

Adapting to the Future: Innovation and Standardization in Healthcare Technology

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Background

I worked at the La Jolla site of Pfizer, Inc. an American biopharmaceutical company. Pfizer is a multi-billion-dollar American pharmaceutical company that produces vaccines, medicines, and a variety of healthcare products. I worked in the Pfizer Oncology Division in the Product Team Leadership, Portfolio and Program Management department (PPTLPPM).

Population

PTLPPM department and ultimately the patients who benefit from the use of the approved therapies that result from the data driven, innovative approaches to drug development.

Learning Objectives

1. Understand drug development, how a drug product team moves through various stages of development and the role of the program manager
2. Collect information on product development team risk management processes, analyze the information to inform the creation of a unified, consistent approach to risk management and tools.
3. Apply what has been learned to present on the value of risk management and the impact to Pfizer's business associated with risks

Activities

- Consolidated strategic partnership data into Pfizer's internal tool, which allowed a statistic assessment of milestone and contract fulfillment around collaborations, as well as resource realization for use in R&D
- Designed and analyzed a global risk management survey; conducted team interviews to assess current practices
 - Effective risk management increases efficiency, decreases risk and waste of resources which can translate into more treatments in the hands of patients and health care providers
- Researched AI applications and developed educational AI agents to enhance operational efficiency
- Conducted market research on aerospace and defense AI use cases to support breakthroughs in pharmaceutical-based AI technologies
- Learn about the role that a global program manager plays at a multinational pharmaceutical company
- Engaged with Pfizer leadership and cross-functional teams to understand internal operations and strategic priorities



Master of Public Health Program



Figure 1—Logos: Case Western Reserve University School of Medicine, Master of Public Health Program logo alongside Pfizer Inc. logo

Deliverables

- GPM Onboarding AI Agent
 - Automated onboarding of individual team members onto cross functional product teams, allowing them to become productive in their role sooner
- AI Agent for the GPM Role
 - Enabled redundant tasks to be automated thus allowing use of time for more value-added work
- Instructional video on AI Agents
 - Provided PTLPPM team members with the tools to create AI Agents following my departure from Pfizer
- Risk Management for Program Managers Survey
 - Survey to assess current program management risk framework at Pfizer and identify areas for improvement
- Aerospace and Defense AI Applications Research Presentation
 - Derived insights from the aerospace and defense industry's use of AI for potential pharmaceutical applications

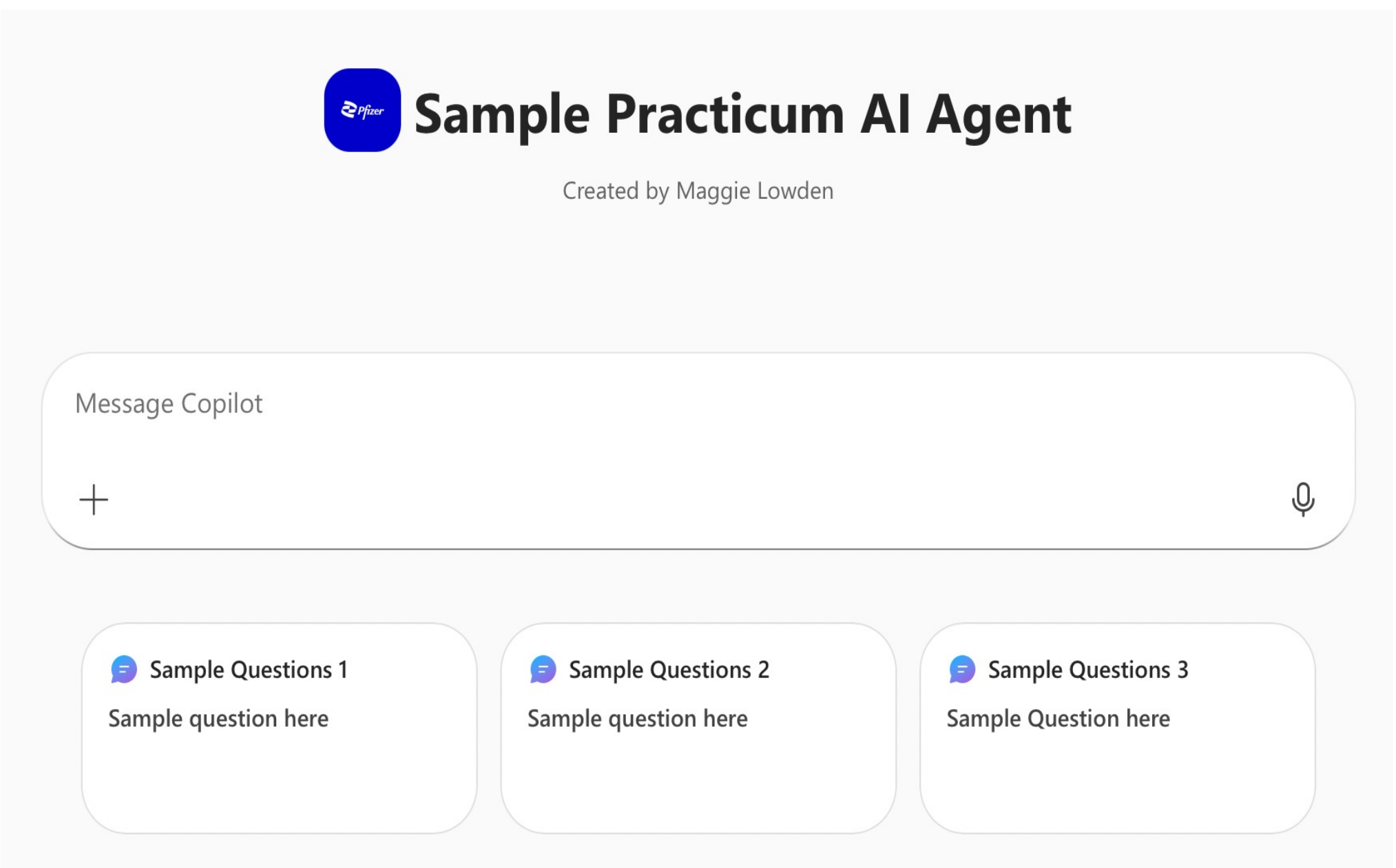


Figure 2— Sample AI Agent: This figure shows a sample AI agent representative of one that I created for the organization like the GPM Onboarding AI Agent.



Figure 3— Pfizer Facility Lab Coat Picture: This figure shows myself and three other interns touring the Pfizer La Jolla labs.

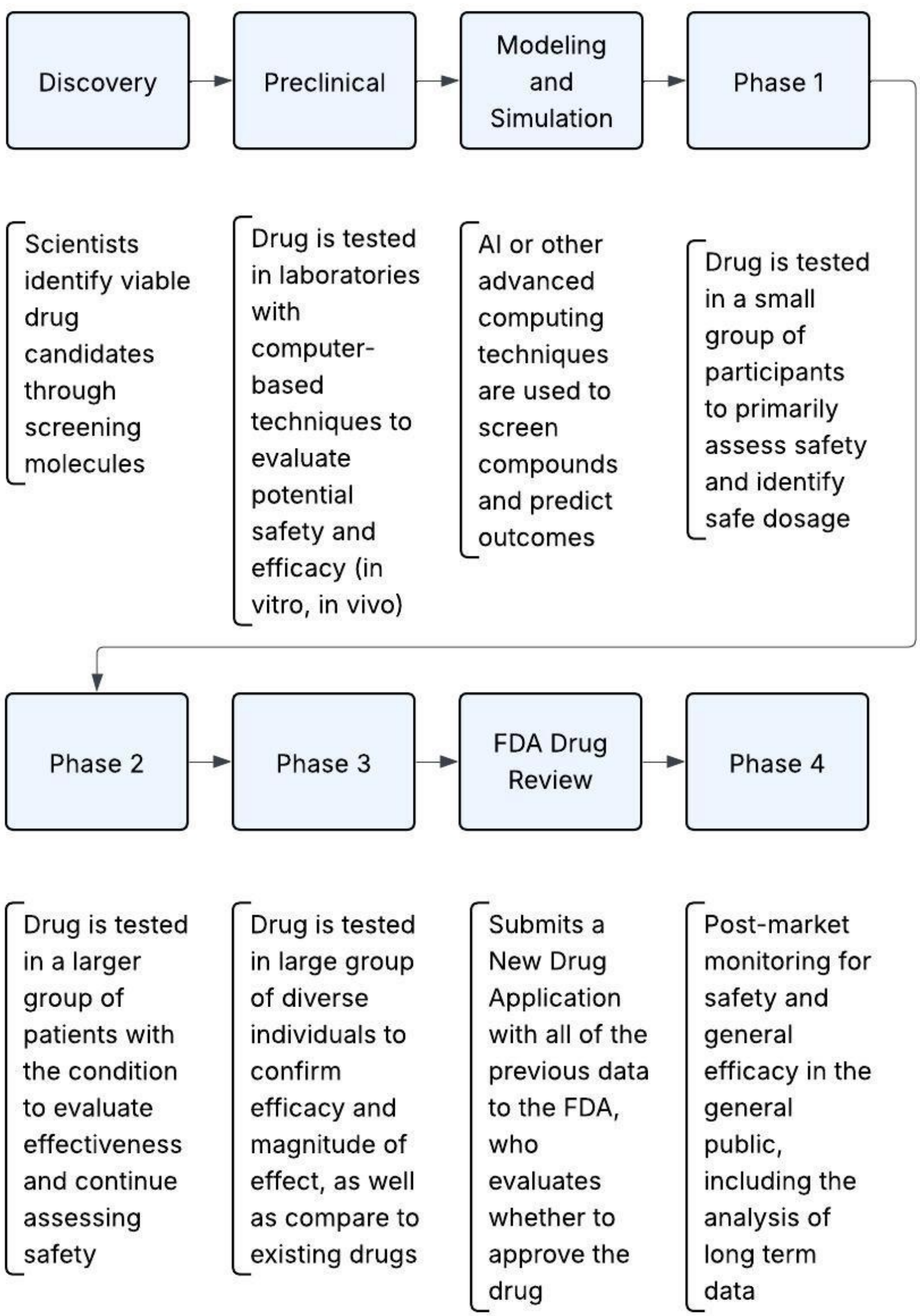


Figure 4— Pfizer Drug Development Pipeline: This figure shows the Pfizer Drug Development Pipeline, from molecule discovery through to Phase 4 trials and post-market monitoring.

Lessons Learned

- Embracing new technologies through continuous learning and adaptability
- AI applications in pharmaceutical innovation and drug discovery
- Approaching healthcare and public health with an entrepreneurial, solution-oriented mindset
- Prioritizing standardization to improve coordination in large organizations
- Balancing healthcare innovation with ethical and regulatory considerations within AI



Figure 5— Pfizer La Jolla Facility: This figure shows the inside of the La Jolla Pfizer facility, with wall art stating Pfizer's core values: Courage, Excellence, Equity, and Joy.

Public Health Implications

- Highlights the growing role of technology and innovation in improving healthcare systems
- Demonstrates how standardization and risk management enhance safety, efficiency, and accountability in large healthcare organizations
- Shows that collaborations are key to breakthroughs in healthcare that change treatment paradigms in very difficult to treat diseases
- Emphasizes the importance of ethical and responsible innovation when integrating emerging technologies into healthcare practice, specifically relating to patient data
- Reinforces the need for adaptability and continuous learning among public health professionals in a rapidly evolving technological landscape
- Emphasizes the value of cross-sector collaboration between public health, technology, and industry to advance population health goals
- Encourages an entrepreneurial mindset to identify more efficient, scalable, and equitable solutions to public health challenges
- Demonstrates how innovation in healthcare technology can ultimately improve access, quality, and effectiveness of care across populations