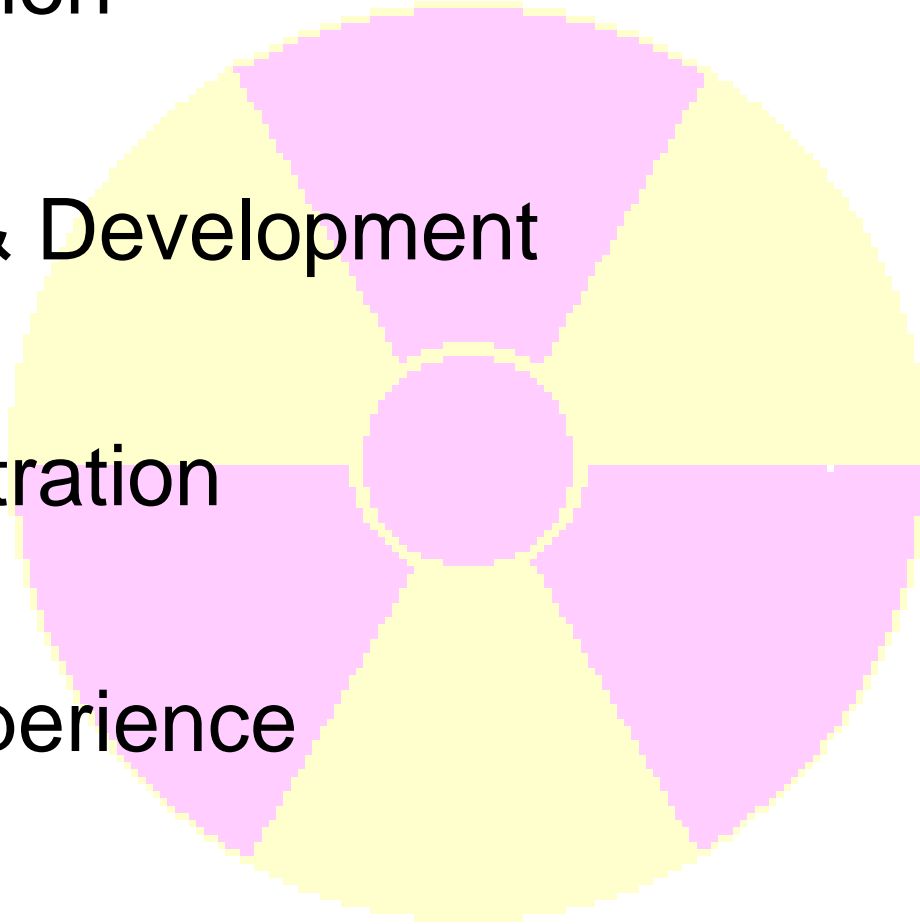# IPRO 329:
EDUTAINMENT
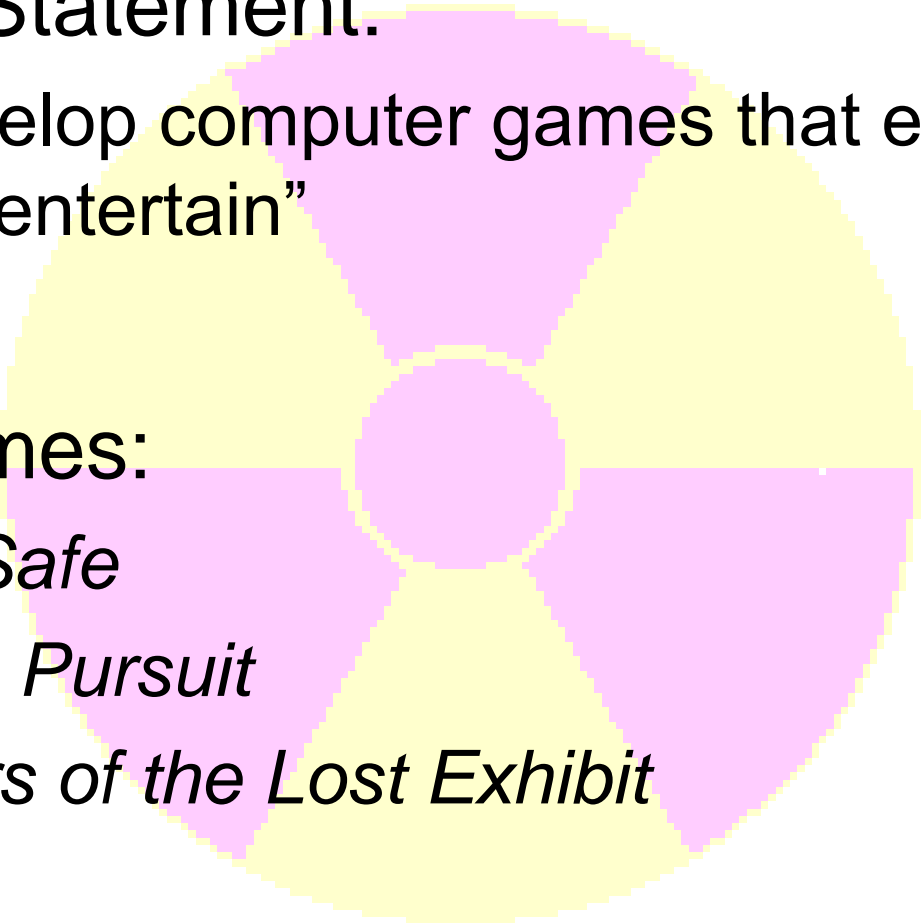## Radiological Control Technician Training Simulator

Presentation Outline

- Introduction

- Design & Development

- Demonstration

- User Experience

IPRO 329 Overview

- Mission Statement:
  - "To develop computer games that educate as well as entertain"

- Past Games:
  - *Credit Safe*
  - *College Pursuit*
 - *Scholars of the Lost Exhibit*

Current Game

RCT Training Simulator

- Background
  - RCTs must pass an oral certification
- Problem
  - Preparation is limited to a mock board
  - Logistically and man-power intensive
- Solution
  - Computer animated simulation
- Objective
 - Develop and test an alternative to oral boards

Project Planning

- Work Organized into Subteams
  - Management
    - Oversee IPRO deliverables
    - Schedule deadlines and organize team tasks
  - Design & User Experience
    - Create backgrounds and sounds for game
    - Design usability testing packet
    - Develop IPRO day presentation
  - Development (Programming)
    - Design game structure and interface
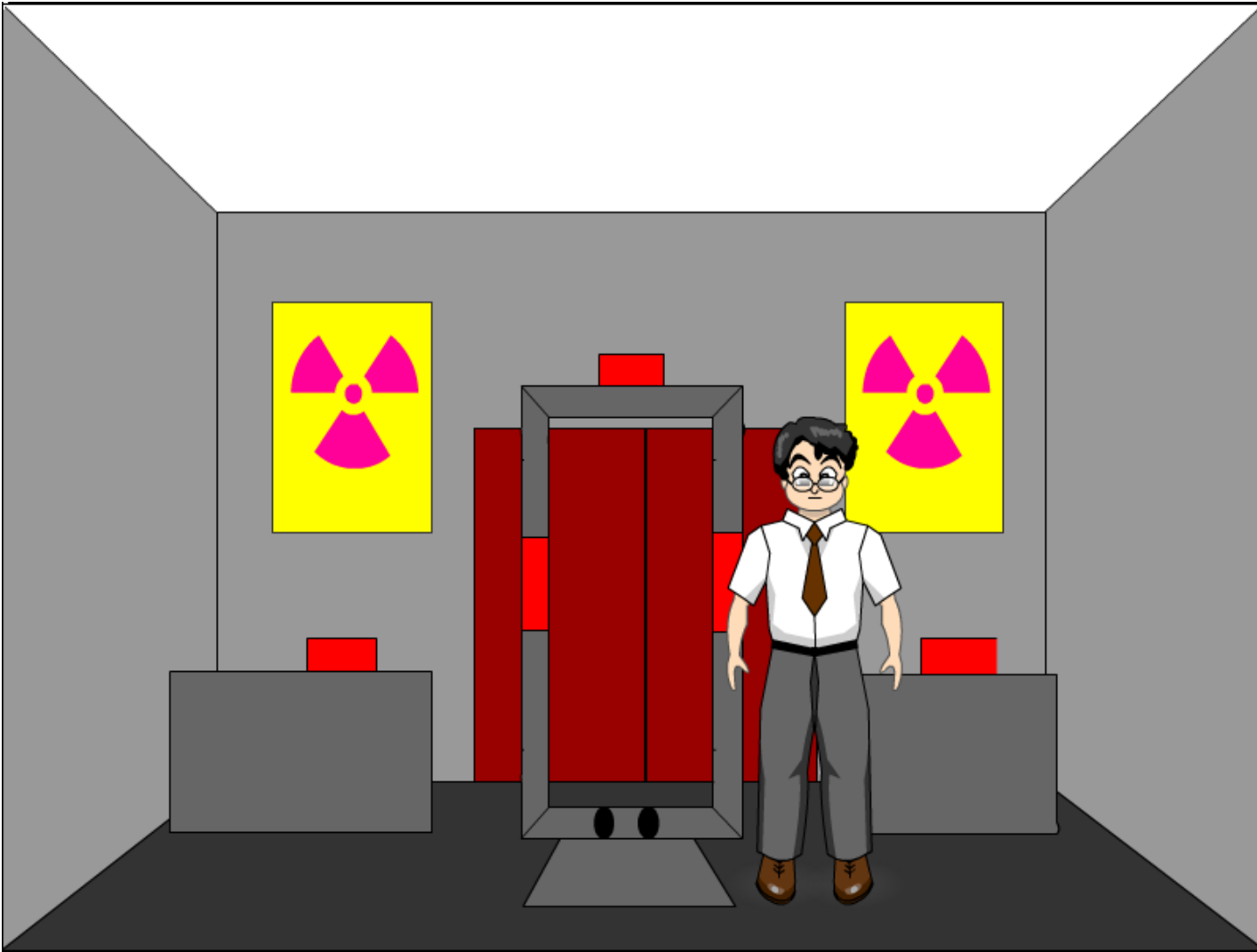   - Implement scenarios and debug

Development Hierarchy
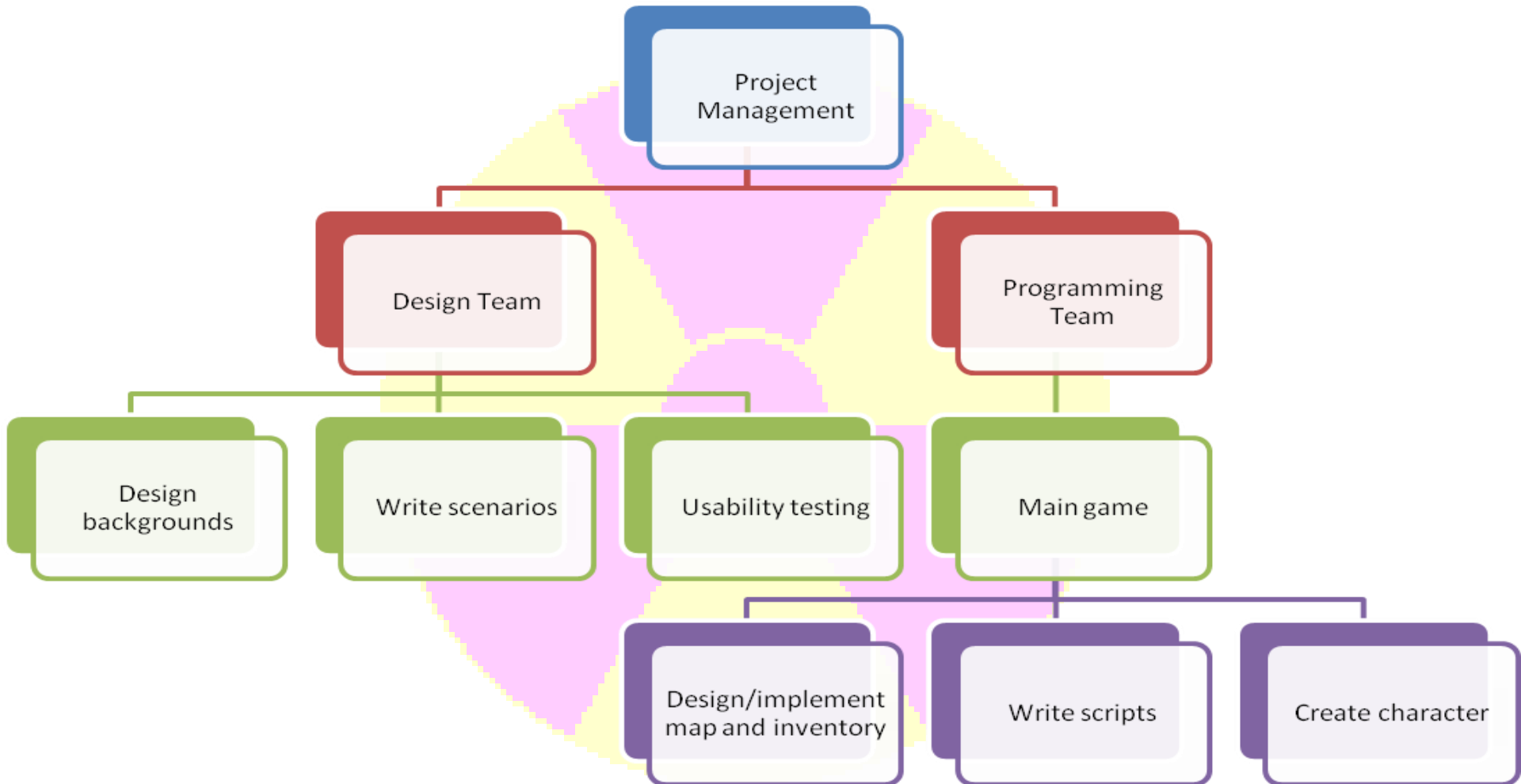
Development Timeline
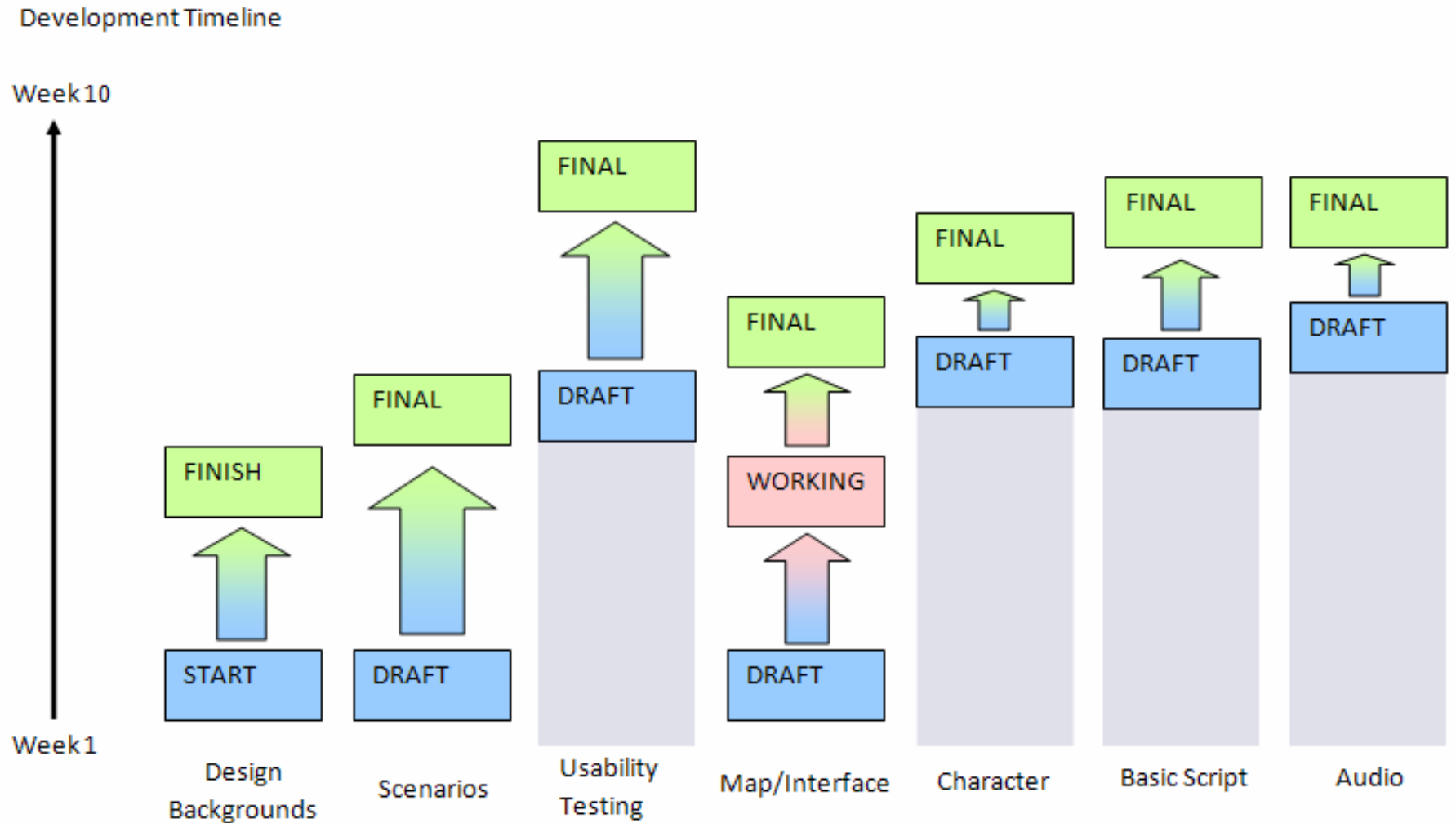
Demonstration

Game Structure and Purpose

- Sample Plot Components
  - Radiation alarm
  - RCT investigates incident and those involved
  - Source of problem is found and neutralized

- RCT Tools
  - Actual tool skills are tested in-game
  - Radiation probe and protective gear

Advantages Final Product

- Portable Game
  - Installs from CD
  - Hosted on a web server
- Comprehensive Training
  - Alternative to practice oral board
  - Covers complete skill set
- Entertaining
  - Holds interest while educating
  - Randomized scenarios increase replayability

Usability Testing

- Usability Testing
  - Beta test conducted at Argonne National Labs
  - n=6
  - Users were certified RCT who are involved in oral certification

Testing Insights: Strengths

- All users appreciated sound effects
- 4 out of 6 felt scenarios were realistic
- 5 out of 6 agreed testing the individuals knowledge was an efficient alternative to practice oral boards
- All users felt game was worth further development

Testing Insights: Weaknesses

- Game unable to understand user input
- User expected wider variety of tools
- User unsure about his/her location
- User found navigation difficult

Future

- Further development
  - Apply user feedback to enhance the simulation
  - Develop more scenarios
  - Increase the complexity of problems

- Transition to an EnPRO
  - Develop a fully-functional product
  - Add-site specific backgrounds and scenarios
  - Market to other organizations that require radiation protection workers

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Questions?