

DESIGN THINKING

Alexey Volkov

DESIGN THINKING???

FUN!

EXPRESSION
W/O BARRIERS

Iteration
OOOO

The real
thing about
think and...
DO!

JUST ANOTHER
BUZZ WORD

WORKING
MODE

MIND-
JET

- LISTEN
- SEE
- DEVELOP

WORK IN
STAGES TO
SOLVE THE
PROBLEM!

FUN!

Iteration

NOT FOR
EVERYBODY!

Integration

PEOPLE
OOO

HANDS
ON!!!

THINK
OUT THE
BOX

THINK
out of the
box

COLLABORA-
TIVE WAY
OF SOLVING
PROBLEMS

THE KEY
TO
WIN!

TEAM WORK
WITH FEEDBACK

- FIND IT
- PLAN IT
- JUST DO IT

BE
CREATIVE

DOING THINGS IN A
WAY THEY (ACTUALLY)
MAKE SENSE!

IMAGINATED ARE
TO THINK

CREATE TOGETHER
SOMETHING NEW
ALONE WE CANNOT

GETTING
THE BEST
SOLUTIONS

A MEANS TO
EXPAND YOUR
WAY OF SEEING
YOUR DAILY WORK

DT IS CHANGING
CREATIVE SO STILL INSIDE
THE WAY TO COME UP
WITH NEW IDEAS

SHARING YOUR
BORING DAILY
TRAILS

OPPEN
FRANKRA
STYLE

IDEAS START
TO FIND
SOLUTIONS





David M. Kelley

1987 book *Design Thinking*



WHAT IS DESIGN THINKING?

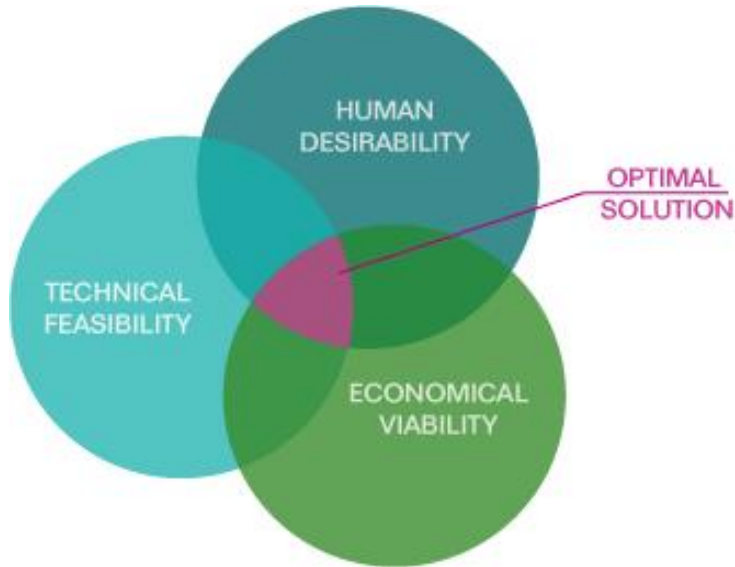
Design Thinking is a method for solving **complex problems** and creating **new ideas**.

DESIGN THINKING means...

**...creating INNOVATION by combining
diverse PEOPLE, creative SPACE and an
iterative APPROACH.**

WHAT IS INNOVATION?

A PATH TO SUCCESSFUL INNOVATIONS



Design Thinking focuses on **desirability**, but also considers viability and feasibility along the innovation process.

The optimal solution to a problem is at the heart of the three.

From push to pull: **design thinking**



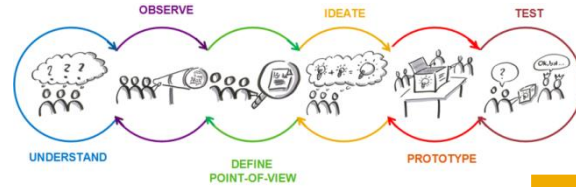
INNOVATION *Desirability + Feasibility + Viability.*

DESIGN THINKING



People

Space



Approach

Innovation



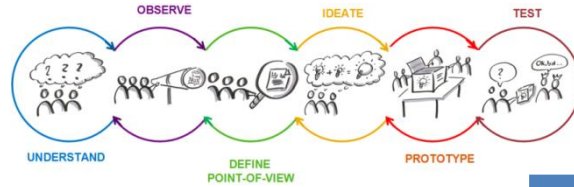
“Ingredients” for Design Thinking

DESIGN THINKING



People

Space



Approach

Innovation



“Ingredients” for Design Thinking

DESIGN THINKING

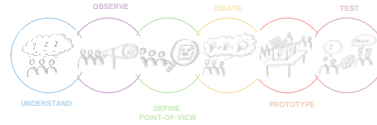


People

Space



Approach



Innovation

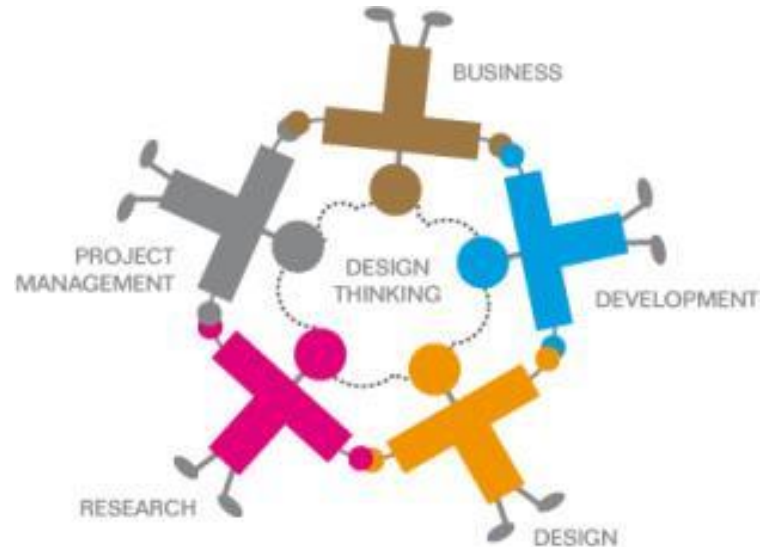


“Ingredients” for Design Thinking

PEOPLE WITH A DIVERSE SKILL SET

Multidisciplinary Teams

A common culture of empathy, a design thinking mindset, as well as an environment where it is safe to explore are fundamental for an inspired and successful team with diverse backgrounds.

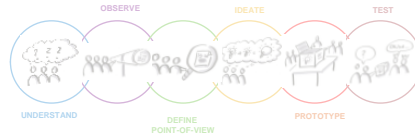


DESIGN THINKING



People

Space



Approach



Innovation



“Ingredients” for design thinking



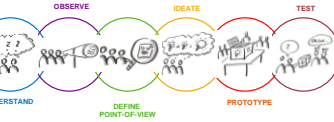
...and the freedom to explore.

DESIGN THINKING



People

Space



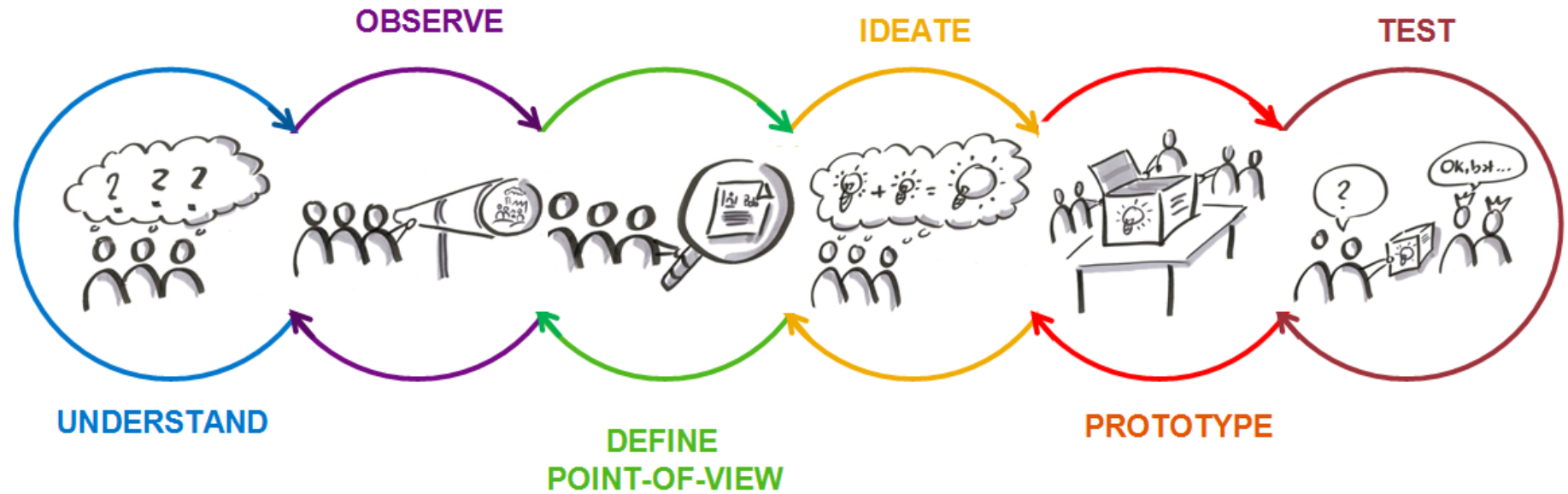
Approach



Innovation



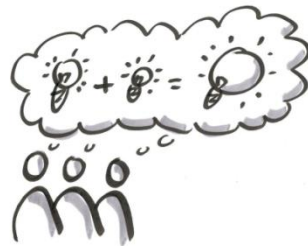
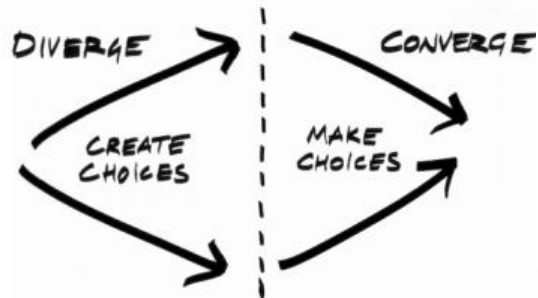
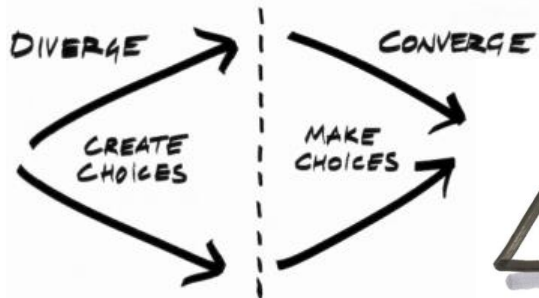
“Ingredients” for design thinking



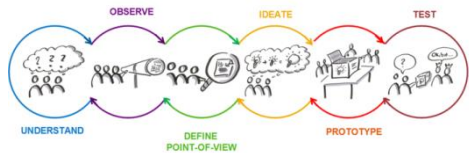
THE DESIGN THINKING STEPS.

PROBLEM SPACE

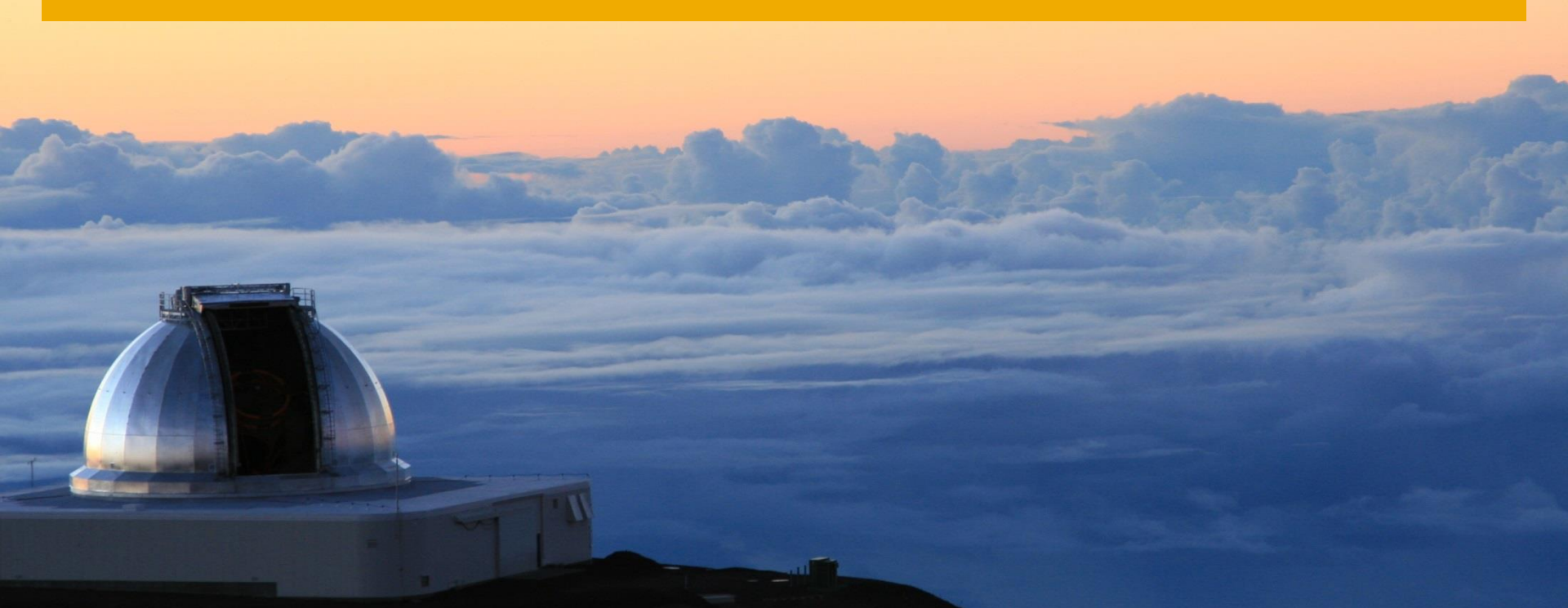
SOLUTION SPACE



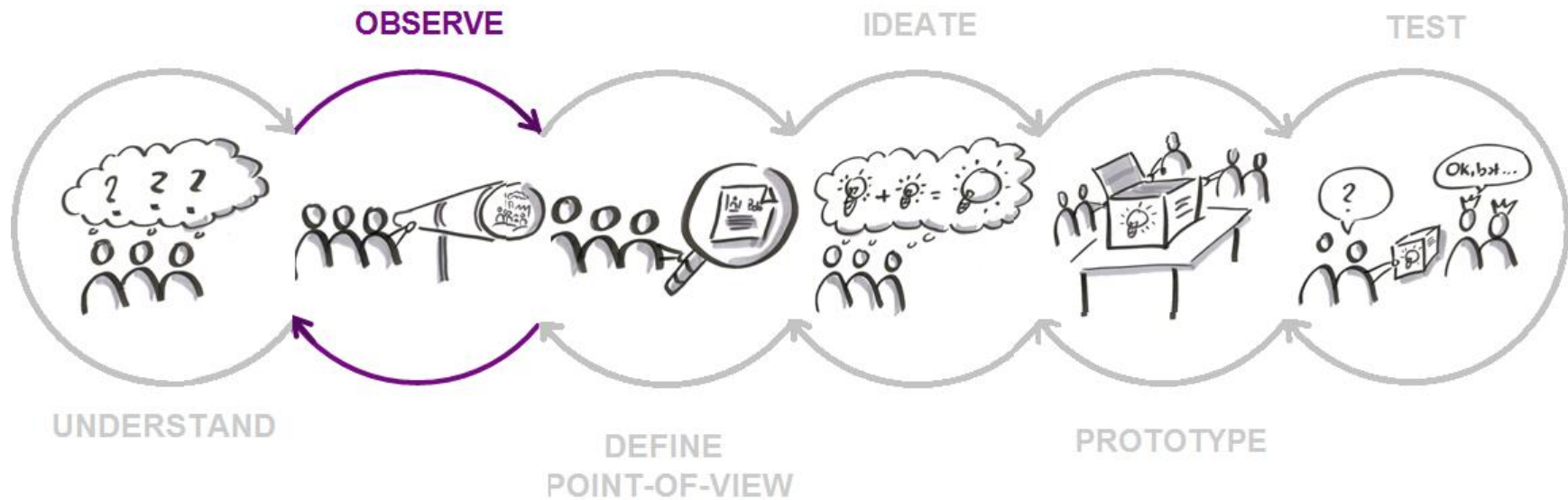
THINK LIKE A DESIGNER *Go broad first and focus later.*



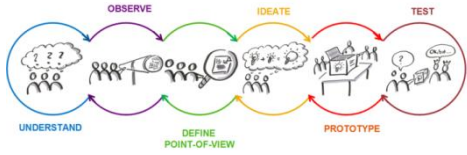
WHY UNDERSTAND?



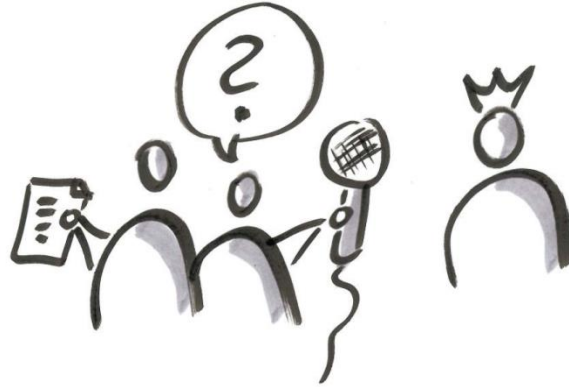
OBSERVE.



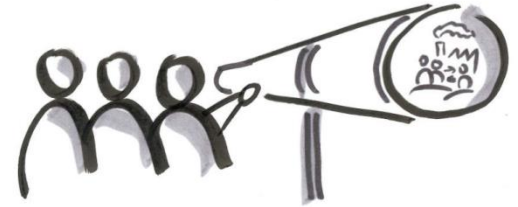
Where are we in the process?



TRY AND DO



ASK AND LISTEN



WATCH AND OBSERVE

DIFFERENT METHODS OF OBSERVATION TO GET EMPATHY.



- **Develop empathy**
- **See through the eyes of your users**
- **Define your task and really do it**
- **State your impressions**
- **Mention all enablers and constraints**
- **Take it seriously**

TRY AND DO



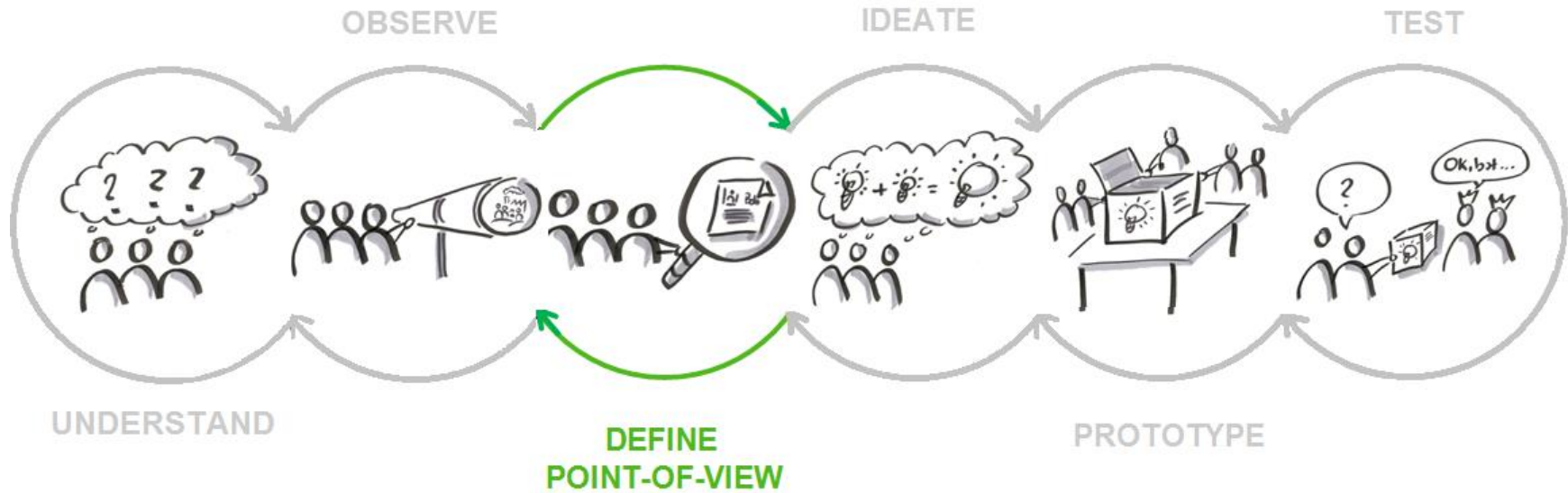
- Ask open-ended questions
- Ask 5 times WHY
- Be aware of body language (own and interviewee)
- LISTEN – You are the student (20-80)
- Be curious!
- Take photos
- Collect artifacts
- Write down your impressions
- Pair up for interviews, interviewer and note taker
- Say thank you in the end
- Debrief and make the next interview even better

ASK AND LISTEN

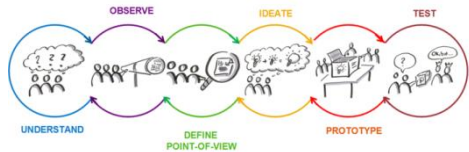


- Look for details
- Capture the atmosphere
- Be curious and talk to people
- Take photos and notes
- Speculate: what if... ?
- Buy things, do things
- Collect artifacts
- Write down your impressions
- Be polite and do not disturb
- Act as a guest

WATCH AND OBSERVE



Where are we in the process?



WHY DEFINE POINT-OF-VIEW?



SYNTHESIS

The art of structuring your insights.

FRAMEWORK

Model/view of specific aspects (interim step).

PERSONA

End-user-focused model/view (interim step).

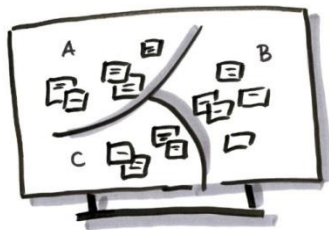
POINT OF VIEW

Hypothesis about users' needs (result of synthesis).

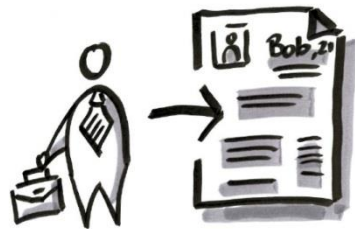
Glossary of concepts involved in this step



1. Storytelling



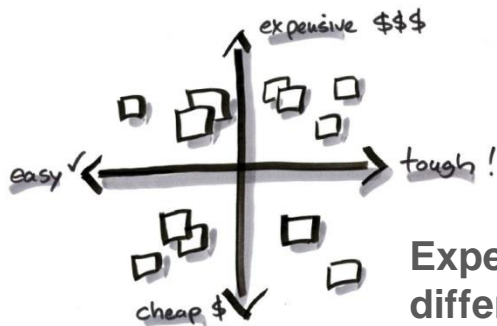
2. Clustering



3. Creating a persona



4. Defining a point-of-view



SYNTHESIS *The art of structuring your insights.*



COLOR-CODING TO STRUCTURE RESULTS.

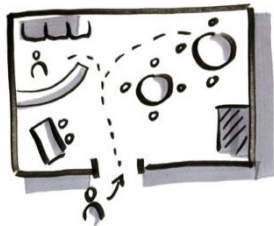


- Sort your insights into categories or “buckets”.
- Which insights are related to each other in some way?
- Look for common patterns and themes.

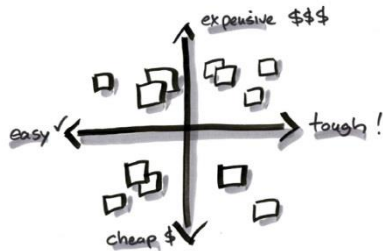
SYNTHESIS STEP TWO: Clustering



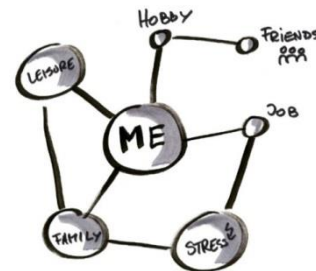
PROCESS MAP CIRCULAR



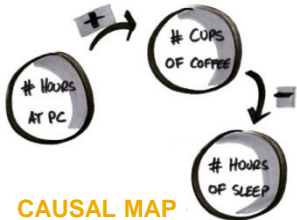
FLOORPLAN



2x2 MATRIX



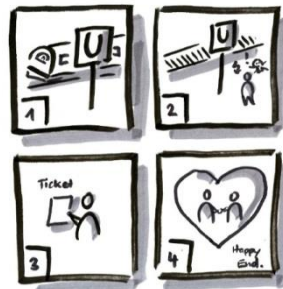
CONCEPT MAP



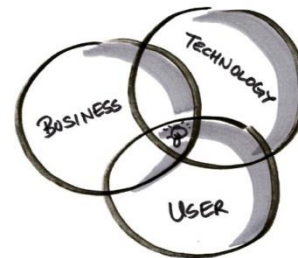
CAUSAL MAP



GEOGRAPHIC MAP





SCENARIO / EXPERIENCE MAP




VENN DIAGRAM

PLAY WITH FRAMEWORKS *Different frameworks can give different perspectives.*

 JOHN
 attributed persona
 needs a way to WORK BETTER,
THINK AND COLLABORATE
 user's need
 because
 (or "but..." or "surprisingly...")
*Circle one
HE IS NOT HAPPY WITH CURRENT
WORKSPACE (NOISE, ^{NO TEAM} PRIVACY, NO
ADAPTABLE FURNITURE).
 insight

 MARY
 attributed persona
 needs a way to come to sap
faster, cheaper, ~~and~~ with comfort
 user's need
 because
 (or "but..." or "surprisingly...")
*Circle one
as she needs money and time
and the transportation is ineffi-
cient.
 insight

 STU DENT
 attributed persona
 needs a way to go back home
after college class
 user's need
 because
 (or "but..." or "surprisingly...")
*Circle one
The SAP buses leave early
(late shift at 9pm), normal
shifts at 6pm
 insight

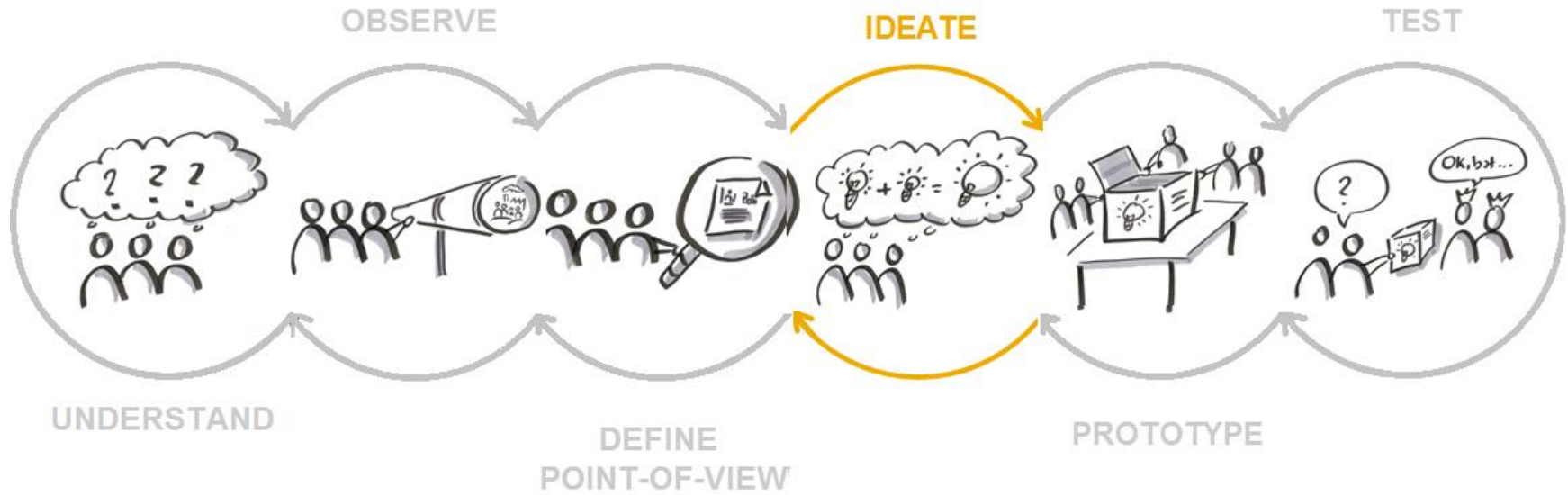
POV = USER + NEED + INSIGHT

The point-of-view is **one sentence that creates an image in your mind.**

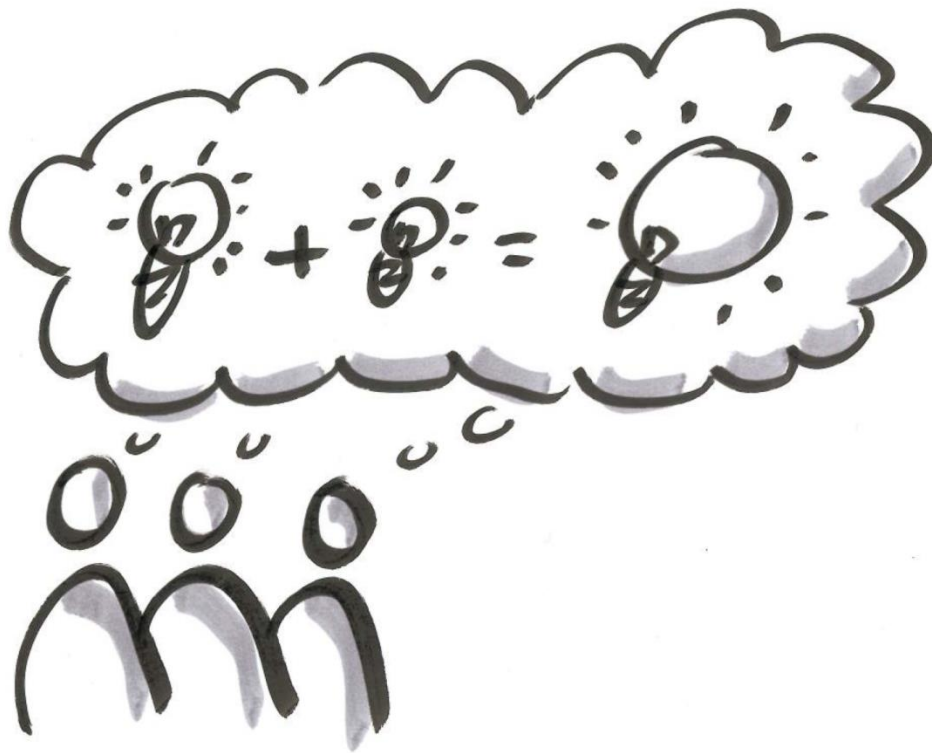
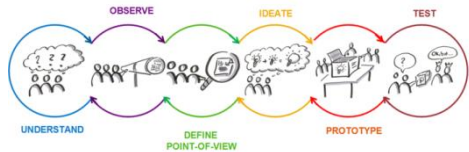
Based on an understanding of a user group and insights in to a specific need, it narrows down the problem space and focuses on a specific problem.



SYNTHESIS STEP FOUR: Establish a point-of-view (POV)



Where are we in the process?



WHY IDEATE?

The image shows two black cylindrical containers filled with a variety of colorful markers and pens. The markers are in shades of blue, red, orange, yellow, green, purple, and pink. Some pens are black, and one is blue with the text 'ART NO. 6841' visible. In the foreground, there are several stacks of sticky notes in bright colors: yellow, light blue, pink, and purple. The background is a dark, textured surface, possibly a carpet or desk mat. A solid yellow horizontal bar is at the top of the image.

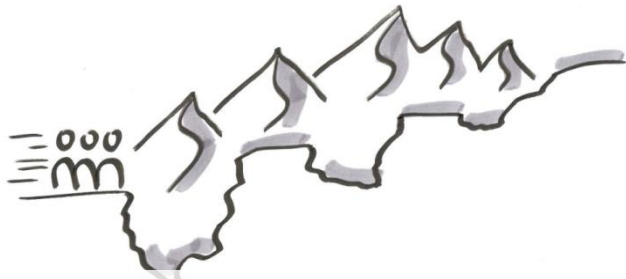
BRAINSTORMING RULES.



BUILD ON THE IDEAS OF OTHERS



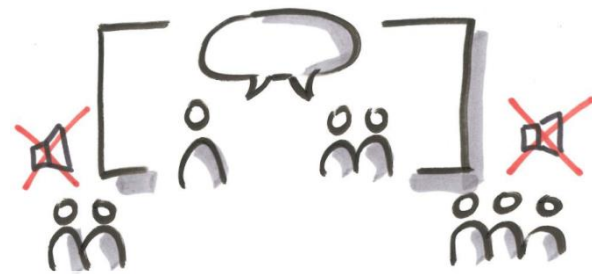
STAY FOCUSED ON TOPIC



FAIL EARLY AND OFTEN



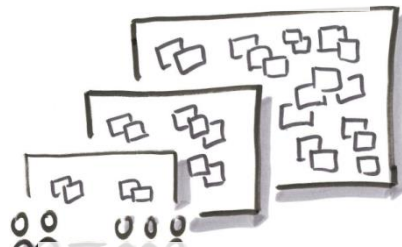
BE VISUAL



ONE CONVERSATION AT A TIME



THINK USER-CENTRIC



GO FOR QUANTITY



GO FOR WILD IDEAS

BRAINSTORMING RULES.



BE VISUAL

“draw a crazy picture...put something silly in the world that ain't been there before”
shel silverstein



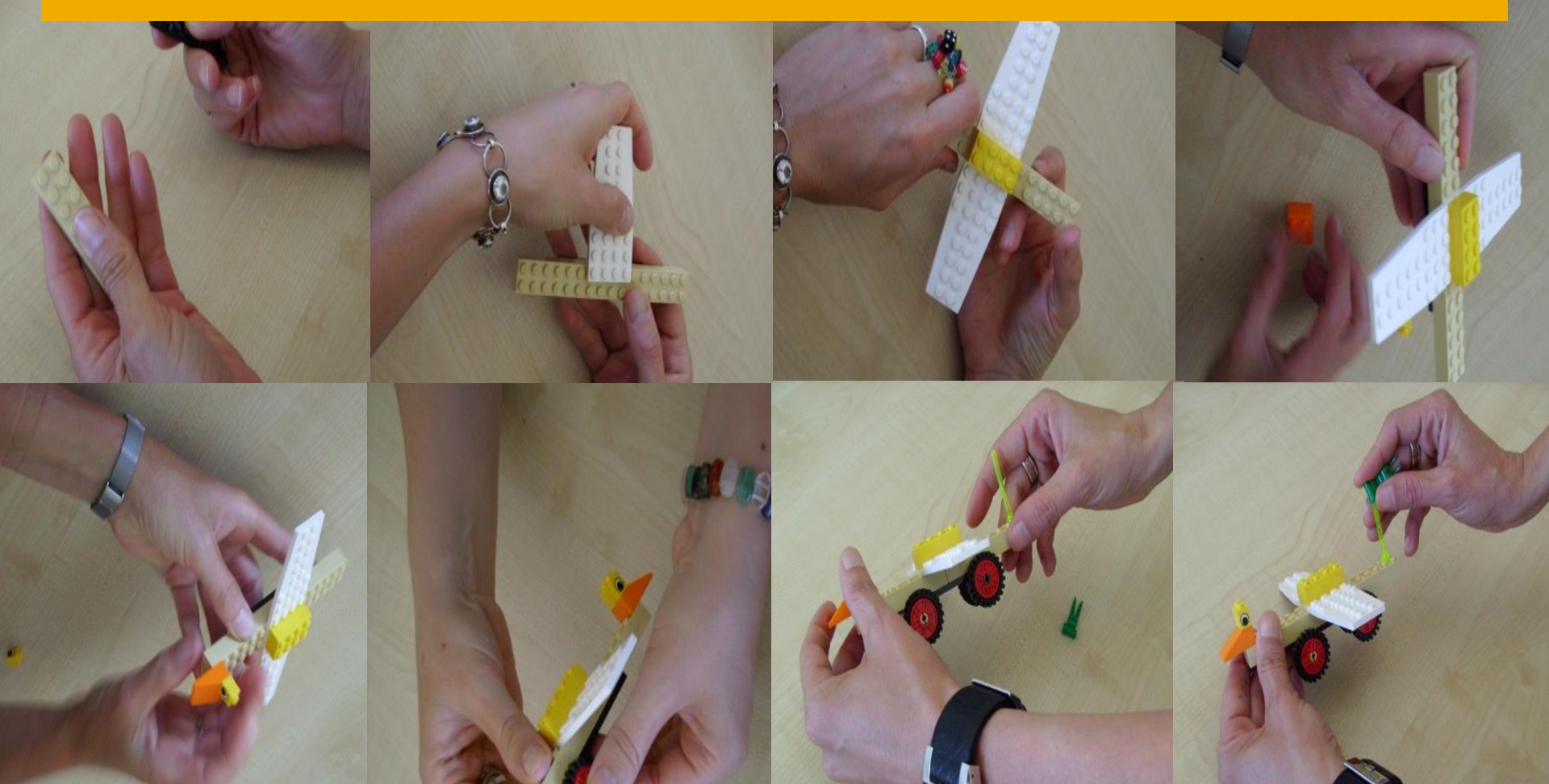
DEFER JUDGEMENT

“criticism is hard to take, particularly from a relative, a friend, an acquaintance or a stranger “
franklin jones



ENCOURAGE WILD IDEAS

"if at first an idea doesn't sound absurd, then there's no hope for it"
albert einstein



BUILD ON THE IDEAS OF OTHERS



GO FOR QUANTITY

“the best way to get a good idea is to get a lot of ideas”

linus pauling



ONE CONVERSATION AT THE TIME

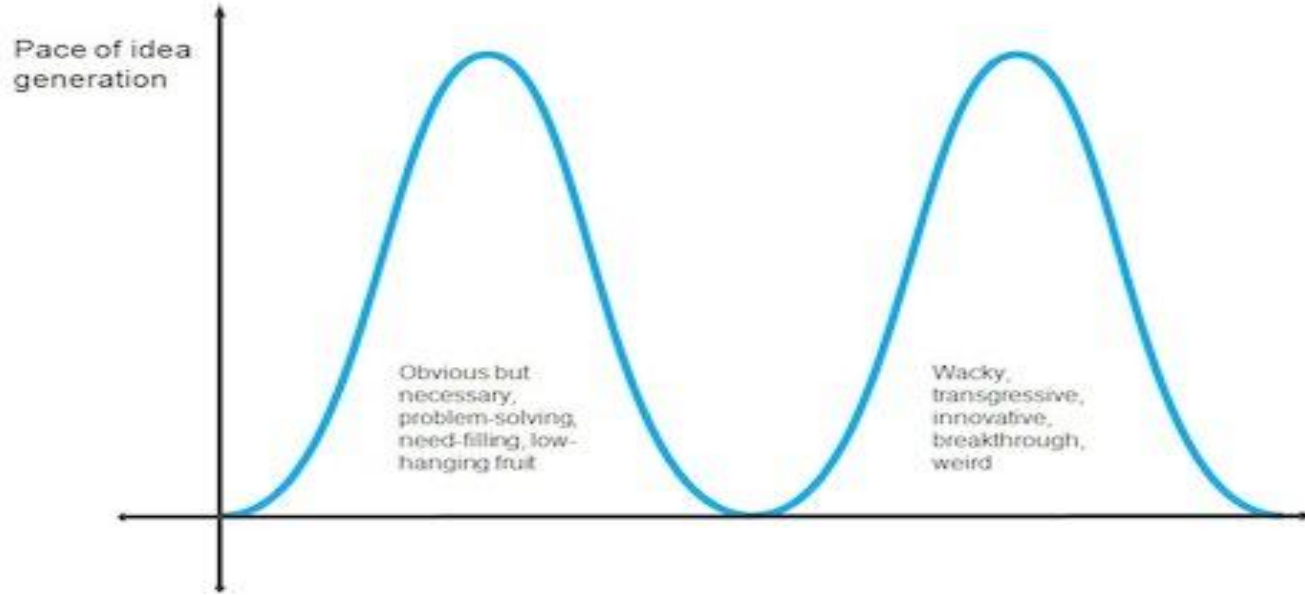
*"it takes a great man to be a good listener"
calvin coolidge*



STAY FOCUSED ON TOPIC



HOW WOULD SUPERMAN DO IT?

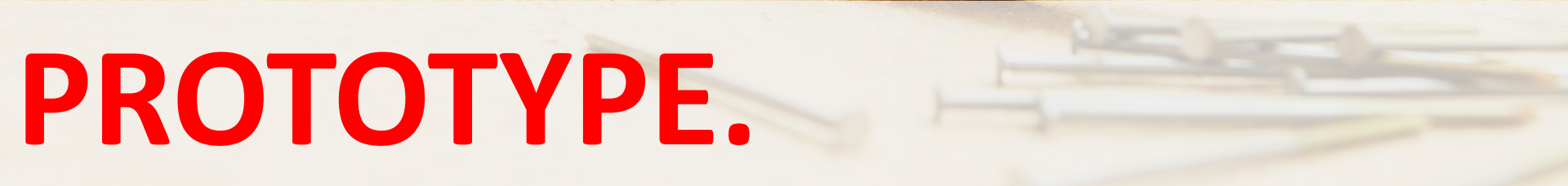


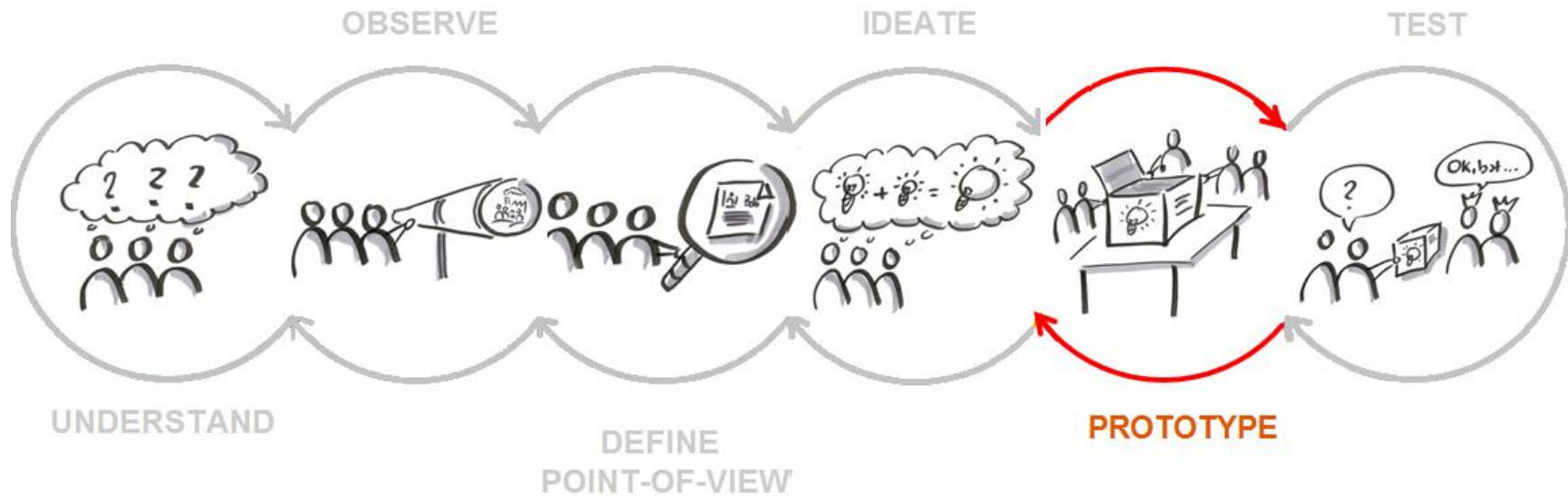
Steve Portigal: [The power of bad ideas](#)

THE POWER OF BAD IDEAS.



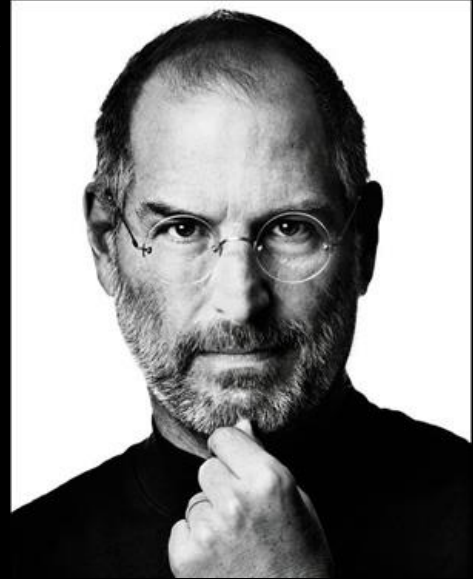
PROTOTYPE.

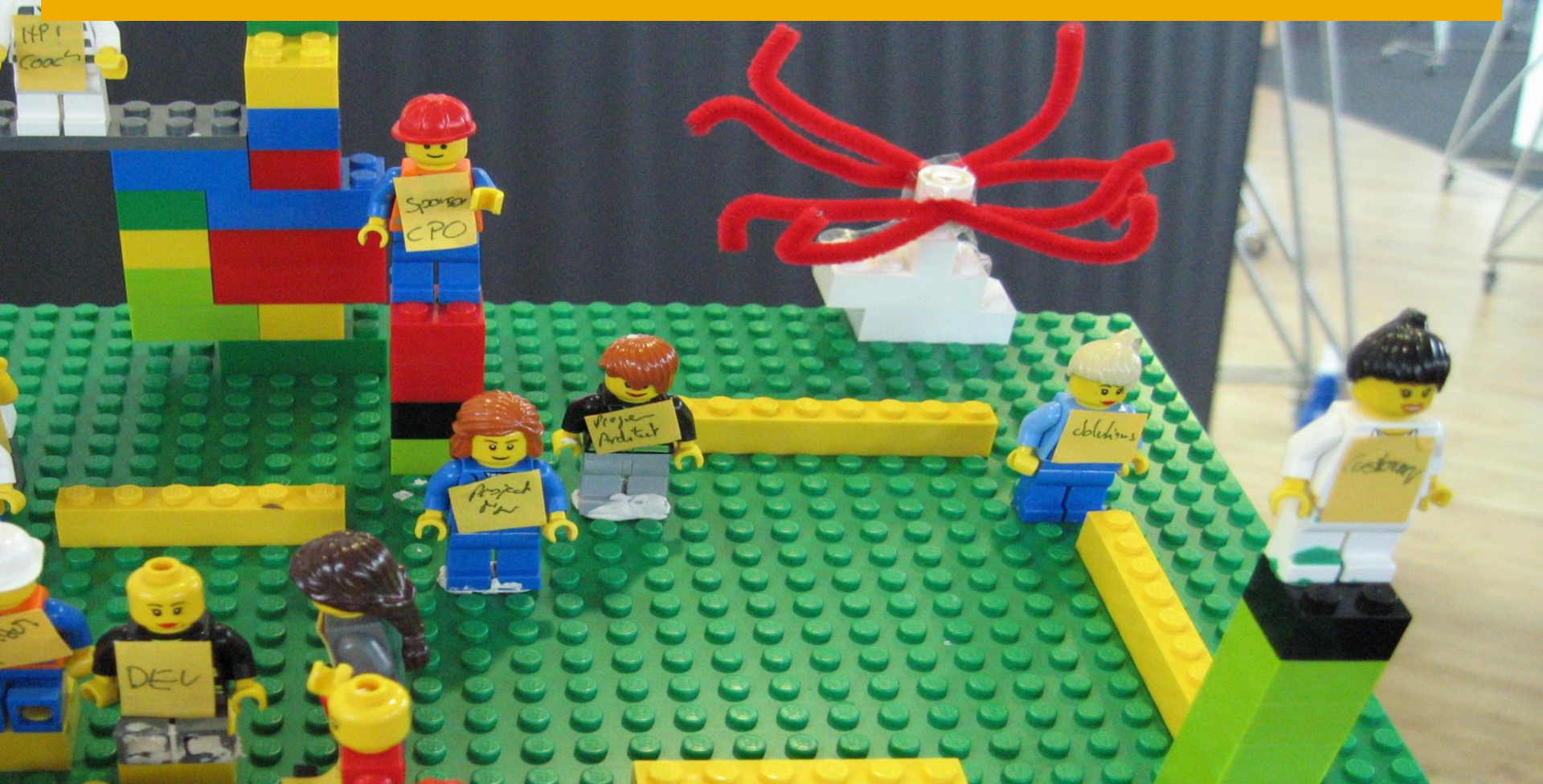




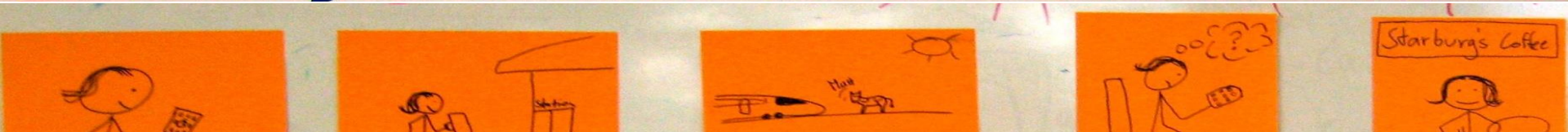
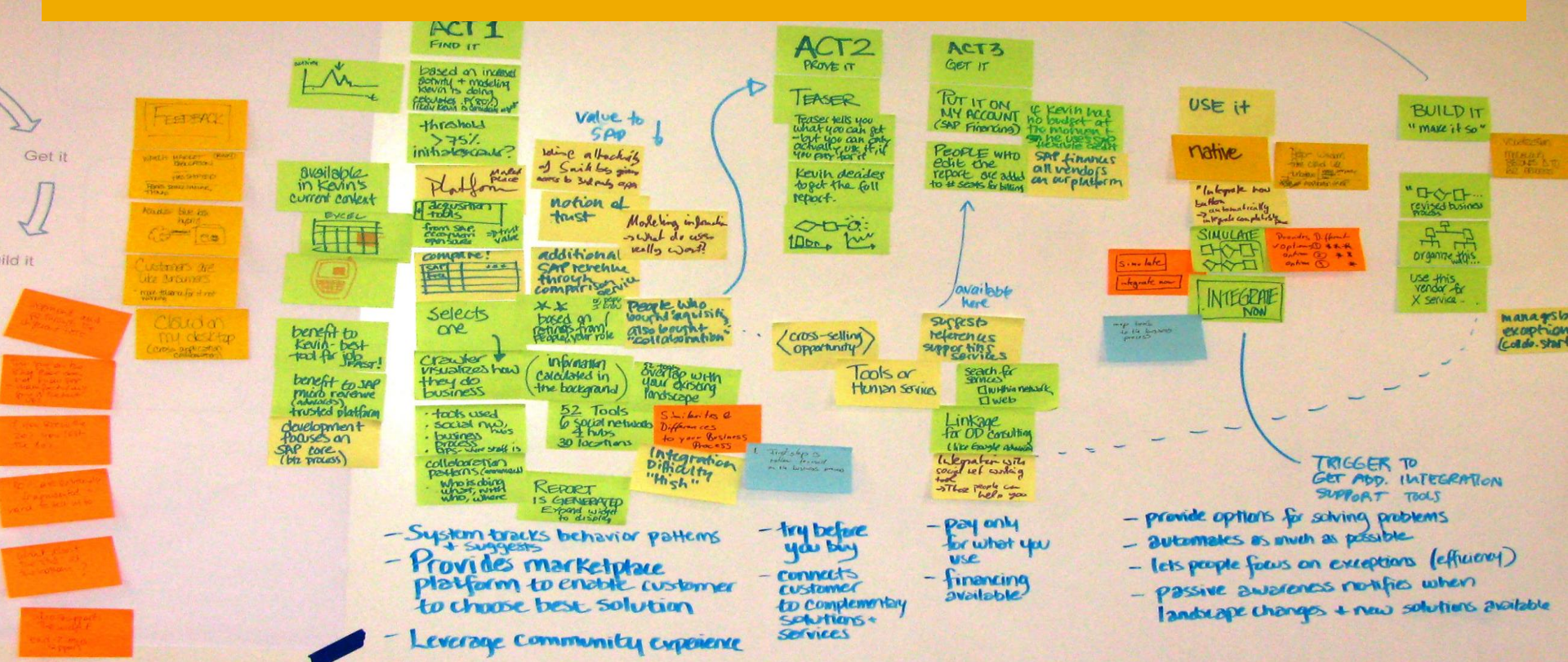
Where are we in the process?

“DESIGN is not just what it looks like and feels like. Design is how it works.”
– Steve Jobs





Physical prototypes



Storylines and storyboards

Franks plans the trip – his first ever trip to the US

Frank has booked his flight with the help of an agent, but he still has a lot of questions...

Passport? Visa?

How do I get to the airport, and to the hotel?

Should I get a rental car?

Do I need US Dollars in cash?

Is hotel too expensive? I'll have to ask Linda...



contact@newcotravel.com
New York Trip, March 23rd - March 29th 2011
March 21, 2011, 9:42:57 AM PDT
frank@newcotravel.com
Signed (1826843)

Howdy Frank,

Please click on the button below to review your New York trip travel details for March 29th, 2011.

Travel Package

Know your booking info, travel recommendation, top 10 policy info and more.

Bon Voyage!
NewCo Travel
contact@newcotravel.com
800-555-5555

Learn how you can start expensing on your trip

Submit your expenses, receipts, photos or voice messages to contact@newcotravel.com on your mobile phone, we will organize it for you.

Save the Vcard

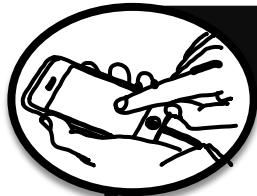


Download our iPhone or Blackberry mobile application and updated your expense on the go.

Download Application

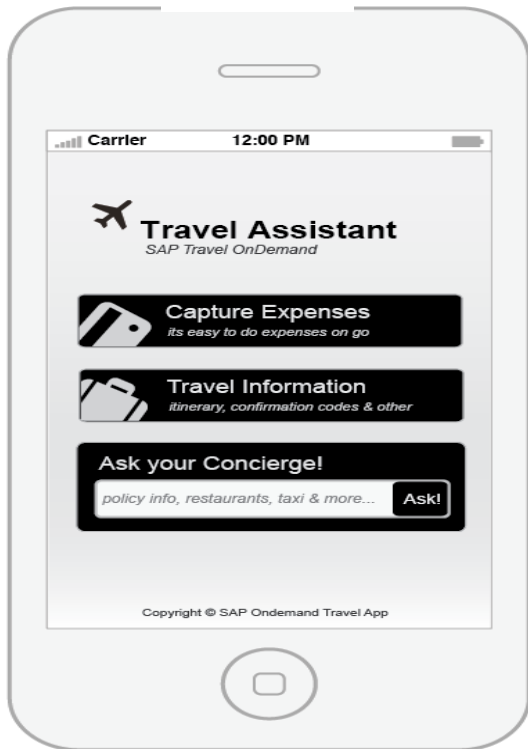
Just then, Frank gets an email from Travel OD...

High-fidelity storyboard

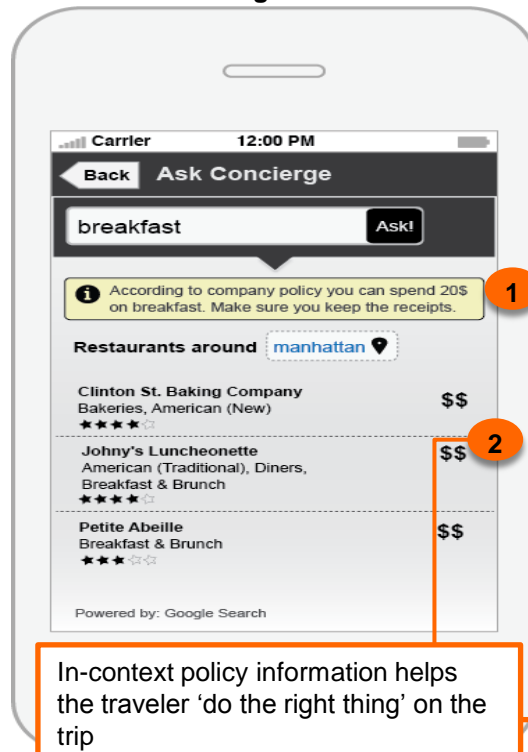


Concierge service helping Frank to be smarter

Start Screen

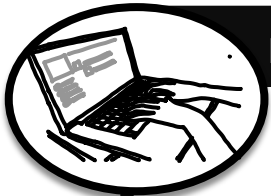


Concierge Services



In-context policy information helps the traveler 'do the right thing' on the trip
Travel smarter

Policy overlay for tips & tricks drives cost-conscious behavior
Spend money wisely



Meanwhile, all throughout the trip, Frank's expense report gets filled out....

SAP TRAVEL ON DEMAND Welcome, Frank ▾ | Help | Logout

MY ENVELOPES MY ENVELOPES Recent New York Sales Deal

View: Day to Day Expenses Settings ▾

March 23 - 29, 2011
New York Sales Deal
total spent **\$600/** average **\$3000**
Cost Assignment: 9999999 newco sale trips (100%)

Pretrip Expenses + Add New

Did you have any pre-trip expenses?
e.g. passport renewal, conference charges or travel adapter

Day 1 - Wed, 23 March, 2011 + Add New

Airfare Air travel Policy: Policy allows a maximum of \$25 for baggage checked **\$300** paid by corporate card
03/23/2011 SFO-NY LH 9053 Confirmed 01:54 PM/09:45 AM +1 Economy / H
from your travel itinerary

Are we missing receipts for your airport commute?
e.g. taxi, shuttle service or car mileage

Per Diem Per Diem Policy: Policy allows a maximum of \$25 for baggage checked **\$15**
Breakfast-06 Lunch 15\$ Dinner-06
Gary Paulsen has calmed your dinner charges (ref: planning meeting), edit if required.

Hotel Expenses Hotel Check-in Policy: 1. The maximum nightly rate is \$150. Your manager will need to approve this expense. 2. Your hotel bill needs to show your full More... **\$250** total \$1750 not paid yet
Receipt needed New York Marriott East Side, New York, New York 10017 USA
from your travel itinerary

Day 2 - Thu, 24 March, 2011 + Add New

Day 3 - Fri, 25 March, 2011 + Add New

1 Airfare and other itinerary information is automatically added
Painless expense reporting

2 Credit card expenses are automatically classified and added
Painless expense reporting

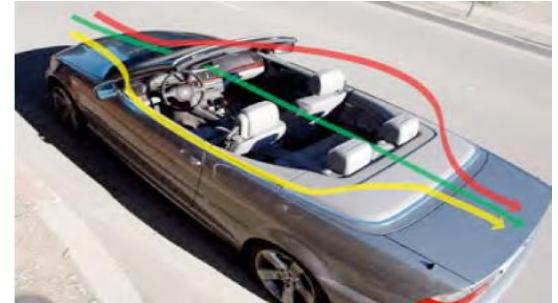
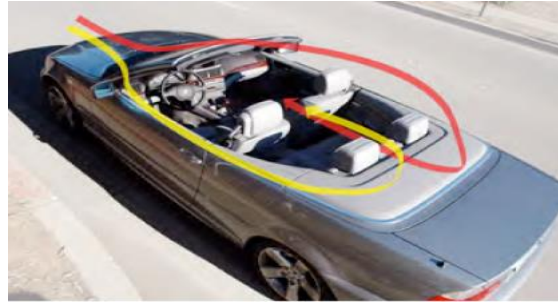
Daily expenses (e.g. per diem) are automatically added, as are all expenses coming from mobile
Painless expense reporting
Anywhere, anytime



Acting

Project BMW – Improving the open-air experience

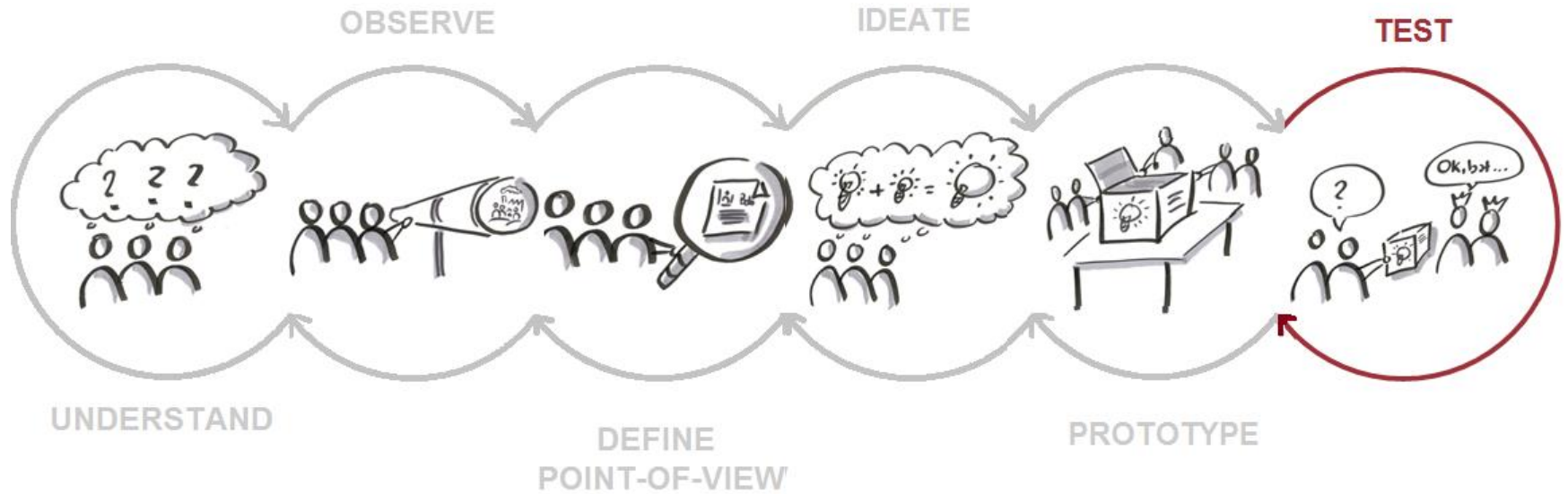
getting very real



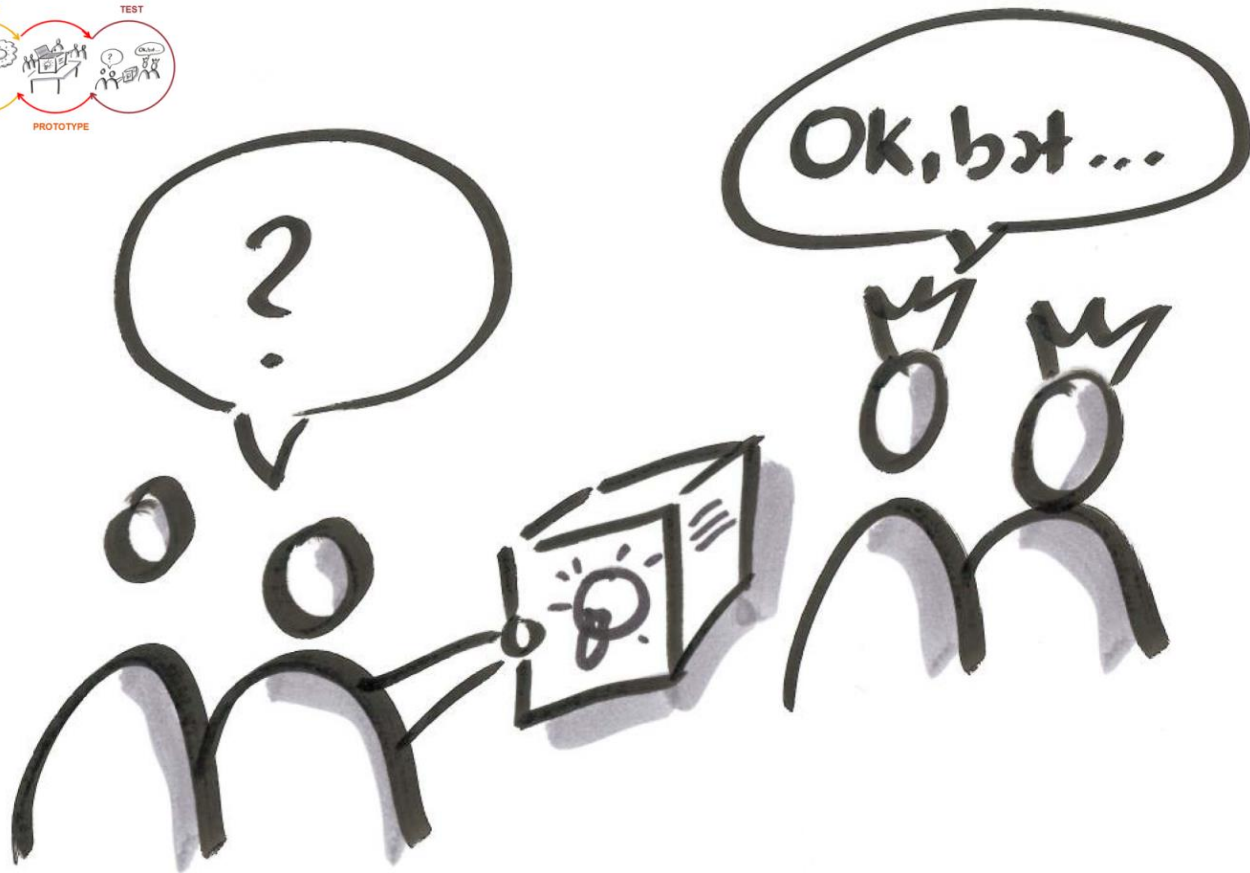
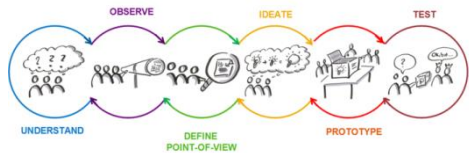
This example has been provided by Larry Leifer Larry – the Director of the Center for Design Research (CDR) at Stanford University
[<http://www-cdr.stanford.edu/~leifer/>]



TEST.



Where are we in the process?



WHY TEST?

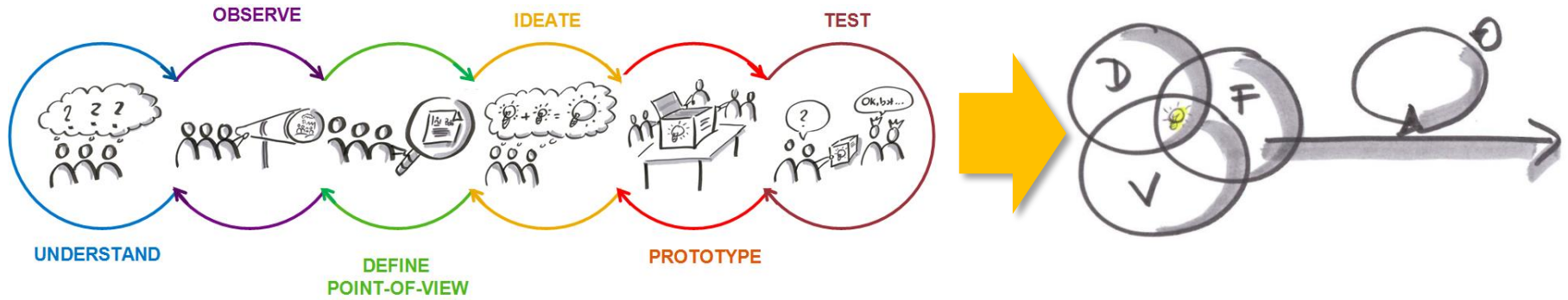


Why Test?

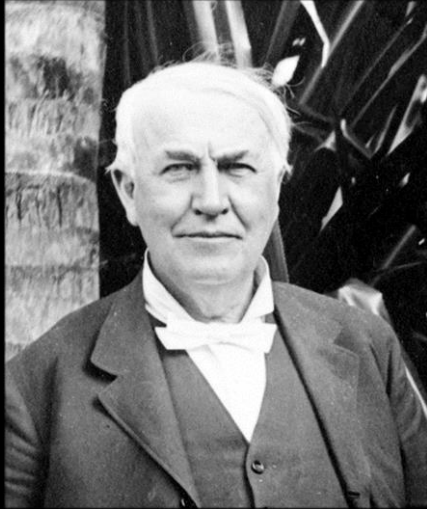
- To **gather early feedback** from users, stakeholders and experts, to be able to iterate
- To learn about your ideas strengths and weaknesses
- To fail early

A row of computer workstations in an office setting. The foreground shows a black keyboard and a black mouse on a light-colored desk. In the background, several computer monitors are visible, and blue office chairs are partially seen. The scene is brightly lit, likely from a window. A solid black horizontal bar is at the top of the image.

IMPLEMENTATION



THERE'S NO INNOVATION WITHOUT IMPLEMENTATION.



*“What innovation boils down to is one per cent **inspiration** and ninety-nine per cent **perspiration.**”* – Thomas Edison

WHAT THE HELL IS DESIGN THINKING???

WORK IN STAGES TO SOLVE THE PROBLEM!

FUN!

EXPRESSION W/O BARRIERS

Iteration

The real thing about think and...
Do!

JUST ANOTHER BUZZ WORD

WORKING MODE

MIND-SET

- LISTEN
- SEE
- DEVELOP

FUN!

NOT FOR EVERYBODY!

INTEGRATION

PEOPLE

HANDS ON!!!

THINK OUT THE BOX

THINK OUT OF THE BOX

COLLABORATIVE WAY OF SOLVING PROBLEMS

THE KEY TO WIN!

TEAM WORK WITH FEEDBACK

FIND IT
PLAN IT
JUST DO IT

BE CREATIVE

DOING THINGS IN A WAY THEY (ACTUALLY) MAKE SENSE!

INTEGRATED ARE TO THINK

CREATE TOGETHER SOMETHING THAT ALONE WE CANNOT

GETTING THE BEST SOLUTIONS

IDEAS START TO FIND SOLUTIONS

A MEANS TO EXPAND YOUR WAY OF SEEING YOUR DAILY WORK

DT IS CHANGING CREATIVE SO STILL OFFICE IS WAY TO COME UP WITH NEW IDEAS

SHARING YOUR BORING DAILY TASKS

JAPAN

THANK YOU!