Professional Practice in Artificial Systems

Lecture 1

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Professional Practice in Artificial Systems

- Professional practice in artificial systems refers to the ethical and responsible use of artificial intelligence (AI) and other automated systems in various industries and fields.
- Here are some of the key practices that professionals should follow when working with artificial systems:
  - **Transparency:** Professionals should be transparent about how AI and other automated systems are being used, what data is being used to train them, and how the decisions are being made.
  - **Accountability:** There should be accountability for the decisions made by AI and automated systems, and individuals or organizations should be held responsible for any negative consequences that arise from their use.
  - **Fairness:** Professionals should ensure that AI and automated systems are not biased against particular individuals or groups based on characteristics such as race, gender, or age.
  - **Privacy and security:** Professionals should ensure that AI and automated systems are designed to protect the privacy and security of personal data.

key practices that professionals should follow

- **Human oversight:** AI and automated systems should be designed with human oversight in mind, so that humans can intervene when necessary and ensure that the systems are functioning as intended.
- **Continuous learning and improvement:** Professionals should ensure that AI and automated systems are constantly learning and improving, and that they are able to adapt to changing circumstances.
- **Collaboration and interdisciplinary approach:** Professionals should work collaboratively and involve experts from different fields to ensure that AI and automated systems are used responsibly and effectively.

Overall, professional practice in artificial systems requires a commitment to ethical and responsible use of technology, and a willingness to continually assess and improve AI and automated systems to ensure that they are serving their intended purpose without causing harm.

Building Procurement Process

- Building procurement is the process of acquiring goods and services required for the design, construction, and operation of a building. In the context of professional practice in artificial systems, building procurement should involve the responsible and ethical use of AI and other automated systems. Here are some key considerations to keep in mind when incorporating AI into building procurement:
  - Identify the need for AI: Before incorporating AI into building procurement, it's important to identify the specific needs and goals that AI can help to achieve. This may involve identifying areas where AI can improve efficiency, accuracy, or safety.
  - Consider ethical implications: When using AI in building procurement, it's important to consider the ethical implications of its use. This may involve assessing the impact of AI on job roles, privacy, and data security.
  - Develop a procurement strategy: A procurement strategy should be developed that outlines the requirements for the AI system, including the functionality, performance, and data requirements.
  - Choose the right supplier: When selecting a supplier for an AI system, it's important to consider their experience, expertise, and reputation. The supplier should be able to demonstrate their ability to deliver a system that meets the requirements outlined in the procurement strategy.
  - Manage the implementation: The implementation of an AI system should be managed carefully, with appropriate resources allocated for testing, training, and evaluation. It's important to ensure that the system is functioning as intended and is delivering the expected benefits.
  - Monitor and evaluate: Once an AI system has been implemented, it's important to monitor and evaluate its performance over time. This may involve collecting data on its use and performance and using this data to make improvements or adjustments as needed.
- In summary, building procurement in the context of professional practice in artificial systems requires a thoughtful and strategic approach, with a focus on ethical considerations, supplier selection, implementation management, and ongoing monitoring and evaluation.

Practice and project management

- Practice management and project management are critical components of the built environment professions, which encompass a range of fields related to the design, construction, and operation of buildings and infrastructure. Here are some ways that we can examine practice management and project management in the built environment professions:
  - Reviewing industry standards and best practices.
  - Conducting case studies.
  - Analyzing project outcomes.
  - Assessing project management tools and techniques.
  - Surveying professionals and stakeholders.

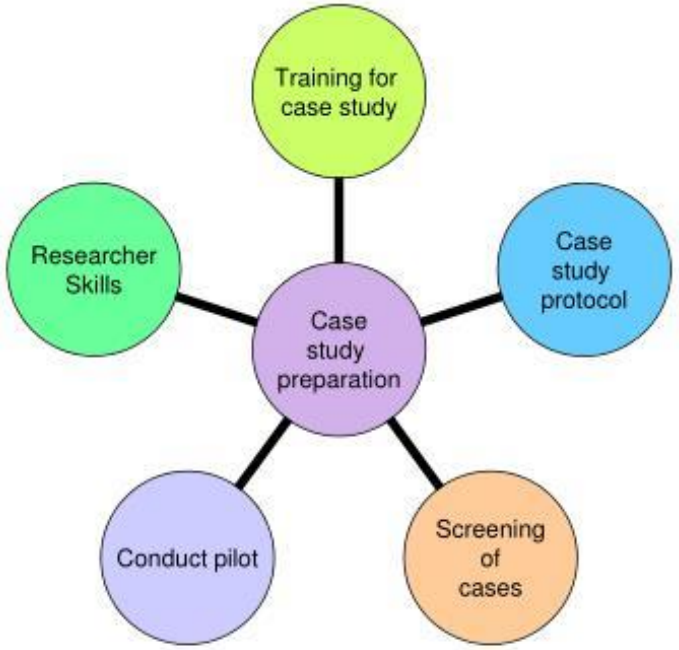
Reviewing industry standards and best practices:

- Reviewing industry standards and best practices: One way to examine practice and project management in the built environment professions is to review industry standards and best practices. This may involve looking at standards set by professional organizations or government agencies, as well as best practices developed by leading firms in the industry.

Conducting case studies

- Case studies can be a valuable tool for examining practice and project management in the built environment professions. By examining real-world examples of successful projects, we can identify the key factors that contributed to their success and apply those lessons to future projects.

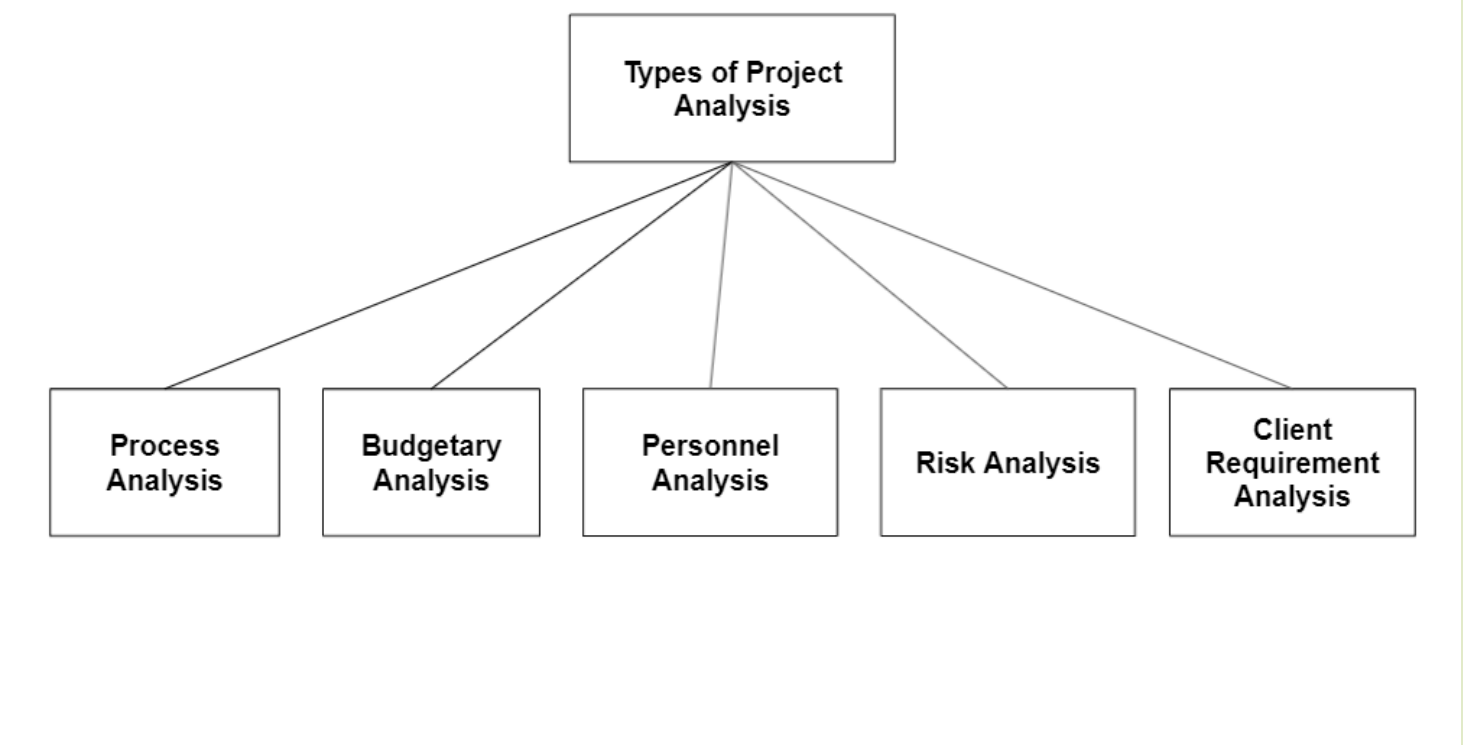
Prepare for conducting the case study



YIN, R.K., 2003. Case Study Research: Design and Methods. . Thousand Oaks, California: SAGE Publications, 3rd edition. Applied Social Research method series. Volume 5.

Analyzing project outcomes:

- Another way to examine practice and project management in the built environment professions is to analyze project outcomes. This may involve reviewing data on project cost, schedule, and quality, as well as stakeholder feedback and other performance metrics.



Assessing project management tools and techniques:

- The built environment professions rely on a range of project management tools and techniques, such as building information modeling (BIM), lean construction, and integrated project delivery (IPD). Examining these tools and techniques can help us identify their strengths and weaknesses and determine how they can be used to improve practice and project management in the industry.

Surveying professionals and stakeholders:

- Finally, surveying professionals and stakeholders in the built environment professions can provide valuable insights into practice and project management in the industry.
- By collecting feedback from industry practitioners, clients, and other stakeholders, we can identify areas where improvements are needed and develop strategies for addressing those challenges.

In summary, examining practice and project management in the built environment professions requires a multi-faceted approach that involves reviewing industry standards, analyzing project outcomes, assessing project management tools and techniques, and gathering feedback from industry practitioners and stakeholders.