Service Science
UniMiB
F9101Q022

Course Presentation

roberto.boselli@unimib.it
mirko.cesarini@unimib.it

Road Map

- Two Paths (different but very related)
  - Service Science
    - Theoretical approach
    - From products to (innovative) services
    - Holistic and ex-post approach
  - Service Design - Lean Start-up
    - Ex-ante approach (how to make stuffs happen)
    - Focus on time constraint and feasibility
    - Real life experience
- Final Lab/Workshop (connection point)

Service Science Path, Details

1. SSME: service characteristics, value co-creation, service systems, design models, service productivity

2. KIBS and Smart services

3. Business Models: servitization, new service dominant logic

4. IoT and Industry 4.0

5. Open innovation, crowdsourcing

6. Social CRM, social customer service

Service Design - Lean Start-up Path, Details

1. Service Design in Innovative scenarios
2. Traditional Management Approach Issues
3. Validated Learning
4. Measuring Knowledge Gains
5. Pivot or Persevere
6. Sprint approach
7. Funding

Final Lab/Workshop

- Designing/Creating a new
  - Service
  - Start-up
  - …
- Business Model Canvas

Evaluation

- Exams
  - Oral exam
  - No differences for attending and non-attending students
- A student, in agreement with the teacher, can replace a part of the oral exam with the discussion of a project. The project must be agreed in advance with the teacher
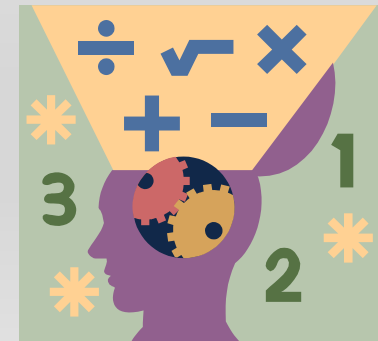
Service Science

What is SSME?

- SSME is the application of
  - Scientific, management, and engineering disciplines to tasks that one organization beneficially performs for and with another (i.e., services).
- SSME goal
  - Make productivity, quality, performance, compliance, growth, and learning improvements more predictable in (co-production) relationships.
- SSME is the study of service systems
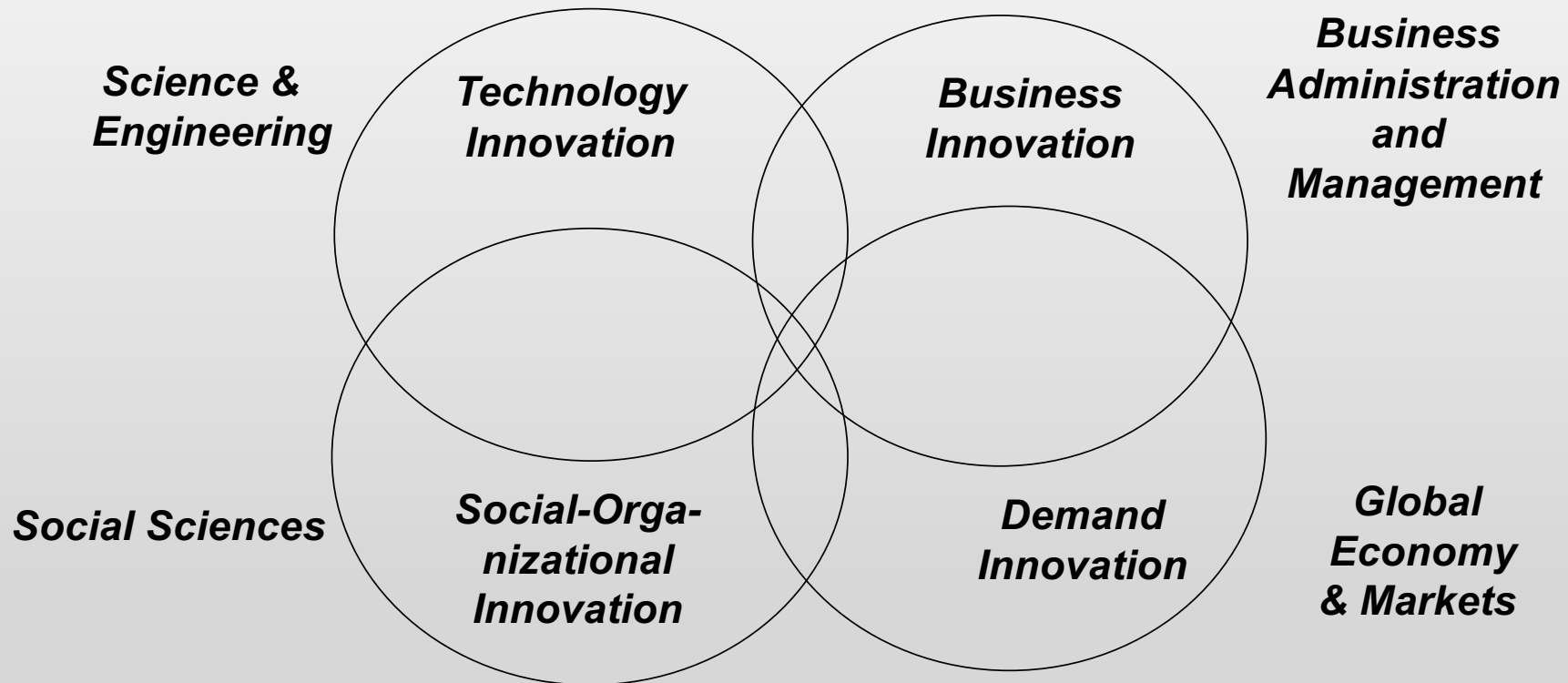 - Aimed at improving service systems

Why is SSME important?

- The world is becoming networked, dependent on information and information technology

- Science will provide tools and methods to study services and develop solutions to problems that span multiple disciplines

- Graduates may be solution designers, consultants, engineers, scientists, and managers who will grow into becoming entrepreneurs, executives, researchers, and practitioners

Service Innovation is inherently Multidisciplinary

Knowledge sources driving service innovations…

Science & Engineering

Business Administration and Management

Technology Innovation

Business Innovation

Social Sciences

Social-Orga-nizational Innovation

Demand Innovation

Global Economy & Markets

SSME = Service Sciences, Management, and Engineering

(fonte: IBM Almaden Services Research, SSME Course 2006-07)

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What are some everyday services?

- **Transportation**
  - Trains, planes, delivery
- **Hospitality**
  - Hotels, restaurants
- **Infrastructure**
  - Communications, electricity, water
- **Government**
  - Police, fire, mail

- **Financial**
  - Banking, investments
- **Entertainment**
  - Television, movies, concerts
- **Professional Services**
  - Doctors, lawyers, skilled craftspeople, project management
- …

Digital Services

- Dominate communication, online shopping, payments, etc.
- More and more services are offered digitally to cut cost and increase efficiency of distribution
- Services marketing research focus more attention to this area with high growth potential for businesses!
- ...but is there *anything special* about digital services compared to traditional services?

Service Design

What have in common ...

- Service Design
- Service Science
- Start-up(s)
- Data Science/Analysis

Case: Suppose you are planning a new Start-up

- On-line Grocery Shopping and Delivery
  - Idea: online intermediation among existing Businesses
    - Similar to Expedia.com/Bookings.com/Hotels for hotels
  - Focus: mixing products by different groceries looking for best prices
- You convinced an investor …
- Try to sketch out a road-map to implement this business idea
  - 10 minutes open discussion
  - Focus on Value Proposition:
    - which one of our customer's problems are we helping to solve
    - which customer needs are we satisfying?
    - Are the customers willing to pay for it? How much?

Discussion Summary

- To be written after Discussion

- (Possible example of) Discussion Topics
  - Catalogue Scraping vs direct merchant data access
  - Delivery
  - Payment

Assumption Highlights

- What assumptions your Value Proposition is based on?
- Maybe … (next topics written before discussion ☺)
  - Cheap prices
  - Customers are not willing to pay for a service … but they may accept advertisements
 - …

The Value of Knowledge

- Suppose you work for 1 year on a start-up implementing this business idea
- Then, you go operative (out of stealth mode)
- You realize something is not working as expected
- At the very end you talk with a business expert
  - Expert: have you checked the grocery on-line prices? Have you compared them with the store prices?
  - You ….
  - Expert: on-line prices are higher, on-line customers do not care (a lot) about prices, they do care about easiness of service
- You've just realized that you wasted 1 year!

Problem Analysis

- What was wrong?
- Let's try to learn! Please …
    - … try to figure out how to discover the issue without prior knowledge
    - … not an ex-post analysis, suppose you don't already know the end
- The problem was about knowledge acquisition, which is a relevant problem for both service design and start-ups
- Was the problem *only* related to …
    - Strategy?
    - Management?
    - Design/implementation?
- There were issues in each areas
- … but to solve them you need a holistic approach …

IMVU Case

- IMVU The world's largest avatar-based social network
  (… this is what they claim on their web site)

- https://about.imvu.com/
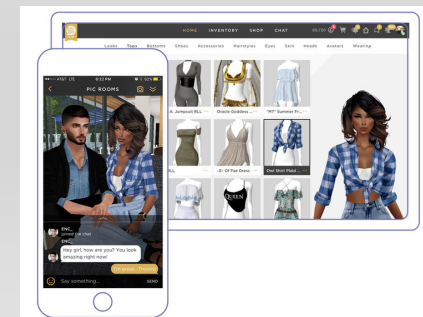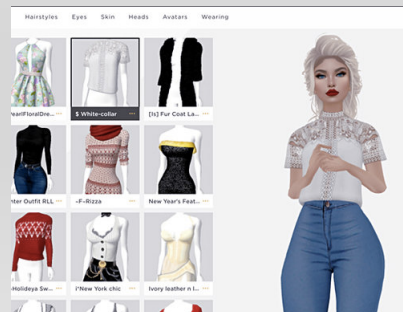
IMVU Case (2)

- "… We build a *minimum viable product*",
  - an **early product** that is **terrible**, full of bugs and crash-your-computer-yes-really stability problems
  - Then we **ship** it **to customers** way before it's ready
  - And we **charge money** for it

IMVU Case (3)

- After securing initial customers,
  - we change the product constantly shipping (daily) new versions of our product
  - We really did have customers (true visionary early adopters) and we asked for their feedback.
  - But we did not do what they said. We viewed their input as a source of information
  - In fact, we were much more likely **to run experiments** than to cater our customer whims.

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Differences?

- "… the approach we pioneered at IMVU has become the basis for a new movement of entrepreneurs around the world". Ries, Eric. The Lean Startup. The Crown Publishing Group.

- If you want to learn how to turn Case (1) into a success Case like IMVU …

Welcome …

- … to this **Service Science & Design course**!
- Course important aspect
  - Focus on uncertain scenarios
    - Mature firms creating (very) new services
    - Start-ups
  - Focus on new services related to data
  - … we hope you will enjoy!

Why Service Design Matters …

- … to data scientists?
- Introducing data science into existing organizations/processes/businesses is very similar to creating a new services or working on a start-up
  - You have a "new product"
    - to be continuously improved
  - You have to convince customers to "purchase"
    - Business Intelligence success criteria: is XYZ used by final users?
  - You work in a very uncertain scenario
    - What do my customers want?
    - Do the analysis fit their needs?
  - You have competitors … (e.g., your old school colleagues)
  - You have limited resources

Entrepreneurship? Why not!

- New technologies and Data Science open thousands of entrepreneurial / service development opportunities

- Bring new ideas to the market is not straightforward

- A brilliant idea, a smart team, adequate funding are not enough

- Service design methodologies are very important

Service Science & Start-up(s)???

- How do Service Science and Start-up(s) fit together?
  - A start-up is not only creativity or ... magic
  - Start-up success is not a consequence of **good genes** or being in the **right place** at the **right time** ... Startup **success can be engineered** by following the right process, which means it can be learned, which means it can be taught. Source: Ries, Eric. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. The Crown Publishing Group.
- There are a lot of similarities among service and start-up design and management
- We will explore these similarities in the course