User Experience Design I
(Interaction Design)

Service Design Beyond the Desktop
Transition Lecture to the Course UX3
Two fundamental questions...
What is a product?
What is a service?
What do they have in common?
SERVICE FIRST, PRODUCTS SECOND

Product-dominant logic
- 1950s

Transition
1950–2000+

Service-dominant logic
today & tomorrow

Quelle: SinnerSchrader
A new marketing logic.

The day before yesterday

Yesterday

Today

FOCUS: SALES

FOCUS: ADVERTISING

FOCUS: PRODUCTS & SERVICES

Quelle: SinnerSchrader
IDENTIFY A RELEVANT INSIGHT

People don't want to buy and own cars, but drive and experience integrated mobility.
CREATE A DIGITAL PLATFORM

Marketing built-in

Beautiful & easy to use

Data-driven

Ubiquitous Touchpoints

Quelle: SinnerSchrader
What if someone is changing the game?
Disruptive Innovation

…an innovation that creates a new market and value network and eventually **disrupts an existing market** and value network, displacing established market leading firms, products, services and alliances…

Clayton M. Christensen
Designing technology enabled services is nothing new…
Telephone Service
Service Design

ensures that all parts work together throughout the customer journey. A customer journey describes the way from an entry point to an exit point of a service.

source: http://www.livework.co.uk/
What is a service?

-a chain of activities that form a process and have value for the end user (customer journey)

-services affect our daily qualify of life (user experience)

-service design is somehow similar to systems design (service blueprints)

-service design focuses on the entire system of use (via touchpoints)
Some Key-Characteristics of Service:

1. **Intangible**

Although services are often populated with objects, the service itself is ephemeral, customers can´t see or touch the service itself-only the physical embodiments.

2. **Provider ownership**

Customers who use a service may come away from it with an owned object such as a cup of coffee or used car, but they don´t own the service itself.

3. **Co-created**

Services aren´t made by the service provider alone; they require the involvement and engagement of the customers as well.

4. **Flexible**

Each new situation or customer requires that the service adapt to it.

source: [5]

http://www.flickr.com/photos/wensi/320468481/sizes/l/in/photostream/
Service Design....

-can lead to environmentally friendly solutions. (Car sharing service)
-can boost good business models: well designed and executed services will increase sales and helping tying users to a specific brand

The introduction of new technology (IoT, Sensors, AR, VR, etc.) makes this discipline highly relevant for UX/interaction designers/software engineers as their expertise involves bridging the gap between technology and people.

Applying UX/interaction design techniques to service design can lead to richer experiences.
Shelley Evenson
-teaches service and interaction design at CMU, Pittsburgh
-Co-founder of seeSpace and chief experience scientist for Scient
Service as design triangle

- Service provider
- Brand relationship
- People (user)
- Meta design
- Service medium
- Design

A 'service as design' triangle

interaction10
Service design can involve

**person2person interaction** = check in desk

**person2machine interaction** = self check in kiosk

**machine2machine interaction** = airport baggage system
Service as Design Triangle:

- **Service Provider**
- **People (User)**
- **Service Medium**

- Brand relationship
- Meta design
- Design

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Service design addresses the functionality and form of the service medium. The aim is to ensure that service interfaces are usable and useful, effective and efficient, desirable and differentiated from the provider and the persons point of view.

after Birgit Mager
Prototyping Digital Service Design:

#1 Experience Blueprints
#2 Video-prototypes and
#3 IoT Prototyping Wall
User Centered Design Process
**GRAPHIC DESIGN**

2D

**PRODUCT DESIGN**

3D
+Z-axis (spatial depth)

**INTERACTION DESIGN**

4D
+T-axis (temporal dimension)

**SERVICE DESIGN**

5D
+W-axis (multi-local simultaneity)

Model: Benjamin N.N. Schulz; Icons: Dima Yagnyuk, Daphne Espinosa, George Agpoon / The Noun Project
UX Tool #1: Experience Blueprints

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What is an Experience Blueprint?

An experience blueprint is a diagrammatic representation of the user journey that maps processes, touch points, people and support activities involved in creating the experience.

It helps in visualising the correlation between the front stage (user end) and the back stage (provider end). It also helps to interconnect the tangible elements with intangible and deal with them more objectively.
History and Use

Blueprinting services was pioneered by G. Lynn Shostack, former VP of Citibank, in the 1980’s as a way to plan the cost and revenue associated with operating a service.

Ever since it has been interpreted in many different ways and used by many leading design and management consultancies.

source: [2]
Service Design Wording

- **Use Case** > A set of user actions that leads to a particular goal
- **Touchpoint** > Points of Interactions with a service
- **Front Stage** > Everything that is visible to the user
- **Back Stage** > Everything that is visible to the provider
- **Blueprint** > Visualisation of Touchpoints and Use Cases
- **Stakeholder** > External Service Partner

source: [2]
Definition

In the British Standard for Service Design (BS 7000-3, BS 7000-10, BS EN ISO 9000), blueprinting is described as the mapping out of a service journey identifying the processes that constitute the service, isolating possible fail points and establishing the time frame for the journey.

We interpret this in a much broader sense. We look at it as an experience blueprint which covers both the service elements as well as the product interactions.

source: [2]
Front Stage

User Touch points

User Journey

Entry

Time

Provider Touch points

Exit

Support Processes

Back Stage

source: [2]
# UX Blueprint Template

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Example: FoodSense® Connected Kitchen
Professional Foodservice Equipment
Ideation: Sketching out Experience Blueprint(s)
Reagieren auf Information zu Events
Ofen mit zusätzlichen Produkten bestücken
Werbung an digitale Werbeflächen in unmittelbarer Nähe senden (Guerilla-Kurzwerbe-Aktion/Promo-Aktionen)
Sich über neue Events informieren
Information erfassen (Endkunde)
Vom Smartphone in den Shop leiten lassen (Endkunde)
Mit Eintrittskarte Rabatt erhalten (Endkunde)
Produkte verkaufen und über das Kassensystem registrieren
Bargeldlos bezahlen (z.B. per Smartphone / NFC)
Auswertung von Kosten und Nutzen der Kurzwerbe-Aktion mit Partnern
Planung

Daten verarbeiten und Bereitstellen
Über erhöhte Nachfrage informieren
Standortermittlung

Ofen vorheizen (automatisch)
Rezepte vorschlagen (passend zu Event / Saison / Tageszeit / Wetter)
Werbetext generieren (passend zum Rezept / Backgut)
Standortvorschläge digitaler City-Light-Poster
Temporäre Werbung platziern
Neue Events anzeigen

Daten verarbeiten
Abrechnung
Daten verarbeiten
Umsätze / Werbekosten vergleichen

Daten verarbeiten und grafisch aufbereiten (Dashboard)
Werbekosten ("ABO Sekunden-Ad") mit Partner abrechnen auf Grundlage der zusätzlich verkauften Produkte

EVENTIM
STROER
PAYPAL
WETTER.DE
MVV / ÖPNV
APPLE / GOOGLE MAPS
SAP
TELEKOM
PAASPHERE
BACKOFENHERSTELLER

Selection: Refined Experience Blueprint
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UX Tool #2: Video-Prototypes
Why Video-Prototypes?

Representing complex relationships, new behaviours and attitudes are an integral part of user experience design.

These can be represented through many means including sketching and making physical prototypes.

However, capturing a journey over time and at multiple locations requires a linear medium like video.
Example: 2 Video-Prototypes for IoT Kitchen Services
WARNING
CLEANING NEEDED!
Proceed to first cleaning step
UX Tool #3: IoT Prototyping Wall
Sketching in Technology: IoT Prototyping Wall
Acting Out a Service (Content of UX3)

Dealership

Work place

Call centre

On-line support

Home

source: [2]
References (Books):

UX1 Quiz
Quiz Beyond the Desktop:

What is a “Shareable Interface”?
(1) Shareable interfaces

• Shareable interfaces are designed for more than one person to use
  • provide multiple inputs and sometimes allow simultaneous input by co-located groups
  • large wall displays where people use their own pens or gestures
  • interactive tabletops where small groups interact with information using their fingertips

source: [8]
Saint Luke's Hospital of Kansas City

Advantages

• Provide a large interactional space that can support flexible group working
• Can be used by multiple users
  • can point to and touch information being displayed
  • simultaneously view the interactions and have same shared point of reference as others
• Can support more equitable participation compared with groups using single Laptops/Mobile Devices

source: [8]
Summary: Which interface?

• Will depend on task, users, context, cost, robustness, etc.

• Much system development will continue for the PC platform, using advanced GUIs, in the form of multimedia, web-based interfaces, and virtual 3D environments
  • Mobile interfaces have come of age
  • Increasing number of applications and software toolkits available
  • Speech interfaces also being used much more for a variety of commercial services
  • Appliance and vehicle interfaces becoming more important
  • Shareable and tangible interfaces entering our homes, schools, public places, and workplaces

source: [8]
Quiz Simplicity and Design:

What are the “10 Principles of good design” by Dieter Rahms?
Dieter Rahms
Ten Principles: Good design…

1. **is innovative** – The possibilities for progression are not, by any means, exhausted. Technological development is always offering new opportunities for original designs. But imaginative design always develops in tandem with improving technology, and can never be an end in itself.

2. **makes a product useful** – A product is bought to be used. It has to satisfy not only functional, but also psychological and aesthetic criteria. Good design emphasizes the usefulness of a product whilst disregarding anything that could detract from it.

3. **is aesthetic** – The aesthetic quality of a product is integral to its usefulness because products are used every day and have an effect on people and their well-being. Only well-executed objects can be beautiful.

4. **makes a product understandable** – It clarifies the product’s structure. Better still, it can make the product clearly express its function by making use of the user's intuition. At best, it is self-explanatory.

5. **is unobtrusive** – Products fulfilling a purpose are like tools. They are neither decorative objects nor works of art. Their design should therefore be both neutral and restrained, to leave room for the user's self-expression.

6. **is honest** – It does not make a product appear more innovative, powerful or valuable than it really is. It does not attempt to manipulate the consumer with promises that cannot be kept.

7. **is long-lasting** – It avoids being fashionable and therefore never appears antiquated. Unlike fashionable design, it lasts many years – even in today's throwaway society.

8. **is thorough down to the last detail** – Nothing must be arbitrary or left to chance. Care and accuracy in the design process show respect towards the consumer.

9. **is environmentally friendly** – Design makes an important contribution to the preservation of the environment. It conserves resources and minimizes physical and visual pollution throughout the lifecycle of the product.

10. **is as little design as possible** – Less, but better – because it concentrates on the essential aspects, and the products are not burdened with non-essentials. Back to purity, back to simplicity.

Quiz Simplicity and Design:

What is a “Visual Constraint”?
Constraint
Constraints are closely related to real affordances: For example, it is not possible to move the cursor outside the screen: this is a physical constraint.

Locking the mouse button when clicking is not desired would be a physical constraint. Restricting the cursor to exist only in screen locations where its position is meaningful is a physical constraint.
Flip Horizontally
Flip Vertically

Lock
Unlock

Group
Ungroup

Visual Constraint

source: [2]
Quiz Simplicity and Design:

What is the principle of “Reduction” in interface design?
Reduction through successive refinement is the only path to simplicity
Reduction means that you eliminate whatever isn’t necessary. This technique has three steps: (1) decide what essentially needs to be conveyed by the design; (2) critically examine every element (feature, label, UI widget, etc.) to decide whether it serves an essential purpose; (3) remove it if it isn’t essential.
Quiz Service Design:

What is “Disruptive Innovation”?
Disruptive Innovation

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Clayton M. Christensen
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What is a “Customer/User Journey” in the context of UX?
Service Design

ensures that all parts work together throughout the **customer journey**

*a customer journey describes the way from an entry point to an exit point of a service*

source: [http://www.livework.co.uk/](http://www.livework.co.uk/)
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What characterises “Digital Services”?
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source: [2]
<table>
<thead>
<tr>
<th>Stakeholder 1</th>
<th>Stakeholder 2</th>
<th>Stakeholder 3</th>
<th>Stakeholder 4</th>
<th>Stakeholder 5</th>
<th>Stakeholder 6</th>
</tr>
</thead>
</table>

**UX Blueprint Template**

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