

OPERATIONS ANALYTICS

COURSE INTRODUCTION

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ABOUT ME...



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INDUSTRY EXPERIENCE, CONSULTING & ENTREPRENEURSHIP



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Research

Marketplaces, digital transformation, innovation



upwork™
formerly oDesk

Teaching

*Operations Management, Analytics, Business
Model Transformation, Logistics, Project
Management*




U B E R

WHO ARE YOU?



Two questions:

- 1) What was the most exciting thing you did recently? Or, share a fun fact about yourself.
- 2) What is Operations to you, and how do you think it relates to your past experience and even more importantly to your future job?



I am a Professor, and my first day of lectures is next Monday. I love exploring the world with my wife and daughter, and I also love playing water polo with Halfmoon Ireland. Can you write a joke about this that I can tell my students to break the ice? 





Sure! Here's a joke you can tell your students:  

"Why did the water polo player take his family on vacation? To give them a break from all the pool-itics!"



OK that's not bad. Can you give me another joke but this time as a rhyming poem?



Sure, here's a rhyming poem you can tell your students:  

I'm a Professor, it's true
And my lectures start next week anew
I love to travel, near and far
With my wife and daughter, we're a shining star

But when I'm not exploring the globe
I'm splashing in the water, playing water polo with Halfmoon Ireland's robe
So come to class, don't be tardy
We'll learn a lot, and it won't be hardy

<https://chat.openai.com/chat/c0f78a3d-658d-48e2-805e-6b9a73ccae54>

WHAT IS OPERATIONS?



Operations < (latin) opus = work

WHO DO YOU WANT TO BE (AS A MANAGER)?



Improvement

You as a modern “Manager”
A Master of Business Administration?

See also: “How Will You Measure Your Life?” (HBR 2010)



Innovation, Disruption

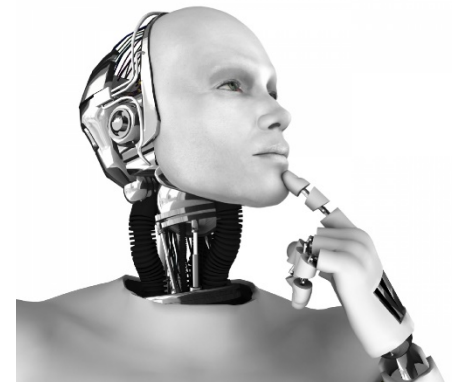
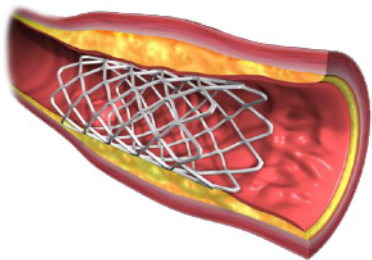
This Class: Innovation

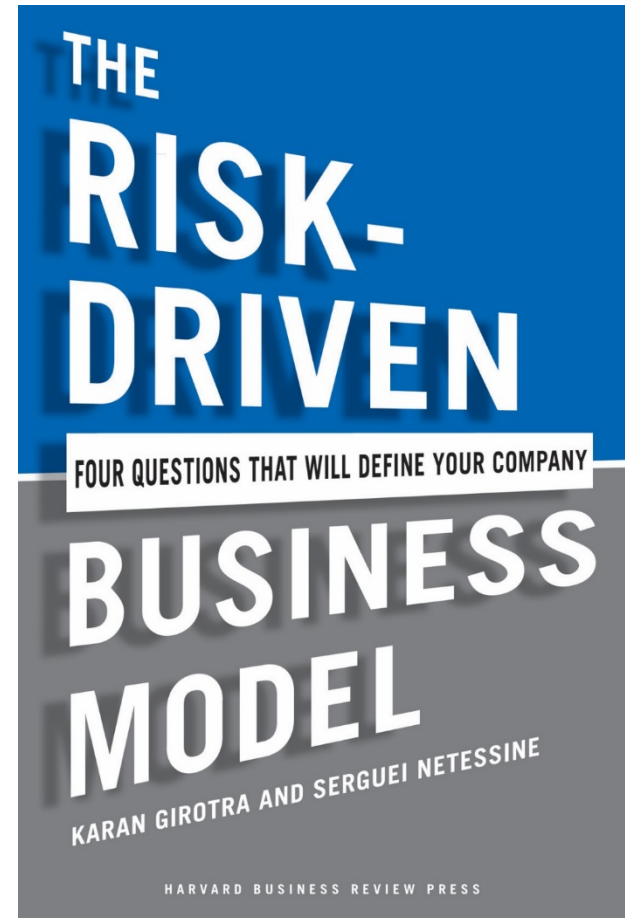
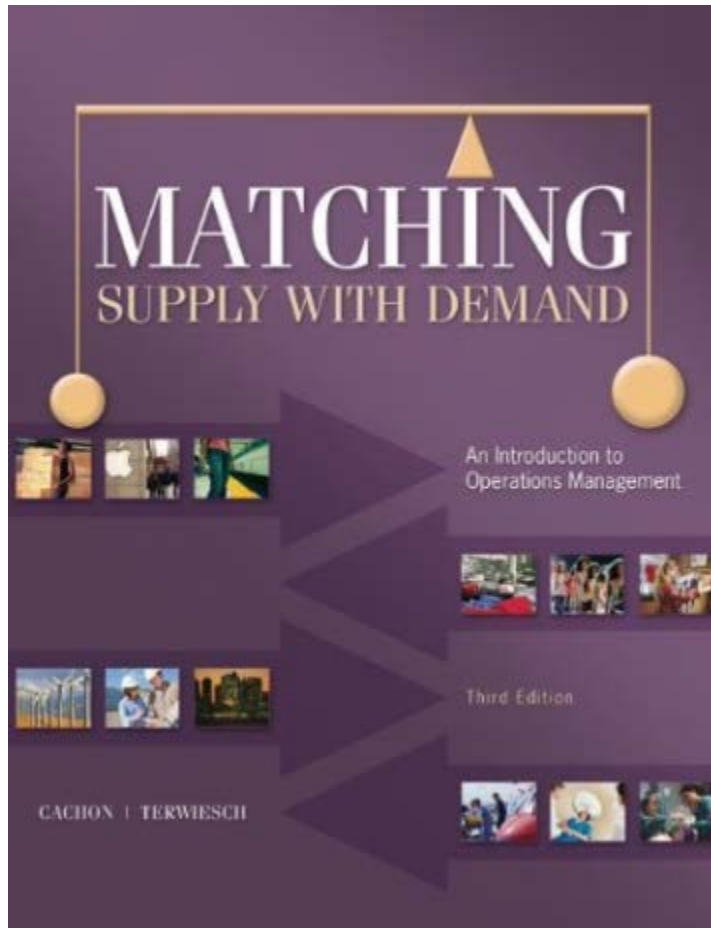
INNOVATION IN PRACTICE: AN OPERATIONAL VIEW OF INNOVATION

New Products- New Markets



New Technology- New Markets





THE BLIND SPOT OF INNOVATION

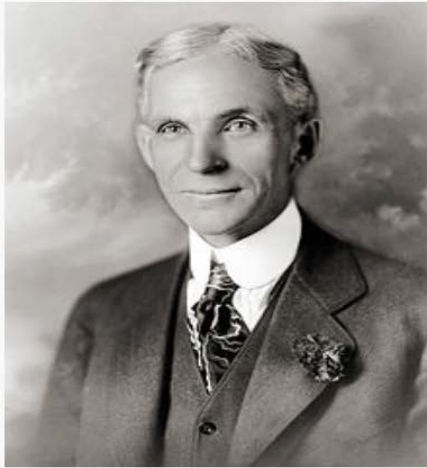
A JOURNEY THROUGH TIME: TRANSPORTATION INDUSTRY

WHO IS THIS MAN?



HENRY FORD

Henry Ford



Ford in 1919

Born July 30, 1863
[Greenfield Township, Michigan](#), United States

Died April 7, 1947 (aged 83)
[Fair Lane, Dearborn, Michigan](#), U.S.

Nationality American

Occupation Founder of [Ford Motor](#), [business magnate](#), engineering

Net worth ▲ **\$188.1 billion** (based on February 2008 data from [Forbes](#))

Religion [Anglican](#)

Spouse(s) Clara Jane Bryant

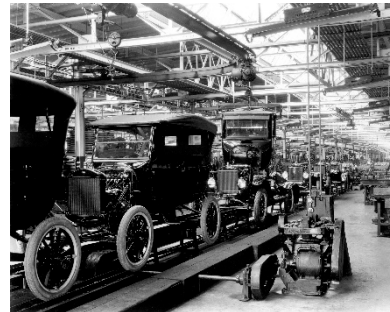
Children [Edsel Ford](#)

Parents William Ford and Mary Ford

Signature 



"Any customer can have a car painted any color that he wants so long as it is black".



Assembly Line Production V/s
Artisan Production

**'GOLD RUSH'
IS STARTED
BY FORD'S
\$5 OFFER**

Thousands of Men Seek Employment in Detroit Factory.

**FORD TO OWN SHIPS,
MAKE TIRES, EXTEND**

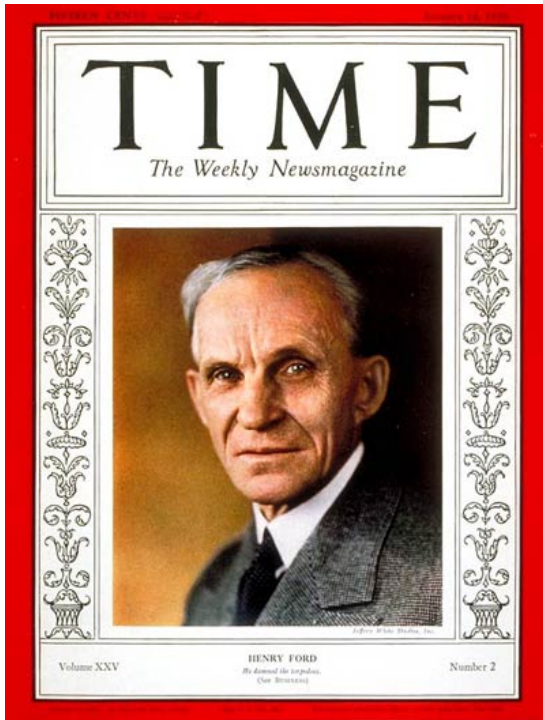
Industry: Massive Vertical Integration

Paid employees very well (\$5/day
or around \$200/day in today's
money: welfare capitalism)

Sold millions of cars

Disruptive Cost Reduction

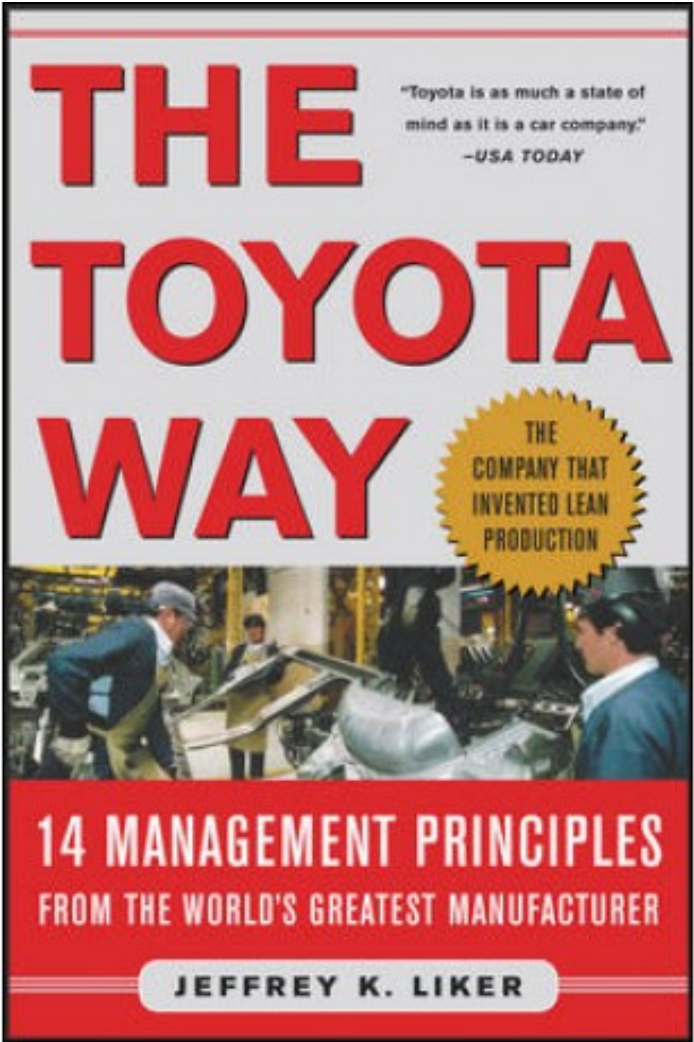
HENRY FORD'S LEGACY



Session WHAT Innovation

Henry Ford (July 30, 1863 – April 7, 1947) was an American industrialist, the founder of the Ford Motor Company, and **sponsor of the development of the assembly line technique of mass production**. Although Ford did not invent the automobile or the assembly line, he developed and manufactured **the first automobile that many middle class Americans could afford**. In doing so, Ford converted the automobile **from an expensive curiosity into a practical conveyance** that would profoundly impact the landscape of the twentieth century. His introduction of the Model T automobile revolutionized transportation and American industry. As owner of the Ford Motor Company, he became one of the richest and best-known people in the world. He is credited with **"Fordism": mass production of inexpensive goods coupled with high wages for workers**. Ford had a global vision, with consumerism as the key to peace. His intense commitment to **systematically lowering costs** resulted in many technical and business innovations, including a franchise system that put dealerships throughout most of North America and in major cities on six continents. Ford left most of his vast wealth to the Ford Foundation and arranged for his family to control the company permanently.

THE TOYOTA WAY..



Build much more reliable cars and managing for the long run



Suppliers: From Competition to Collaboration



Continuous Improvement



Just In Time

Session WHY: Relationships?



Disruptive Quality Improvement

WHAT'S HAPPENING AT THE AUTO INDUSTRY NOW?



Use non-utilized assets like cars



Today the need to own a car is decreasing



Platform to Match Supply with Demand

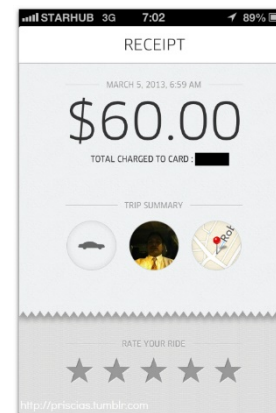
THE UBER BUSINESS MODEL



Surge Pricing



No Physical Assets
Intermediation

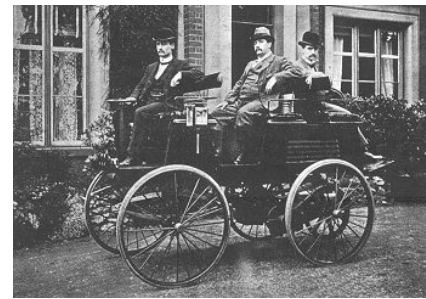


A Free Frictionless
Market of "Employees"

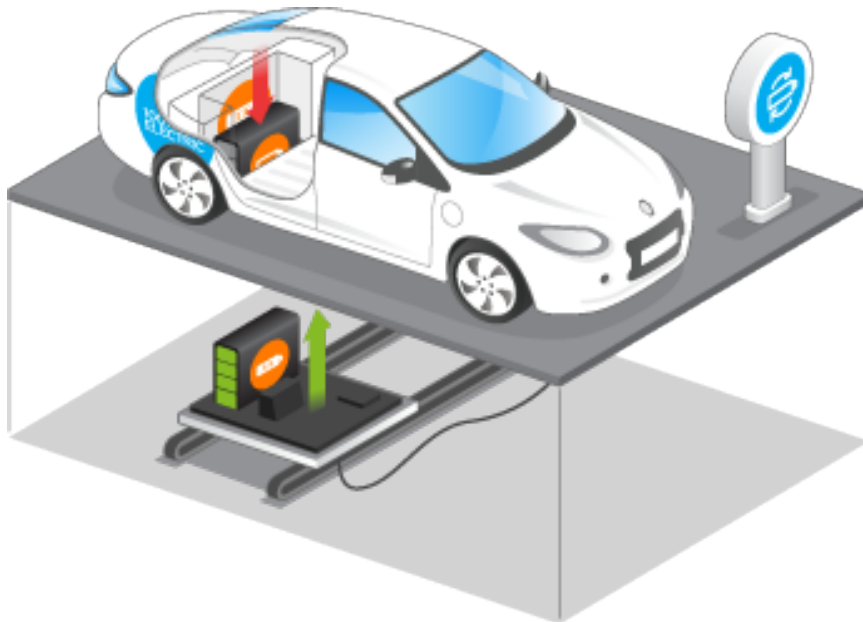


Disruption in Risk profile

WHAT IS TESLA'S INNOVATION?



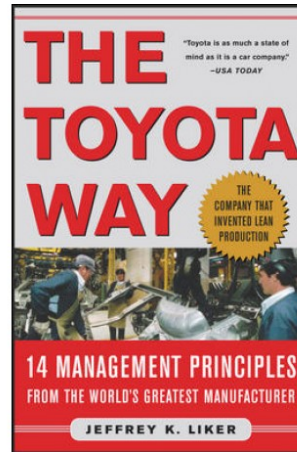
First electric car
(England, 1895)



No breakthrough in battery tech

- 1) Market entry strategy: Fast sports car
- 2) Supply chain innovation: Not sold thru dealerships
- 3) Battery swap stations

THE COMMON THREAD



What is the common thread in these three stories?

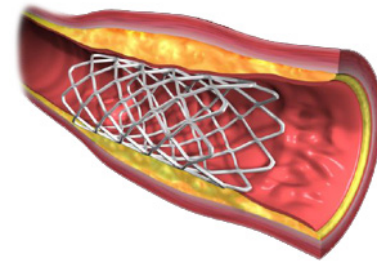
What did all these companies not do?

What did all of these companies do?

What is different between these companies?

disrupt

Highly Disruptive!



No New Technology



Did not identify new Customer Needs
Or a New Product Category



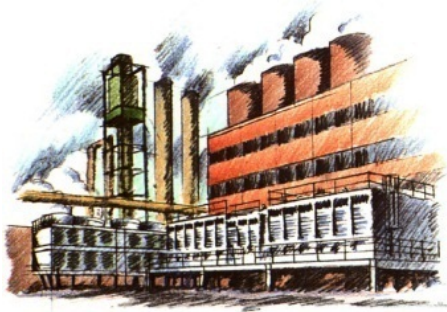
No Superior Product Design

THE BLIND SPOT OF INNOVATION

HOW THEY WERE MAKING, SELLING AND SERVICING PRODUCTS (OPERATIONS MANAGEMENT)

HOW THEY ADDRESS AND MONETIZE CUSTOMER NEEDS

SUPERIOR BUSINESS MODELS TO PROVISION PRODUCTS TO MARKET



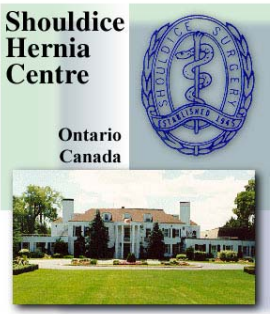
A very different way to innovate: Business Model Innovation

COURSE THEME:

Analyze and create superior business models that disrupt industries, change lives and create wealth!

SUPERIOR BUSINESS MODELS

ENTREPRENEURIAL CONTEXTS (NEW BUSINESSES)



CORPORATE CONTEXT (RESTRUCTURING EXISTING BUSINESSES)



BUSINESS MODEL INNOVATIONS ACROSS INDUSTRIES

SOURCING

GLOBAL OR LOCAL



TO CHINA OR NOT TO CHINA?

*STAYING LOCAL
SMARTLY*



*GOING GLOBAL
SMARTLY!*



INTERMEDIARIES



MAKING

SPEED-UP PROCESSES



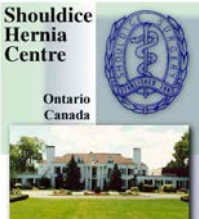
BTF vs. BTO



REAL OPTIONS



FOCUS & STANDARDIZE

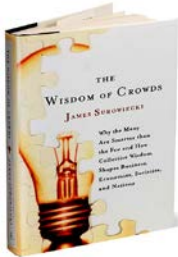


SELLING

ASSORTMENT PLANNING



SUPERIOR DEMAND FORECASTING

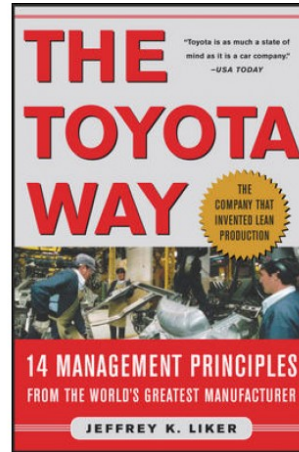


BUILD TO ORDER



WHAT IS DIFFERENT AMONGST THESE FIRMS?

The evolution of BMIs



Disruptive Cost Reduction

Disruptive Quality Improvement

Disruption in Risk Profile

The focus of this class: From costs and revenues to managing incentives and risks

ALUMNI BUSINESSES: PORTFOLIO



TESTIMONIALS

“Recruiters often tell me how OA sets our students apart from others; they quote the students’ expertise in analyzing business models to be the key differentiator.”

– Recruiter relations assistant

“Yesterday’s interview was like an OA exercise. I used lots of bottlenecks, and processes that was just taught in the previous class. I also compared my proposed solution to the status quo business model like we did in OA.”

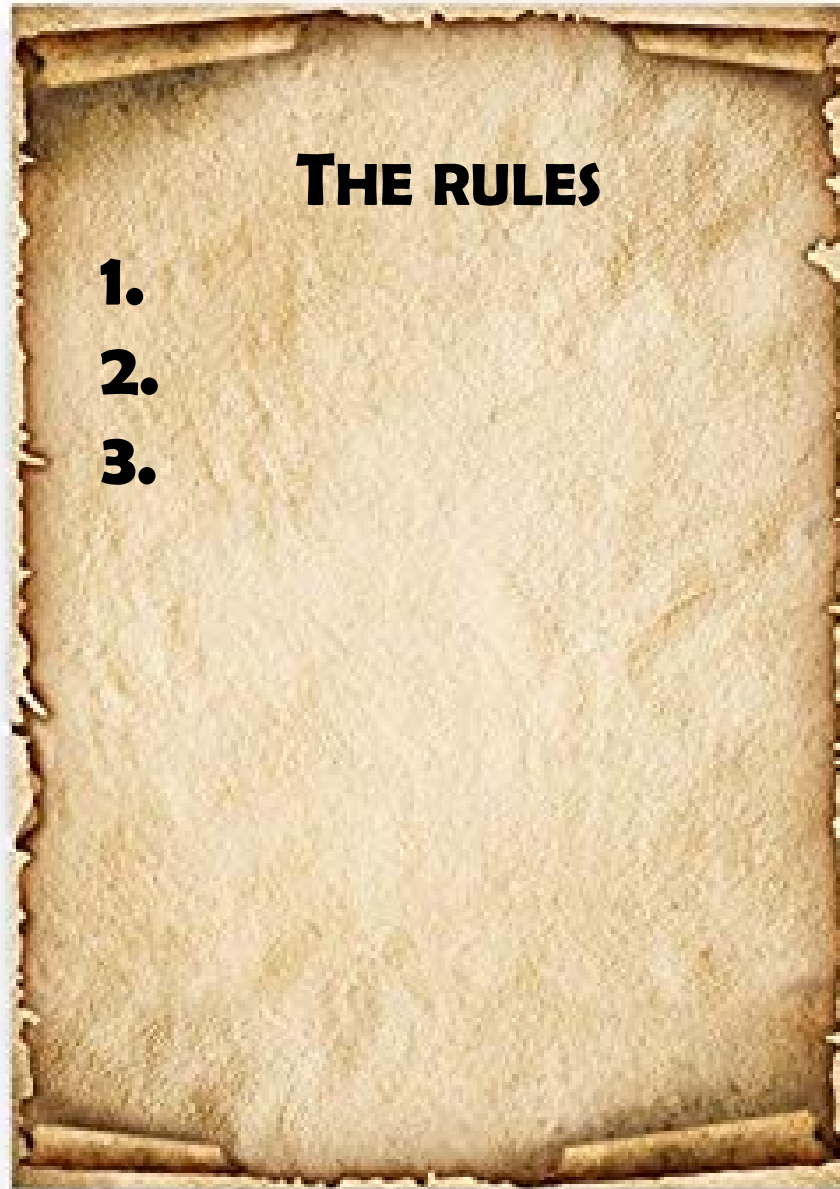
“I worked as a Supply Chain intern in the summer. What I did was strictly OA stuff.”

– Former OA students

COURSE OVERVIEW

Title		Date and Room	Reading	Case	Article
Introduction and Processes (online)	1	6 th March 9am-12pm Online: https://ucd-ie.zoom.us/j/64061594687	1.1, 2.1, 2.2, 3.1-3.4 and "Recipe 1"	Circored	Measure Your Life (HBR 2010), 6-degrees framework (HBR 2016) Movies: The American Factory; The Last Truck
Queues (online)	2	7 th March 9am-12pm Online: https://ucd-ie.zoom.us/j/64061594687	Chapters 2.3, 9.1-9.4, 9.10 and "Recipe 2"	LiveOps	What Safe Shopping Looks Like During the Pandemic (HBR 2020); Plugging into the gig economy, from home with a headset (NYT 2017): complementary to the case
Tutorial 1: Processes and Tutorial 2: Queues	3	3 rd April, Maharry Th B125	"Recipe 1" and "Recipe 2"		
Dealing with Demand-Supply Mismatches	4	4 th April, Jones Room 231	Chapters 2.4, 2.5, 14 and "Recipe 3"	M&S and Zara	How Fast Fashion Works: Can It Work for You, Too? (HBR 2014)
Tutorial 3: Newsvendor	5	5 th April, Jones Room 231	"Recipe 3"		
SC contracts and Platforms	6	6 th April, Jones Room 231	Chapter 19.4-19.5	Investing in Online Marketplaces	Finding the Platform in Your Product (HBR 2017), Why Some Platforms Thrive and Others Don't (2019), What the Grocery Stores Holding Their Own Against Amazon Are Doing Right (HBR 2019), What Did 2020 Do to Retail (HBR 2020)

KNOW THE RULES AND FOLLOW THEM!



INCENTIVES (A.K.A. ASSESSMENT)



Casey Feigh
@caseyfeigh

...

My niece turned 3 today!! She asked for a Lion King cake but specifically the moment where Mufasa dies, because “everyone will be too sad to eat the cake and it will be all for me.”



INCENTIVES (A.K.A. ASSESSMENT)

- Class participation and case contributions (10%) +
- Individual assignment (40%)
- Individual final exam (online) (50%)



CLASS PARTICIPATION AND CASE CONTRIBUTIONS

- Participation is important for you
Effective learning; communication exercise
- Participation is more than just being here
(But not being here means not participating)
- You don't automatically get participation credit

Super duper mega awesome award for top contributor



ASSIGNMENTS

- **Individual assignment (40%)**

Title: *Business Model Innovation at the Shouldice Hospital*

Deadline: By 12 noon of the date of the final exam (TBC)

Submit through Blackboard.

Length: No lower nor upper bound restrictions

Formatting requirements: Follow the style file provided on Blackboard

Topic: Read the Shouldice Case and the related POM article. Then, respond to the questions posted by typing your answers in the accompanied Answer Sheet. Save and name your Answer Sheet file with your ID number. Convert it to PDF and submit a single PDF file online via Blackboard.

FINAL EXAM

Online exam (Answers to be typed in MS Word): Open books, open notes, open laptops

No internet access allowed; no communication of any kind allowed

Don't stress about it; focus on your learning and you will be rewarded!

More information as the class progresses

KEY LEARNINGS OF TODAY'S SESSION

- ▶ The Blind Spot of Innovation– Innovate through Business Models
- ▶ BMI is disruptive and involves changing how we make, sell and service products
- ▶ From costs and revenues to risks