Singapore's Strategy in Securing the Cyberspace

Presented to ITU WSIS Thematic Meeting on Cybersecurity

29 June 05

iDA
SINGAPORE

1 / Who is Infocomm Development Authority of Singapore (IDA)?

Who is IDA?

> The Infocomm Development Authority of Singapore (IDA) is a single government agency responsible for planning, policy formulation, regulation and industry development of IT and telecoms sectors

> Roles of IDA

  > Formulation of national infocomm masterplans and policies

  > Architecting of e-government development plans and project management of infocomm systems deployment in government

  > Regulation of telecoms industry

  > Promotion and development of infocomm industries and manpower

  > Facilitation of infocomm adoption and usage in businesses and society

2 / Agenda

Agenda

> Cyber Security in Singapore

> Overview of Singapore's Infocomm Security Masterplan

> Strategies

> Outcomes

> Public-Private Collaboration

> Conclusion

3 / Cyber Security in Singapore

Infocomm in Singapore

> Ranked #1 in Network Readiness Index by World Economic Forum

> Rated as one of top 7 Intelligent Communities by Intelligent Community Forum

> 88% used electronic means to transact with the government

> 83.1% of the businesses use infocomm technology in their business process

> 65% of the homes have Internet access

Cyber-Threats

> Like other open economies, Singapore faces threat from all vectors

> > Epidemic

> > Terrorism

> > Threats to infocomm environment

> Challenges in protection of infocomm environment

> > Malware: worms, virus and trojan horses

> > Irresponsible hackers, cyber-criminals & cyber-terrorists

> > Ignorant users & system owners

Proactive Efforts in Cyber-Security

> Legislation Level

>> Examples:

>>> Computer Misuse Act in 1993

>>> Electronic Transactions Act in 1998

> Policies and Guidelines Level

>> Examples:

>>> Infocomm Security Best Practices

>>> Internet Banking Technology Risks Management Guidelines in 2003

Proactive Efforts in Cyber-Security

> ## Infrastructure Level

>> Examples:

>>> Public Key Infrastructure in 1996

>>> SingCERT in 1997

>>> Infocomm security awareness programme for people, private and public sectors

> ## Strategic Level

>> Examples:

>>> Infocomm Security Masterplan in 2005

4 / **Infocomm Security Masterplan**

Overview of Infocomm Security Masterplan

> Three year (FY2005-2007) strategic roadmap

> S$38 million seed funds to bolster cyber security and build capabilities

> Objectives

>> Defend Singapore's critical infrastructure from cyber attacks

>> Maintain a secure infocomm environment for the government, businesses and individuals

Development of the Masterplan

> Multi-agency effort led by Infocomm Development Authority of Singapore (IDA)

> Driven by a high-level steering committee

> Inputs from businesses & government agencies

Strategies

> Six strategies:

> > Securing the People Sector

> > Securing the Private Sector

> > Securing the Public Sector

> > Developing National Capabilities

> > Cultivating Technology and R&D

> > Securing National Infrastructure

> Projects will build upon existing initiatives

Strategies

Infocomm Security Masterplan

| PUBLIC SECTOR | PEOPLE SECTOR | PRIVATE SECTOR |

National Capability

Technology and R&D

National Infrastructure
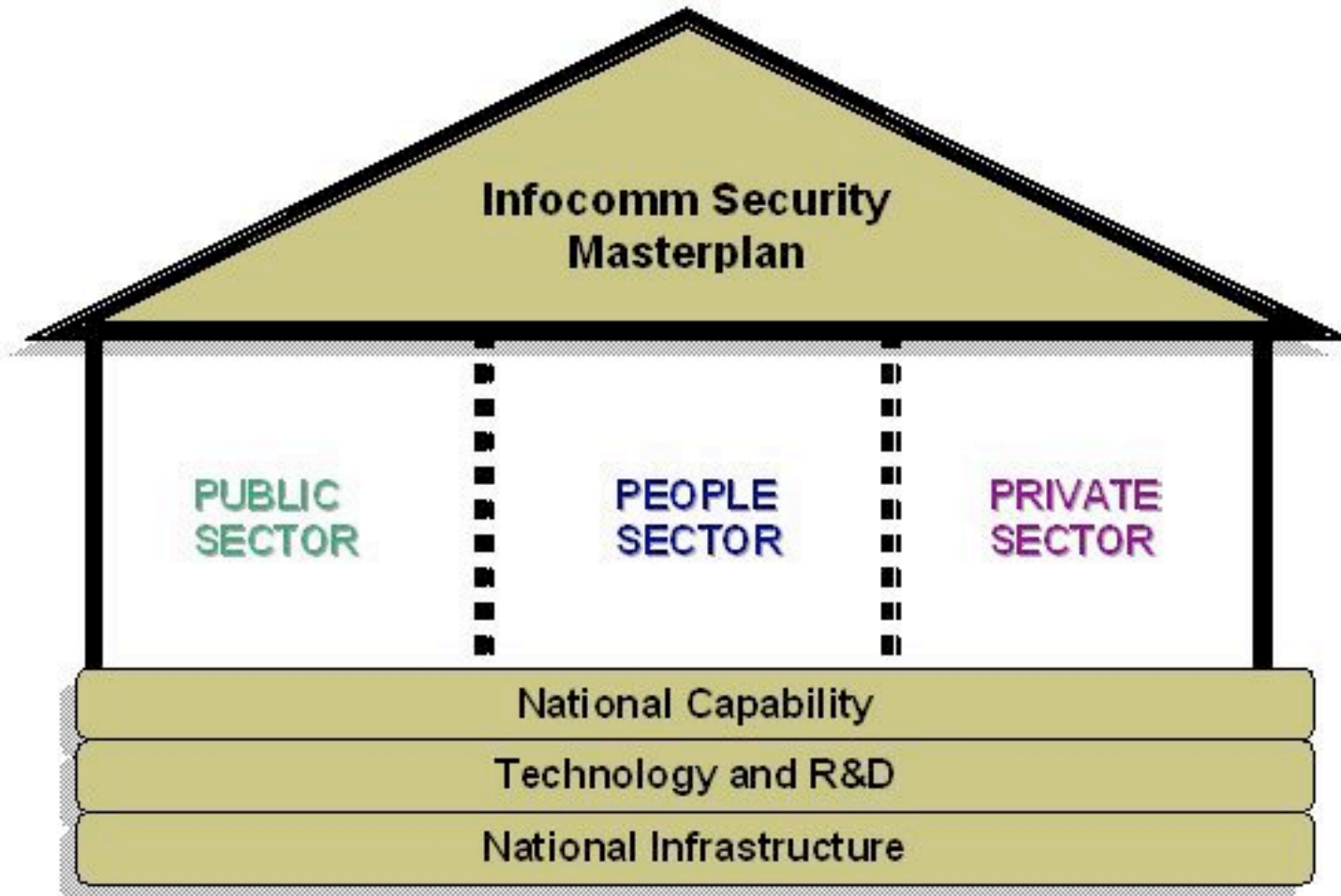
Pictorial Representation of the Masterplan Framework

Key Outcomes

1. Enhanced situational awareness and contingency planning assurance

2. Information protection assurance and risk mitigation measures

3. Human and intellectual capital development

Enhanced Situational Awareness & Contingency Assurance

> Technical controls and processes are not enough

> Need to know what is going on in real-time.

>> Ability to detect when an incident happened

>> React fast enough to prevent harm to our infrastructures and systems or to limit the damage

>> Ability to restore the system to its original state

> Example of initiatives

>> Cyber threat monitoring

Information Protection Assurance & Risk Mitigation Measures

> Risk Assessment

> Vulnerability analysis and reduction

> Technology assessment

> Example of initiatives

>> Vulnerability Assessment

>> Security Testing

>> Critical Infrastructure Protection

>> Security Health Scorecard

Human and Intellectual Capital Development

- Security Awareness

- Development of professional skills

- Promotion of research & development

- Example of initiatives:

  - Awareness Outreach

  - Certification of Infocomm Security Practitioners

Public-Private Collaborations

> In implementing some of the Masterplan projects, there will be a need for the government to engage the private sectors

> Businesses were consulted during the planning of the Masterplan

> Expertise from solution providers needed in implementation

Conclusion

> It encourages change of mindset to treat cyber security with priority

> The infocomm environment and the threats that it faces are ever changing

> Enhancing the infocomm security, resilience and preparedness of the nation is a journey without end

Thank you

www.ida.gov.sg