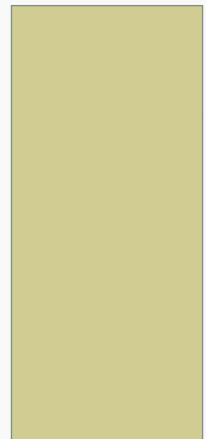


Serious games for e-health care

Voravika Wattanasoontorn,
Ruben Jesus Garcia Hernandez and
Mateu Sbert

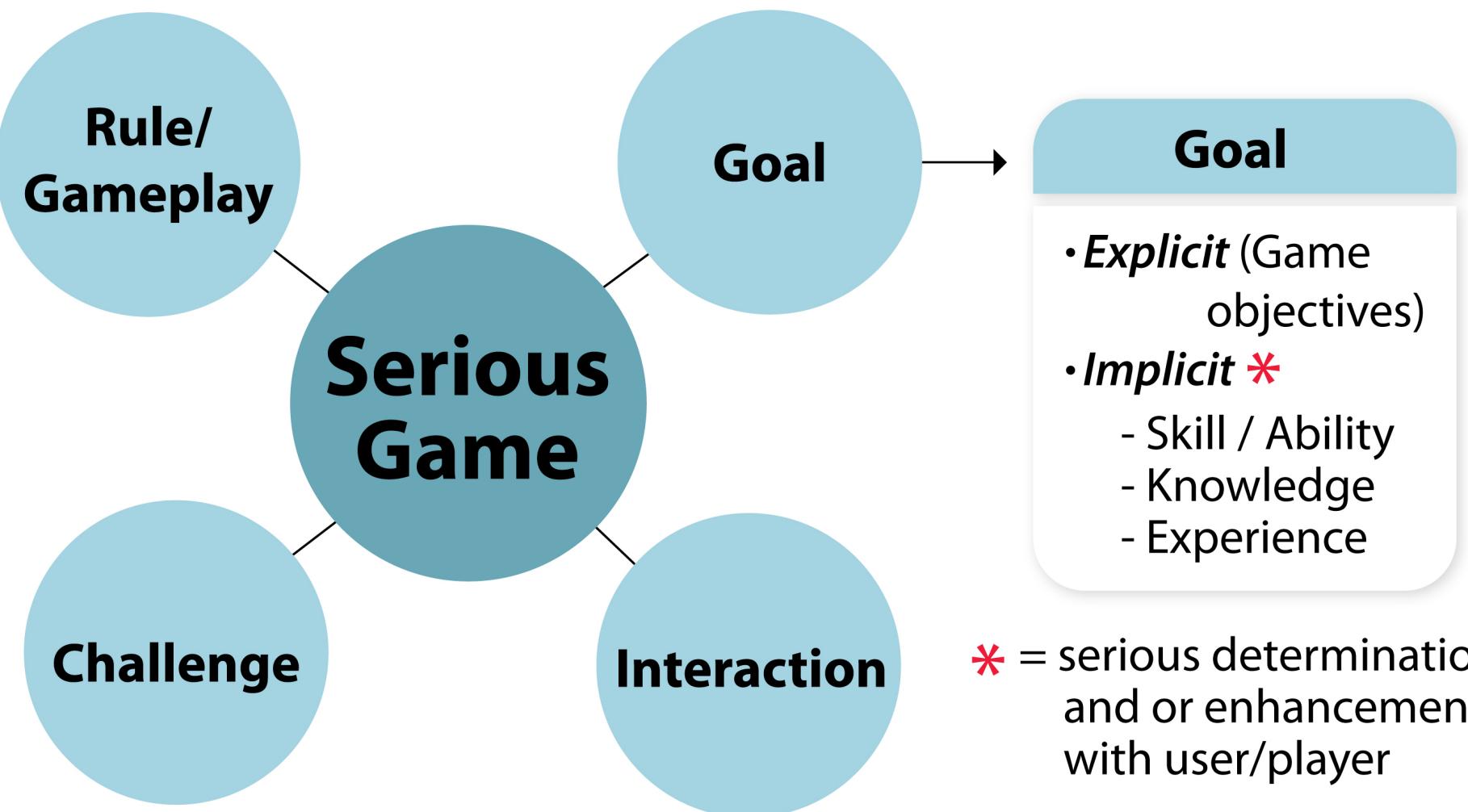
*The Institute of Informatics and Applications,
University of Girona, Spain*



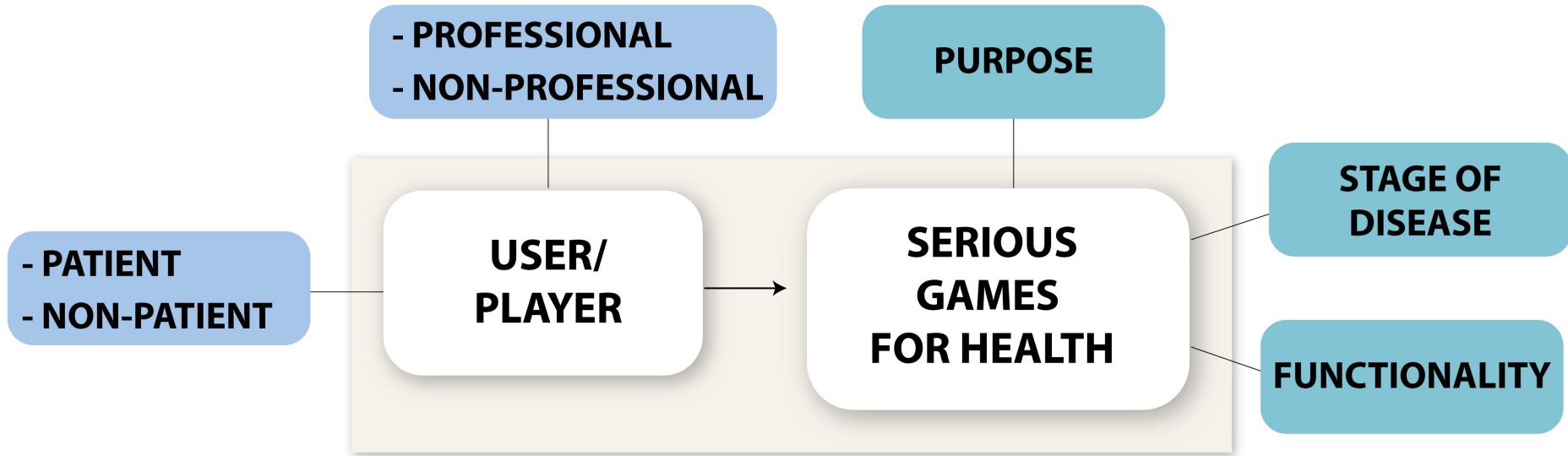
INTRODUCTION

- Serious games
- Importance of health
- The use of serious games to promote health

CHARACTER OF SERIOUS GAMES



CLASSIFICATION OF SURVEYED SERIOUS GAMES FOR HEALTH



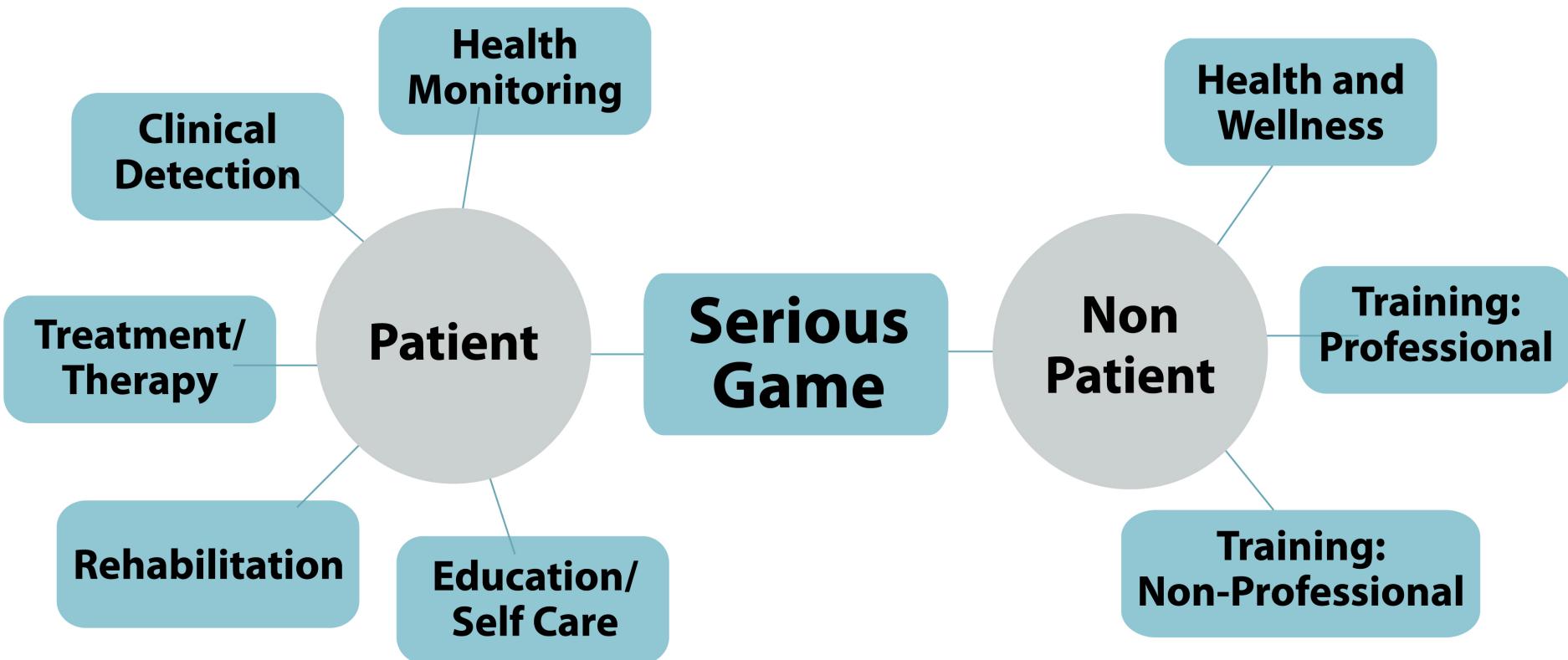
CLASSIFICATION BY MAIN PURPOSE

1. The main purpose is entertainment
2. The main goal is Health
3. Serious use in health and medical purpose

CLASSIFICATION BY STAGE OF DISEASE

| Stage of disease | Serious Game purpose |
|---------------------------|------------------------------------|
| Stage of Susceptibility | Monitor |
| Presymtomatic Stage | Detect |
| Stage of clinical disease | Treatment, Therapy |
| Stage of disability | Rehabilitation, Track and Trace |

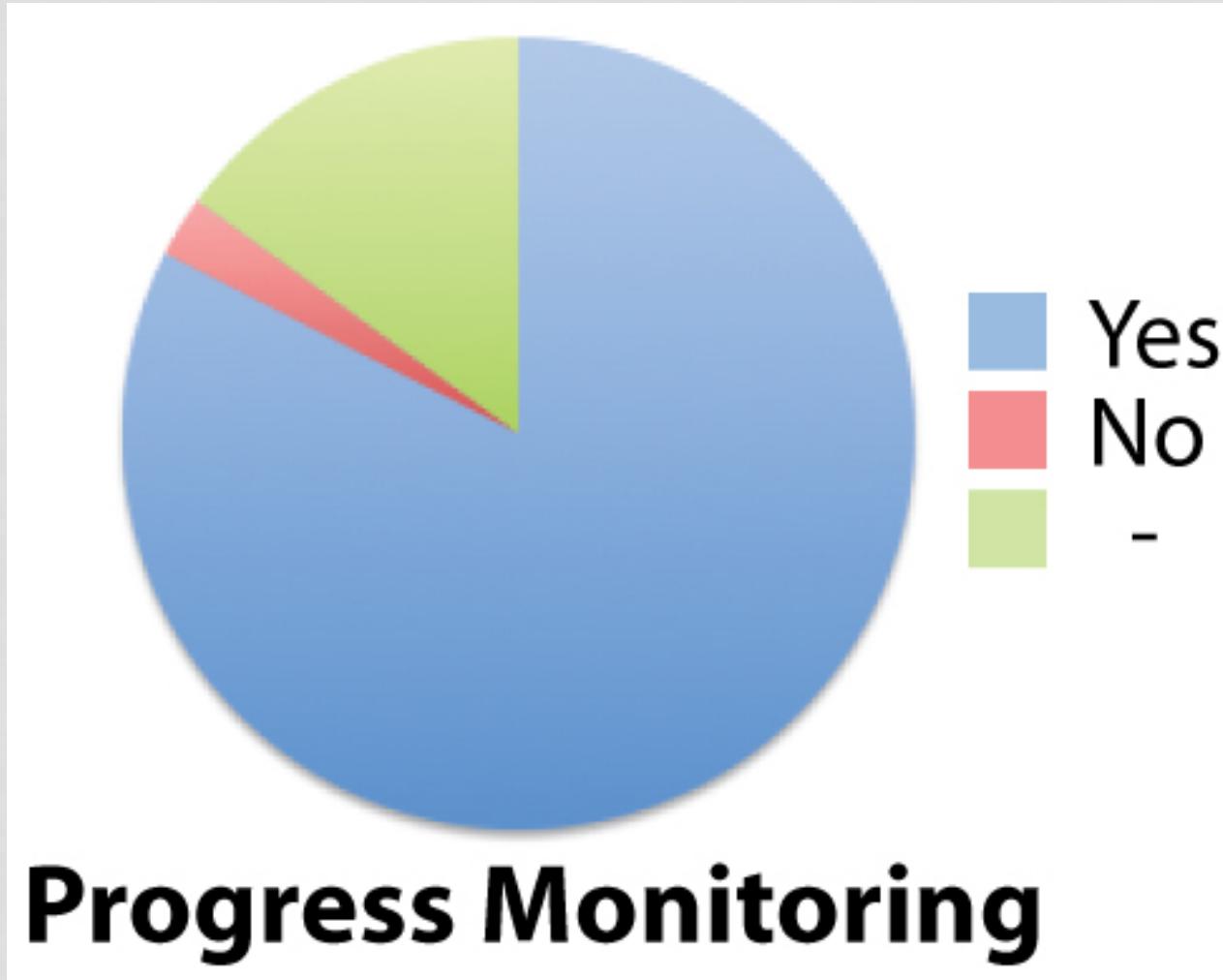
CLASSIFICATION BY PLAYER (PATIENT/NON-PATIENT)



CLASSIFICATION BY FUNCTIONALITY

- 1. Application area
- 2. Interaction Technology
- 3. Game Interface
- 4. Number of Players
- 5. Game Genre
- 6. Adaptability
- 7. Performance Feedback
- 8. Progress monitoring
- 9. Game portability
- 10. Game Engine
- 11. Platform
- 12. Health Objective
- 13. Connectivity

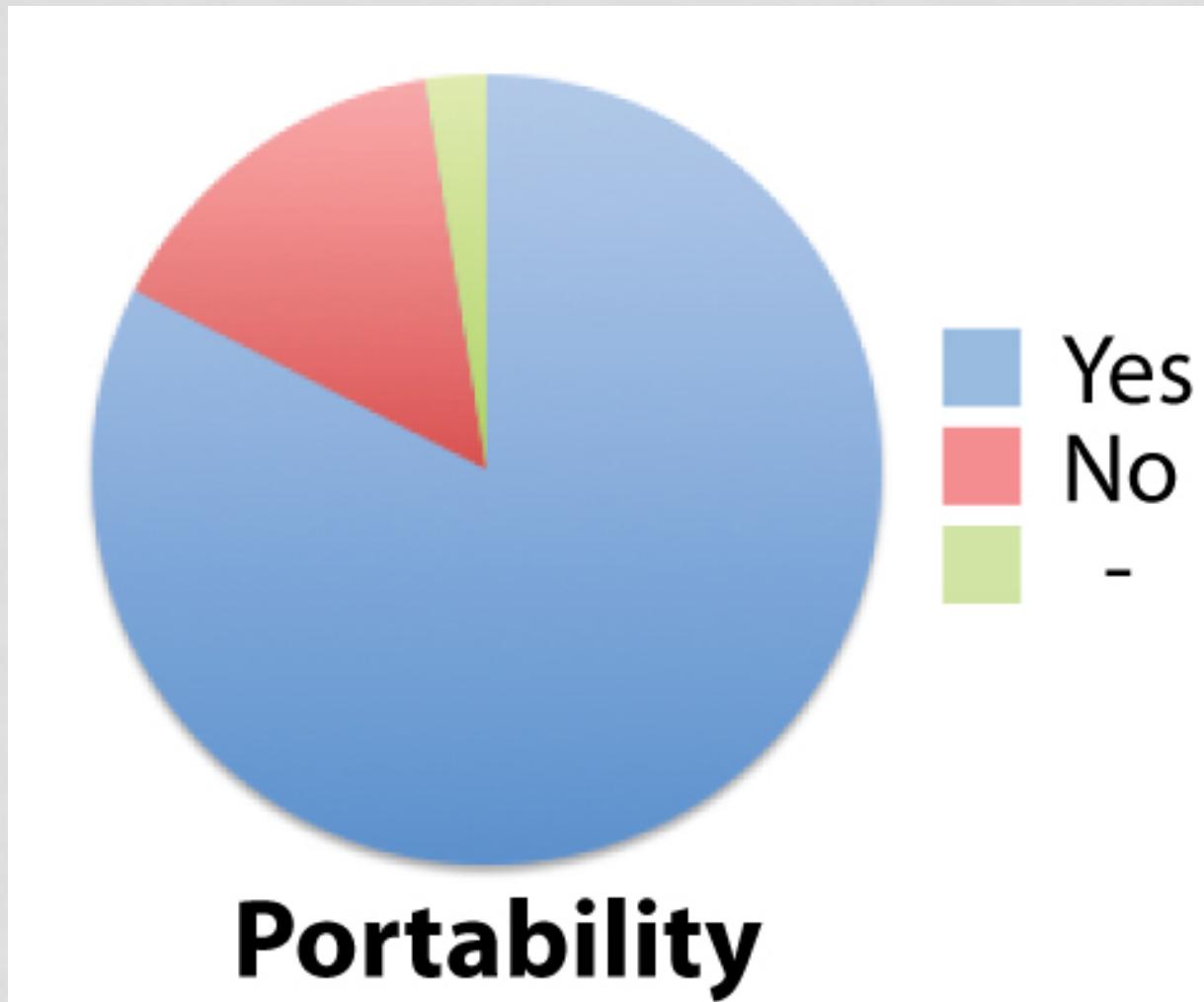
BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



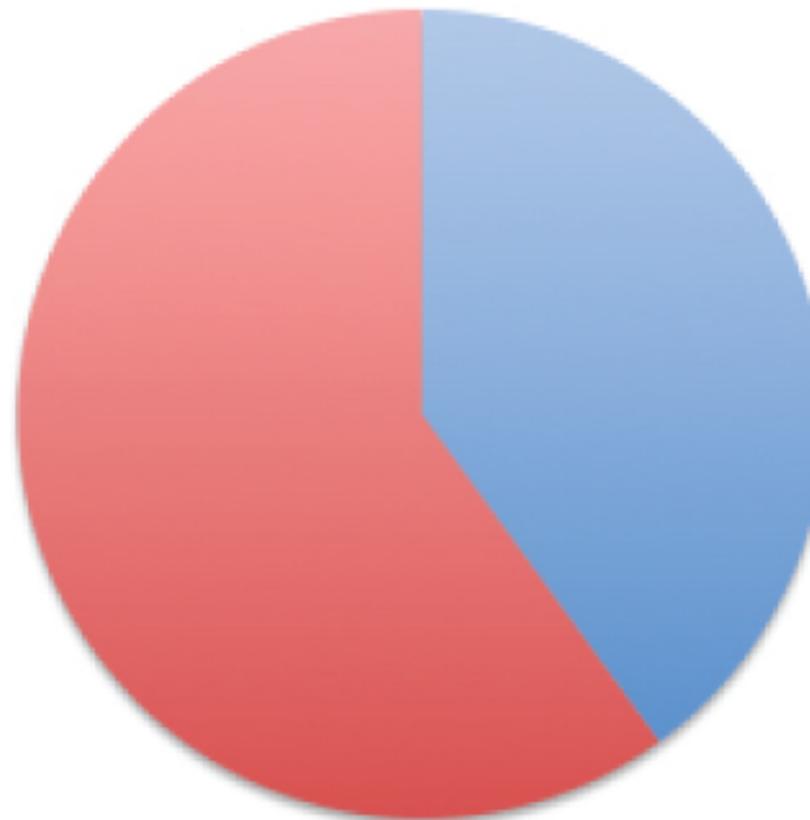
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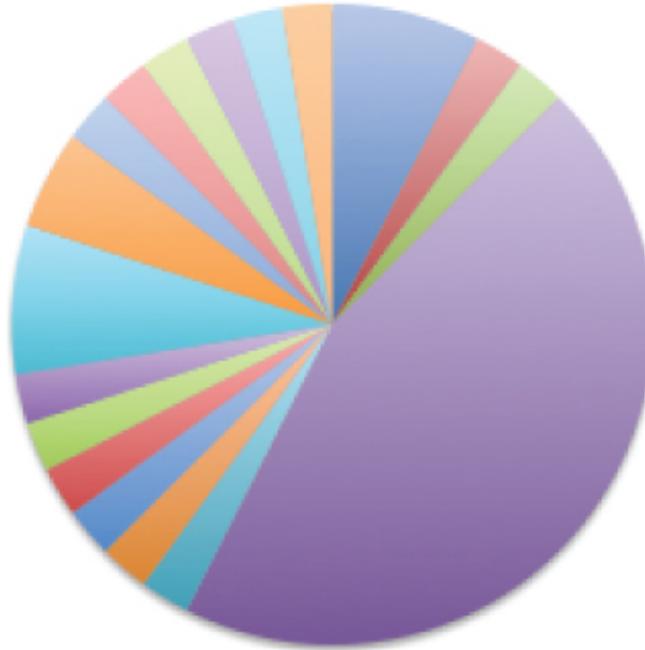
BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



■ Motor
■ Cognitive

Application Area

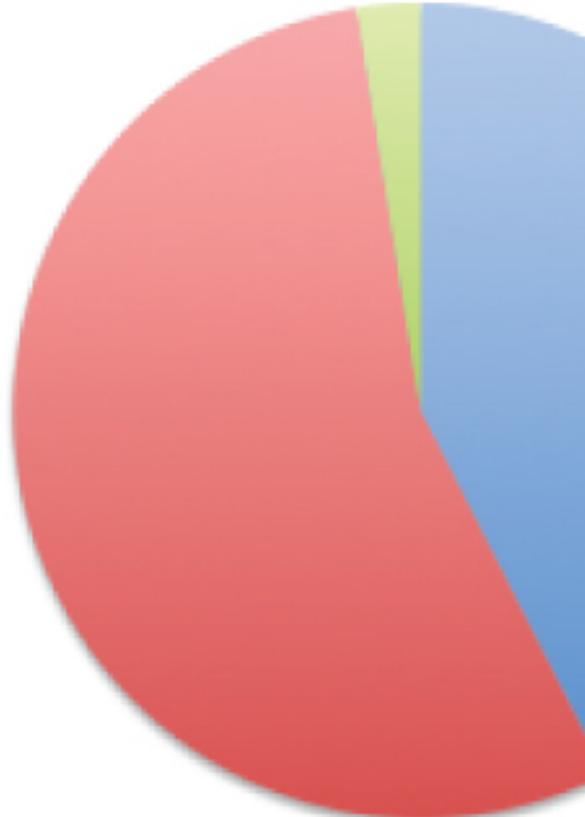
BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



Interaction Technology

- Wiimote
- Wireless sensor network
- Electrode
- Mouse
- EEG
- Wii fit
- Novint
- Kinect
- VR
- HMDs

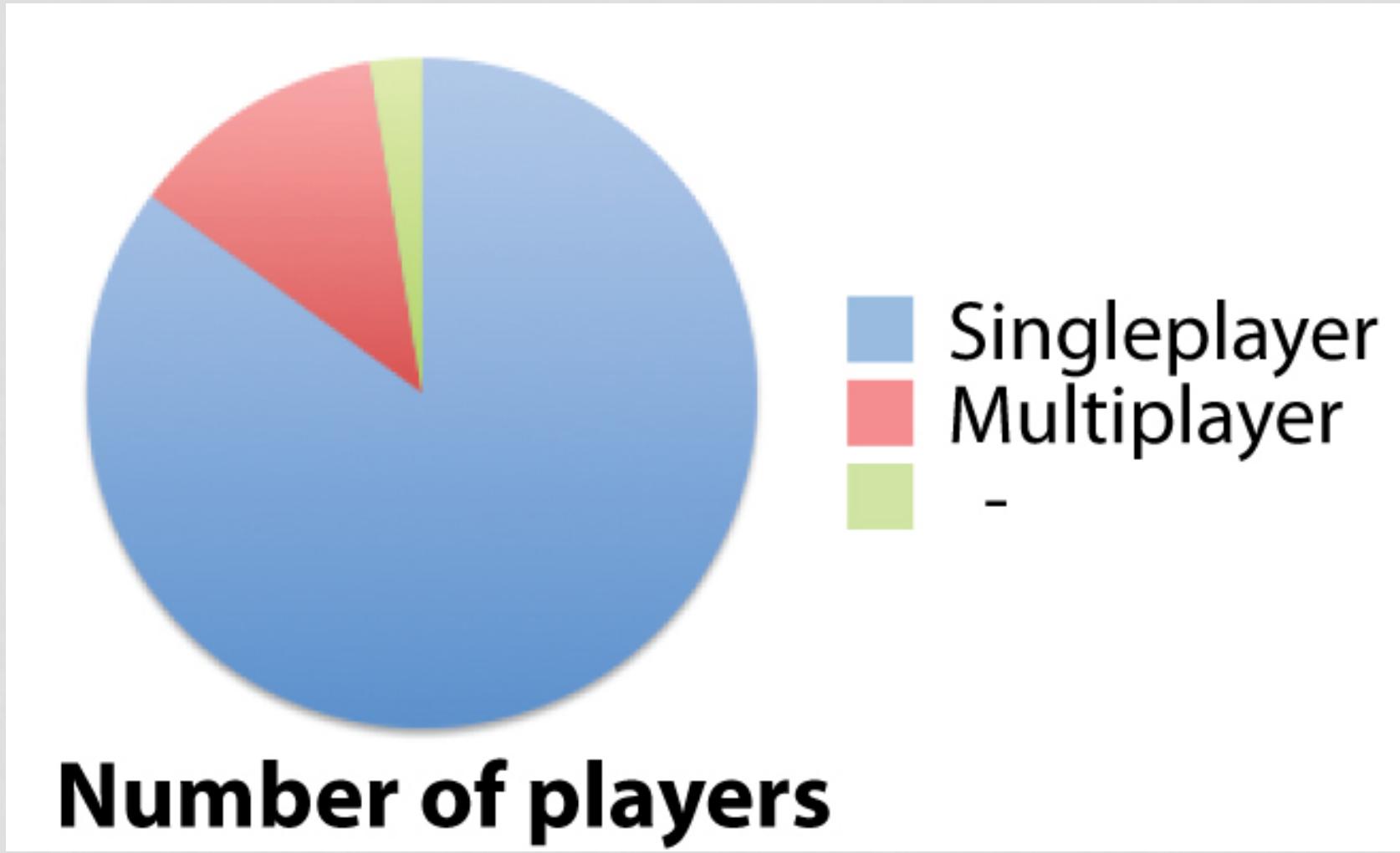
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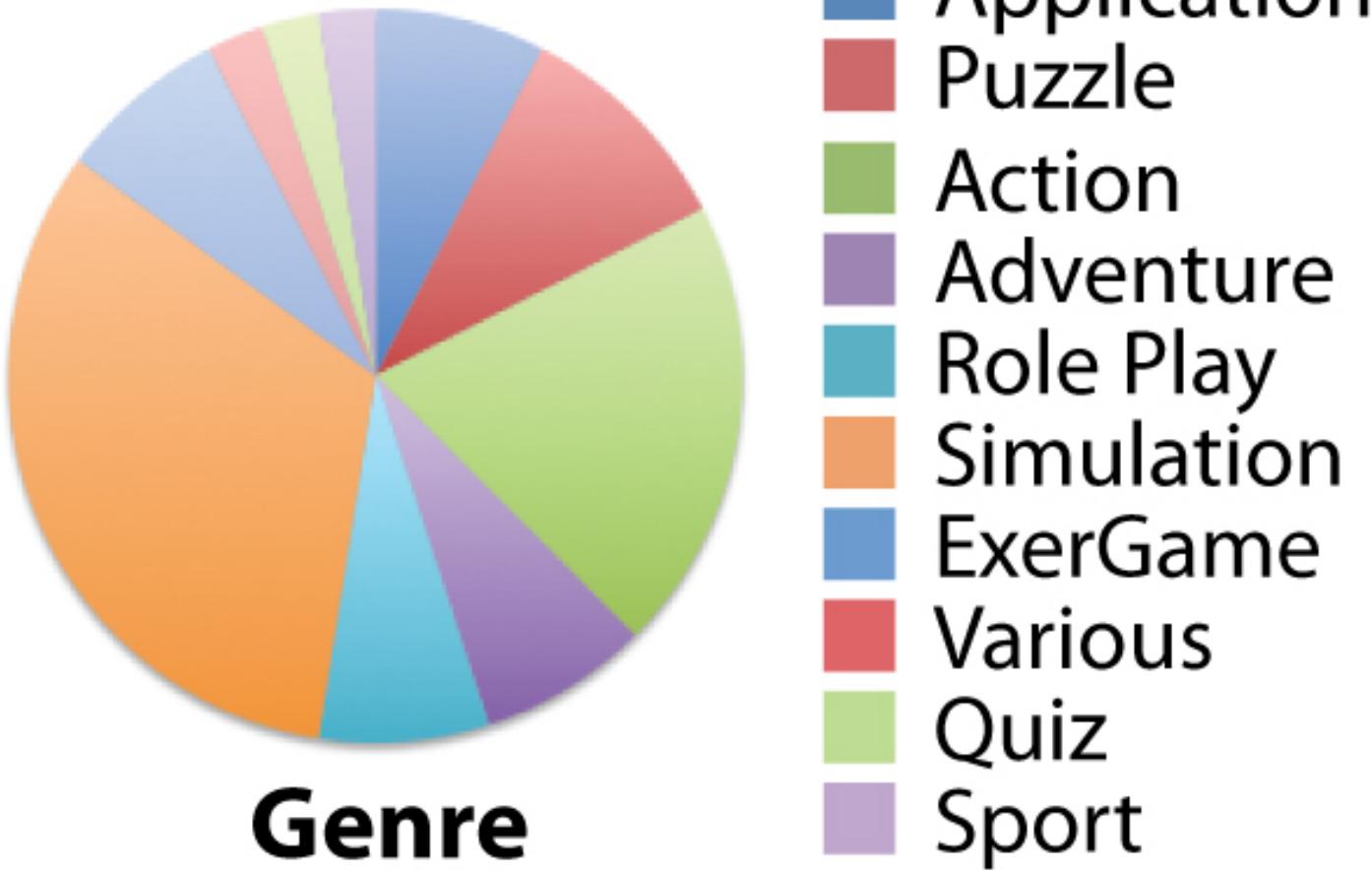
2D
3D
2D/3D

Interface

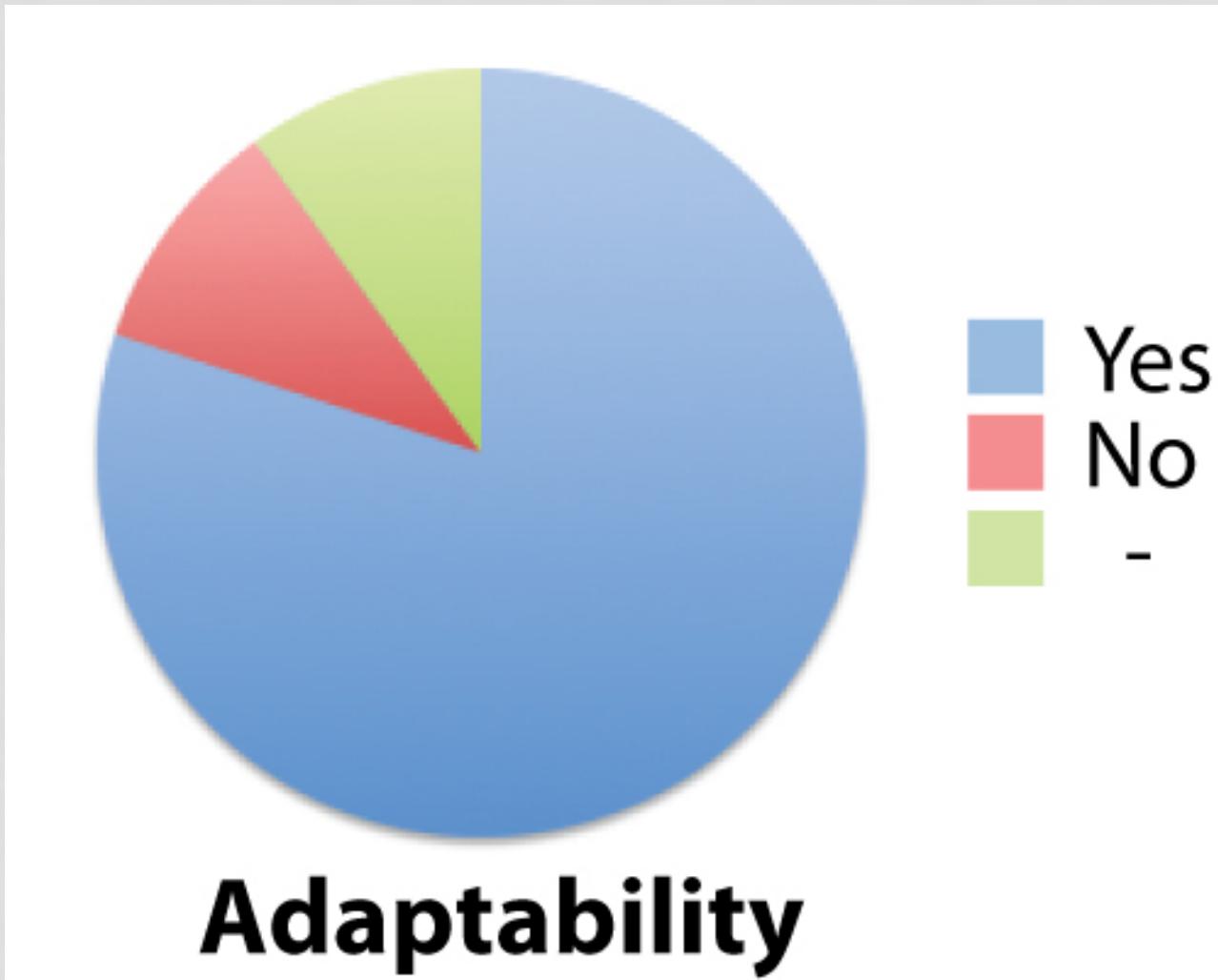
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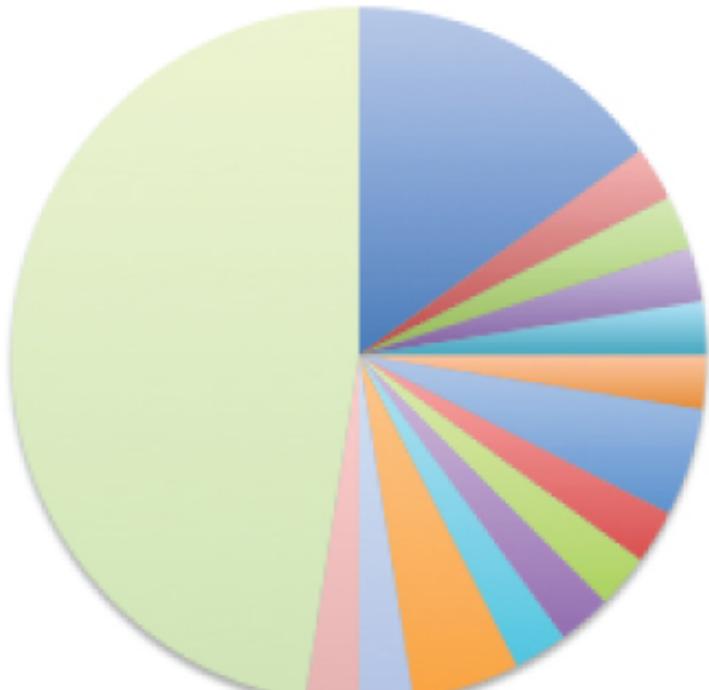
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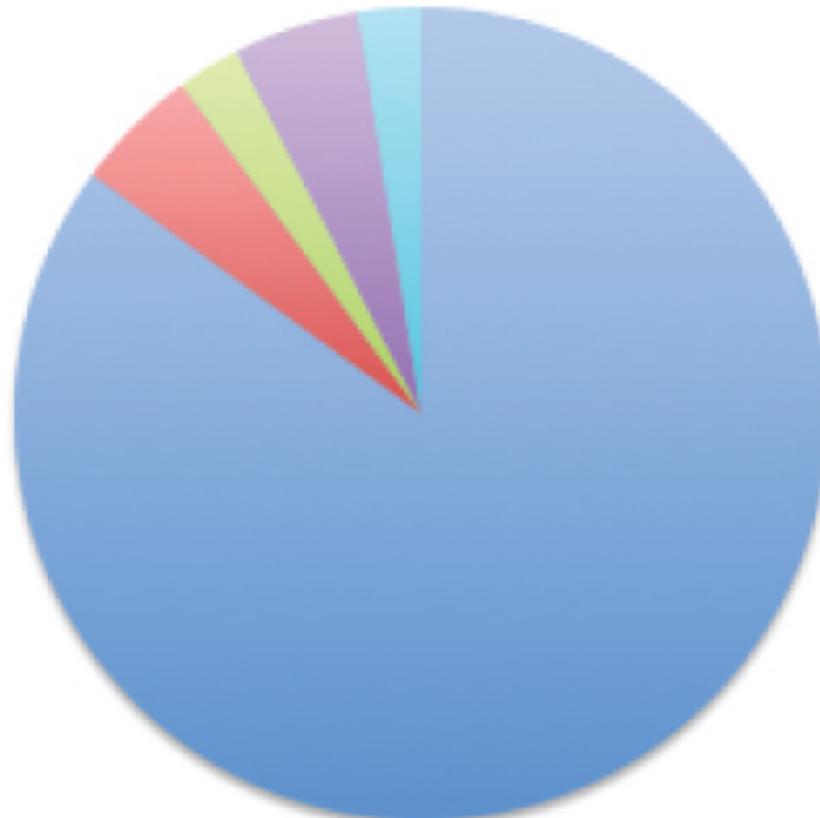
BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



Engine

- Flash
- SDK
- Unity3D
- XNA
- Unreal
- Torque
- In house
-
- Palib
- Director
- Orge
- NeoAxis
- BreakAway
- Second life
- smac

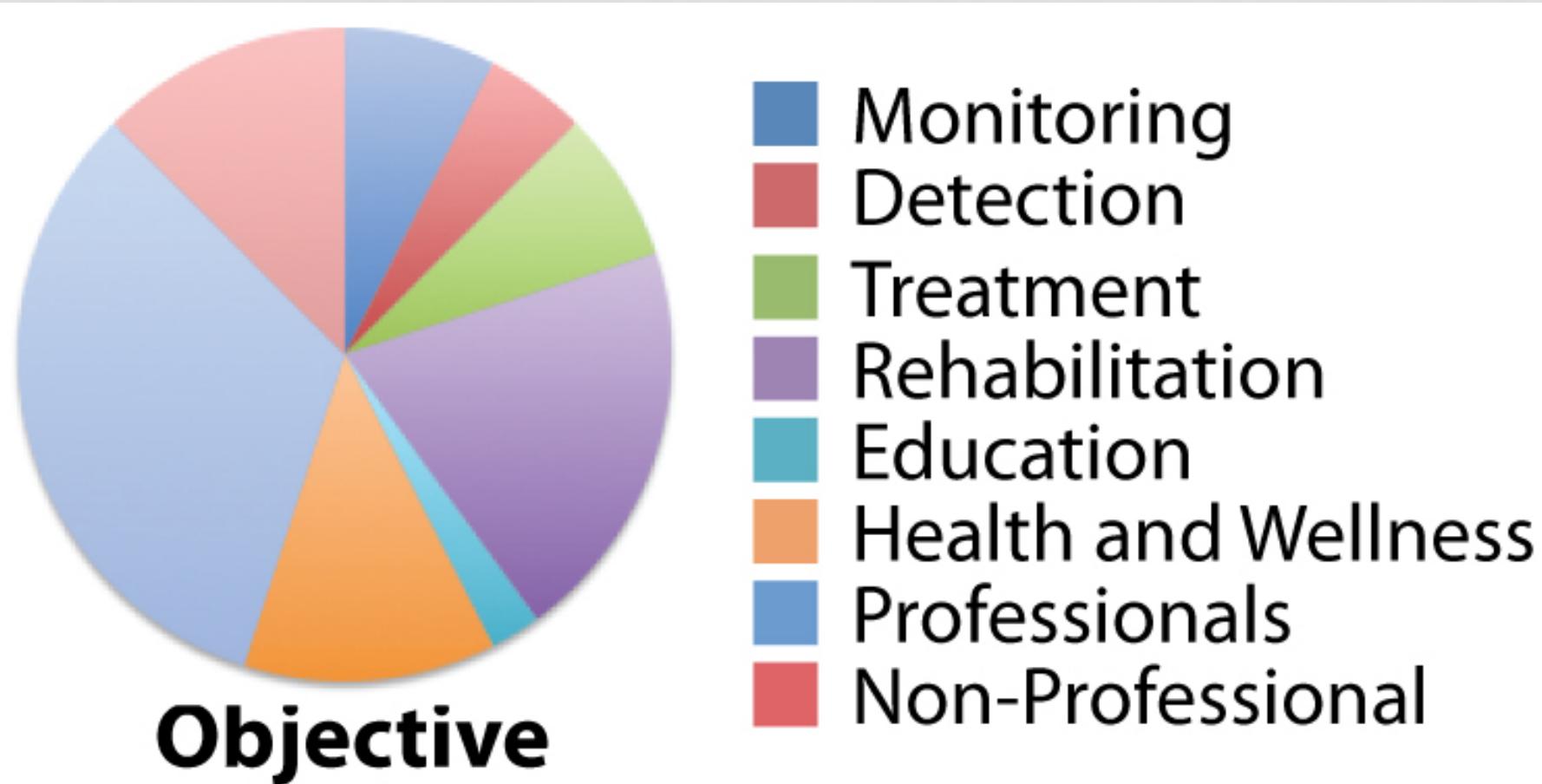
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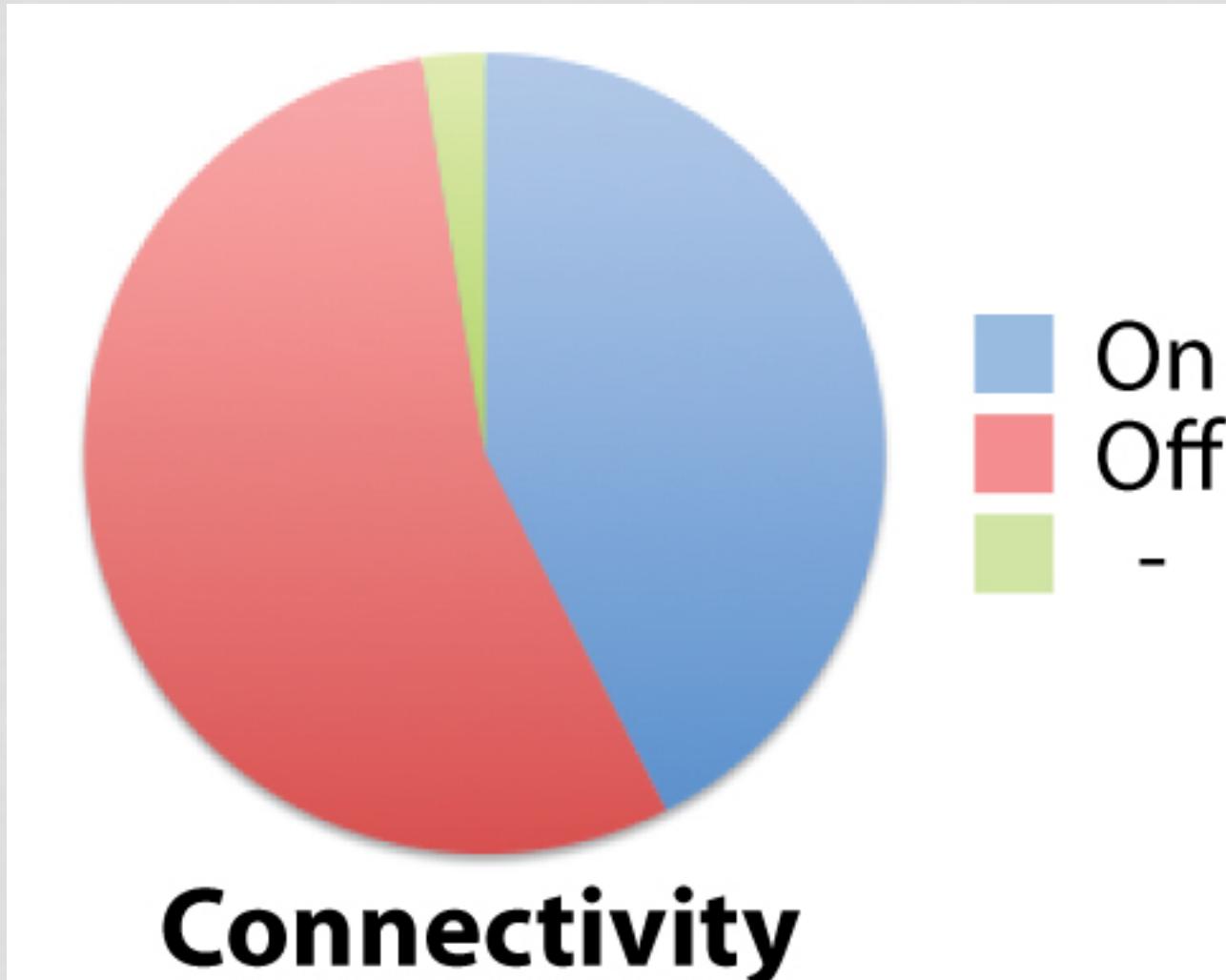
Platform

- PC
- Nintendo Wii
- Nintendo DS
- Mobile
- IPad

BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



BREAKDOWN OF THE VALUES OF EACH CHARACTERISTIC OF SERIOUS GAMES FOR HEALTH



CONCLUSION

The typical game can be summarized as a portable PC game programmed in Flash, using mouse interaction and including progress monitoring, performance feedback and adaptability, although the variability of games is quite large in many aspects.

THANK YOU

RUBEN JESUS GARCIA HERNANDEZ