

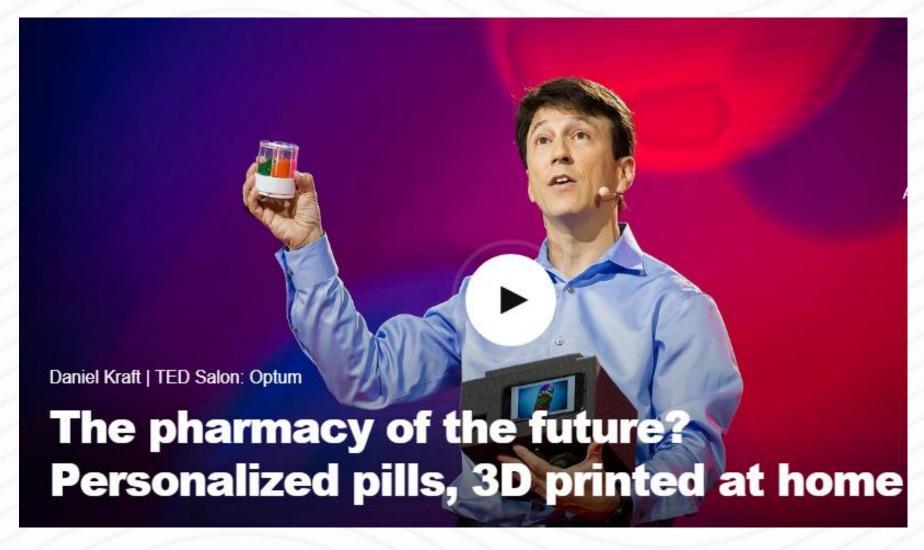
Design

Thinking

Tehran University of Medical Science



Let's start with one of your colleagues





Lean Design Founders



Nikoo Javidpour
When it comes to creation, She is always in!

Experience Fields:

Developing Startups, Service Design, Management consulting, HR, Ergonomics, Systems& methods, **Systemic Thinking** Behavioral Design Enthusiast MBA & Industrial Engineering background



Shiva Salehnia
"Ruins with one hand, and builds with another!"

Experience Fields:

Strategy, Innovation, Service Design Research, Systemic Thinking Enthusiast for Interaction Design and Innovation strategy MBA & Industrial Engineering background

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Who are Lean Designers?

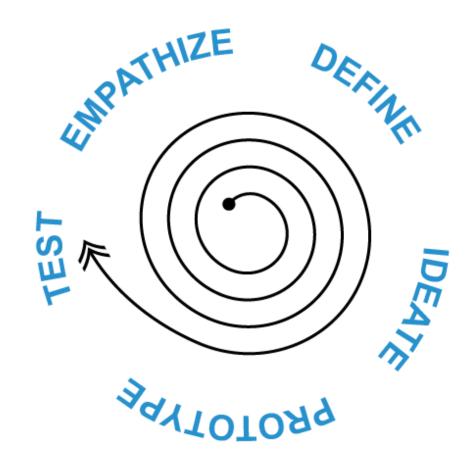
We are service designers who facilitate design teams to make a holistic, tailor-made, Human Centered, sustainable solutions for problems.

Categories:

Service Design Experience Design

Brand Experience Design

Innovation Ecosystem Design





How?

Outside-In viewpoint

Design Thinking

Lean Startup Logic

Service Dominance Logic

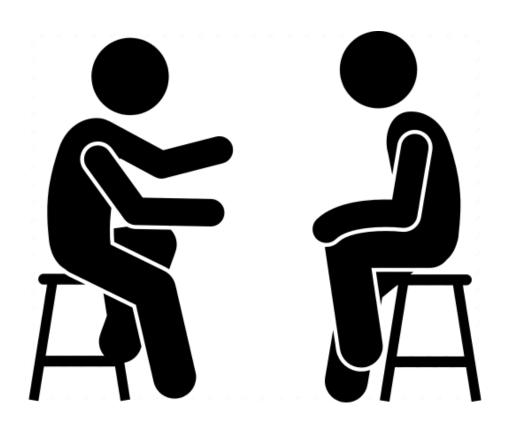
- Service driven economy
- Product-service systems
- The experience economy
- Value co-creation



Just 8 Minutes!

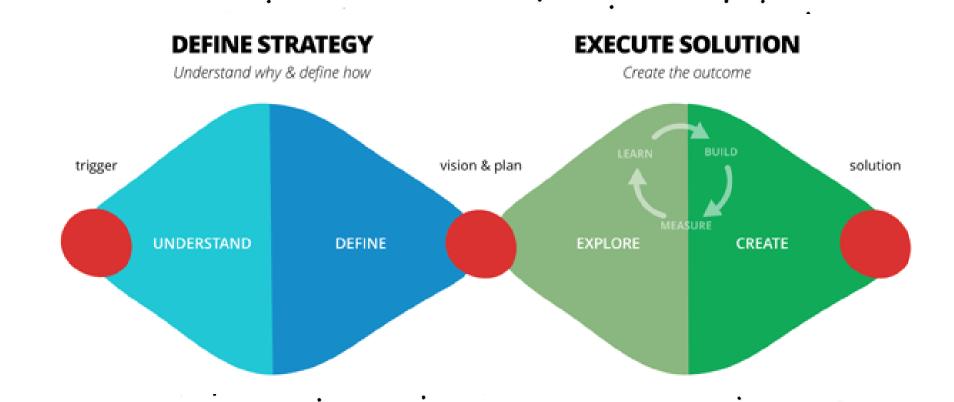
Person 1: Persist on not going to hospital when you should do

Person 2: Try to convince person #1 to go hospital





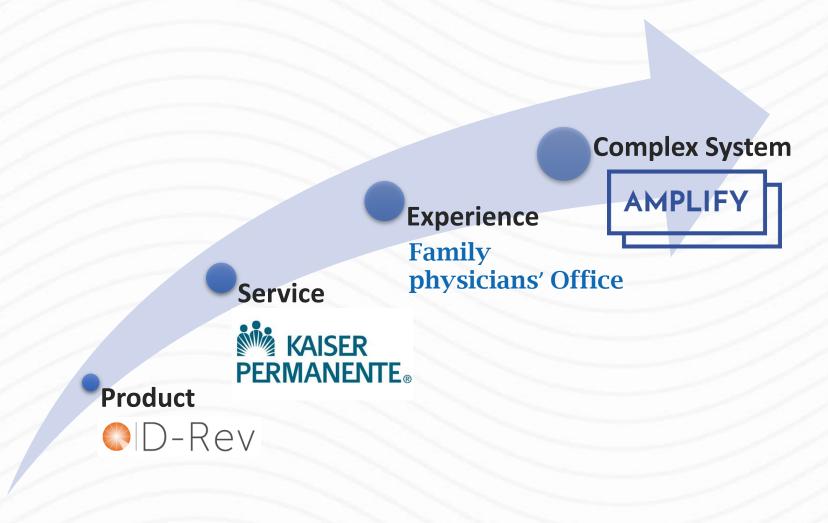
What needs do you discover?



Can you explain your problem solving method?



Examples of DT Solutions in Healthcare







Project Goal

Develop a phototherapy device with LEDs instead of CFLs (that are more efficient and do not require costly replacement), and make the device affordable for medical providers across the globe.

Time

2 years

Team

7 D-Rev company designers. Partnering with Phoenix Medical Systems



Visit hospitals and interview any doctor to understand the pain points.
Understand the systems that prevent usual solutions

Empathize Define

Affordable LED in lowincome markets Doctors prefer their devices to look the same but more cost effective and durable

Ideate

Once they'd arrived at the right design, D-Rev partnered with Phoenix Medical Systems that trained doctors on the treatment



Implement



Rapid prototyping, building a handful of iterations for feedback from users (ranging from nurses to patients)

















red<mark>dot</mark> design award winner 2017



Service Design



Project Goal

Hospitalization in the intensive care unit can be a stressful time for patients and their family members. Patients' family members often have difficulty processing all of the information that is given to them.

Time

1.5 years

Team

An intensivist physician-researcher, a clinical nurse specialist and consultant, a project manager, an Innovation Fund for Technology team leader, and a designer with expertise in user experience.



Service Design

Family members do not are unfamiliar with ICU tech. Lack of follow-up and longterm side effects occur after the episode of care is over,...

Issues Observed From Feedback and Proposed **Improvements**

Implement

Empathize

The application needed to be specifically tailored to assist ICU patients in their recovery process after discharge.

+ Functional Requirements

Ideate

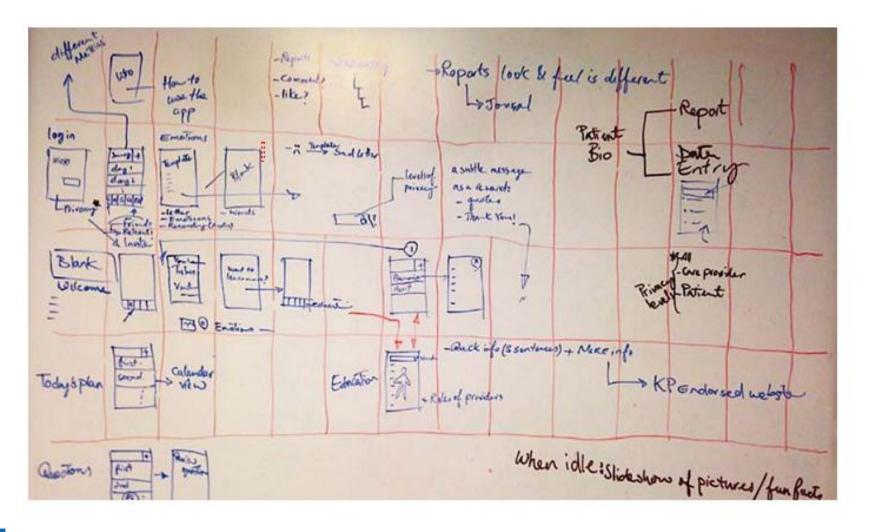
Define

Rapid prototyping & Presenting to key stakeholder (Staff, Patients, & Family) (1) emotional updates, (2) health updates, (3) goals of care, and (4) questions for clinicians.

More alignment with the workflow in the ICU Version 2 included menus that provided information about sedation in the ICU. **Prototype**



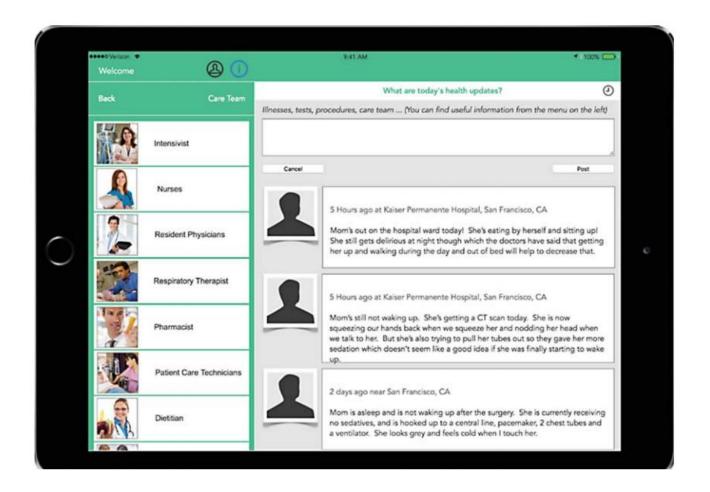
Ideate







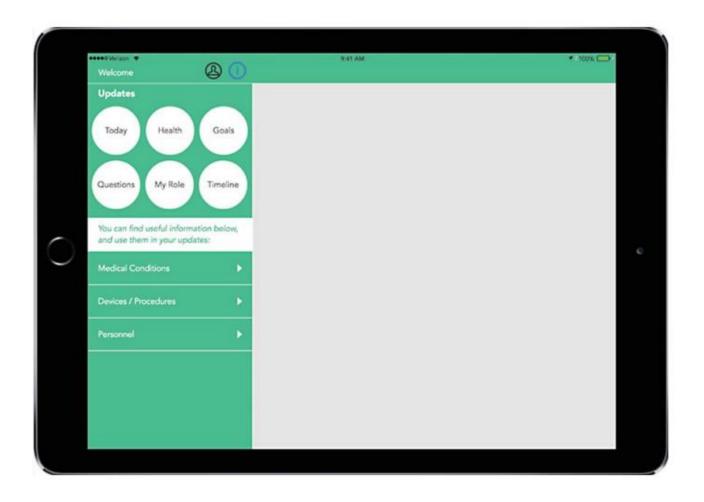
Prototype







Implement







Service Design





Experience Design

Family physicians' Office

Project Goal

Examining the Integration of Playful Aspects into the Experience of Waiting at Family Physicians' Offices. In Germany, waiting at a family physician's office is not usually experienced in cases of serious health problems. So the atmosphere is calm and boring.

Time

6 months

Team

1 designer, 6 office managers, many patients

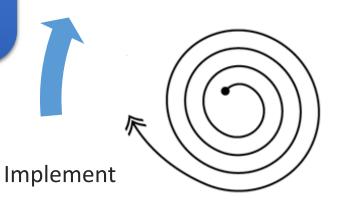


Experience Design

How participant:

Define waiting, Spend their waiting time at a medical office, Perceive the atmosphere, What they do instead, Their hobbies.,...

Empathize Define





Waiting and being passive,
Waiting as a barrier to
productivity, Waiting and
worry, Waiting and
expectations, ... for different
PERSONAS

Providing a collection of familiar board games for groups of people,
Providing a more cocreative playful experience in which patients and the physician's office staff discuss, ...

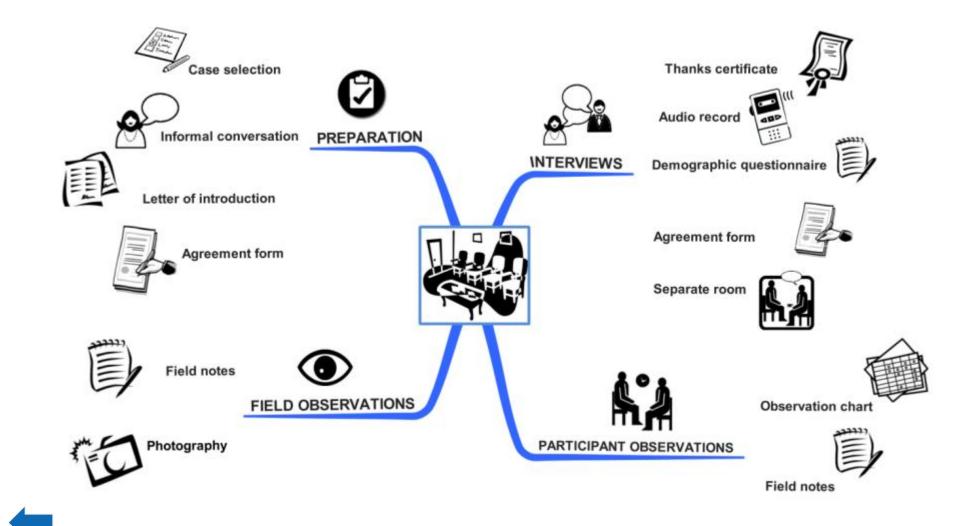
Approach to implement & Challenges

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Ideate



Empathize





Define

The **busy** group: I can wait if I can engage in some serious activity







The sensitive group: I can wait if I am far away from anything related to medical issues



The impatient group
I cannot wait under any circumstances!



wait if provided with some physical or mental challenge

I could wait if...



The **neutral** group

I have to wait so I do!





Ideate





OASIS (remove the annoying elements)			
Playful Pastime			
Mental Stimulation			
Co creating with staff			

For

Sensitive & Impatient	
Bored	
Sensitive	
Neutral	







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Ready to Protoype

Experience component	Playful active waiting			
Origin Essence Purpose Design challenge	Going beyond the customers' expectations: The desire for play in customers' reactions Integrating more engaging pastimes → Allowing for physical movement and more active engagement → Attracting people's concentration in the course of play to divert their concentration away from the depressing ambience → Transforming idle waiting time into pleasant leisure time Creating engaging activities → A collection of familiar and common play objects. for the eyes, the hands and They provide topics for conversation and facilitate the mind, and facilitating interaction among patients.			
	free-play activities → Meaningful play challenges and rules for playful movement in the particular waiting environment. → A co-creative playful experience for patients and the service staff to discuss and decide on play activities to enrich the waiting time. → A flexible approach allowing for personal preferences. Inviting individuals to bring their favorite hobby items with them to the waiting room.			
Playful design approach	 → Integrating more comprehensive movement playfulness into the customer experience → Directing people's attention toward hidden leisure time in serious activities and encouraging them to improve their experience by making use of the opportunity to consciously enjoy a break. 			





Design for Complexity



Project Goal

How might we get products to people without generating plastics waste to build a framework for an economy that is restorative and regenerative by design.

Time

Competition among 65 events in 22 countries and then 1 year acceleration

Team

The Ellen MacArthur Foundation & Open IDEO. Partnering business (companies like PepsiCo, Nestle, Veolia, and British retailer Marks & Spencer, as well as plastics manufacturers, recycling experts, and smaller-scale entrepreneurs and individuals from all over the world), government and academia



Design for Complexity

Research: 317 contributions

What techs, capacities, behaviors, needs & drives we observe to reduce plastic waste

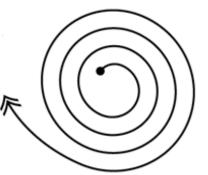
Empathize

Define

Define: 618 ideas
I am a chemist & food
scientist that like to realize

bioplastic

Implement



Ideate

Concepts: 618 final ideas put the sachet in my drinking bottle and drank it when I was on the way

Implement: Announcing 16 ideas & accelerate (ongoing) Piloting in Indonesia, bioplastic based on seaweed material

Prototype



Prototype: 101 final ideas



EVOWARE Case



This edible bioplastic is applicable for sugar, coffee , seasoning sachet, burger/rice wrap and not limited to semisolid and liquid packaging like shampoo/lotion sachet



















EVOWARE Business Model

1. Manufacturing: fixed and variable cost; raw material cost, direct labor

2. Operational cost: salaries, sales and marketing, legal, certification cost,

Cost efficient management strategies by using lean management team, automatic control system and procuring seaweed in bulk/per container

Key Partners - Seaweed cooperatives and farmers - Networks for global trading - Alliance with ecoconcern companies, NGOs, governments& influencers	Key Activities - Marketing and sales - Logistic and distribution - Manufacturing/Production - Purchasing - Research and Development - Others: financial, legal and human resources	We provide small format packaging with features: a. safe for environment and all living things b. 100% biodegradable / edible	Offline community building and support Return policy Customer service for feedbacks and complaints On time delivery, transparent process,	Customer Segments 1. F&B sectors Such as: instant & packaged food, and beverage powder industry 2. Hospitality Such as: Hotel, Restaurant, Airlines, Cruises and Café 3. Personal care industry Such as: cosmetic sachets, toiletries, etc
	Key Resources - Tangible asset: the whole factory - Intangible asset: patent, trademark, halal certificate. - Raw material: seaweed			



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Product sales
 Patent royalty

- Transfer technology



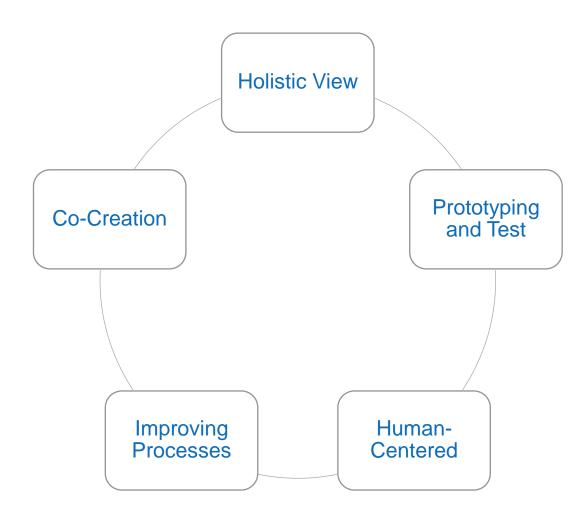
Whereas scientists investigate today to discover explanations for what already is, Designers invent tomorrow-They create something that isn't!

To get to growth, we have to create something in the future that is different from the present.

- Designing for Growth Jean Liedtka & Tim Ogilvie

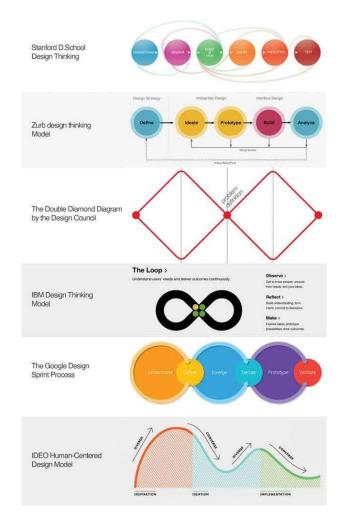


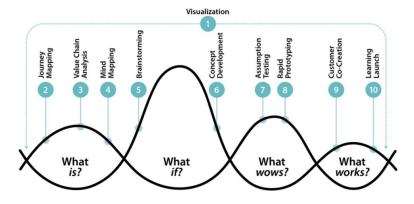
Design thinking principles





Design Thinking Models



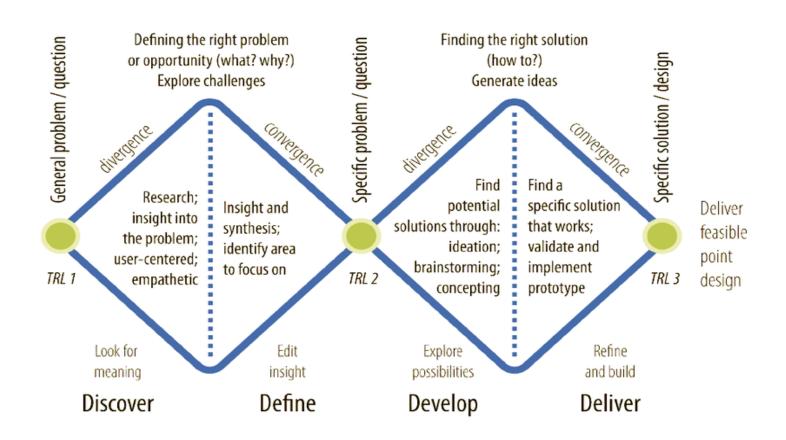


Jeanne Liedtka's design thinking model





Double Diamond





Do and Don'ts



Which problems are most likely to be solved by this

Designers interactions with organizations





Before next inspiring TED talk video

What would be Your solution?

Let's practice for 15 Minutes



And Let's end with one of your colleagues





Resources

- A. Scruth, Elizabeth; Oveisi, Nazanin; Liu, Vincent, "Innovation and Technology:Electronic Intensive Care Unit Diaries", 2017, AACN Advanced Critical Care, Volume 28, Number 2, pp. 191-199
- Khazaei, Mitra; "Playful Customer Experience: Examining the Integration of Playful Aspects Into The Experience of Waiting at Family Physicians' Offices", 2014, A Dissertation Submitted To The Faculty Of Art And Design Of The Bergische Universitat Wuppertal In Partial Fulfillment Of The Requirements For The Degree Of Doctor Of Philosophy
- https://www.openideo.com/amplify
- https://www.openideo.com/case-studies/plastic-waste-solutions-in-circulardesign-challenge
- http://www.designkit.org/case-studies/5
- http://www.linetamericas.com/en-US/news/news-and-press-releases/2017/prestigious-design-award-for-ave2
- http://www.ave2.eu/



Related Resources (to study more)

- https://www.ideo.com/work/health-and-wellness
- Field Guide to Human-Centered Design (IDEO)
- https://www.youtube.com/watch?v=OC7xk4avFq0
- https://wedesignlean.com/blog/
- https://www.aparat.com/Digargooni



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