MIS: Special topics

Professor Courtney Minich

Hello

你好

Welcome to MIS 3504: Digital Design & Innovation

- This is a 5 (five) day course in which you will prepare for the ITACS program of Temple University.

- This class will consistent of:
  - Lectures
  - Groupwork
  - Quizzes
  - Final Exam
  - Participation

Primary Course Objectives

- Prepare you for the role of an IT auditor by understanding how business processes drive systems in organizations

- Enable you to identify the business processes, data elements, and business rules that are involved in any business activity

- Enable you to identify process controls and understand how and why they are used

How this course is graded

- The final grade of this course is: HIGH PASS, PASS, or FAIL.

- Grades are calculated as below:

Item	Percentage
Quizzes (2)	40%
Final Exam	25%
Team Project	25%
Participation	10%

Quizzes- 20% each = 40%

- All quizzes are 30 minutes long

- Quizzes will be given first thing each morning

- Cover all reading & material in class the previous day

- Closed notes/book

- Individual only- do not share work with classmate

- Graded between 0 & 100 %

- Combine grade= 40%

Final exam = 25%

- Comprehensive final exam

- Friday PM

Project= 25% each

20%= group grade

5%= individual grade

Introduction takes place on day 1

You will have group work every day in the afternoon session

Presentation will be on Day 5 in the morning session

Class Expectations

1. **Come prepared to discuss & participate topics in class**

2. **Class contribution**

   1. Please say your name for the first few days of class

   2. Lack of preparation will affect your grade

3. **Classroom etiquette**

   1. Please be present in class

   2. Be on time

   3. Ask questions- this is how you learn

As a business analyst or an IT auditor, we must have gained TRUST with our colleagues.

How does someone gain trust?

In groups of 4, please spend the next 15 minutes learning about your classmate. Ask the following questions to each person:

1) What is their name?
2) Where are they from?
3) Have they ever traveled internationally?
4) When is a time that they were very proud?

Let's talk through some commonalities:

1) What is their name?
2) Where are they from?
3) Have they ever traveled internationally?
4) When is a time that they were very proud?

Let's learn the same about Professor Minich.

1) What is their name?
2) Where are they from?
3) Have they ever traveled internationally?
4) When is a time that they were very proud?

What did we learn about each other? What do we have in common?

We come from many different places and experiences. (similarity)

We all love China! (commonality)

We all know about Temple University (commonality)

This activity expresses traits that both business analysts and IT auditors have.

• Curiosity

• They ask questions

• They create patterns

• Let's understand more about the differences and similarities between both.

Everyone please take out a piece of paper or use your tablet. I want you to spend 5 minutes and draw a building.

1. **What did you draw?**

   What is the purpose of your building?
   Is it big or small?
   What color would it be?
   Where is your building?

This is my building. Is it similar to what you drew? Why/why not?

Business Analysts

Business analysts help uncover facts.

They are specialists in business analysis.

Business analysis: The set of tasks and techniques used to work as a liaison among stakeholders in order to understand the structure, policies, and operations of an organization and recommend solutions that enable the organization to achieve its goals.

Business analysis involves:

- **Identification** of business problems and opportunities
- **Elicitation** of needs and constraints from stakeholders
- **Analysis** of stakeholder needs to define requirements for a solution
- **Assessment** and validation of potential and actual solutions
- **Management** of the "product" or requirements scope

Analysis

- The separating of any material or abstract entity into the constituent elements

Analysis

Break things apart.

Synthesis

- The combining of the constituent elements of separate materials or abstract entities into a single or unified entity

Synthesis

Put things together.

How does a business analyst get involved?

- Business analysts are experts in business analysis. They help an organization:
  - Identify problems and analyze why the problems exist
  - Gather requirements
  - Recommend potential solutions
  - Communicate with stakeholders
  - Support the elements of a project
  - Look at data to analyze patterns

What skills does a business analyst need?

- Business analysts must have a "toolbox" of skills in order to be successful:
  - Analytical thinking
  - Communication skills
  - Problem-solving skills
  - Business acumen and understanding
  - Technology skills
  - Organizational skills
  - Interpersonal skills

Where does a business analyst sit in an organization?

- Business analysts are normally in:
  - Project Management Office (PMO)
  - Technology organizations
  - Data organizations

Let's take one step back to a project.

- What is a project?
  - A project is a temporary endeavor
  - It has a specific start time and end time
  - It is started to create a unique product or service which brings a beneficial (or positive) change or value to a company.

Key differences of common terms.

- **<u>Project</u>**
  - temporary endeavor
  - It has a specific start time and end time
  - It is started to create a unique product or service which brings a beneficial (or positive) change or value to a company.

- **<u>Product</u>**
  - A good, a service, or a platform that is created to meet consumer and or business needs.
  - It goes not end; it has a lifecycle.

- **<u>Operational Activities</u>**
  - Work that is done to sustain the business.
  - Will have some sort of cycle and regular timing of being completed.

Examples:

- **<u>Project</u>**
  - Launching a new system in an auditing department.

- **<u>Product</u>**
  - The platform that bookkeeping software is used on.

- **<u>Operational Activities</u>**
  - Financial reconciliation at quarter's end.

Examples:

- **Project**
  - Launching a new system in an auditing department.

- **Product**
  - The platform that bookkeeping software is used on.

- **Operational Activities**
  - Financial reconciliation at quarter's end.

For projects, there is a lifecycle that is followed.

IT Auditors come in toward the end of the project, as it transitions to operational activities.

Initiation → Planning → Execution → Monitoring & Control → Closure or Completion

Business analysts' job is "front" heavy; they are the ones who help in the initial stages of the project.

Within a project, there are specific roles

Role	Definition
Stakeholder	Persons and organizations actively involved in the project or whose interests may be positively or negatively affected by the execution or completion of the project.
Project Sponsor	The "boss" of the project. The ultimate decision maker.
Project Manager	The leader of the project team.
Business analyst	A member of the project team & the analyst/expert.
Subject Matter Expert	A person who is an expert in the situation related to the project.

Sponsor

- The project sponsor has a very important job.

- **Responsibilities**:
  - Secured funding and sets specific objectives for that funding.
  - Sponsor determines success/failure of the project
  - Do you know what motivates your sponsor, their personal biases, their areas of expertise and personal experiences?
  - Sponsors remove barriers to the success of the project.
  - Determines the success or failure of the project

- How do you communicate with the sponsor?
  - Brief with specific information and let them know the most important information needed.

Business Analyst

- As a business analyst, **none** of the project roles work for you. You are their partner.

- How. do you get them to do what you need them to do?
  - **You must earn their trust & respect.**

Managing importance in your project

- You must understand your stakeholders
  - **This includes:**
    - **Motives**
    - **Personal biases**
    - **Expertise**
    - **Experience**

Documentation for your role

- As a business analyst, the most important document for a business analyst to understand is called...

The Project Scope Document

Project Scope Document

- This is created before the project team assembles

  - Before you have been added to the team

- The project scope includes the work that needs to be done (and only that work) to deliver the final project to completion.

  - The Project Manager does all of the forward-facing parts.

Project Scope Document includes:

- Statement of purpose (problem description)

- Objectives

- Problems & Opportunities

- Risks

- Assumptions & Constraints

- Stakeholder Analysis

- Glossary of common terms

Project Scope Document is the basis to avoid scope creep.

Scope creep is when a stakeholder asks for the project to include more deliverables than what is originally agreed to.

Objectives

- Part of the project scope document

- Project objectives are the business reasons for doing the project

- Examples include:
  - Company finances
  - Performance of a particular process
  - Company's position in the market

They are very clear and concise; there should be no more than 6 for an entire project.

Objective Structure

- When writing objectives, there is a framework that must be followed for successful objectives.

- SMART
  - **S**= Specific
  - **M**=Measurable
  - **A**=Actionable
  - **R**=Realistic
  - **T**= Time-bound

Let's write an example.

- **S**= Specific

- **M**=Measurable

- **A**=Actionable

- **R**=Realistic

- **T**= Time-bound

- Write two objectives about completing this class.

IT Auditing

- IT audit: a systematic evaluation of an organization's information technology infrastructure, policies, and operations to ensure they are secure, efficient, and compliance with relevant regulations and business objectives.

- There are two types of IT audits:

  - **IT Compliance audit:** Confirming that the company or organization is following all rules and regulations.

  - **Control Assessment:** Confirming that all internal processes and procedures are able to prevent and/or minimize external risk.

IT Auditors

Individual responsible for analyzing and assessing a company's technological infrastructure to ensure processes and systems are running accurately and efficiently.

IT Auditing Skills

- Technical knowledge

- Business acumen

- Communication skills

- Risk assessment capabilities

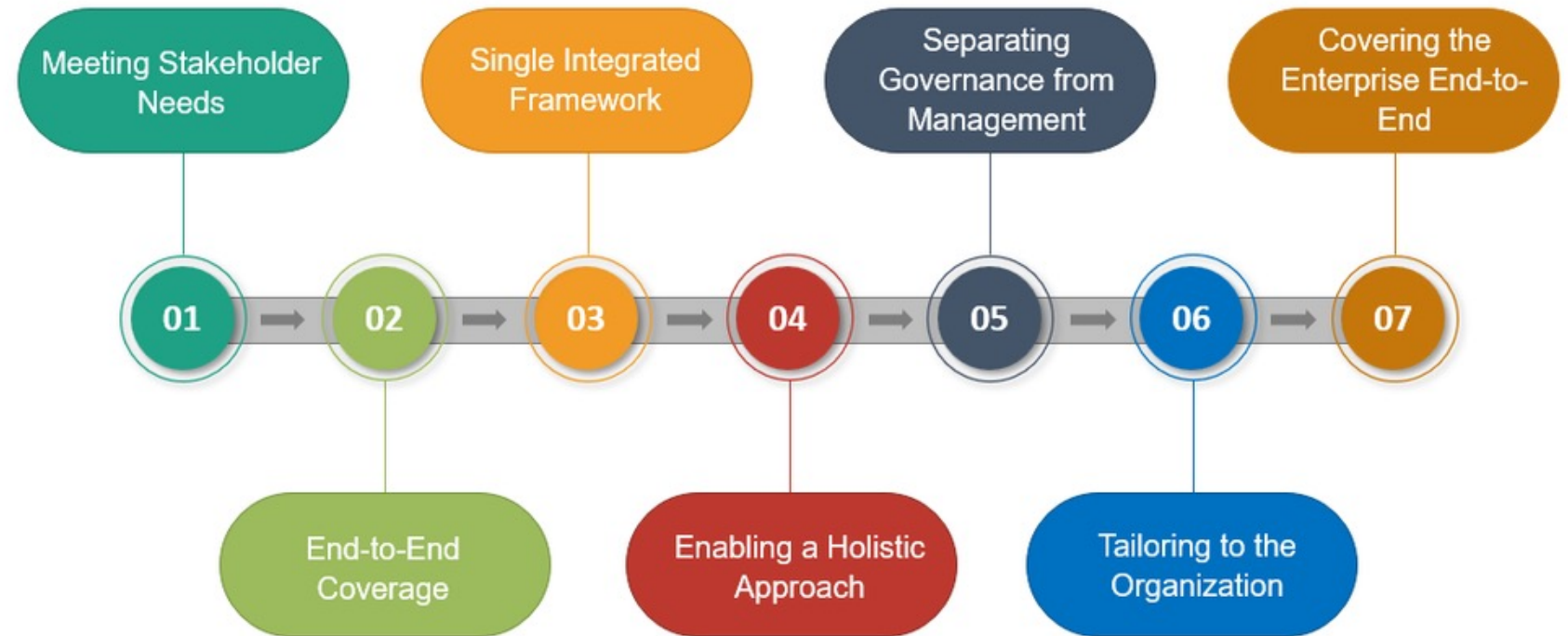- Accounting & forensic skills

IT Audit Process

Planning & Prep → Risk Assessment → Control Evaluation → Compliance Review → Vulnerability testing → Reporting

IT Auditing & Governance

- IT Auditing & Governance have multiple frameworks that can be considered throughout an organization
  - An organization, company, type of organization, all go into consideration on which framework is applied and successful
  - Common frameworks include:
    - COBIT
    - COSO
    - ISO

COBIT

- **C**ontrol **O**bjectives for **I**nformation and **R**elated **T**echnologies

- COBIT 5.0 was released in 2012.

Key Concepts of COBIT 5

01 Meeting Stakeholder Needs

02 End-to-End Coverage

03 Single Integrated Framework

04 Enabling a Holistic Approach

05 Separating Governance from Management

06 Tailoring to the Organization

07 Covering the Enterprise End-to-End

COBIT

- Five core principles:
  1. Meeting stakeholder needs
  2. Covering the enterprise end-to-end
  3. Applying a single integrated framework
  4. Enabling a holistic approach
  5. Separating governance from management
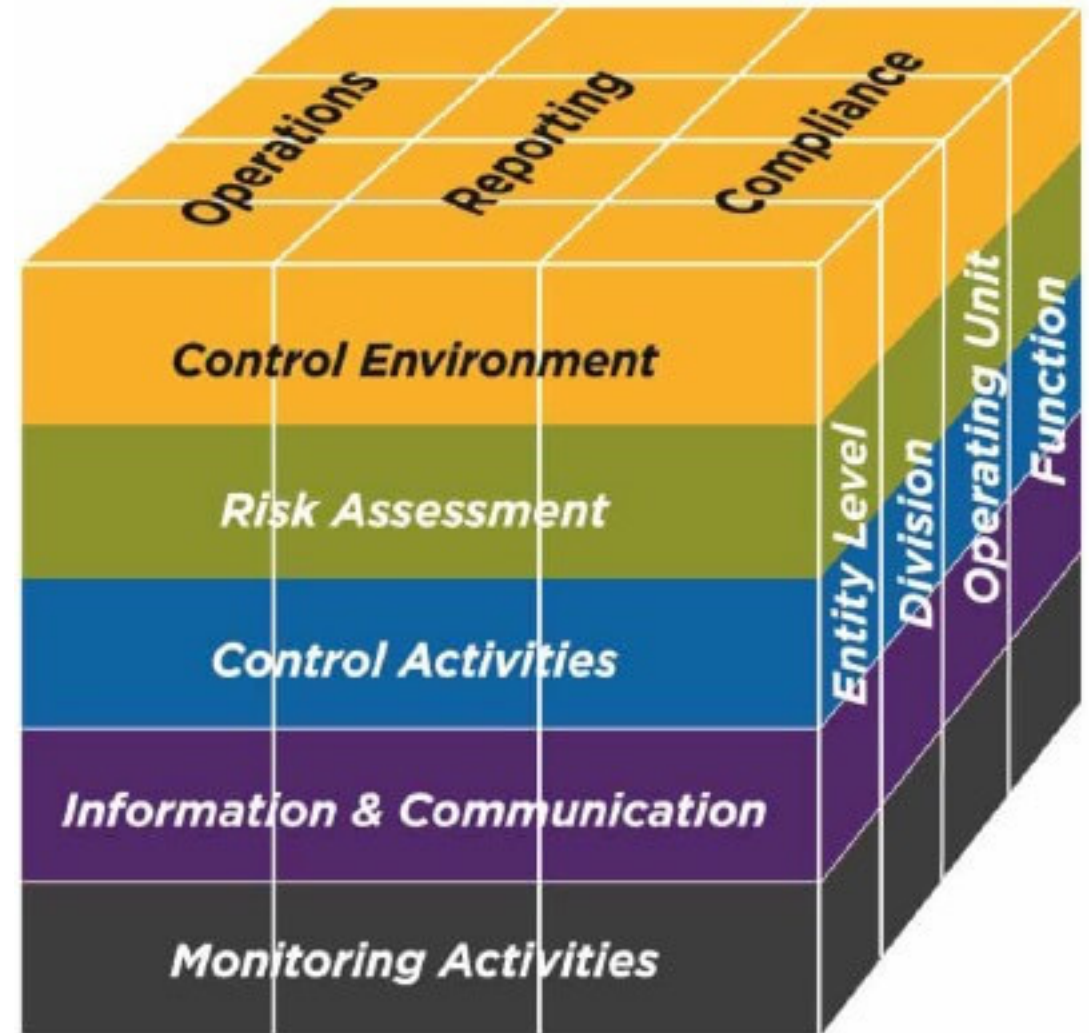

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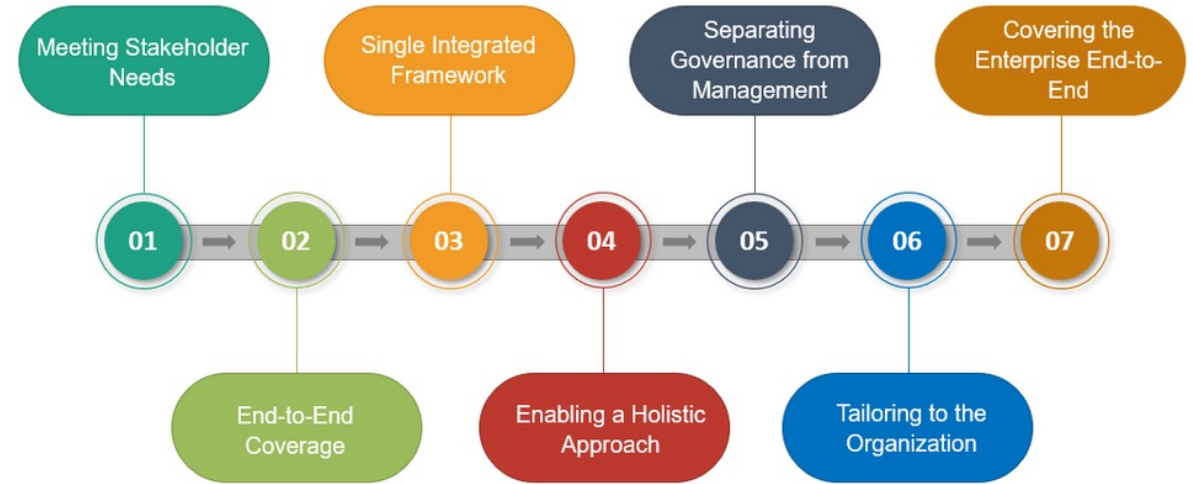
COSO

Committee of Sponsoring Organizations
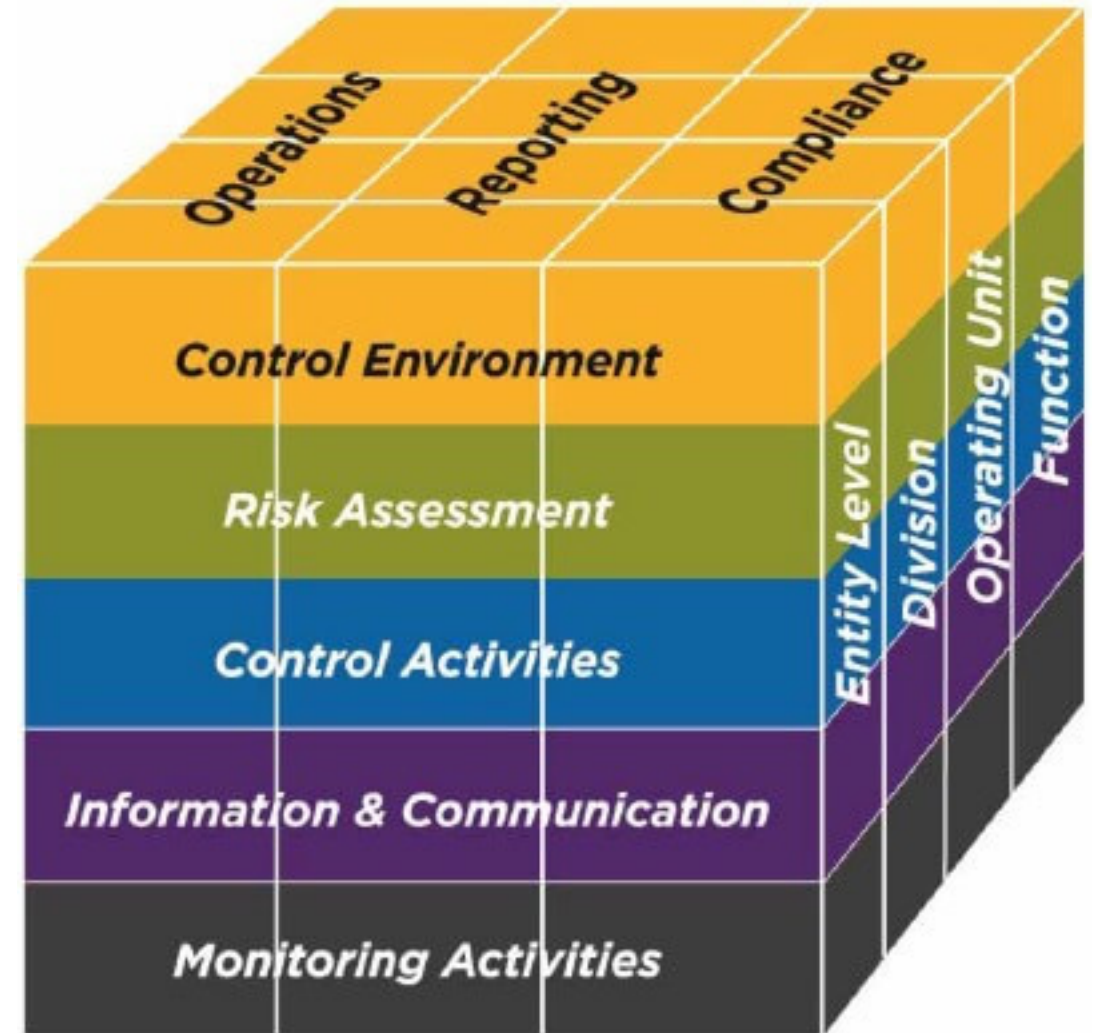
COSO

COSO compromised 5 interrelated components:

1. Risk Assessment

2. Control Activities

3. Information & Communication

4. Control Environment
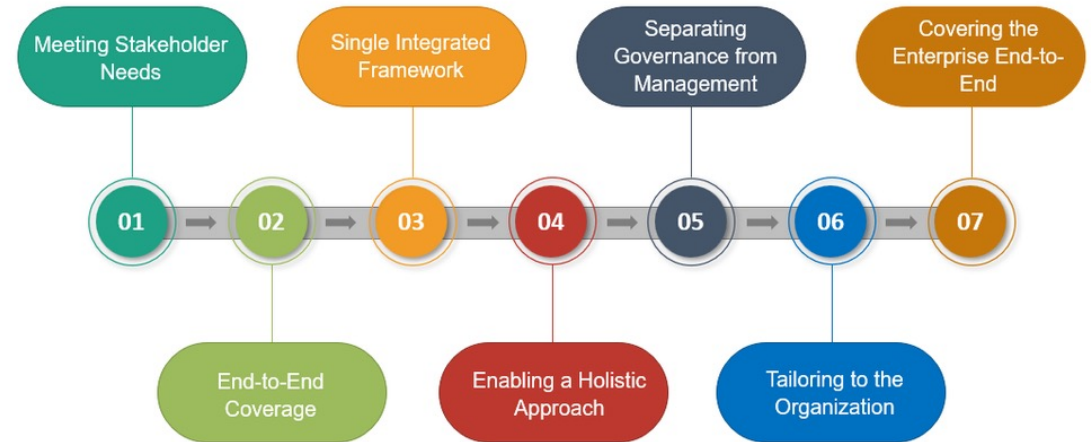
5. Monitoring Activities

Main differences

- COBIT and COSO are both IT frameworks

- COSO covers broad enterprise risk, COBIT is more technology focused.

- For this class and the group project, you will use **COSO** framework.

One is linear in process, the other is not.
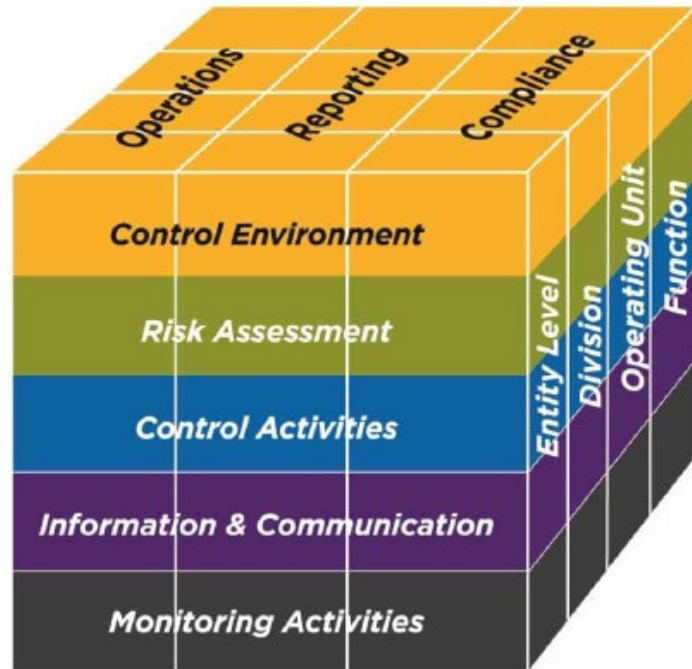
Benefits of the frameworks

- COSO:

- **Enhanced internal control:** It systematically creates and maintains internal control systems that optimize operations and asset protection.

- **Improved risk management:** COSO aids in identifying, assessing, and mitigating risks, leading to informed risk-taking.

- **Better compliance:** Regulatory and compliance requirements are better met, reducing legal risks.

- **Increased transparency:** The framework promotes transparent reporting, fostering stakeholder trust.

- COBIT:

- **Enhanced IT governance**: It provides a structured framework for aligning IT strategies with organizational goals, enhancing decision-making.

- **Improved risk management**: COBIT assists in identifying, assessing, and managing IT-related risks effectively.

- **Optimized resource utilization**: Organizations can better allocate and utilize IT resources to achieve business objectives.

- **Standardized IT processes**: COBIT promotes uniform processes and practices across the organization's IT landscape.

Group Project

- You have 10 minutes to select your group mates.

- This will be your group for the rest of class. Starting tomorrow, you will sit together.

- Once you have selected your group, please come up with your group name.

Team Introductions

Tell the class your team name, who is in your team, and why you choose your name. (One person from each group).

Group Project

- You will begin working with your team on a final deliverable worth 25% of your grade.

- This project will have daily deliverables, and a final due on the last day of class in the AM session.

Group Project

- The final project deliverables include:
  - A comprehensive PowerPoint deck that will be presented in class of your team's thought process and recommendation.
    - It will need to include:
      - Swim lane diagram of current process
      - Swim lane diagram of proposed process
      - ERD of the data involved in the process
      - ERD of the data involved in the proposed solution
      - List of business rules for the process
      - List of control objectives and what controls are recommended
      - Presentation is no more than 10 slides of content including all of the above

Group Project deliverables

- Each day from day 1-4, I will give you time in class to work on your group project and your final deliverables. You should use this time appropriately to ensure your work is comprehensive and well done.

- All final deliverables must be emailed to professor Minich by 9AM on Friday, 25-July