Introduction

The tertiary sector or the “services sector” contributes about 70% of the gross domestic product of the US economy. This sector also provides employment to 80% of the working population. This course in “Service Operations Management” examines the firms in the services sector, and in the manufacturing sector that are becoming increasingly service-oriented employing “as-a-service” delivery (e.g. SaaS) models. Topics covered include service design, sustainability through servitization, service quality, service innovation, and service failures and recovery. Differentiating a service from a product on dimensions, such as, intangibility, perishability, involvement, and participation of the customer in the production or delivery of service, this course focuses on the structural and infrastructural aspects of managing service operations in three broad steps as pictured in Figure 1a and how several products are now transitioning into an “as-a-service model” in Figure 1b.

Specifically, we will consider as-a-service delivery, service encounter, service quality and management of capacity and demand. Using a blend of cases, podcasts, selected book chapters and articles from business press and academic research, this course will explore these aspects in diverse service industries such as financial services, hospitality, retail, and healthcare.
COURSE GOALS
1. To study "breakthrough" services in order to understand the operations of successful service firms that can be benchmarks for future management practice.
2. To develop an understanding of the "state of the art" of service management thinking.
3. To understand how “as-a-service” models can contribute to sustainability initiatives.
4. To develop an awareness of the opportunities that information technology can have for enhancing competitiveness of service firms.
5. To appreciate the organizational significance of managing the service encounter to achieve internal and external customer satisfaction.
6. To understand the dimensions of service growth and expansion both domestically and internationally.
7. To gain an appreciation of the complexities associated with implementing change.
8. To appreciate the entrepreneurial opportunities in services.

COURSE MATERIALS
I. Canvas for presentations and articles.
II. Course Pack will be available from the Harvard website which includes all cases used in this course. URL to access the course pack is: TBD

CASE METHOD
The case method is used throughout the course. Study questions on each assigned case will be provided on the course website. These questions should serve as a starting point with additional insights being welcomed. All class members are expected to have read the case and reflected upon the assigned questions. Furthermore, class members are encouraged to apply concepts from the assigned readings to their analysis of the case.

GRADING
Your course grade will be based on the following team and individual activities and weights:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Weight</th>
<th>Type</th>
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<tbody>
<tr>
<td>Class Participation, Notes Submission and Quizzes</td>
<td>20.00%</td>
<td>Individual</td>
</tr>
<tr>
<td>1 Case Writeup</td>
<td>25.00%</td>
<td>Individual</td>
</tr>
<tr>
<td>Team Project 1: Case Analysis and Presentation</td>
<td>25.00%</td>
<td>Team</td>
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<tr>
<td>Team Project 2: “As a Service” Delivery Project</td>
<td>30.00%</td>
<td>Team</td>
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<tr>
<td>Total</td>
<td>100.00%</td>
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The target assignment for letter grades will be as follows:

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<thead>
<tr>
<th>Grade</th>
<th>Points</th>
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<tr>
<td>A</td>
<td>90-100 points</td>
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<td>B</td>
<td>80-89.99 points</td>
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<td>C</td>
<td>70-79.99 points</td>
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<td>D</td>
<td>60-69.99 points</td>
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<tr>
<td>F</td>
<td>Below 59.99 points</td>
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Class Participation – 20%
This course itself is an example of service operations where co-production is required among the students and the instructor for a high-quality service delivery. Therefore, to stimulate a rich-class environment, it is important to come prepared for the class. Active participation is expected throughout the entire class with thoughtful contributions to advance the quality of the discussion. Please note that the frequency (i.e., the quantity) of your interventions in class is not a key criterion for effective class participation. Meaningful contributions to class discussion include any comments, questions or analyses which advance the general class understanding of the case concept or issue.

Using the case method provides, through relevant managerial examples, a basis for class discussion on the underlying concepts. To guide us through the case, discussion questions will be provided on the course website. As you prepare for these questions, I encourage you to think of additional questions related to the particular session.

Different ways to facilitate participation will be adopted. For example, I will also be using submitted case notes and in-class quizzes to obtain feedback on certain cases and topic areas which will be part of class contribution.

I will clarify this further during the first week of classes.

1 Case Write-up – 25%
Each of you is expected to turn in an individual case write-up for a specifically identified case. This write-up should be limited to 2000 words, plus where necessary up to three additional pages of calculations, charts, diagrams, or graphs. Please note that all calculations and figures must be clearly labeled and referred to in the body of the case write-up. You can summarize key points with bullets, however the substance of your logic and analysis must be readily interpretable. Please have your name in the file and in the header. A suggested format for case write-up content is as follows:

- An overview of the major issues
- A brief description of the service concept and offering
- Address the questions posed with the assigned case, providing the assumptions, analysis, and recommended action plan
- Appendices (if needed)

Team Project 1: Case Analyses – 25%
An important element of this class is teamwork. You are to form your own team (team size to be finalized and contingent on class size). Each team will be responsible for preparing a case analysis that includes leading the case discussion handing in the written assignment.

Facilitating Case Discussion
By the end of the second day, your team will need to select one case for your team to lead the class in its analysis. Facilitating a case discussion is not presenting a complete analysis of the case but rather leading the class in the case analysis. This requires the team to stimulate interest and draw out insights and ideas from the class who are expected to have read the case and thought about the assigned questions. Often the case discussion begins with a brief overview of the firm. Discussions of the assigned questions are facilitated using an outline or bullet form with inputs.
provided by the students. As a team, we will try to build a complete analysis of the situation and address the problems arising in the case applying the framework presented in the readings for the session. At the conclusion of the case discussion, the instructor will summarize the takeaways for the case analysis. Please feel free to include any latest information on the company or industry that is pertinent. Please ensure 40-45 minutes of presentation time.

Criteria for measuring the effectiveness of leading a case discussion include:
1. Ability to relate the concepts from the readings to the issues in the specific situation.
2. How well the discussion generated insights and ideas from the participants?
3. How effectively the team led the discussion?
4. Were the assigned questions addressed?
5. Was the analysis complete?

TEAM PROJECT 2: “As-a-Service” Delivery Project - 30%
An Outside Perspective on Creating Growth with Service Delivery
Each group is to pick a public-listed firm, in consultation with me that is predominantly in the business of making/delivering products (including intangible products such as software) but has either:
   a. shown growth with introduced “service/s” related to the products in the last 8-10 years,
   b. has just embarked on growth with introduced “service/s” related to the products in the last two years, or
   c. shows current and future potential to grow with introduced “service/s” related to the products.

Why public-listed? Public-listed firms will have information and data available on them and their affiliated industries from secondary and archival sources such as: annual reports, earnings call, business news and articles in journals and press (WSJ, Business Week, Financial Times, etc.) websites, social media, besides others.

What is growth in the context of this assignment? Growth is general will come from increase in revenues or profits.

Deliverable: One 15-minute presentation (additional 5 minutes for Q&A), Rather than submitting a report, please have included exhibits (will discuss in class).

Required Readings (Uploaded on Canvas under Assignment 2):

Using (1) secondary and archival sources related to the firm and its industry, (2) required readings, and (3) course material please address the following points/questions in the recommended Format for Presentations:
1. **Rationale** for picking the firm (Max 1 slide)
2. What is the **predominant product offering** and **what option** (from a), b), or c) is on display by the firm? (Max 1 slide)
If you picked the firm **because of option a),**

3. What was the service offering and please **substantiate** that the firm has shown growth with introduced “service/s” related to the products in the last 8-10 years. (Max 2 slides)

4. Given the Service Opportunity Matrix described in Sawhney et al. (2003) where did the growth come from and what is the future growth trajectory for the firm? (Max 2 slides)

5. What changed in the value proposition as the firm grew/transitioned with the introduced service/s. (Max 1 slide)

6. Can the term “servicization” be used in this case? Why or why not? (Max 1 slide)

7. In this instance, how has the firm shifted its focus to helping customers address sustainability issues and tapping into its interest in the circular economy? (Max 1 slide)

8. How are four things mentioned in “The Four Things a Service Business must get Right” Aligned? (Max 2 slides)

9. How would you measure customer satisfaction and customer loyalty related to introduced “service/s”? (Max 1 slide)

10. What challenges and risks exist for service design and delivery with this type of growth? (Max 2 slides)

11. Other pointers/highlights (Max 2 slides)

12. All additional exhibits and backup slides

If you picked the firm **because of option b) or c),**

3. What is the service offering or potential service offering? Please **substantiate** why you believe that the firm will grow with the introduced “service/s” related to the products. (Max 2 slides)

4. Given the Service Opportunity Matrix described in Sawhney et al. (2003) where would the growth come from for the firm? (Max 2 slides)

5. What has started to change or will change in the value proposition as the firm grows/transitions with the introduced service/s. (Max 1 slide)

6. Can the term “servicization” be used in this case? Why or why not? (Max 1 slide)

7. In this instance, how can the firm shifted its focus to helping customers address sustainability issues and tapping into its interest in the circular economy? (Max 1 slide)

8. How are four things mentioned in “The Four Things a Service Business must get Right” Aligned? (Max 2 slides)

9. How would you measure customer satisfaction and customer loyalty related to introduced “service/s”? (Max 1 slide)

10. What challenges and risks exist for service design and delivery with this type of growth? (Max 2 slides)

11. Other pointers/highlights (Max 2 slides)

12. All required additional Exhibits

**Tasks:**

<table>
<thead>
<tr>
<th>Dates</th>
<th>Steps</th>
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<tbody>
<tr>
<td>TBD</td>
<td>Picking and informing me of the public listed firm/s</td>
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<tr>
<td>TBD</td>
<td>Meeting to discuss feedback</td>
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<tr>
<td>TBD</td>
<td>Presentations and uploading version 1</td>
</tr>
<tr>
<td>TBD</td>
<td>Uploading version 2 (Optional)</td>
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COURSE EXPECTATIONS AND GUIDELINES

Each of us has a responsibility to ourselves and our fellow Yellow Jackets to be mindful of our shared commitment.

If you have not tested positive but are ill or have been exposed to someone who is ill, please follow the guidelines at Stamps Health Services (https://health.gatech.edu/coronavirus).

CLASS WEB PAGE
Canvas will be your source for the lectures (PowerPoint slides, etc), participation grade results and any extra articles, etc. that we do in the class.

NOTE
1. The course syllabus provides a general plan for the course; deviations may be necessary.
2. Students are responsible for the information contained in the Academic Honesty policies found at http://www.honor.gatech.edu/.
## GRADING SHEET FOR FACILITATING CASE DISCUSSION

### Analysis

<table>
<thead>
<tr>
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<th>Poor</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1. Was the analysis of the case complete?</td>
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<tr>
<td>2. Does the analysis apply concepts from the <em>readings</em>?</td>
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<td>3. Does the analysis show the relationships among important factors in the situation?</td>
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### Case Discussion

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1. Did the case discussion stimulate interest among participants?</td>
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<tr>
<td>2. How effectively did the team lead the discussion?</td>
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<tr>
<td>3. How well was the timing and pace of the case discussion?</td>
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### Presentation

<table>
<thead>
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<th>Poor</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1. Was the PowerPoint presentation useful and well prepared?</td>
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### Overall Criteria

<table>
<thead>
<tr>
<th></th>
<th>Poor</th>
<th>Excellent</th>
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<tbody>
<tr>
<td>1. How well organized was the discussion?</td>
<td>___</td>
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</tr>
<tr>
<td>2. How well did the discussion draw out insights and ideas from the students?</td>
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**Assigned Case Questions**

1. **Tamago-Ya of Japan: Delivering Lunch Boxes to Your Work**
   1. What are the key selling features of Tamago-ya that appeal to the customers?
   2. What are the key techniques of operations? In other words, how does Tamago-ya operationally do it?
   3. What elements of Sugahara’s Leadership are at play?
   4. For customer interaction, technology is relatively thinly used at Tamago-ya? Picking technology-oriented examples in food delivery, please highlight what benefits and drawbacks can technology implementation bring on this front.

2. **Bossard**
   1. What are the key elements of the Bossard’s business model?
   2. For a manufacturing business, what are the key benefits and drawback of adopting the services of Bossard logistics system?
   3. What are the challenges in transferring Bossard’s business model from Switzerland to other parts of the world?
   4. If you are sales representative for Bossard in China, how would grow the business? What services would you promote and why?

3. **UCB: Data is the New Drug**
   1. What events in UCB’s strategic context required the company to revisit its business strategy?
   2. Identify at least two highly attractive opportunities for UCB to use data and analytics, and answer the following questions for each opportunity.
      1. How can data and analytics be used to create value?
      2. What critical success factors will allow UCB to capture the value?
   3. What achievements should De Prius bring up in UCB's executive meeting in Shanghai in March 2016? Where did De Prius fall short?
   4. What decision agenda and proposals should be put forward for the executive meeting in March 2016?
   5. Discuss the responsibilities of an executive team in helping an organization become an analytical competitor.
4. **NIO: Battling Tesla with Battery as a Service**
   1. What is the motivation for NIO to launch battery-as-a-service (BaaS)?
   2. What are the key features of the NIO BaaS offering? What are its advantages?
   3. How can BaaS promote a circular economy? Why is the automotive industry so concerned about sustainability and circularity?
   4. Compare NIO and Tesla’s strategies in combating twin challenges of battery charging time and range anxiety to accelerate the diffusions of EVs. Which strategy do you think fares better in the long run and why?

5. **Ritz-Carlton**
   1. “Service” can be an elusive concept. What is the essence of The Ritz-Carlton experience? What is The Ritz-Carlton selling?
   2. How does The Ritz-Carlton create “Ladies and Gentlemen” in only 7 days? What systems and processes produce (or contribute to) a successful service operating system in just seven days?
   3. In what may be a first for the hospitality industry, Brian Collins, hotel owner, has asked James McBride, Ritz-Carlton manager, to lengthen the amount of time spent training hotel employees before hotel opening. Should McBride lengthen the 7 Day Countdown? Why or why not? Or, what are the benefits and costs of extending the countdown?
   4. Or, is this the time that McBride should consider a total overhaul of the hotel opening process? If yes, what should he change, and how should he go about doing it? What’s different about experimenting in a service business?
   5. Assume Collins prevails, how do you extend training or what changes might be made to accommodate a much faster ramp-up to the 80% occupancy level?

6. **Data Breach at Equifax**
   1. How does Equifax business model work? Who is the customer and what is the product and what is the service?
   2. Was Equifax lax or unlucky to be cyber-breached in this way? What are the service failures in this cyber breach event?
   3. Who is responsible, and why? In understanding the service failure, where would you assign accountability for the breach - the technology (security) team, senior management, CEO, the board of directors?
4. How would you characterize Equifax response in the wake of the breach? In your view how should Equifax be prepared for the breach and the subsequent response?

5. What are the implications of cyber breach? (What can the whole episode mean for Equifax in the short and long term?). Linking to the Tax and Brown article, link what did Equifax attempt to offer in terms of distributive, interactional and procedural justice?

7. Starbucks: Delivering Customer Service
   1. What factors accounted for the extraordinary success of Starbucks in the early 1990s? What was so compelling about the Starbucks value proposition?
      a. Why have Starbucks’ customer satisfaction scores declined? Has the company’s service declined, or is it simply measuring satisfaction the wrong way?
      b. How does the Starbucks of 2002 differ from the Starbucks of 1992?
      c. Going beyond the case content, ow does the Starbucks of 2024 differ from the Starbucks of 1992?
   2. More specifically, utilizing the service profit chain, as a lens,
      a. How valuable is a highly satisfied customer to Starbucks?
      b. Should Starbucks make the $40 million investment in labor in the stores?

8. Michelin: Building a Digital Service Platform
   1. Why may have Michelin launched the digital service platform? What is the motivation?
   2. Does Digital Service Platform provide value to the players in the ecosystem?
   3. Why is there resistance to adopt DSP?
   4. What should Michelin do to accelerate its adoption?

9. Uber: Applying Machine Learning to Improve the Customer Experience
   1. What are the potential pain points of the pickup experience with Uber for the different customer personas? Using the persona information in the case, the narrative in Exhibit 5 and your personal experience to identify pain points each of the rider personas, as well as for the driver.
   2. Define the ideal pick-up experience with Uber for each of the rider personas as well as the driver persona. Use the formation regarding the priorities and expectations of individual personas. Create a short description of the ideal experience, as well as a list of two or three outcome expectations for each persona.
3. Develop a list of hypotheses Uber could use to predict a rider’s pickup location with information such as rider’s previous trips and current destination, as well as historical patterns related to the pickup location. Augment the case information with your personal Uber experiences to suggest potential hypotheses.

4. Discuss the steps involved in setting up an ML model for automating pickups at scale. Use the framework of the seven-step model in the case to elaborate on how Uber should apply this framework to the ML model. *Hint: You can create a table unless the task and to each step.*