



**SERIOUS GAMES
ARE ABOUT
STORYTELLING!**

**Innovation in
motivational design:**
new technologies,
content platforms and
deeply storytelled
solutions for better
interventions



**SERIOUS
GAMES ARE
ABOUT
TECHNOLOGY!**



The Lens of Your Secret Purpose



Illustrated by Todd Swanson



To make sure you are working towards your one true purpose, ask yourself the only question that matters:

- *Why am I doing this?*

<http://www.jesseschell.com/>



*In Era of
Perceived Disengagement =*

'Engagement' Rising...

SOURCE:

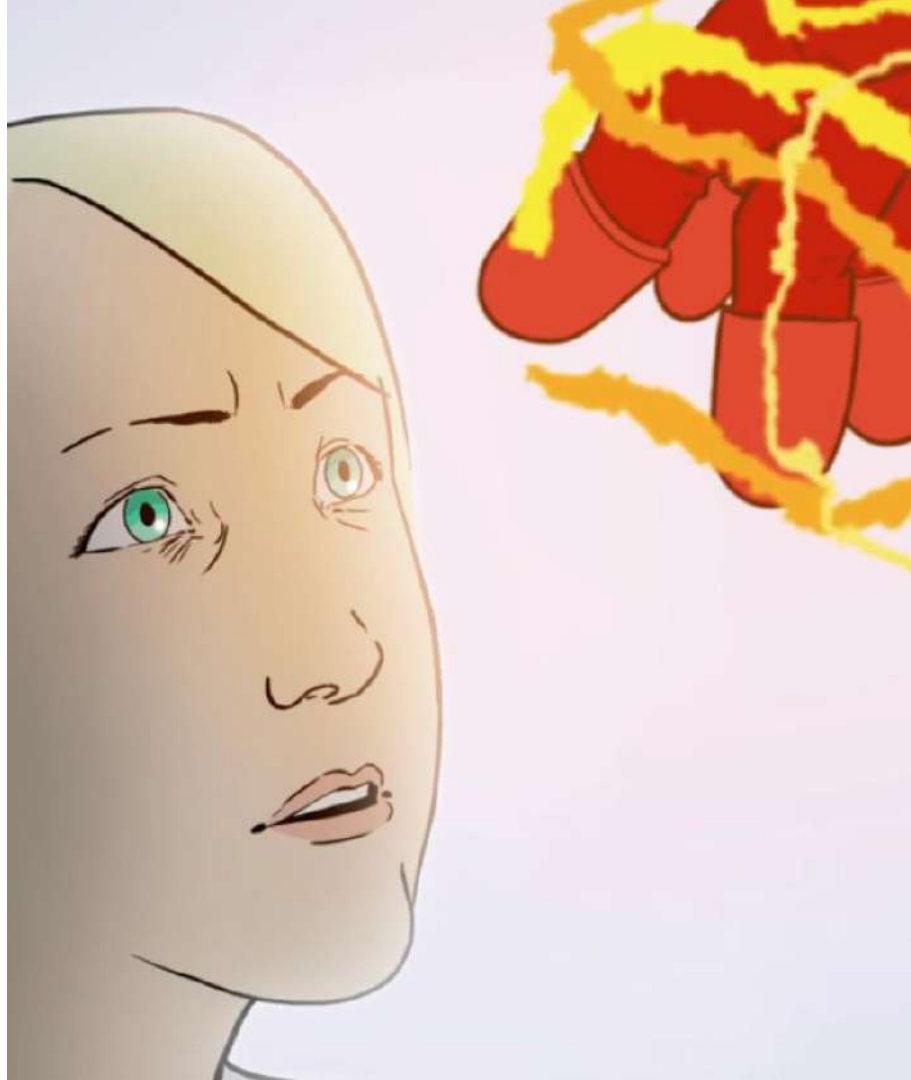
INTERNET TRENDS 2017 –
CODE CONFERENCE

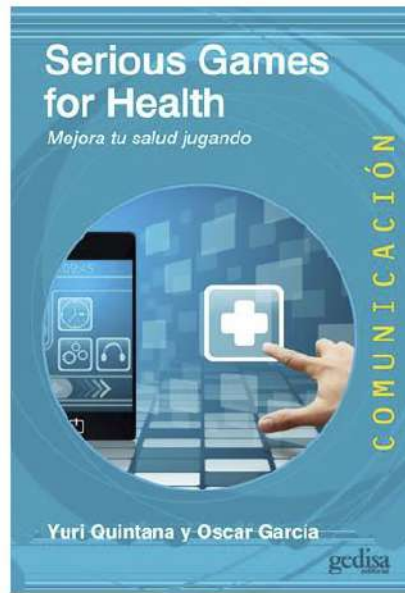
Mary Meeker
May 31, 2017

kpcb.com/InternetTrends

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PERKINS

**WHO
AM
I
?**





3D reconstruction of the left ventricle CITeM

Oscar Garcia i Panyella – Centre d'Integració Tecnològica i Multimèdia - CTT La Salle
 Antoni Susin Sánchez - Departament de Matemàtica Aplicada 1 – UPC

- 1. Input imagery (SPECT)**

The system uses an image SPECT (Single Photon Emission Computed Tomography) images.

The resulting image is processed with the introduction of a window for segmentation algorithm. The window acts as a transparency for segmentation where the data contained in the window is highlighted in the image, increasing the contrast.

The segmentation phase is based on a local search method based on a set of pre-defined shapes of the ventricle. In this method, the shape of the ventricle is defined by a set of points. Final data results on four ventricles being affected by the spatial correlation between them. The window size is fixed, increasing when necessary the initial surface due to its high detection.
- 2. DICOM to VOXELS**

The images are stored using the DICOM file format.

The images are converted to the DICOM file format (DICOM) for imaging and communication in general. The DICOM file format can be represented in a 3D format. The DICOM file format is a binary code by medical equipment, especially for being understood by the user's device.

The internal view representation.
- 3. Edge Detection**

Given a set of 2D images, based on various general segmentation methods that we can apply. These methods are applied to each image, and the results are combined to create a 3D model. After applying the segmentation, we can obtain that every pixel belongs to an edge (red) or not an edge (blue). That is, we can identify every edge in the image. The edge detection is applied to each image.

The binary edge image is applied to one of the images.
- 4. MLC Filter**

Classification is the process of each pixel on each of the images. When an edge is detected, we can use it to filter the image. The probability value of the pixel is high, so we filter a part of the image. In some cases, we can filter the image based on the probability value. The probability value is high, so we filter a part of the image. In some cases, we can filter the image based on the probability value.

The algorithm performs several filters:

 - Histogram, color space
 - Gradient information
 - Morphological information
 - Finding the distance also
 - finding the edges.
- 5. Vector Field**

The vector field is obtained in a 3D format. The vector field is obtained from the probability values, so that the probability value is related to the distance between the vector field and the image. The vector field is represented by the normal and information. The result of the field is related to the probability of a vector field that surrounds the image, making them part of an image.

The field is an image field. This field is represented by a set of vectors that surround the image. The field is an image field. This field is represented by a set of vectors that surround the image.
- 6. 3D Reconstruction**

The reconstruction is performed as an iterative process based on the MLC filter. The process is based on the iterative process of the MLC filter. The process is based on the iterative process of the MLC filter.

Several steps are performed to reconstruct the 3D model of the left ventricle. This is done by using the information of the original image. Then, after the algorithm, the 3D model is reconstructed.

All the steps are applied to the images. The 3D model is reconstructed from the images. The 3D model is reconstructed from the images.

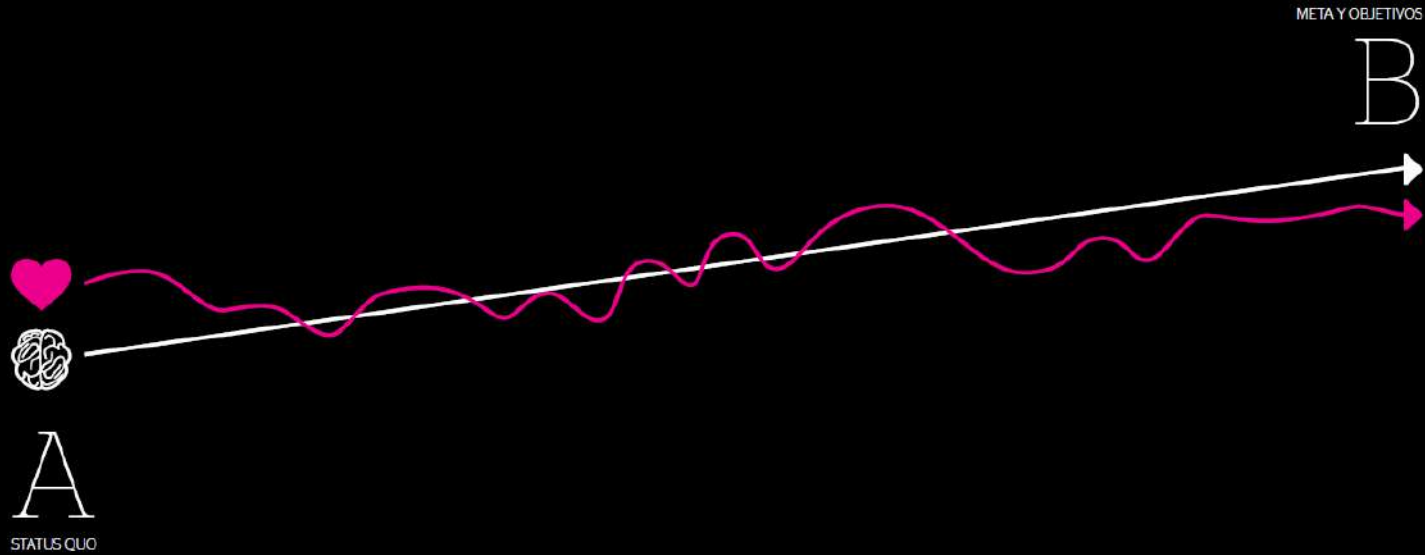
© 2015 by Oscar Garcia Pañella and Antoni Susin Sánchez. All rights reserved. This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License.

applied Barcelona besides California Center **COOKIEBOX**
 Course creation degree Departments **design** directs Edutainment
 Engineering Entertainment **ENTI** etc **games**
Gamification IEBs include Interactive interesting keywords Media
 mention multimedia Oscar others Ph project Reality research Sc
 School Serious several skills Soft Spain Stream **Technology** topic Transmedia
University Videogame **Virtual** World



SOME FACTS

THE ADHERENCE CHALLENGE



♥ HEART BEATS

🧠 BRAIN BEATS

FUN HAS TO BE
ENGAGING



THEN & NOW...



1982



2018



1985
Super
Mario
Bros.



1989
Super
Mario
Bros. 2



1991
Super
Mario
Bros. 3



1992
Super
Mario
World



1997
Super
Mario
64



2002
Super
Mario
Sunshine



2006
New Super
Mario
Bros.



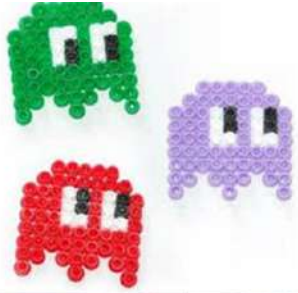
2007
Super
Mario
Galaxy



2009
New Super
Mario
Bros. Wii



2010
Super
Mario
Galaxy 2



A Cookie for
each individual



A "Total Patient Experience" because Motivational Design should contemplate all the potential audiences ("Multi Target")

Motivational Segmentation:
Learn, Help, Discover, Collaborate, Express, Socialize...

Genre Segmentation:
Male, female, etc.

Target 1 Action 1			
		Target M Action M	

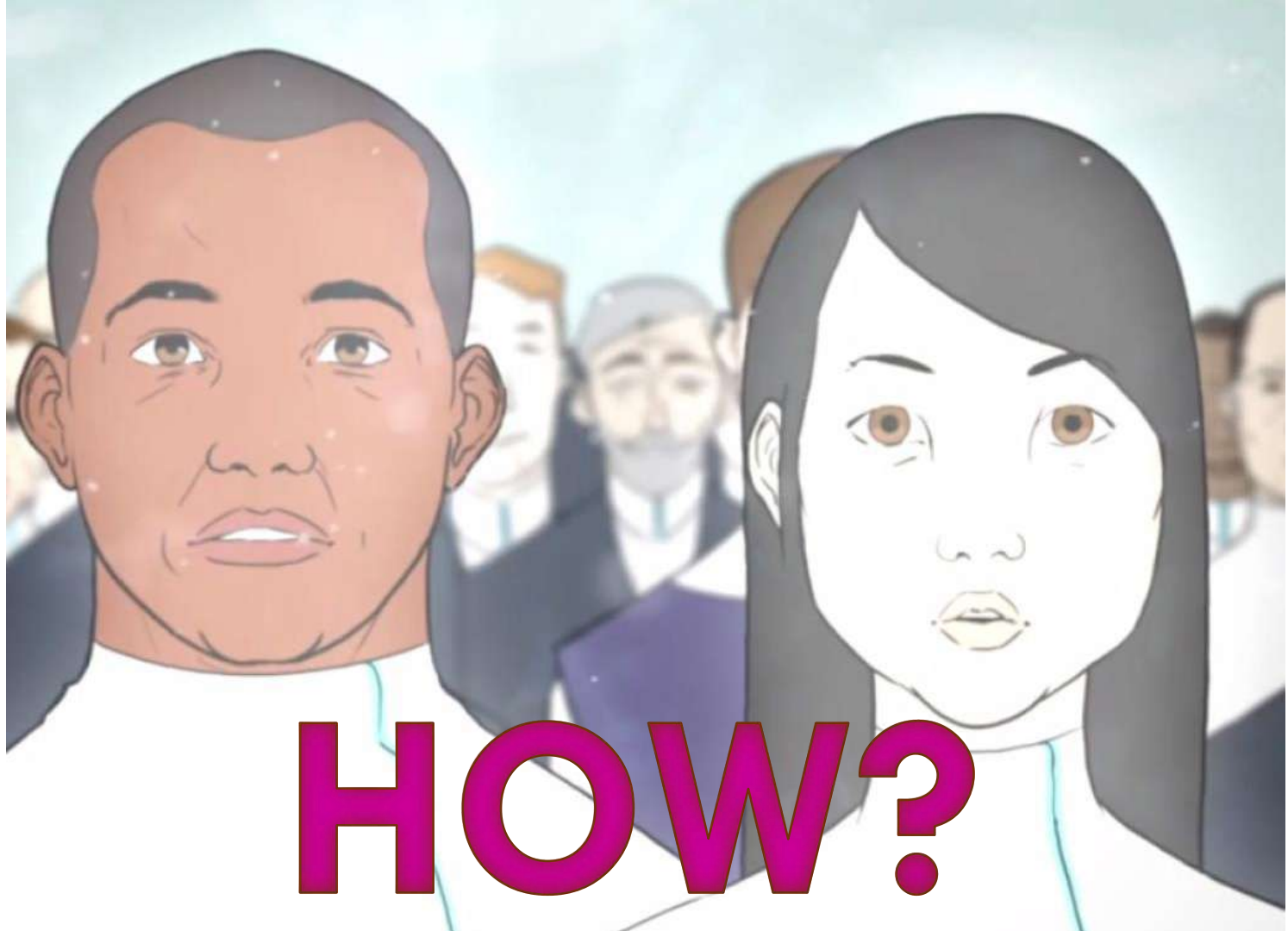
Platform Segmentation:
Analog or Digital (Transmedia)

Age Segmentation:
Kids, Pre teens, Teens, Adults, Seniors...

Other Segmentation(s):
...

We segment audiences via differentiated parameters. Then we design a distinctive and customized experience for each case





HOW?

Simulators

Serious Games

(Exergames, Games for Health, Edugames, Advergames, Newsgames...)

Gamification

Commercial Games and Videogames

Repetition
Dynamic Difficulty Adjustment
Solving Puzzles
Planning Workflows
Completing Projects
Leveling Up
Competing
Exploring / Discovering
Following Rules
Collaborating – Social Connection / Leadership
Observing
Interacting With / Analyzing Data
Self Optimizing
Creative Story Telling

SOURCE:

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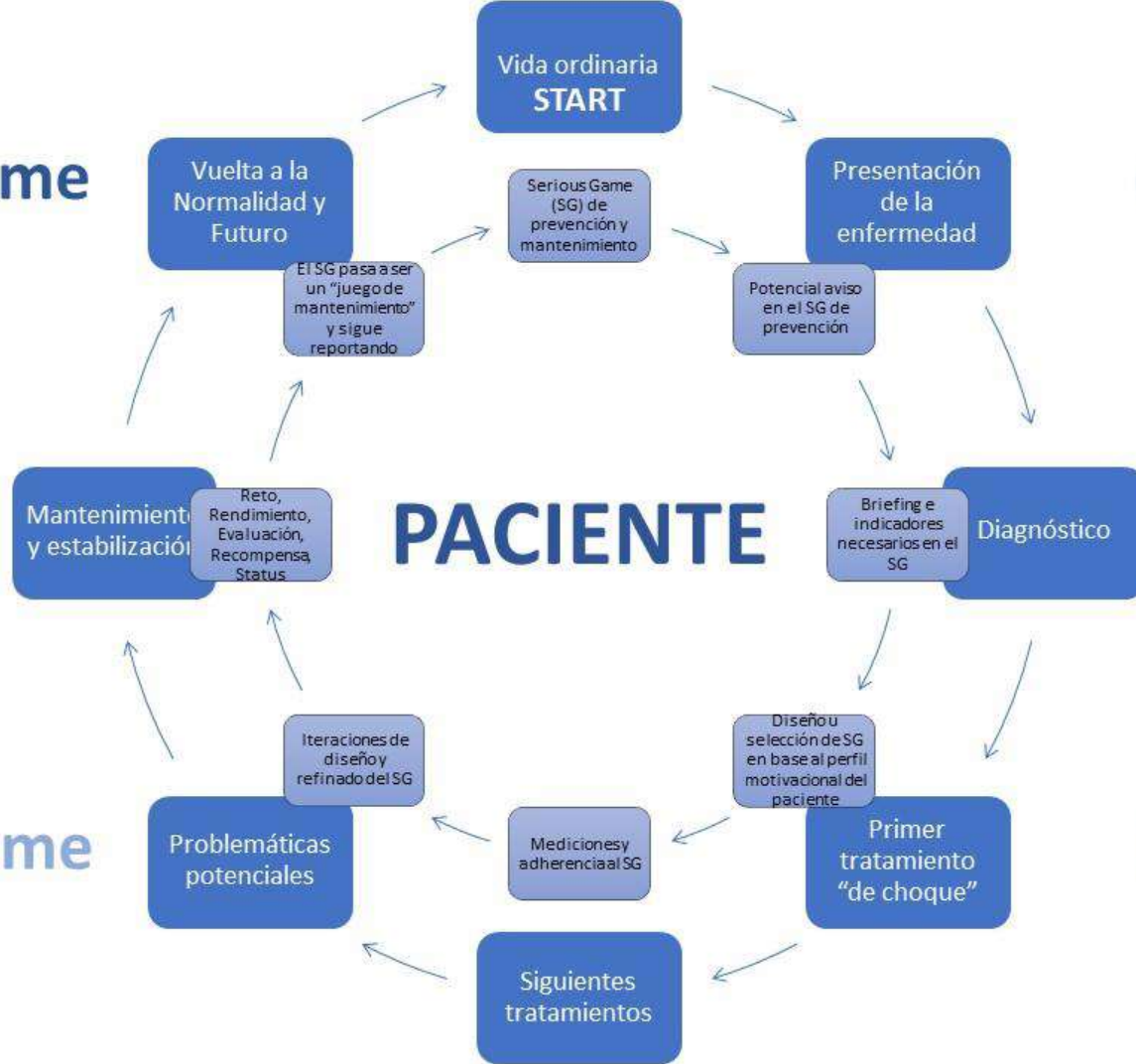
Serious (or applied) Games
build competences while
entertaining. These can manage
behavioral change too

End Game

onBoarding

Mid Game

Mid Game



Gamification = Influencing Multiple Consumer Services...

Education Duolingo



Personal Health Mango Health



Personal Finance Acorns



Energy Conservation Nest



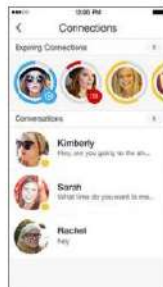
Food Starbucks



Exercise myfitnesspal



Dating Bumble



Advertising Snapchat

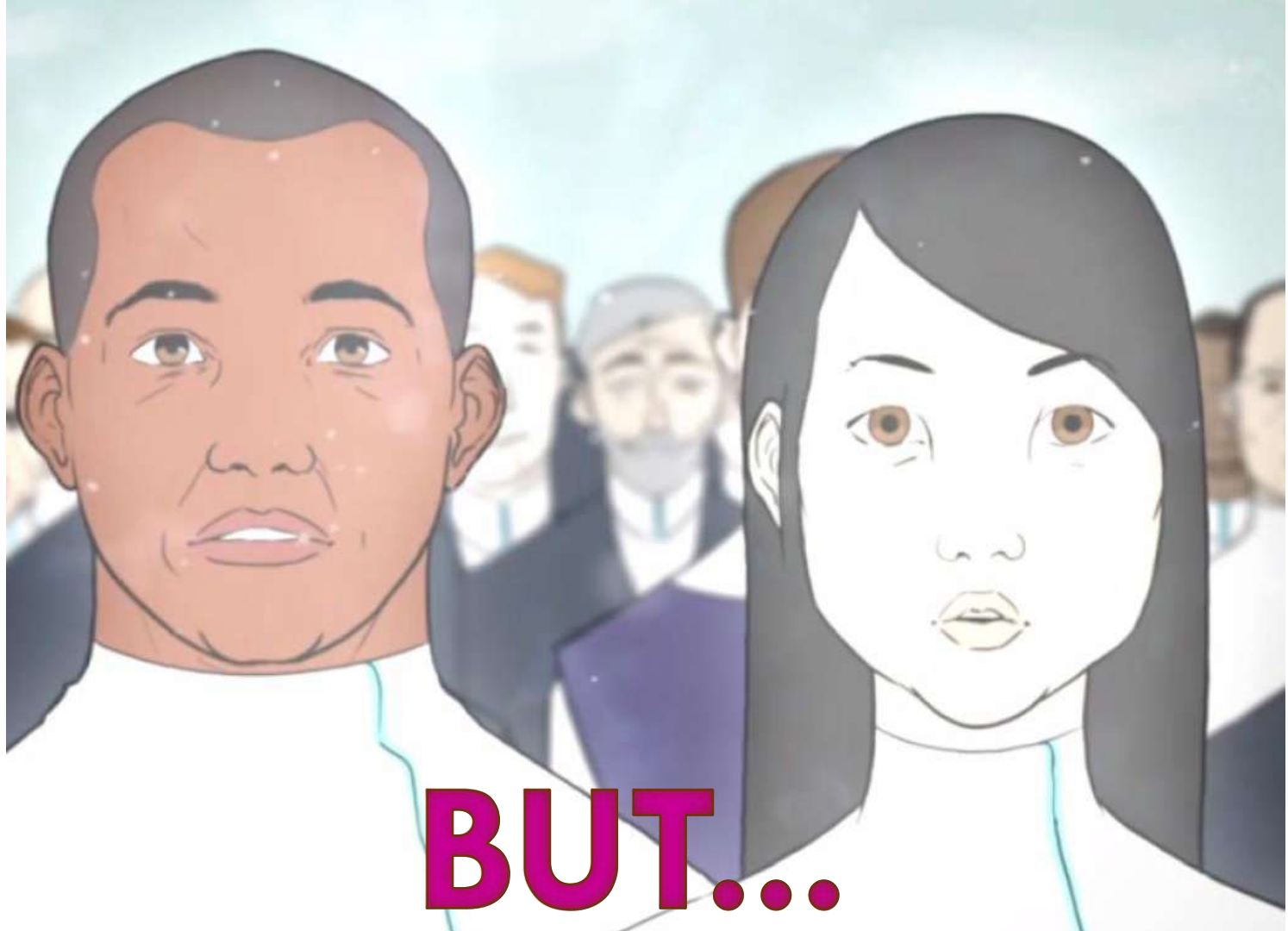


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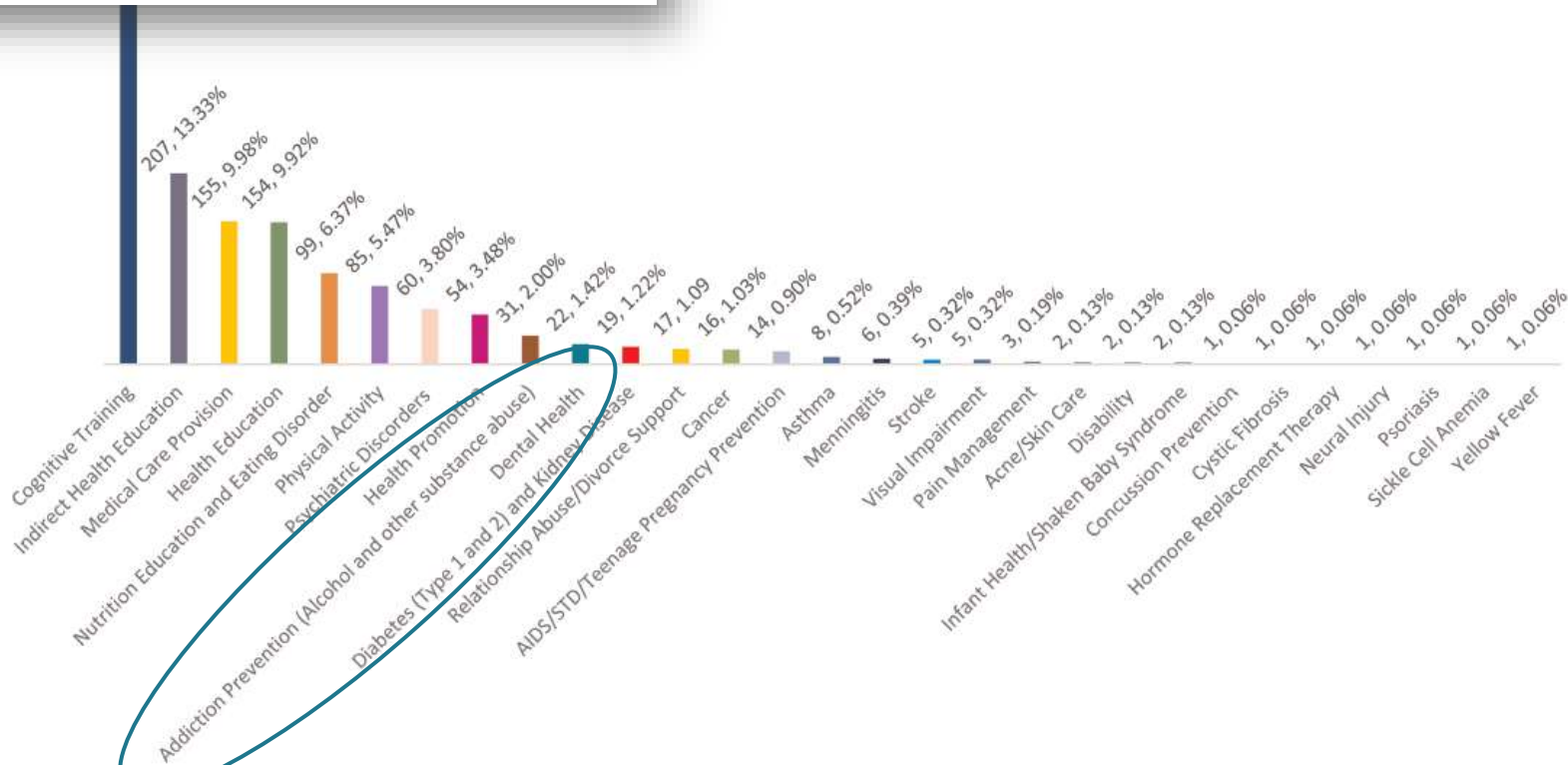
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BUT...

A State-of-the-Art Systematic Content Analysis of Games for Health

Amy Shirong Lu, PhD¹ and Hadi Kharrazi, MD, PhD²





According to Statistics MRC, the Global Serious Game market is accounted for \$2198.96 million in 2015 and is expected to reach \$7833.14 million by 2022 growing at a CAGR of 19.8% from 2015 to 2022. Factors such as increasing usage of mobile devices and social media, growing usage of mobile-based educational games, increasing need for user learning are driving the serious game market. However, improper game design, lack of awareness and assessment tools will hinder market growth. Further, increasing scale of digitization and emergence of social networks would provide ample opportunities for the market to grow.

Serious Game - Global Market Outlook (2016-2022)

<http://www.strategymrc.com/report/serious-game-market-2016>

A State-of-the-Art Systematic Content Analysis of Games for Health

Amy Shirong Lu, PhD¹ and Hadi Kharrazi, MD, PhD²

- 94% for **SOLO** players
- 1 out of 5 (**ONLY**) had a strong narrative
- Players **UNABLE** to customize
- No sufficient info available, lack of tutorial and therefore a **CHALLENGE** to understand properly
- Lack of feedback provided with regard to game status (**FRUSTRATION**)
- Homophily in character design (**GENRE** issues)
- Most of the games are free and web-browser supported (**BUDGET** issues)



AND THE ANSWER IS...



Introducing . . .

sensorama

The Revolutionary Motion Picture System
that takes you into another world
with

- 3-D
- WIDE VISION
- MOTION
- COLOR
- STEREO-SOUND
- AROMAS
- WIND
- VIBRATIONS



○ PATENTED

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TEL. (213) 459-2162

oscargp@enti.cat
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1

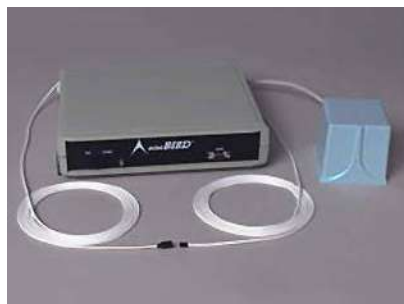
2



3



4



5

**MAY
TECHNOLOGY
BE WITH YOU!**



...Gen X + Millennials = Gamified Since Birth



Gen X

Millennials



SOURCE:

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May 31, 2017

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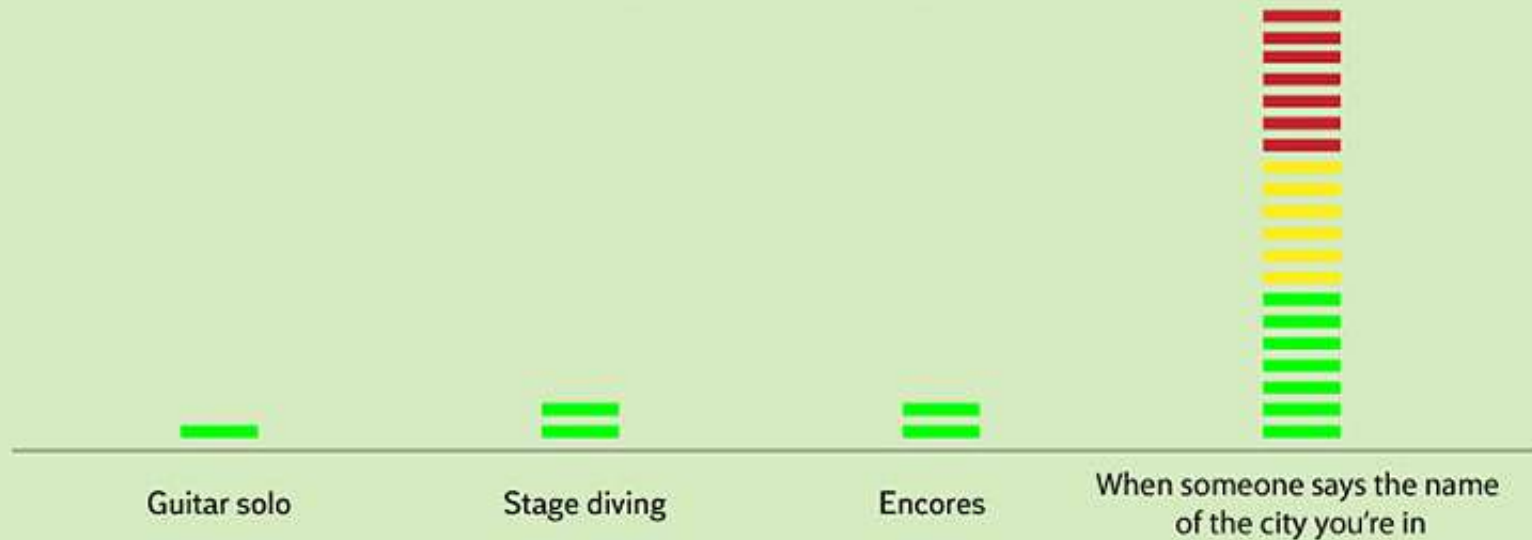
Source: Images: Wikimedia Creative Commons (Pong, Asteroids, Space Invaders, Pac-Man), Flickr user BagoGames (Mario Bros), Mobygames (John Madden Football), Electronic Arts (FIFA), Pokémon (Pokémon Red and Blue versions), World of Warcraft (Warcraft), Supercell (Clash of Clans), Minecraft (Minecraft Logo), Riot Games (League of Legends), King (Candy Crush Saga), Activision Blizzard (Overwatch), Pokémon Go (Pokémon Go)



ARE WE SURE?...

ENTHUSIASM AT CONCERTS

(measured in decibels)



truthfacts.com



oscar.garciap@cookiebox.es
@kokopus_dark



ENTERTAINMENT ENGINEERING



JOHN W. WESNER

1. It's the “total entertainment experience” (“total guest experience”) that determines success.

- “complete immersion”

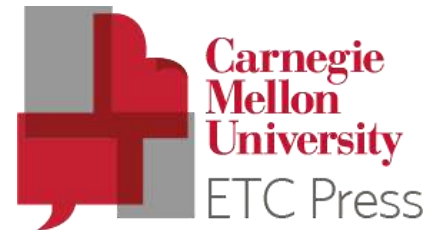
“The more a guest feels immersed in an experience, the better that experience seems to be. We know that the immersion is achieved by various art forms all coming together to tell one story. The background music, the landscaping, the texture of the ground we walk on, etc., all contribute to the total guest experience.”
(Alec Scribner, personal communication)

- “detail”

“The more detail, the more immersive the experience. But the detail does not have to be completely realistic to a period or time or place.”

- “complete sensory experience”

Another Imagineer offered that “the basic definition of ‘total guest experience’ is the complete sensory experience that is provided by any particular purposefully created environment, ... completely enveloping a human into its environment.”



First

Challenge

According to user's interests, motivations, skills and needs

Second

Evaluate

And give appropriate feedback to both user's and system

Third

Reward

Status, recognition, tranquility, access...

Fourth

Let them share

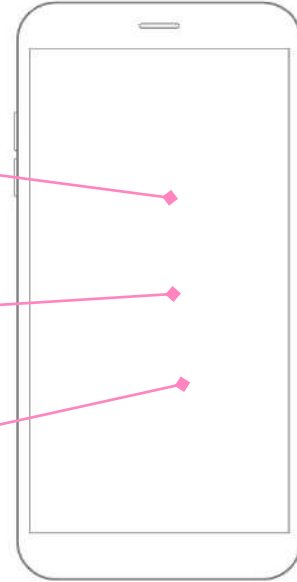
With the community

Fifth

Iterate

And start again!

Target 1 Action 1			
		Target M Action M	



The Gamificator's journey

The Gamificator's Journey

by OGP (@kokopus_dark)



Client + Briefing
Identify both
Generic &
Specific
Objectives
(Challenges)



Define...
**Metrics
Indicators
ROI**
As a consultant



Show best cases &
scientific references



Combine Game Elements
To produce
Mechanics, Activities,
Missions, Actions...
While unfolding
a deep & epical...
Storytelling



Decide on the list
of human
motivators or
Dynamics
Place the
experience within
A Transmedia Platform



Segment
A minimum of 7
users from the
target group



Pointification
& also relevant



Never hesitate to
Playtest
as much as you can



Iterate your
solution while
implemented
because...
Refinement
is crucial



*Using creative implies constructing from the mixing of previous ideas having been taken as a model. Sometimes in a group, others' feedback. Motivation is a key as it is being respectful for our needs and "others" to life.



A

MOTIVATIONAL DESIGN METHODOLOGY

STATUS QUO

GOALS

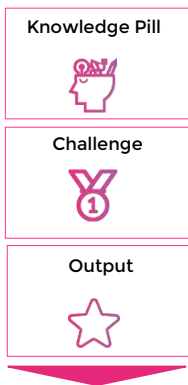
B

INPUT

STORYTELLING

CO-CREATION JAM

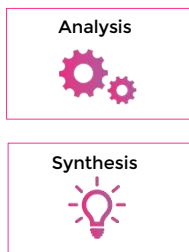
In the co-creation process, we align ourselves with our target, deepen our knowledge and gather information to define the experience. We do it through challenges, which have a defined structure:



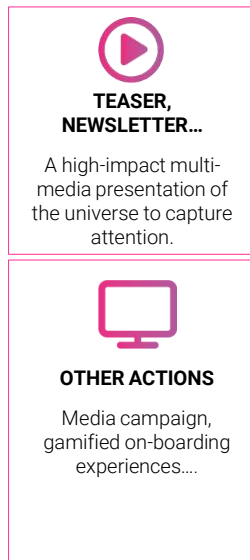
CHALLENGE RESOLUTION

EXPERIENCE DESIGN DOCUMENT

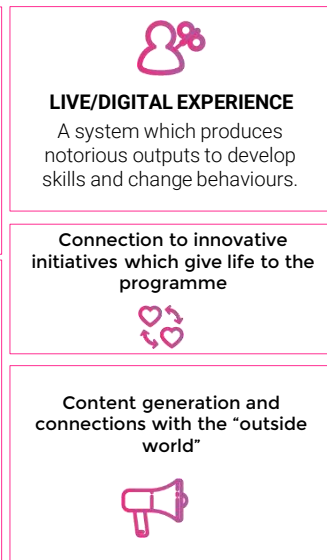
We synthesize the outputs from the jam in a document which designs the experience connecting general and specific goals, platforms, restrictions, target motivation...



LAUNCH



TRANSMEDIA EXPERIENCE



Briefing and other previous information and knowledge from the situation, goals, target...

With it, we can kick-start the co-creation process.

GAMIFICATION



Teams



Avatars



Competition and Collaboration



Tutorial



Rules of play



Experience points



Challenges and Missions



Badges and Prizes



Feedback and Progress

TRANSFER



**But we lack
the profiles that we need in
order to create decent games
We (I, YOU) cannot
implement everything!!! So...**



CO



C



R



E



A



TE



JAM
TODAY
LEARNING
TO CHANGE
LEARNING



JamToday Fair 2016 in
Florence, Italy

[MORE INFO](#)

TRANSMANGO Game Jam

[MORE INFO](#)

Overview Jams

[MORE INFO](#)

Living Lab - Applied game ja
2017

[MORE INFO](#)

<http://www.jamtoday.eu/>





[Participate](#)

[Calendar](#)

[Prize](#)

[Mentors & Jury](#)

[Rules](#)

[FAQs](#)

[Location](#)

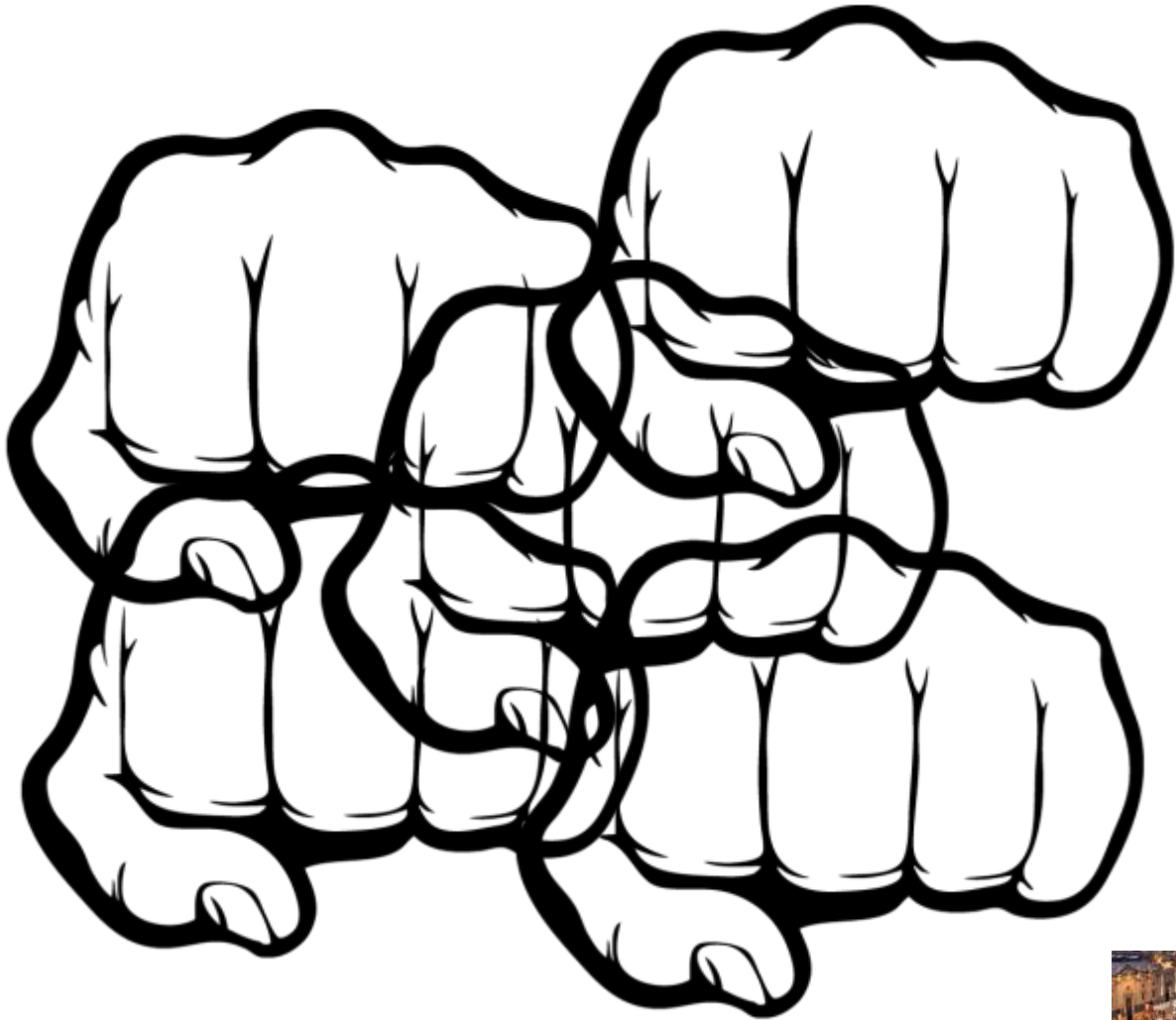
[Partners](#)

{Not Only Games} jam

1 weekend · 4 universities · 8 teams · 1 goal

Create innovative solutions to increase diversity and inclusion in society





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[@kokopus_dark](https://twitter.com/kokopus_dark)



THANKS!

“Wrap Up”



1. Need to Engage (the loop)
2. Total Patient Experience
3. Customize (the matrix)
4. Design well = Psychology first
plus “the other” axes
5. Co-create