

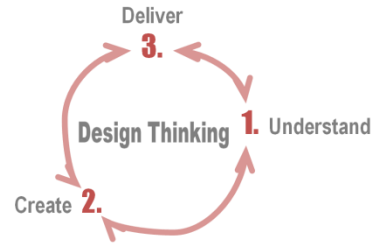


# Design Thinking



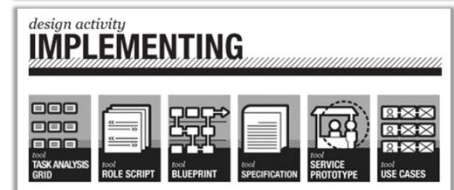
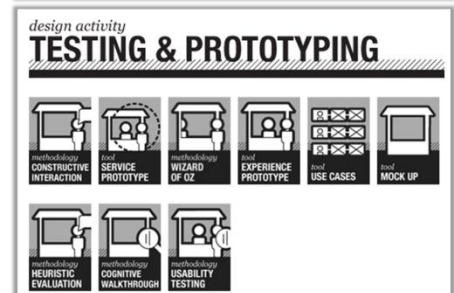
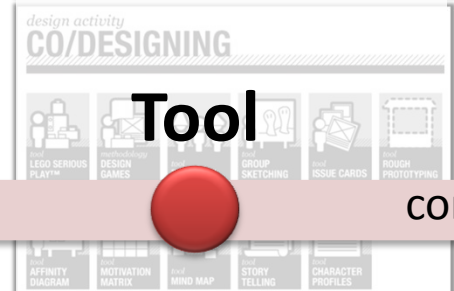
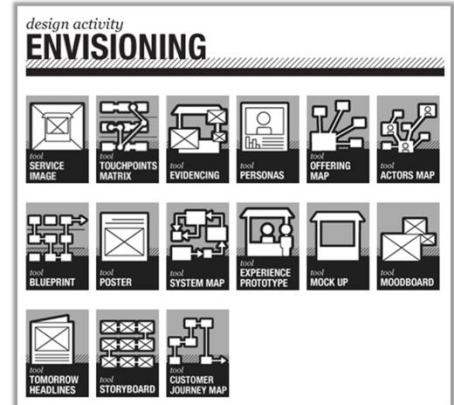
## Definition

## Mind-set



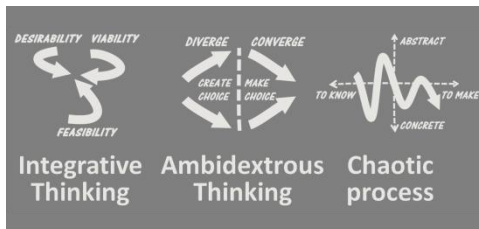
**Understand**   **Create**   **Deliver**  
 Understand what matters   Make the idea real   Make the idea happens

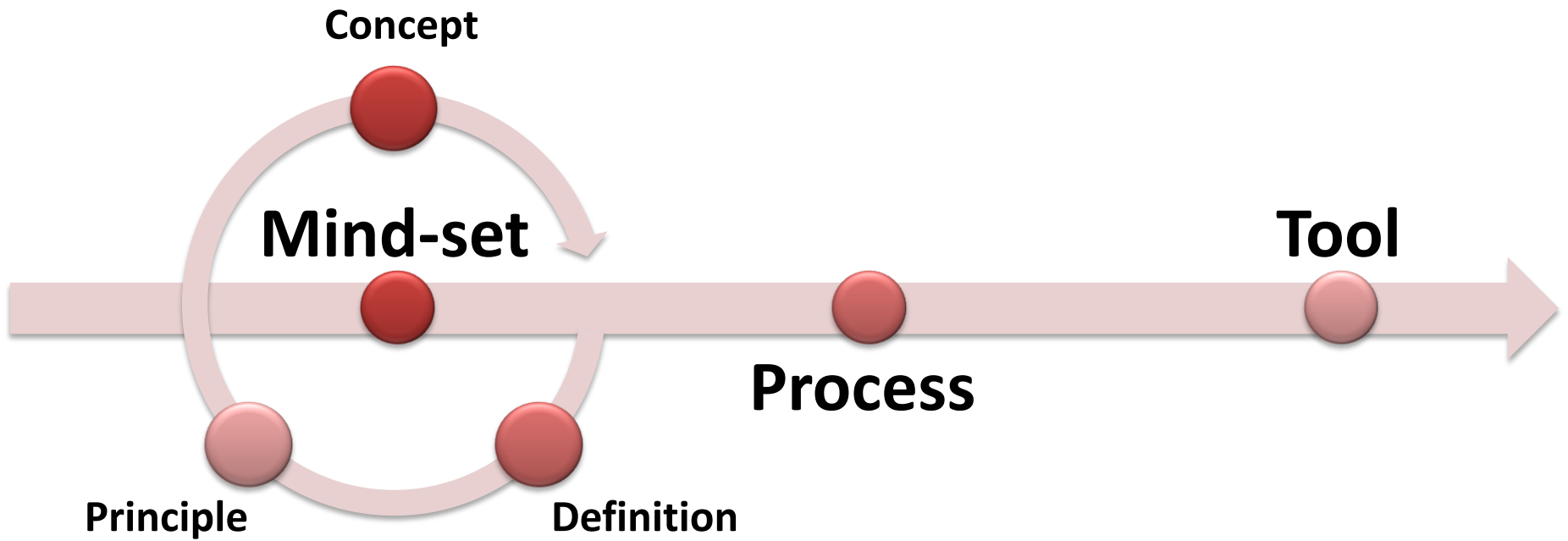
## Process

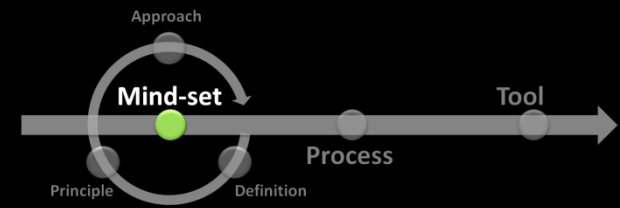


## Concept

## Principle

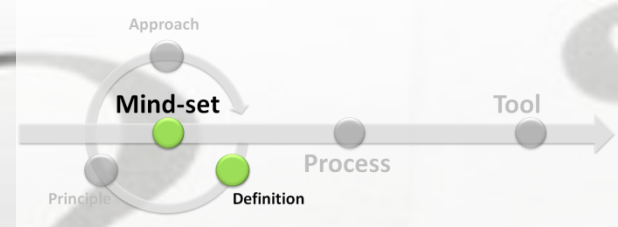






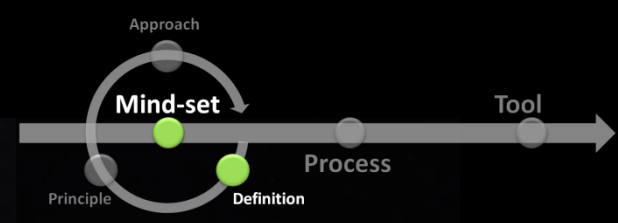
# Mind-set

# Design



“The job of the designer is **converting need into demand.**”

Peter Drucker

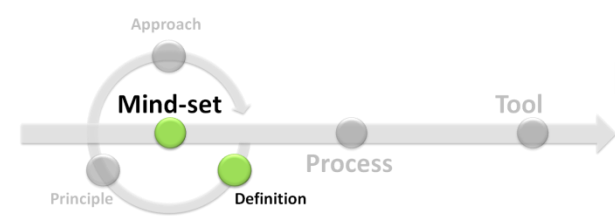






**No longer associated simply with objects and appearances, design is increasingly understood in a much wider sense as the human capacity to plan and produce desired outcomes.**

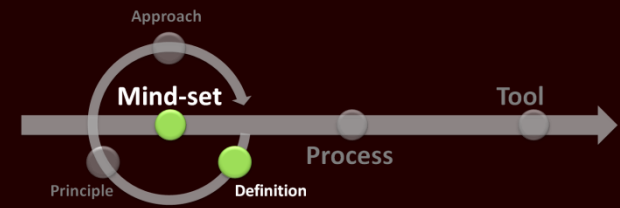
**Bruce Mau**



“design is art optimized to  
meet objectives”

- Me



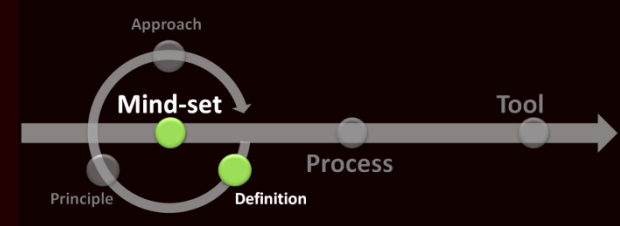


design is  
making sense of things



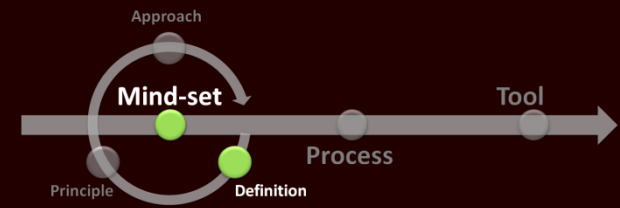
design as style + some usability





design is not so small



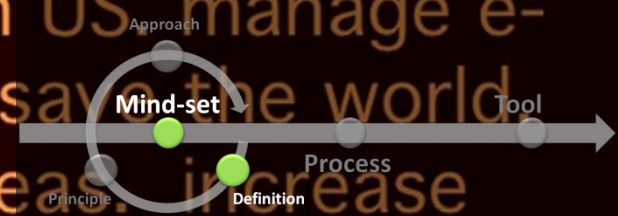


design as:

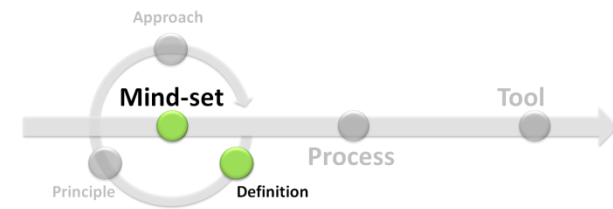
a way of thinking, an approach  
to solving problems



reduce water bottle consumption in US. manage e-waste and discarded electronics to save the world. improve sanitation in low income areas. increase the number of registered bone marrow donors. better connect food production and consumption. design an accessible election experience. improve recruitment of potential participants in clinical trials at U-M. increase availability of affordable learning tools and services for students in the developing world. create a multimodal system of transportation in major cities. restore vibrancy in cities and regions facing economic decline (detroit). design an ideal home for soldiers injured in the field. redesigning the patient experience in hospitals. create environments where students can explore, understand and add their unique voice to the world. create employment in areas that have high unemployment



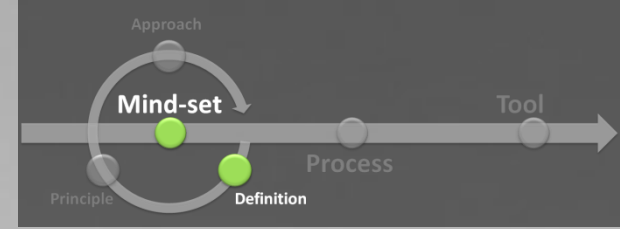




*Thinking of design as an experience rather than as isolated objects helps us deal with a much more complex world.*

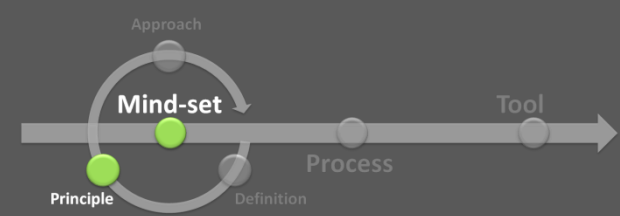
TIM BROWN  
CEO and President of IDEO.





a way of approaching  
**business problem**  
in the same way  
designers approach  
**design problem**

Roger Martin



# DESIGN THINKING WORKS WITH THREE PRINCIPLES



**EMPATHY**

---

**Design is  
human  
centered**



**COLLABORATION**

---

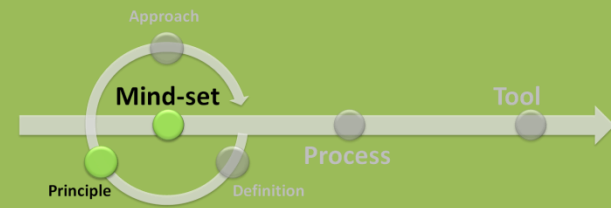
**From  
Consumption  
to participation**



**EXPERIMENTATION**

---

**Building  
to think**



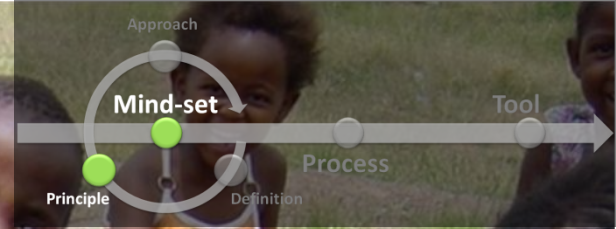
Start with  
humans

1



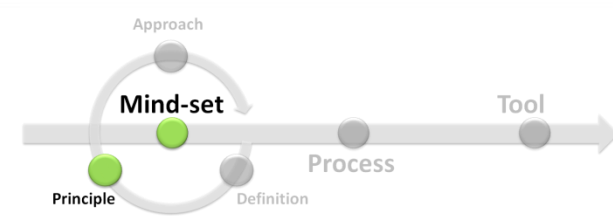
Instead of starting with technology, the team started with people and culture. It starts with what humans need, or might need. What makes life easier, more enjoyable? What makes technology useful and usable?

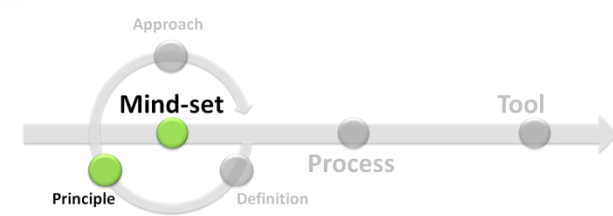


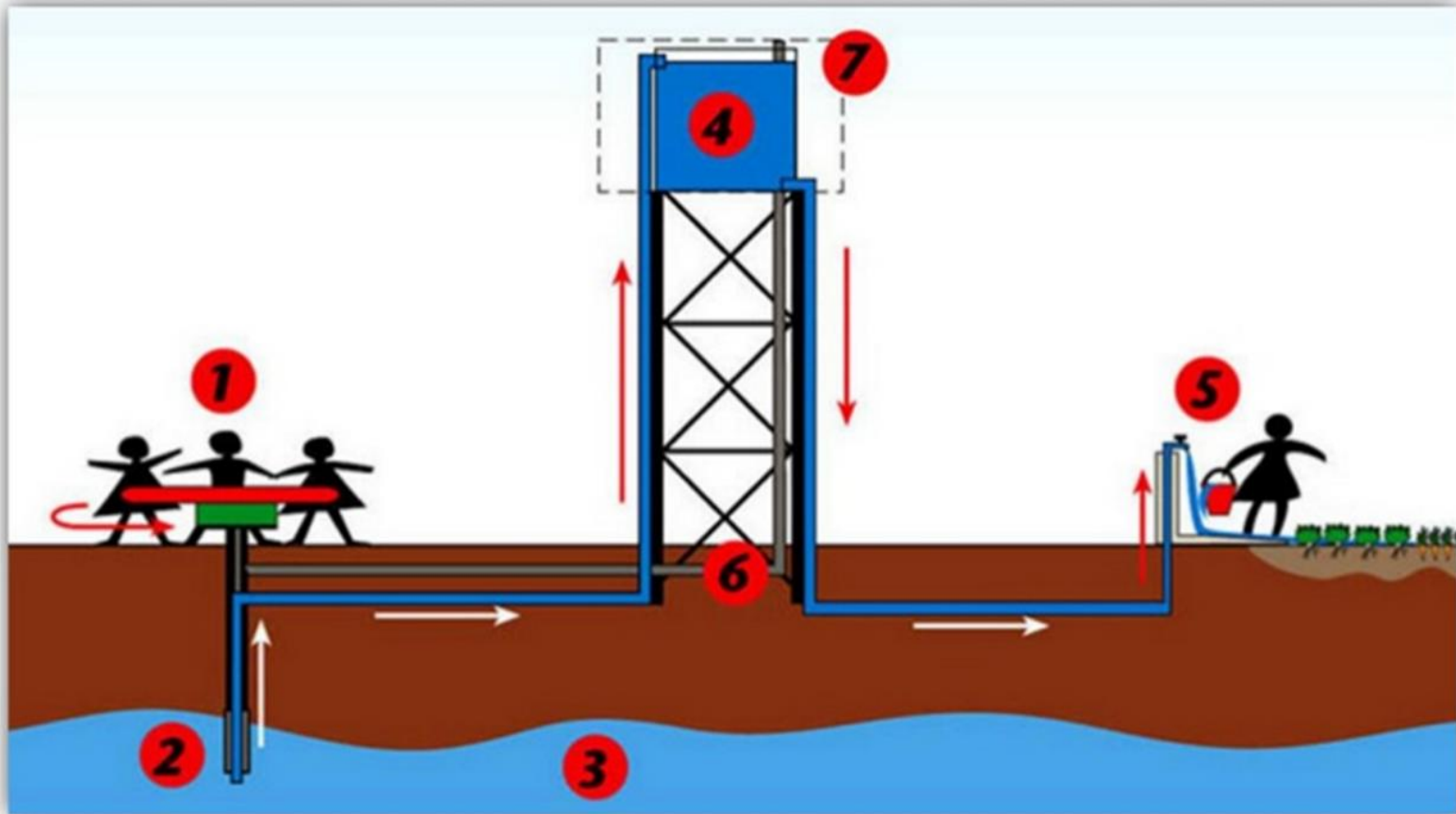
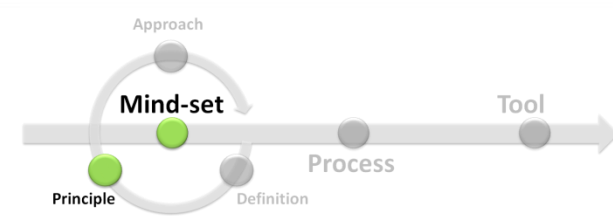


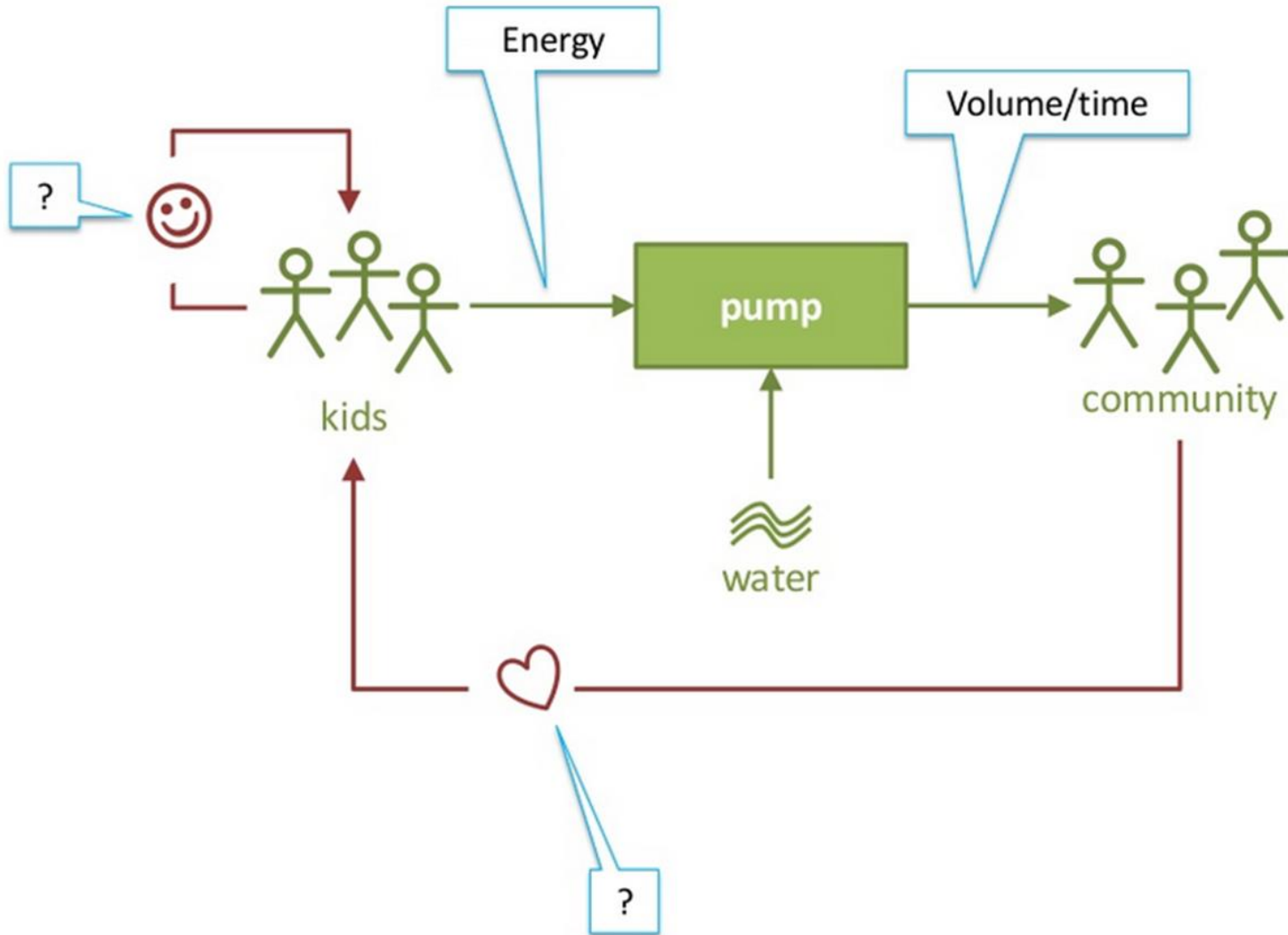
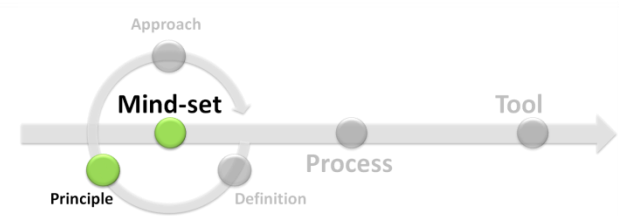
But that is more than simply good ergonomics, putting the buttons in the right place. It's often about understanding **culture** and **context** before we even know where to start to have ideas.



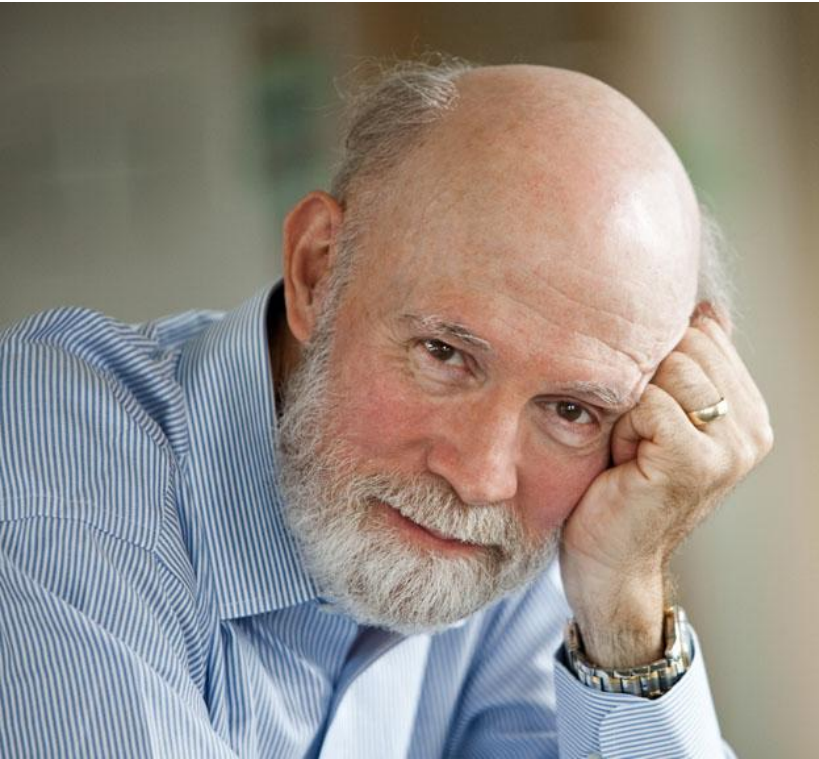






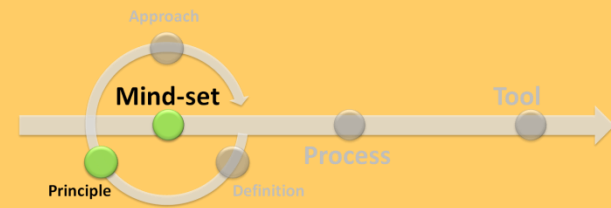






***“Most consumers aren’t  
really interested in products.  
They only want to use  
products to solve their  
day-by-day problems.”***

*Jonh Womack  
Lean Enterprise Institute*

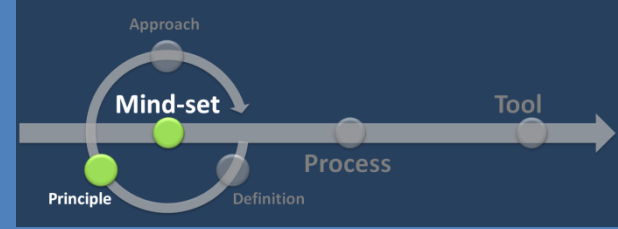


From  
consumption to  
participation

2



active engagement of everyone in experiences that are meaningful, productive and profitable.



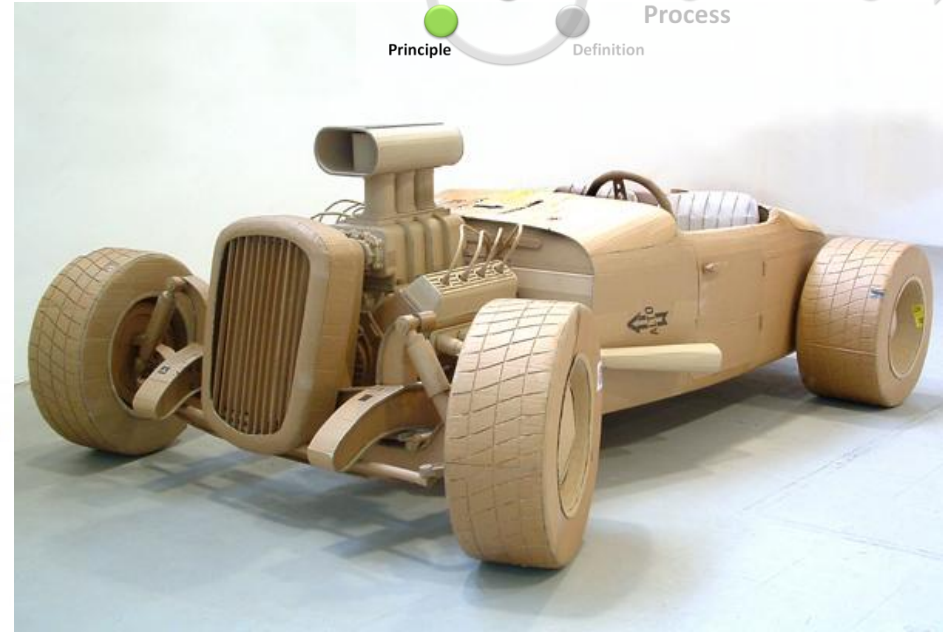
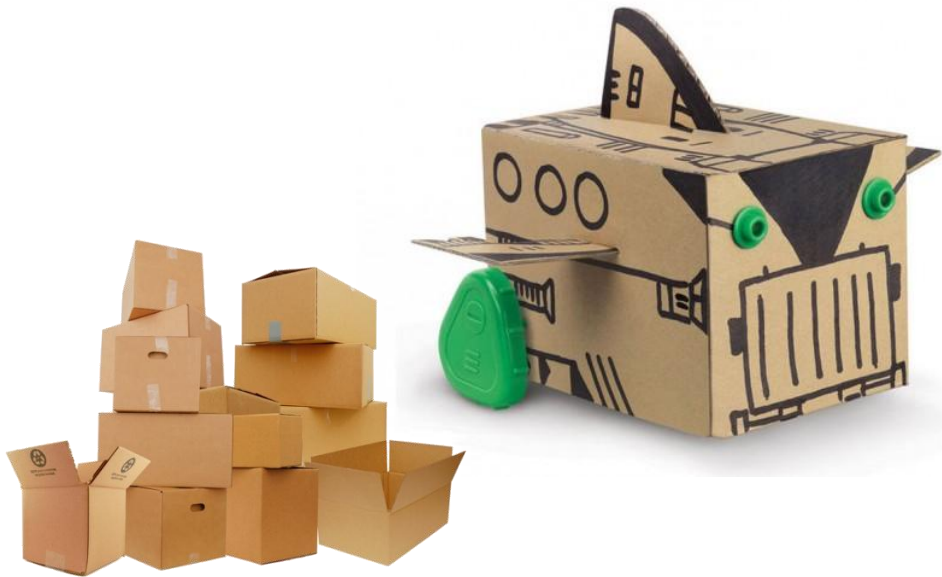
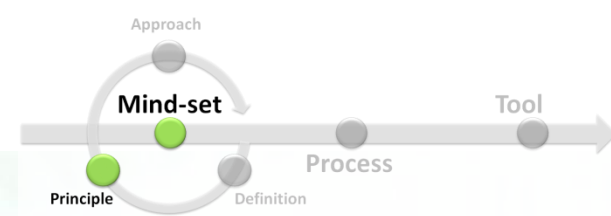
Building  
to think

3

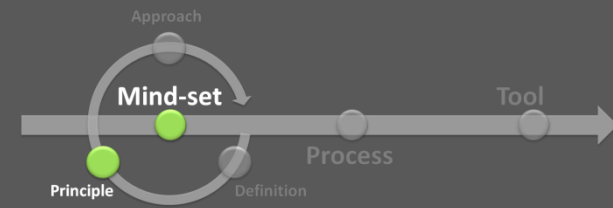


Instead of thinking about what to build, building in order to think.





Prototypes speed up the process of innovation, because it is only when we put our ideas out into the world that we really start to understand their strengths and weaknesses. And the faster we do that, the faster our ideas evolve.



## EMPATHY

**Design is  
human  
centered**



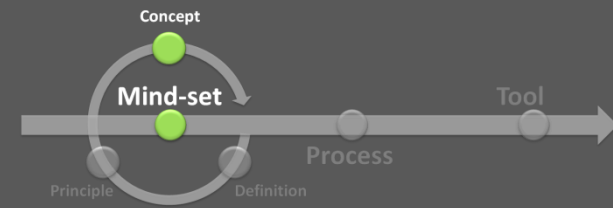
## COLLABORATION

**From  
Consumption  
to participation**



## EXPERIMENTATION

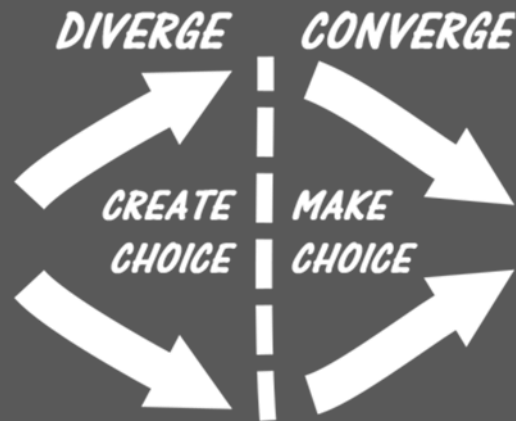
**Building  
to think**



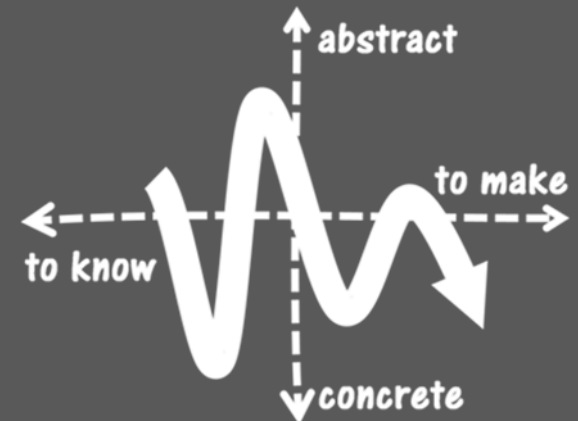
# DESIGN THINKING RELY ON THREE PREMISES



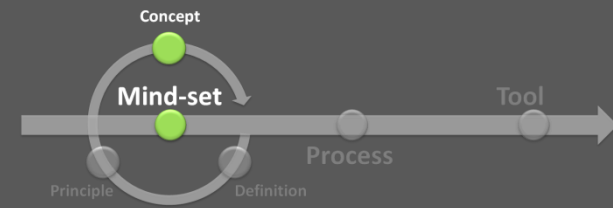
Integrative  
Thinking



Ambidextrous  
Thinking



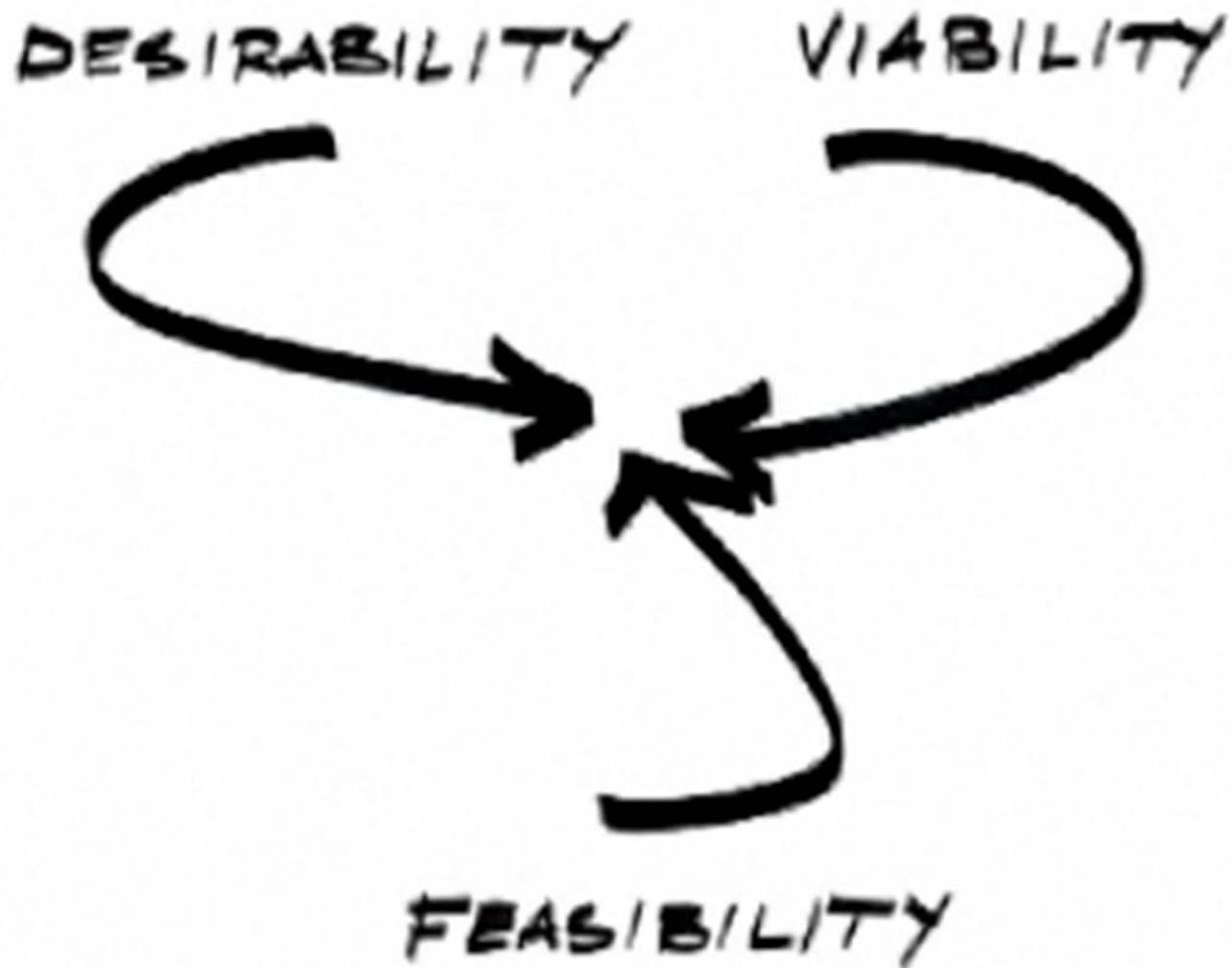
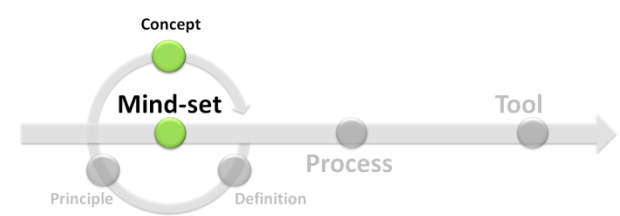
Non linear  
process



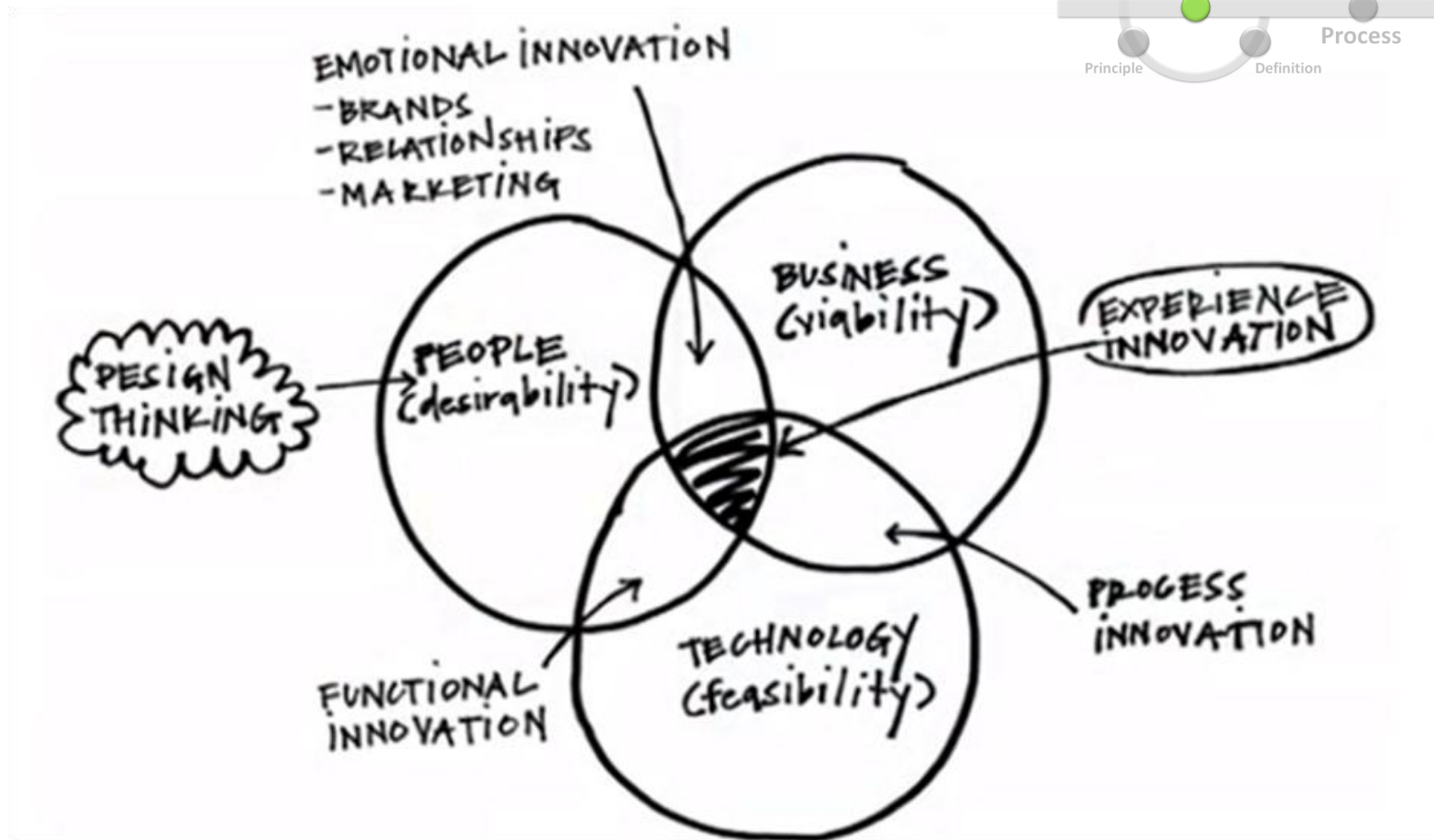
*DESIRABILITY VIABILITY*



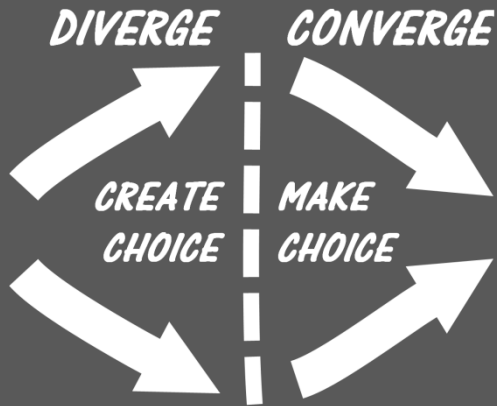
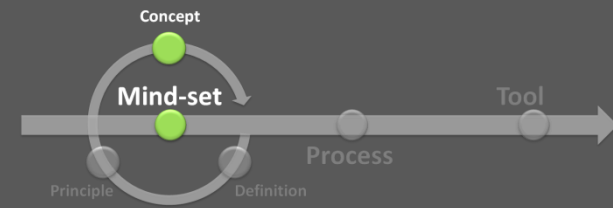
# Integrative Thinking



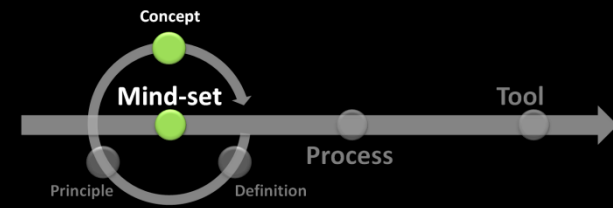




Design thinking begins with integrative thinking, the ability to exploit opposing ideas and opposing constraints to create new solutions

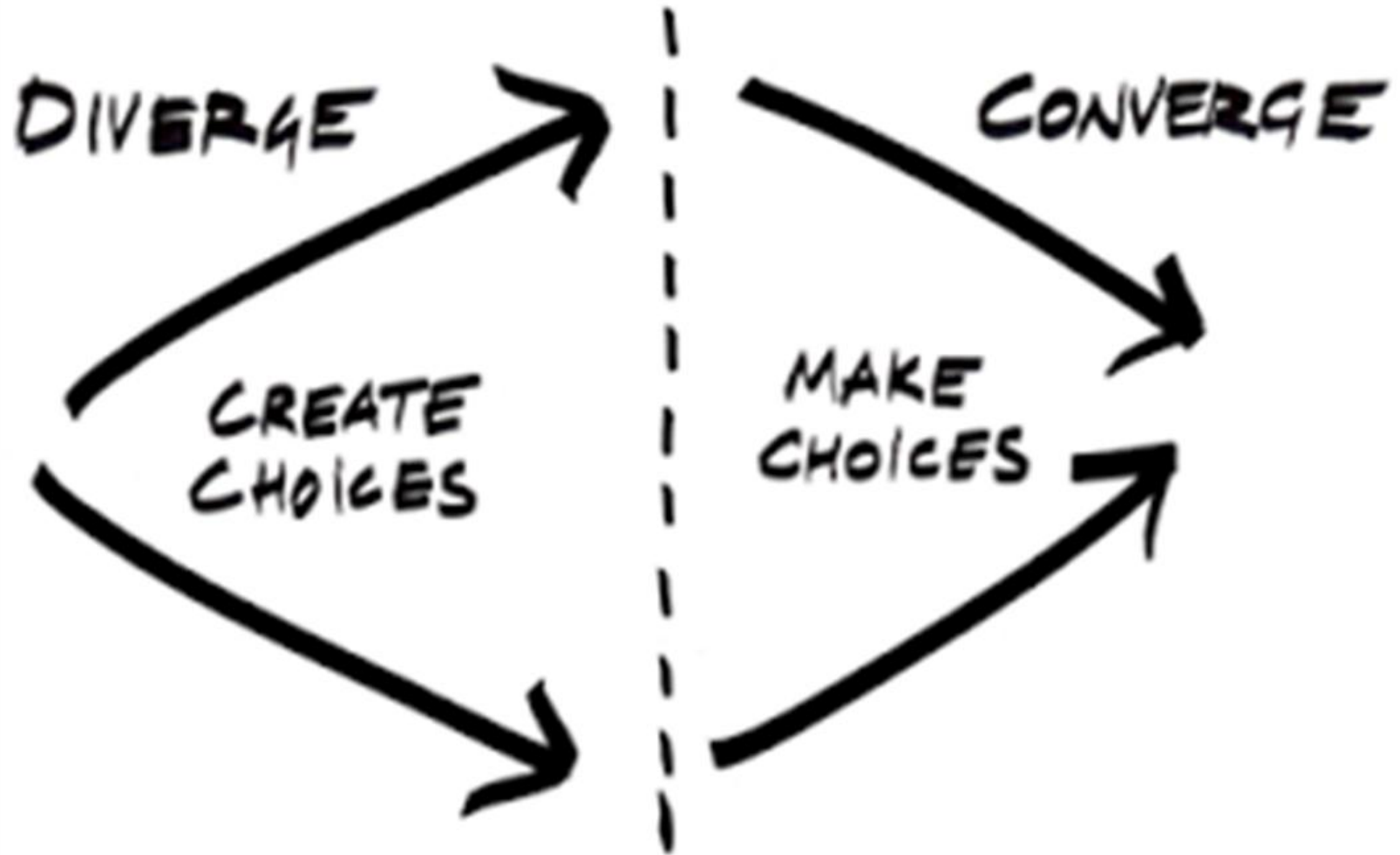
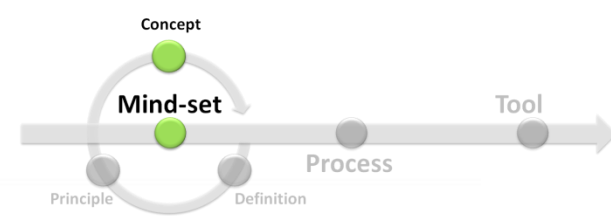


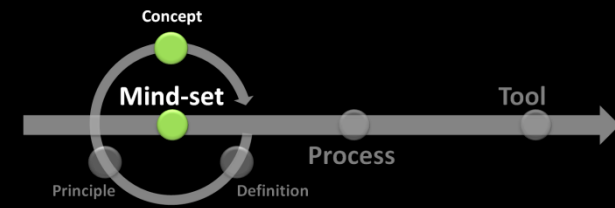
# Ambidextrous Thinking



**... making the transition to a society based in the creative, empathic and systemic faculties: the Conceptual Age”.**

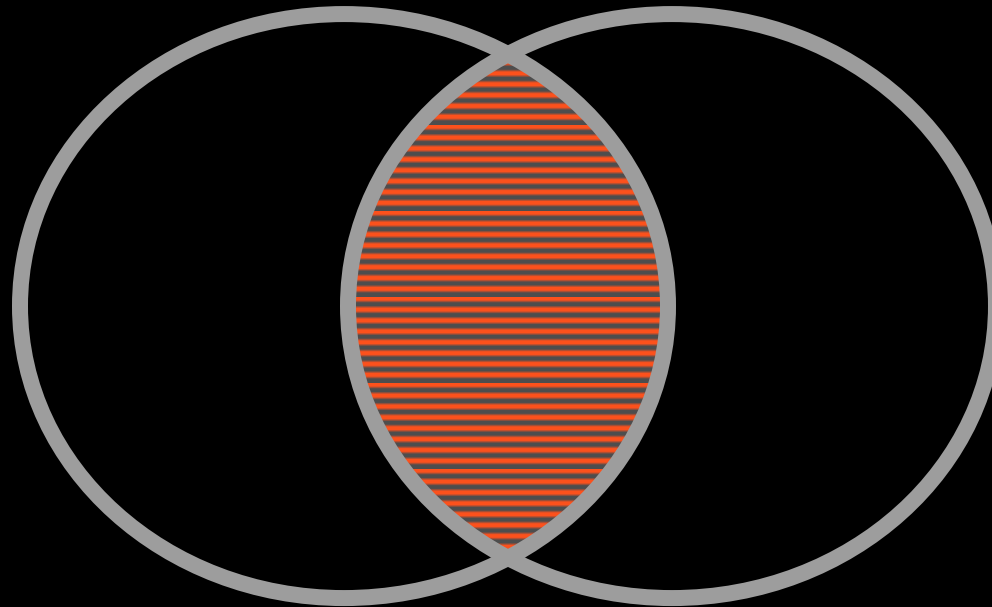
**Daniel Pink**  
**A Whole New Mind**





Analytical thinking

Intuitive thinking



**Design thinking**

**“to create better business leaders”**

Roger Martin,  
Dean of Rotman School of Business



**Objectives/capabilities**

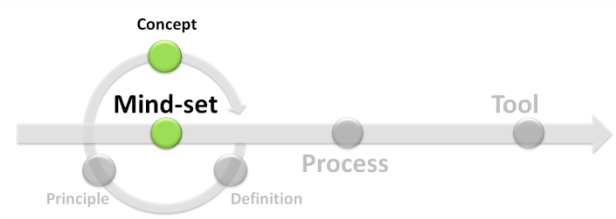
**opportunities**

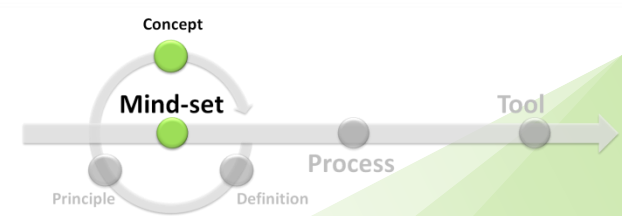
**ideas**

**innovations**

### **ideation**

- inspiration
- spontaneous
- methods/systematic





**divergent  
thinking**  
(creative,  
qualitative,  
possibilities,  
conceptual...)

**convergent  
thinking**  
(analytic,  
quantitative,  
constraints,  
specifics...)



I AM THE  
LEFT BRAIN

Decisive!  
011001011 LOGIC

Accurate  
ANALYTIC

REASON  
1234567  
245879

PRACTICAL  
Strategic

CONTROL

SCIENCE

Realistic  
Bryan

WWW.CARTOONADAY.COM

I AM the

Right Brain!

Intuition  
Love LOVE Love  
thou art  
Poetry

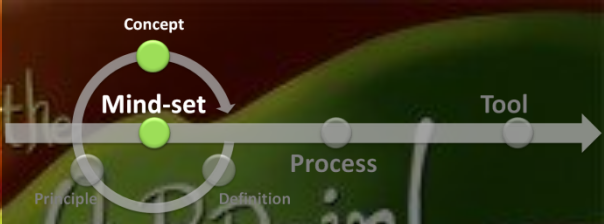
FREEDOM

Passion  
vivid

creative

YEARNING

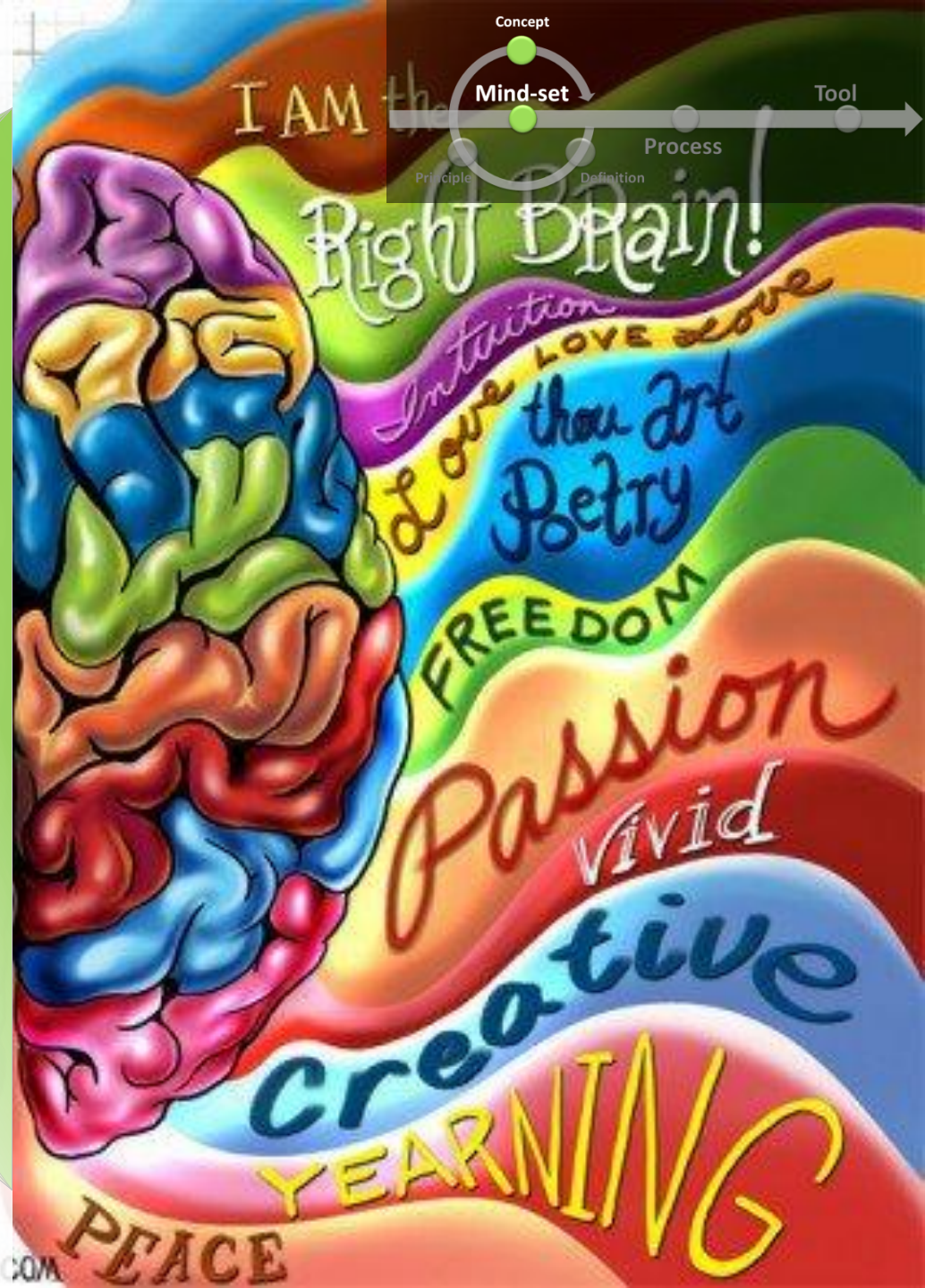
PEACE



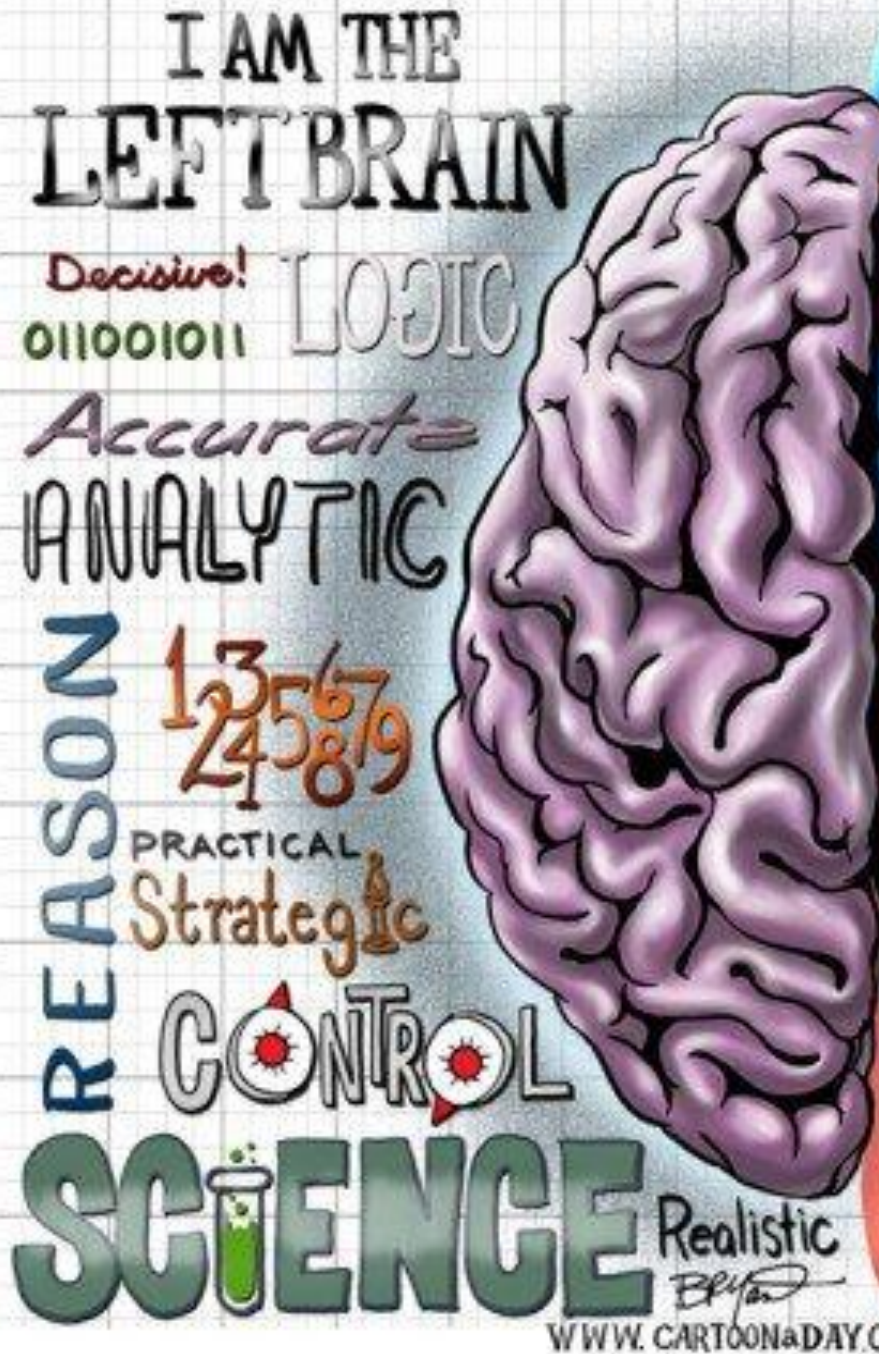


# divergent thinking

- Random
- Intuitive
- Synthesizing
- Subjective
- Big picture

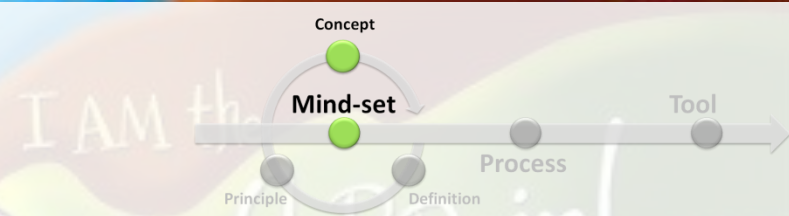






## convergent thinking

- Sequential
- Rational
- Analytical
- Objective
- Detail oriented







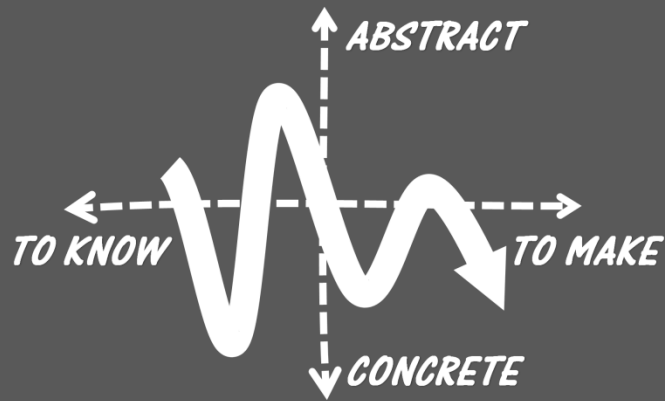
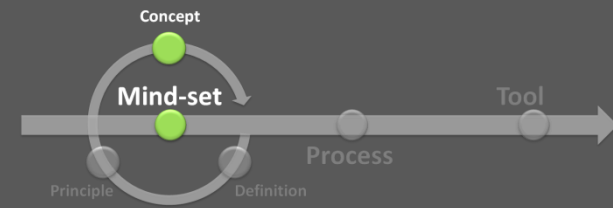
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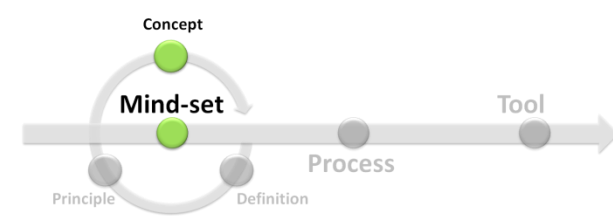


# convergent thinking

- Sequential
- Rational
- Analytical
- Objective
- Detail oriented

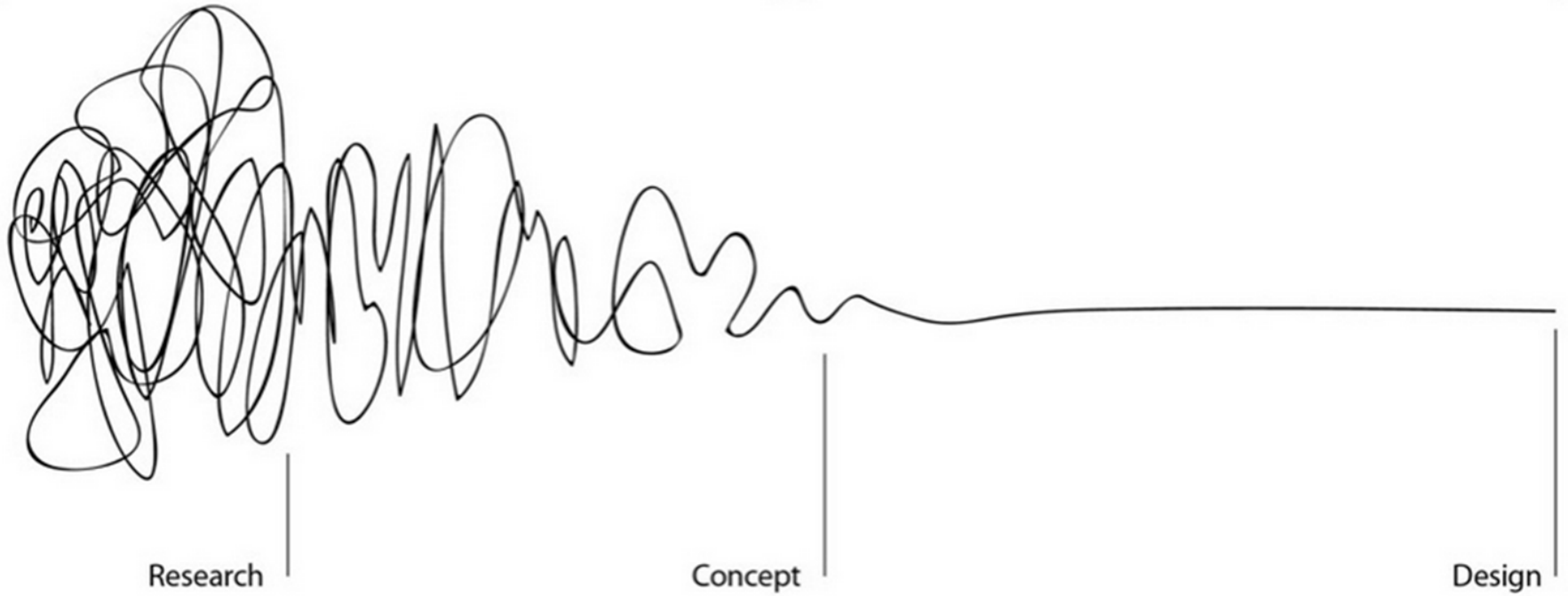


# Non linear process

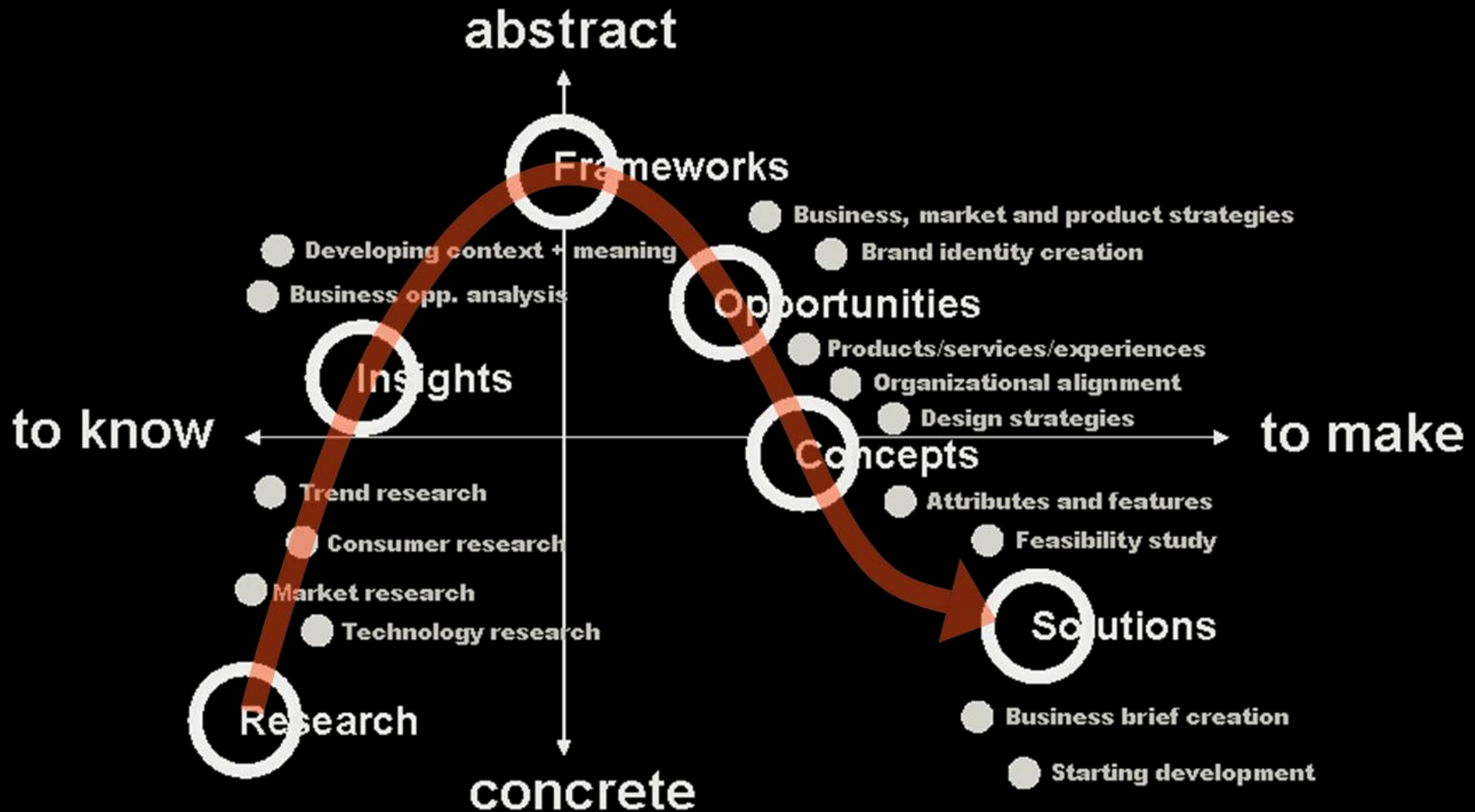
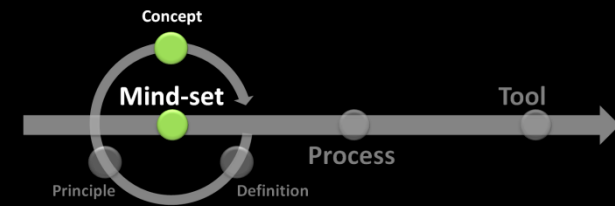


Uncertainty / patterns / insights

Clarity / Focus



# Design thinking **connects** NPD activities







the first step is to start asking  
the right questions.



# **How might [company name] get closer to existing customer?**

Beyond commercial transactions, brand strength is about relationship

Customers can be seen to be on a journey through a series of touchpoints with [company name]. To maintain a customer relationship all of these touch points need to be continually cultivated and designed to be increasingly satisfying experiences – through encounter, planning, purchase, implementation and support, and continuing interactions.

# **How might [company name] encourage business growth for its customers?**

Creating new benefits, and value, for customers through innovation

Can [company name] understand market trends and expectations better than its customers. Can it provide innovation that build on this knowledge with features that generate more business growth for its customers?

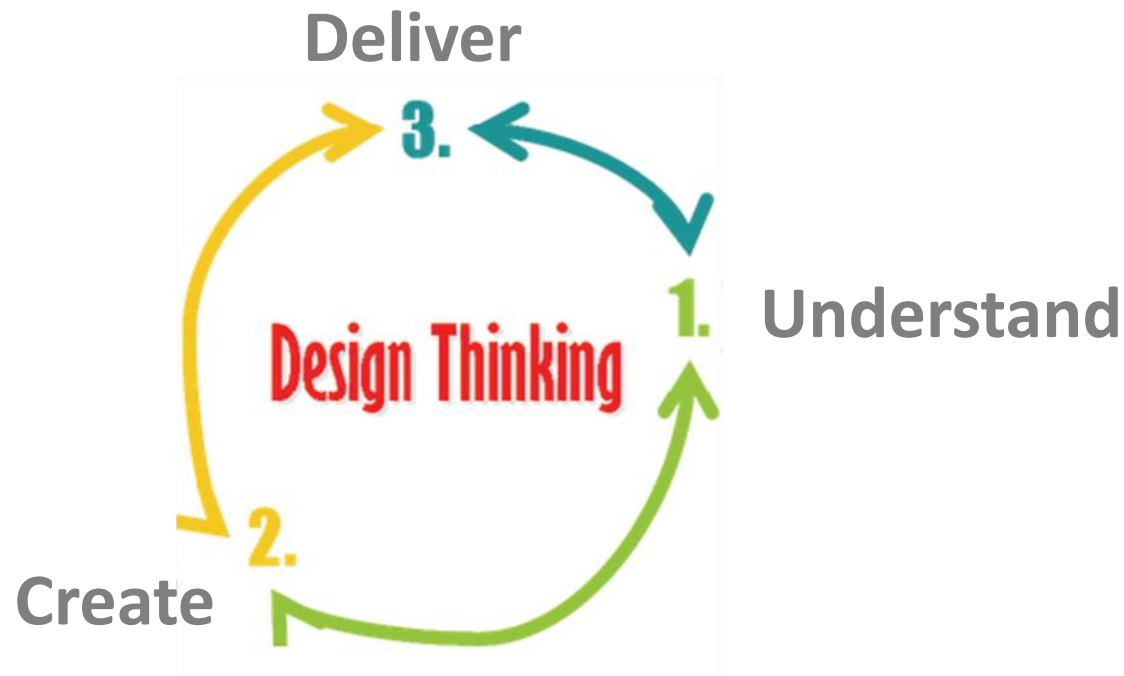
# **How might technology be applied to improve end-users experiences?**

Is [company name] and engineering firm – or is it an innovation firm?

Manufacturing companies tend to regard themselves as primarily engineering experts. Although quality and safety come first, customers are often most interested in the benefits of innovation and technology is only valued as a way to skillfully achieve those benefits

Innovation should be about bringing together smart approaches to business, technology and user-understanding that enable new and better customer and end-user experiences.

Process



**Understand**  
Understand  
what matters



**Create**  
Make the  
idea real



**Deliver**  
Make the idea  
happens



# CO-CREATION DESIGN PROCESS

1

## Understand

Understand  
what matters

2

## Create

Make the  
idea real

3

## Deliver

Make the idea  
happens

**DEFINE**  
a shared  
“hearts &  
minds”  
purpose

**SET** the bar

**CLARIFY**  
meta roles &  
responsibilities

**THINK**  
things through  
together

**REALIZE**

What do we  
seek to create  
together?  
(one sentence)

What questions  
should we be  
asking in order to  
achieve our  
purpose?

What research  
will we draw on?

What will my  
contribution be:  
- to this project?  
- to this community?  
- and beyond?

(our legacy)

What options do  
we have beyond  
easy answers?

Do our decisions  
match our “hearts  
& minds” purpose?

Bring our  
words,  
visions &  
requirements  
to reality



1

## Understand

Understand  
what matters



Discovery



Interpreta  
tion

2

## Create

Make the  
idea real



Ideation

3

## Deliver

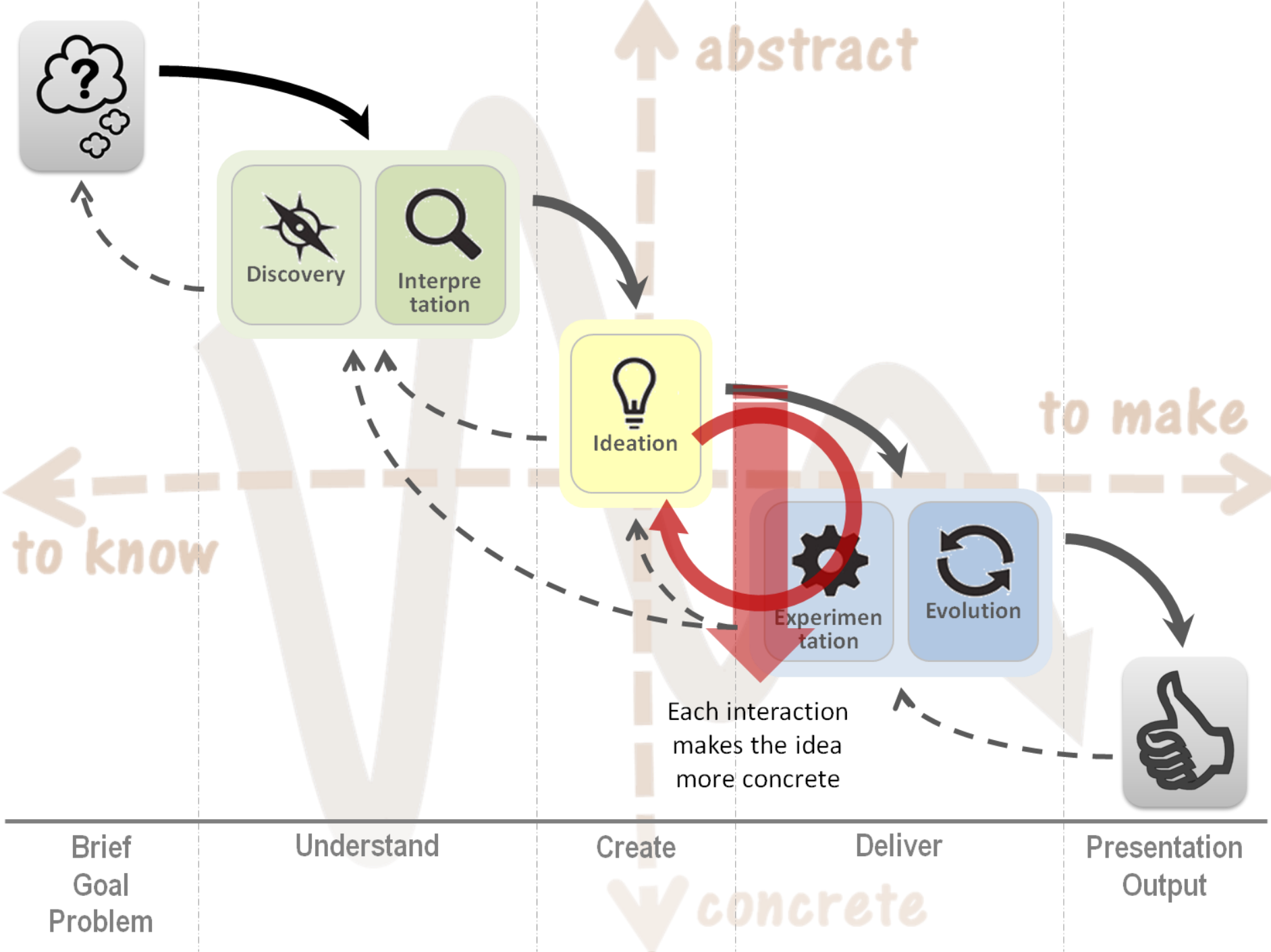
Make the  
idea happens



Experimenta  
tion



Evolution



1

## Understand

Understand  
what matters

*DIVERGE*

*CONVERGE*

*CREATE  
CHOICE*

*MAKE  
CHOICE*

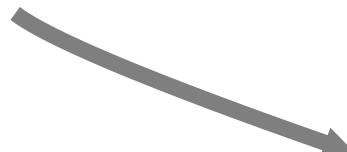
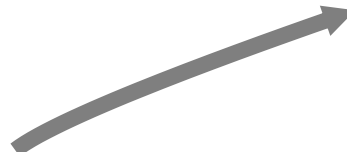
Discovery

Interpreta  
tion

2

## Create

Make the  
idea real



Ideation

3

## Deliver

Make the  
idea happens



Experimenta  
tion



Evolution

1

## Understand

Understand  
what matters

2

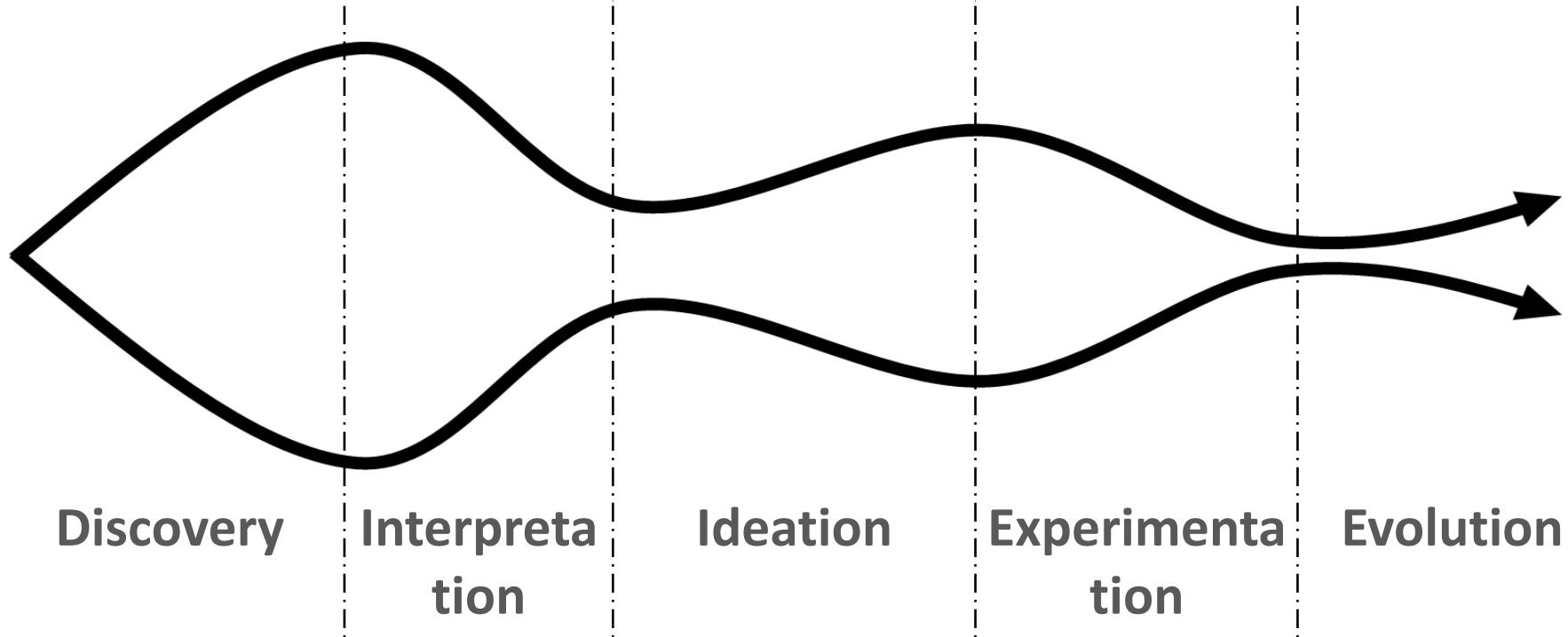
## Create

Make the  
idea real

3

## Deliver

Make the  
idea happens





1

## Understand

Understand what matters

2

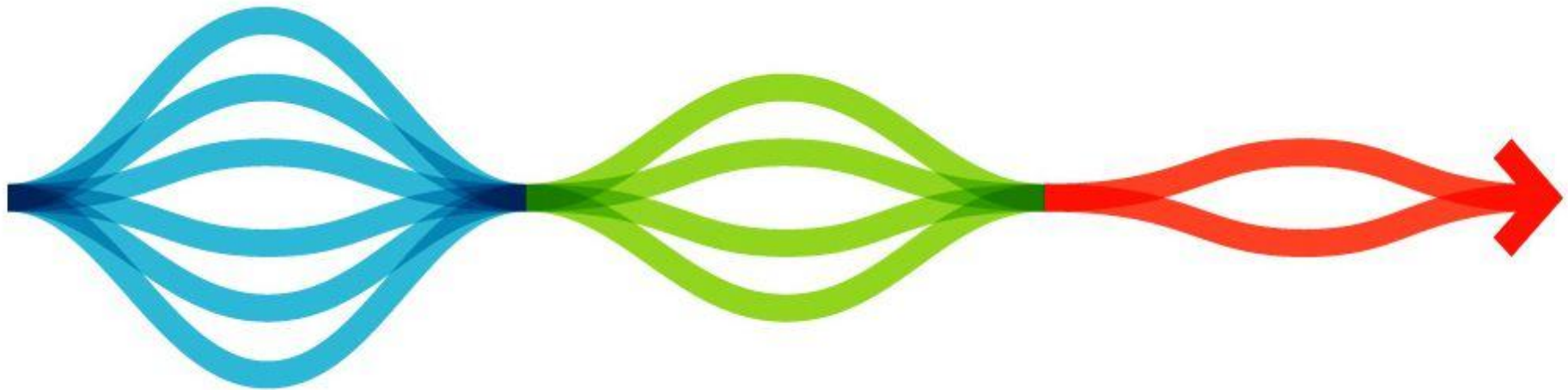
## Create

Make the  
idea real

3

## Deliver

Make the idea happens



Discovery

Interpre  
tation

Ideation

Experimen  
tation

Evolution

Tools

1

## Understand

Understand  
what matters



Discovery



Interpreta  
tion

2

## Create

Make the  
idea real



Ideation

3

## Deliver

Make the  
idea happens



Experimenta  
tion



Evolution

# Discovery

Observation

Interviews

Focus groups

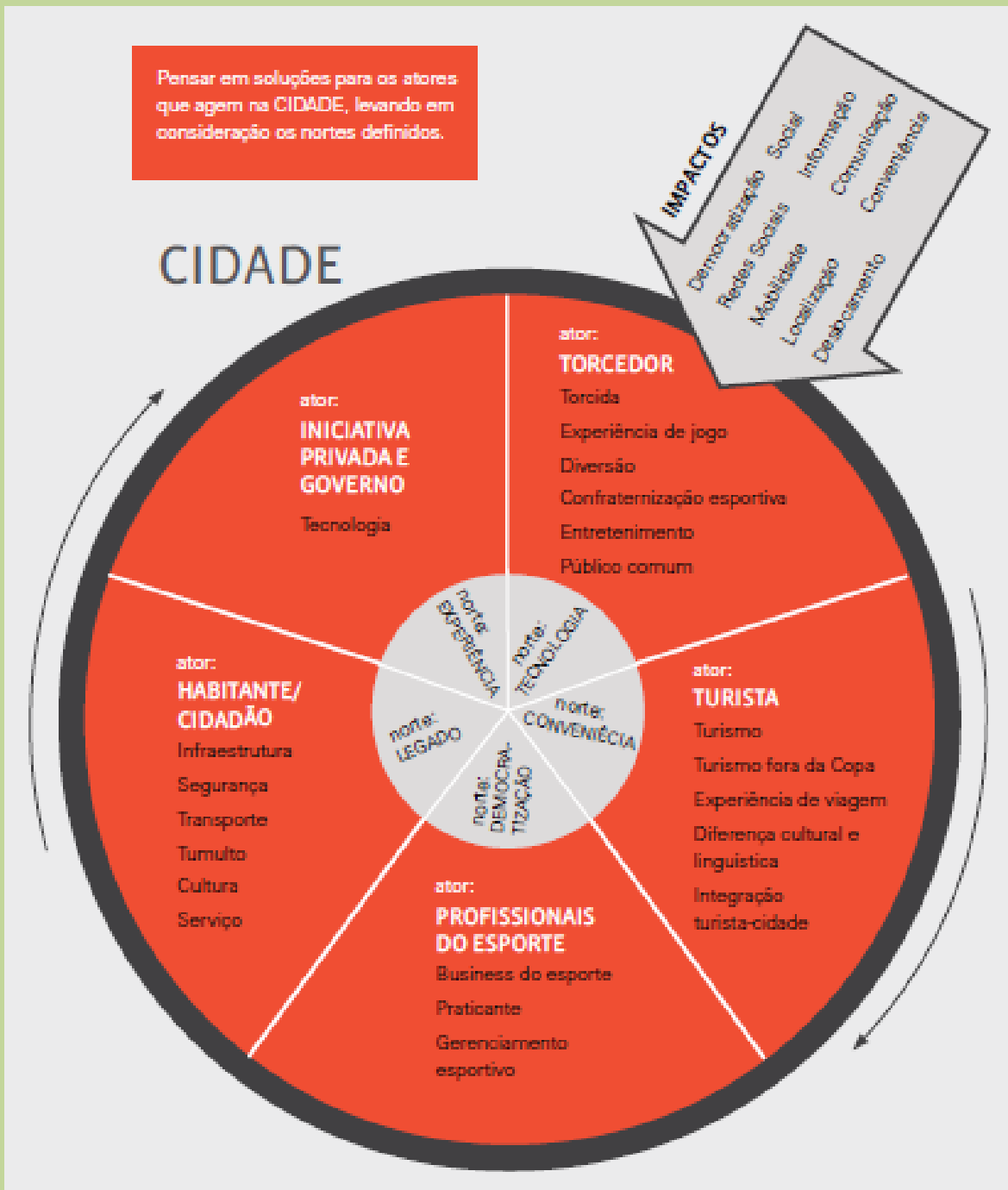
Semantic Panels

A day in the life

Shadow

Benchmark

# Reenquadramento



# Interpretation

Customer's journey

Insights cards

Personas

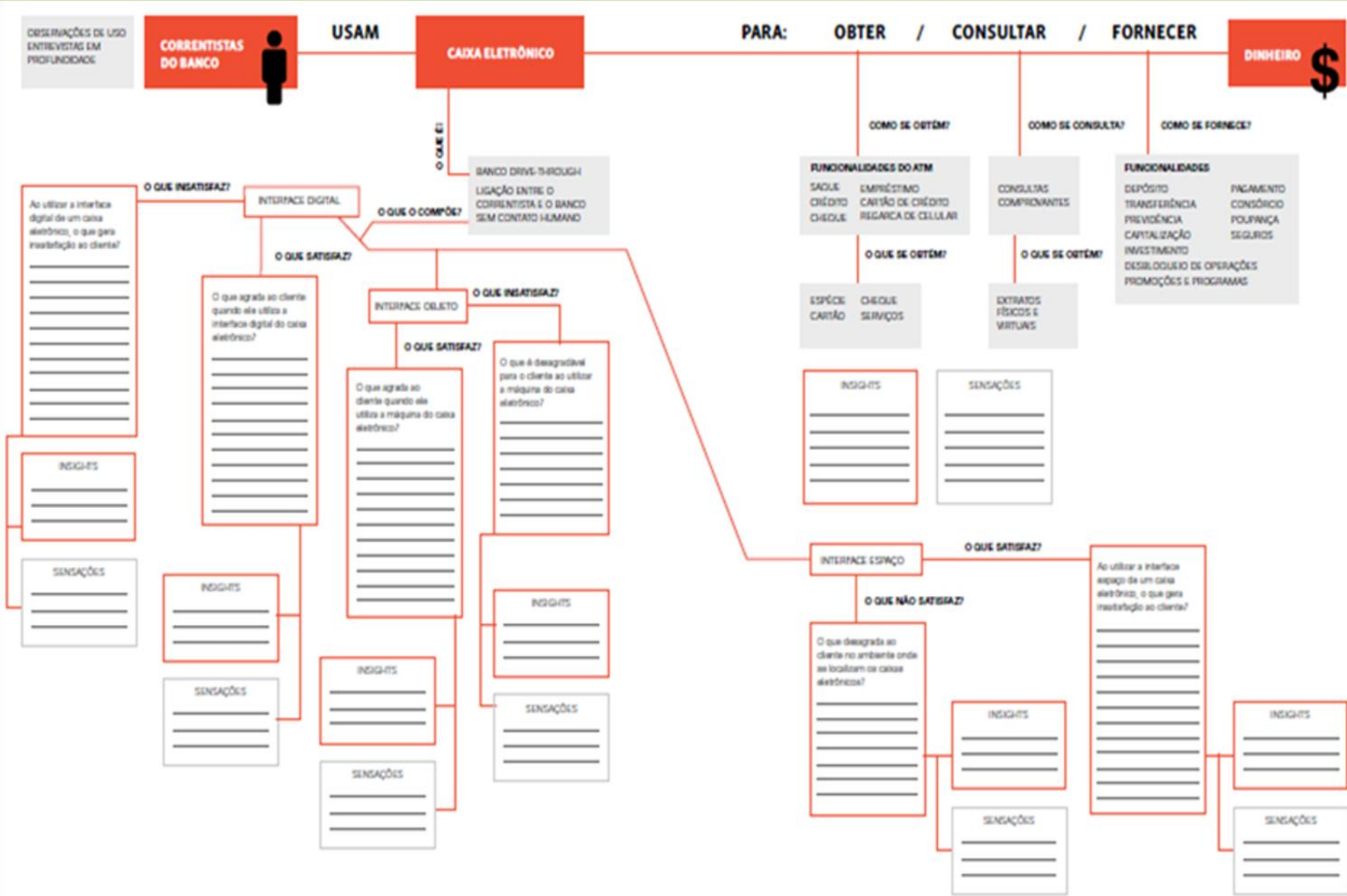
Touchpoints

Camera Journal

Secondary Research

Extreme users





## PLANEJAMENTO

### Passagem

Como tirar dúvidas simples dos viajantes iniciantes?

Como os viajantes podem pesquisar por preços de passagens sem usar internet?

Como fazer isso de maneira remota?

### Mala

Como organizar o transporte de malas de grandes famílias?

Como passar transparência e segurança nesse transporte?

### Preparação de documentos

Como orientar quais são os documentos importantes a serem levados?

Como facilitar a organização de múltiplos documentos?

### Ida ao aeroporto

Como facilitar o acesso a bairros ou cidades distantes do aeroporto?

## NO AEROPORTO

### Embarque

Como evitar que passageiros inexperientes percam o cartão de embarque?

### Espera

Como entreter os passageiros e seus familiares durante a espera pelo voo?

Como dar mais privacidade ao momento da despedida?

### Check-in

Como agilizar e facilitar o despacho das malas?

Como traduzir a ideia de "check in" ao primeiro viajante de avião?

### Localização

Como facilitar a orientação do passageiro no aeroporto, indicando a ordem de cada etapa para o embarque?

## NO AVIÃO

### Entrada na aeronave

Como facilitar a localização do assento no avião?

Como fazer o passageiro se sentir acolhido ao entrar no avião?

### Durante o voo

Como fazer o passageiro se sentir acolhido no avião?

Como flexibilizar as opções de alimentação dentro da aeronave?

Como entreter e informar o passageiro que eventualmente esteja intimidado pelo ambiente frio do avião?



### Transporte

Como facilitar o acesso a bairros ou cidades distantes do aeroporto?

### Mala

Como organizar o transporte de malas de grandes famílias?

Como facilitar a localização das malas na esteira?

## DESEMBARQUE

# Jornada do Usuário

## PONTOS DE CONTATO

|                            | IDENTIFICAÇÃO DO PROBLEMA / MOMENTO DA LIGAÇÃO                            | CONTATO COM A CENTRAL DE ATENDIMENTO  | TEMPO DE ESPERA  | ATENDIMENTO:<br>- 1ª IDENTIFICAÇÃO DO USUÁRIO                    | ATENDIMENTO:<br>- 2ª IDENTIFICAÇÃO DO PROBLEMA DO USUÁRIO                    | ATENDIMENTO:<br>- 3ª DETALHAMENTO DA SITUAÇÃO DO USUÁRIO                     | ATENDIMENTO:<br>- 4ª PREENCHIMENTO DE DADOS PARA SINISTRO  | ATENDIMENTO:<br>- 5ª RELATO DO QUE ACONTECEU   | FINALIZAÇÃO DO ATENDIMENTO   |
|----------------------------|---|---|--|--|--|--|--|--|--|
| EVIDÊNCIAS FÍSICAS         | Acidente (carro batido).  | Número para ser transferido.  | Observação do acidente.  | Tom de voz. CPF.   | Tom de voz.  | Tom de voz.  | Tom de voz.  | Tom de voz.  | Tom de voz.  |
| AÇÕES DO USUÁRIO           | Buscar informação sobre o que fazer.<br>Ligar para o call center.         | Interação com o atendimento automatizado (URA).<br>Escolha do assunto a ser tratado.<br>Espera.                     | Aguardar o atendimento.  | Falar o nome, CPF e telefone.                                    | Resumir o ocorrido.  | Relato de como está se sentindo.<br>Informar o telefone de algum parente.    | Fornecer: nome, CPF, data de nascimento, endereço, CEP, telefone de contato e do trabalho, estado civil, carro, placa e data de emissão do seguro. | Relatar detalhadamente o que aconteceu.  | Ouvir o que acontecerá a seguir.   |
| BARREIRAS PARA A INTERAÇÃO | Não achar o número.<br>Sinal de ocupado.<br>Não ter acesso a um telefone. | Ligação cair.<br>Apertar o número errado para transferência.<br>Falta de compreensão do que a URA está comunicando. | Ligação ser transferida para outro setor.                                    | Sistema travar.<br>Usuário não saber o seu CPF.<br>Ligação cair. | Sistema travar.<br>Atendente não ouvir o que o usuário diz.<br>Ligação cair. | Sistema travar.<br>Atendente não ouvir o que o usuário diz.<br>Ligação cair. | Sistema travar.<br>Atendente não ouvir o que o usuário diz.<br>Ligação cair.<br>Burocracia.  | Sistema travar.<br>Atendente não ouvir o que o usuário diz.<br>Ligação cair.<br>Usuário não fornecer as devidas informações. | Sistema travar.<br>Atendente não ouvir o que o usuário diz.<br>Ligação cair.                     |
| AÇÕES DOS FUNCIONÁRIOS     |   |   | Atender o telefone.  | Anotar os dados básicos em um sistema de apoio.                  | Anotar o ocorrido.   | Anotar o contato do familiar.  | Anotar o dados.  | Anotar o relato no documento.  | Anotar o relato no documento.  |
| AÇÕES DA RETAGUARDA        |   | Apresentação dos motivos da ligação.<br>Apresentação dos serviços.<br>Transferência da ligação para um atendente.   | Transferir a ligação para o atendente (cronômetro).<br>Tempo de atendimento. | Fornecer documento de apoio.                                     | Fornecer documento de cadastro.  | Fornecer documento de cadastro.  | Fornecer documento para o cadastro dos dados.  | Fornecer documento de relato.  | Perguntar se tem alguma dúvida.<br>Agradecer a ligação.<br>Encaminhar a ocorrência para análise. |
| ESTRESSÔMETRO              | Impaciência.<br>Angústia.   | Impaciência.<br>Atenção. 😞!   | Impaciência.<br>Angústia. 😞!   | Impaciência.<br>Angústia. 😞!<br>Atenção. 😞!                      | Impaciência.<br>Angústia. 😞!<br>Atenção. 😞!                                  | Impaciência.<br>Angústia. 😞!<br>Atenção. 😞!                                  | Impaciência.<br>Angústia. 😞!<br>Atenção. 😞!  | Impaciência.<br>Angústia. 😞!<br>Atenção. 😞!  | Alívio. 😊  |

# Ideate

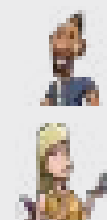
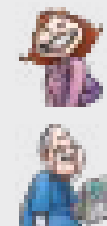
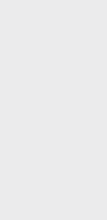
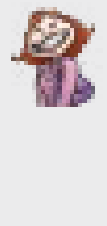
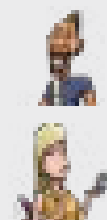
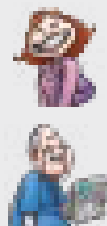
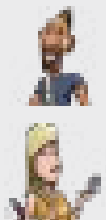
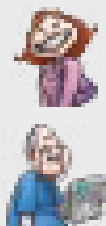
Brainstorming

Co-creation

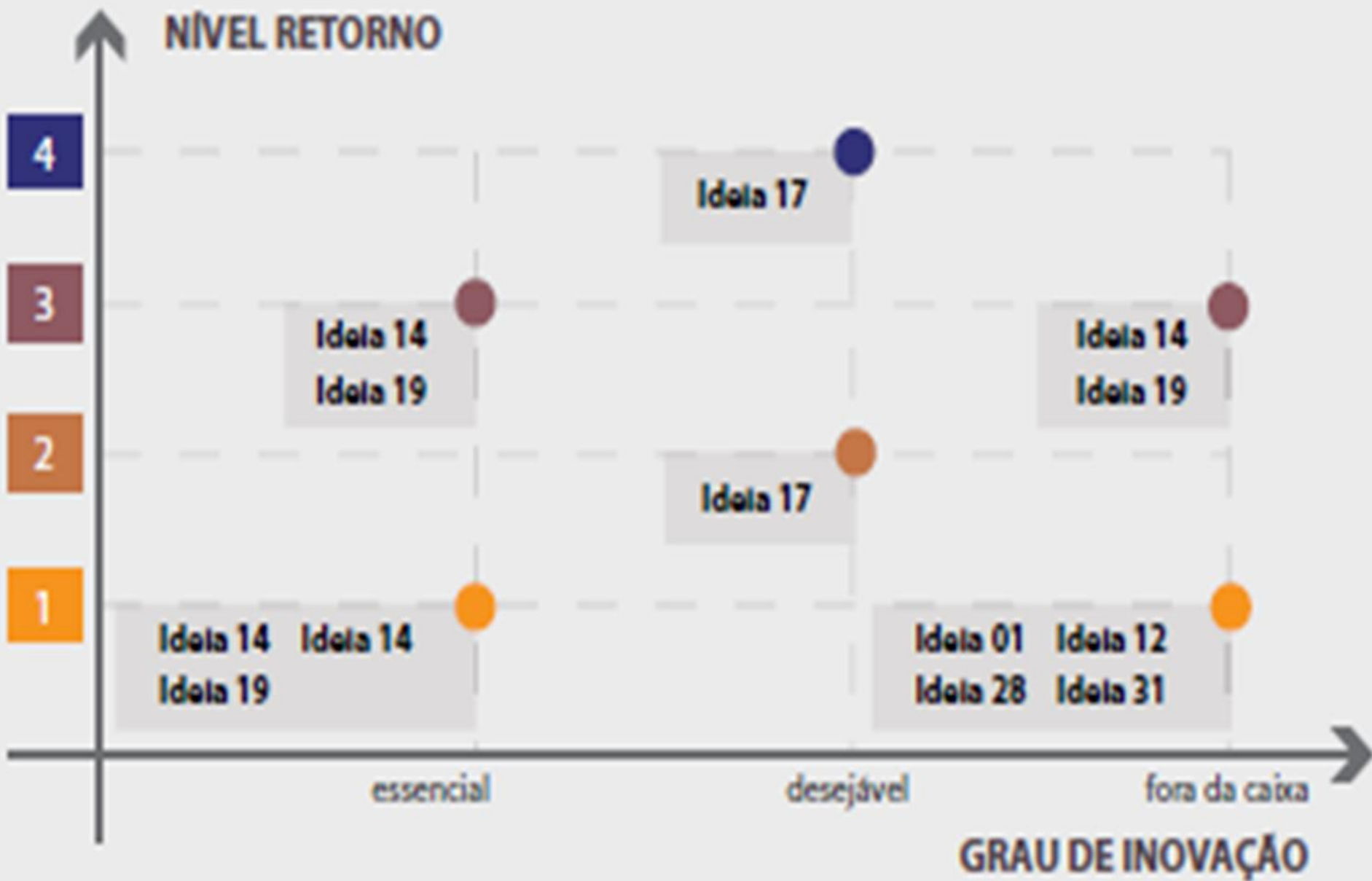
Selection of ideas

# Matriz de Posicionamento

| CRITÉRIO NORTEADORES | IDEIA 1 | IDEIA 2 | IDEIA 3 | IDEIA 4 | IDEIA 5 | IDEIA 6 |
|----------------------|---------|---------|---------|---------|---------|---------|
| CRITÉRIO 1           | ✓       | ✗       | ✓       | ✓       | ✗       | ✗       |
| CRITÉRIO 2           | ✓       | ✓       | ✓       | ✓       | ✗       | ✗✓      |
| CRITÉRIO 3           | ✗       | ✓       | ✗       | ✓       | ✗       | ✓       |
| CRITÉRIO 4           | ✓       | ✗✓      | ✓       | ✓       | ✗       | ✗       |
| CRITÉRIO 5           | ✓       | ✗       | ✓       | ✓       | ✗       | ✗       |
| CRITÉRIO 6           | ✓       | ✗✓      | ✓       | ✓       | ✓       | ✓       |
| CRITÉRIO 7           | ✗       | ✗       | ✗       | ✓       | ✗       | ✗       |
|                      | 8,0     | 8,0     | 9,5     | 11      | 4,0     | 7,5     |







Matriz de Posicionamento

# Prototype

Storyboard

Role playing

Paper prototyping

# WHAT IS A SERVICE? THE ARGOS EXPERIENCE...

thinkpublic

www.thinkpublic.com



HI, MY NAME IS PAUL, AND I'M GOING TO USE THE ARGOS SHOPPING SERVICE TODAY. MY GIRLFRIEND WANTS A EXERCISE BALL WHICH SHE SAW AT HOME IN THE CATALOGUE...



THIS SIGN IS USEFUL, I KNOW HOW LONG THIS IS GOING TO TAKE



HERE WE GO... THIS IS WHAT SHE WANTED



AND HERE'S THE CATALOGUE NUMBER AND PRICE



THE SHOP WAS EASY TO FIND WITH THE BIG SIGN OUTSIDE!

## STEP 1: SELECT PRODUCT



HERE'S ALL THE SPORTS STUFF, IT SHOULD BE IN THIS SECTION...

THIS IS REALLY USEFUL, I CAN SEE IF THERE ARE ANY IN STOCK BEFORE QUEUING UP. IT LOOKS LIKE I'M IN LUCK, THERE ARE 9 IN STOCK!



I'LL MAKE A NOTE OF THE NUMBER USING THE SLIP AND PEN PROVIDED...



Storyboard