

Syllabus

OIDD 636x

Scaling Ventures: Aligning Operations with Strategy

Class Schedule and Room

TBD

Instructor

Gad Allon

Office Hours: TBD

Telephone:

Email: gadallon@wharton.upenn.edu

Teaching Assistant

TBD

Office Hours: TBD

Email: TBD

Course Overview

THE GOAL OF THIS COURSE is to make strategic scaling decisions that are grounded in operational reality. We study how to build and evaluate the “operating system” of the firm to maximize value with the focus on scaling the firm’s operations. This involves tailoring the firm’s operational competencies, assets, and processes to a specific business strategy.

We will approach the challenge of scaling operations and operations strategy by taking a holistic view that incorporates competitive strategy, financial evaluation, and the customer experience. Operations strategy is a plan for developing assets and configuring processes such that the resulting competencies maximize value for stakeholders. We focus on decisions and challenges that many firms that try to scale their operations face: assessing the attractiveness of a firm’s operating system from an investor/external perspective and a management/internal perspective. Then we study building competencies in-house (i.e., investing in a portfolio of assets whose capacity, type, and location define the internal supply chain) or buying them (i.e., developing and implementing a global sourcing strategy and integrating external supply chain partners).

Prerequisites

Students who have already taken OIDD 611, OIDD 615, and STAT 613 should be well equipped for the class. Other students should have a solid understanding of elementary probability and statistics. For questions regarding the specifics of your background, please contact the instructor.

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Course Materials

All course materials are either downloadable from [study.net](http://www.study.net)

<http://www.study.net/xxxxx>

or will be delivered over ForClass. ForClass is a platform that allows you to read cases and submit responses to basic questions that then will be used to enhance the discussion in the class.

Text and Course Materials

The textbook *Operations Strategy: Principles and Practice* by Gad Allon and J. A. Van Mieghem is **optional**.

Other textbooks that can give complementary viewpoints on operations strategy and scaling operations:

1. *Operations Strategy: Competing in the 21st Century*. S. L. Beckman and D. B. Rosenfield. McGraw-Hill, 2007.
2. *Operations, Strategy, and Technology: Pursuing the competitive edge*. R. Hayes, G. Pisano, D. Upton and S. Wheelwright. Wiley, 2005.
3. *Operations Strategy* by Slack and Lewis. Prentice Hall, 2003.

Other business books that may be of interest to students taking this course:

1. *Supply Chain Management: Strategy, Planning and Operations* by Chopra and Meindl. Prentice Hall.

Clock Speed by Charles H. Fine

Course Requirements and Grading

Course grades will be based on class participation (15%), case write-ups (30%), and a final exam (55%).

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Class Participation

One half of this grade will reflect basic measures of participation. On-time attendance is mandatory. You are expected to do the pre-assigned readings and to be prepared to discuss the readings in class.

The other half reflects my qualitative judgment concerning your effective contribution to class discussions and dynamics. You should be attentive to the class discussion. Your comments should respond to and “push forward” what is happening in class.

Case Write-Ups

There are three case write-ups, which should be done in groups of 4. Each group should hand in a hard copy of its write-up at the start of the associated class.

For each case, I will post on Canvas a set of questions to be answered. Your group may answer the questions one at a time. While there is no need to write up the case as a memo, your answers to case questions should be crisp and complete. I will judge your answers based on the depth, clarity, and care with which you present them.

Answers based on *quantitative analysis* should include summary charts or tables that are sufficient to communicate your findings. They should not describe each analytical step. Rather, for each analysis you should include this type of detail in an appendix.

Qualitative questions are often open-ended. Your analysis here should be thorough in its treatment and succinct in its description or explanation of individual points.

Exam

An open-book exam will cover the tools and concepts developed in class. The exam is scheduled for **XXXXX**.

Self-study problems, described below, will give you a good idea of the kind of questions you can expect on the exam.

While you may prepare in groups for the exams, the notes you use during an exam must be your own. Similarly, the work performed on the exam itself must be your own.

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Self-Study Exercises

The course includes ungraded self-study exercises that are designed to for you to practice using the course's analytical models to solve problems. I will post sample solutions for the exercises on Canvas.

I suggest you work in pairs on the self-study exercises. Having a partner will help to ensure that you do the work on a timely basis. You are also likely to find that discussing the problem with another person helps you in the learning process.

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Class Schedule

Below is a summary listing of class topics and the due dates for case write-ups. To prepare for a given session, you should go to Canvas

<https://canvas.upenn.edu/courses/#####>

and follow the appropriate link for instructions for the given class.

Session	Topic	Due
1	Opportunistic to Strategic :Introduction	
2	Financial View of Operations	
3	Investor/External perspective	Peapod Case
4	Internal View: Trade off curves	
5	Competitive cost analysis: ACC case	ACC Case
6	People to Process: process mapping for scale	
7	Managing Assets for growth	Seagate Case
8	Local to Global: scaling globally	
9	Managing global networks (simulation game)	Mexico China game
10	Managing global networks (Debrief)	
11	Ownership to partnership: Managing suppliers and vendors	
12	Make vs. buy decisions. Learning and innovation in a network	
13	Wrap-Up and Review	

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More Detailed Description for the Curriculum Committee

Module 1: From Opportunistic to strategic: Alignment, Value creation and Capabilities

Class 1: [What is operations strategy and what are the key scaling challenges?](#)

Introduce a framework to describe a company's operations strategy. The key premise is that an operations strategy must be evaluated in terms of the performance it delivers. This performance depends on the activity network and the asset bundle that operations puts in place. We will discuss the goal of operations strategy and a framework to think about operations strategy and scaling operations.

Class 2: [How to assess an operations strategy as an outsider?](#) Use public information together with personal estimates and projections of key resources and process to assess the attractiveness of an operations strategy. During this process, starting with the Dupont decomposition, we distill key operational metrics that create value, tie them to financial performance, and suggest how to improve profitability over time while scaling the business.

Class 3: Apply the operations forensics concept. We will use the Peapod case as our main discussion vehicle.

Required Reading: Peapod Case Study,

Prepare: Prepare the Peapod on ForClass and submit your responses on the platform.

Required Reading: "Peapod Case", Available in *Operations Strategy: Principles and Practice* by Gad Allon and J. A. Van Mieghem. Belmont, MA: Dynamic Ideas, 2015.

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Class 4: [How to assess an operations strategy using internal data and competitive intelligence?](#) Discuss how the concepts of operational trade-offs and competency focus relate to strategic positioning and operational efficiency and how they can be used--qualitatively and quantitatively—to evaluate a firm’s operations strategy in a competitive setting. The class uses the Efficient Frontier framework to study the trade off between costs and other dimensions.

Read: Read the Sugar & Spice case on ForClass and submit your responses on the platform. This should be done individually.

Required Reading: “Sugar & Spice Desserts: Strategic Position Defensibility”, Kellogg Case: 5-411-753, 1992.

Optional Reading:

Allon, G., Beenstock, M., Hackman, S., Passy, U., & Shapiro, A. (2007), Nonparametric estimation of concave production technologies by entropic methods, *Journal of Applied Econometrics*, 22(4), 795-816.

Class 5: Apply the content of classes 1-5: describe and contrast two firms’ operations strategy. Use competitive cost analysis and trade-off curves to guide the design of a defensive strategic response based on process and resource capabilities.

Prepare: Prepare the American Connector case (ACC) on ForClass and submit your responses on the platform.

Required Reading: “American Connector Company (A)”, HBS case # 9-963-035.

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Module 2: From People to Process: Process, Capacity and Assets

Class 6: [How to design a capacity strategy?](#) A major part of operations strategy is deciding on a capacity strategy. This includes deciding on the sizing, timing, type, and location of each asset change.

Prepare: Prepare the Beleza case on ForClass and submit your responses on the platform.

Required Reading: “Beleza Natural”, Columbia CaseWorks Case Number: 110206, 2012.

Class 7: How can we structure resources and processes to mitigate the firm’s risk exposure? We approach risk management as a process with focus on operational risks and methods to mitigate that risk as we scale our operations.

Prepare: Read the Seagate case on ForClass and answer the questions. This is an individual case.

Required Reading: “Seagate Technologies: Operational Hedging” case study, Available in *Operations Strategy: Principles and Practice* by Gad Allon and J. A. Van Mieghem. Belmont, MA: Dynamic Ideas, 2015.

Optional Reading:

Van Mieghem J. (1998), Investment Strategies for Flexible Resources, *Management Science*, 44(8).

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Module 3: From Local to Global

Class 8: [How to best utilize the asset portfolio you just built?](#) Which factors should be considered when designing a global operational network?

Class 9: How can the concept of *total landed cost* help making such decisions? We will play an in-class simulation game. The objective is that each group identifies how to best manage a global network and the key challenges faced in such setting.

Prepare: The assignment for the in-class simulation game will be discussed and handed out in the previous class.

Class 10: Mexico China game debrief.

Optional Reading:

Allon, G. and J. Van Mieghem (2010), Global Dual Sourcing: Tailored Base Surge Allocation to Near and Offshore Production, *Management Science*, 56(1).

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Module 4: From Ownership to partnership

Class 11: [How do we choose and manage an appropriate supplier portfolio?](#)

Deciding on which suppliers to use for particular goods or services and on how to manage the supplier relationship over time is called strategic sourcing.

Class 12: Every organization must build capabilities for future growth. Such capabilities include processes for new product and process development. We review the learning curve concept to predict process improvement. We discuss “learning by doing” through lean operations and compare to “learning before doing” in operations.

The ITT case is our vehicle to discuss how organizations use their total process skills in bringing products to market strategically.

Required Reading: *“ITT Automotive: Global Manufacturing Strategy”, HBS case # 9-695-002, 1996.*

Module 5: Closing the Loop

Class 13: Summary and wrap up