Data Management and Strategy: Building a Growth-Driven Strategy

SYLLABUS

Course	Data Management and Strategy: Building a Growth-Driven Strategy
Professor	Julia Bardmesser
Office Hours	Monday, 4pm-5pm, room 8171
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Course Summary and Learning Objectives	It is commonly held that the majority of digital transformation initiatives fail. Current prediction is that the AI initiatives will experience an even higher level of failure. While there are a lot of reasons for this failure rate, the major one is that digital transformation is first and foremost a cultural transformation and that transformation requires the understanding by the business leaders of how data and data capabilities directly relate to the company's mission and growth. This course builds the bridge between common business growth challenges and data management capabilities. It leverages real life business case studies from multiple industries including financial services, biotech, consulting services and others to help students understand how key data management capabilities affect all types of business growth strategies, from creating operational efficiencies to serving as a foundation for scaling the business and enabling organic growth. This course will also provide guidance on how to evaluate data management capabilities in a non-organic/acquisition scenario. This course will introduce students to the key data management capabilities and teach the fundamentals of business data management disciplines. At the end of the course, students will • understand the difference between data and data capabilities • learn the framework for creating and executing business data and analytics strategy that truly drives business growth • the purpose and implementation styles of key data management capabilities. After developing a basic understanding of the key topics covered in the class, the students will be prepared to make business decisions that create value from data, digital and analytic assets, avoid common mistakes that lead to high failure rates of digital transformation initiatives, and have incisive conversations with technology, data and analytics experts and be able to ask pertinent questions on a wide range of data and analytics topics. Examples of issues to be addressed in this course: ➢ The crucial influence of data and AI capabilities on the choice of a company's business growth strategy ➢ How data management capabilities should be evaluated and incorporated into business decisions. ➢ Data management capabilities considerations in M&A. ➢ Applicability of data management to the non for profit and mission critical organizations ➢ Evaluation of data related operational risks and issues and mitigation strategies This course features lectures, discussion and analysis of real-world

	examples/case studies, and a final group project.
Recommended reading	1. Data Analytics and Digital Transformation, Eric Beulen, Marla A. Dans 2024 2. Infonomics: How to Monetize, Manage and Measure Information as an Asset for Competitive Advantage, Douglas B. Laney 2017 3. Master Data Management, David Loshin 2008 4. Data Governance: The Definitive Guide: People, Processes and Tools to Operationalize Data Trustworthiness, Evren Eryurek, Uri Gilad, et al. 2021 5. Articles as listed in this syllabus + additional new articles to be assigned as they become available.

The content & policies of this course are described in detail in the following:

Class 1	**TOPIC 1: Review of syllabus** **TOPIC 2: Business value of data** • Definition of data and data capabilities • Business value of data framework • Data centricity framework and its implications **PRE-READING PRIOR TO CLASS 1** https://www.cdomagazine.tech/opinion-analysis/article_53d239a8-ac70-11ed-a152-abb741904465.html **ASSIGNMENT FOLLOWING CLASS 1** Leveraging business value of data framework come up with 3 challenges in different categories for one of the following types of organizations: 1. Technology company 2. Consumer goods company 3. Pharmaceutical company 4. Financial Services company **Please come to Class 2 prepared to present the business challenges you've come up with.**
Class 2	**TOPIC 1: Business challenges – class discussion** **TOPIC 2: Business case study 1: data defense** • Business context, company's challenges, and goals • Data capabilities introduction • Data capabilities mapping to solving the business challenge **TOPIC 3: Business case study 2: data offense** • Business context, company's challenges, and goals • Data capabilities mapping to solving the business challenge **TOPIC 4: Business case study 3: Customer Lifetime Value (CLV)** • CLV definition • CLV and data centricity framework • Customer retention business case study • Data capabilities for customer retention challenge **TOPIC 5: Business case study 4: data monetization** • Business context, company's challenges, and goals • Data capabilities mapping to solving the business challenge

	HOMEWORK ASSIGNMENT FOLLOWING CLASS 2 For two of the business challenges you've come up with, create data capabilities -business goal alignment maps. Come to the class prepared to present your alignment map
Class 3	**TOPIC 1: Business challenges – class discussion** **ASSIGNMENT OF FINAL GROUP PROJECT** [Small groups of students will take up one of the challenges discussed in the classroom and create: 1) A written presentation detailing • a chosen company's business model, • current growth strategy • chosen growth challenge • detailed data capability mapping • implementation plan for a data capability judged key to solving the growth challenge 2) A short oral presentation of the strategy and the implementation plan **Each group's presentation will be due at the final session of the class. Each group will have 10 minutes during the final session to present their strategy and implementation plan as if they are presenting it to the company's Executive Committee. Following each group presentation, there will be a 5-minute Q&A session.** **TOPIC 2: Data capabilities and inorganic growth** • Why consider data capabilities in M&A • Data due diligence considerations • Data capabilities assessment framework in M&A **TOPIC 3: Data and startups – a unique advantage** • **Medici Project** case study – guest lecturer
Class 4	**Topic 1: Data Architecture** • Enterprise architecture vs solution architecture vs data architecture vs information architecture • Hype decoder: Data Lakehouse, Data Mesh, Data Fabric, Knowledge graph **Topic 2: Data capabilities primer: Data Governance** • Definition, common activities and accountability structures • Data governance and data centricity framework **Topic 3: Data capabilities primer: Master Data Management** • Definition and implementation styles • MDM and data centricity framework • MDM components and accountability structures • Reference data management
Class 5	**Topic 1: Data capabilities primer: Metadata Management** • Definition; business vs technical metadata • Data lineage implementation levels • Metadata management components and accountability structures **Topic 2: Data capabilities primer: Data Quality Management**

	• Definition • Issue management and resolution process overview and accountability structures • Data quality measurement process overview and accountability structures **<u>Topic 3:</u> Data capabilities primer: AI, Generative AI and data governance** • Definition • Data centricity framework implications • Responsible AI and data governance
Class 6	**Final presentations**

Grading Criteria	**Class Attendance**	**20%**
	Class Participation	**40%**
	Final Project	**40%**
	-- Presentation (25%)	
	-- Q&A (15%)	

Policies for This Course

Academic Integrity

We take pride in our well-rounded education and approach our academics with honesty and integrity. Indeed, integrity is critical to all that we do here at NYU Stern. As members of our community, all students agree to abide by the NYU Academic Integrity Policies as well as the NYU Stern Student Code of Conduct, which includes a commitment to:

- Exercise integrity in all aspects of one's academic work including, but not limited to, the preparation and completion of exams, papers and all other course requirements by not engaging in any method or means that provides an unfair advantage.
- Clearly acknowledge the work and efforts of others when submitting written work as one's own. Ideas, data, direct quotations (which should be designated with quotation marks), paraphrasing, creative expression, or any other incorporation of the work of others should be fully referenced.
- Refrain from behaving in ways that knowingly support, assist, or in any way attempt to enable another person to engage in any violation of the Code of Conduct. Our support also includes reporting any observed violations of this Code of Conduct or other School and University policies that are deemed to adversely affect the NYU Stern community.

STERN CODE OF CONDUCT

The Stern Code of Conduct and Judiciary Process applies to all students enrolled in Stern courses. For graduate students, information can be found here: https://www.stern.nyu.edu/uc/codeofconduct.
To help ensure the integrity of our learning community, prose assignments you submit to NYU Brightspace will be submitted to Turnitin. Turnitin will compare your submission to a database of prior submissions to Turnitin, current and archived Web pages, periodicals, journals, and publications. Additionally, your document will become part of the Turnitin database.

GENERAL CONDUCT & BEHAVIOR

Students are also expected to maintain and abide by the highest standards of professional conduct and behavior. Please familiarize yourself with Stern's Policy in Regard to In-Class Behavior & Expectations for Graduate and Undergraduate students.
(https://www.stern.nyu.edu/portal-partners/registrar/policies-procedures/general-policies/code-conduct)

(http://www.stern.nyu.edu/portal-partners/current-students/undergraduate/resources-policies/academic-policies/index.htm) and the NYU Student Conduct Policy (https://www.nyu.edu/about/policies-guidelines-compliance/policies-and-guidelines/university-student-conduct-policy.html).

STUDENT ACCESSIBILITY

If you will require academic accommodation of any kind during this course, you must notify me at the beginning of the course and provide a letter from the Moses Center for Student Accessibility (212-998-4980, mosescsa@nyu.edu) verifying your registration and outlining the accommodations they recommend. If you will need to take an exam at the Moses Center for Student Accessibility, you must submit a completed Exam Accommodations Form to them at least one week prior to the scheduled exam time to be guaranteed accommodation. For more information, visit the CSA website:
https://www.nyu.edu/students/communities-and-groups/student-accessibility.html

STUDENT WELLNESS

Our aim is for students to be as successful academically as they can, and to help them overcome any impediments to that. Any student who may be struggling and believes this may affect their performance in this course is urged to contact the Moses Center for Student Accessibility (see also the Student Accessibility section of this syllabus) at 212-998-4980 to discuss academic accommodations. If mental health assistance is needed, call the NYU's 24/7 Wellness Exchange hotline 212-443-9999. Furthermore, please approach me if you feel comfortable doing so. This will enable me to provide relevant resources or referrals. There are also drop in hours and appointments. Find out more at http://www.nyu.edu/students/health-and-wellness/counseling-services.html
Graduate students can also reach out to the Academic Advising team at academicaffairs@stern.nyu.edu if you would like to receive more information or further support.

NAME PRONUNCIATION AND PRONOUNS

NYU Stern students now have the ability to include their pronouns and name pronunciation in Albert. I encourage you to share your name pronunciation and preferred pronouns. Please utilize this link for additional information: Pronouns & Name Pronunciation

RELIGIOUS OBSERVANCES AND OTHER ABSENCES

NYU's Calendar Policy on Religious Holidays states that members of any religious group may, without penalty, absent themselves from classes when required in compliance with their religious obligations. You must notify me in advance of religious holidays or observances that might coincide with exams, assignments, or class times to schedule mutually acceptable alternatives. Students may also contact religiousaccommodations@nyu.edu for assistance.

Except for religious observances or other absences that may be required in compliance with nondiscrimination law, this class otherwise requires attendance and participation and cannot accommodate conflicts. Please review all class dates at the start of the semester and review all course requirements to identify any foreseeable conflicts with exams, course assignments, projects, or other items required for participation and attendance. If you are aware of a potential conflict, it is strongly recommended that you do not take this class.

Laptops, Mobile Phones, Recorders & Other Electronic Devices

The use of tablets and electronic devices that are laid flat on the desk, for the purpose of note-taking only, is permitted. However, students should make every effort to avoid distracting their classmates or disrupting the class, including arriving early and choosing a seat that is less distracting for peers.

INCLUSION STATEMENT

This course strives to support and cultivate diversity of thought, perspectives, and experiences. The intent is to present materials and activities that will challenge your current perspectives with a goal of understanding how others might see situations differently. By participating in this course, it is the expectation that everyone commits to making this an inclusive learning environment for all.

Recording

At any time, your classes may be recorded by NYU Stern for educational purposes. (NYU Stern policy).