

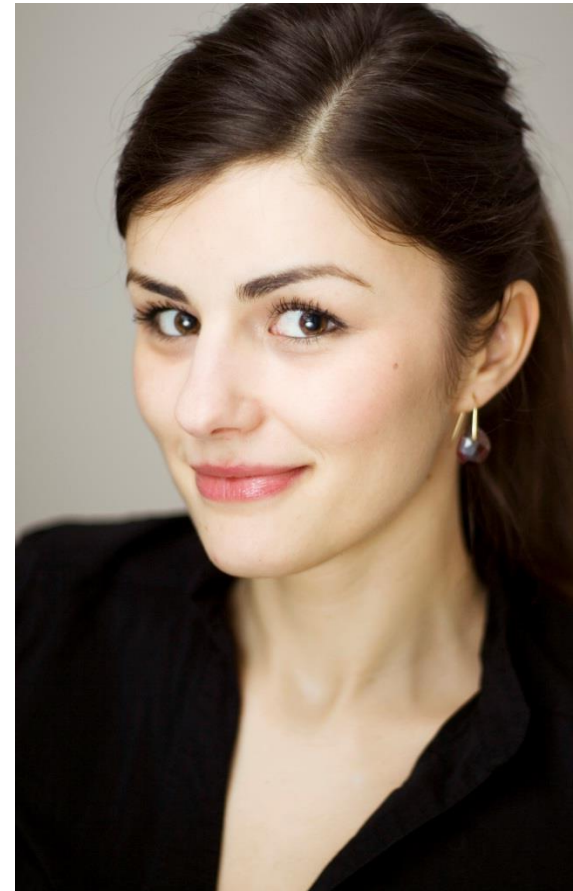
# **DESIGN CASE: GAMIFICATION OF ERP**

A USER CENTERED DESIGN APPROACH

*Dana Maria Popa*

# DANA MARIA POPA

- Now: UX Design
- Science Master in IT: Games+UX  
IT University Copenhagen
- Previous: Architect



# AGENDA

## **1** Premises:

- gamification
- emotions
- motivations

## **2** Project:

- design framework
- personas
- concepts



# TODAY'S MOST USED DEFINITION

Gamification

=

the use of game elements into non-game applications to drive users' engagement.



# GAMIFICATION?!

*the infinite game - - Jesse Schell*

- Getting points for brushing your teeth.
- Getting points for lucid dreaming of a Pepsi add.
- Life itself becomes a game.

*gaming can make a better world*

- - *Jane McGonigal*

- Playing games can raise awareness on oil shortage.
- Playing games can raise trigger positive emotions.
- Playing games can even solve famine.

*gamification is bullshit - - Ian Bogost*

- It's just about points!
- Users will get bored very fast.

*getting gamification right*

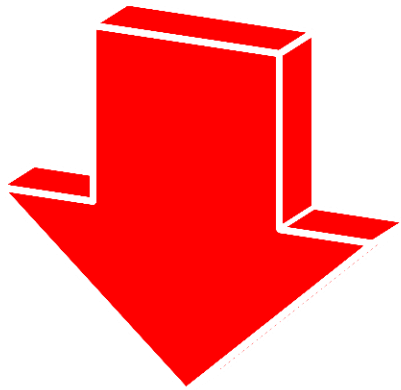
- - *Sebastian Deterding*

- Needs to mature towards gameful + playful design.

Missing now:

- Meaning – challenges with personal significance
- Mastery – providing goals and feedback
- Autonomy – free & safe play space that can be shared

# UNDERSTAND ETHICAL DELIMAS



Games are the only force in the universe that can  
**get people to take actions against their self-**  
**interest**, in a predictable way, without using force.

Gabe Zicherman

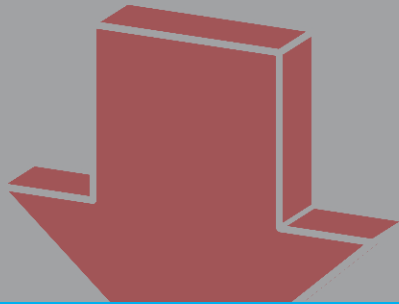


Gamification **tricks people** into believing that there's  
a simple way to imbue their thing... with the social,  
psychological, and emotional power of a great game.

Margaret Robertson



# UNDERSTAND ETHICAL DELIMAS



Games are the only force in the universe that can  
get people to take actions against  
interest, in a predictable way.

*Merge users goals with the business goals in  
order to satisfy and be ethical to both sides.*

Ga  
a s  
psychological, and emotional power of a great game.  
Margaret Robertson



# GAMIFICATION OF ERP

## *Research project motivation*

Digital products need better design methods - - Allan Cooper

- using **cross references** from **games** and **game design** process has the potential to provide the necessary tools for designing better emotional experiences for ERP users.

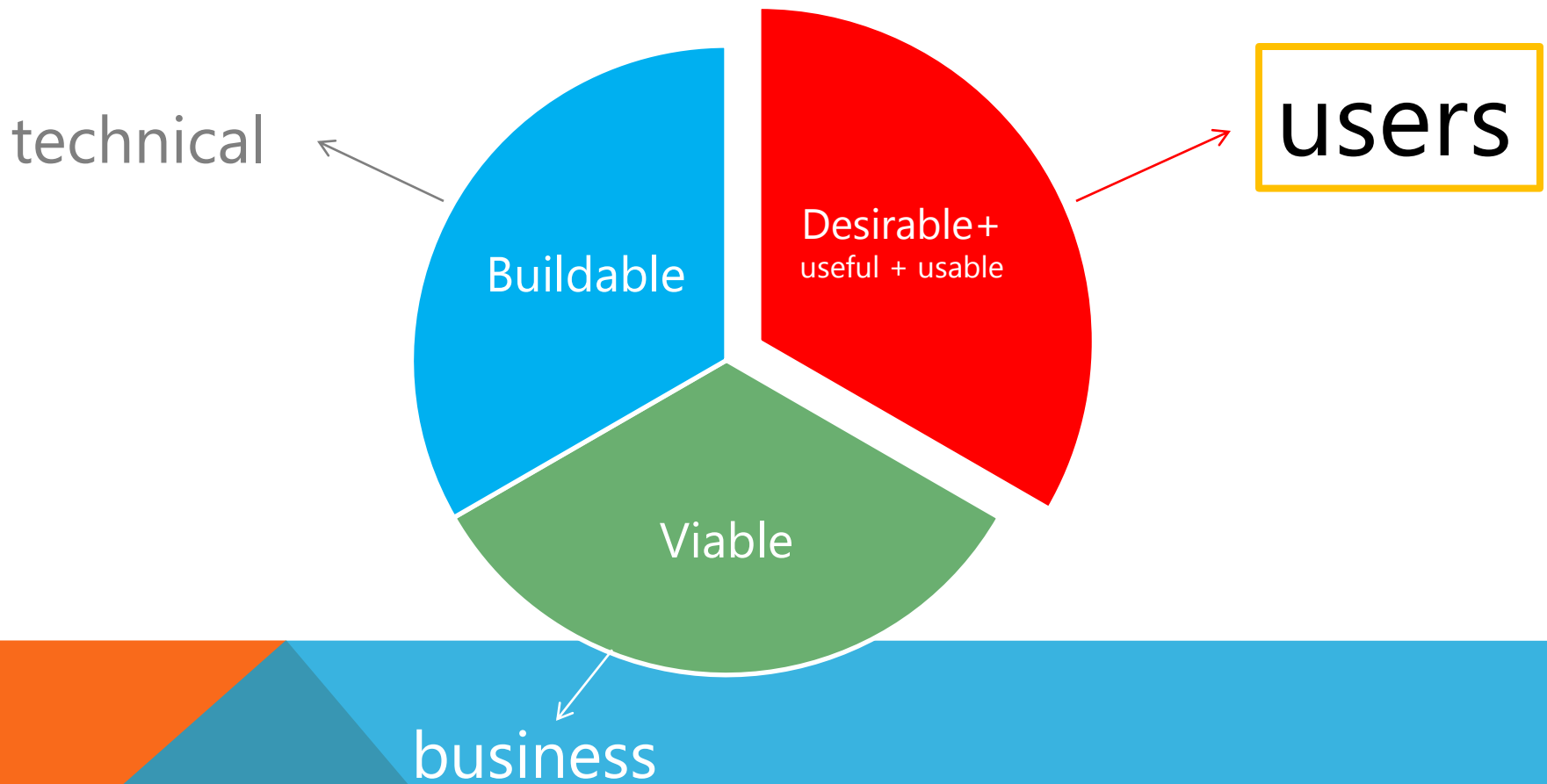
## *Method*

Putting the user in the center with its needs, desires, wishful thinking, personality, emotional state, motivations, context of its environment – **UCD approach**





# The Gamified ERP



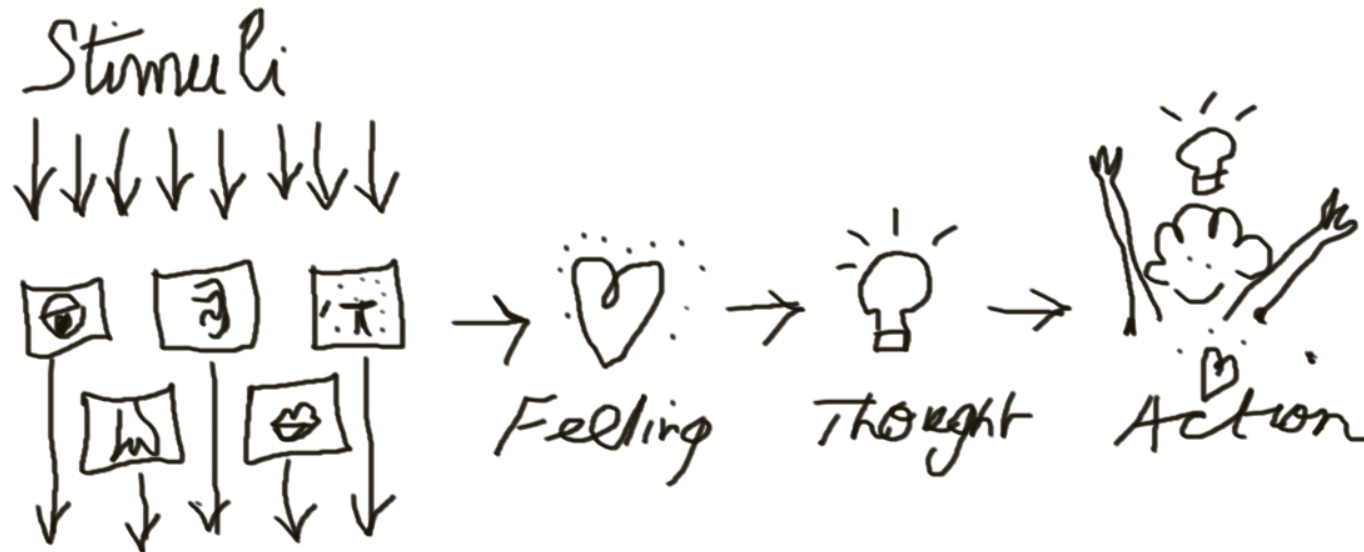
# DESIRABLE > DESIRE

## Philosophy:

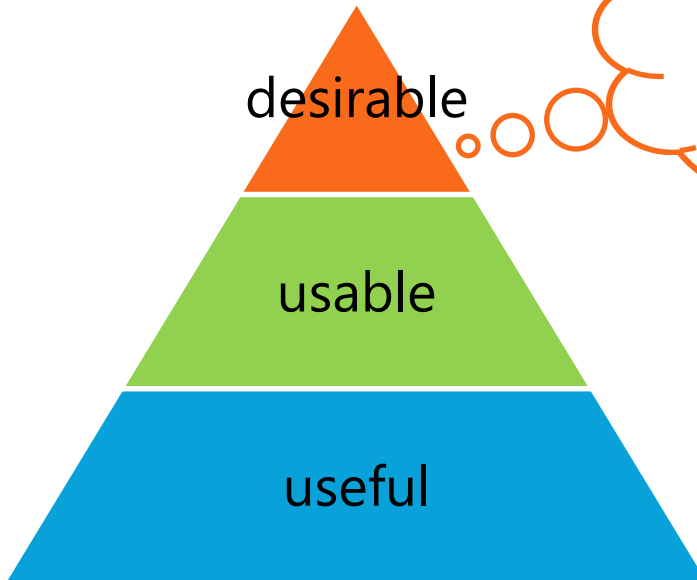
- Human **desire** is the **fundamental motivation** of all human action.  
Thomas Hobbes

## Psychology:

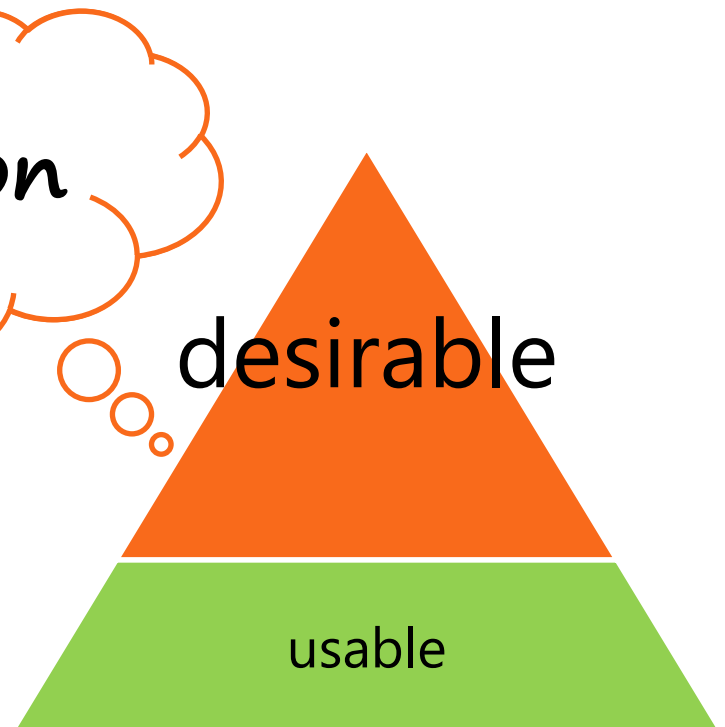
- Emotion** is **action readiness** tendency to change.  
Nico Frijda



## DESIRE IN UX



## DESIRE IN GAMES



# WHY EMOTIONS?

## Why emotions?

- When dealing with people, remember you are not dealing with creatures of logic, but with **creatures of emotion**.  
Dale Carnegie

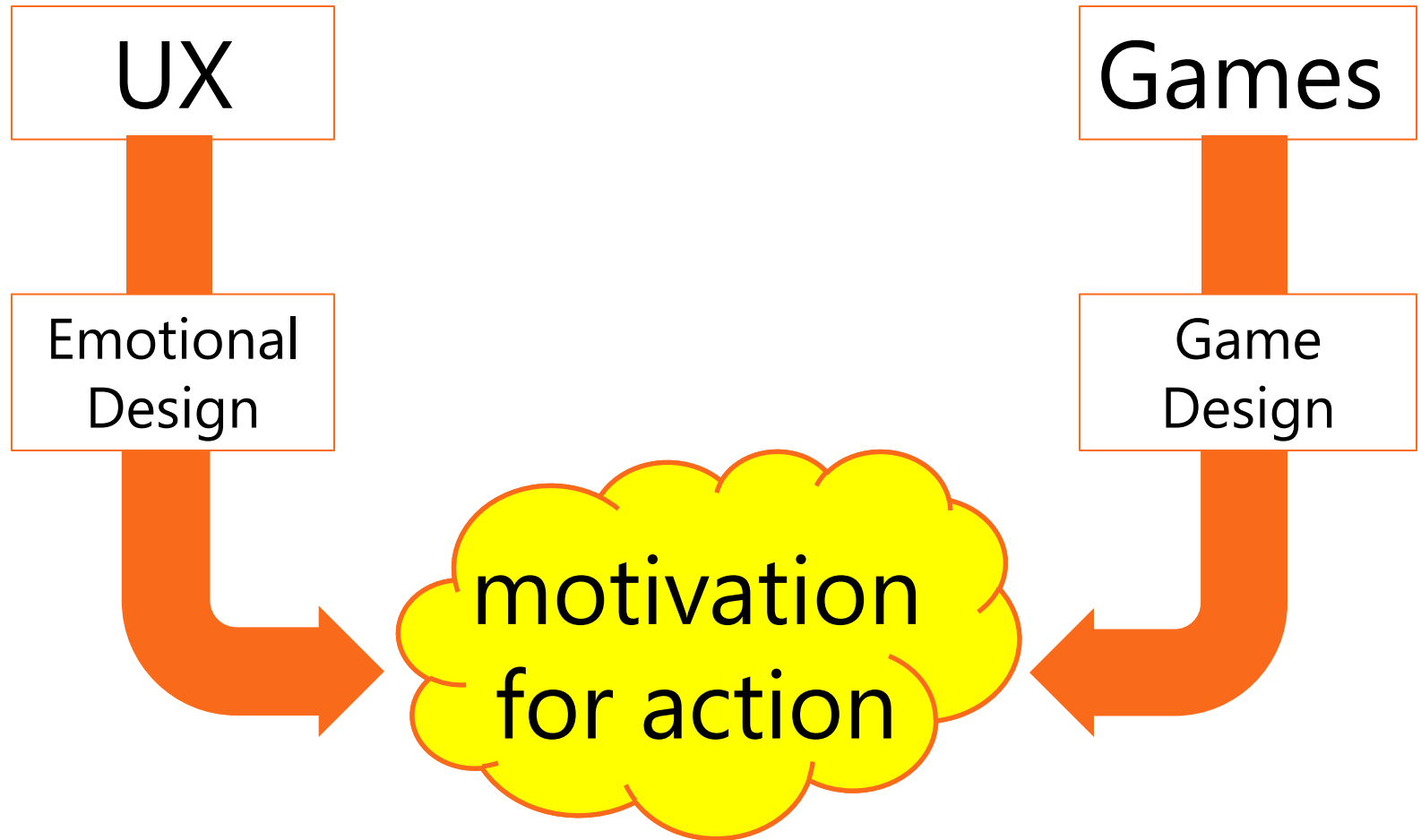
## Why emotions of digital users?

- Emotions not only contribute to a **richer quality of interaction**, but they directly impact a person's ability to **interact in an intelligent way**.  
Rosalind Picard

## Why emotions and gamification?

- **video-games** can become the **dominant medium**, and the **emotional drug of choice** for the next generation of junkies .... when seeking that emotional fix.  
Jonathan Sykes

## 2 ROADS TO GREAT DESIRABLE EXPERIRNCE



# WHAT MOTIVATES PEOPLE?

Humans are driven to achieve their maximum potential unless they need to overcome hunger, thirst, safety issues.



*Maslow pyramid of human needs*

# MY TAKE ON TODAY'S MOST USED DEFINITION

Gamification

=

~~the use of game elements into non game applications to drive users' engagement.~~



*Games have the attribute of  
moving between media.*

Jesper Juul




Gamification should be composed of **cross media references from games** to other products, especially digital ones, that can provide a suited emotional experience to users.

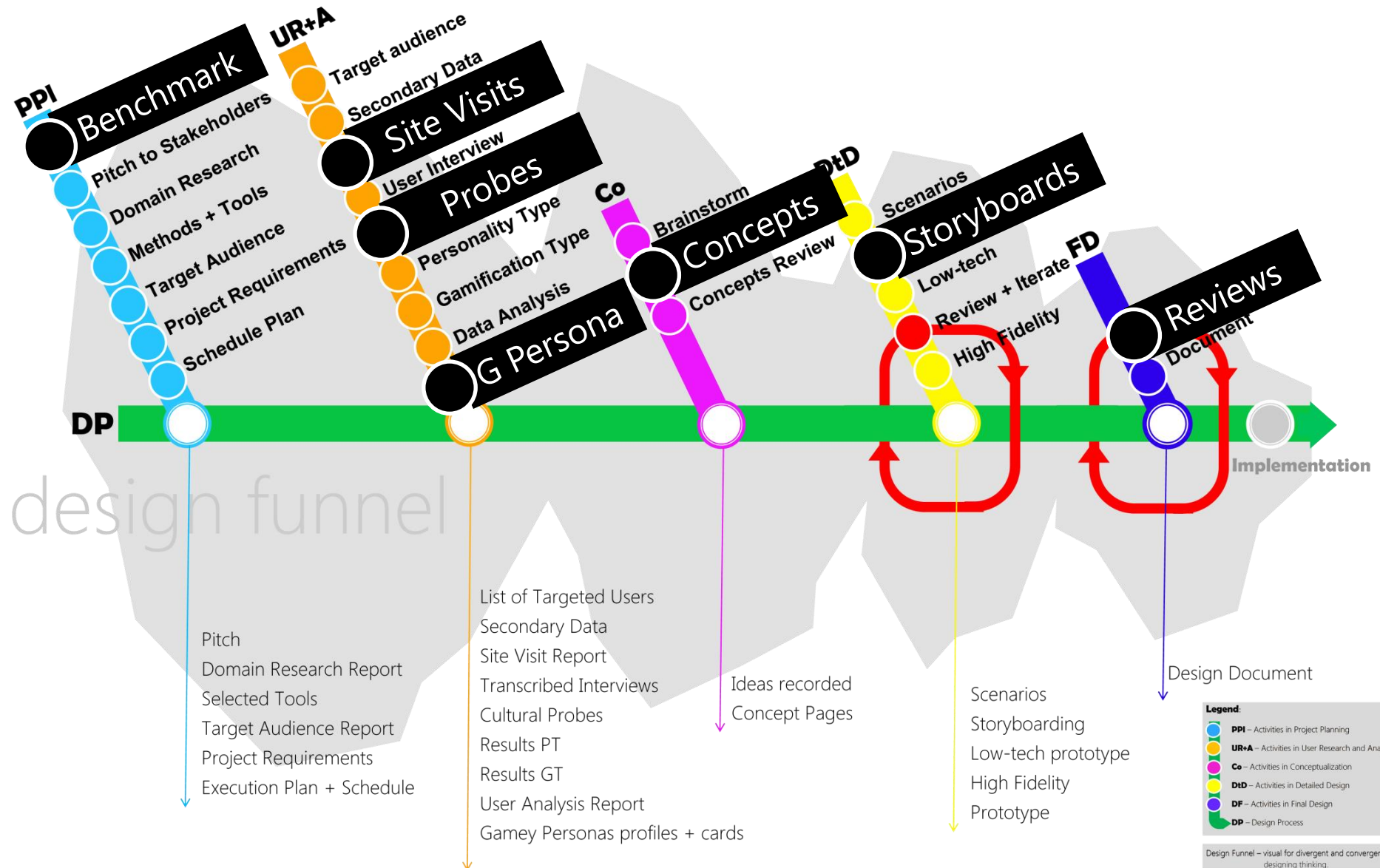


**my definition**

# MY GAMIFICATION GUIDELINES

1. access is voluntary and not enforced.
  2. facilitate fun learning.
  3. facilitate the appropriate Fun Key for its context of use.
  4. present opportunities for ludic experience that intrinsically motivates curiosity and exploration.
  5. design for flow that facilitates optimal user experience.
  6. ethically constructed and implemented.
  7. give clear feedback and allow for its customization that best suits the user.
  8. should not decrease productivity or efficiency of the existing software.
  9. provide a safe play space for user to explore means of creating generative tools.
  10. respect the ethical goals of both the users and the business.
- 

# GAMIFICATION DESIGN FRAMEWORK

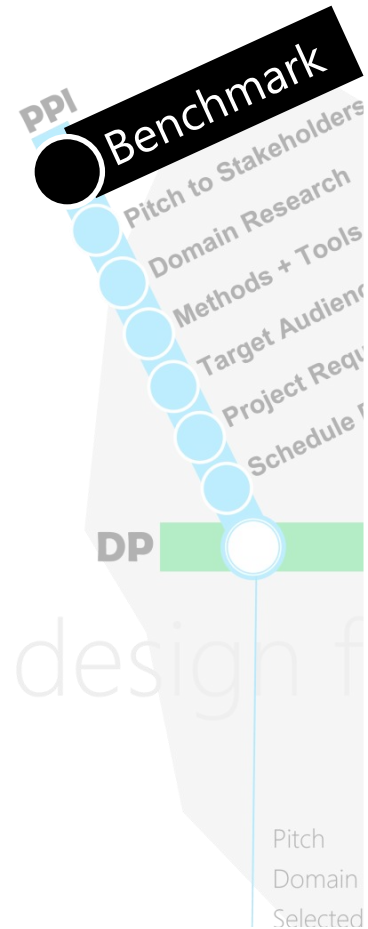


# GAMIFICATION DESIGN FRAMEWORK

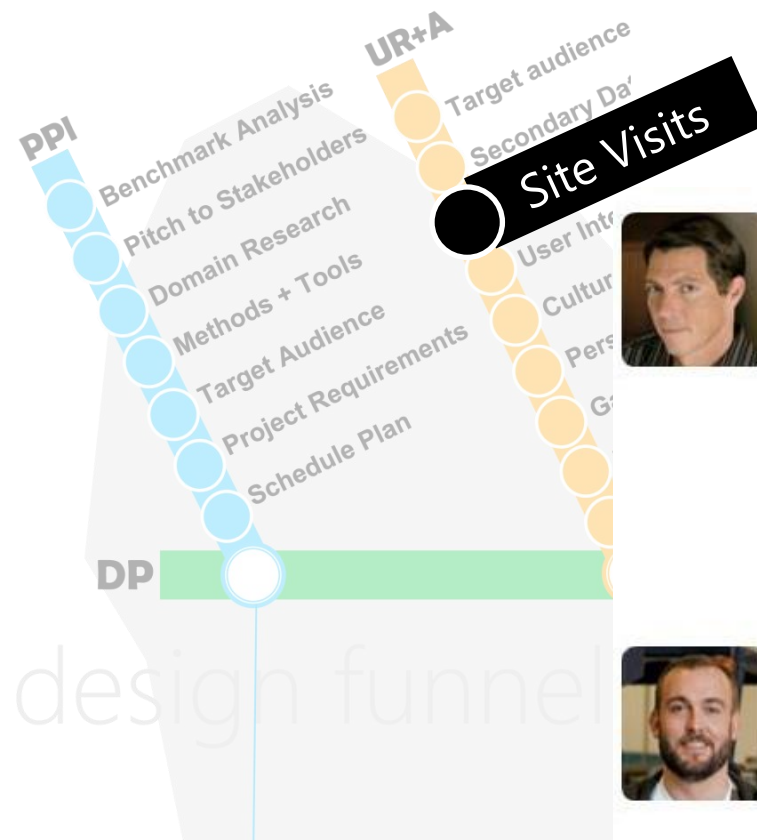
- Microsoft Office: Ribbon Hero 2



- SAP AG: Lead in One - Video



# GAMIFICATION DESIGN FRAMEWORK



- "I like to solve nice combination of interesting tasks." + "Good feeling of elegant solution."
- "I play with who ever wants to play with me."



- "Buying and selling: exciting, it's like a game."
- "Score the goals." "Be the best!"
- "Success – to have it!"

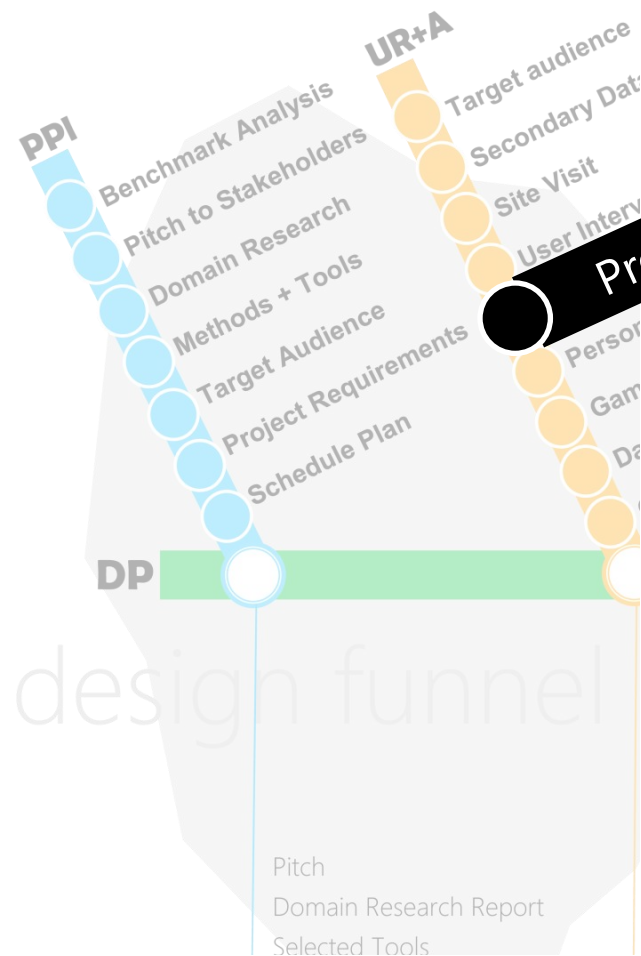


- "Learn by playing, try till you master the technique."
- "I like to joke, it cannot be only work, work, work."
- "Take decisions that will have consequences ; it is rewarding for me"





# GAMIFICATION DESIGN FRAMEWORK



Probes

Do you feel	<b>Anxious?</b>
words:	Bored?
Do you feel	<b>Content?</b>
plain in few words:	you feel
	<b>Surprised?</b>
	ords:
Do you feel	<b>in Control?</b>
tain in few words:	you feel
	<b>Confused?</b>
	rds:
Do you feel	<b>Accomplished?</b>
ain in few words:	you feel
	<b>in the Flow?</b>

## Cultural Probes Kit

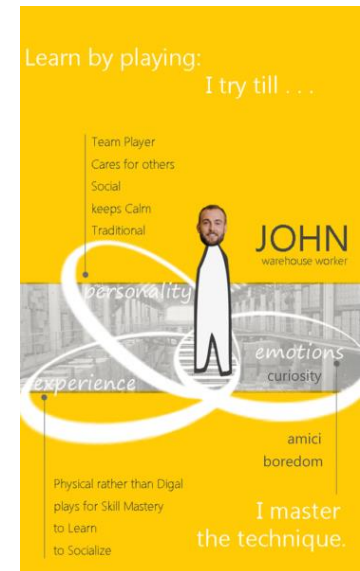
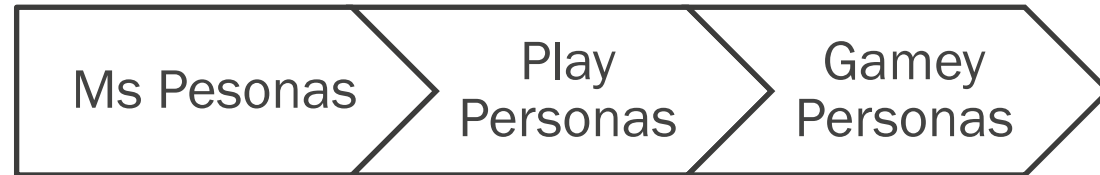
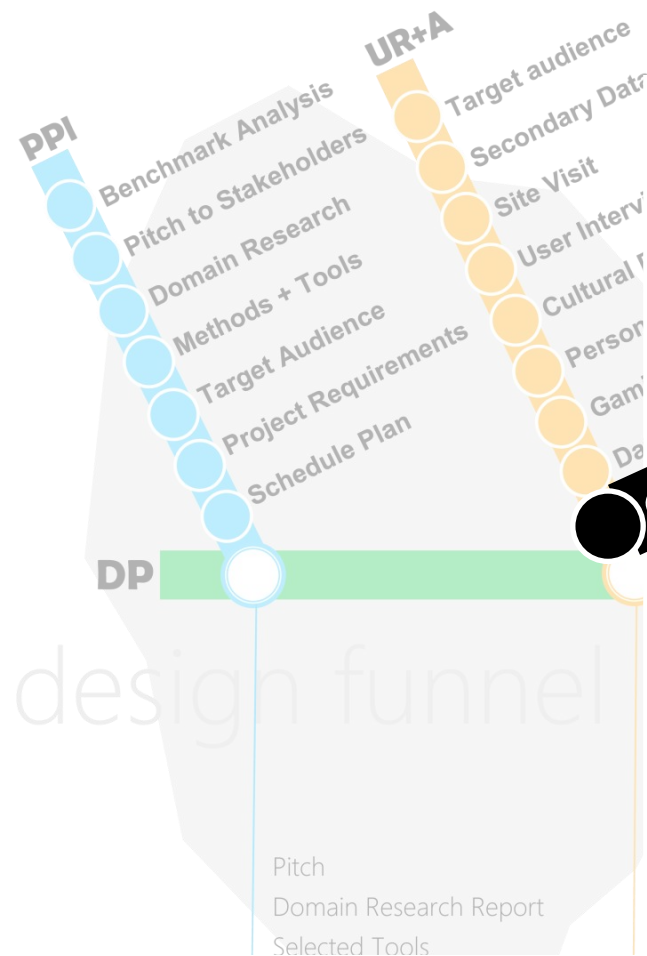
Find out users' emotions when interacting with ERP software.

Package includes:

- 1 set of printed ERP screenshots
- 8 labels with different emotions
- stickers with smiley yellow & red angry faces

*Playfull user reseach tool*

# GAMIFICATION DESIGN FRAMEWORK



*Facilitate a common design language*

# GAMIFICATION DESIGN FRAMEWORK

## GAMIFICATION Direction 9: Fun Eraser

**Idea:** Make an application that facilitates users' with a fun eraser tool.

### Description:

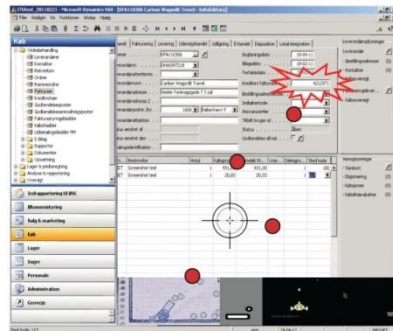
The application allows the users to erase text while using game mechanics, such as aiming at the wrong text with a cannon, a space sheep or a pong ball, shotgun crosshair.

### Intentions:

Users will be able to complete a mindless mundane task in a fun way if they choose so. The application's intent is to distress users while they have to adjust/change already completed jobs.

### Key Functions:

- Enables software with the possibility for interesting mechanics while solving a mundane challenge.
- Example: optional 30 seconds mini games of erasing mistakes by using different "weapons".



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## GAMIFICATION Direction 12: Swipe Strategy

**Idea:** Facilitate to users graphs as active strategy planning

### Description:

The application allows users to visually analyse and develop strategies for their resources while using game mechanics.

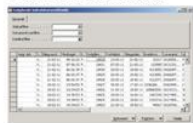
### Intentions:

Users will be able to show quickly develop strategies as they are able to swipe visual generated data into categories and create workflows.

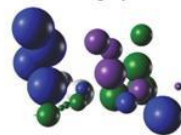
### Key Functions:

- Enables software to modify visual generated metrics and quickly sketch possible workflow strategies.
- Example: Swipe and arrange POs in the order of their importance.

metrics as numbers:



metrics as graphs:



metrics as virtual space:



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## GAMIFICATION Direction 26: Calories Burner

**Idea:** Facilitates users to track physical activity while working

### Description:

The application allows users to track their physical activity done while at work and calculate burned calories.

### Intentions:

Give users (warehouse) the ability to see how much physical activity they are achieving while completing picking or placing tasks at work; provides intrinsic rewarding for completing the job.

### Key Functions:

- Enables software to register each job as calories burned value.
- Example: calories burner, physical log, workout work.



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## GAMIFICATION Direction 27: Work Safety

**Idea:** Facilitate the option to see safety guides related to job type

### Description:

The application allows users to access work safety guides before starting on an assigned task. The guide is generated per job's type and it can be accessed on demand before starting to work.

### Intentions:

Users will be able to quickly review any work safety guides before starting on an assigned task. The guide is generated per job's type and it can be accessed on demand before starting to work.

### Key Functions:

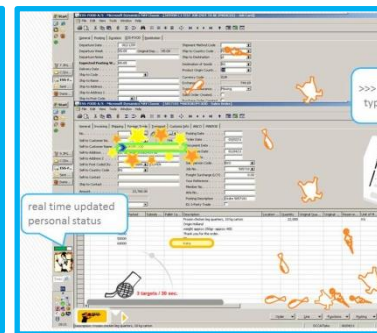
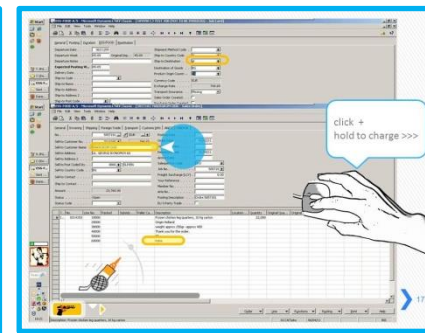
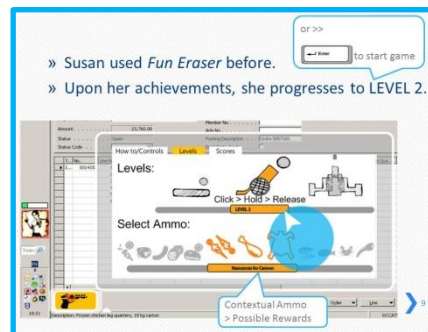
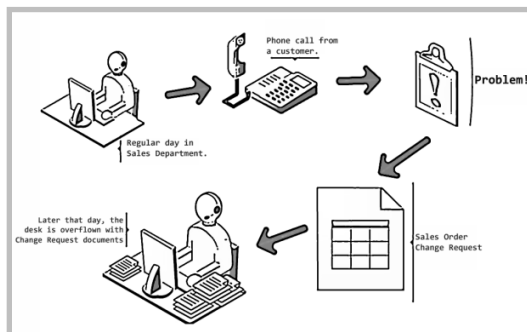
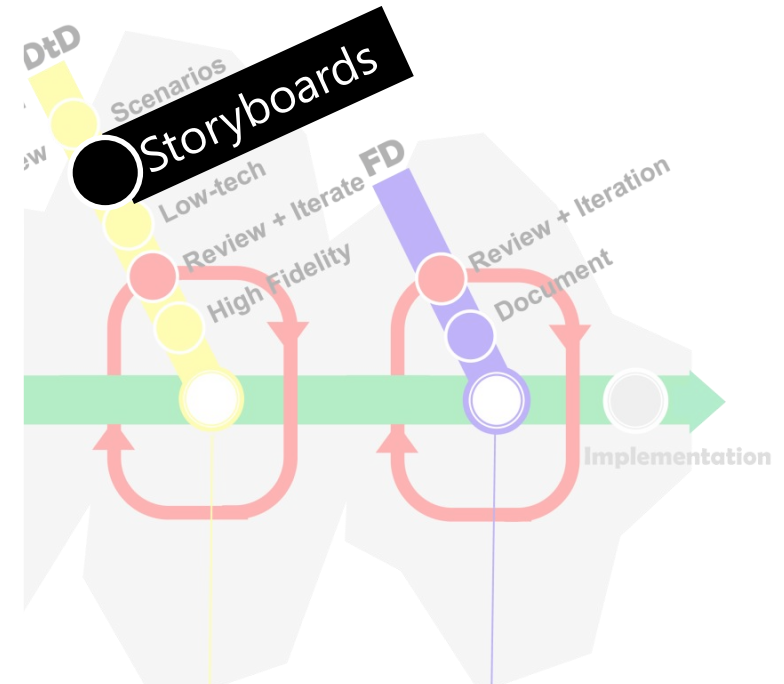
- Enables software to generate a visual representation of work safety guidelines.
- Example: how to pack a box, how to raise a box, how to label materials, how to use a paper knife.



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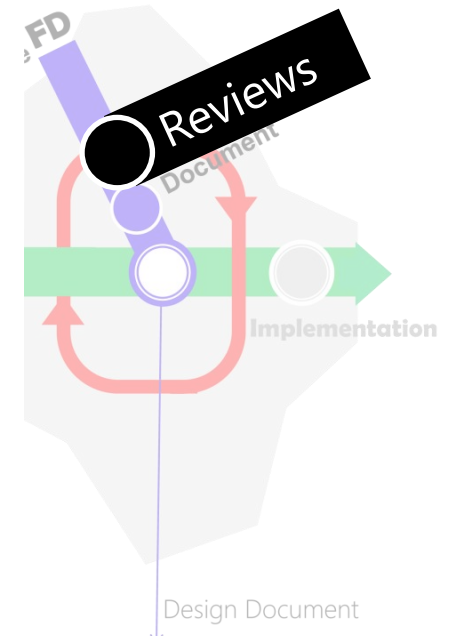
# GAMIFICATION DESIGN FRAMEWORK



# GAMIFICATION DESIGN FRAMEWORK



Design must be reviewed with all members of the development team: UX, PM, DEV, TEST



Thank you!



# ADDITIONAL NOTES ON PLAY + GAMES

- i. What is play?
- ii. What are games?
- iii. Fun in Play and Games.
- iv. Playful vs Game like experience.
- v. Design for playful vs gameful experiences.



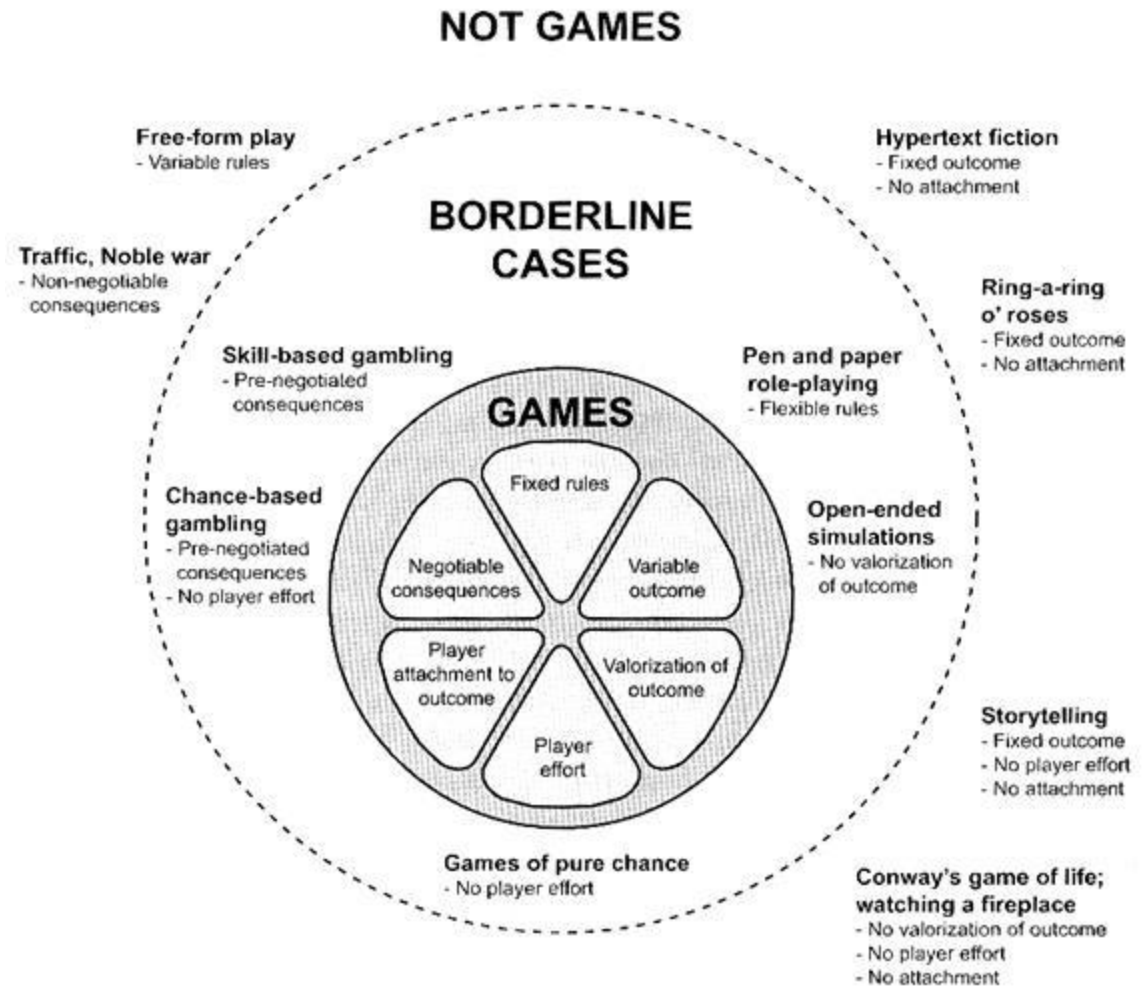
# WHAT IS PLAY?

## Huizinga – Homo Ludens

- The phenomena of play is not a biological phenomenon but a cultural one, where culture itself bears the character of play.
- First and foremost, all play is a voluntary activity.
- Play is superfluous. The need for it is only urgent to the extent that the enjoyment of it makes it a need.
- Play is innate: eg kids learning about gravity.



# WHAT ARE GAMES?



*Half Real: between Real Rules and Fictional Worlds.*  
2005. Juul

# FUN IN PLAY + GAMES

Huizinga – the fun of playing, resists all analysis, all logical interpretation and it is precisely this fun element that characterizes the essence of play.

Raph Koster – Edutainment: fun is just another word for learning.

Juul – different games emphasize different types of enjoyment and different players may even enjoy the same game for entirely different reasons.

Lazarro – Functional theory of fun: people play games for Easy Fun, Hard Fun, Serious Fun, People Fun.



# PAYFUL VS GAME LIKE EXPERIENCES

Miguel Sincart – Games don't matter

- Ecology of play that is not limited or sanitized by games

Sebastian Deterding – Questioning Gamification

- gamification is being constructed on few gameful elements lacking consideration of playful elements, which provide longer lasting users' engagement.





# DESIGN FOR PLAYFUL VS GAMEFUL EXPERIENCES

## Bill Gaver

- Designing for Homo Ludens: the Drift Table. Technologies for the home can support ludic activities, which are motivated by curiosity, exploration, and reflection rather than externally defined tasks.

## Mihaly Csikszentmihalyi:

- Flow theory – the psychology of optimal experience for best user engagement.

## Marc LeBlanc:

- Mechanics- Dynamics-Aesthetics game design framework that translates into Rules/Systems/Fun.

