

Proposal: innovative Serious Game for skills acquisition and evaluation in Avionic

Success Factors For Serious Games

Serious games are more than just fun engagement for the players, they are successful learning tools :

- Adaptativity: by creating multiple choices to real airports situations
- Realism: the scenarios in airport are engaging and worthwhile
- Feedback: hearing how they did, or what they struggled with, will the need to focus on their weaknesses
- Interaction: the learner will stay vigilant throughout the entire game

Component of a serious game

Each serious game has five main components:

- **rules (gameplay)**
- **challenge**
- **Interaction**
- **goal**
 - explicit: game objectives
 - implicit: skills, knowledge, experiences



Ref: Serious Games for e-Health Care (2012), Asian-European Workshop on Serious Game and Simulation, 25th Annual Conference on Computer Animation and Social Agents (CASA 2012). Voravika Wattanasoontorn, Rubén Jesús, Mateu Sbert



Illustration: the case of luggage management/handling → event investigation

- 2 solutions:
 - Full web version
 - Hybrid version with papermap and avatars but QR codes

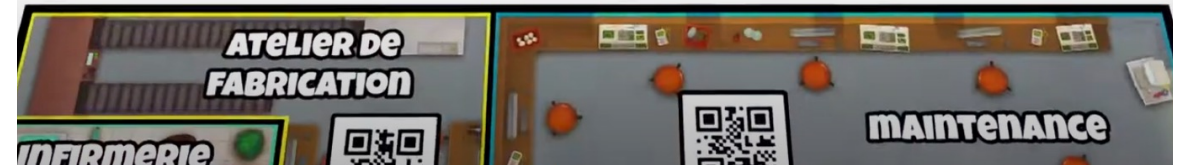
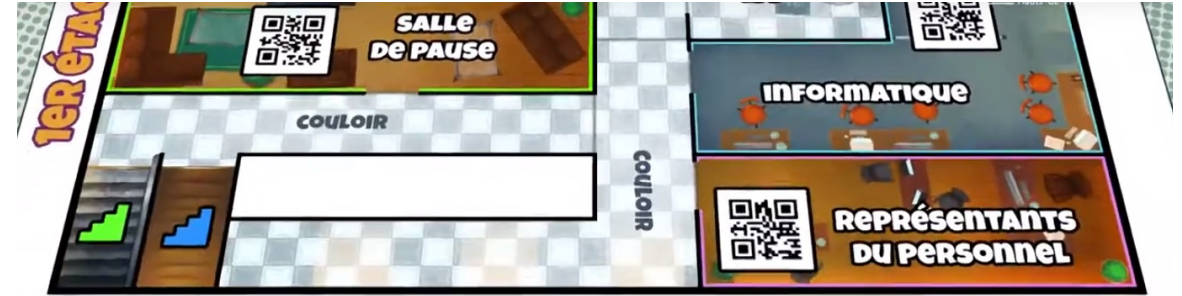
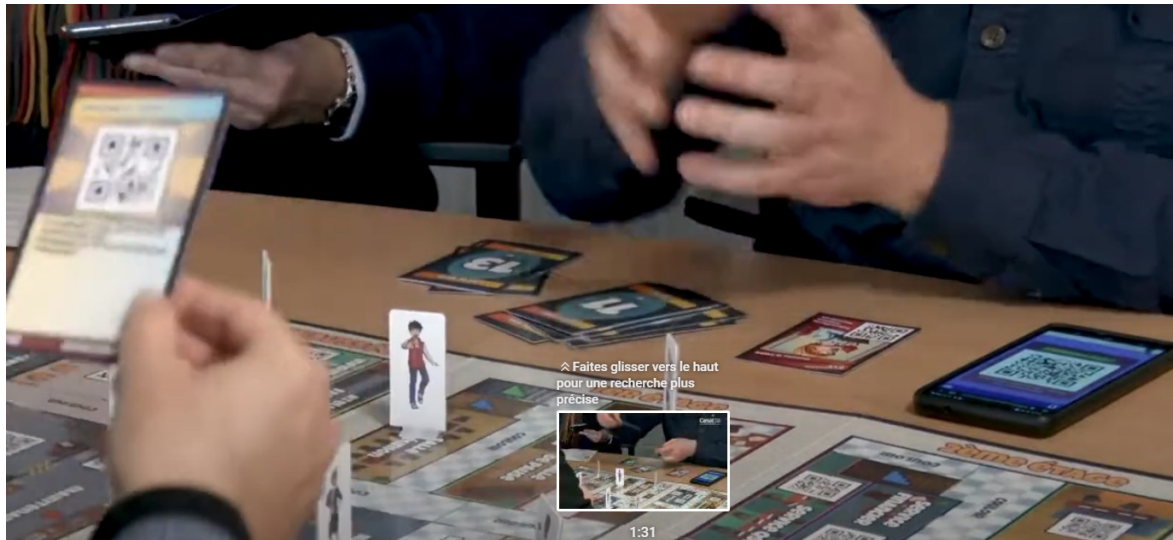
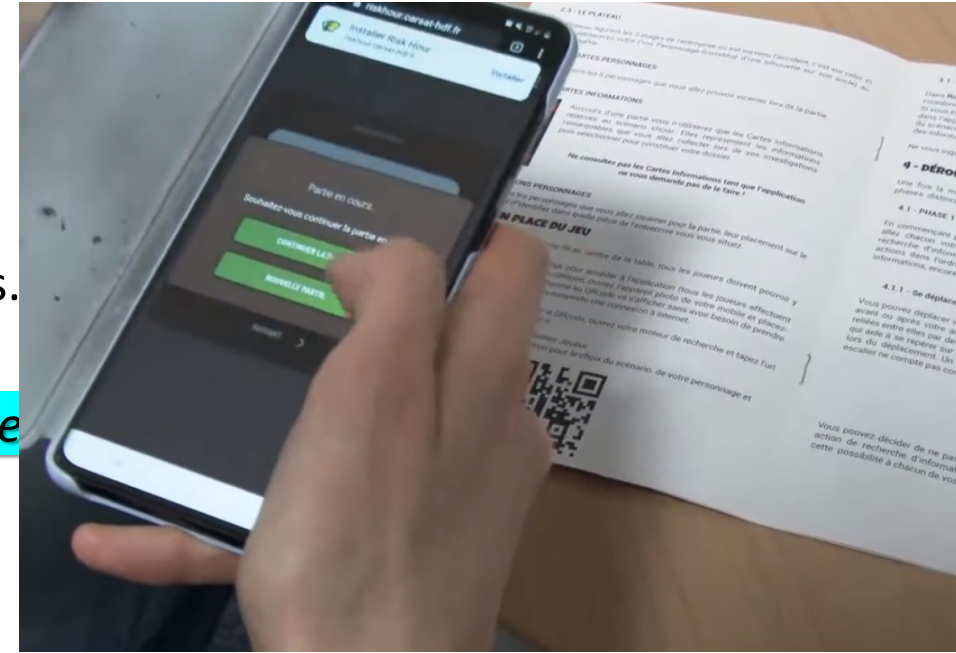


Illustration: the case of luggage management/handling → accident investigation

- 3 phases in the game:
 - Data and information collection
 - Exchanges upon the solutions to be setup
 - Step 1: Identify the Goal.
 - Step 2: Gather Information for Weighing the proposals.
→ access to online courses
 - Step 3: Consider the Consequences. → access to online Decision → access to online courses
 - Step 5: Evaluate the Decision.
 - MCQ to secure the knowledge acquisition



Assets: toward specifications in airport context

- For the teacher:
 - Innovative and fun way of transmitting knowledge but also skills
 - Direct feedback from the MCQ and direct view upon the maturity reached.
 - Interactive PI for continuous improvement
- For the student:
 - Awareness of the methodology required for an event analysis at an airport
 - Cooperative immersive experience through the analysis carried out
 - Identify the root causes
 - Implement corrective actions to prevent a new event (accident, professional illness, etc.) from occurring in a playful/fun environment



Meeting activity proposal

- 4 scénarios definition
 - -> Which one?
 - For which purpose?
 - For which skills to be developed?
 - For each scenario:
 - Requirements analysis
 - Post-it session: 10' per round
 - Learning curve impact
 - Skills acquisition
 - Performance evaluation
 - ...
 - Functionnal analysis
 - Performance visual management
 - ...

Support platform requirements

- For the global platform (Information System)
 - Requirements analysis
 - Post-it session: 10' per round
 - Links with the information system/platform
 - Accessibility
 - Functionnal analysis
 - Performance visual management
 - ...