Demystifying Data Governance and Security

2018 IT Partners Conference

MIT | Audit Division

Objectives of the Presentation

Through a discussion of data governance and security within the context of the MIT culture, this session will explore how effective data governance and security can facilitate the balance of compliance, privacy and security with the culture, spirit and goals of the Institute.

After this session, participants will be able to:

✪ Understand what data governance means at MIT and why it is important

✪ Identify techniques for implementing and managing a data governance program in your area

✪ Align resources and programs from across the Institute with the needs of your local area

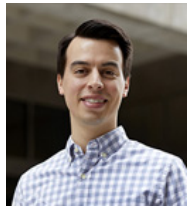✪ Understand how security fits into an overall governance program to enable the protection of your data

What do you want from today?

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Today's Presenters

John Dvorak,

Audit Services Manager

Carter Stubbs,

Senior IT Auditor

Bob Monteith,

Senior IT Auditor

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Who we are and what we do

- The MIT Audit Division delivers <u>audit and advisory services Institute-wide</u>, including compliance assessments and financial, operational, and information technology reviews and audits.

- We report functionally to the Risk and Audit Committee of the MIT Corporation and administratively to the Executive Vice President and Treasurer.

- We have 3 dedicated IT Audit team members.

- Past projects include audits of HR Data Security, Dropbox Administration, and SAP Transport as well as advising Institute Data Classification and Massachusetts Green High Performance Computing (MGHPCC) Information Security.

Administrative | Functional

EVP&T
Israel Ruiz

Risk & Audit Committee
MIT Corporation

Institute Auditor
Michael Moody

Lincoln Laboratory Audit Services
Martha Jane Gagnon

Campus Audit Services
Michael Bowers

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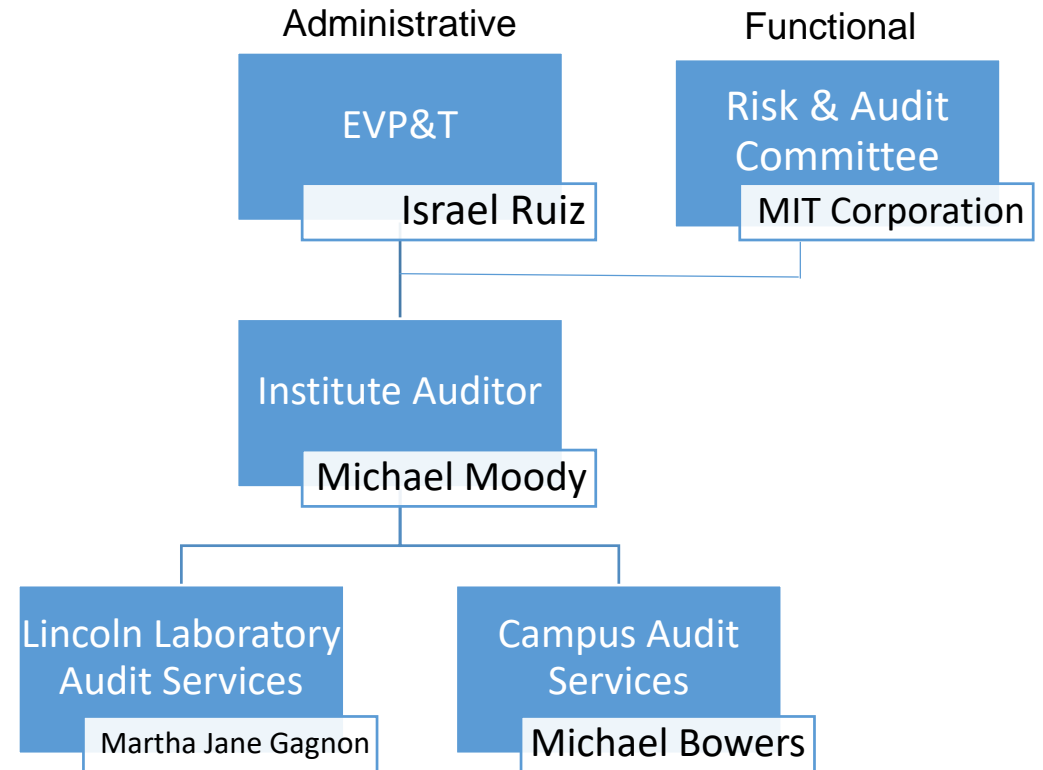
What is Data Governance?

- A mix of roles, guidelines, and technologies working together to maximize the benefits of Institute data

- Establishes consistent data quality, improves data integrity, controls data access and addresses data security and retention

- Aligns with the unique priorities and needs of the local unit

- Promotes awareness of tools and techniques for managing and security Institute data

- An ongoing process and not a one-time project

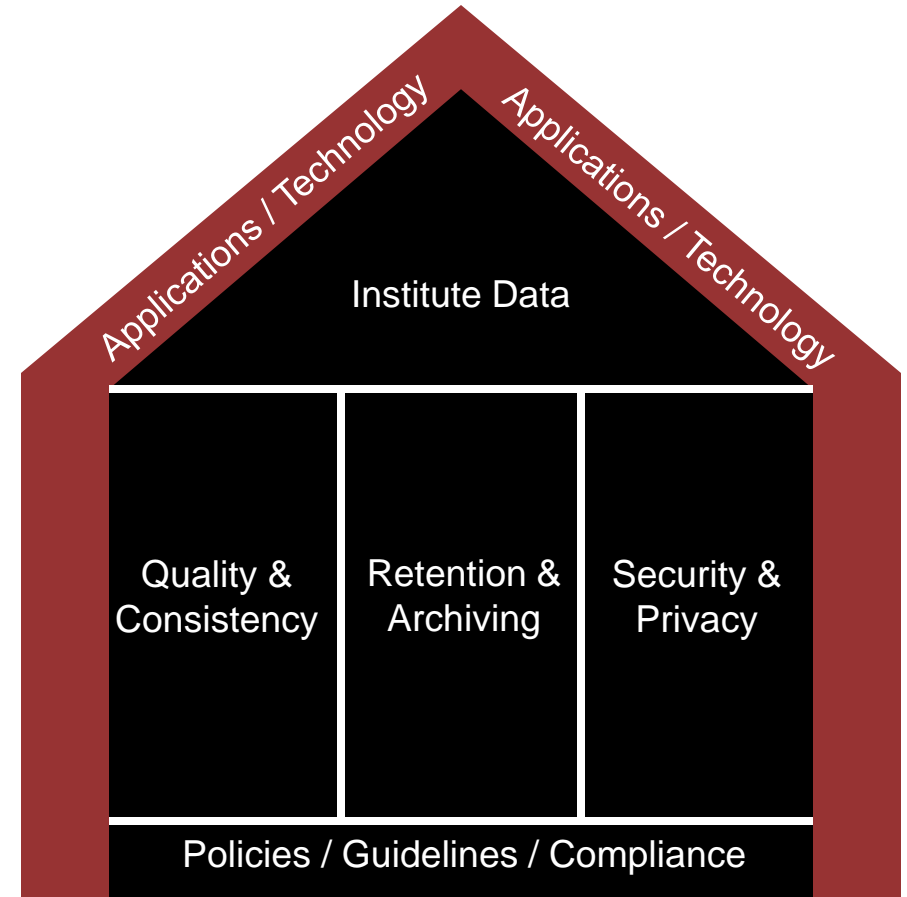**Ⅲīi** | **Audit Division**

Why does it matter?

- DLCs and other units at MIT have a diverse set of Institute data across research, academic, and administrative realms.

- Data breaches in Higher Education are on the rise

- Each area deals with specific regulatory and compliance requirements as well as the need to store and secure various types of data.

- Data governance structures can provide guidance and standards for expanding access, improving quality, maintaining consistency, ensuring security, and improving information management.

GOVERNANCE IN ACTION

Well, technically Anarchy is a form of governance...

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www.ComicStripGenerator.com

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Data Governance Frameworks

- Frameworks help you think through what data you have, where you have it, and how to protect it

- Gives flexibility for adapting to the specific needs of the local unit

- Provides the structure to enable the ongoing management of the program

Applications / Technology

Applications / Technology

Institute Data

Quality & Consistency	Retention & Archiving	Security & Privacy

Policies / Guidelines / Compliance

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How to implement effective governance?

- Discover – What do we have and where is it located?
  - Data discovery
  - Data inventories
  - Data profiling
  - Location assessment

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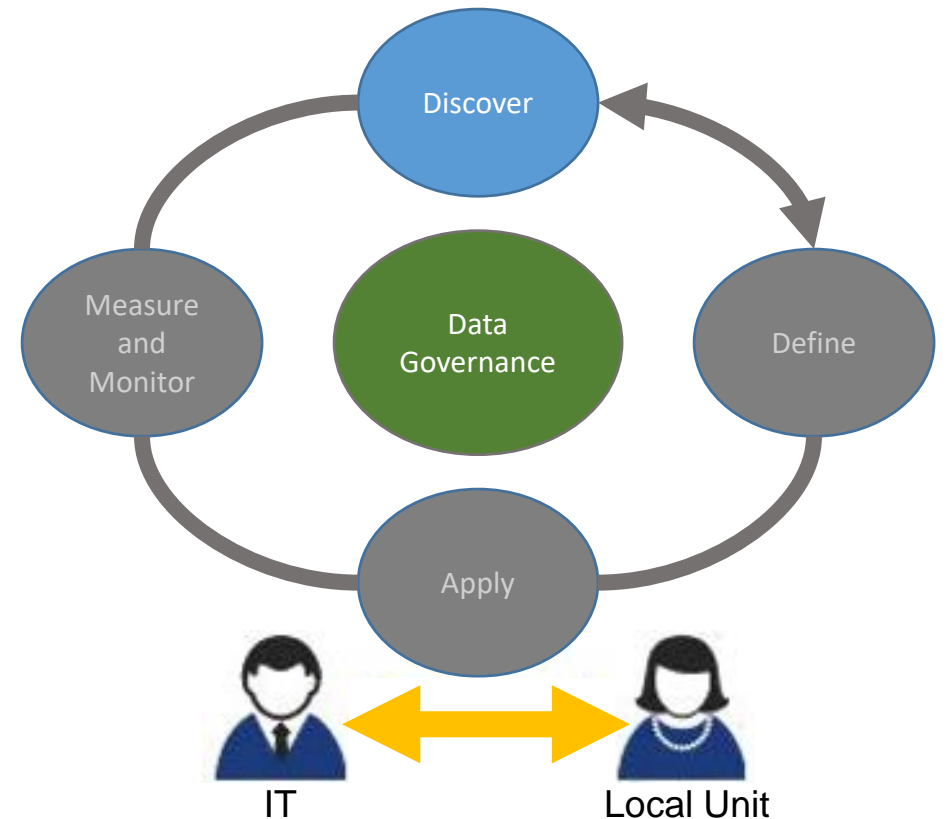
How to implement effective governance?

- <u>Define</u> – What type of data do we have and who owns/controls it?
  - Data classification
  - Data owners / custodians
  - Compliance requirements
 - Applicable policies
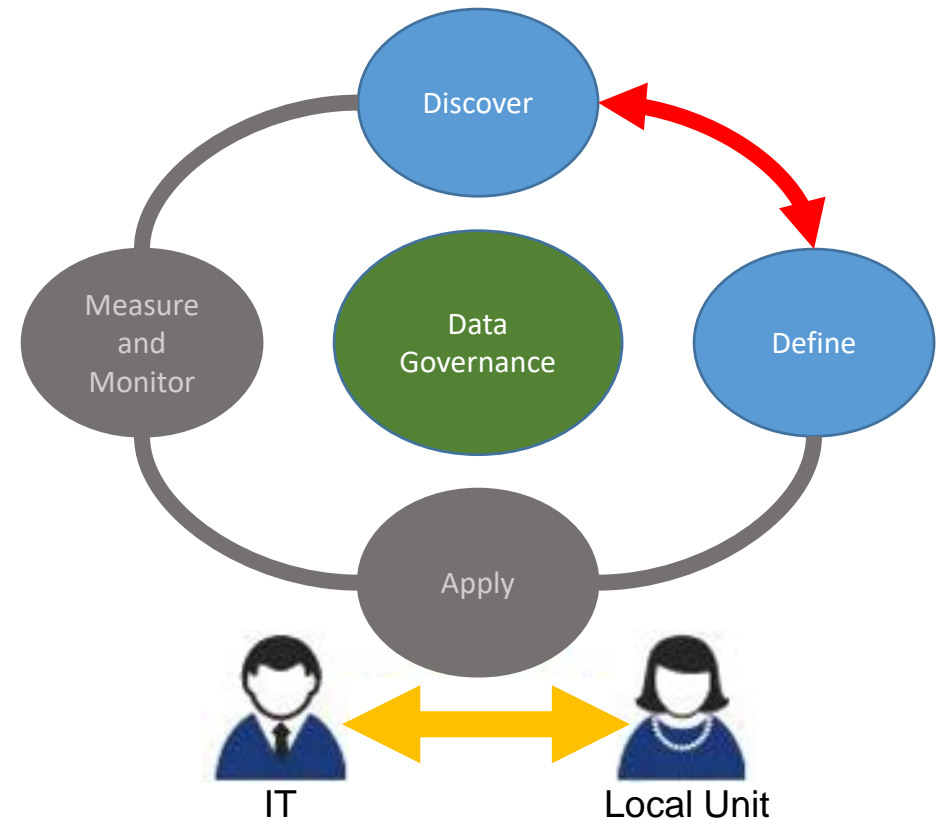
How to implement effective governance?

- <u>Apply</u> – How do we facilitate the intended use and security of the data?
  - Security techniques – Defense in Depth
  - Redundancy and availability
  - Relevant workflows
  - Local Unit and IT collaboration
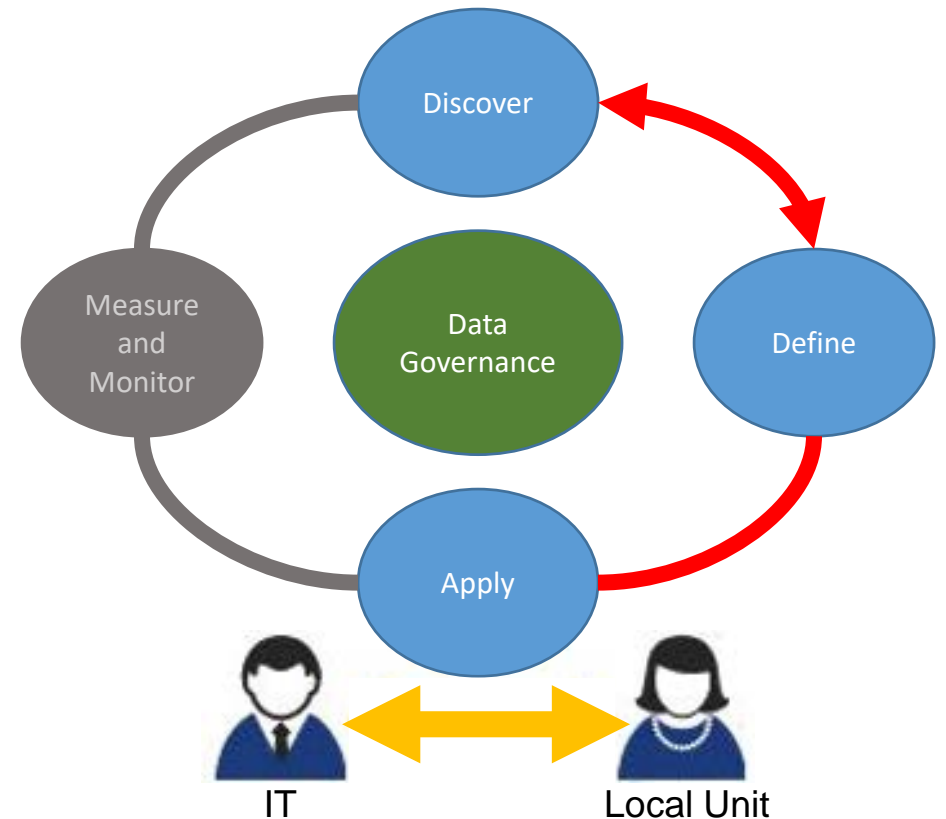
Defense in Depth

- <u>Apply</u> – How do we think about the security of the data?

- <u>Defence in depth</u> - add security layers in order to increase the security posture.

- <u>Benefit</u> - If an attack causes one security mechanism to fail, the other measures are in place to further deter and even prevent an attack.

Perimeter
Network
Host
Application
Data

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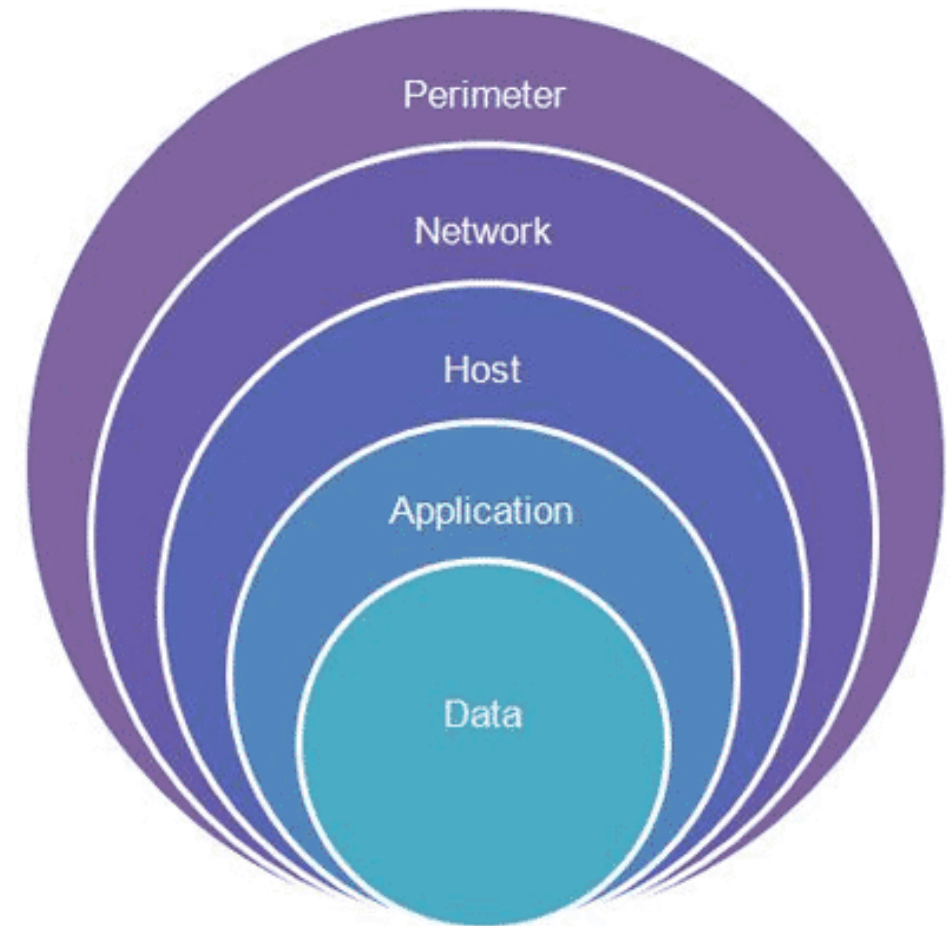
How to implement effective governance?

- <u>**Measure and Monitor**</u> – How do we know our program is working?
  - Proactive monitoring and review
  - Periodic self-audits
  - Independent audits
  - User feedback
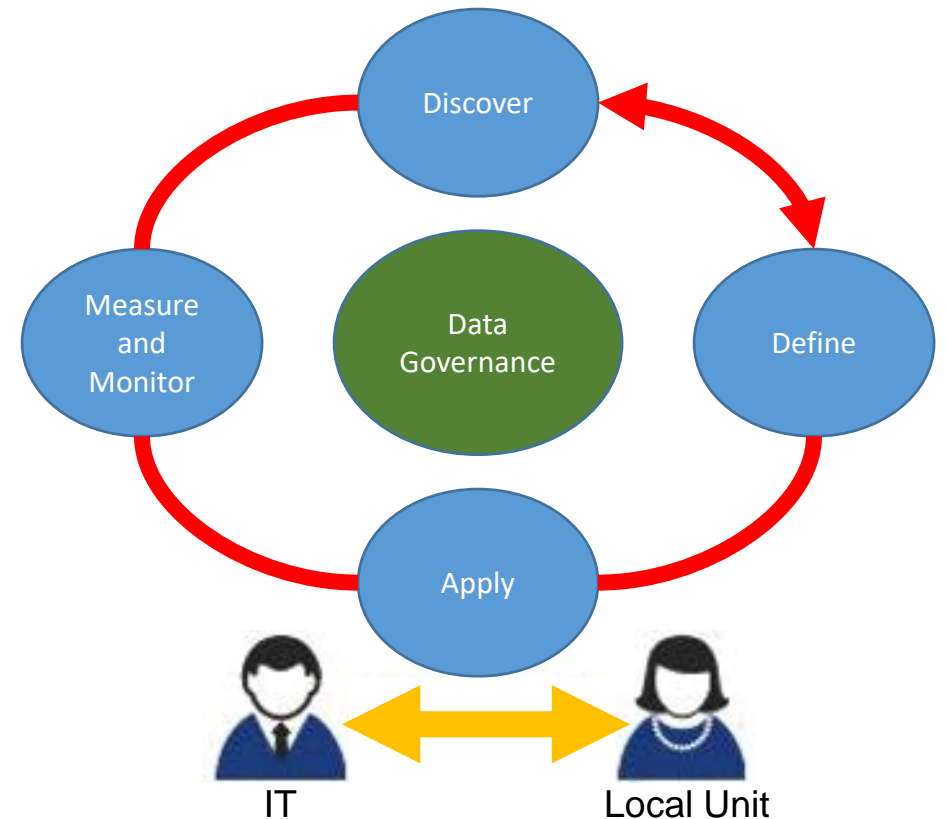
So what now?

- Consider ideas for how a data governance program might work in your area and what unique challenges you may face

- Visit infoprotect.mit.edu and ist.mit.edu/secure

- Connect with other IT Partners across the Institute
  - Consortium on Financing Higher Education (COFHE)
  - Sloan Technology Services (STS)

- Consult with the MIT Audit Division

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Takeaways

- Data governance is a way of thinking about what you have, what it means to you, and how you protect it

- Data governance drives the tools and techniques that can be implemented to facilitate the use and protection of critical data

- Data governance programs can look different depending on the needs of the local area

- Security mechanisms protect the data in your environment that you care the most about

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For more information

http://audit.mit.edu

Our Services

The Audit Division evaluates MIT's academic, research, and administrative processes and offers recommendations for improvement. We work for the MIT Corporation Risk and Audit Committee and with managers on campus and at Lincoln Laboratory. We perform audits and provide advisory services.

Learn more about our services

Our Promise

You're in good hands with the MIT Audit Division. Like you, we work for MIT and share your commitment to its mission.

As internal auditors, our objectives are different from external auditors that provide oversight to federal agencies. We recommend process improvements and encourage your efforts to fine-tune your operations.

Learn more about us

http://infoprotect.mit.edu

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Thank you

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