DSO431: Foundations of Digital Business Innovation
Spring 2021 Jan 19th version

Spring 2021 MW 10:00am-11:50am
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Technology is everywhere but do you understand enough about it to affect the way you might run a business one day, the way you might function as an analyst one day, the way you might want to affect the world one day? This is a class that strategically exposes you to new technology. While technology is everywhere, you don't need to be a technologist to use technology in ways to strategically change an organization, an industry, or the world. ABSOLUTELY NO TECHNOLOGY BACKGROUND OR BUSINESS BACKGROUND IS EXPECTED. This is the class to take you from knowing nothing about technology, to getting a job as a technology strategist – the most interesting job on the market!

What makes this class so special is that you learn-by-doing! You don't just get lectures about technology, you experience it! You have hands-on labs using SAP, Blockchain, Machine learning, Salesforce.com – among others. You have speakers who are in charge of the technology strategy for the LA City, Capital Group multi-billion$$ trading platform, and the latest in tools that help anyone to become a data scientist and programmers. You learn about all the latest technology strategy trends. AND you apply this all in the class and with a real-world client project!

This course teaches you the 10 skills of designing and leading a 4th Gen digital strategy for a firm –. 4th Gen strategies recognize that Individual and corporate leadership used to require innovation, personalization, and globalization; but that isn't enough any more to be competitive. 4th Gen strategies are STRATEGIC CAPABILITIES to be agile enough to create continuous disruption to a market. Current thinking about these capabilities include: component-based enterprises, service mesh, API economy, two-sided architectures, customer experience mapping and design thinking, Gartner hypecycles, democratizing application development, ML, and AI to the digital workforce, edge computing, security as a strategic edge, platforms as a service, and blockchain. Labs on ALL of these capabilities are provided in the context of a class project for provided clients.

Why take this course?
 "As technology teams become much more integrated into the business and develop deeper business knowledge and expertise, understanding how complex applications, platforms and third-party systems interact, it leads to technology being at the table much more often than in the past. This is compounded by

what's happening in data, machine learning, artificial intelligence and the growing need to use data to augment and guide interactions with clients and other stakeholders. These changes have pushed technology into executive discussions and into the board room."

—Dennis Howard, executive vice president and CIO at Charles Schwab.

Why Learn about 4th Gen with this course?
- Co-taught by a CEO who does the course's content for a successful living
- Ten skills for designing and leading a 4th Gen digital strategy for a firm
- Linked-In Badges to certify your digital strategy skills
- Hands-on lab experiences with 4th Gen technologies including federated app development, federated AI development, platform as a service (Salesforce's Trailblazer) and blockchain (ethereum) plus in depth discussions on others including edge computing, security as a competitive advantage, and service architectures
- Amazing guest speakers including the COO of Hyperloop Transportation Technologies Inc, CIO of City of Los Angeles, Digital Ecosystems Lead for Unquork, Lead Digital Architect for Capital Group Investments
- Experience designing digital strategic initiatives for provided client organizations
- In-class experience designing digital strategic initiatives using Edge Computing, P
- Prepare you for jobs as technology or management consultant, entrepreneur, inhouse analyst, human resource manager, business unit leader, any CXO, product manager, supply chain management, or anyone with the initiative to make change.

Upon successful completion of this course, students will be able to:
1) Describe latest technology strategy trends, including component-based enterprises, service mesh, API economy, two-sided architectures, customer experience mapping and design thinking, Gartner hypecycles, democratizing application development, ML, and AI to the digital workforce, edge computing, security as a strategic edge, platforms as a service, and blockchain.
2) Create a Digital strategic initiative for 4th Gen and persuade management with a one-pager
3) Describe key technology components of a digital initiative that builds a capability in the firm for agility, continuous innovation, and disruption
4) Know how to implement the initiative using best practice tools and frameworks
5) Describe case examples of organizations using various digitally-enabled strategic initiatives and different management design decisions to ensure their success.
6) Add to their resume the following skills: customer journey mapping, digital platform design, PESTLE and 7S designing
7) Accomplishment to add to resume: presentation to CEO about a digital strategic initiative
8) Create digital strategic initiative for any of the following technology trends: blockchain, federated AI/ML, IoT, data monetization, security as a strategic advantage, API economy, PaaS
9) Demonstrate ten skills for designing and leading a 4th Gen digital strategy for a firm to create continuous disruption to a market

Zoom is the platform used for all online sessions and online office hours. A link and instructions to join the Zoom sessions will be posted in the Blackboard Course Pages. For more information about Zoom, go to: [Zoom Support Tutorials](#)

Course Instructors

Mr Reppe is the CEO of, a new kind of consultancy that bands together independent talent to offer premier consultancy/agency quality at a much lower price point – and to empower and enable talent to make more, find greater fulfillment, and have greater autonomy in their careers. He is working with MBO Partners, Inc's CEO, Miles Everson, to enlarge this kind of consultancy into establishing a global talent platform to disrupt both the staffing and consulting industries, using both fresh-off-campus talent as well as seasoned consultants. He will be pilot-testing the 24 skill competencies developed in this class as certification badges for consultants on his platform. He brings to the platform his extensive consulting experience and recent experience as the global leader of PwC's Customer Experience practice and a founding partner of PWC's Experience Center, a hybrid agency/consultancy. He has had substantial experience working with USC. He is a USC alum, and currently on the board of USC's School of Dramatic Arts.

Dr. Majchrzak is a seasoned teacher, researcher and consultant of digital innovation, helping a range of companies implement new digital technologies that disrupt their industry. Read more about her research on Blackboard.

Course Description
This is a class for you as a manager to know what are the current and upcoming ways in which firms are strategizing to innovate with digital technology. You will learn the basics of digital technology from a business perspective, followed by the basics of strategizing with digital technology, followed by current and future technology disruptions to industries and firms. This course will help you prepare for a variety of different jobs including: technology consultant, business analyst, and any job in which you want to help your firm stay competitive with technology. In this class you are a manager/CEO – not a techie, not a consumer, not an analyst, not a sales person.

ALL INFORMATION IN THIS SYLLABUS IS SUBJECT TO CHANGE AS POSTED IN BLACKBOARD. YOU ARE ASSUMED TO HAVE NOTIFICATIONS TURNED ON FOR BLACKBOARD AND RECEIVE THEM WHEN I SEND THEM.

Readings (BRING READINGS TO CLASS):
Reading of all material and jotted down answers to questions is due by date on syllabus. You should CRITICALLY THINK about the reading, i.e., learn the content, then be able to describe the content in your own words, with the examples described in the text, details, and being able to argue pros and cons. Bring reading material to class on day reading due since we'll be referring to it. Part of your prep work is to prepare a brief paragraph answering a question BEFORE class starts.

You will need to buy a chapter from a textbook on Wiley Publishing
https://www.vitalsource.com/custom/9781119813255
All other readings have been uploaded for you on Blackboard.

Prerequisites and/or Recommended Preparation: none

Grading Policies:
Grading is based on the following:

> 10% Contribution in class or via current event discussion forum in Blackboard Graded as I=Inaccuracies in your knowledge or contribution is so vague that accuracy can't be assessed. K=knowledge is accurate but critical thinking is not demonstrated.
> CT=Critically able to apply your knowledge to new contexts not covered in reading or in the classroom. CT is the highest standard and your grade for contribution is based on the # of CTs you share in the classroom.
> End of semester grade based on # of CTs

10% Weekly Application Writing Assignment: Graded as I, K or CT. Due by 5pm Fridays
> Question is listed in Blackboard. You are illustrating your takeaway learning for that week. Questions vary, but most involve 2 paragraphs. In paragraph 1, you describe and elaborate your understanding, given the material, using critical thinking. In paragraph 2, you demonstrate you are able to apply this understanding to another organization of your choosing. I=inaccuracies in your knowledge or too vague to assess accuracy; K=you have provided some knowledge all of which is accurate, but not a complete understanding or an understanding without critical thinking. Critical thinking is demonstrated.

10% Preparation Question (answers to questions posted on Blackboard before class).
> One-paragraph answer with sufficient detail to judge comprehension of your prep. Graded as I, K, or CT.
> I=Inaccuracies in your knowledge or knowledge is too brief or vague to judge the accuracy.
> K=knowledge is accurate but a CT is not warranted because of lack of critical thinking and not demonstrating the ability to move beyond the written material because either the material or the application is not provided in enough detail to determine whether the student can apply the knowledge they have learned.
> CT=Sufficient detail and critical thinking (see end of syllabus for critical thinking rubric) provided to indicate student has the ability to extend beyond the minimal knowledge gained and apply the knowledge to contexts not covered in reading or in the classroom. Your end-of-semester Prep grade is based on the # of CTs you have by the end of the semester.

10% Case discussion leadership (graded as I, K or CT. I=Inaccuracies such as case does not illustrate the Take-away skills or case is presented so briefly or vaguely so that accuracy can't be judged. K: knowledge is accurate by a CT is not warranted because the case material has not been organized to efficiently demonstrate the take-way ad the discussion question does not help to deepen the student's understanding. CT: Sufficient detail and critical thinking demonstrated in the case selection, case presentation, and discussion question.

30% 2 Midterm (% correct; 15% each). No Makeup Exams permitted

10% Group Presentation on Future Disruption (graded as I, K or CT – see rubric)

20%   Final Report on Future Disruption – Individual (% points) due on
>> final exam day

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Final grades represent how you perform in the class relative to other students. Your grade will not be based on a mandated target, but on your performance. Historically, the average grade for this class is the Marshall target grade of 3.3 (where A=4,A-=3.7, B+=3.3, B=3, etc.). Three items are considered when assigning final grades:

1. Your average weighted score as a percentage of the available points.
2. The overall average percentage score within the class.
3. Your ranking among all students in the class.

Contribution   THIS IS A SEMINAR. NOTE ATTENDANCE DOES NOT EQUAL Contribution

To help you develop the skills to publicly contribute to managerial conversations, Marshall allows up to 15% grading points for contribution, specifying that contribution is not attendance. I have allocated 10% grading points to preparation-based contribution, meaning that contributions made in class need to reflect an understanding of the preparation for that class. As with all Marshall electives, attendance is expected. Some students have asked how they earn an A in contribution. Here are some suggestions if you need them:

- When I ask students for their answers to the reading questions, show that you have written down answer notes and refer to them in discussions with your student-peers. AND
- When I ask students about experiences they have had, make sure that the experiences relate to the material being discussed and prepared for.
- Accept responsibility when your grades are not as high as you would like and show genuine interest in understanding what you need to learn

To receive a Contribution grade for a session, you need to contribute at least once. You don't receive more points if you contribute more times in a session. Ideally, in a session, all of you would contribute. Please note that if you have contributed and then turn yourself off (meaning you violate the tech use policy, or you stop paying attention), your Contribution point will be removed. The Contribution grade is intended for you to develop the skills to think "on your feet" quickly so that in business meetings you are able to bring something verbally to the table.

IF YOU ARE PHYSICALLY LOCATED OUTSIDE OF THE TIME ZONE FOR THE CLASS, SEE ME FOR ACCOMODATIONS ON THE CONTRIBUTION GRADE

Weekly Application Writing Assignment About the skill learned for the week:

The assignment is to be typed into the Journals tool on Blackboard by Friday 5pm for the week in answer to the question for that week. Expectations is to write at least 3-5 sentences. Sometimes 2 paragraphs are requested. Each paragraph should be at least 3 sentences.

The assignment will only be seen by the professor, not by other students. Indicate the week the paragraph is for. The paragraphs must be uploaded by Friday 5pm of that week to get credit; anything later will not be graded. To find where to upload the assignment, go to Blackboard → Tools → Journal/Application Assignment.

This exercise is specifically intended to help you develop skills to apply what you are learning as you are learning it; not wait until the end of the semester.

Preparation

Since this is a seminar, we often have discussions about the reading and especially about cases. When everyone does the reading, the discussion is more compelling and we all learn from each other.

10-min Leading Small Group Discussions on a Personally Picked Case:

This exercise is an individualized exercise specifically intended to help you develop the skills to be perceived by your coworkers and managers as someone with thought-provoking and useful questions for the company.

Signup for one of 7 different discussion leadership cohorts. You will be asked to individually find a case (no agreement or discussion needed among the cohort), present the case in 5 mins or so to a small group of students, then suggest a question to students about the case that leads to a 5-min discussion. <u>You will turn in your preparation work on the day due which should consist of: the case, the 5-mins of information on the case you plan to present (often PPTs), WHY the information is related to the discussion Q, YOUR answer to the discussion Q, and how you plan to encourage the students to get to your answer for the discussion question</u>. Grading based on the skill rubric

Group Presentation and Individual Final Report on Client Project

You will be preparing a business case for a digital initiative to help a real organization enhance their digital innovation capabilities to become more disruptive and agile. To ensure that you are thinking far enough into the future, one of the following technologies should be included in your initiative: The companies are being provided by Rik Reppe based on his extensive contacts in various industries. In addition we have the Los Angeles City as another organization. You will sign up for one organization. With 25 people in class, there will be 5 projects. Basic information about the organizations will be available through Marshall electronic resources. Use Mr Reppe to ensure that your ideas are sufficiently forward thinking such that they tell the company something they don't already know. You will have access to him via email throughout the semester.

The project will involve research on the company, an initial meeting with the client the week of Feb 22nd (except see notes in syllabus about one client who can only meet the week before), brainstorming ideas about digital initiatives, a second meeting with the client the week of April 12th to get feedback on your ideas, a draft presentation to Rik and I about your final idea, then a revision to the presentation based on feedback and preparation of an individualized 3-page memo to the company about your proposed initiative. Based on the final memo, you may be asked to present directly to your client.

You will first work on this project in teams, prepare a presentation in PPT-format and deliver this presentation in the last session to your classmates and the instructors on the last day. A hard copy of the PPTs are due at the start of the last class. Your team will receive feedback on your PPTs, based on the rubric below. This accounts for 10% of your grade

Then INDIVIDUALLY, you will use the feedback to prepare a solo 3-page memo to the company CEO describing your strategy and how it meets the company's threats and opportunities. This provides 20% of your grade. Plagiarism among team members leads to a Fail. Ideas can be similar but words must be your own. Sometimes students ask if they

can do the final paper together. My preference is NOT doing it together, BUT if you have a particularly well-collaborating team and are greatly enjoying the experience and all team members want to do the final paper together, then I will make an exception and a single paper is turned in for all team members. You will need to make your case to me.

The Final Paper, per USC policy, will be due on the final exam due date.

This exercise is a white paper that is typically constructed by strategic technology thinkers. The more accomplished you are at doing this, the greater the likelihood you will be asked to do it and then be seen as a strategic thinker, not just an operational executor.

Marshall's Technology Policy

Zoom into the classroom with your picture and professional dress and location showing. Zooming in from your laptop or desktop is required to be able to use Google and Blackboard and PPT as well as Zoom at the same time. All other uses of technology during class time including iphones and ipads are strictly forbidden. Violation of this policy is determined at the instructor's discretion and will be marked by the instructor. More than 3 violations of this policy will lead to an automatic reduction of a grade in your final grade. The instructor is NOT required to notify you if s/he believes the policy has been violated.

Additional Requirements for this All Online Classroom Experience:

Class attendance and participation is important in developing a coherent view of the materials covered in the course. Unless accommodated as described in (b) below, attendance and active participation is expected at the synchronous Zoom class sessions.

a. Students are expected to have cameras on during the synchronous Zoom sessions, and preferably use headsets or earphones to ensure the best audio quality. *Please advise me if you have circumstances under which you will not be able to meet these expectations.*

b. For students who are located in a time zone where the synchronous class sessions or exams fall outside the window of 7 a.m. to 10 p.m. in your local time zone, please contact me. You will not be penalized for not attending the live Zoom class sessions. The Zoom sessions will be recorded and posted on Blackboard, and you will be responsible for watching the recorded sessions. Exams and other synchronous assessments will be scheduled for students to be able to complete the assessment between 7 a.m. and 10 p.m. in your local time zone.

2. During synchronous Zoom sessions, the following netiquette is expected, as if you were in a physical classroom.

a. Please do:
   i. Log into class early or promptly
   ii. Arrange to attend class where there is a reliable internet connection and without distractions
   iii. Dress respectfully. Video conference business meetings are and will be the norm, so practice your professional telepresence.
   iv. If you use a virtual background, please keep it respectfully professional.

  v. Display both your first and last name during video conferencing and synchronous class meetings.

  vi. Respectfully minimize distractions by muting and or turning off video if necessary and when appropriate.

  vii. Engage in appropriate tone and language with instructors and classmates.

 b. Please try not to:

  i. Engage in a simultaneous activity not related to the class.

  ii. Interact with persons who are not part of the class during the class session.

  iii. Leave frequently or not be on camera for extended periods of time.

  iv. Have other persons or pets in view of the camera.

3. All Zoom sessions will be recorded and posted in the Blackboard Course pages.

4. The following equipment and system requirements are recommended to successfully participate in this online course:

- Computer with webcam
- Earphones or headset
- Reliable (preferably high speed) Internet connection
- Current operating system for Windows or Mac
- Current browser
    - Google Chrome
    - Firefox
    - Internet Explorer (not recommended)
    - Safari (Mac)

For technical support please see:

- **USC Systems** (Blackboard, USC Login, MyUSC, USC Gmail, GoogleApps)
  For assistance with your USC login or other USC systems, please call +1 (213) 740-5555 or email Consult@usc.edu. They are open Mon – Fri 9:30am – 5pm and weekends from 8am - 5pm (all Pacific time).

- **Zoom Video Web Conferencing System** (MarshallTALK)
  For assistance using Zoom, go to Zoom Support Page. You may also call +1 (888) 799-9666 ext. 2. They are available 24/7.

- **Marshall Systems** (MyMarshall, Marshall Outlook email)
  For assistance with Marshall systems you can call +1 (213) 740-3000 Mon-Fri 8am-6pm (Pacific), email HelpDesk@marshall.usc,edu, or use our self-help service portal as shown below. The portal allows you to get immediate assistance by searching for the information you need. You can also use it to chat with a technician or input a request. To access the service portal, follow these steps:
    - On a computer or mobile device, go to MyMarshall Home Page and click the "**Help**" link on the upper right.

- Log in using your Marshall username and password.
  (If you don't know your Marshall login please follow the onscreen instructions pertaining to login issues)

If your computer does not have Microsoft Word, Office 365 package is available to you free of charge and allows you to install Word, Excel, PowerPoint, Outlook, OneNote, Publisher, and Access on up to 5 PCs or Macs and Office apps on other mobile devices including tablets. Office 365 also includes unlimited cloud storage on OneDrive. To download Office 365 log into your student (University) email through a web browser, choose Settings (top right corner), and select software. If you have further questions or need help with the software, please contact the USC ITS service portal.

DSO431 Spring 2021 COURSE CALENDAR/READINGS/CLASS SESSIONS

Class #	Take-away Skills to Learn Today	In class Experiences	Reading & Prep
1 Wed Jan 20	Today's leading companies think of digital innovation as meeting foundational business trends like personalization. Tomorrow's leaders go further and strive for disruption and agile innovation as a capability This is referred to as GEN 4 Industry	How Warby Parker follows today's (Arthur D. Little) foundational digital business trends and the 6 Forces that will shape Business and Technology in 2030	Optional Read: 1) Caselet on Warby Parker; 2) Six Forces that will shape Business and Technology in 2030 (will cover in class)
OPTIONAL DUE FRIDAY JAN 22 5PM Individual Weekly Writing Assignment (to get hang of it before grading starts): Answer this question: First paragraph: How is Gen 4 different than current strategies for using technologies in organizations; include multiple reasons? Second paragraph: Pick any 2 organizations you know of. It could be USC, a place you worked, or Amazon/Google/Facebook, etc. Using the list of reasons you offered in Paragraph 1, explain why one organization you picked illustrates "current" strategies, and explain how the OTHER organization COULD illustrate Gen 4 Strategies.			
2 Mon Jan 25	Be able to construct value propositions for capability-building; how to create Executive One-Pagers for digital initiatives;	Case of BBVA to explain digital innovation as a capability. Digital Initiatives and Value Propositions Executive One-Pager in class	Read: 1) Gartner on Value Proposition 2) Gartner's Top 10 Strategic Techn Trends for 2020; 3) BBVA Prep: 1) Find 5 of the 10 Gartner trends in the BBVA and describe how the trends were used 2) One of BBVA's many initiatives was

			the introduction of the BBVA Game. What was the value proposition for the game, Using first reading?
3 Wed jan 27	Be able to apply the 7S framework for digital initiatives; knowing difference between federated vs top-down governance	Case of BBVA: Apply 7S Framework to explain their success, to explain difference between Federated Governance vs top-down governance	Read: 1) Build an Adaptable Org Structure to Accelerate Digital Business as describing Federated Governance for Disruptive and Agile Companies and 2) about McKinsey 7s: https://www.mindtools.com/pages/article/newSTR_91.htm PREP: Complete a table of the 22 practices listed in the Forrester Reading, by indicating which 7S each practice belongs in.
Weekly Application Assignment: What you learned this week: A digitally disruptive, agile company requires a federated governance 7S model. In paragraph 1: Explain in one paragraph what a federated governance 7S model looks like and how its different from a conventional organization. In paragraph 2: apply this to a company you think today is a conventional organization (it can be your work, your school club, USC, or a company you want to recruit at) and describe 2 of the 7S that need to change.			
INTRODUCING 2025 DIGITAL INITIATIVES			
4 Monday Feb 1st	Be able to design an initiative for creating strategic capability of federating app development	LAB Experience with Federated App development led by Unqork.	Prep: Unqork signup Reading: Maximizing Digital Dexterity by Fostering Citizen developers PREP: Practice with 7S: list one practice for each 7S likely to be needed if a company is to help business users become developers
5 Wed Feb 3	Be able to identify opportunities to disrupt an industry	Case of Grubhub: how the PESTLE Framework can inspire ideas for disruption; need for intermediate (or forward-looking metrics of success); estimating potential revenue value for a new service; Marshall electronic resources PROJECT SIGNUPS DUE; Identify available times within group for first and second client meeting (week of Feb 22nd and April 12th)	Read 1) The 6-Principle Framework for Mastering a Business Agile Mindset; 2) How a CTO can incorporate mega-trends 3) Grubhub caselet PREP: The 6th principle says to find situationally specific megatrends, not just generic ones. Think of the strangest and farthest removed situationally-specific megatrend that would be only remotely related to Grubhub. Write down what that might be and how you came up with this trend.
Weekly Application Assignment: In one paragraph describe the major 7s changes you would make to Grubhub to implement a citizen developers digital transformation, success metrics, and revenue value			

6 Mon Feb 8	Be able to use concepts of Arenas & Gartner Hypecycles to inspire ideas for disruptions.	Case of Grubhub: apply arenas and hypecycles 1ST Case Discussion: identify case of an agile disruptive digital initiative in which the notion of arenas can be used to explain why that digital initiative succeeded	Read: 1) "Era of Sustainable Competitive Advantage" and 2) "Understanding Gartner Hype Cycles" PREP: 1) What is an adjacent industry for Grubhub within the same arena? 2) What are the 7S of an agile company according to McGrath
7 Wed Feb 10	MIDTERM #1		
No Weekly Application Exercise Due because of Midterm			
No Class Monday Feb 15			
8 Wed Feb 17		Client Projects: Applying Frameworks Thus Far to First Meeting with Client; Reviewing the 1 pager Client Proposal (Rik) 2nd Case Discussion: identify case of an agile disruptive digital initiative in which the notion of arenas can be used to explain why that digital initative succeeded For those signed up LA CIO project, the only time he is available is Fri Feb 18th 1pm-2pm (he's booked the entire week of Feb 22nd)	Prep: for the client you choose, what is one business opportunity you have identified thus far based on your research. Explain what data sources you used to identify that business opportunity.
Weekly Application Exercise Due: Report on what you have learned about the client business thus far based on your own personal research, and the most critical question you believe needs to be answered during your client meeting, and why this question			
WEEK OF FEB 22nd	INITIAL MEETING WITH CLIENT		
9 Mon Feb 22	Be able to determine when you organization needs cross-functional vs single-function systems using DIKD framework. Front/Back Architecture for agility	Case of John Deere D(ecision)I(nformation)K(nowledge)D(ata) as a framework for deciding what systems and data you want: Single- vs Cross-functional systems and structural processes (2 of the 7S) Application to client 3rd Case Discussion: Identify a case of agile disruption in which cross-functional systems	Read: 1) Understanding D(ata)I(nformation)K(knowledge)W(isdom) hierarchy. DIKW is similar to DIKD but I prefer to combine W(isdom) with the D(ecision) needing to be made so it's not just data for data's sake. 2) Cross-functional decisionmaking PREP: For Warby Parker to decide what it could do to increase customer delight, it requires looking at it's order-to-

		were needed using the DIKD framework	delivery cross-functional process. Identify the DIKW hierarchy needed for this decision.
10 Wed Feb 24		LAB experience: SAP's Enterprise Resource Planning cross-functional system for an an order-to-cash cross-functional process Application to client	Read: Challenges of Implementing Vanilla versions of Enterprise Systems PREP: Create a table. For each hospital, indicate what parts of the ERP it had to change (customize) and what part of the organization the ERP changed
Weekly Application Assignment: Paragraph: Report on the results of your first client meeting: What did you learn about the company this week from the client about their strategic focus, competitors, and industry they are in. Did you get any ideas of your own about how you might digitally transform the company (it's early so no worries if you don't)? Is the company already democratizing programming? Does the company have an ERP?				
11 Mon Mar 1	Be able to construct a strategy for revenue generation to an organization which relies on the data it owns & has access to.	Cases of Google, Marshall, & Amazon's Data as Strategy, SaaS API Economy. Programmable Web. Data as Assets, IAAS in the cloud Application to client 4th Case Discussion: Identify a case of an organization using data and APIs as strategy.	Read 1) API economy 2) How to Craft a Modern Data and Analytics Strategy 3) Data Governance 4) Different types of cloud: https://nub8.net/different-types-of-cloud-services-available-in-the-market/ PREP: What might be the APIs behind the Marshall website? How might USC use the 2 clouds of IAAS & SAAS? Describe a data strategy that Grubhub could use
12 Wed Mar 3	Be able to create concrete Use Cases for a digital intiative so its clearer how the initiative is executed and the different value propositions for different use cases	Use the DIKD to identify concrete use cases for a data monetization digital initiative Application to client 5th Case Discussion: Describe at least 2 concrete use cases for a case of disruptive agility	Read:Data Monetization Retail case PREP: Complete the table of use cases shown in BB for Drug Co
Weekly Application Exercise: What is the Data Strategy for your client company? What DIKD use cases and governance should it have in place, if it doesn't?				
13 Mon Mar 8	Be able to design a service mesh as the "Systems" of 7S to create a Composable Enterprise Systems	Cases of Unqork, Marshall, Israel and Capital Group Service mesh, Loose Coupling, Tech Stack. Application to client	Read: 1) Innovation Insight for Packaged Business Capabilities 2) SOA 3) How Web services helped Israel PREP: What packaged business capabilities should USC consider that would help it to share data between registrar and Career Resource Center?

14 Wed Mar 10	Be able to understand Capital Group's architecture	Capital Group System Architecture offered by the Capital Group Senior Architecture Team	PREP: review the material covered in class up to this point.. Offer one question to Capital Group about how they implement something related to class material
Weekly Application exercise: Describe how the Capital Group presentation integrates the material presented in the class thus far			
15 Mon Mar 15	Be able to use Customer Journey Mapping to envision a disruptive digital business opportunity	LAB experience: CJM as Opportunities for Dreaming/Visioning/Design thinking (Rik) Application to client	Read: White Paper Customer Journey Map PREP: Prepare and list as bullets a customer journey map for Warby Parker and indicate a new envision how a service mesh might help Warby develop agile disruption to its industry.
16 Wed Mar 17	Be able to design a PAAS	LAB experience Salesforce.com's Trailblazer program as an example of a PAAS offered by Matt Wilson	Read: 1) PAAS use cases; 2) https://www.salesforce.com/paas/overview/ PREP: Register for Force.com Watch a Force video Check out Appexchange.com
Weekly Application Exercise: What does the CJM look like for your client company? What crazy ideas does this CJM suggest to you personally for a disruption to the client's industry? How is this idea one that provides continuous innovation?			
17 Mon Mar 22	Be able to design Platforms to expand an organization's ecosystem	Cases of Unqork and Hyperloop Transportation Technologies' Digital Ecosystem Platforms. Two Speakers: Christian Berrera, Head of Digital Ecosystems for Unqork, and Andrea LaMondola, COO, for Hyperloop Transportation Technoogies. Both will talk separately about the process of how they create ecosystems	Read: 1) 8 ways ecosystems supercharge….2) HTT Case PREP: Review material covered for this session. Prepare a question uniquely suited to each speaker's company and industry about developing ecosystems based on the material you read.
18 Wed Mar 24	Be able to design the technology underlying an ecosystem	Case of Enterprise Rent a Car: Designing an ecosystem: The technology and 7S needed: EDI, Standards, XML We will design an ecosystem for your clients and then share	Read: Digital Ecosystem Framework. PREP: What participants would you invite to an ecosystem you might develop for your client and why?
Weekly Application Exercise: Draw a picture of the digital ecosystem for your client indicating the value provided and received to each partner. Explain the picture in your own words			

19 Mon Mar 29	Be able to use a Machine Learning digital initiative	LAB experience with Machine Learning; guest lecture by Tianshu Sun	Read: 1) 3 types of ML, 2) Watch video on BigML 3) Register for Tensor Flow PREP:
20 Wed Mar 31	Be able to design a federated AI strategic capability	Case of DBS Bank. Preparing Platform for AI. The technology and 7S needed Given how ML works, what is your responsibility as a manager for ensuring that these tools are used ethically, responsibly, and appropriately? How should you be designing your 7S to execute on this responsibility? Application to client	Read:DBS Bank PREP: Explain how Figure 2 provides value to DBS. What are the 7S needed to make Figure 2 achieve this value?
Weekly Application Exercise: Individually Turn in a one-page executive summary of your one big idea for a digital initiative which will disrupt and spark continuous innovation for your client company. Explain how this digital initiative will disrupt and spark continuous innovation.			
21 Mon April 5	Be able to engage client with alternative ideas for a digital initiative	Client: Preparing to meet with client again: The 3 big ideas for Your client to share with each other. What still need to know from client to see if ideas are executable. We will work with you to prepare for meeting with client. (week of April 12) to share and get feedback Introduction to Blockchain if time permits	PREP: Exchange ideas with other members of the team and select only three to talk about with client. In your Prep paragraph, explain what you believe you still need to know from the client to ensure that your ideas are executable and to decide which idea you should pursue.
Wed April 7		WELLNESS DAY NO CLASS	
WEEK OF APRIL 12	MEET WITH CLIENT FOR FEEDBACK ON 3 IDEAS For those signing up for the LA CIO project, students are booked to meet with him Thursday April 15th 1-2pm		
22 Mon April 12	Be able to design a blockchain/smart contract initiative	LAB experience on Blockchain and Smart Contracts provided by Amuly Katti and Prof Kalle Case of Marijuana Sales in California: Design a Blockchain digital initiative. The 7Ss of putting in a Blockchain initiative. 6th Case Discussion: Identify a couple of use cases of organizations using Blockchain; identify the technology they use and the value proposition	Read: 1) Gartner on Blockchain 2) Common mistakes to avoid in blockchain Do some googling and marijuana and blockchain. PREP: PREP: Describe a success metric to know that you have implemented a valuable digital initiative of a smart contract for marijuana transactions in California and the 7S that need to be in place to make it work.

		Application to client	
24 Wed April 14	Be able to define value proposition of having Security as a Competitive Advantage	Cases of Target, Snapchat 7 Equifax: why security threats won't go away Application to client 7th case Discussion: Identify a case of a company prevent security breaches correctly. What are they doing right?	Read: 1) Information Security Text Chapter p. 92-111 2) Target caselet. PREP: Create a table of each row being one of 5 case examples described in the chapter of a company's security being breached: Target, Snapchat, Equifax, and two more. Then in the second column, indicate if attack was due to social engineering, equipment theft, SCADA, virus, whaling, denial of service attack, whaling, etc. Then, in the last column, indicate what company could have done to reduce the probability of a breach
Weekly Application Exercise: How could security be used as a strategic competitive advantage for a firm? Describe a specific company where consumers might care enough			
25 Mon Apr 19	Be able to design a digital initiative for security as a competitive advantage using NIST Security framework	Lecture on NIST framework for 7S Return to the 7th case Discussion to revisit what company did right to prevent security breaches	Read: Information Security Text Chapter p. 111-128 PREP: List 6 practices a company should do to (not including training since too vague) reduce probability of breaches
26 Wed April 21	MIDTERM 2		
No WEEKLY APPLICATION EXERCISE			
27 Mon April 26	Be able to design an Edge computing IOT-based digital initiative	Ted Ross, CIO of the LA City to talk about smart cities; IOT 7S practice; iOT envisioning	Gartner: 1) 10 machines which will be your customers 2) Gartner: Empowered Edge PREP: what is difference between IoT and Edge computing?
Class 28 Wed Apr 28		Presentations (6 groups of 3-4 each, 10 minutes each)	
Final Exam			Final paper due

ADDITIONAL MARSHALL GUIDELINES

Add/Drop Process

If you are absent six or more times prior to the last day to withdraw from a course with a grade of "W"), I will ask you to withdraw from the class by that date. These policies maintain professionalism and ensure a system that is fair to all students.

USC Statement on Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to

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protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles. *SCampus*, the Student Guidebook, (www.usc.edu/scampus or http://scampus.usc.edu) contains the University Student Conduct Code (see University Governance, Section 11.00), while the recommended sanctions are located in Appendix A.

Students will be referred to the Office of Student Judicial Affairs and Community Standards for further review, should there be any suspicion of academic dishonesty. The Review process can be found at: http://www.usc.edu/student-affairs/SJACS/ . Failure to adhere to the academic conduct standards set forth by these guidelines and our programs will not be tolerated by the USC Marshall community and can lead to dismissal.

Class Notes Policy

Notes or recordings made by students based on a university class or lecture may only be made for purposes of individual or group study, or for other non-commercial purposes that reasonably arise from the student's membership in the class or attendance at the university. This restriction also applies to any information distributed, disseminated or in any way displayed for use in relationship to the class, whether obtained in class, via email or otherwise on the Internet, or via any other medium. Actions in violation of this policy constitute a violation of the Student Conduct Code, and may subject an individual or entity to university discipline and/or legal proceedings.

Marshall Academic Integrity

It is a violation of USC's Academic Integrity Policies to share course materials with others without permission from the instructor. No student may record any lecture, class discussion or meeting with me without my prior express written permission. The word "record" or the act of recording includes, but is not limited to, any and all means by which sound or visual images can be stored, duplicated or retransmitted whether by an electro-mechanical, analog, digital, wire, electronic or other device or any other means of signal encoding. I reserve all rights, including copyright, to my lectures, course syllabi and related materials, including summaries, PowerPoints, prior exams, answer keys, and all supplementary course materials available to the students enrolled in my class whether posted on Blackboard or otherwise. They may not be reproduced, distributed, copied, or disseminated in any media or in any form, including but not limited to all course note-sharing websites. Exceptions are made for students who have made prior arrangements with DSP and me.

Students are expected to be familiar with USC's Academic Integrity Policies (i.e., copying, fraudulent possession of an exam, plagiarism, submission of purchased papers, submitting the same assignment to more than one instructor) and be aware of recommended sanctions (i.e., F for the course, suspension or expulsion) associated with violating such policies. See Appendix A in the SCAMPUS Guidebook for more detail

Academic Conduct:

Plagiarism – presenting someone else's ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, "Behavior Violating University Standards" https://policy.usc.edu/scampus-part-b/. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

Support Systems:

Counseling and Mental Health - (213) 740-9355 – 24/7 on call
studenthealth.usc.edu/counseling

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

National Suicide Prevention Lifeline - 1-800-273-8255 suicidepreventionlifeline.org
Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.

Relationship and Sexual Violence Prevention and Services (RSVP) - (213) 740-9355(WELL), press "0" after hours – 24/7 on call studenthealth.usc.edu/sexual-assault
Free and confidential therapy services, workshops, and training for situations related to gender-based harm.

Office of Equity and Diversity (OED)- (213) 740-5086 | Title IX – (213) 821-8298 equity.usc.edu, **or** titleix.usc.edu
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants. The university prohibits discrimination or harassment based on the following *protected characteristics*: race, color, national origin, ancestry, religion, sex, gender, gender identity, gender expression, sexual orientation, age, physical disability, medical condition, mental disability, marital status, pregnancy, veteran status, genetic information, and any other characteristic which may be specified in applicable laws and governmental regulations. The university also prohibits sexual assault, non-consensual sexual contact, sexual misconduct, intimate partner violence, stalking, malicious dissuasion, retaliation, and violation of interim measures.

Reporting Incidents of Bias or Harassment - (213) 740-5086 or (213) 821-8298
usc-advocate.symplicity.com/care_report
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office of Equity and Diversity |Title IX for appropriate investigation, supportive measures, and response.

USC Support and Advocacy - (213) 821-4710 uscsa.usc.edu
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

Diversity at USC - (213) 740-2101 diversity.usc.edu
Information on events, programs and training, the Provost's Diversity and Inclusion Council, Diversity Liaisons for each academic school, chronology, participation, and various resources for students.

USC Emergency - UPC: (213) 740-4321, HSC: (323) 442-1000 – 24/7 on call dps.usc.edu, or emergency.usc.edu
Emergency assistance and avenue to report a crime. Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

USC Department of Public Safety - UPC: (213) 740-6000, HSC: (323) 442-120 – 24/7 on call
dps.usc.edu
Non-emergency assistance or information.

Critical Thinking Rubric for Cases

Clarity	• Could you elaborate further? • Could you give me an example? • Could you illustrate what you mean?
Accuracy	• How could we check on that? • How could we find out if that's true? • How could we verify or test that?
Precision	• Could you be more specific? • Could you give me more details? • Could you be more exact?
Relevance	• How does that relate to the problem? • How does that bear on the question? • How does that help us with the issue?
Depth	• What factors make this a difficult problem? • What are some of the complexities of this question? • What are some of the difficulties we need to deal with?
Breadth	• Do we need to look at this from another perspective? • Do we need to consider another point of view? • Do we need to look at this in other ways?

Logic	• Does all this make sense together? • Does your first paragraph fit with your last? • Does what you say follow from the evidence?
Significance	• Is this the most important problem to consider? • Is this the central idea to focus on? • Which of these facts are most important?
Fairness	• Do I have any vested interest in this issue? • Am I sympathetically representing the viewpoints of others?