# THOUGHTS ON FINDING SUCCESS IN THE REAL WORLD

*TAKING SOME GUIDES FROM THE WORDS OF THE CREATOR*

**THE PERSPECTIVE OF AN INFORMATION SYSTEMS CONTROL AND SECURITY PROFESSIONAL**

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# SUCCESS

- An ***outcome***, a result, a manifestation, an achievement, etc , that is or bigger than ***expected***. Simply put, a favorable outcome.
  - Expectation: Existed at a time only as an imagination
  - Outcome: Eventually becomes real and can be evidenced (physical')
- Is not just attainment of wealth or fame,
- aligns with creativity and productivity. Making things that are not to become.

# 3 Important Areas of Success

- In the Soul
  - (your mind and heart),
- In your body
  - (Healthy body)
- **In all areas, especially economic success**

  - *Culled from **3 Jn:2**,*
    - *Beloved, I pray that you may prosper in all things and be in health, just as your soul prospers. (NKJV)*

# SOMETHING WILL GO BAD IF YOU DO NOT SUCCEED

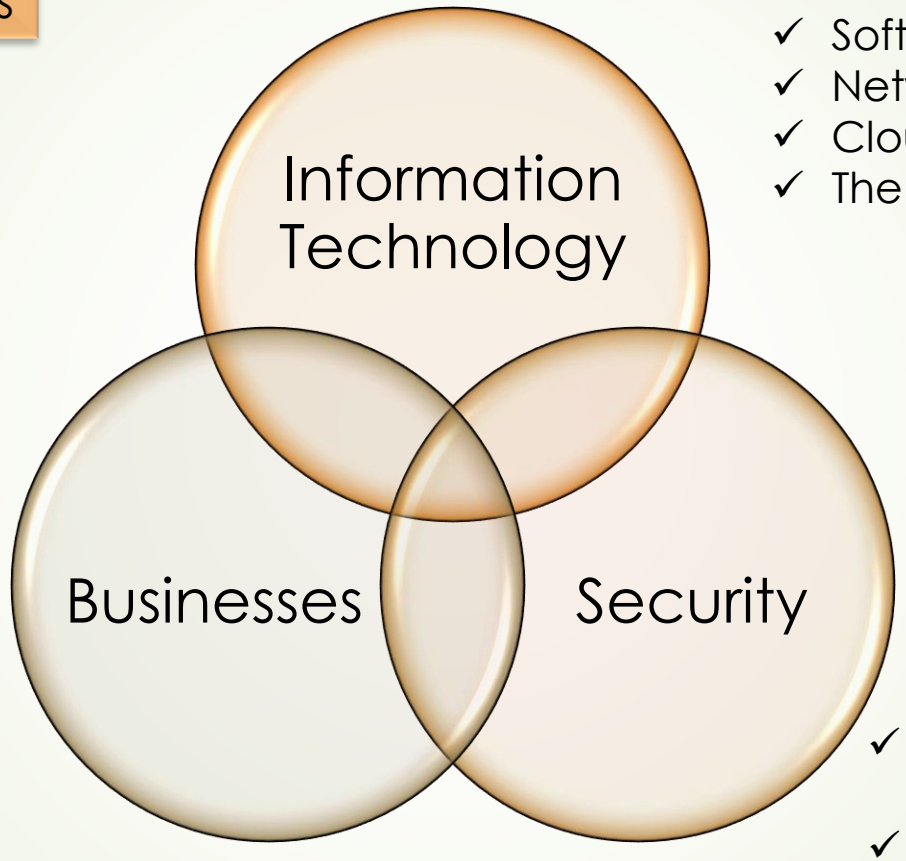
- Imagine that Bill gates was **NOT** successful…
- Imagine that Steve Jobs was **NOT** successful…
- Imagine that Aliko Dangote was **NOT** successful…
- Imagine that the owners of the banks or other places your benefactors work were **NOT** successful. Imagine what happened when some banks failed…
- Imagine that as a doctor, you are **NOT** successful…
- Imagine that Isaac Newton, Albert Einstein, Archimedes, etc. were **NOT** successful..
- Imagine that Bishop was not successful in setting up this University
- **The same way, something will be terribly bad in the future if you are not successful**
  - **Imagine that now that you are *n* years old, you are dependent on someone for your basic needs and that in 30 yrs. time, you are still dependent on someone to meet up with your basic needs.**
  - **Imagine that at 40yrs you are nothing because you did not plan when you were 15 to be anything.**
  - **What then happens to those whose success depend on your success**

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

# Information Technology in Business—*Issues Arising*



The Buzz words




- ✓ Hardware
- ✓ Software
- ✓ Network
- ✓ Cloud
- ✓ The Evolution

- ✓ Valuables in any industry
  - ✓ Banking
  - ✓ Manufacturing
  - ✓ Oil and Gas
  - ✓ Merchandising
  - ✓ Insurance
  - ✓ Transport
  - ✓ Etc.

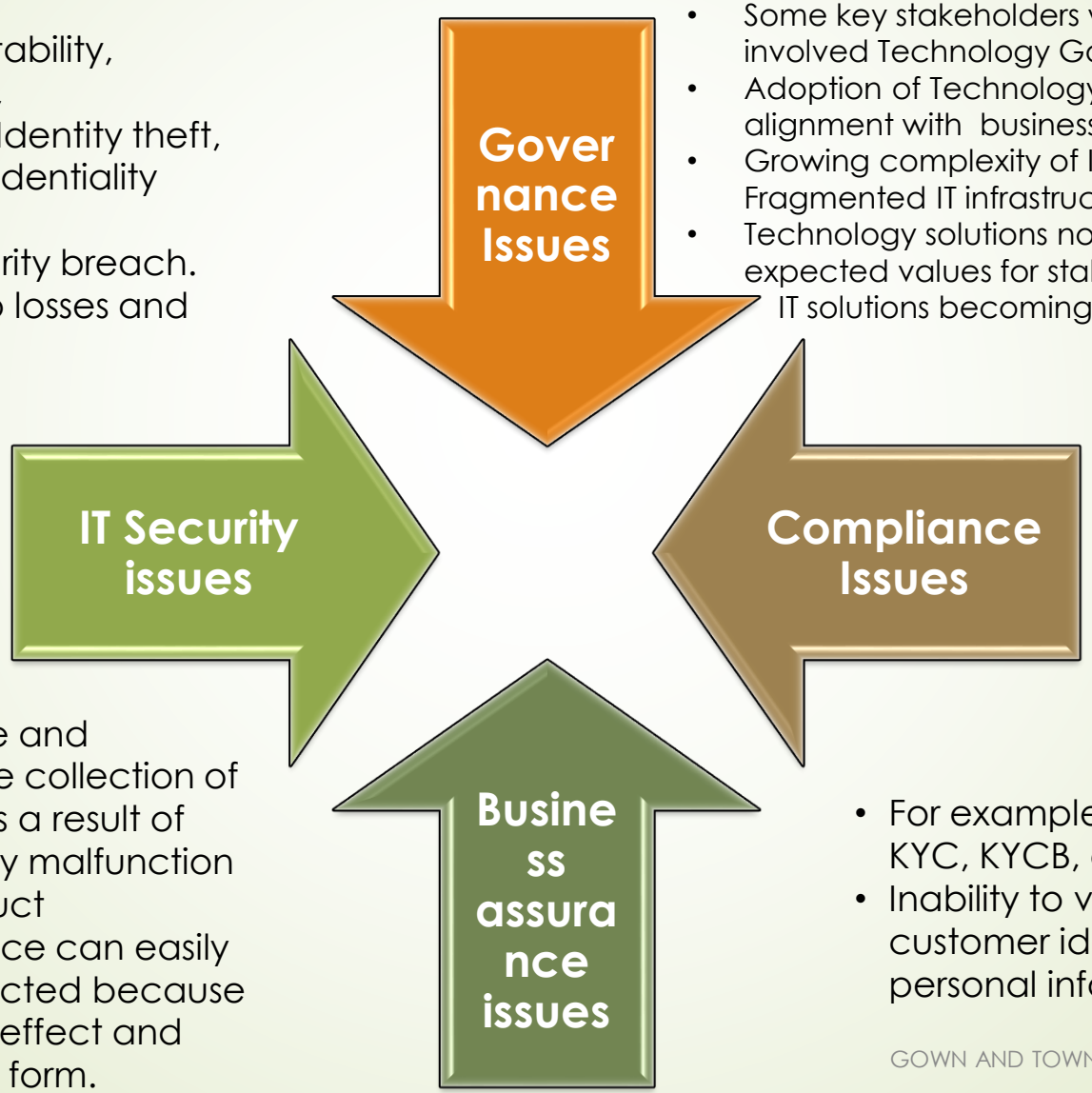
- ✓ Always available (as and when required)--Availability
- ✓ Is known to only authorized individuals--Confidentiality
- ✓ Genuine --- Authenticity
- ✓ Trustworthy—Integrity
- ✓ Cannot be denied—Non-Repudiation

# Information Technology in Business—*Issues Arising*



- Risk Assessment and Risk Mitigation process does not function as a continuous process.
- Some key stakeholders within the banks not involved Technology Governance.
- Adoption of Technology without proper alignment with business need
- Growing complexity of IT environments and Fragmented IT infrastructures
- Technology solutions not delivering the expected values for stakeholders
- IT solutions becoming ad hoc

- System Instability, downtime,
- Customer Identity theft,
- data confidentiality breach,
- data integrity breach.
- Leading to losses and disputes




- Inaccurate and incomplete collection of revenue as a result of Technology malfunction
- Poor product performance can easily go undetected because of volume effect and change of form.

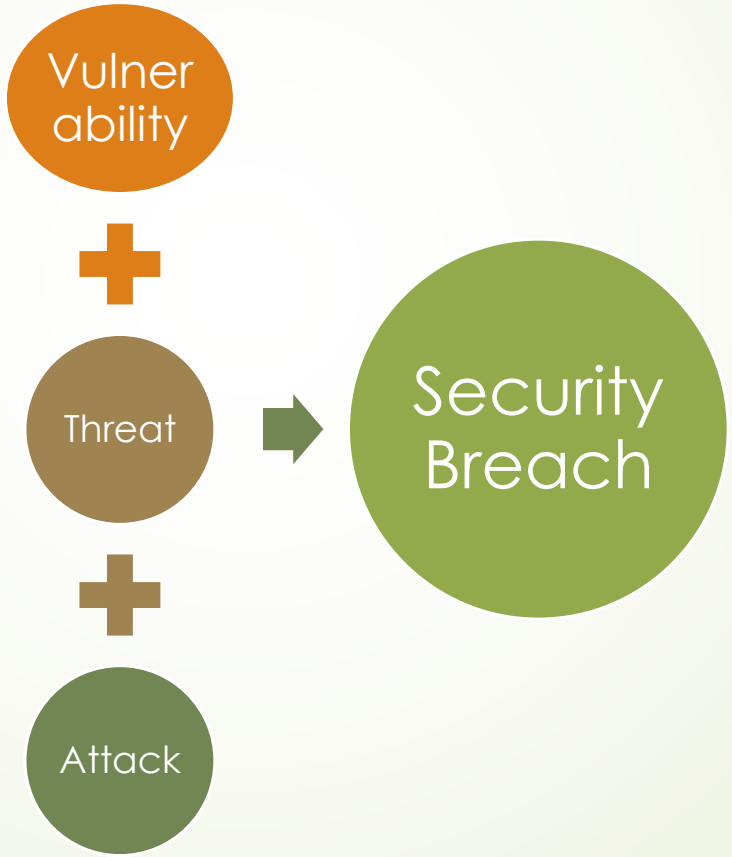
- For example, managing KYC, KYCB, etc.
- Inability to validate of customer identity and/or personal information

# BASIC CONCEPTS IN IT SECURITY

- **Information Security Needs**
  - Security is a function of the value in what you want to protect
  - Information Technologies Provide real life valuable solutions that are timely and with minimal or no errors
  - Such Solutions, to be really valuable, need to
  - Always be available (as and when required)
  - Be protected from unauthorized individuals
  - Be kept Genuine (Authenticity)
  - Reliable and Trustworthy
  - Cannot be denied

# BASIC CONCEPTS IN IT SECURITY

**Breach IT Security**



# BASIC CONCEPTS IN IT SECURITY

**Vulnerabilities: Technical Loopholes and weaknesses**

**Network**

- Misconfiguration (use of defaults),
- poor password management,
- SS7 vulnerability
- Audit and logging issues
- session management flaw,

**Systems**

- Bugs,
- buffer overflow,
- weak file system,
- unpatched O/S,
- O/S mis-configuration,
- Password write-back
- Audit and logging issues

**Application**

- Bugs
- poor error handling,
- buffer overflow,
- Directory transversal,
- shrink wrap code vulnerability,
- Broken authentication and
- System Instability, downtime.

# BASIC CONCEPTS IN IT SECURITY

**Attacks: Modifying Systems/application features to disrupt original owners purpose**

**Network**

- Target foot printing
- DoS,
- piggy backing,
- masquerading,
- short code impersonation,
- Brute Force (Encryption Key / password)

**Systems**

- Target foot printing
- DoS,
- security by-pass,
- Zero Day Attack
- Remote Code execution (RCE),
- Malware
- Back door Attack
- Privilege escalation
- piggy backing,
- masquerading,
- Brute Force (P/W and encryption key)
- memory scrapping,
- memory corruption,

**Application**

- Target foot printing
- Brute Force
- App poisoning
- DoS
- Zero Day Attack
- piggy backing,
- masquerading,
- Sensitive information disclosure,
- SQL Injection,
- Directory Traversal
- Man-in-middle,
- Cross site scripting,
- Cross site request forgery (goes with phishing),
- Session hijack,

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

**RELEVANT ACADEMIC AND PROFESSIONAL QUALIFICATION**

- Good First Degree in Any field
  - First degree in Computer Science will give the most advantage
  - First degree in any other numerical analysis courses will give some advantage
- Mastery of one ore more areas of Information Technology
  - Infrastructure,
  - Systems,
  - Applications,
  - Network

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

**RELEVANT ACADEMIC AND PROFESSIONAL QUALIFICATION**

- Professional certifications in one or more areas of Technology. Some of the popular ones include like;
  - CCNA, CCNP, MSCE, MSCP, OCP, etc.
  - Certifications in this area are often OEM driven
    - For example, IBM certified, Sun certified, Cisco certified, etc.
- Mastery of concepts and methodologies in information systems control, security and audit
  - Information Systems Audit
  - Information Systems Control
  - Information Systems Security
  - Information Security

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

## RELEVANT ACADEMIC AND PROFESSIONAL QUALIFICATION

- Professional Certifications in one or more of these areas. Some of the popular ones include;
  - CISA,: Certified Information Systems Auditor
  - CRISC: Certified in Risk and Information Systems Control
  - CGEIT: Certified in in Governance of Enterprise IT
  - CISM: Certified Information Security Manager
  - CISSP, Certified Information Systems Security Professional
  - PCISA,: Payment Card Industry Security Assessor
  - PCIP: Payment Card Industry Professional
  - CEH: Certified Ethical hacker
  - Etc.

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

- SUGGESTED SUPLEMENTAL SKILLS FOR IS CONTROLLERS
  - Analytical skills—The ability to visualize, articulate and solve complex problems and concepts, and make decisions that make sense based on available information. Such skills include
    - demonstration of the ability to apply logical thinking to gathering and analyzing information,
    - designing and testing solutions to problems, and
    - formulating plans.
- Managerial communications and/or public speaking—Includes the communication skills that are employed when discussing audit scope, findings and recommendations
- Interviewing skills— Includes the effective gathering of information
- Skills in information gathering.
  - Designing and administering questionnaires that meet set security/control check objectives

Culled from: *ISACA Model Curriculum for IS Audit and Control, 2nd Edition*

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

**SUGGESTED SUPLEMENTAL SKILLS FOR IS CONTROLLERS**

- Negotiation skills and/or personal selling—
  - Includes the ability to
  - Convince the process owner that there are some things wrong in what he/she is doing or has done
  - Make the process owner comfortable accepting your views and to change the things that are not the way they should
  - convince management to invest resources into making the changes you recommend.
- Business writing—
  - Includes the ability to produce concise, understandable and usable reports,
  - presentation materials, and other written communications
- Industrial psychology and/or behavioral science—
  - Includes the ability to understand and effectively manage human behavior throughout the audit process

Culled from: *ISACA Model Curriculum for IS Audit and Control, 2nd Edition*

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

**SUGGESTED SUPLEMENTAL SKILLS FOR IS CONTROLLERS**

- Project Management/Time Budgeting—
  - Includes the ability to effectively and efficiently manage time and tasks during audits.
  - Auditors are frequently evaluated on covering specific scopes within timelines and budgets.
- Team building and team leading—
  - Includes the ability to effectively manage team activities
  - Effective coordination and utilization of knowledge and skills of individual team members in the performance of an IS audit

Source: *ISACA Model Curriculum for IS Audit and Control, 2nd Edition*

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

ECONOMC VALUE OF INFORMATION SYSTEMS CONTROL AND SECURITY

- Action and Reaction are equal and opposite—
  - This Newton's theorem on motion can be used to extract some thought on how to determine economic value of this career path
  - Businesses invest sizeable portion of their annual budgets into acquisition and maintenance of information technology to support their businesses.
  - This budget in some organizations run into billions annually
  - These organization will not want to loose this investment
  - So they need professionals that understand how this investment can be lost to
    - act as a check and balance for the professionals who has the primary responsibility to manage these assets, and
    - To advise the owners and managers of the business on what to do to keep this investment from being lost

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

ECONOMC VALUE OF INFORMATION SYSTEMS CONTROL AND SECURITY

- Cost of Damages caused by Cyber and computer Criminals—
  - Cyber and computer criminals can steal or damage information that are really very important to organizations.
  - The cost of rebuilding this information when lost.
  - The cost of repairing the damage caused by these criminals can run into huge amounts.
  - So organizations need professionals that can assist the m to prevent these criminals from succeeding or mitigating the impact of the actions of the criminals

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

## ECONOMC VALUE OF INFORMATION SYSTEMS CONTROL AND SECURITY

- Opportunity Cost
  - Technology has become an enabler for competitive advantage organizations have over their peers.
  - The cost of not being able to use acquired technology for the original intention by an organization can be quantified in terms of loss of business, financial losses, reputational loss, even regulatory and legal losses.
  - Eliminating or reducing these losses is a lot of value give back to the organization.
    When quantified, the estimate of such losses saved is an economic value of the information systems control function

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECURITY

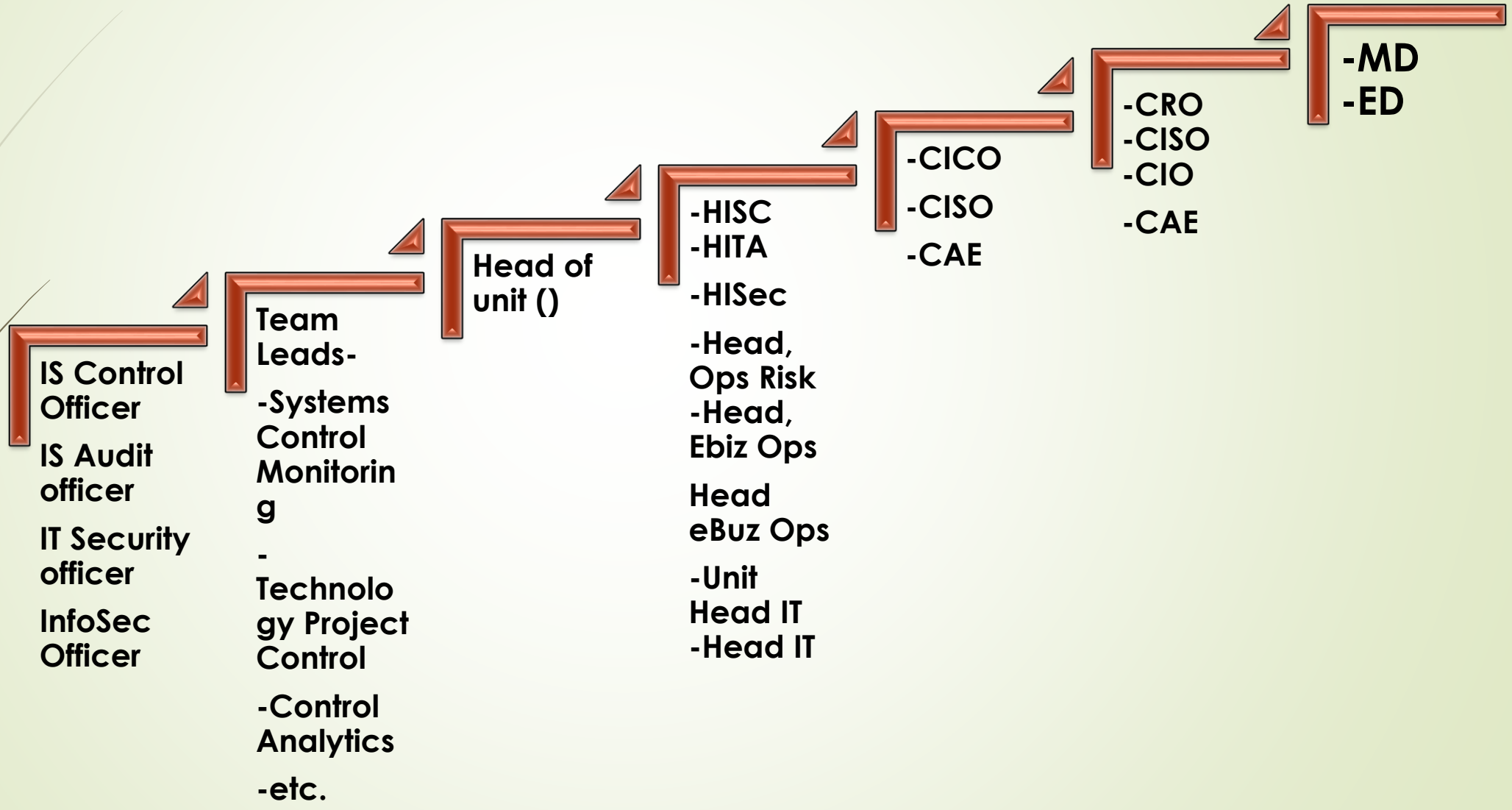
## ECONOMC VALUE OF INFORMATION SYSTEMS CONTROL AND SECURITY

- There are so many of such value metrics. The value and need for Information Systems Control and security capabilities increase by the day as potential risks and the cost of damages they can cost increase.
- Also the increasing adoption of technology by businesses and individuals also increase this value and need

# SUCCESSFUL CAREER IN INFORMATION SYSTEM CONTROL AND SECUTIY



## POSSIBLE CAREER PATH



# IN CONCLUSION

- TO SUCCEED
  - YOU NEED GOD
  - HAVE THE MINDSET AND HEARTSET OF SUCCESS
  - DREAM BIG, DREAM REAL
  - BE VALUE DRIVEN
  - WATCH FOR OPPORTUNITIES
  - ACQUIRE RELEVANT KNOWLEDGE
  - DO NOT BE SLOTHFUL IN BUSSINESS
  - AVOID MATERIALISM