

# Preparing the New Generation of Security Professionals

- **Marc Noble**, Director Government Relations, (ISC)<sup>2</sup>, Former Chief Information Security Officer, FCC
- **Karen Evans**, National Director, The US Cyber Challenge
- **Patrick J. Kelley**, Cyber Corps Graduate
- **Earnest McDuffie**, Leader, National Initiative for Cybersecurity Education (NICE), NIST
- **Brenda Oldfield**, Director, Cybersecurity Education & Workforce Development, National Cyber Security Division, Office of Cybersecurity & Communications, U.S. Department of Homeland Security

# IT Security EBK:

## A Competency and Functional Framework for IT Security Workforce Development

Functional Perspectives

M - Manage  
D - Design  
I - Implement  
E - Evaluate

### IT Security Roles

#### Executive

#### Functional

#### Corollary

Chief Information Officer

Information Security Officer/ Chief Security Officer

IT Security Compliance Officer

Digital Forensics Professional

IT Security Engineer

IT Security Operations and Maintenance Professional

IT Security Professional

Physical Security Professional

Privacy Professional

Procurement Professional

### IT Security Competency Areas

1 Data Security

2 Digital Forensics

3 Enterprise Continuity

4 Incident Management

5 IT Security Training and Awareness

6 IT Systems Operations and Maintenance

7 Network Security and Telecommunications

8 Personnel Security

9 Physical and Environmental Security

10 Procurement

11 Regulatory and Standards Compliance

12 Risk Management

13 Strategic Management

14 System and Application Security

M		M	D		E				D			M	D				D		
			E					E	I	E			E				E		
		M	D			E	M	D											
					E		I	E			I								
M		M									D				D				
			E		E						I			E	I				
M		M	D								D			D		M	D		
			E		E		I				I	E		E	I		I	E	
M													D				D		
			E		E						I	E					E		
						E		D		D	M	D							
					E		I	E	I		I	E							
						E		D		D	M	D							
					E		I		I		I	E							
					E								D				D		
						E							E		E	I			
M		M											D	M	D				
			E		E								E	I	E				
M	D	M	D															M	D
			E		E		E				E				E		I	E	
M		M	D		D											M	D		
	E		E	I	E						I					I	E		
M		M	D									D				M	D		
	E		E		E		I		I		I	E	I		I	E			
M	D	M	D																
	E		E		E														
M		M							D										
			E		E				I	E	I								

# Mapping Professional Specialist Groups to Career Levels

<b>Professional Specialist Group Model</b>						
		<b>Management</b>	<b>Technology</b>	<b>Architecture</b>	<b>Assurance</b>	<b>Risk Management</b>
<b>Senior Executive</b>	CISO	CTO	CIO	COO	CAO	CRO
<b>Manager/Director</b>	ISM, ISD, Mgr Dir, Ops Mgr/Dir, Consulting Mgr/DIR	Development Manager Systems and Infrastructure			Head of Internal Audit	Information Risk Mgr/Dir Consulting Mgr/Dir
<b>Expert</b>	Principal Consultant	Senior Dev Engineer	Senior Architect	Senior Architect	Senior Security Auditor	Principal Consultant
<b>Sepecialist Managerial</b>	Product/Program manager, Team Leaders, Account Sales managers					
<b>Specialist Technical</b>	Security Consultant Business Analyst	Security Product Manager	Security Designer	Security Designer	Security Auditor	Information Risk Consultant
<b>Entrant</b>	Analyst	Deverloper	Security Designer Trainee	Security Designer Trainee	Security Auditor Trainee	Information Risk Trainee

# Career Levels and Traditional Paths

Senior Executive

**CIO; CISO; CTO; CRO; COO**

  
**EXPERT**

Principal Consultant;  
Senior/Chief Architect;  
Senior Security Auditor; Etc.

  
**MANAGER/DIRECTOR**

Consulting Manager/Director; Information  
Security Manager/Director; Head of  
Security Audit; Information Risk  
Manager/Director; Operations  
Manager/Director

Specialist (Technical/Business)  
Security Consultant; Security  
Designer/Architect; Security Auditor;  
Information Risk Consultant; Security  
Product Manager; Business Analyst

Specialist (Management) Project Manager;  
Program Manager; Team Leader; Account  
Manager; Sales Manager; Marketing  
Manager

  
**ENTRANT**

Security Analyst; Security Developer; Security Administrator; Trainee  
Information Risk Consultant; Security Product Sales; Etc.

Years of experience & ability