

# Particle Physics Manager Objectives

- Educational game communicating particle physics and science ideas
- Suitable for 12-16yrs (KS3/4)

# KS3 Science Curriculum 'Key Concepts'

- 1.1 Scientific thinking
- 1.2 Applications and implications of science
- 1.3 Cultural understanding
- 1.4 Collaboration

# KS4 Science Curriculum 'Key Concepts'

“During KS4 pupils learn about the way science and scientists work within society”

# How can the game educate?

- Active decision making  
e.g., overcome a particular problem
- Resource management / Problem solving
- Explanatory dialogues  
Short, focused description of key points



# Scope of the game

LHC-based

## Possible goals:

- Design an effective collider / campus
- Discover Higgs boson

## Advantages:

- Highly focused – can communicate more detail on current particle physics without overwhelming user
- Current topic

# Scope of the game

LHC-based

Possible flow:



# Scope of the game

## Historical

### Possible goals:

- Manage and design a CERN-like site over several decades
- 'Beat' CERN's progress
- Reach discovery milestones

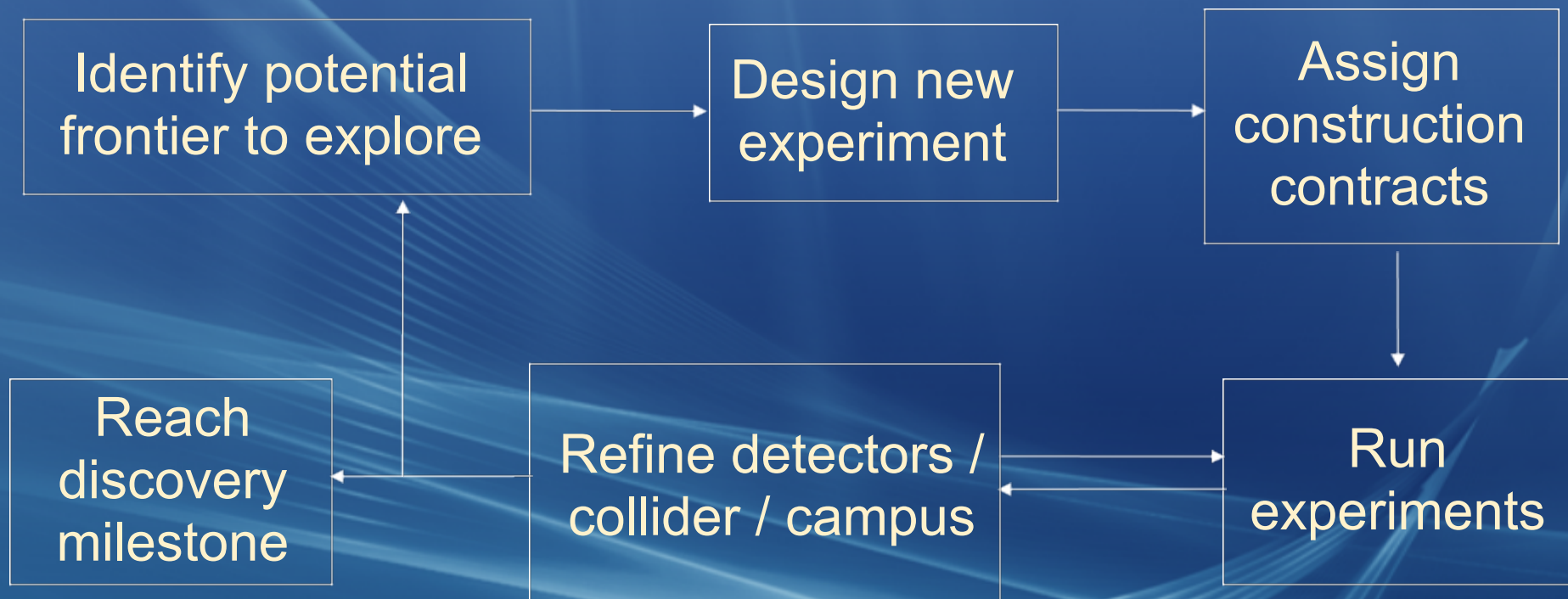
### Advantages:

- Greater potential divergence of user experience
- Communicates importance of prior work on progress

# Scope of the game

Historical

Possible flow:





# Open Questions

- What scope is most appropriate or interesting?
- Which goals are suitable and how can a user's performance be evaluated on them?
- What mechanics would effectively reward those who understand the science presented without frustrating those that do not?