

S/MIME Secure Messaging Certification Program

THE *Open* GROUP

Mike Lambert

A Fellow of The Open Group
Director, Messaging Forum

GSM +44 7770 451167

m.lambert@opengroup.org

79, Camrose Way
Basingstoke
Hants, RG21 3AW
United Kingdom

Tel +44 1256 414513
Fax +44 20 7691 7868
www.opengroup.org

THE *Open* GROUP

Structure



**S/MIME Secure
Messaging**

- ❑ Context – The Problem to be Addressed
- ❑ Certification – What does it Mean
- ❑ S/MIME Secure Messaging Certification
- ❑ Status

Structure



**S/MIME Secure
Messaging**

- Context – The Problem to be Addressed
- Certification – What does it Mean
- S/MIME Secure Messaging Certification
- Status

An Industry Problem

- ❑ The market demand for e-mail encryption is growing explosively.
- ❑ Companies who have a business need to deploy this capability are reporting difficulties finding skilled resources to help them.

The Market Opportunity

- ❑ One aerospace company is requiring all of its business partners working on an important new program to use e-mail encryption.
- ❑ By the middle of 2006, this means that 900 companies worldwide will need to deploy strong e-mail encryption.
- ❑ The majority of these companies do not currently have the necessary knowledge and skills and will require professional assistance.

Market Opportunity

- ❑ The automotive industry in Europe is starting to deploy e-mail encryption
- ❑ HIPAA in the US and equivalent legislation in Europe is forcing the Healthcare Community to deploy e-mail encryption
- ❑ The US Depart of Defence, the UK Ministry of Defence and other agencies worldwide are mandating e-mail encryption
- ❑

Kind of Services Needed

- ❑ In-house Staff Training
- ❑ High level planning and implementation support
 - estimated at up to 2 person weeks per deployment
- ❑ Turnkey deployments
 - estimated at up to 10 person weeks per deployment

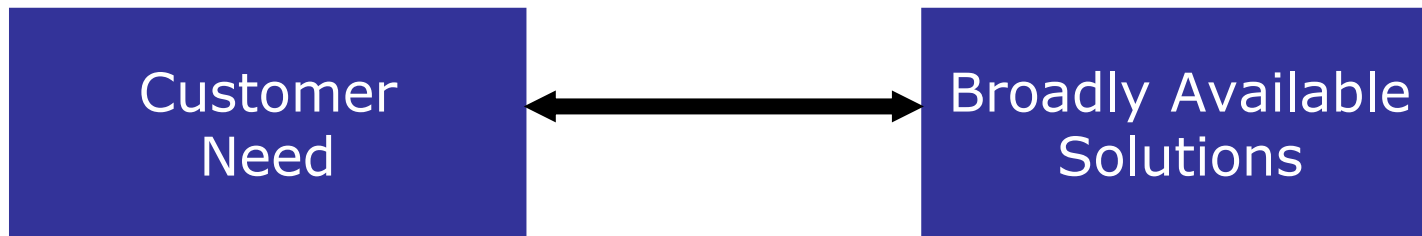
Structure



S/MIME Secure Messaging

- Context – The Problem to be Addressed
- Certification – What does it Mean
- S/MIME Secure Messaging Certification
- Status

Certification – The Objective



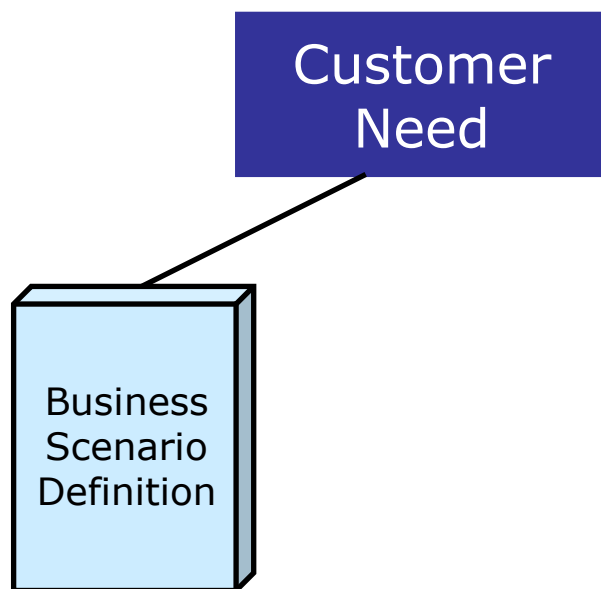
- Fully meet the customer need

Certification – The Open Group Promise

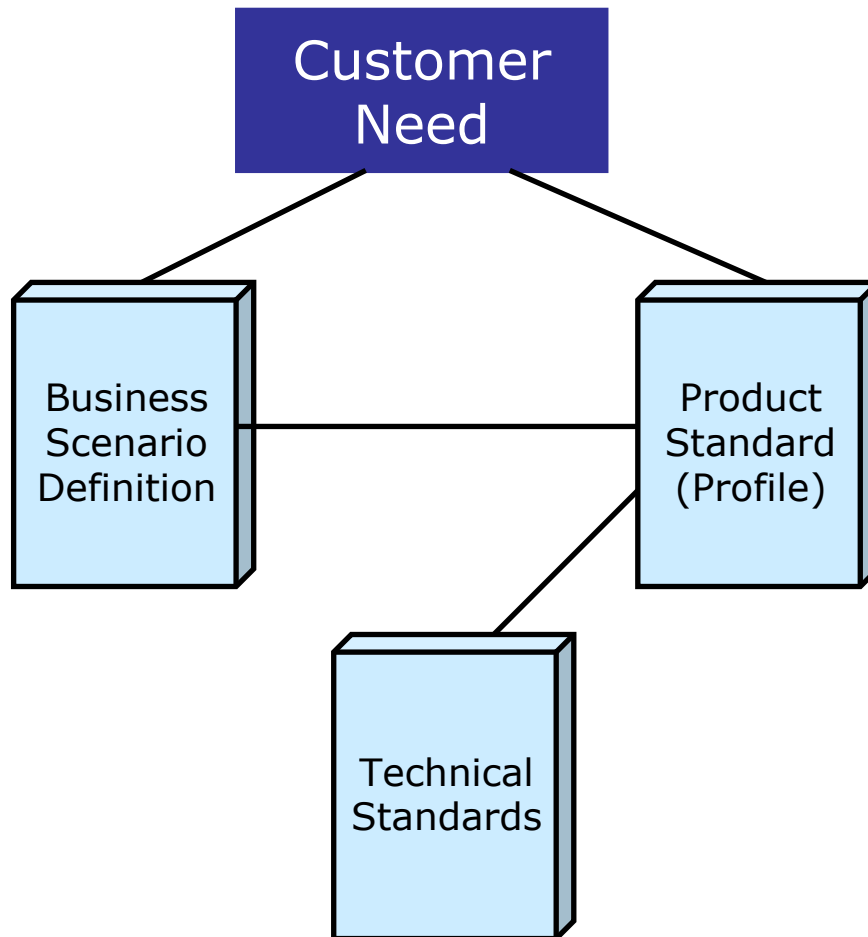


- If a solution carries The Open Group certification logo
 - It conforms to the referenced specification .. GUARANTEED
 - It has passed all of the required tests .. GUARANTEED
 - If there is a demonstrated failure to conform, The Open Group will take action .. GUARANTEED

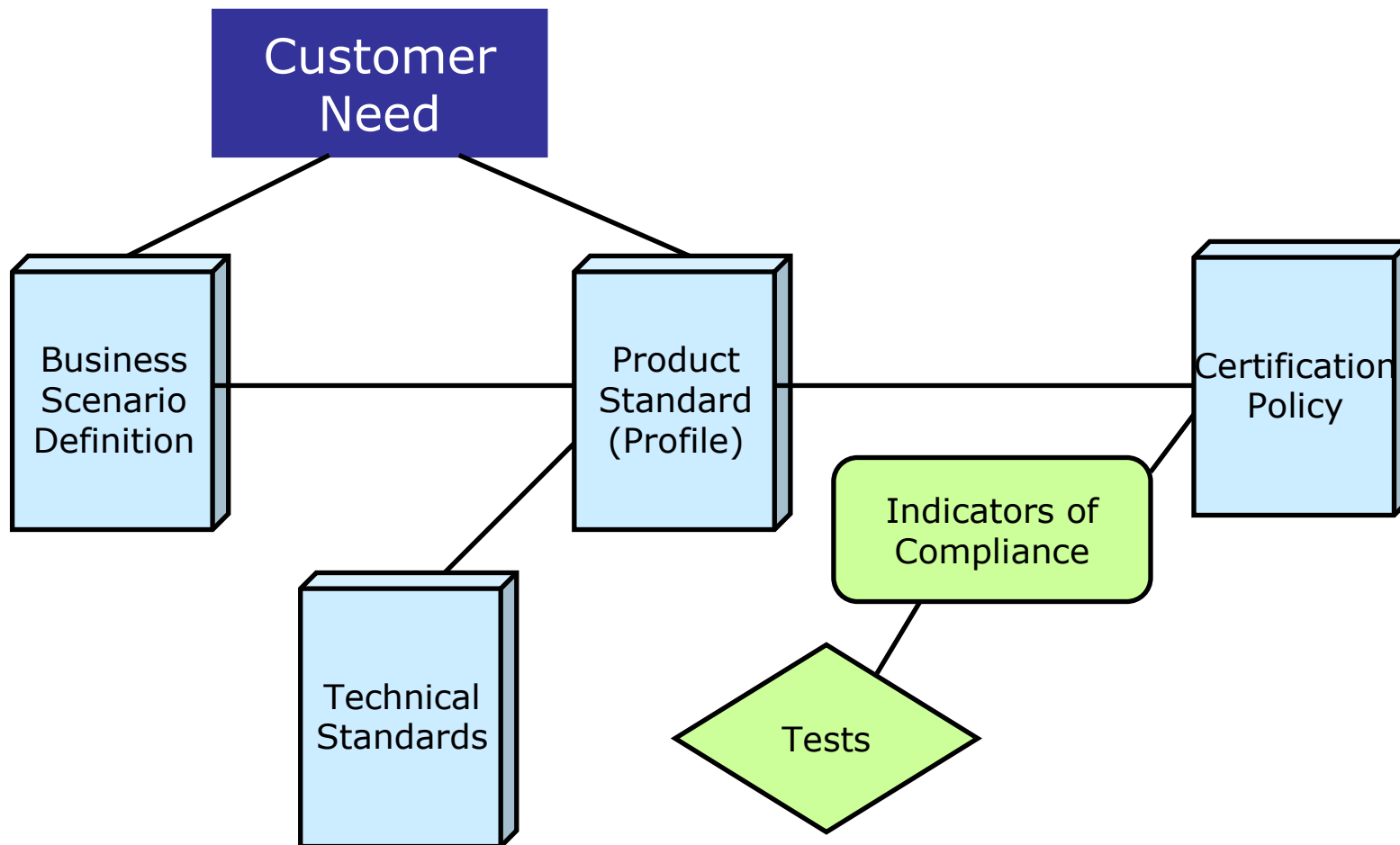
Understand and Demonstrate the Customer Need



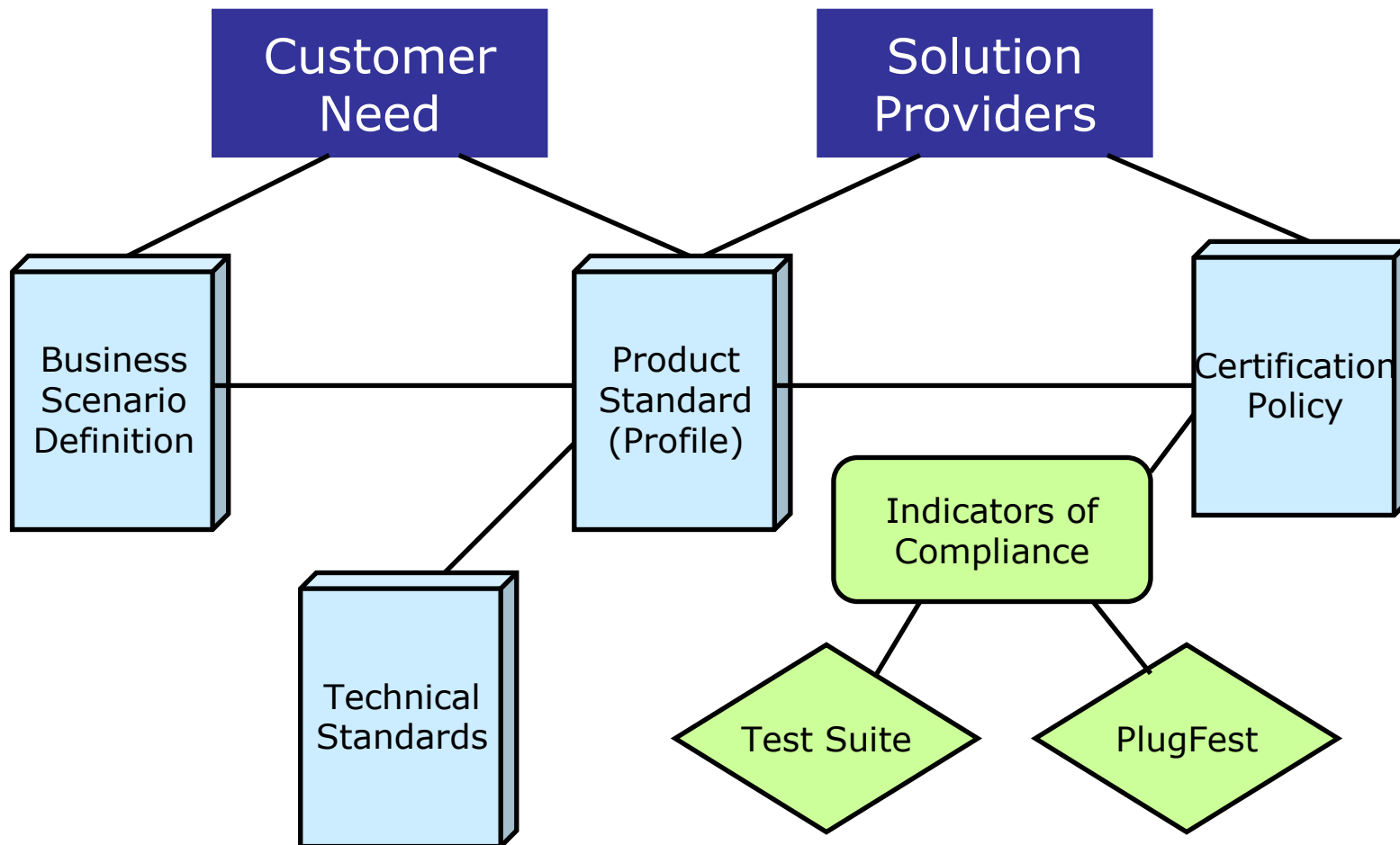
Define the Appropriate Solution



Plan the Certification



Get the Buy-in of Solution Providers



Structure



**S/MIME Secure
Messaging**

- Context – The Problem to be Addressed
- Certification – What does it Mean
- S/Mime Secure Messaging Certification
- Status

Objective

- ❑ The **S/MIME Secure Messaging (SSM) certification program** will identify **organizations** and **individuals** who are able to support the deployment of secure e-mail systems in accordance with The Open Group S/MIME Secure Messaging Architecture, together with appropriate **training courses** and materials.

Baseline for SSM Certification

- ❑ SSM Certification Policy
 - How the program operates

- ❑ SSM Core Syllabus
 - Scope of the program

- ❑ SSM Architecture
 - Components and relationships between them

- ❑ SSM Product Standards
 - Requirements to achieve certification

Scope of Program

- ❑ Professional Services Providers
 - Knowledgeable staff
 - Consistent use of SSM architecture
 - Code of practise
- ❑ Training Courses
 - Meet core syllabus
 - Delivered by appropriate staff
- ❑ Practitioner
 - Knows and understands SSM architecture

Core Syllabus

- ❑ Defines the scope of knowledge needed to achieve certification
- ❑ Training courses **MUST** cover all topics in the core syllabus
- ❑ Examination for individual practitioner certification may ask questions on any element of the core syllabus

Core Syllabus

- ❑ Mandatory Elements
 - Must be covered by certified training courses
 - The basis for examination questions

- ❑ Optional Elements
 - May be covered in certified training courses
 - Differentiators for course providers
 - Will not be addressed in examination

Core Syllabus

- Rationale for Secure E-Mail
 - Requirements
 - Use cases

- Basic Internet E-Mail Architecture
 - Components
 - Standards

Core Syllabus

- Information Security Principles
 - Scope of Security
 - Trust Models
 - Cryptography
 - Symmetric key
 - Asymmetric key
 - Digital signatures

Core Syllabus

- Introduction to E-Mail Security
 - Scope of security
 - Cryptography
 - Digital Signatures
 - Sender Authentication Overview
 - Standards

Core Syllabus

- Pre-requisites for secure E-Mail
 - Technical
 - Infrastructure
 - Organizational
 - What can be automated

Core Syllabus

- Architecture Models for Secure E-Mail
 - “To-End” Desktop
 - “To-Site” Gateway

Core Syllabus

- ❑ Components of a PKI
 - Certificate
 - Certification Authority
 - Self-signed certificates
 - Self-managed CA service
 - External CA service
 - Registration Authority
 - Key Generation
 - Key Management
 - Directory Service
 - Validation/Revocation Service

Core Syllabus

- Usage of a PKI
 - Internal Organization and Infrastructure
 - Certificate Policy
 - Certification Practice Statement
 - PKI Disclosure Statement
 - Relying Party Agreements
 - CP/CPS audits

Core Syllabus

- Bridge Infrastructures
 - Requirements/challenges
 - Out of band delivery
 - Approaches
 - Signed list
 - Cross certification
 - Participation requirements

Core Syllabus

- Implementing a Gateway Encryption System
 - Key Generation
 - Key Exchange
 - Establishing Policy

Core Syllabus

- ❑ Optional Elements
 - Other Architecture Models for Secure E-mail
 - E-Mail Sender Authentication
 - Path validation
 - Crypto based approaches
 - Content Management
 - Virus protection
 - Spam filtering
 - Configuration of specific E-Mail products for security
 - Hands-on experience of product configuration



S/MIME Secure Messaging SERVICES

- ❑ For organizations wishing to deploy secure e-mail systems S/MIME Secure Messaging SERVICES certification will **identify organizations** who have the necessary **knowledge** and **understanding** to provide supporting services.
- ❑ For professional services companies SSM SERVICES certification and inclusion in the register of certified organizations provides a mechanism of **promoting** both their **services** and their **commitment** to The Open Group SSM Architecture.



S/MIME Secure Messaging SERVICES

- ❑ In order to achieve SSM SERVICES certification, an organization must
 - Agree to abide by the SSM Code of Practice
 - Commit to use of at least one SSM CERTIFIED messaging professional in provision of certified professional services
 - Have a training policy for its SSM CERTIFIED messaging professionals
 - Maintain a register with The Open Group of the names of all personnel currently providing the SSM services.



S/MIME Secure Messaging CERTIFIED

- ❑ For individual messaging professionals, S/MIME Secure Messaging CERTIFIED demonstrates that have the **knowledge, awareness** and **understanding** of The Open Group SSM Architecture order to be able to **design** and/or **deploy** and **configure** secure e-mail systems in conformance to the architecture.
- ❑ For organizations requiring the services of secure messaging professionals, SSM CERTIFIED **identifies candidates** with the suitable **skills**.
- ❑ For SSM SERVICES certified organizations, SSM CERTIFIED is a **mandatory requirement** for **staff** employed to deliver professional services.



S/MIME Secure Messaging CERTIFIED

- ❑ In order to achieve certification as SSM CERTIFIED, an individual must demonstrate their knowledge and understanding of The Open Group SSM Architecture by completing an un-timed open book examination paper to the satisfaction of The Open Group (or third party examining body).
- ❑ Attendance on an SSM TRAINING certified course is not mandated but strongly recommended.
- ❑ In order to maintain SSM CERTIFIED status, individuals must keep knowledge and awareness up to date through regular attendance at Technology Update sessions organised by The Open Group Messaging Forum.



S/MIME Secure Messaging CERTIFIED - Examination

- ❑ Untimed, Open book
- ❑ 30 factual questions requiring 1 paragraph answers
- ❑ 3 analytical questions requiring essay style answers
- ❑ For certification all answers must be satisfactory
.. Pass mark is 100%
- ❑ Candidates get 2 opportunities to correct unsatisfactory answers
- ❑ At least 1 question from each segment of the core syllabus



S/MIME Secure Messaging TRAINING

- ❑ S/MIME Secure Messaging TRAINING certification identifies training courses that address the core requirements for knowledge, awareness and understanding of The Open Group SSM Architecture that messaging professionals should have in order to be able to design, deploy and configure secure e-mail systems in conformance to the architecture.
- ❑ SSM TRAINING certified courses cover the complete syllabus upon which examination for SSM CERTIFIED is based.



S/MIME Secure Messaging TRAINING

- ❑ In order for a course to achieve SSM TRAINING certification:
 - The course must cover all elements defined in the core syllabus
 - The organization providing the course must be SSM SERVICES certified
 - The course must be delivered by an SSM CERTIFIED trainer
 - At the end of the course candidates must be offered the opportunity to take the examination for SSM CERTIFIED certification



S/MIME Secure Messaging TRAINING

- The Open Group will make available for license a suitable set of training materials
 - Basis for construction of a suitable course
 - Not a complete course

Structure



S/MIME Secure Messaging

- Context – The Problem to be Addressed
- Certification – What does it Mean
- S/MIME Secure Messaging Certification
- Status

Program Status

- ❑ All base specifications are complete
- ❑ Examination and training materials to be available around the end of the year
- ❑ Program launch in Q1/2006

S/MIME Secure Messaging Certification Program

THE *Open* GROUP

Mike Lambert

A Fellow of The Open Group
Director, Messaging Forum

GSM +44 7770 451167

m.lambert@opengroup.org

79, Camrose Way
Basingstoke
Hants, RG21 3AW
United Kingdom

Tel +44 1256 414513
Fax +44 20 7691 7868
www.opengroup.org

THE *Open* GROUP