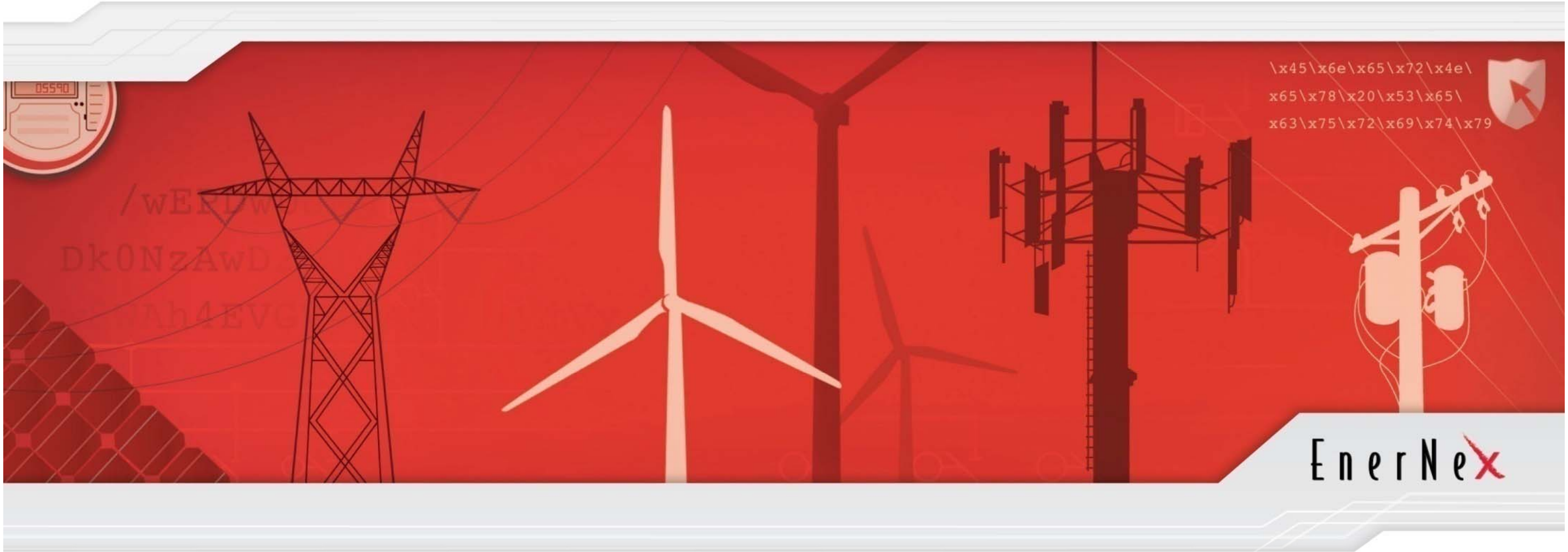
Compliance, audit, risk, security – what's the difference and why do we need it?

Presented By:

Sandy Bacik, Principal Consultant



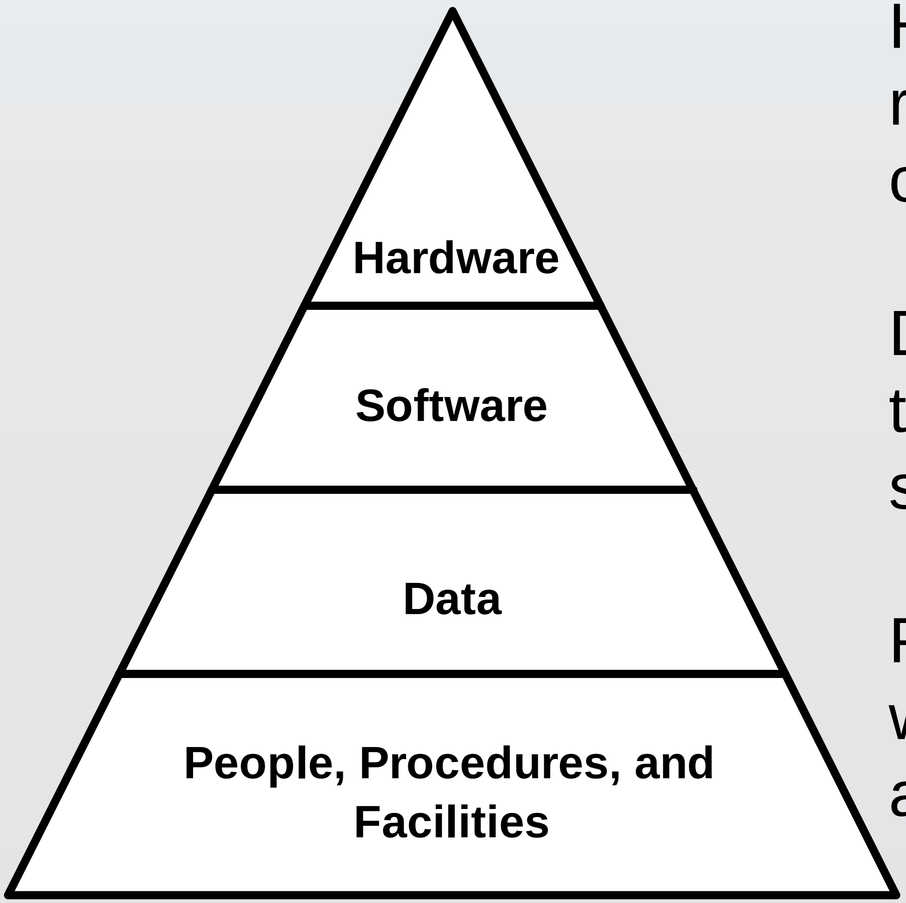
Agenda

- Defining compliance, audit, risk, and security
- What is the difference between them?
- Why do I need all four functions?
- Can I build one program that includes all these functions?

Protecting Assets

- Consists of protection methods from liabilities (enterprise obligations)
  - Information
  - Contracts
  - Personnel
  - Systems
  - Communications

Risk Triangle



Hardware

Software

Data

People, Procedures, and Facilities

Hardware and software is replaceable, it is not customized

Data risk is larger, because it takes much to recreate it should something happen

People are sometimes a wildcard when dealing with assets

Change Is a Constant

- Threats
- Risks
- Privacy and invasive technology
- Legislation

- All related to a degradation of trust
  - Trust Degrades over time
  - Trust provides value to information
  - Multi-faceted – experience, referral, observation, communicative

What is due diligence?

Such a measure of prudence, activity, or assiduity, as properly exercised by a reasonable and prudent man under the particular circumstances; not measured by any absolute standard, but depending on the relative facts of the case.

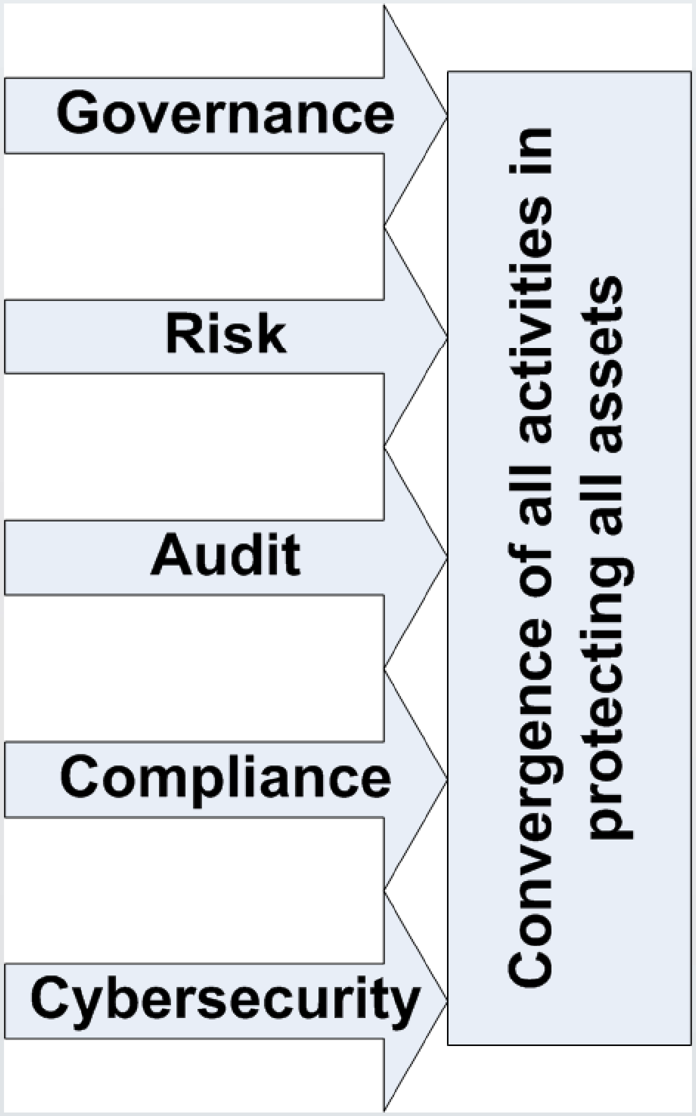
Governance

- Governance relates to decisions that define expectations, grant power, or verify performance.
- It consists either of a separate process or of a specific part of management or leadership processes.
- The structure, oversight and management processes which ensure the delivery of the expected benefits of technology in a controlled way to help enhance the long term sustainable success of the enterprise.

Enterprise Governance Architecture

- A business organization’s risk reduction style and methodology
- A business organization’s compliance and audit methodology
- Designed to protect the assets of an organization, where assets are defined as resources that provide value to the organization
- Program that facilitates systematic business change by continually aligning security and technology investments and projects with business mission needs

Convergence



Governance

Risk

Audit

Compliance

Cybersecurity

Convergence of all activities in protecting all assets

Think about all areas, including the business processes, when developing asset protection.

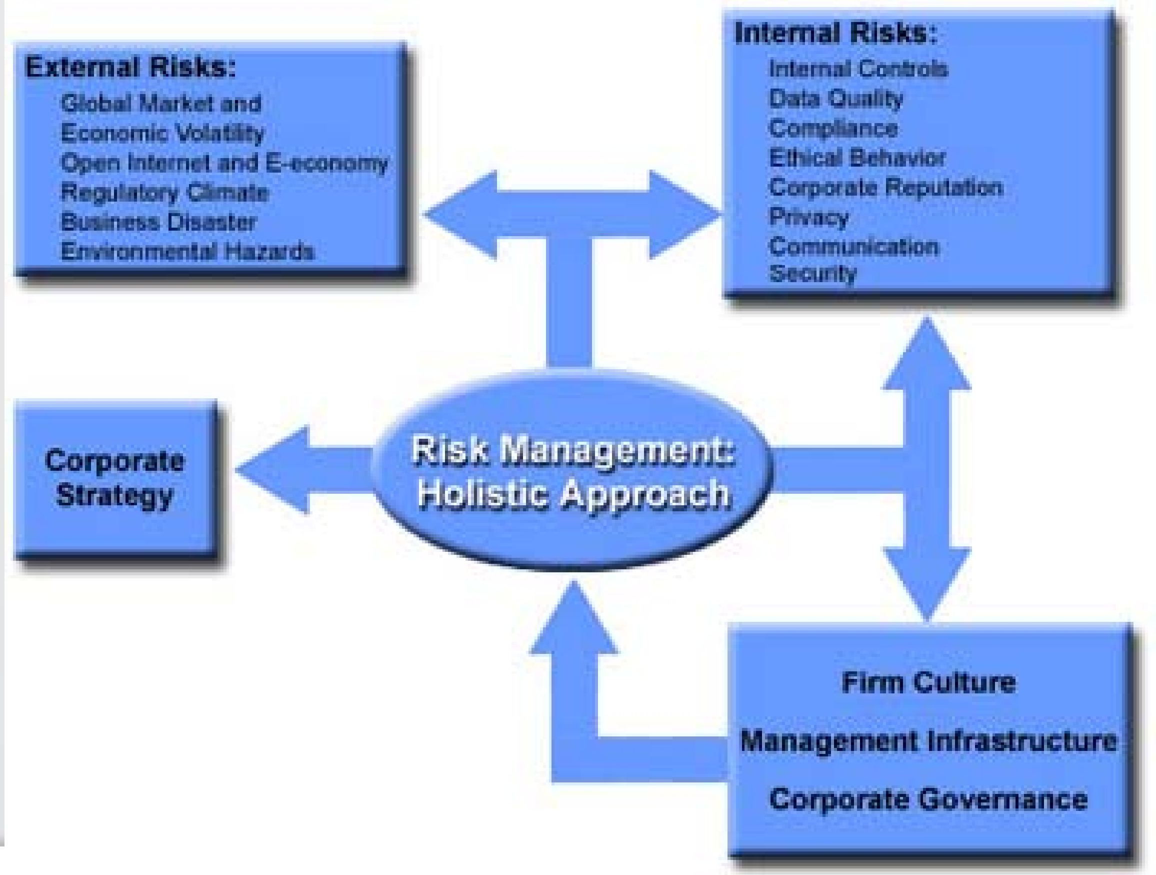
Saves time in the future.

Risk

- Risk management is the identification, assessment, and prioritization of risks (defined in ISO 31000 as the effect of uncertainty on objectives, whether positive or negative) followed by coordinated and economical application of resources to minimize, monitor, and control the probability and/or impact of unfortunate events or to maximize the realization of opportunities
- Risks can come from uncertainty in project failures (at any phase in design, development, production, or sustainment life-cycles), legal liabilities, credit risk, accidents, natural causes and disasters as well as deliberate attack from an adversary, or events of uncertain or unpredictable root-cause

Risk

- Risk management standards
  - ISO/IEC Guide 73:2009 (2009)
  - ISO/DIS 31000 (2009)
  - NIST SP800-30



External Risks:
Global Market and
Economic Volatility
Open Internet and E-economy
Regulatory Climate
Business Disaster
Environmental Hazards

Internal Risks:
Internal Controls
Data Quality
Compliance
Ethical Behavior
Corporate Reputation
Privacy
Communication
Security

Corporate Strategy

Risk Management: Holistic Approach

Firm Culture

Management Infrastructure

Corporate Governance

Audit

- Internally and externally supported
- An evaluation of a person, organization, system, process, enterprise, project or product
- Audits are performed to ascertain the validity and reliability of information; also to provide an assessment of a system's internal control. The goal of an audit is to express an opinion of the person / organization / system (etc.) in question, under evaluation based on work done on a test basis.

- Very similar to a basic checklist

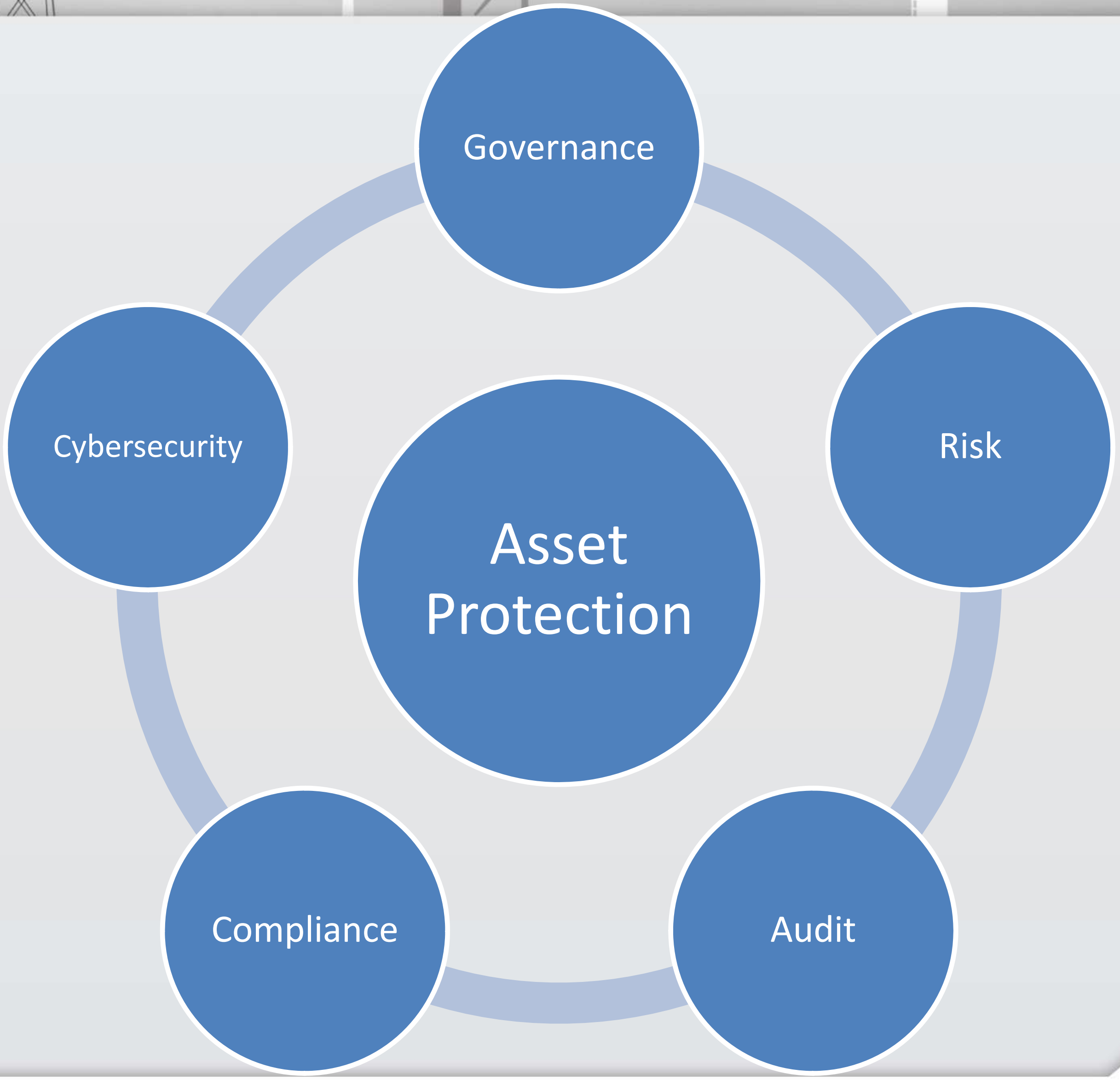
Compliance

- Internally and externally supported
- Conforming to a rule, such as a specification, policy, standard or law
- Regulatory compliance describes the goal that the utility aspires to in their efforts to ensure that personnel are aware of and take steps to comply with relevant laws and regulations
- Due to the increasing number of regulations and need for operational transparency, organizations are increasingly adopting the use of consolidated and harmonized sets of compliance controls. (This approach is used to ensure that all necessary governance requirements can be met without the unnecessary duplication of effort and activity from resources.)
- Very similar to a basic checklist

Cybersecurity

- Internally and externally supported
- A measure of system’s ability to resist unauthorized attempts at usage or behavior modification, while still providing service to legitimate users.
- The protection of data and systems
- Actions required to ensure freedom from danger and risk to the security of information in all its forms (electronic, physical), and the security of the systems and networks where information is stored, accessed, processed, and transmitted (DoD)

All Comes Down To Asset Protection



Governance

Risk

Audit

Compliance

Cybersecurity

Asset Protection

How do we govern assets?

- Administrative and managerial measures
- Physical
- Technical measures

How We Start (1)

- Identifying
  - Assets
  - Communications
  - Architecture
  - Industry policy, requirements, regulations
- Perform a risk assessment
  - Evaluating on the acceptable level of risk

How We Start (2)

- Compliance / Audit
  - – Controls
  - – Monitoring
  - – Ensure we meet the controls
- Cybersecurity
  - – Controls
  - – Monitoring
  - – Testing – penetration, vulnerability, assessments – how well we meeting the controls

Governance

- The protection of assets needs to have
  - Risk
  - Audit
  - Compliance and
  - Cybersecurity

- In-sourced and outsourced

5Ws and 1H

- "I keep six honest serving-men (They taught me all I knew); Their names are What and Why and When and How and Where and Who." – Rudyard Kipling
- For example
  - What - Value
  - What - Goal
  - How - Function
  - Degree - Metric
  - Where - Context
  - When - Time
  - Who - Responsible

- Value – What kind of a structure
- Goal – What is the goal
- Function – What does it do / have
- Metric – What does success mean
- Context – Where will the structure be
- Time – What is the urgency
- Responsibility – Who shall build / who shall benefit

Assessing Example (1)

- Requirement:
  - The SG system uniquely identifies and authenticates users (or processes acting on behalf of users). The SG system uses multifactor authentication for remote access to non-privileged accounts; local access to privileged accounts; and remote access to privileged accounts.

Assessing Example (2)

- The SG system uniquely identifies and authenticates users (or processes acting on behalf of users). The SG system uses multifactor authentication for remote access to non-privileged accounts; local access to privileged accounts; and remote access to privileged accounts.

- Risk
  - What SG systems require unique identification?
  - What information is processed on the SG system?
  - What risk does not having unique identification present?
  - As we willing to accept the risk?

Assessing Example (3)

- The SG system uniquely identifies and authenticates users (or processes acting on behalf of users). The SG system uses multifactor authentication for remote access to non-privileged accounts; local access to privileged accounts; and remote access to privileged accounts.

- Audit
  - List the ID on a SG system and determine if all the IDs unique and not shared?
  - What about remote access IDs?
  - What are the privileged accounts and are they unique and not shared
  - Show configuration file on access

Assessing Example (4)

- The SG system uniquely identifies and authenticates users (or processes acting on behalf of users). The SG system uses multifactor authentication for remote access to non-privileged accounts; local access to privileged accounts; and remote access to privileged accounts.

- Compliance
  - How does the system conform to the requirement?
  - Show configuration file(s)
  - List the IDs and show separation of duties and look at ID descriptions

Assessing Example (5)

- The SG system uniquely identifies and authenticates users (or processes acting on behalf of users). The SG system uses multifactor authentication for remote access to non-privileged accounts; local access to privileged accounts; and remote access to privileged accounts.

- Cybersecurity
  - Identify a SG system
  - Select a non-privileged id, privileged id, remote access id, local id
  - Attempt to use the IDs for proper and unauthorized use

Simplification

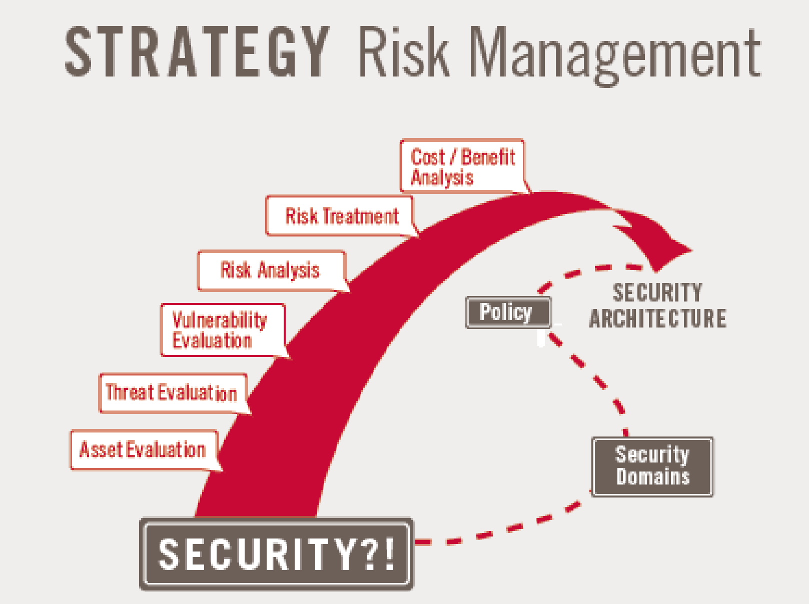
- What processes cross multiple assessments
- Reporting into the same part of the organization (separation from operational functions)
- Splitting assessments between in-sourced and outsourced engagements
- Keep current evidence of assessments
- Determine what best fit into the culture

Summary

- Discussed the merging of the risk, audit, compliance, security, and governance concepts
  - To get a complete picture of asset protection the organization needs all the pieces
- How to simplify the processes
- Why a utility needs risk, audit, compliance, security, and governance programs implemented

EnerNex Cyber Security Offerings

- Security Architecture and Policy Development
- Utility Automation Security
- NERC-CIP
- Hardware Embedded Security
- Security & Penetration Testing
- Vulnerability Analysis
- Risk Assessments
- Security Audit Development
- Regulatory Compliance
- Security Training



- *Clients:* Consumers Energy, U.S Department of Energy, Duke Energy, Florida Power & Light (FPL), Southern California Edison (SCE), Tennessee Valley Authority (TVA), TXU Energy

EnerNex

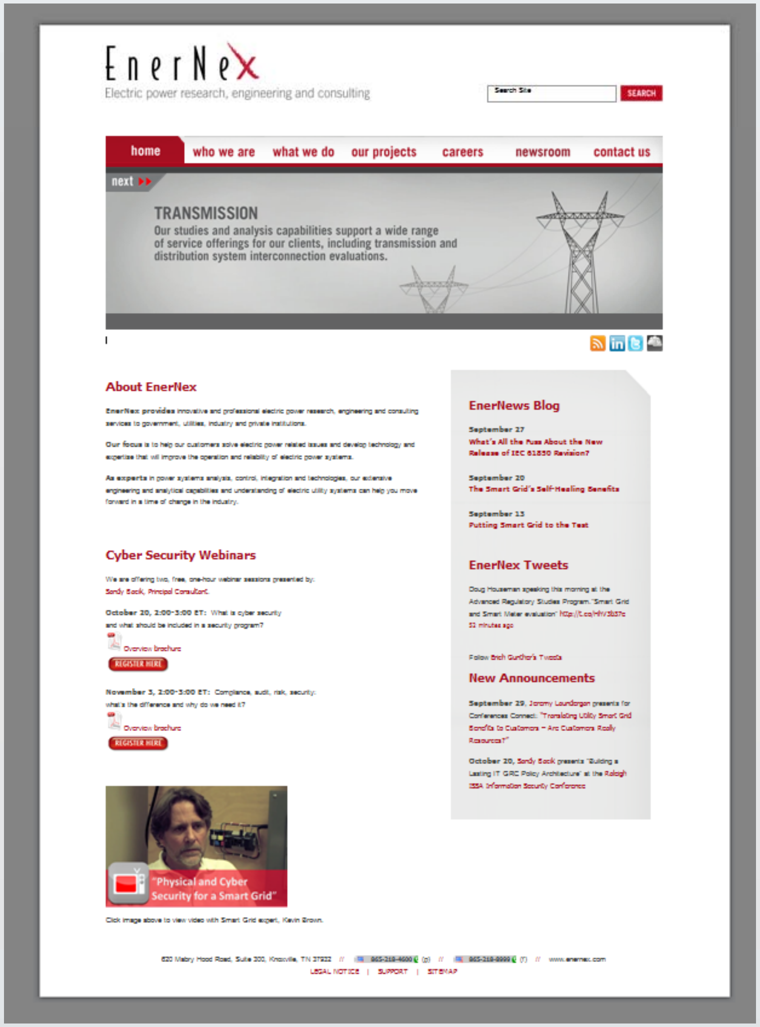
Thank you for attending

- Contact me: sandy.bacik@enernex.com
- Visit us on the web: www.enernex.com

Follow us on Twitter @ EnerNex

Connect with us on LinkedIn

Subscribe to the EnerNex blog



TRANSMISSION

Our studies and analysis capabilities support a wide range of service offerings for our clients, including transmission and distribution system interconnection evaluations.

About EnerNex

EnerNex provides innovative and professional electric power research, engineering and consulting services to government, utilities, industry and private institutions.

Our focus is to help our customers solve electric power related issues and develop technology and expertise that will improve the operation and reliability of electric power systems.

As experts in power systems analysis, control, integration and technologies, our extensive engineering and analytical capabilities and understanding of electric utility systems can help you move forward in a time of change in the industry.

Cyber Security Webinars

We are offering two, free, one-hour webinar sessions presented by:
Sandy Bacik, Principal Consultant.

October 20, 2:00-3:00 ET: What is cyber security and what should be included in a security program?

Overview brochure

REGISTER HERE

November 3, 2:00-3:00 ET: Compliance, audit, risk, security: what's the difference and why do we need it?

Overview brochure

REGISTER HERE

"Physical and Cyber Security for a Smart Grid"

Click image above to view video with Smart Grid expert, Kevin Brown.

EnerNews Blog

September 27
What's All the Fuss About the New Release of IEC 61850 Revision?

September 20
The Smart Grid's Self-Healing Benefits

September 13
Putting Smart Grid to the Test

EnerNex Tweets

Doug Houseman speaking this morning at the Advanced Regulatory Studies Program."Smart Grid and Smart Meter evaluation" http://t.co/HYV3b37c
51 minutes ago

Follow Erich Gunther's Tweets

New Announcements

September 29, Jeremy Lauderdgan presents for Conferences Connect: "Translating Utility Smart Grid Benefits to Customers – Are Customers Really Resources?"

October 20, Sandy Bacik presents "Building a Lasting IT GRC Policy Architecture" at the Raleigh ISSA Information Security Conference

620 Mabry Hood Road, Suite 300, Knoxville, TN 37932 // 865-218-4600 (p) // 865-218-8999 (f) // www.enernex.com
LEGAL NOTICE | SUPPORT | SITEMAP