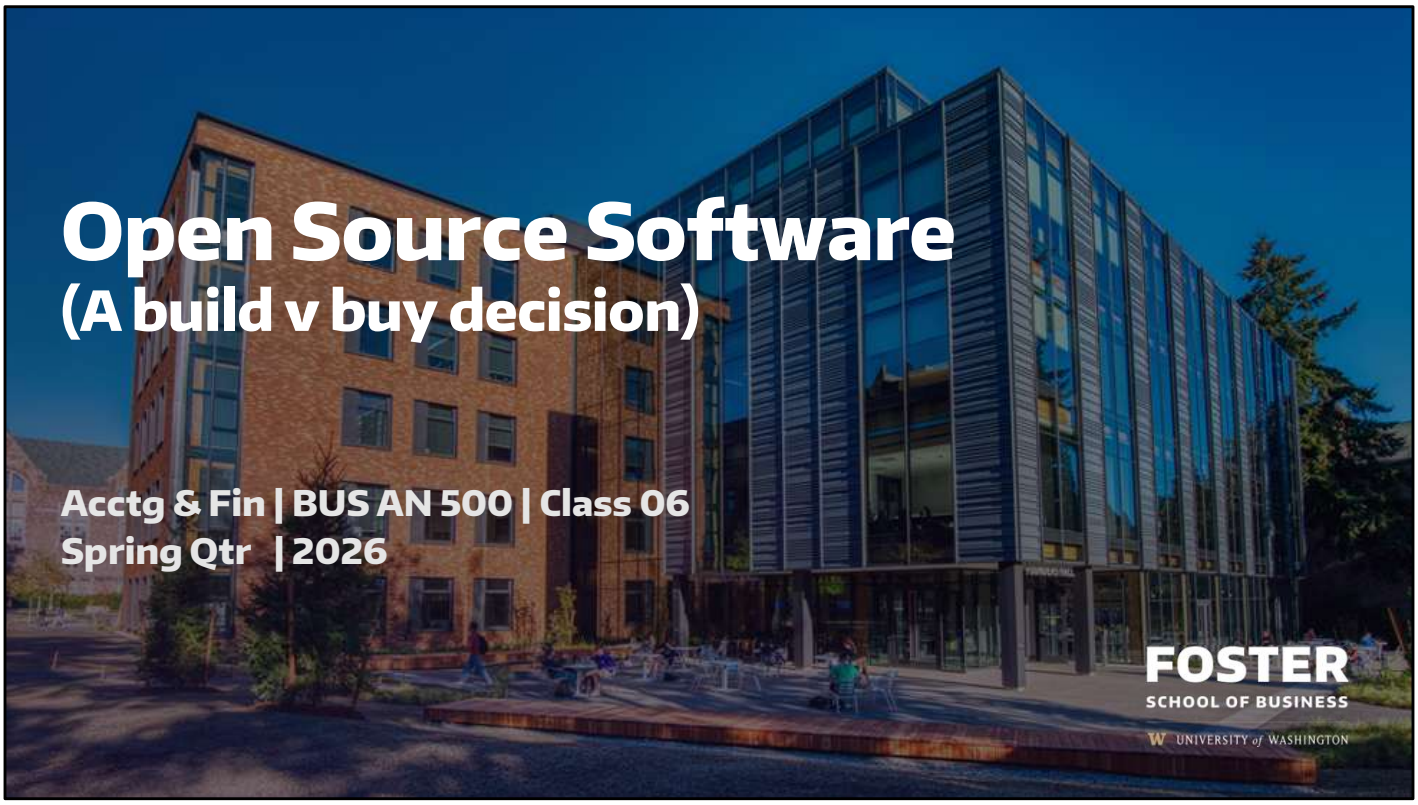
Open Source Software
(A build v buy decision)
Acctg & Fin | BUS AN 500 | Class 06
Spring Qtr | 2026
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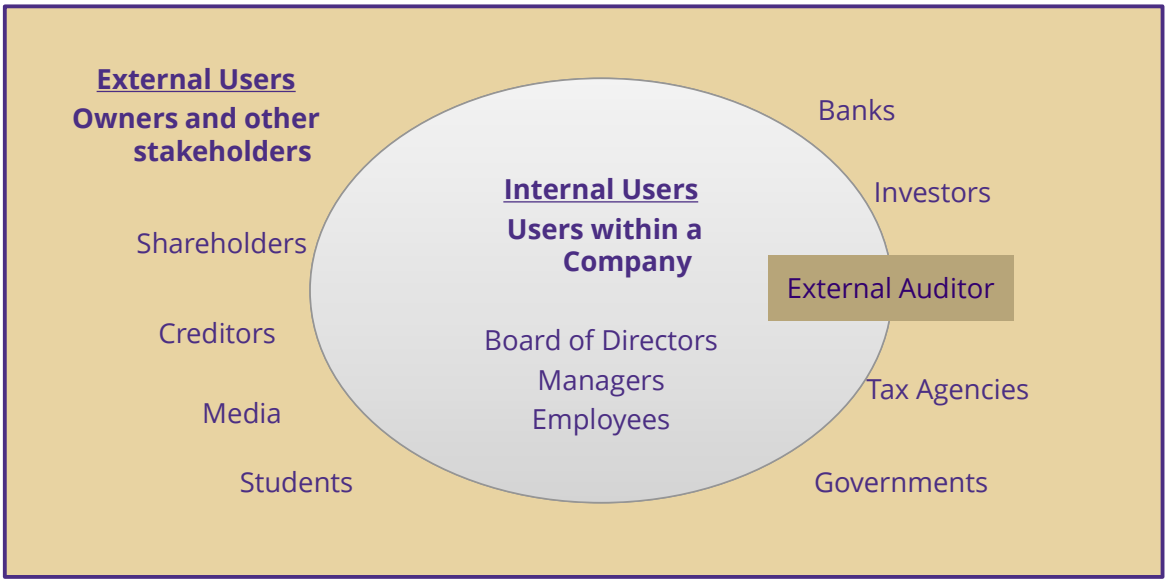
What will we do today?

- **Review**
  - **Accounting & finance function**
  - **RPA & Agents**
- Investment Decisions Lab
  - Build v. Buy & Uncertainty
- Final Project
  - Background: Enterprise AI implementation rates
  - Team check in & time to build

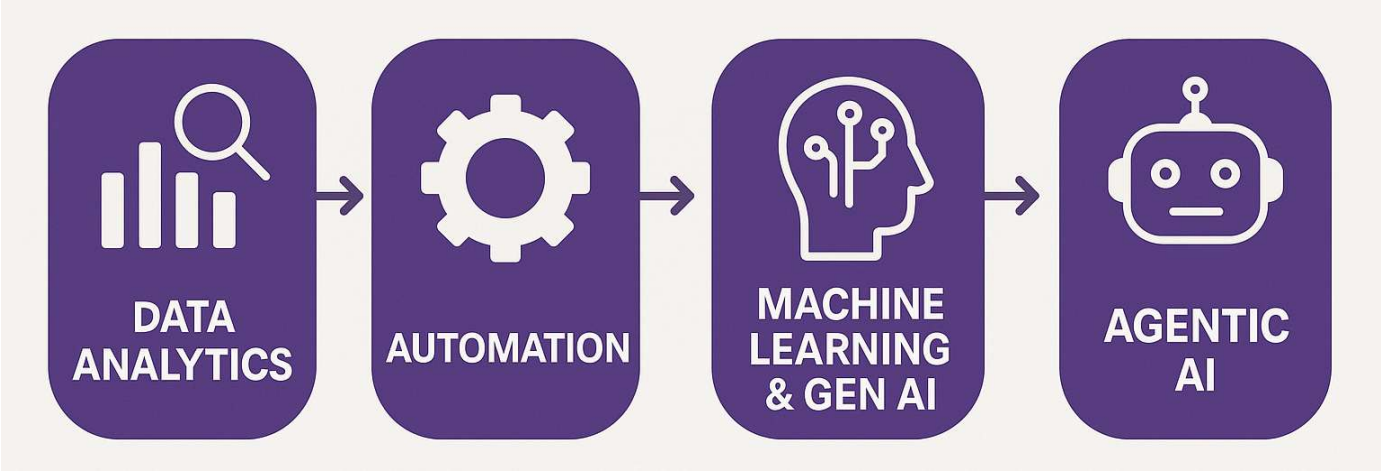
Accounting & Finance Function



An information and decisions approach

	Financial Accounting	Managerial Accounting
Users and decision makers	External: Investors, creditors, and other external users	Internal: Managers, employees
Purpose of the information	Help external users make investment, credit and other decisions	Help managers make planning and control decisions
Flexibility of reporting	Structure, follows GAAP requirements plus voluntary disclosures	Flexible; can be structured as to best inform managers
Timeliness of information	Public after period end after an audit	Available on demand
Time dimension	Historical information with some projections	Future information, including projections and forecasts backed with historical data
Focus of information	Aggregate entity-level with some segmented data	Detailed around projects, processes and divisions
Nature of information	Monetary with voluntary non-monetary	Monetary and non-monetary including KPIs

Process Diagram



How can we use data analytics and automation tools to improve decisions?

RPA helpers versus Agent helpers

Step	RPA (Automation)	Agent (Interpretation)
Data ingestion	Reads budget and actuals	—
Aggregation	Computes totals and variances	—
Detection	Flags differences	—
Interpretation	—	Explains what happened
Prioritization	—	Identifies what matters most
Recommendation	—	Suggests actions
Decision	—	Supports human judgment

RPA helpers versus agent helpers

- RPA answers: **“What happened?”**
- Agents answer: **“What does it mean and what could we do?”**
- Humans **decide whether a change is needed**

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Why is this important?

Build versus buy and related investment decisions

Managers must make expensive, long-lasting business decisions under uncertainty and incomplete information due to:

- rapid technological change,
- uncertain future demand,
- incomplete information,
- and evolving competitive pressures.

Long-term consequences

A business reality is that initial decisions can lead to “lock-in” of a strategy as switching costs become too high.

"We're currently evaluating five different GenAI solutions, but whichever system best learns and adapts to our specific processes will ultimately win our business. Once we've invested time in training a system to understand our workflows, the switching costs become prohibitive." - CIO, $5B Financial Services Firm

The HuskyVision Analytics Case

Compute versus subscribe (a build v buy problem)

HuskyVision Analytics is a growing analytics startup evaluating whether to:

1. continue relying on external AI subscriptions and APIs (“Buy”), or
2. invest in internal AI compute infrastructure (“Build”).

HuskyVision Expectations

The company expects AI usage to increase significantly over the next four years but faces substantial uncertainty regarding:

- future subscription costs,
- AI usage growth,
- hardware investment requirements,
- and the long-term economics of AI infrastructure.

HuskyVision's Decision

Should the company:

Subscribe to third-party AI services with lower upfront costs but higher recurring expenses?

OR

Build internal compute capabilities with high upfront investment but lower long-term operating costs?

The task

This is a problem of solving trade-offs between “fixed” and “variable” costs

And

Understanding forecast assumptions and the role of uncertainty surrounding those forecasts (use the spreadsheet starter)

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The GenAI Divide

STATE OF AI IN BUSINESS 2025

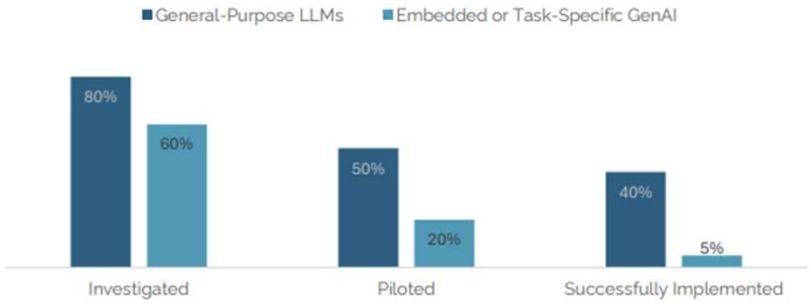
MIT NANDA

Aditya Challapally
Chris Pease
Ramesh Raskar
Pradyumna Chari
July 2025

NOTES

Preliminary Findings from AI Implementation Research from Project NANDA
Reviewers: Pradyumna Chari, Project NANDA
Research Period: January – June 2025
Methodology: This report is based on a multi-method research design that includes a systematic review of over 300 publicly disclosed AI initiatives, structured interviews with representatives from 52 organizations, and survey responses from 153 senior leaders collected across four major industry conferences.
Disclaimer: The views expressed in this report are solely those of the authors and reviewers and do not reflect the positions of any affiliated employers.
Confidentiality Note: All company-specific data and quotes have been anonymized to maintain compliance with corporate disclosure policies and confidentiality agreements, ensure neutrality, and prevent any perception of commercial advancement or opinion.

Exhibit: The steep drop from pilots to production for task-specific GenAI tools reveals the GenAI divide

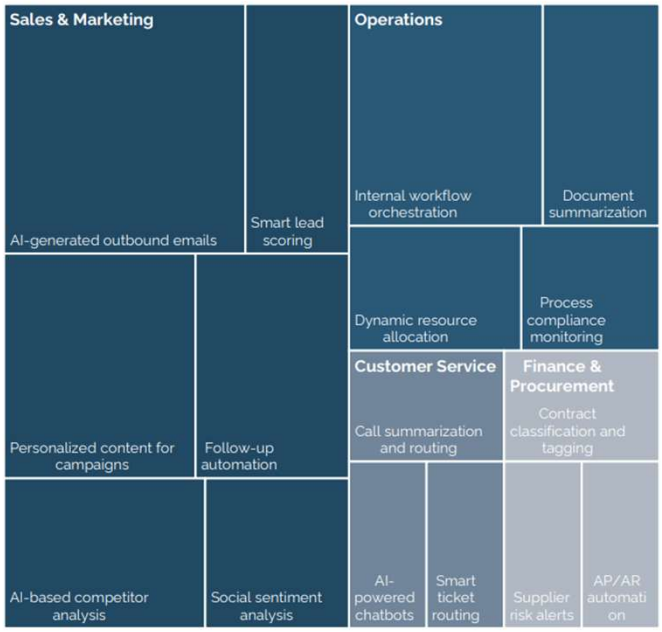


The GenAI Divide is starkest in deployment rates, only 5% of custom enterprise AI tools reach production. Chatbots succeed because they're easy to try and flexible, but fail in critical workflows due to lack of memory and customization.

Exhibit: the shadow AI economy, employee usage far outpaces official adoption

In many cases, shadow AI users reported using LLMs multiples times a day every day of their weekly workload through personal tools, while their companies' official AI initiatives remained stalled in pilot phase.

Exhibit: GenAI Investment Distribution by Function



Final Project Take-Away

Gen AI – LLMs have wide individual adoption and widespread ***investigation*** at the enterprise level

*What's holding enterprise adoption is that most AI tools don't learn and **don't integrate well into workflows.***

Team check in, roles

By the end of this class:

- ✓ Finalized roles within the team including:
  - ✓ Building/simulating data retrieval and cleaning
  - ✓ Building the proof-of-concept with RPA support
  - ✓ Building the proof-of-concept agent
  - ✓ Slide deck owner and presentation roles
  - ✓ Any video demo of the bot (recommended)

Team check in, content

By the end of this class:

- ✓ Finalize the process being automated with clear roles for:
  - ✓ RPA bots / Agents
  - ✓ How this aids the human decision
  - ✓ The economics of the bot and scalability potential
  - ✓ How the agent adds value to the target audience

Team check in, proof-of-concept

By the end of this class:

- ✓ Decide or map out the workflow and pass it by me, including:
  - ✓ Explicit RPA steps in logical order, location of an agent in the workflow
  - ✓ What the agent needs (data) and what the agent does
  - ✓ Confirm the workflow style (maestro versus studio)

Thank you

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Appendix

Reminder of Final Project Requirements

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Intelligent Automation Team Challenge

A team project that focuses on an enterprise level automation robot aimed at solving an Accounting & Finance problem.

- The bot can be demonstrated in a proof-of-concept state.
- Has a Generative Artificial Intelligence (LLM) and/or Agentic AI / AI Agents component.

Requirements

- Software deliverable: A prototype (or example) of a solution to the problem.
- Presentation deliverable: Discussion of the problem being solved, how the agent benefits the task or workflow, and an evaluation of the usefulness of the Agent or LLM example.

Accounting & Finance Focus Areas

We will focus on the following core areas:

- Financial Performance & Forecasting
- Budgeting & Financial Planning and Analysis (FPA)
- Project Evaluation & Risk

Teams have the option to choose from these areas (or some other options).

Structuring the problem

I will provide each team with a problem from within the Accounting & Finance Function* for this problem, you will be asked to present an AI-agent solution to the use-case focusing on:

- What does an intelligent agent need to know, compute, and determine/reason?

* If your team is interested in solving a different problem from the pool of potential ones I offer let me know

Structuring the project

The project will have each team focus on

- What are the appropriate inputs/data?
- What is the model or logic used to solve the problem?
- What decisions and explanations do I want the agent's help on?

Financial Analysis & Forecasting

Data: transactions, financial statements, earnings reports

Logic: Trend analysis & ratio analysis

Agent Role: Explain performance & generate insights, predict outcomes & explain key assumptions

Users/audience: Internal (managers) and external (investors) to the firm

Budgeting and & Financial Planning and Analysis

Data: Transactions / budgets versus actuals reports (internal).

Logic / tools: variance analysis, relevant costs, cost allocation.

Agent roles: Diagnose what went wrong (missing a budget target), aid in filtering decision-relevant information (relevant v irrelevant costs).

Users/audience: Internal management decisions.

Project Evaluation & Risk

Data: investment targets, risk/return estimates and cost of capital, projected future cash-flows.

Logic tools: Time value of money, valuation, capital asset pricing models.

Agent roles: Rank & Recommend Investment decisions based on a set of targets, simulate uncertainty and risk analysis and/or evaluate investment trade-offs over time.

Users/audience: Mangers and investors.

Some other potential focus areas

- Fraud Detection
- Portfolio Management
- Environmental, Social and Governance reporting
- Personal Finance
- Wealth Planning
- Tax Optimization
- Compliance
- Cybersecurity
- Blockchain

Structuring the data

Simulate data internal company inputs for this task or use real company disclosures and/or stock prices.

Proof-of-concept / prototype

Multiple possible approaches:

- Goal: Proof of agent concept (UiPath, Python, LLM) without automation **do this part first.
- Goal: Proof of concept process map in business process mapping notation (BPMN) **do this second.
- Goal: Working automation workflow prototype with agents using business process mapping notation (UiPath, Python). **optional; do this third.

Presentation Preparation

Each team will present for up to 15 minutes plus up to a 5 minute Q&A.

- What is the problem, why is it important
- What your solution achieves
- Mechanics of the solution (data inputs, process, outputs)
- Conclusion and Q&A

Non-presenting class members are expected to ask questions.