope of Assessment (ISMS)
    - Statement of Applicability
    - Risk Assessment and Management Approach
    - Security Policy and Supporting key Procedures
      - e.g. Information Security Manual
    - Determine any minor/major non-conformities
  - Action taken to correct non-conformities
  - Documentation updated to reflect changes
  - Finalise Information Security Manual
  - Finalise implementation of safeguards (control)

# May or may not be conducted on site

## Certification Audit – Phase 2

- **Month 7**
  - Commence Phase 2 – Implementation Audit
    - To confirm the:
      - Organisation adheres to its own policies, objectives and procedures
      - ISMS conforms with requirements of:
        (a) ISMS Standard; and
        (b) Is achieving the organisation's policy objectives
      - Test the effectiveness of the ISMS
    - On-site inspection to review/test effectiveness of (ISMS) Policies, Procedures, Objectives
      - Interview Owners and Users of ISMS
      - Review High, medium and/or low risk areas
      - Security objectives and targets
      - Links between the core documents within the system
      - Security and management reviews
    - **Report findings and give final recommendation**

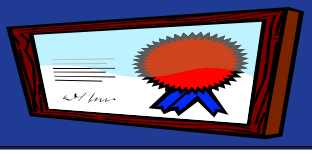


## Certification Audit – Phase 2

- **It's worth knowing…**
  - Not Expect to Gain Certification Without Risk Assessment
  - Without Internal Reviews, Unlikely to Pass External Audit

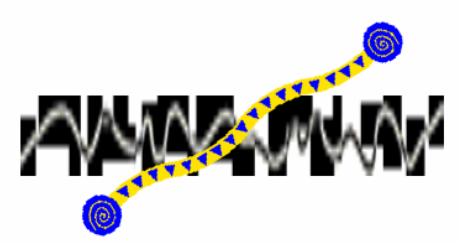
## Certifications (171)

| | | |
|---|---|---|
| Australia (1) | Greece (2) | Korea (9) |
| Austria (1) | Hong Kong (6) | Norway (6) |
| Brazil (2) | Hungary (2) | Singapore (6) |
| China (3) | Iceland (1) | Spain (1) |
| Egypt (1) | India (8) | Sweden (4) |
| Finland (8) | Ireland (3) | Taiwan (3) |
| Germany (6) | Italy (3) | UAE (1) |
| | Japan (17) | UK (74) |
| | | USA (3) |





## BENEFITS



## BS7799 Benefits

- **Improves**
  - Management Understanding of the Value of Organisational Information
  - Customer Confidence, Satisfaction and **TRUST**
  - Business Partner Confidence, Satisfaction and **TRUST**
    - e.g. Handling Sensitive Information of Customers & Business Partners
  - Level of Assurance in Organisational Security & **QUALITY**
  - Conformance to Legal and Regulatory Requirements
  - Organisational Effectiveness of Communicating Security Requirements

  - Organisational Effectiveness of Communicating Security Requirements
  - Employee Motivation and Participation in Security (Best Practices)
  - Organisational Profitability
  - Management and Handling of Security Incidents
  - Ability to Differentiate Organisation for Competitive Advantage
  - Organisational Credibility & Reputation



## Certification Benefits

- **Certification Demonstrates:**
  - Commitment
  - Continuous Improvement
  - Preparedness for Independent Review
  - Measure Against Best Practice
- **Certification Provides**
  - Means to Benchmark
    - Industry & Competitors
    - Business Partners
    - Customers
  - Increased Level of Certainty

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Thank You

Q & A