



The nuclear industry reaching out to the i-Generation

ETRAP conference 2021



PUBLIC



INTERNAL



RESTRICTED



CONFIDENTIAL

The nuclear industry reaching out to the i-Generation

1. Background

- Why
- How

2. *Radiomon* concept

- What

3. Challenges

4. Roadmap

- Development
- Budget
- Organisation

5. After *Radiomon*

- Concept flexibility and expansion



What am I going to be when I grow up?



And where is nuclear?

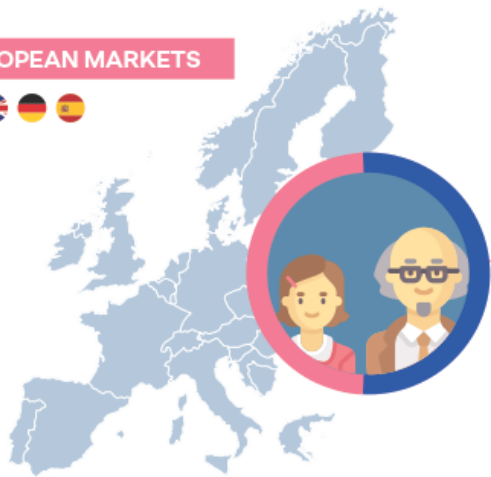




How to make nuclear physics attractive for a larger population?

Videogame market size

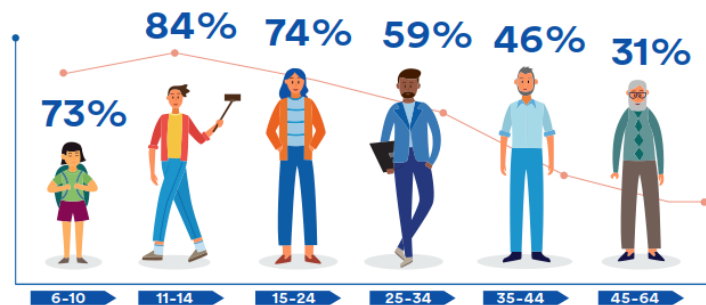
EUROPEAN MARKETS



51%
of the population
aged 6-64
play video games

SHARE OF VIDEO GAME PLAYERS AMONG THE WHOLE POPULATION IN KEY

EUROPEAN MARKETS BY AGE GROUP



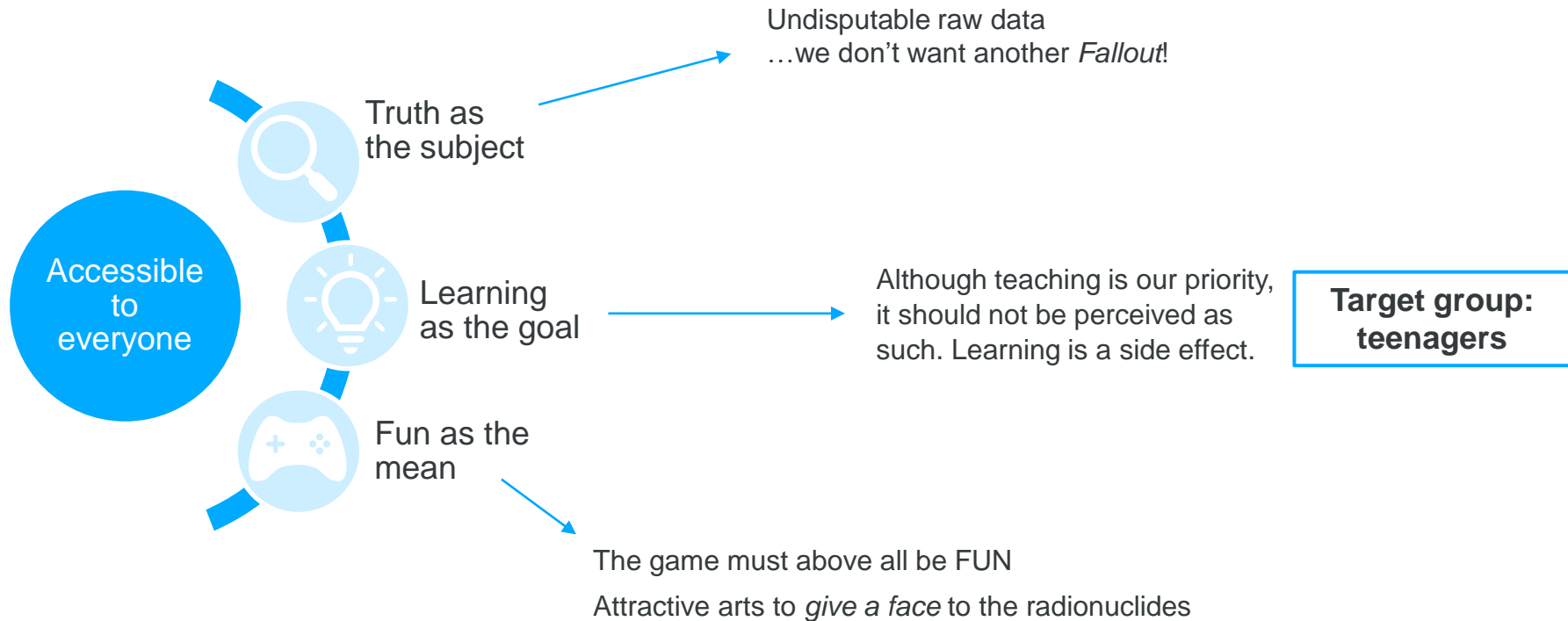
Women represent
51%
of all mobile and
tablet video game
players



Girls who play video games are
3x more likely
to study
for a STEM degree
than girls who don't play
video games*



The idea





Radiomon concept



Pokémon: the proof that humans are collectors



Froakie



Frogadier



Greninja



Fennekin



Braixen



Delphox



Chespin



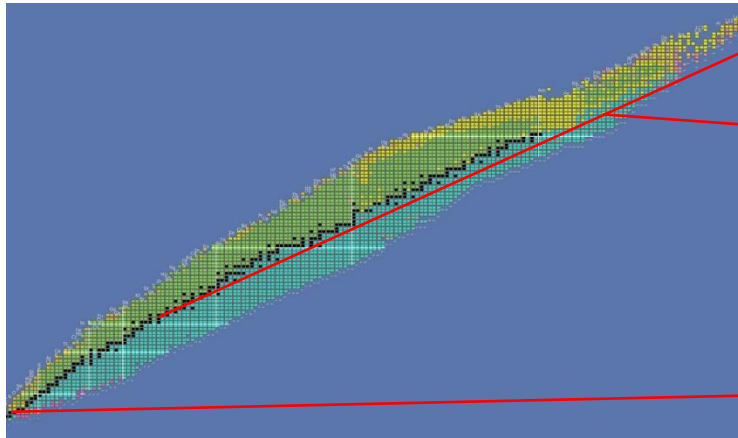
Quilladin



Chesnaught

Radiomon : a fun game to collect knowledge

- Nature gives us the gamefield!
 - >100 chemical elements
 - >1000 radionuclides



Cobalt
59



Cobalt
60



Cobalt
61



Uranium 235



Uranium 233



Uranium 238



Hydrogen



Deuterium




Tritium

Truth as the subject

- Nuclear properties

- State: stable or unstable
- Neutron capture and fission cross-section,
- Decay properties: time, type, energy

Boron-10




stable

XS: 3800 barn!

used as a neutron absorber in NPPs

Beryllium-10



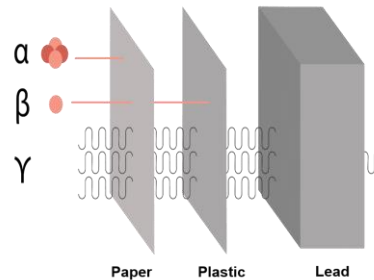
Beta decay

0,2 MeV

1M Years

XS - 0.001 barn

- Radiation shielding



- Collection of Radiomons from real-life objects or technologies

Fun as the mean

- Lots of elements that behave differently to **collect!**
- Activation of the Radiomons occur by neutron capture – that's **hitting a target** with a ball...
- Battle **strategy**:
 - choose the best Radiomon to transmute,
 - choose the right shield to place
- **Visuals** – skilled game developers are needed!
 - Cool effects representing decay
- **Storytelling** and progression mechanisms



Challenges



Main challenges for *Radiomon*

Market competition:

- Implementation in a freemium app – but most of them are!
 - Many developers – the best are difficult to reach
- High quality edutainment product

Reality simplifications:

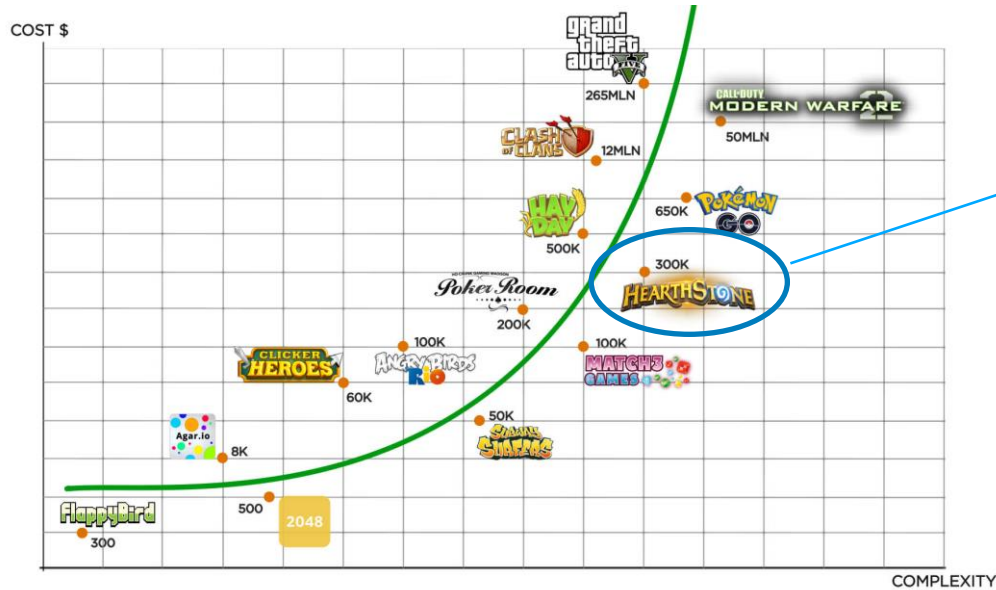
- Necessary for playability reasons – educational material to compensate

Investments:

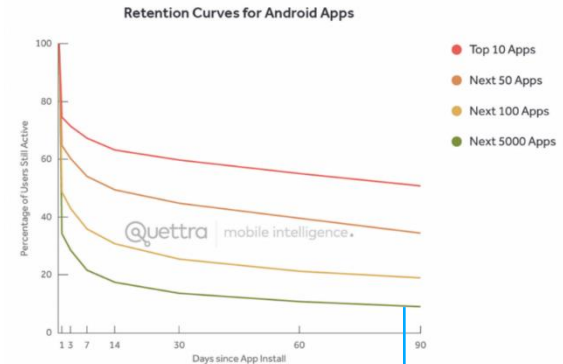
- Estimated budget for a prototype is around 15k€, while the cost before launch will rise up to 300k€
- Updates needed to increase shelf-life (estimated otherwise below 1 year)

Development cost

300 k€ was estimated by few developers



10M+ downloads on Play store
100M+ players community



Detailed business case after discussion with developers

10% are susceptible to make in-app purchases



Roadmap



Roadmap

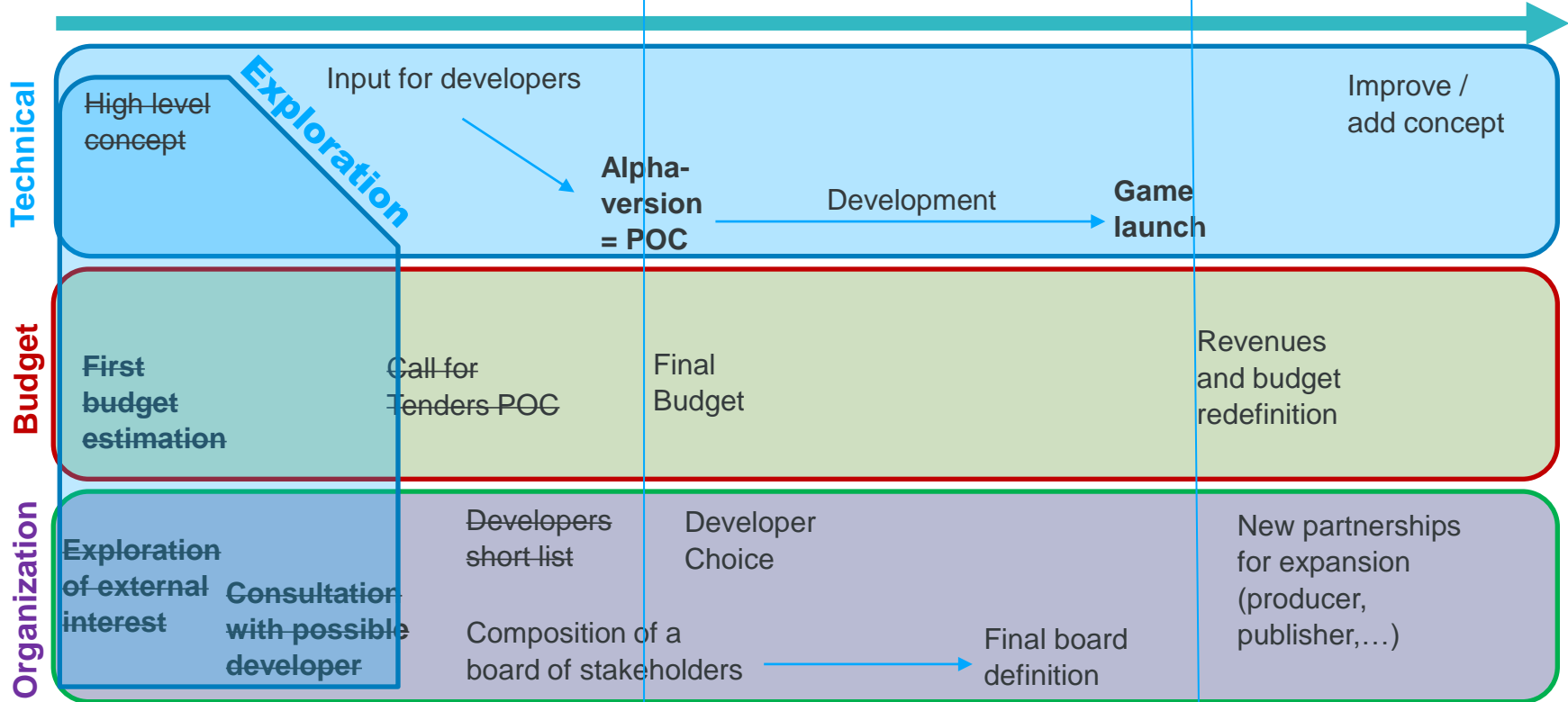
Phase Φ1 = Definition

1/10/2020 – 30/6/2021
Budget – 10-15 k€

Phase Φ2 = Acceleration

Budget – around 300k€ + marketing

Phase Φ3 = Scale-up





After Radiomon



Flexible concept

New features / new concepts

Capitalize on the franchise
to increase visibility

Inclusion in other successful franchises

**Experience for
gamification**





**When radiation
gets fun
future gets
radiant**