Intro to UX

Agenda

Lecture

Recap

- Final project – Jak budete hodnoceni

What is UX

- What is covered under UX umbrella

Design processes – Jak se dá postupovat

- Design thinking – emphasize, define, ideate, prototype, test (Illustrated on a sample project)

Workshop

Form teams of 2

Define your project – Co chceme dělat?

- Select topics
- Select target group – Pro koho to chceme dělat?
- Formulate POV statements

Communication tools

→ **Gitlab**
https://gitlab.fi.muni.cz/qhala/dashboard-PV278

→ **Slack** (preferred)
fi-muni-rejnoci.slack.com
When you log in - say hi to #general

→ **Email**
khala@redhat.com
msviriko@redhat.com
lenka.sakalosova@notino.com

Final project – UX

UX part (50%)

- Define a problem
- Understanding your user (personas, storyboard)
- Sketches and prototypes
- Usability testing feedback captured and incorporated
- Creativity

Final project – UI

UI part (50%)

- ‣ Landing page
- ‣ Dashboard
- ‣ Chart using some chart library
- ‣ Table – static
- ‣ Table – interactive
- ‣ Entity detail
- ‣ User detail

Red Hat

Brainstorming: Využitia predmetu (90 s)

Final project variables

Meteorological information of czech republic past 40 years

- ▸ Temperature - average, minimum, maximum
- ▸ Sun - precipitation, snow, sunshine
- ▸ Air - wind speed, air pressure, air mois

Choose interesting and relevant date or date range

- ▸ Eg: date of birth (how much sunshine was in history at this date), temperature change in your life or someone famous

Data are not 100% clean and up to date

Odkazy na dokumentáciu dát
https://app.swaggerhub.com/home?owner=karelhala a potom odkaz na "referenčnú" aplikáciu https://spotless-grass.surge.sh/

Brainstorming: Ako počasie ovplyvňuje život ľudí v Česku?

Samostatná práca

1. Vymyslite, čo najviac rôznych spôsobov

3 min

2. Prezentujte:

- Najhodnotnejší
- Najhlúpejší

Red Hat

Lecture: Intro to UX

- What is UX?
- How to UX? (Design Thinking)

Red Hat

User experience discipline

"User experience is a discipline focused on designing the end-to-end experience of a certain product." [or service, or system, etc.]

Red Hat

UX

User experience is the way a person feels about using a product, system or service.

Red Hat

The DESIGN of EVERYDAY THINGS

DON NORMAN

"Good design is actually a lot harder to **notice than poor design**, in part because good designs fit our needs so well that the design is invisible, serving us without drawing attention to itself.
Bad design, on the other hand, screams out its inadequacies, making itself very noticeable.

Donald A. Norman (The Design of Everyday Things)

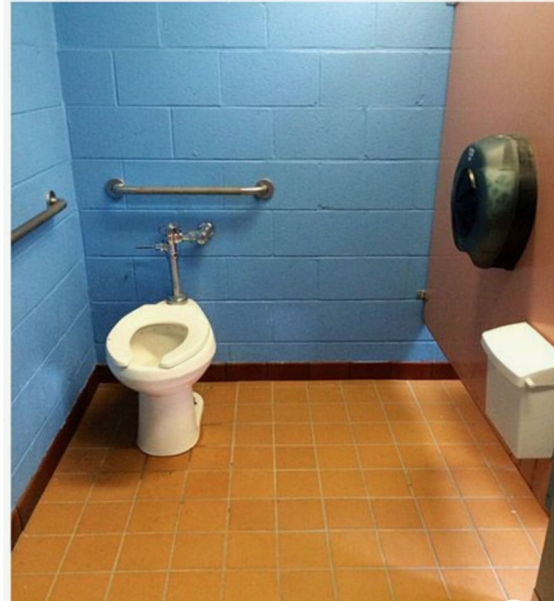# UX fails

Handicap parking privilege is out of control.
Source: reddit.com

Time to crab walk over to the toilet paper.

COMMON SENSE, IA OR UX?
Imaging we are given...

Source: Gail Leija "What is an IA?"; images adapted from *The Order of Things: How Everything in the World is Organized into Hierarchies, Structures and Pecking Orders* Barbara Ann Kipfer, Random House NY 2000

JWT

Red Hat

COMMON SENSE DOES...

Forks

Knives

Spoons

J W T

Red Hat
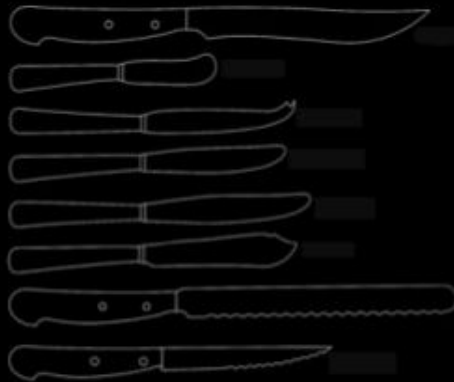
USER EXPERIENCE DOES...
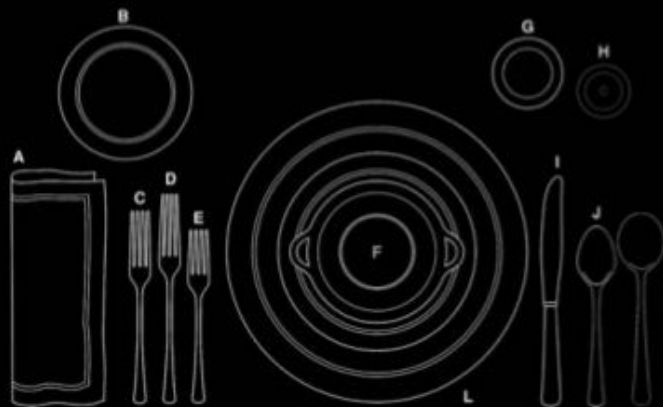
A. Napkin,
B. Salad plate,
C. Salad fork,
D. Dinner fork,
E. Dessert fork,
F. First-course bowl and liner plate

G. Water goblet,
H. Wine glass,
I. Dinner knife,
J. Teaspoon,
K. Soup spoon,
L. Dinner or service plate

Dinner Setup

J W T

Red Hat

But great User Experience asks:

"WHO SAID THEY NEEDED US TO LAY A TABLE?"

JWT

Red Hat

"Most people make the mistake of thinking design is what it looks like. People think it's this veneer - that the designers are handed this box and told, 'Make it look good!' That's not what we think design is. It's not just what it looks like and feels like. Design is how it works."

Steve Jobs
1955-2011

Red Hat

What is covered under the User Experience umbrella?

Red Hat

Surface
- Visual Design

Skeleton
- Interface Design
- Navigation Design
- Information Design

Structure
- Interaction Design
- Information Architecture

Scope
- Functional Specs
- Content Requirements

Strategy
- User Needs
- Site Objectives

Architecture

Marketing

Content
Requirements

Information
Architecture

Informatics

Functional
Specifications

Spatial
Experience

Signage

Mechanical
Engineering

Electrical
Engineering

Industrial
Design

Interactive
Environments

Ubiquitous
Computing

Ergonomics

Media
Installations

Controls

Informatics

Application
Design

Interface
Design

Human
Computer
Interaction
(HCI)

Generative
Design

Navigation
Design

Usability
Engineering

Psychology

InfoVis

Interaction
Design
(IxD)

Human
Factors

Cognitive
Science

Visual
Design

Invention
Design

Conent
Creation
(Text, Data,
Graphics)

DataVis

Sociology

Szenario
Design

Sound
Design

Information
Design

Design
Simulation

Audio
Engineering

User
Experience
Design (UX)

Motion
Design

Copyright :envis precisely (2009)
based on »The Disciplines of User Experience« by Dan Saffer (2008)
www.kickerstudio.com/blog/2008/12/the-disciplines-of-user-experience

Red Hat

USER EXPERIENCE DESIGN

INFORMATION ARCHITECTURE

ARCHITECTURE

Content (Text, Video, Sound)

INDUSTRIAL DESIGN

HUMAN FACTORS

VISUAL DESIGN

INTERACTION DESIGN

SOUND DESIGN

HUMAN-COMPUTER INTERACTION

22

UX jobs options

- ▶ User Researcher
- ▶ Visual Designer
- ▶ Interaction Designer
- ▶ UI Engineer / Frontend engineer

- ▶ User Experience Architect
- ▶ User Experience Strategist
- ▶ Motion Designer

Red Hat

Design Process Diagram

	Discovery & Research	Interaction Design	Visual Design	Engineering

Functional Design
- User Research
- Requirements Definition

Content Analysis
- Content Inventory
- Content Analysis
- Content Mapping

IA, ID, UI Design, Usability
- Card Sorting
- Site Map
- Visual Comps
- Business Objectives
- User Goals
- Process/Task Diagrams
- Style Guide
- Wireframes
- Prototype
- Usability Testing

Production Engineering
- Technology Selection
- Content Migration Plan
- CMS Framework
- HTML, CSS Templates
- Content Migration
- Testing
- Launch

Todd R. Warfel
Principal User Experience Architect
© Message First Corp.

24

1

Red Hat

Design process

VISION

CONCEPT

PROBLEM

DESIGN BUILD

PRODUCT!

Red Hat

*Illustration of Stephen Anderson's **UX Hierarchy of Needs** from Simon Pan site.*

User centered design solution

Overlap of:

‣ Desirability

‣ Viability

‣ Feasibility
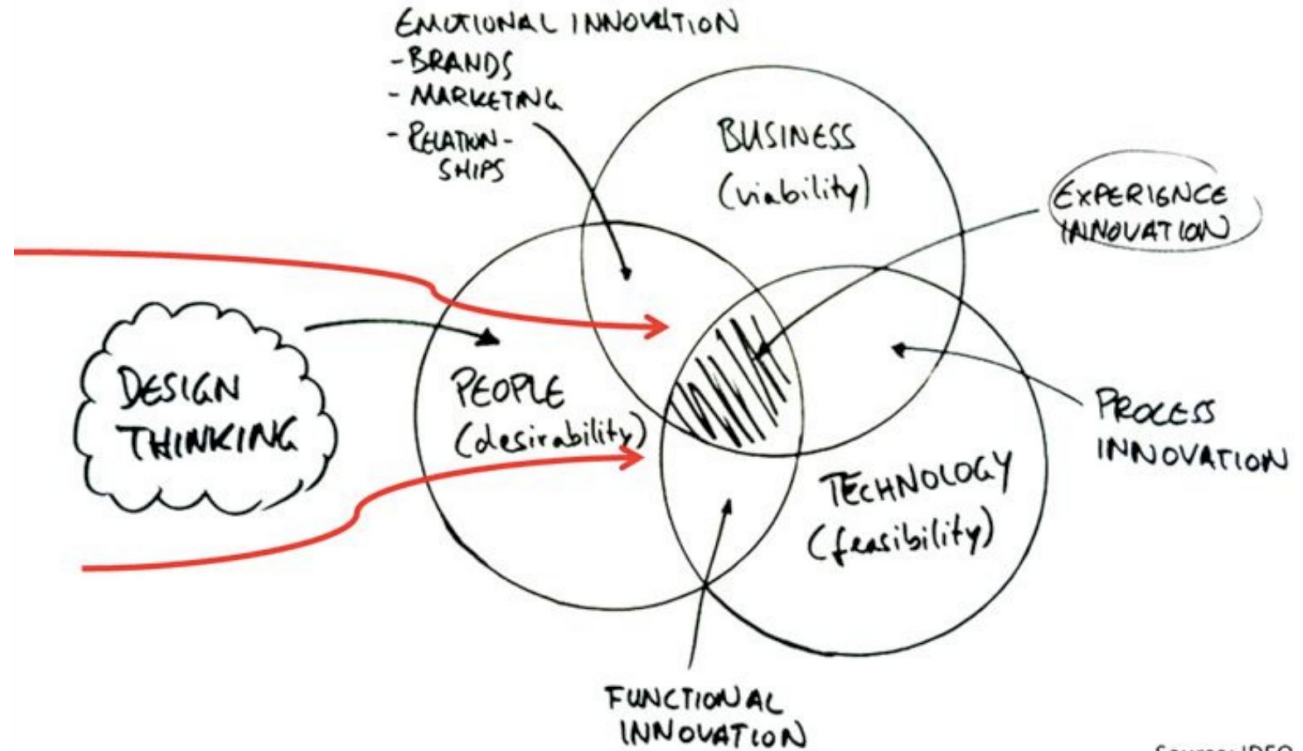
Source: IDEO

Design thinking

- ▸ an approach used for practical and creative problem-solving
- ▸ Design Thinking can also be applied to any field; it doesn't necessarily have to be design-specific
- ▸ is extremely user-centric
- ▸ understand people's needs and come up with effective solutions to meet those needs

Red Hat

DESIGN THINKING : A NON-LINEAR PROCESS
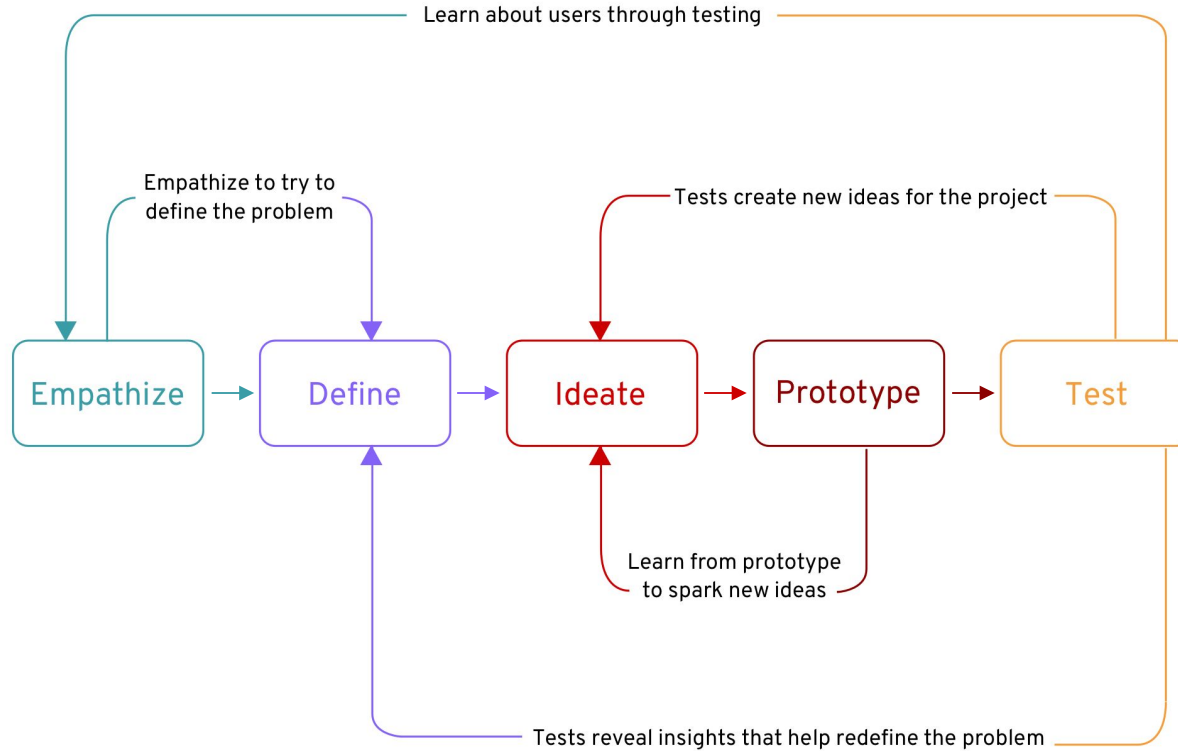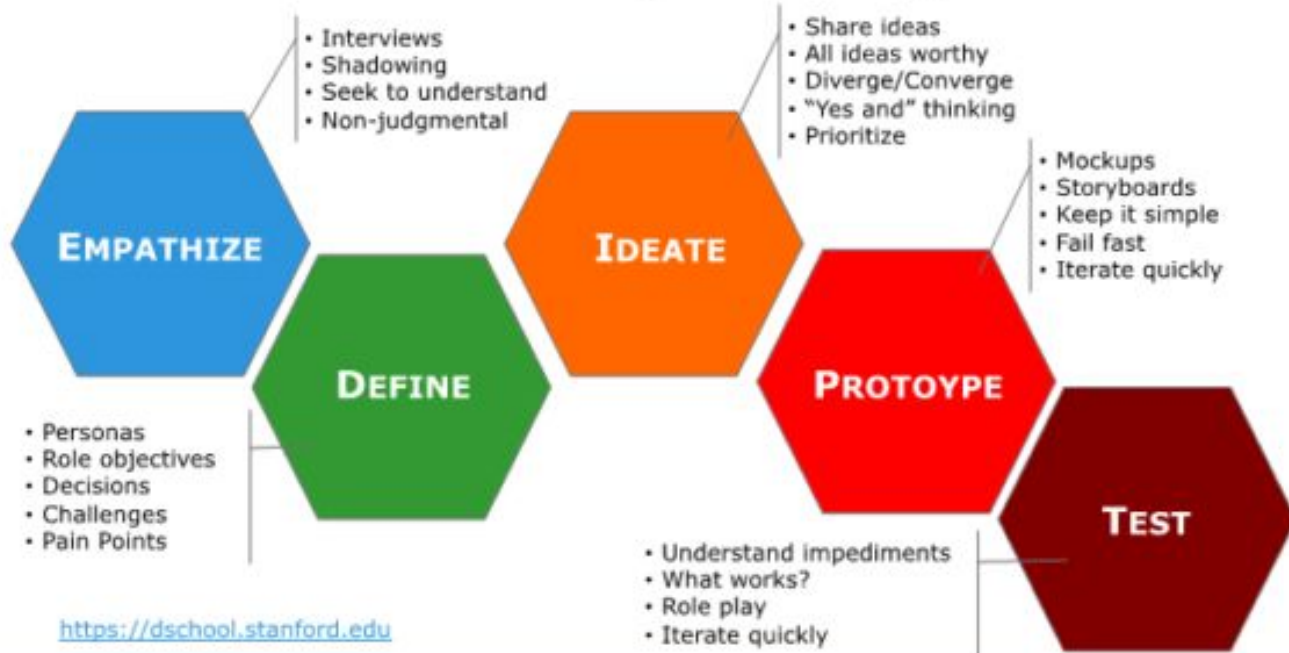
Learn about users through testing

Empathize to try to
define the problem

Tests create new ideas for the project

| Empathize | Define | Ideate | Prototype | Test |

Learn from prototype
to spark new ideas

Tests reveal insights that help redefine the problem

Red Hat

Stanford d.school Design Thinking Process

- Interviews
- Shadowing
- Seek to understand
- Non-judgmental

- Share ideas
- All ideas worthy
- Diverge/Converge
- "Yes and" thinking
- Prioritize

- Mockups
- Storyboards
- Keep it simple
- Fail fast
- Iterate quickly

EMPATHIZE

DEFINE

IDEATE

PROTOYPE

TEST

- Personas
- Role objectives
- Decisions
- Challenges
- Pain Points

- Understand impediments
- What works?
- Role play
- Iterate quickly

https://dschool.stanford.edu

30

Red Hat

Discover
insight into the problem

Define
the area to focus upon

Develop
potential solutions

Deliver
solutions that work

Problem

Problem Definition

Design Brief

Solution

Doing the right thing

Doing things right

British Design Council

Red Hat

EMPATHIZE DEFINE IDEATE PROTOTYPE TEST IMPLEMENT

UNDERSTAND EXPLORE MATERIALIZE
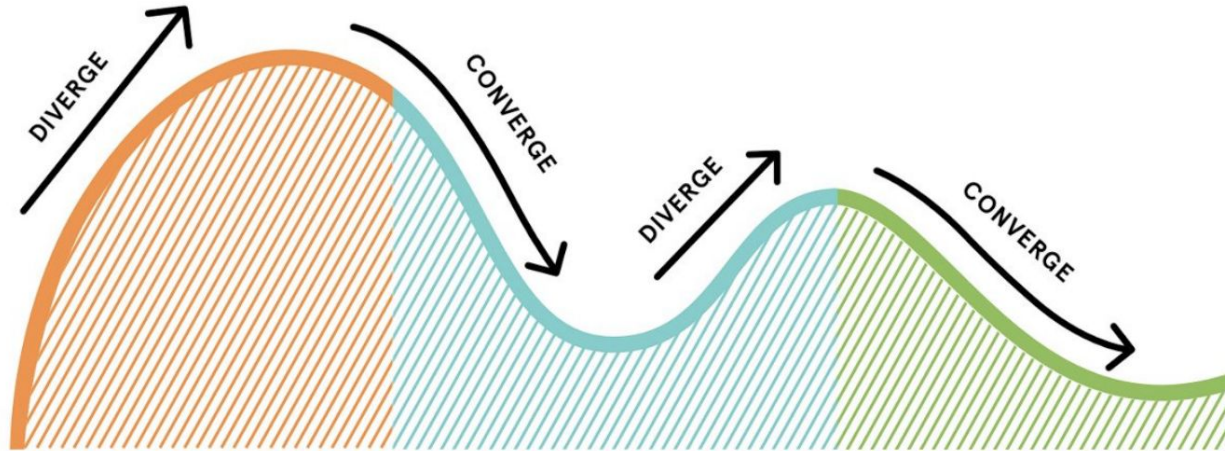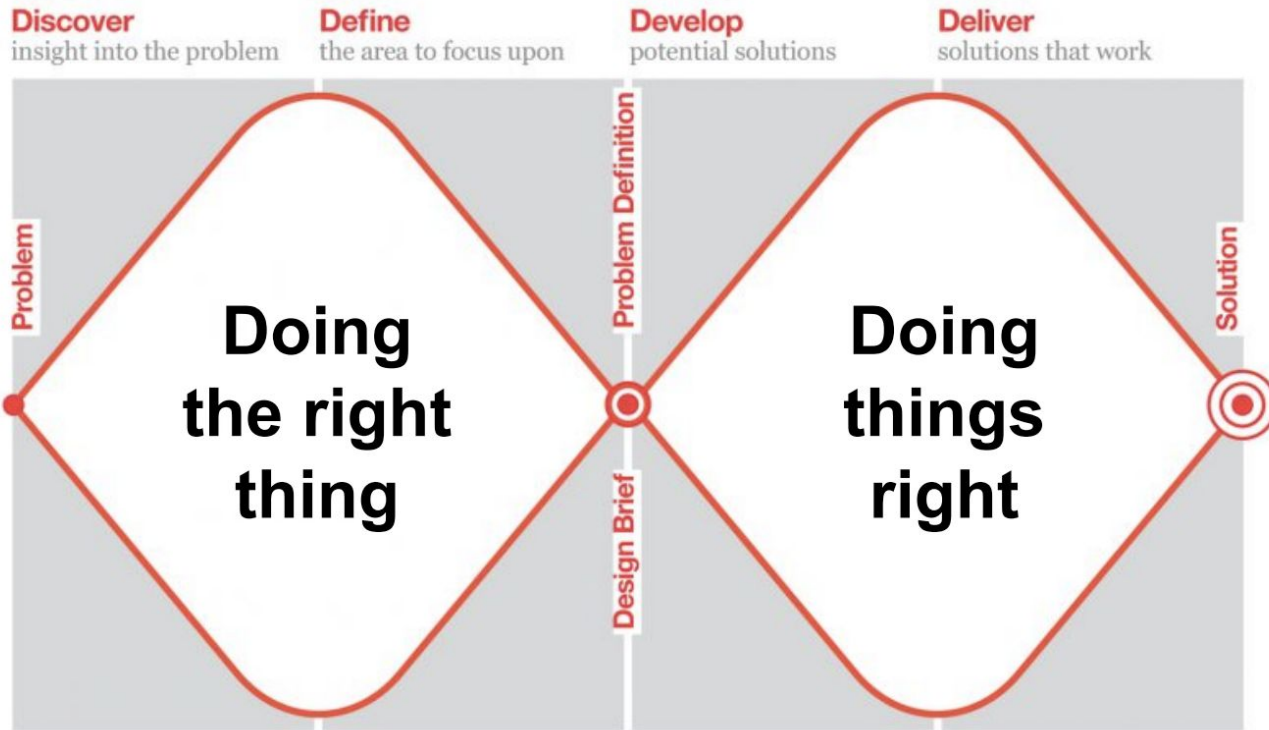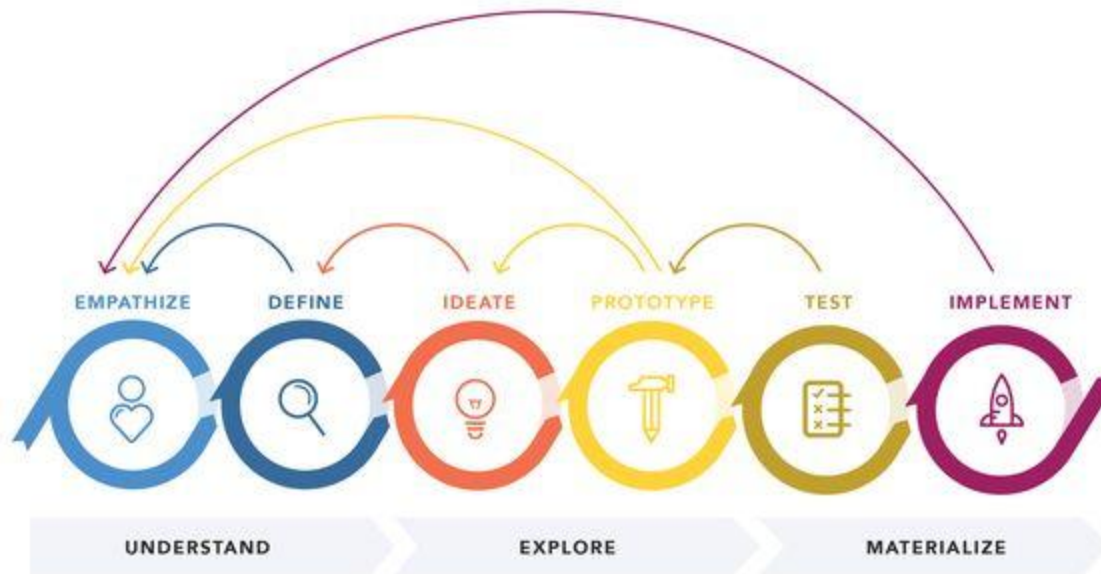
DESIGN THINKING 101 NNGROUP.COM

Design process

VISION →
CONCEPT →
PROBLEM →
DESIGN   BUILD
→ PRODUCT!

Red Hat
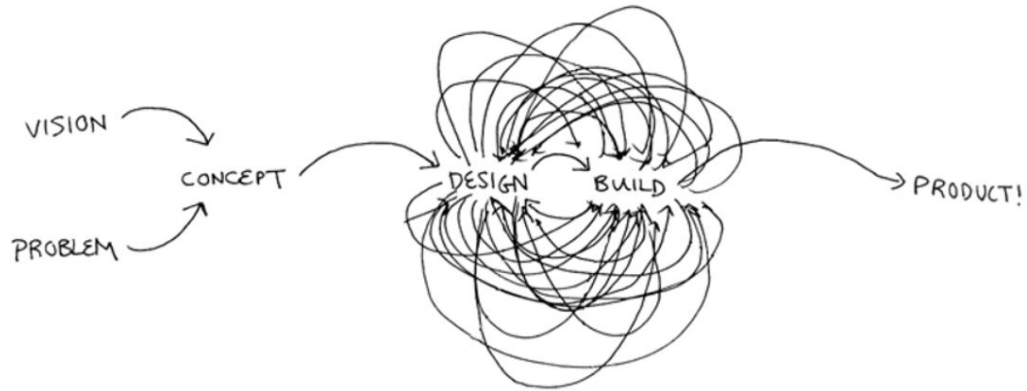
Sample project: Čekárna

Cíl: vylepšit zkušenost v čekárně u doktora

Red Hat

Stanford d.school Design Thinking Process

EMPATHIZE
- Interviews
- Shadowing
- Seek to understand
- Non-judgmental

DEFINE
- Personas
- Role objectives
- Decisions
- Challenges
- Pain Points

IDEATE
- Share ideas
- All ideas worthy
- Diverge/Converge
- "Yes and" thinking
- Prioritize

PROTOYPE
- Mockups
- Storyboards
- Keep it simple
- Fail fast
- Iterate quickly

TEST
- Understand impediments
- What works?
- Role play
- Iterate quickly

https://dschool.stanford.edu

Red Hat
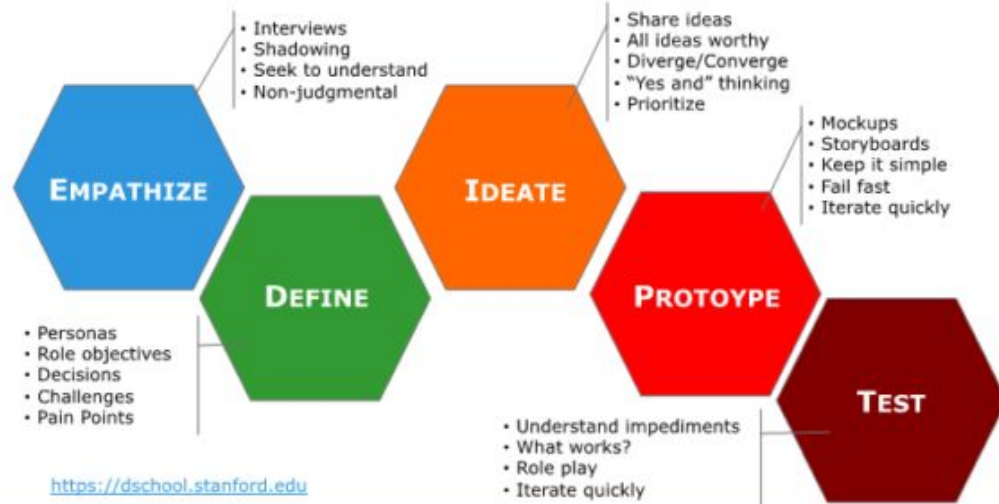
1

Empathize

User needs

Who are the users?

What is the context?

What do they expect?

What are their goals?

What do they want to accomplish using this product?

Cieľová skupina

= Pre koho to robíme?

- ▸ Definovaná kritériami, napr:
  - · Demograficky – napr. vek, pohlavie
  - · Psychograficky – ako premýšlajú
  - · Behaviorálne – ako sa správajú
  - · Geograficky – napr. kde žijú..

  ...

(aka. target group/audience)

Sample project: Čekárna

- Kto je vaša cieľová skupina?
- Pre koho to NErobíme?

Red Hat

Personas

▶ Purpose: to have a realistic and reliable representation of your key audience

▶ Effective personas do the following:
- Represent a major user group for your product
- Express and focus on the major needs and expectations of the user group
- Give a clear picture of the user's expectations on product use
- Aid in uncovering universal features and functionality
- Describe real people with backgrounds, goals and values

Clark Andrews

AGE	26
OCCUPATION	Software Developer
STATUS	Single
LOCATION	San Jose, CA
TIER	Experiment Hacker
ARCHETYPE	The Computer Nerd

Friendly   Clever   Go-Getter

"I feel like there's a smarter way for me to transition into a healthier lifestyle."

Motivations

Incentive
Fear
Achievement
Growth
Power
Social
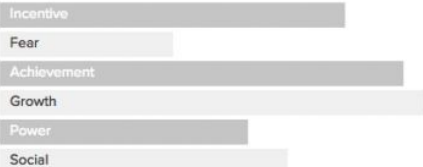
Goals

- To cut down on unhealthy eating and drinking habits
- To measure multiple aspects of life more scientifically
- To set goals and see and make positive impacts on his life

Frustrations

- Unfamiliar with wearable technology
- Saturated tracking market
- Manual tracking is too time consuming

Bio

Aaron is a systems software developer, a "data junkie" and for the past couple years, has been very interested in tracking aspects of his health and performance. Aaron wants to track his mood, happiness, sleep quality and how his eating and exercise habits affects his well being. Although he only drinks occasionally with friends on the weekend, he would like to cut down on alcohol intake.

Personality

Extrovert	Introvert
Sensing	Intuition
Thinking	Feeling
Judging	Perceiving

Technology

IT & Internet
Software
Mobile Apps
Social Networks

Brands

42

Red Hat

43
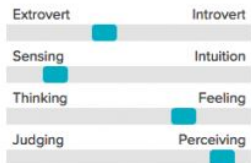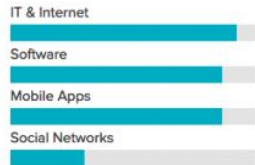
Empathy Mapping

- The first step of the process is empathizing
- This step is all about the users
  - Create personas
  - Explore user needs
  - Discover user goals
  - Consult experts to better understand the areas of concern
  - When possible, talk directly to users!

Empathy Map Canvas — multiple filled copies

Top-left canvas:

GOAL

1 WHO are we empathizing with?
Who is the person we want to understand?
What is the situation they are in?
What is their role in the situation?

- Open Source Contributors
- RH users

Names of tech and products they have no experience with

2 What do they need to DO?
What do they need to do differently?
What job(s) do they want or need to get done?
What decision(s) do they need to make?
How will we know they were successful?

- Keep up with changing scene
- Understand the direction RH is headed
- New tech in the marketplace

6 What do they HEAR?
What are they hearing others say?
What are they hearing from friends?
What are they hearing from colleagues?
What are they hearing second-hand?

Predictions about the future in the industry

7 What do they THINK and FEEL?
PAINS
What are their fears, frustrations, and anxieties?
- Adopting tech that will soon be obsolete
- Falling behind the industry

GAINS
What are their wants, needs, hopes and dreams?
- Reliable Apps + Tech
- Learny New Concepts

3 What do they SEE?
What do they see in the marketplace?
What do they see in their immediate environment?
What do they see others saying and doing?
What are they watching and reading?

All Groups advocating for diff tools
Reading help threads
Excited about future RH

4 What have we heard them say?
What can we imagine them saying?

This update + migration is a headache

5 What do they DO?
What do they do today?
What behavior have we observed?
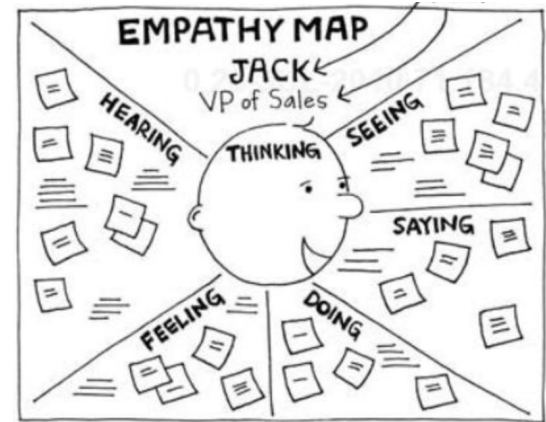What can we imagine them doing?

Build, Deploy, Test, Maintain Apps
Migrate tech

Center canvas:

Designed for: Engineers

1 WHO are we empathizing with?

engineers software building

I don't get it !
they just stare at me

7 What do they THINK and FEEL?
PAINS
people
deadlines
unknown
lack of knowledge
Code is broken

GAINS
growth
enthusiasm
lead my own team

2 What do they need to DO?
people like using their s...
build software
no bugs

3 What do they SEE?
notebook
monitor
mass of tech
the dev...
useless expensive tech

4 What do they SAY?
complaints
something doesn't work
Jokes that were inside threads

5 What do they DO?
sitting by their laptops
playing on their computer all day

Bottom-left canvas:

Empathy Map Canvas
Designed for: presentation   Designed by: dan   Date: 1/12

GOAL

- We need to be consistent
- We need to be done by summit
- We are running out of time
- open issues

1 WHO are we empathizing with?
Developers Creating RH Software

2 What do they need to DO?
Share Code
Fix Bugs

6 What do they HEAR?
- reviewing fast end
- when does our not ready
- Learning new technology is hard

7 What do they THINK and FEEL?
PAINS
GAINS
- Working Software
- Newer Technology w/ support to Learn it
- New stacks

3 What do they SEE?
- Component library
- people doing tasks more quickly w/ other products
- This isn't stable enough

4 What do they SAY?
- Components I need over here
- How can I learn React quickly

5 What do they DO?
- All Developer docs
- Debate on my own before asking for help
- Put up WIP PRs

Top-right canvas:

empathizing with?
... what do they do in the situation?
What is their role in the situation?

A developer who doesn't have access to heavy duty hardware and wants to make use of cloud resources to get their jobs done. May also be playing around outside of work with a pet project.

7 What do they THINK and FEEL?
PAINS
What are their fears, frustrations and anxieties?
Unclear workflow and path on getting started
Overwhelming terminology / lack of terminology explanation

GAINS
What are their wants, needs, hopes and dreams?
A clear method for getting started that's application to my end goal
Better workflow for using Storage
Better monitoring for what is happening after my app is running

2 What do they need to DO?
What do they need to do differently?
What job(s) do they want or need to get done?

Build an application that will help run their code. As a technology expert, I imagine ...

3 What do they SEE?
What do they see in the marketplace?
Amazon seems to be ...

4 What do they SAY?
What have we heard them saying?

5 What do they DO?
What do they do today?
What behavior have we observed?
What can we imagine them doing?

Bottom-right canvas:

Designed for   Date: 7/14/19

WHO are we empathizing with?

...-Release Manager/Team
Providing ... for their org.

Discussions at Cloud computing information security long-term viability. Future of Kubernetes? Serverless? needs to be on top of latest

7 What do they THINK and FEEL?
PAINS
Downtime
Configuration Errors

GAINS
Cost
Speed
Ease of use
Compatibility

2 What do they need to DO?
Highlander...on
Build processes
Little downtime
Easy configuration

3 What do they SEE?
Containers
Alternatives to legacy tech like VMs to accomplish...

4 What do they SAY?
Want ease of use
fast drill down to issues that arise

5 What do they DO?
Runs on...right
Conso le to manage
Cloud infrastructure

Seeing...

Messy desks

Alternative technologies

Bugs and broken code

Saying…

We need compatibility

This migration is a headache

Nobody understands

Hearing...

Sample project: Čekárna (20 min)

- Create empathy map!
  - Thinking
  - Feeling
  - Seeing
  - Saying
  - Doing
  - hearing
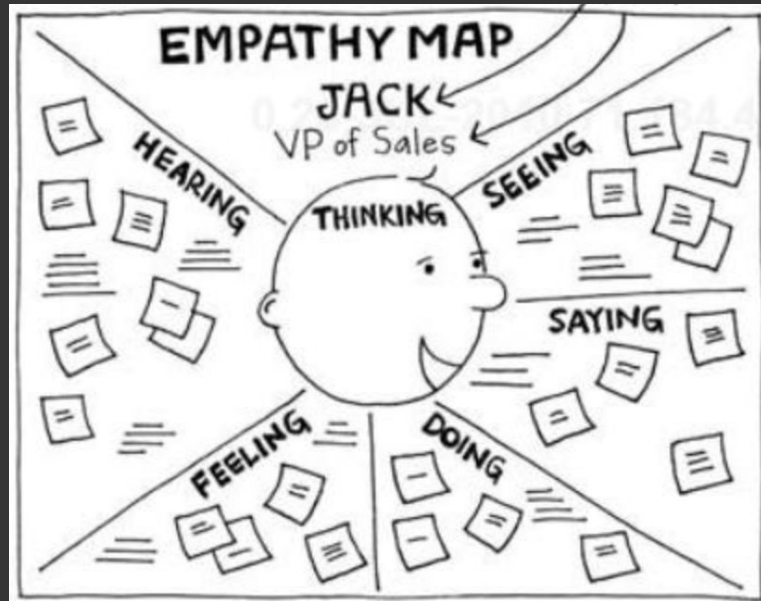
2 Define
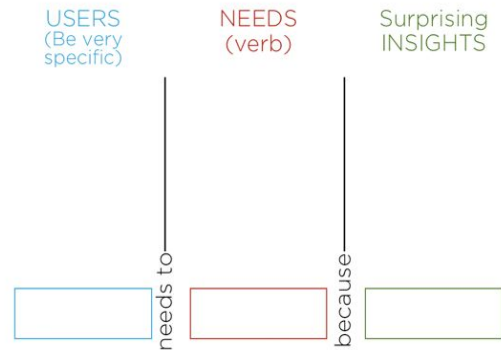
Define

The fundamental questions at this stage are:

- What is the problem we are trying to solve?
- Explore the what and why of the user's needs and goals
- Translate **user needs** into **product requirements**
- Define requirements in terms of functionality, attributes, and specifications

Sample project: Čekárna (7 min)

3 Ideate

Ideate

"Ideation is the mode of the design process in which you concentrate on idea generation. Mentally it represents a process of "going wide" in terms of concepts and outcomes. Ideation provides both the fuel and also the source material for building prototypes and getting innovative solutions into the hands of your users."

– d.school, An Introduction to design thinking PROCESS GUIDE

Red Hat

What is ideation

- ▶ it's all about generating ideas
- ▶ come up with as many ideas as possible
- ▶ the focus is on quantity of ideas rather than quality
- ▶ main aim of an ideation session is to uncover and explore new angles and avenues—to think outside the box
- ▶ Tools - mind mapping, storyboarding

CHALLENGE

UNDERSTAND DEFINE

DIVERGE CONVERGE

PROBLEM SPACE

[RE-] FRAMED PROBLEM

IDEATE PROTOTYPE TEST

DIVERGE CONVERGE

SOLUTION SPACE

SOLUTION

https://medium.com/design-sprint-academy/evil-8s-remove-the-pressure-to-perform-in-a-design-sprint-e0c4337be5a
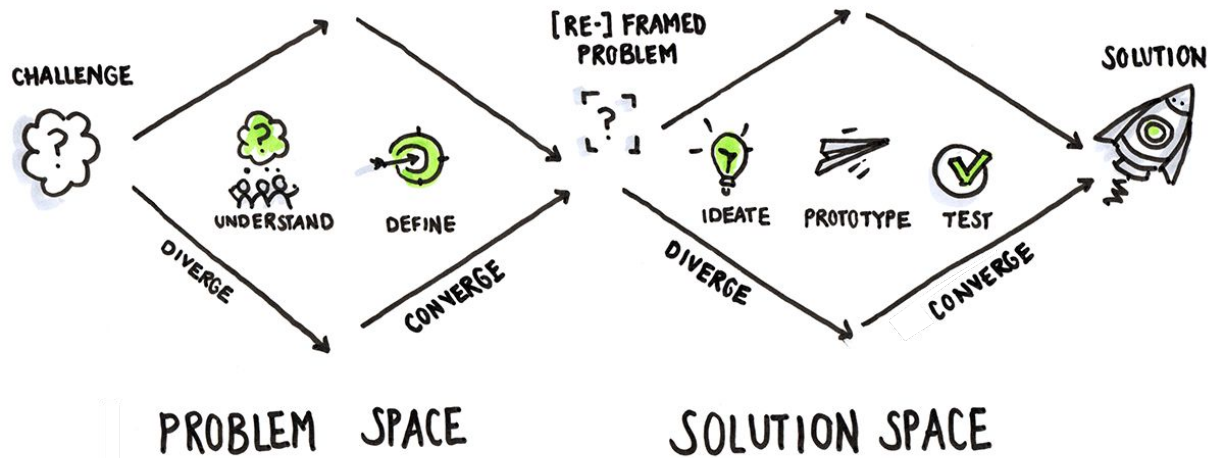
Sample project: Čekárna (8 min)

Crazy 8's = It is a fast sketching exercise that challenges people to sketch eight distinct ideas in eight minutes. The goal is to push people beyond their first idea, by suppressing self-judgement and making their ideas tangible.

"You'll need to come up with the most ridiculous, silly, stupid solution to make the user problem even graver than before. Generate the worse possible ideas you can think of and stop at nothing."

Workshop: Final project

Workshop agenda

Form teams → Select challenges → Define your project

Form teams

- Designer/researcher
- Frontend developer
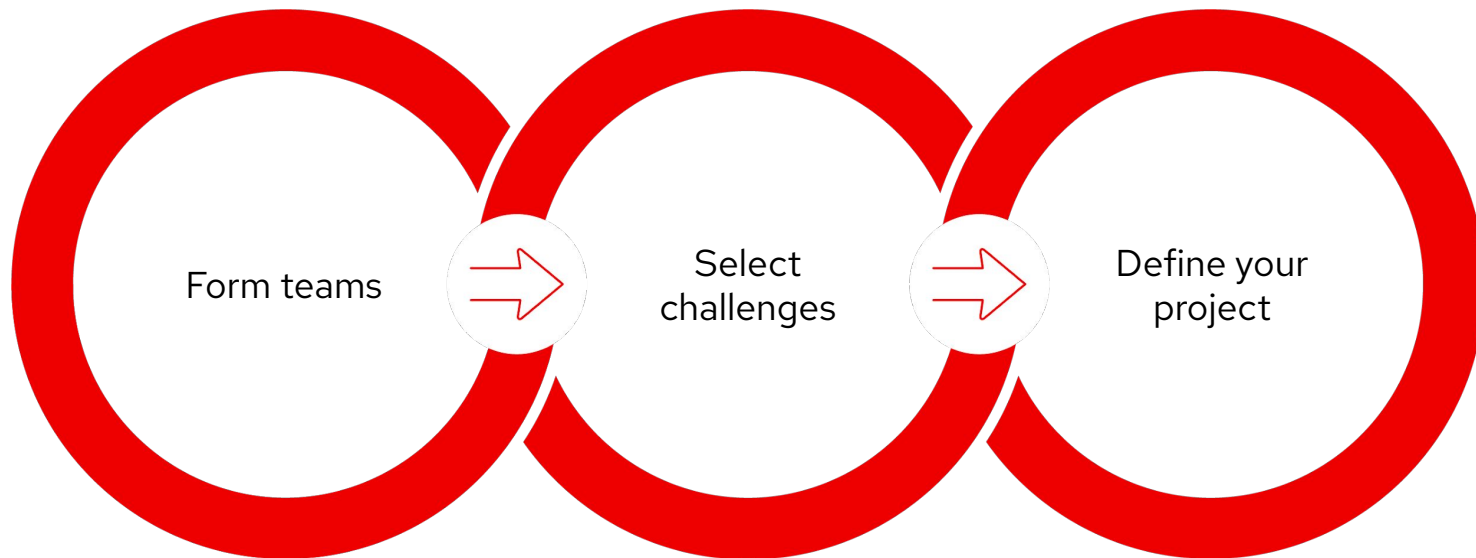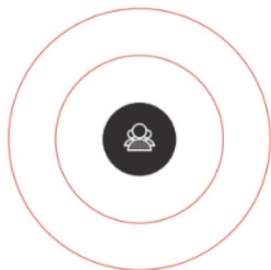
SYNOPSIS

Team Design

What kind of team do we need to create our business?

Having worked with teams all around the world, we have learned that behind every successful new venture is a great team. If you are at a startup, the founding team is the glue that holds it all together. If you are in a corporation, you'll still need a solid team to create a new business venture. If you are a solopreneur, the team you eventually bring in will make or break your business.

Commonly Required Skills to Test Business Ideas

Design   Sales

Product   Marketing

Tech   Research

Legal   Finance

Data

Cross-Functional Skillset

A cross-functional team has all the core abilities needed to ship the product and learn from customers. A common basic example of a cross-functional team consists of design, product, and engineering.

Adapted from Jeff Patton.
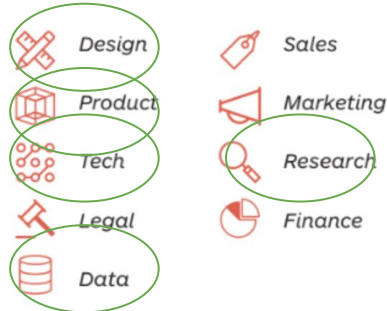
Access to Missing Skillsets

If you do not have all of the skills needed or are unable to partner with external team members, then evaluate technological tools to fill the void.

Red Hat

Select challenges

Return of the brainstorming exercise

Discuss ideas

Select 2-4

- Importance
- Feasibility

Red Hat

Define target group and your project

➜ **Define target group/s**

◆ For each challenge

◆ State criteria (inclusion, exclusion)

◆ Are there subgroups with different needs?

- Which one is your primary target group?

- Imagine a typical representant of this group

➜ **Formulate "Point of view" statements**
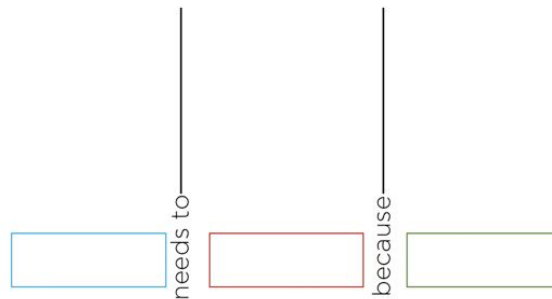
◆ For each challenge

USERS
(Be very
specific)

NEEDS
(verb)

Surprising
INSIGHTS

needs to

because

Red Hat
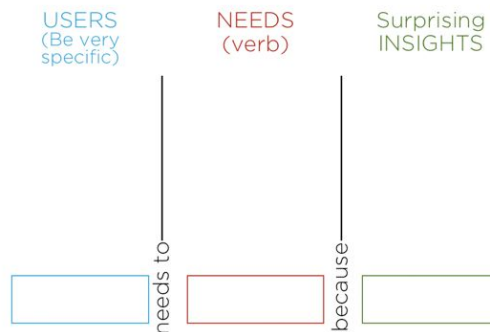
Activity #2 - 7 min

USERS
(Be very
specific)

NEEDS
(verb)

Surprising
INSIGHTS

needs to

because

POINT OF VIEW STATEMENT

_____needs a way to _____
(User name)   (Verb)

because _____.
(Surprising Insight)

Red Hat