



KOZMINSKI UNIVERSITY

Digital Game-Based Learning in the Agrifood Training

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ASKFOOD within the framework of the
Gamification Academy





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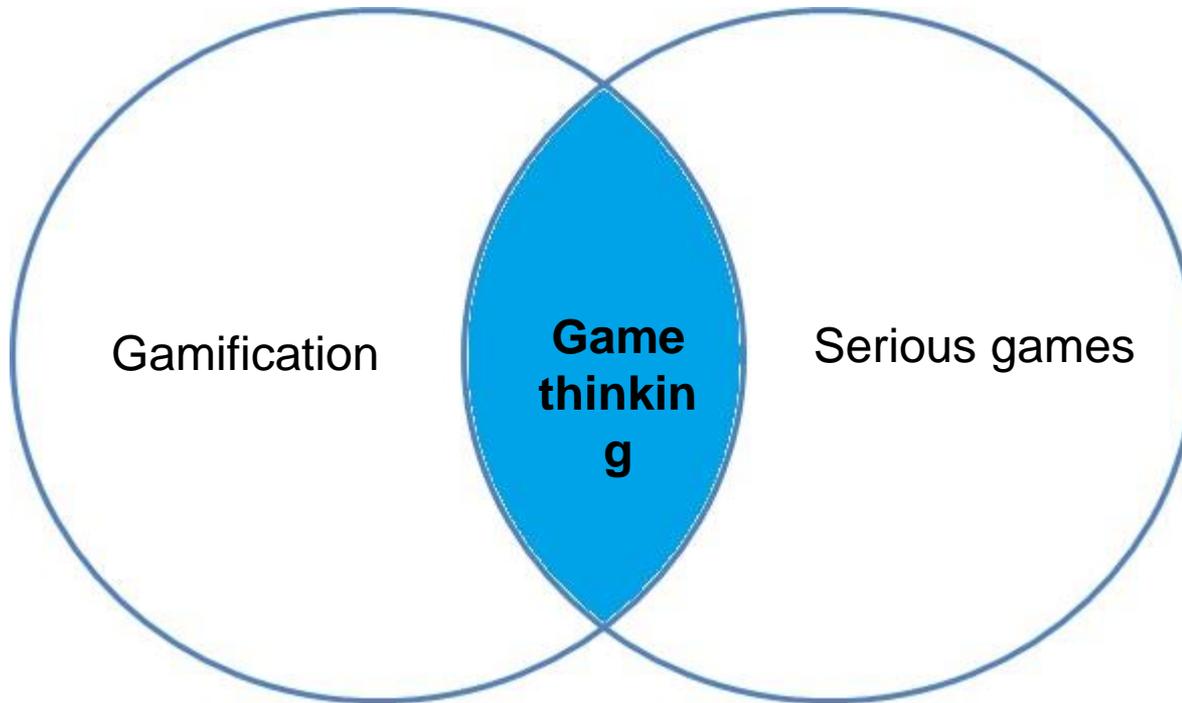


Małgorzata Ćwil



Dr Błażej Podgórski

Serious games and gamification



Gamification and serious games are related because both try to leverage aspects of games to achieve something beyond playfulness.

Source: Ganit Richter , Daphne R. Raban and Sheizaf Rafaeli

WHAT IS GAMING SIMULATION?

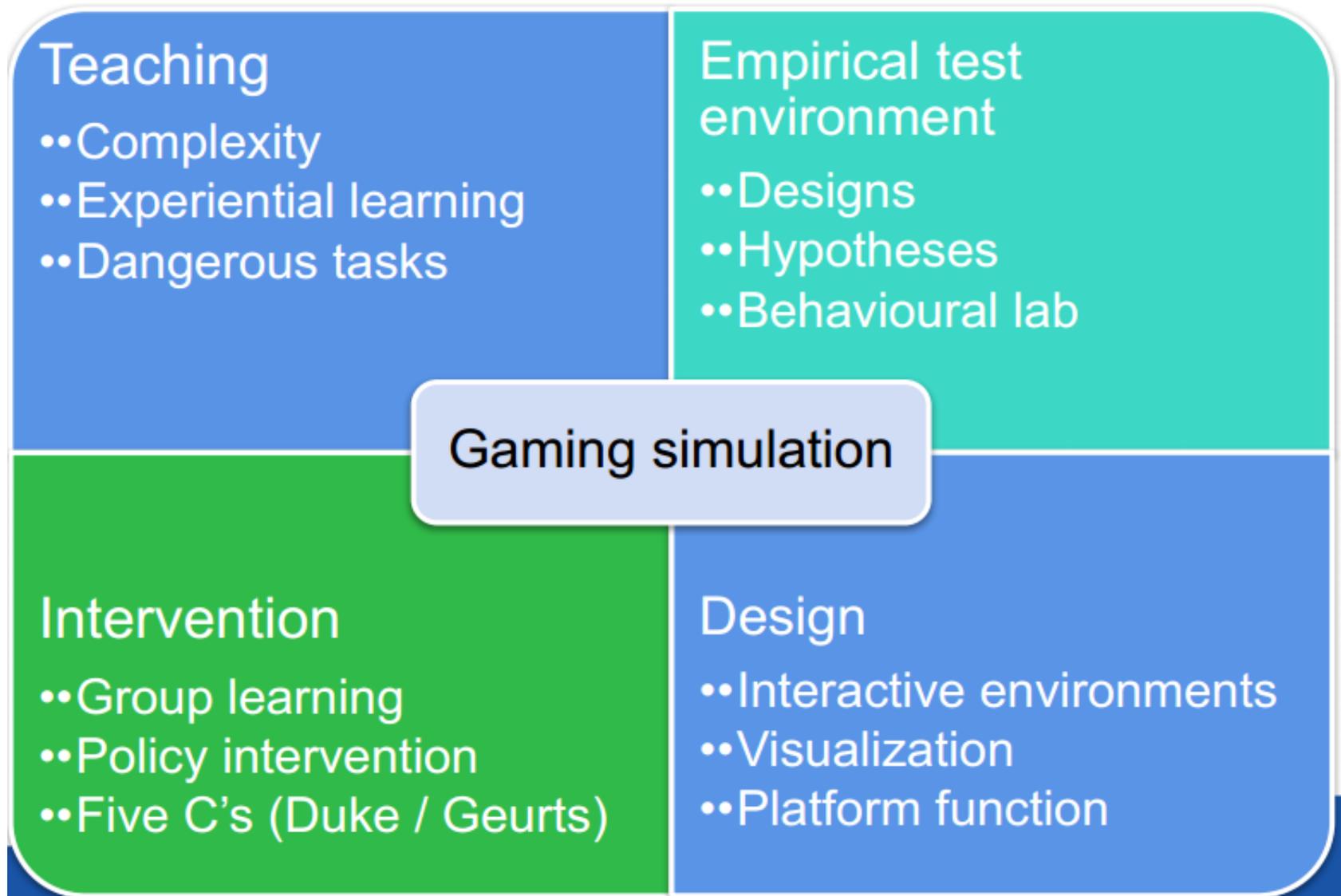
A gaming simulation session:

- Mimics the behavior of a real-world system
- Uses real people as decision makers
- Combined with (computerized) simulation models

A broad range of simulations in which the role of a human decision maker is enacted by a real human participant instead of a computer.

Technology is not essential but driven by the goals of the gaming simulation. From table-top to 3D immersive environments.

Simulation gaming in 4 domains



Source: Sebastiaan Meijer, „Gaming simulation in design of logistics systems. Dornbirn 2017.

ROLE AND PLACE OF SIMULATION GAMES IN EDUCATIONAL PROCESS

Choice of the role, model and place of simulation games implementation in the educational systems have a great impact upon the way they are used:

- Games as a summary of knowledge and skills – at the end of the process
- Games as a motivation to learn and knowledge and skills gaps recognition – at the beginning of the process
- Games as a support to particular and specific field of knowledge or skills – in the middle of the process
- Games as an assessment and test center – separated from the process

Types of games

- Free-form games
- Role-play games
- Serious board games – haptic games
- Hybrid games
- Serious computer games
- MLG – mobile games for learning
- ARG – alter reality games
- AR/VR/MR games

Game & Game-Like Experiences Split by Design Intent

	Game Thinking	Game Elements	Virtual World	Game Play	Non Purposeful
Game Inspired Design					
Gamification					
Simulation					
Serious Game					
Game					

Marczewski, A. (2015). [Game Thinking](#). [Even Ninja Monkeys Like to Play: Gamification, Game Thinking and Motivational Design](#) (1st ed., pp. 15). CreateSpace Independent Publishing Platform

SmartLeo



Smart Leo



64



A medium that allows buyers and sellers of a specific good or service to interact in order to facilitate an exchange

Market

Supply

Demand

There is no correct answer

Menu



33



O/N Deposit

Disel Fuel deposits

I'm proud of You

Debt deposits

Over night deposits

There is no this type of deposits

Menu



33



A fundamental economic concept that describes the total amount of a specific good or service that is available to consumers

Supply

Really?

Market

Demand

There is no correct answer

Menu



Game Layout

- Intro screen with choice of the knowledge area
- Short game instruction ahead of every level
- Level 1-5 quiz questions randomly chosen from database
- Mini-games:
 - cross-word puzzle;
 - Pac-Man style game with Leo;
 - Matching Photos with names of famous people, objects, logos etc.;
 - drag-and-drop – matching famous quotes with people;
 - grouping objects or names
- This layout is repeated on the following five stages of the game

Database

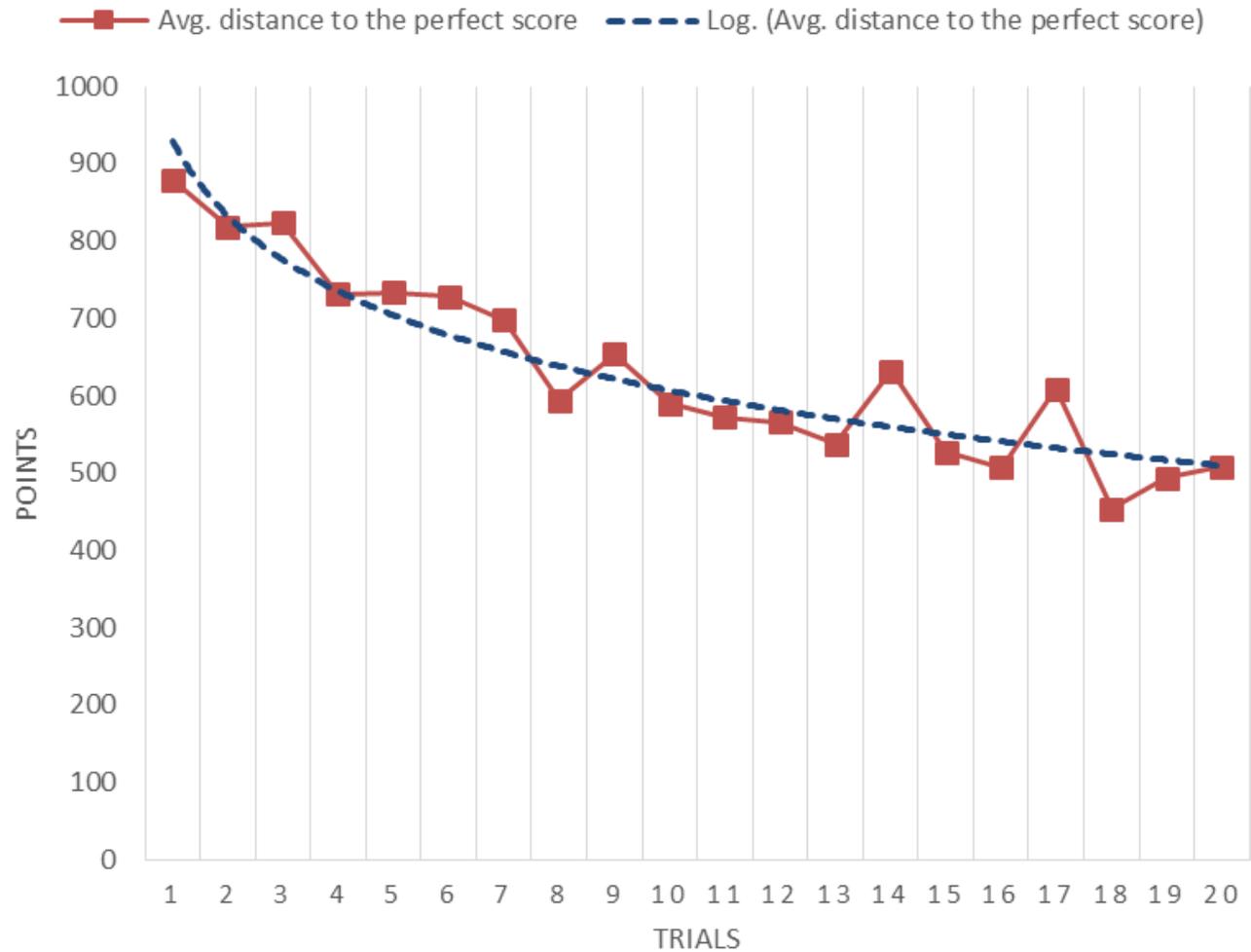
- The questions' mechanism is flexible; you can add a new question at any time.
- In order to add any of categories it is necessary to have at least:
 - 30 questions with 4 possible answers
 - 4 passwords to cross-words
 - 4 images for matching images module
 - 4 passwords to group the category
 - 4 quotes a mini-game quotes

Game – CMS

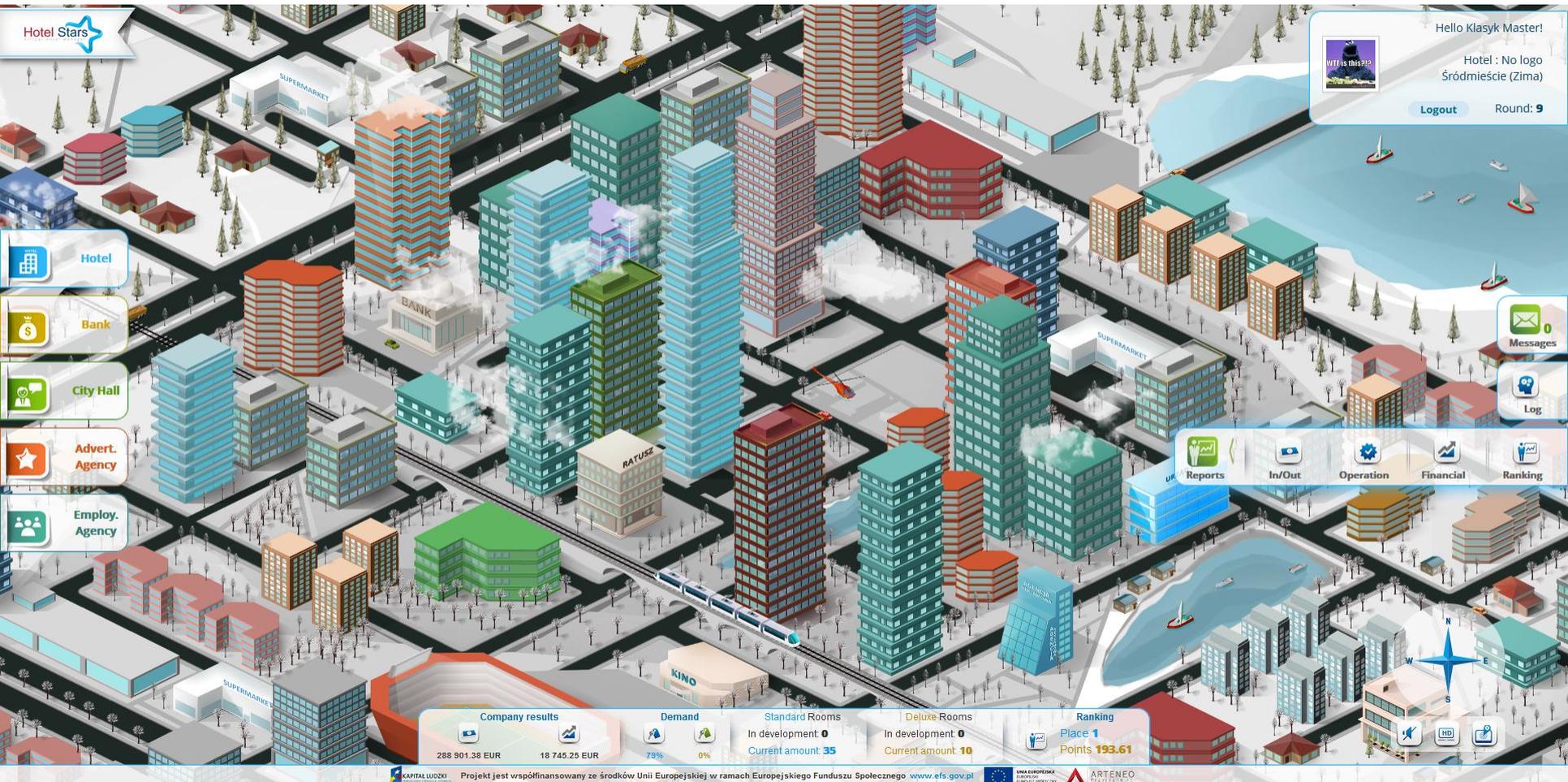
The number of categories is unlimited, but due to operational capabilities of older devices it is recommended to set the Content Management System (CMS) max to 10.

Categories can be flexibly turn on and off from CMS module

LEARNING CURVE MLG



Hotel Stars



Unique interface

- Touch screen optimized
- Single page design
- Interactive map and design
- Growing complexity along player's experience
- Rich tutorial and onboarding
- Storytelling thorough comic's
- Virtual advisor

Profit & Loss Report

	Year - 1	Year - 2	Year - 3	Year - 4	
Revenue	577 677.28 EUR	2 426 548.87 EUR	3 606 175.02 EUR	1 051 474.80 EUR	1 051 474.80 EUR
Sales revenue	277 677.28 EUR	2 406 548.87 EUR	3 545 175.02 EUR	1 034 474.80 EUR	1 034 474.80 EUR
Cash income	300 000.00 EUR	0.00 EUR	0.00 EUR	0.00 EUR	0.00 EUR
Other revenue	0.00 EUR	20 000.00 EUR	61 000.00 EUR	17 000.00 EUR	17 000.00 EUR
Costs	503 481.77 EUR	2 058 867.11 EUR	3 238 923.05 EUR	736 784.85 EUR	736 784.85 EUR
Financial result	74 195.50 EUR	367 681.75 EUR	367 251.96 EUR	314 689.94 EUR	314 689.94 EUR

Close

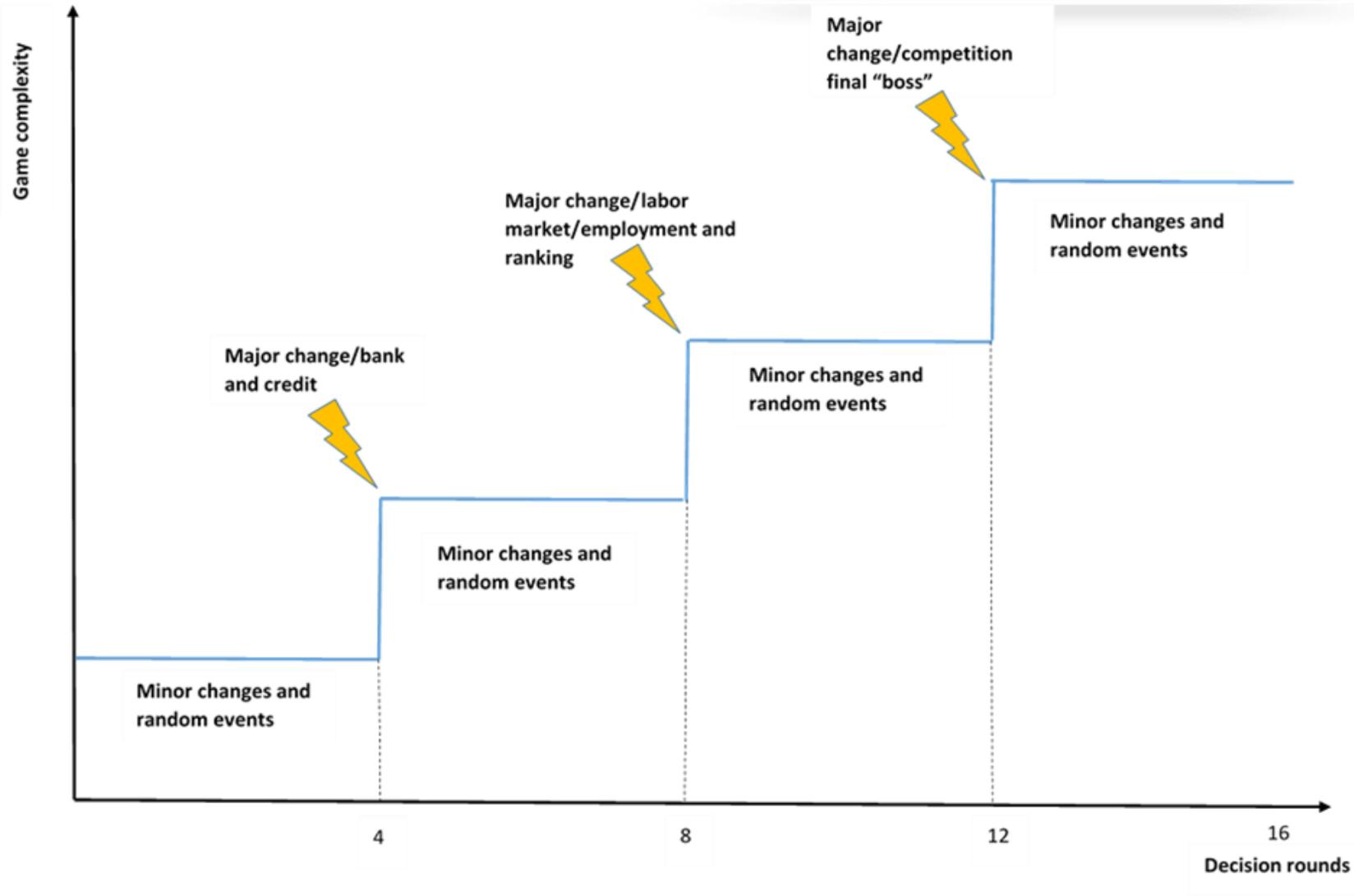
Company results **Demand** **Standard Rooms** **Ranking**
 1 826 319.17 EUR 314 689.94 EUR In development 0 Localisation 1
 90% Current amount 240 Points 586.06

Simulation game



- Web browser-based game
- Played in the small (2-3 person) groups of students
- You create, run and manage hotels in a virtual city of Pekunia
- 17 decision rounds
- Growing complexity
- Dynamic scenario of the game will feature seasonality, random events, and competition
- Final boss fight

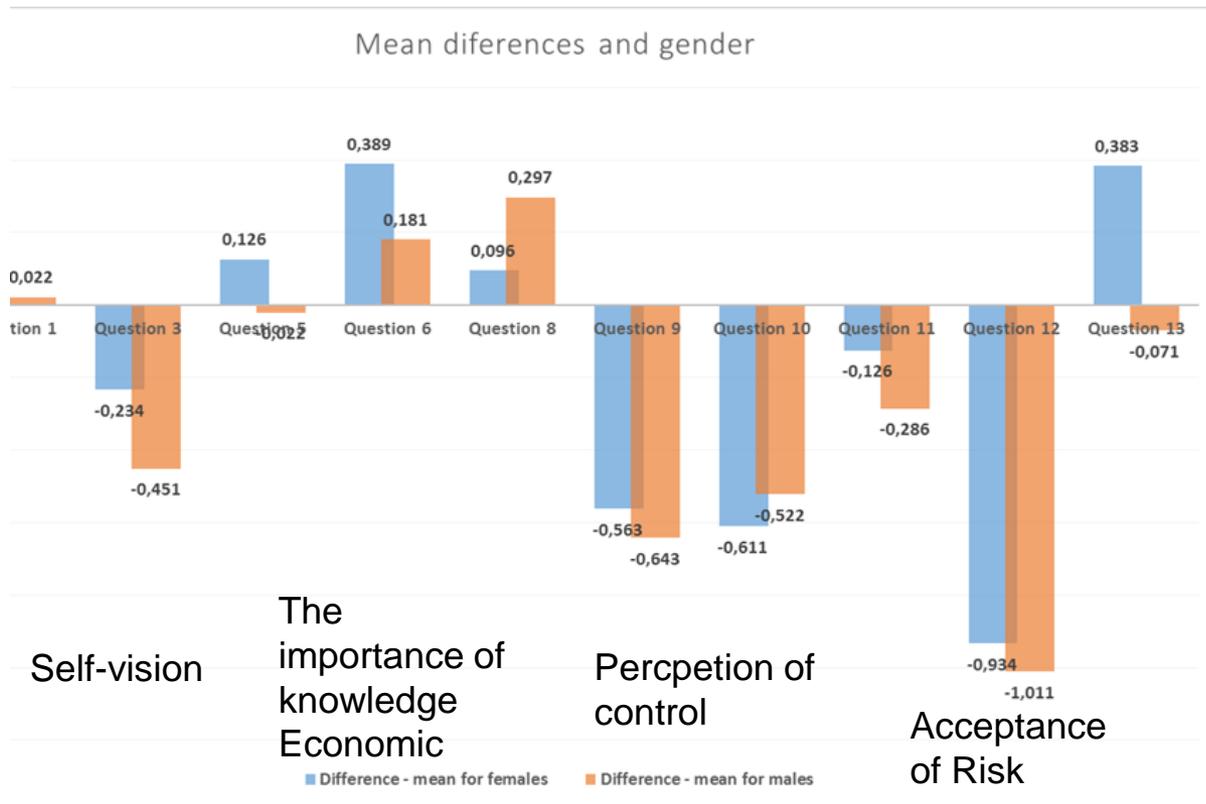
Flow-oriented experineece



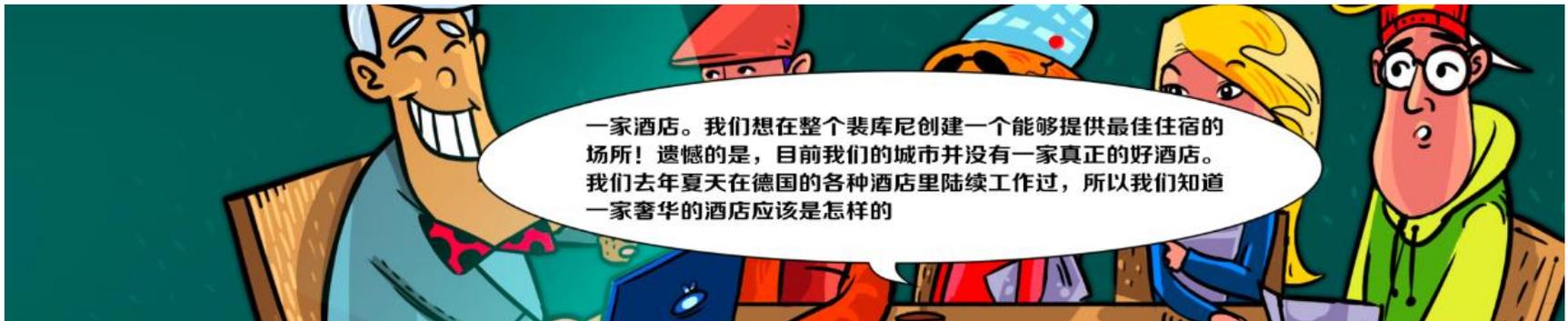
Teaching program

- overall game scenario
- teachers' manual
- students' manual
- program syllabi with 36 detailed lesson scenarios
- 23 presentations covering the simulation game and knowledge presented in the program
- 15 exercises for both in-class tasks and homework activities – with solutions
- 3 experience-based exercises

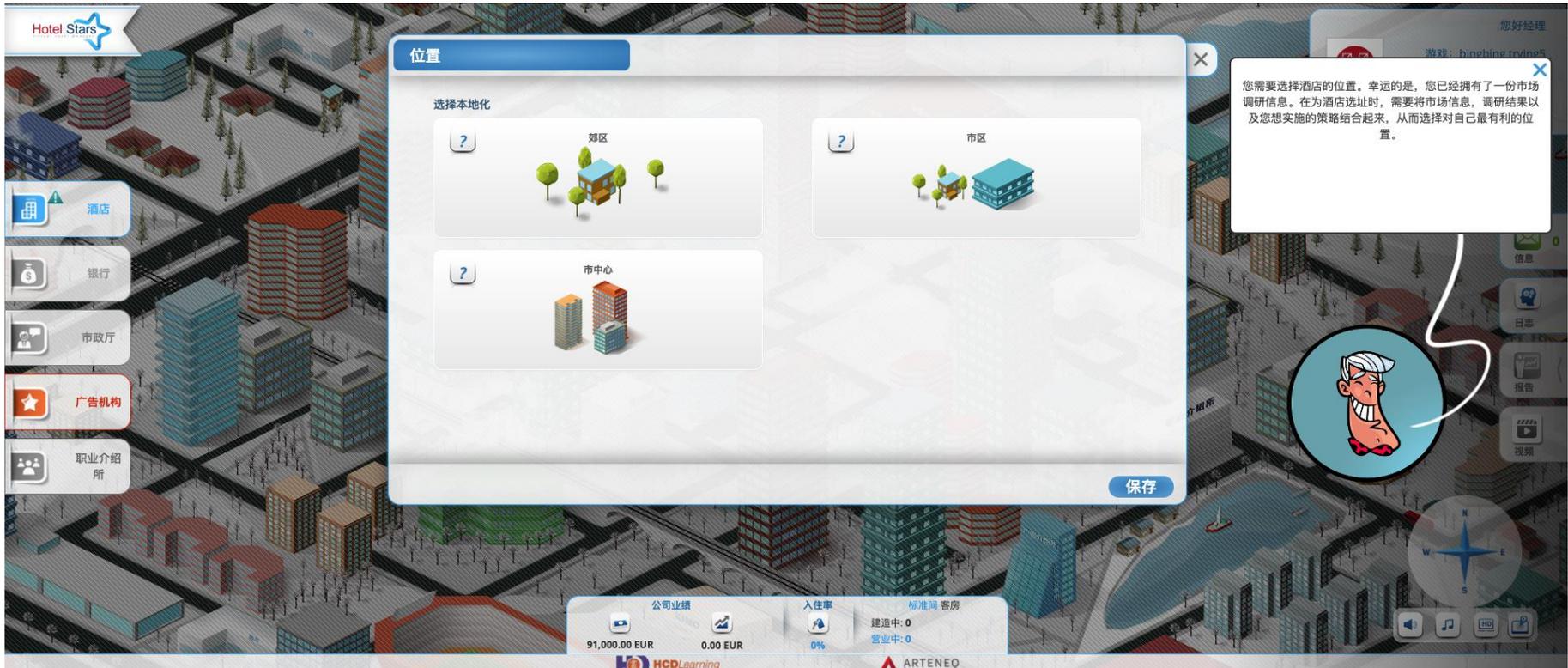
Differences in entrepreneurial attitudes among high school students before and after the game



课程展示



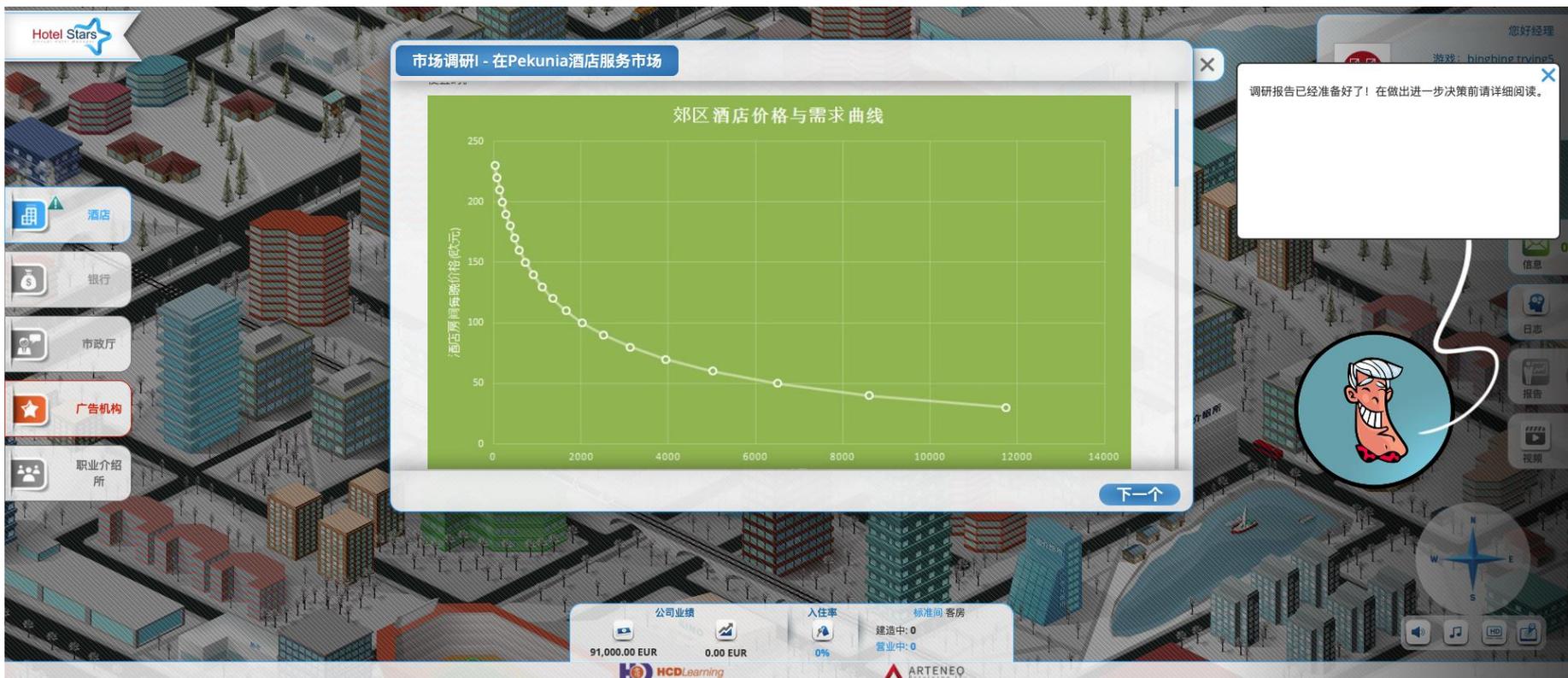
课程展示



The screenshot displays the HotelStar simulation interface. A central dialog box titled "位置" (Location) prompts the user to "选择本地化" (Choose localization). Three options are available: "郊区" (Suburb) with a house icon, "市区" (City Center) with a multi-story building icon, and "市中心" (Downtown) with a tall skyscraper icon. A "保存" (Save) button is at the bottom right of the dialog. On the right side, a tooltip box contains the text: "您需要选择酒店的位置。幸运的是，您已经拥有了一份市场调研信息。在为酒店选址时，需要将市场信息，调研结果以及您想实施的策略结合起来，从而选择对自己最有利的位 置。" (You need to choose the location of the hotel. Fortunately, you already have market research information. When choosing a location for the hotel, you need to combine market information, research results, and the strategy you want to implement to choose the most favorable position for yourself.)

On the left side, a vertical menu includes icons and labels for: "酒店" (Hotel), "银行" (Bank), "市政厅" (City Hall), "广告机构" (Advertising Agency), and "职业介绍所" (Job Center). At the bottom, a status bar shows: "公司业绩" (Company Performance) with a value of 91,000.00 EUR, "入住率" (Occupancy Rate) at 0.00 EUR, and "标准间 客房" (Standard Room Rooms) with 0 built and 0 in operation. Logos for HCD Learning and ARTENEO are also visible.

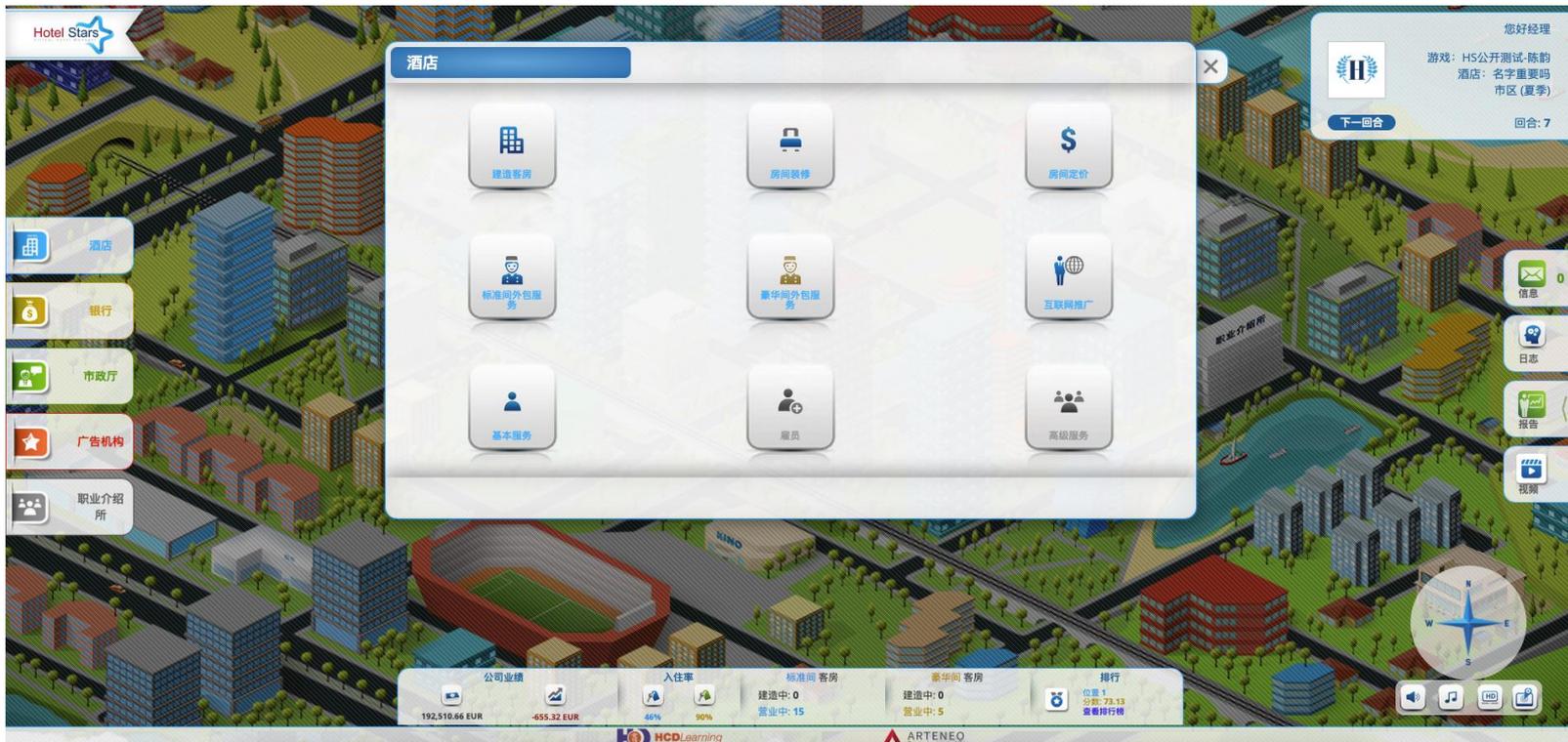
课程展示



The screenshot displays a simulation game interface with a central market research report window. The report is titled "市场调研! - 在Pekunia酒店服务市场" (Market Research! - In Pekunia Hotel Service Market). The main chart is titled "郊区酒店价格与需求曲线" (Suburban Hotel Price and Demand Curve) and shows a downward-sloping curve on a grid. The y-axis is labeled "酒店房间价格(欧元)" (Hotel Room Price (EUR)) and ranges from 0 to 250. The x-axis ranges from 0 to 14000. A data point is highlighted at approximately (11500, 30). A speech bubble from a character says "调研报告已经准备好了! 在做进一步决策前请仔细阅读。" (The research report is ready! Please read it carefully before making further decisions.). The interface includes a sidebar with icons for "酒店" (Hotel), "银行" (Bank), "市政厅" (City Hall), "广告机构" (Advertising Agency), and "职业介绍所" (Job Introduction Office). At the bottom, there is a status bar with "公司业绩" (Company Performance) at 91,000.00 EUR, "入住率" (Occupancy Rate) at 0.00 EUR, and "标准间 客房" (Standard Room Rooms) with 0 built and 0 in operation. Logos for HCD Learning and ARTENEO are also visible.

酒店房间数量 (X)	酒店房间价格 (欧元) (Y)
0	230
100	220
200	210
300	200
400	190
500	180
600	170
700	160
800	150
900	140
1000	130
1100	120
1200	110
1300	100
1400	90
1500	80
1600	75
1700	70
1800	65
1900	60
2000	55
3000	45
4000	40
5000	35
6000	32
7000	30
8000	28
9000	26
10000	25
11000	24
12000	23
13000	22
14000	21

课程展示



课程展示

损益报告

1年 > 2年 > 3年 > 4年 >

收入: 637,500.92 EUR 4,120,794.60 EUR 8,886,239.60 EUR 13,332,320.60 EUR

您可以继续查看游戏中的商业报告以及他们的历史经营数据。

真诚邀请您扫描以下二维码给我们反馈这款产品的任何内容，只有4个回。

年份	1年	2年	3年	4年
销售	1/1	2/1	3/1	4/1
销售	1/II	2/II	3/II	4/II
销售	1/III	2/III	3/III	4/III
销售	1/IV	2/IV	3/IV	4/IV
现金	0.00 EUR	0.00 EUR	0.00 EUR	0.00 EUR
其他	0.00 EUR	10,000.00 EUR	20,000.00 EUR	20,000.00 EUR

关闭

公司业绩: 289,761.73 EUR -1,729,403.44 EUR

入住率: 88% 66%

标准间客房: 建造中: 0 营业中: 200

豪华间客房: 建造中: 0 营业中: 365

排行: 位置 1 分数: 4161.46 查看排行榜

您经理: 游戏: bingbing trying2 酒店: Adam 市中心(冬季) 回合: 17

视频目录:

01. 如何建立一个新的酒店
02. 酒店是如何定价的
03. 企业运营成本
04. 损益表详解
05. 现金流量表详解
06. 基础簿记
07. 基础的经济概念
08. 资产负债表详解
09. 什么是企业社会责任
10. 公司建立之初的资产负债表
11. PEST分析
12. SWOT分析简化讲解
13. 社会责任投资决策
14. 市场营销组合 (7Ps)
15. 4C营销理论 vs. 4S营销理论
16. 是什么让经济增长的
17. 市场细分, 市场目标, 市场定位
18. 危机管理准则
19. 酒店管理---酒店的种类

BLUEPRINT CONSPIRACY

Augmented Reality Game (ARG) mobile as a source of information and tasks for the players:



- Available missions,
- Status of the game and current tasks,
- Resource management,
- Rankings and position among other players.

blueprintapp.net

B.L.U. ADMIN1
LVL1 19 AP 0 BP

Tweets Follow

 **Thales** @thales_bpc 22 May
First day of our game is over. Get ready for tomorrow! #rest #chill #goodjob

 **Thales** @thales_bpc 22 May
I can see first players there, nice! Do you have twitter? Contact me @thales_bpc #havefun #yolo

Missions Trophies Stats Leaderboard

Welcome to B.L.U.!

Do you have problems with the security of your data? Are you afraid that someone will steal your blueprints? You don't need to worry anymore - here comes the B.L.U. We have prepared fast and fun tool for recovering your lost data. To boost up that process you will have to solve missions. Upon successful task solving you will receive data packages of your lost blueprints. Try to recover as much as you can and

Missions Trophies Stats Leaderboard

Begin this mission "New restaurant"

Please choose your insurance:

Continue without insurance

MAX BUY: 11AP

MID BUY: 8AP

BASIC BUY: 4AP

Roulette BUY: 4AP

blueprintapp.net

or a success while opening a restaurant aren't high: six out of ten undertakings of this type are not successful and only four out of ten bring as high profits as Mr. N would like to reach. Should Mr. N open a restaurant?

[GLITCH] Go to the cloakroom and say "DONUT"

Insurance 0%

Solve the mission Attempts left: 1

New restaurant 100 BP

Input code

CHECK

Blueprint Localisation Utility

We would like to announce new generation of software for your mobile devices that will help you to find your "blueprint" data. You don't have to stop your work before important meeting. You don't have to worry anymore when comes a U.S. Blueprint Localisation Utility. Retrieve lost data and actions and alert from unsecured events.

By completing mission you will collect Blueprint Alerts which are extremely important when thinking about security of your data. Collecting them will build local firewalls around an archive of your records. To earn a reward you have to reach a threshold of points. More about our partner - more advanced firewalls will gain if your data.

But what if you are not sure about your chances in given mission? Insurance which will protect you from some Blueprint Alerts will help you to get correct answer. That's a perfect solution if you are taking technical task.

Our representative will be on place of SCRM Conference you with every question. Feel free to ask them about our product with B.L.U. Good luck and have fun!



WARM-UP

was my idea to bring you h
reading similar note. That's
package of data from your

row you will a

high qualified specialist
reading this note I will
something about it.

mobile device called
e. Try to secure as

It will be helpful

BLUEPRINT CONSPIRACY

Areas of implementation:

- Acquaintance with building, campus or area,
- Content oriented games,
- Resources management,
- Risk management.



AR/VR/MR

- Growing number of applications
- Falling prices of hardware
- Mobile and cardboard solutions
- Ability to build visually rich immersive environments
- Human-computer interface
- Low-cost simulator solutions
- Hard to transfer soft skills

Case-study – VR crime scene





CICERO VR

Learning program content

The learning program of CICERO VR has been designed with modern digital native in mind:

- ✓ the VR simulation game with 2 modes of work and flexible build for more future scenarios
- ✓ Student instructions
- ✓ Training video material – total amount of 2h distributed through private YouTube channel
- ✓ Interactive mobile application for participants to vote.



Game system

The game has been build with Unity 3D system. The CICERO VR works in two modes:

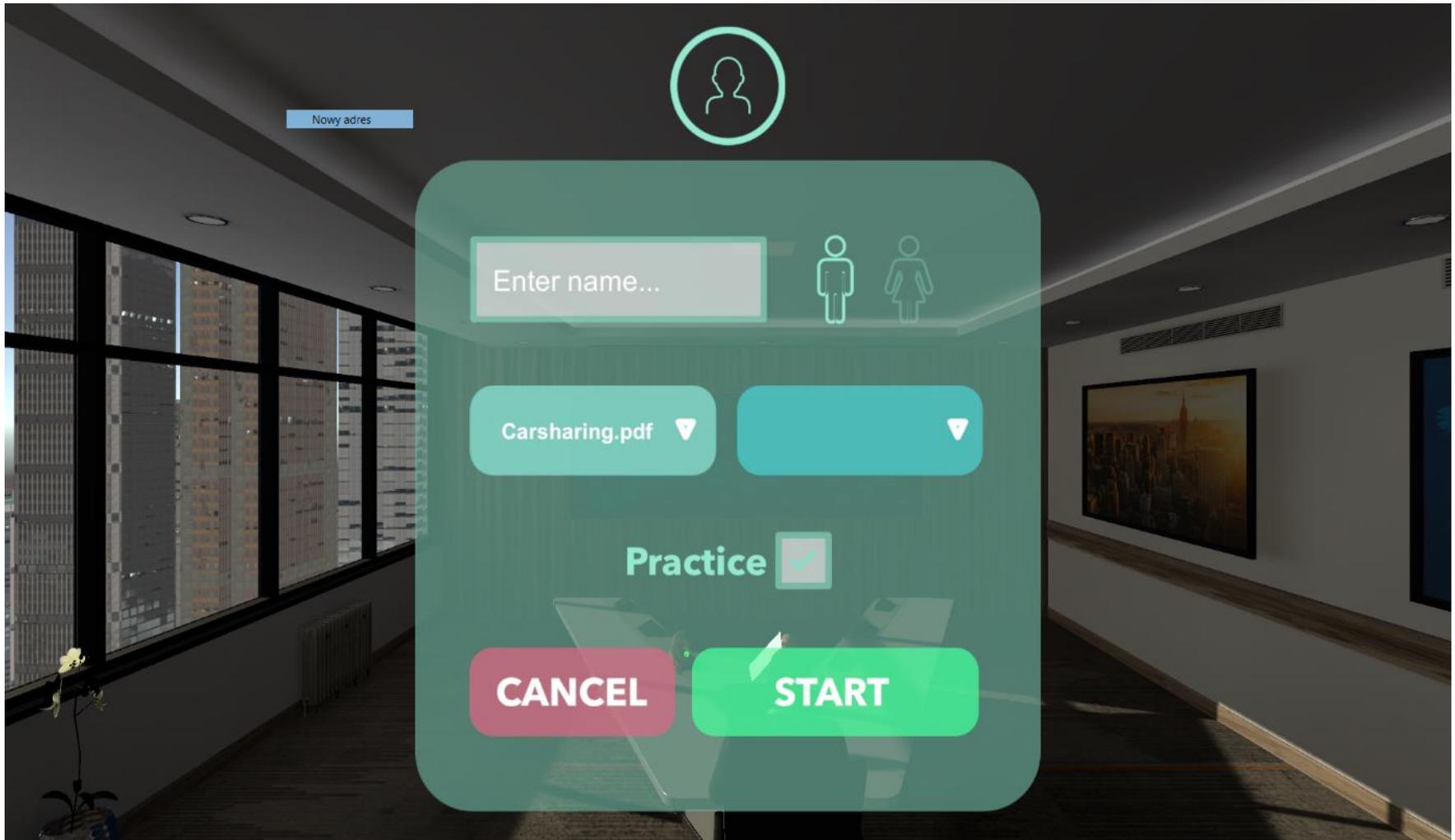
- ✓ Practice mode – in this mode students train with prepared presentation on the selected business problem – with the help of the video material they goal is to mimic the master.
- ✓ Challenge mode – in this mode students prepare their own presentation, upload to the system and present it in the VR environment.

Feedback visualization and measurement system



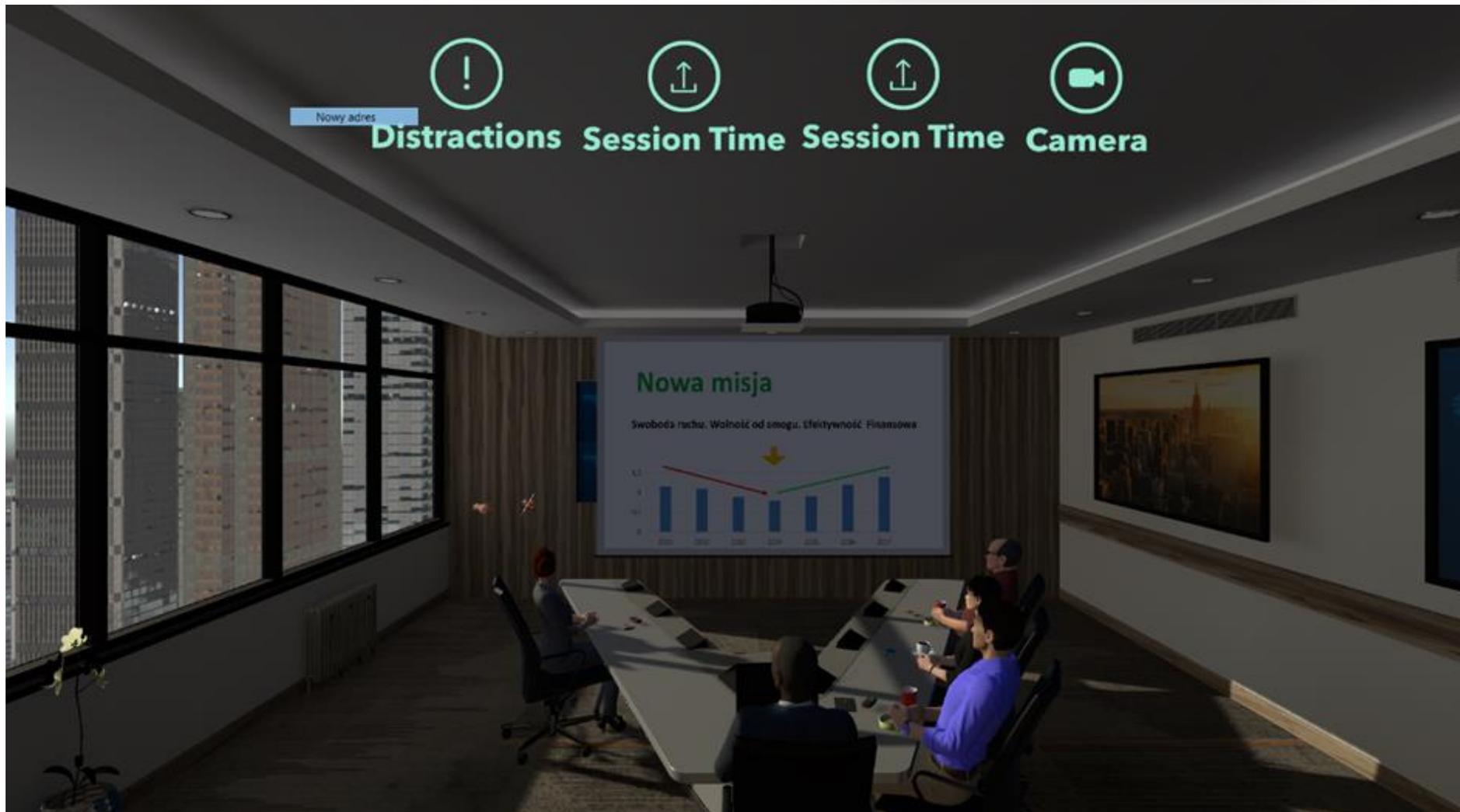
CICERO VR

Player actions	Visual feedback icon	Measurement unit
Sight direction		Seconds per object or avatar;
Speaking speed		Number of words, words per minute, average words per minute;
Speaking sound volume		Voice loudness in decibels per millisecond;
Gestures		A number of hand gestures measured by the distance between HMD and haptic virtual controllers in the player's hands.





CICERO VR





Randomized avatar creation system

System creates up to 5 avatars with gender and racial balance for diversified audience

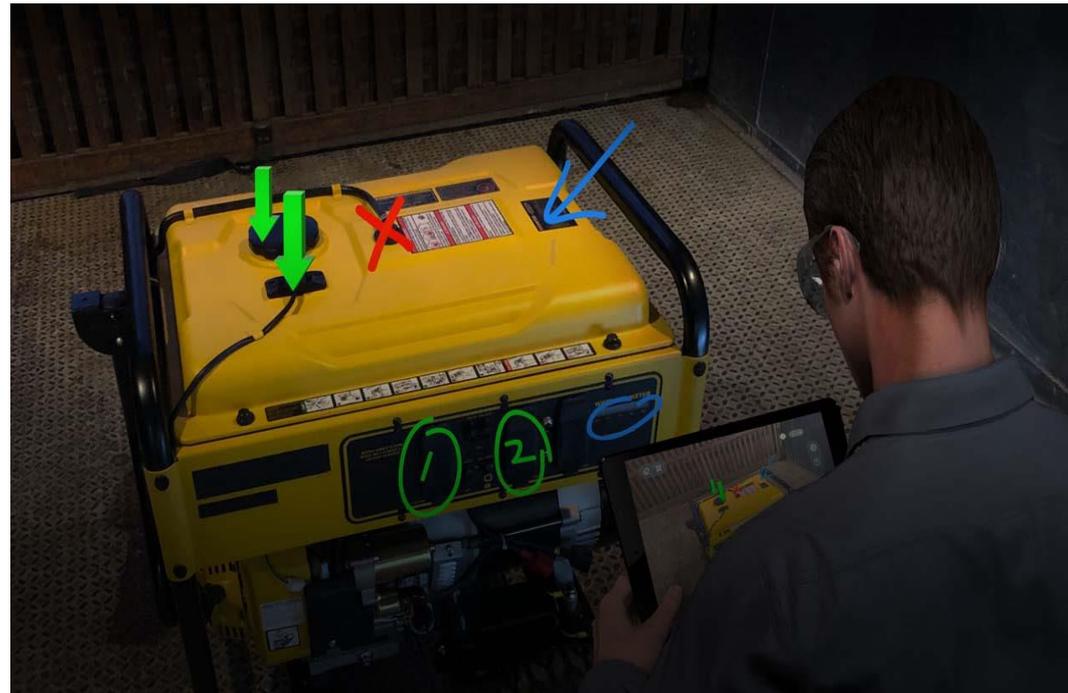


CEEMAN Champion Award 2019 for teaching



AR/VR for training

- Ideal for on-the-job and on-the-site training and onboarding
- Future of job safety training
- The future of technological support
- Sales support systems



Course framework

Course name: Gamification of business and education

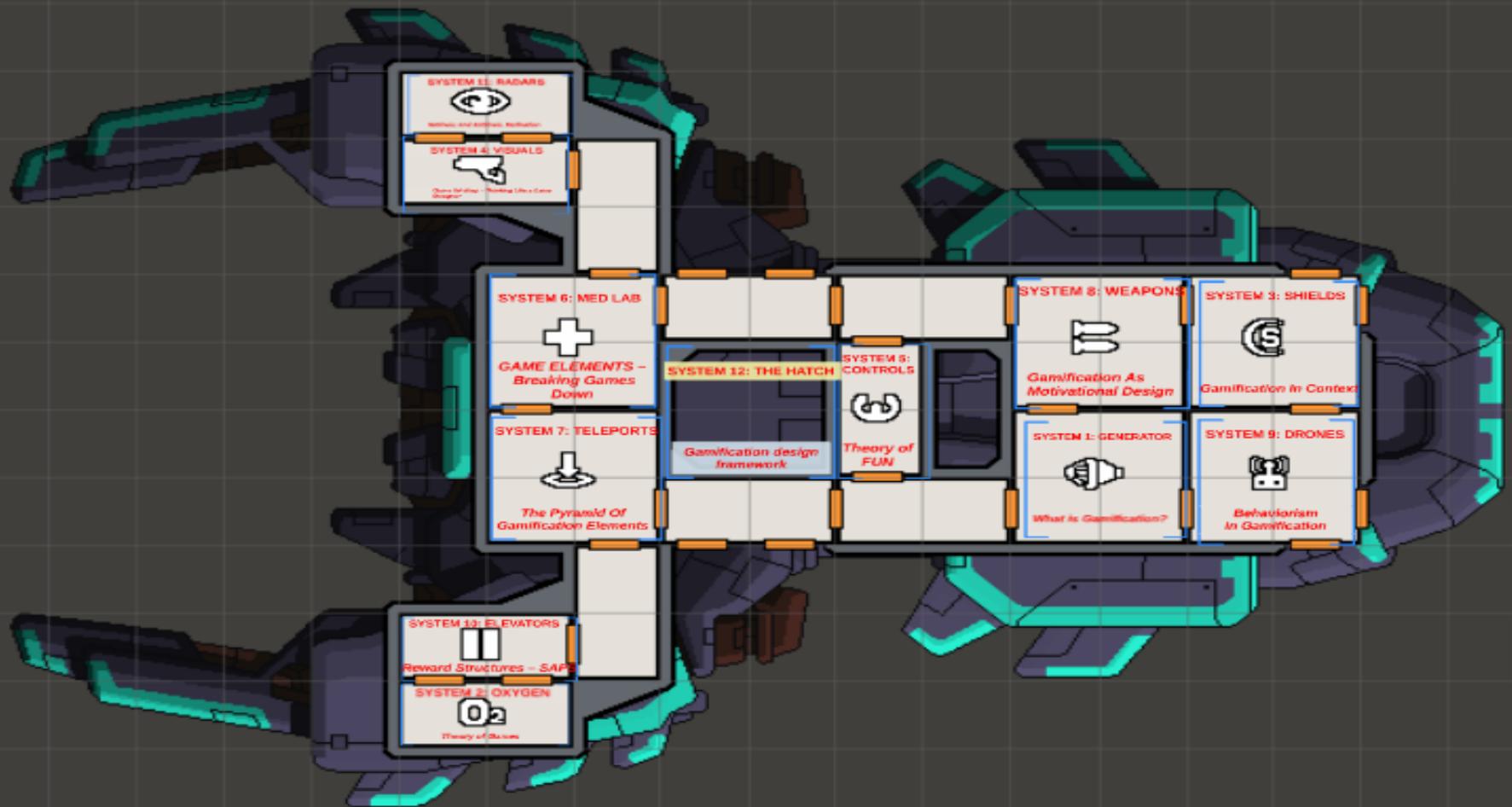
Course narrative:

Space Quest: students as spaceship crew

teacher as a spaceship commander

Main goal: reactivate spaceship generator

SPACE QUEST



WARNING: ALL SYSTEMS OFFLINE

Course framework

The storyline – need to have some epic meaning. Thanks to that the course can be more attractive and student's motivation can be higher just to see how the story ends.



Course framework

Points system: each spaceship system needed some number of energy cells (points) to activate it back.

How to earn points?

- Missions' accomplishment (1 for each system)
- Activity during lecture
- Instant challenges

Course framework

Other game mechanics:

Badges + achievements – recognition



Challenge #1

Name all the social media platforms from the picture above.
Prize: 10 cells + SocialMediaNinja badge

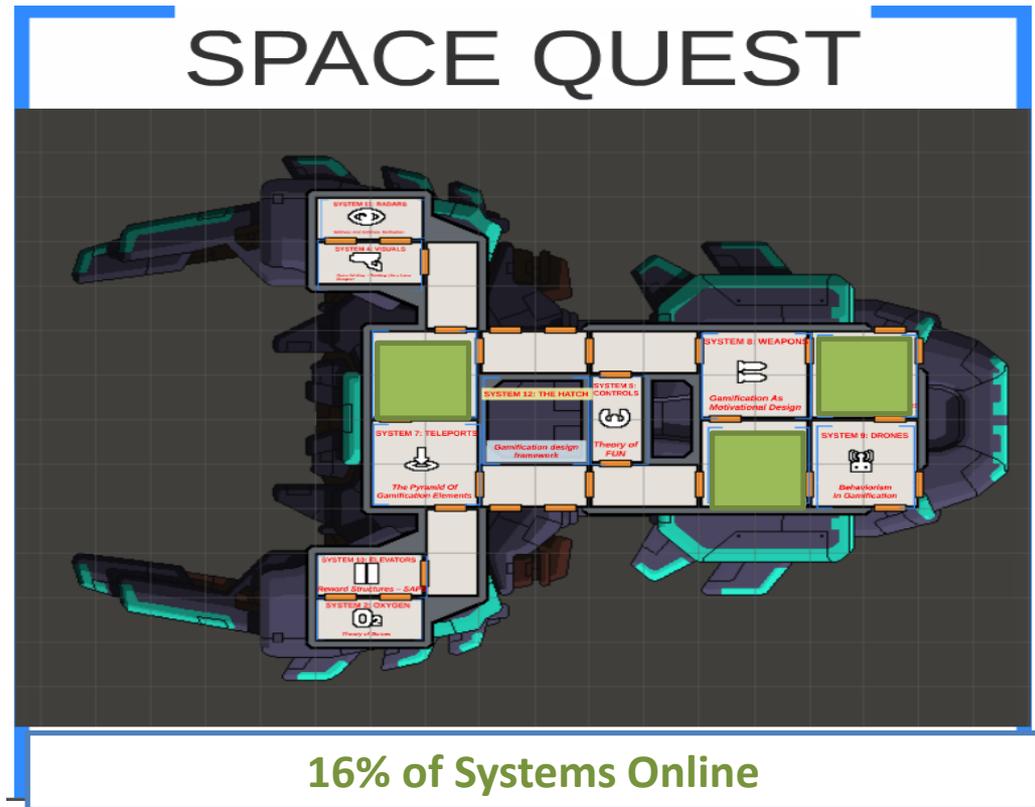


Challenge #2

Why H.G. Wells almost started war of the worlds?
Prize: 10 cells + BookWorm badge

Course framework

Progression:



Course framework

- **Boss fights** – case study, final project
 - Worth a lot of points
 - Should be challenging combination of knowledge and/or skills of student



Course framework

- **Short missions** – focuses students' attention on certain knowledge/activity

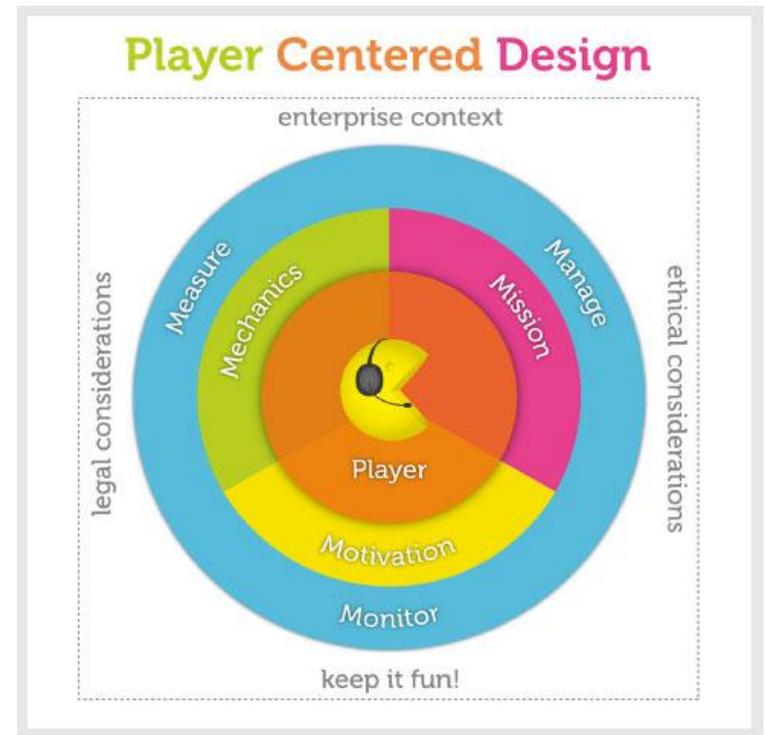
Mission 3.

Pick-up 3 favorite games and analyze their content. Provide findings on different mechanisms you found in them, group them by different outcomes and features in the table. After having a table color, the elements that are unique for this game with one color and with different color mark elements that are the same for more than one game you picked.

Upon successful completion of this mission, you will be rewarded with 10 energy cells. Colored table must be provided in order to finish this mission.

Gamification take-aways

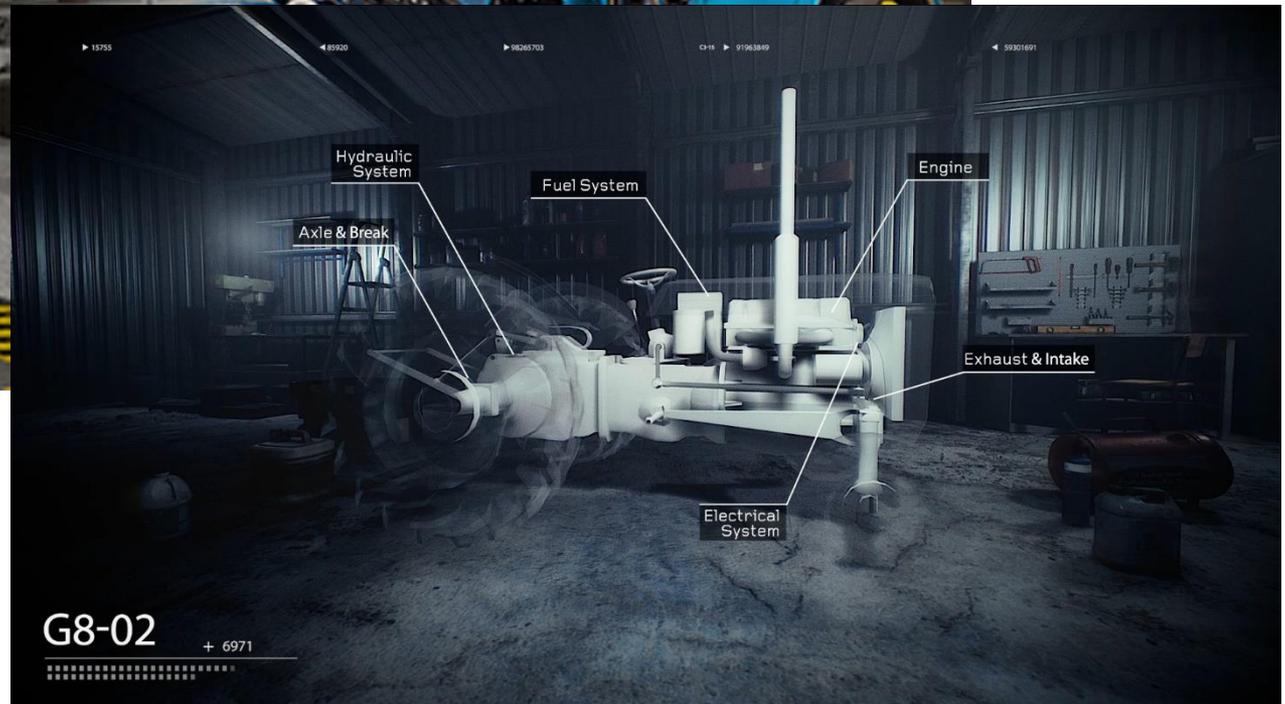
- Player-centric design
- You can start with simple tools
- Stimulating positive behavior
- Gamification could be the answer for millennials:
 - Short attention span
 - Instant feedback
 - Video games natives



Video games



Video games



Video games

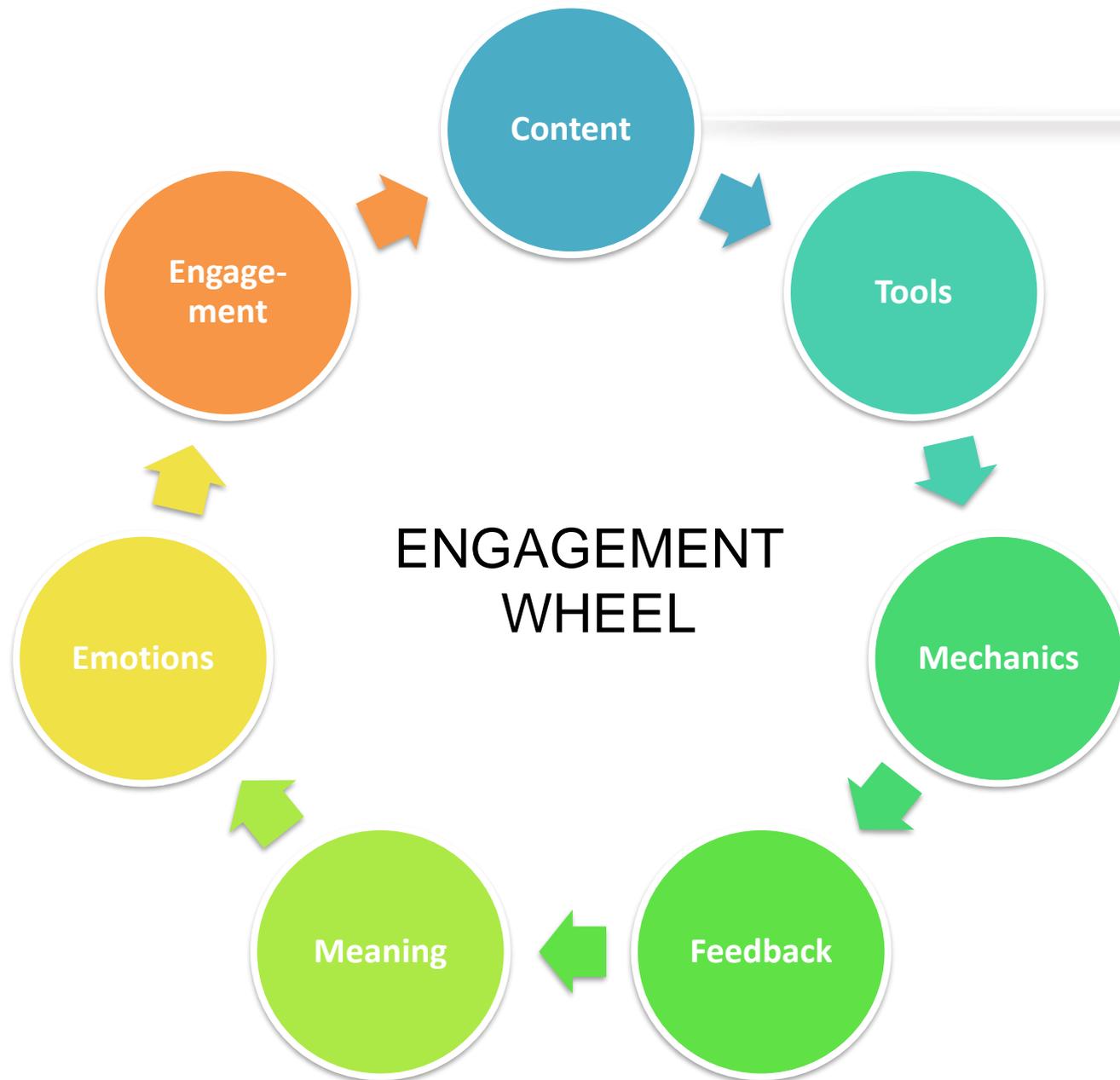


Video games



KLABATER
PUBLISHING







Thank you for listening !!!

wardaszko@kozminski.edu.pl



PRESS ANY KEY TO PLAY