

Module 2 (Case: Moderna)

AI and Technology Strategy in Complex Environments

Please click on the following links to have direct access to the modules. Modules 1 - 15 are indicated

[M 1](#)

<https://canvas.vt.edu/courses/168287/pages/module-1>

[1](#)

[M 2](#)

<https://canvas.vt.edu/courses/168287/modules/358672>



Overview

Welcome to Module 2! This module will last from Monday, January 23 @ 12:01 AM until Sunday, January 29 @ 11:59 PM (ET). This module covers the second part of the introduction to the course and is designed to familiarize you with the basic concepts and principles of developing technology strategies -- particularly as they will be impacted by emerging AI tools.

The purpose of this unit is to link the problems of technology strategy in complex environments (DINE) to discuss how firms contend with complexity to produce sustainable, long-term competitive advantages. We will focus specifically on the implications of artificial intelligence in shaping technology strategies for organizations. AI is a hot topic in businesses today, due in large part to all of the hype surrounding the use of these technologies in organizations. Although the hype can be overblown, there is little doubt that emerging AI technologies are going to continue to transform organizations but it will be important for us to sort through the hype in order to understand the practical ways AI tools will impact organizations in the future.

For the readings this week, we will complete the reading on Technology Strategy and start reading some of the material from Competing in the Age of AI. We will also start our first case discussion on Moderna -- to think about the strategic challenges companies organized around powerful AI algorithms are facing. The goal in this discussion is to identify the key challenges of effectively utilizing agile processes to help resolve the inherent complexities of launching novel, AI-powered, category-creating products into different markets.



Objectives

Upon completion of this module, students will be able to:

- Identify and understand the key concepts of formulating effective technology strategies
 - Apply key principles of technology strategy to complex strategic problems in AI-powered organizations
 - Formulate and defend a set of strategic recommendations to grow an AI-powered organization
-





Readings (2 hours)

Required:

- Read the overview for Module 2
- HBR: Technology Strategy (pp. 25-33 from HBSP Coursepack)
- Competing in the Age of AI (*Chapter 1* from HBSP Coursepack)
- Review the Moderna Case (from HBSP Coursepack)

Optional: <https://canvas.vt.edu/courses/168287/files/26483912/download?wrap=1>

- **McKinsey: An Executive's Guide to Artificial Intelligence** 
<https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/an-executives-guide-to-ai>
 - (Nice Overview of the Technologies and Business Use Cases)
 - **Deloitte: Automation, Artificial Intelligence, and the Essential Role of Humans** 
<https://www2.deloitte.com/us/en/insights/deloitte-review/issue-21/artificial-intelligence-and-the-future-of-work.html>
-



Watch (40 minutes)

These short videos provide an overview of the key principles and concepts of agile/lean strategy methodologies.

- **Lecture 2.1: Technology Strategy in Complex Environments**  <https://youtu.be/6xASEPh-P48>

MGT 5804 Lecture 2.1 Spr20



Minimize Video

- Slide Deck for Lecture 2.1 (<https://canvas.vt.edu/courses/168287/files/26483905/download?wrap=1>)
- Lecture 2.2: AI & the Decision Problem  (<https://youtu.be/DO8LLb-gSAU>)

MGT 5804 Lecture 2.2 Spr 20



Minimize Video

- Slide Deck for Lecture 2.2 (<https://canvas.vt.edu/courses/168287/files/26483845/download?wrap=1>)



Class Activities

These activities cover the material, assignments, and resources covered throughout this module and are intended to provide you with a "checklist" of activities that you will want to cover each week.

- Read Overview for Module Two
 - Complete Assigned Readings
 - **Complete Quiz 2** (<https://canvas.vt.edu/courses/168287/quizzes/421343>) (this will be based on the Technology Strategy readings from this week)
 - Watch Lectures 2.1 and 2.2
 - **Case One Analysis: Moderna** (<https://canvas.vt.edu/courses/168287/assignments/1681424>)
-

Assignment (3 hours)

These are the graded components of the Class Activities listed above.

- **Quiz 2** (<https://canvas.vt.edu/courses/168287/quizzes/421343>)
 - **Case #1 Discussion: Moderna** (https://canvas.vt.edu/courses/168287/discussion_topics/1525897)
-

Recitation (Optional: 1 hour)

Please note that you are not required to attend the weekly optional office hours from 7-8 PM on Thursdays. All weekly Zoom meetings will be recorded. We will be discussing the process for case discussions this week so please join us if you can. The optional session will be recorded for everyone who cannot attend. You will be able to access the video after it finishes processing (usually 24-48 hours after it is recorded) through the Media Gallery (Course) on the left-hand side of the screen here on Canvas.

- <https://virginiatech.zoom.us/j/81038408606> ➞ (<https://virginiatech.zoom.us/j/81038408606>)
-

Optional Materials

Please find the following optional materials for the module.

- **Ted Talk -- Sebastian Thrun: What AI is and Isn't** ➞
(https://www.ted.com/talks/sebastian_thrun_and_chris_anderson_what_ai_is_and_isn_t#t-325781)