NHS A&E: The First Year

The Brief

A fictitious NHS Trust commissioned a simulation to address a recurring problem: newly appointed ED managers understand the *language* of 4-hour targets, safety, and staffing, but not the **lived tension** between them. They tend to chase the 95% 4-hour standard reactively, often at the expense of clinical quality and staff wellbeing and rarely see whole-hospital constraints (especially bed capacity) as central to ED performance.

The **Project Requirements Brief (PRB)** specifies that the simulation should:

- Focus on the **triangular tension** between:
  - 4-hour waiting time performance
  - Clinical quality / patient safety
  - Staff sustainability / burnout
- Make explicit key NHS concepts and constraints:
  - 4-Hour Standard, clinical outcomes/safety, staff satisfaction/burnout, bed flow/exit block, CQC regulation, fixed quarterly budgets, recruitment delays, unpredictable demand
- Drive one key behavioural shift: under pressure, managers should ask

  "What is the impact on safety, staff sustainability, and systemic constraints?" rather than just

  "How do we hit the 4-hour target?"

- Use **moderate abstraction** with tokens, dashboards and cards (individual team boards), and allow **meaningful failure** (breaches, incidents, staff loss, CQC intervention), within a **3-hour session** plus a 25–30 minute debrief.

The Solution

Overview

NHS A&E: The First Year places 12–16 participants into **4 ED Leadership Teams** managing a single NHS Emergency Department through a full year (four quarters) of operations. Each team runs its own ED within the same trust, facing identical external pressures but making independent decisions that drive divergent outcomes.

The simulation centres on three competing priorities:

- 4-hour performance
- Clinical safety
- Staff morale / sustainability

These sit within hard **budget constraints** and an externally controlled **bed capacity** environment. Participants experience that **"perfect performance is impossible"** and that every improvement is paid for somewhere else.

Core Mechanic: The Triangle of Impossibility

The simulation's core mechanic is an explicit **three-way tension system**:

- **4-Hour Performance (%)**
- **Clinical Safety Score**
- **Staff Morale Score**

Key design features that operationalise this:

- **Persistent trade-offs** baked into investments:
  - Fast-Track Pathway: boosts capacity and 4-hour performance but reduces safety.
  - Emergency locums and overtime: increase capacity but reduce morale and are unsustainably expensive.
  - Wellbeing and training programmes: improve morale and/or safety, but often without immediate capacity gains.
- **Cascade thresholds**:
  - Low morale triggers resignations and locum dependence.
  - Low safety triggers CQC intervention and, at repeated low levels, **Special Measures** and elimination from the game.

This mechanic directly mirrors the PRB's requirement to model:

- 4-hour vs quality
- staff wellbeing vs 24/7 coverage
- short-term fixes vs long-term sustainability

Decision Architecture & Progression

The year is structured into **four quarters**, each with:

- A **Planning Phase** (7–10 minutes): teams make **2–3 strategic investments** from a set of 10 decision cards, under fixed quarterly budgets (Q1 £200k → Q4 £140k) and with explicit delays (e.g., permanent staff and recruitment arrive after two quarters).
- **Three monthly event turns** per quarter (4 minutes each): teams respond to operational crises using only existing resources plus limited crisis spend.
- A **Quarterly Review** for calculations, carry forward, and comparison.

The **investment menu** matches the PRB's required decision domains:

- **Staffing Investment** – permanent hires, recruitment campaigns, agency/locum contracts, wellbeing programmes.
- **Patient Flow Strategy** – fast-track pathways, process improvement initiatives, equipment upgrades that impact throughput.
- **Quality & Safety** – clinical training, safety-first investments.

- **Emergency Measures** – high-cost, high-impact fixes for crises (e.g., emergency locum coverage).

Difficulty **builds progressively**:

- **Q1 (Spring)** – mechanics learning; moderate pressure.
- **Q2 (Summer)** – increased regulatory scrutiny and heatwave-type strains.
- **Q3 (Autumn)** – crisis quarter with flu, exit block, and burnout cascades.
- **Q4 (Winter)** – full winter crisis, damage limitation and survival.

This progression is strongly aligned with the PRB request for **gradual build-up of complexity** from fundamentals to crisis.

Dynamic Events

The simulation uses:

- **12 event cards**, three per quarter, covering:
  - Demand surges (flu, heatwave, winter pressures)
  - Bed flow / **exit block** crises
  - Regulatory inspection and CQC action
  - Staff burnout, resignation waves, and sickness spikes
- **Four response options per event**, each with:
  - A budget cost
  - Specific effects on performance, safety, morale, and capacity
  - Sometimes delayed impacts or penalties to future budgets

Events are explicitly framed in NHS language (4-hour breaches, CQC scrutiny, corridor care, special measures) and consistently force participants to trade off targets, safety, and staff wellbeing under **system constraints they cannot fully control** — especially bed capacity.

Team Dashboards & Master Tracking Board

Each team uses an **A3 Team Dashboard** with:

- Tracks for **Budget**, **Staff**, **Locum coverage**, **4-hour performance**, **Safety**, **Morale**, and **Capacity**
- A **Cascade Warning** area that flags when morale, safety, budget, or performance approach dangerous thresholds

This is paired with **Quarterly Decision Sheets** as the "calculation engine" and an **A2 Master Tracking Board** for cross-team comparison and facilitator visibility.

The PRB requested **"individual team boards only"**; the inclusion of a supplementary master board does not change core gameplay and serves mainly as a facilitator aid, but it is a minor extension beyond the minimal requirement.

Assessment

Alignment with Learning Objectives

The PRB specifies three primary learning objectives:

1. **4-Hour Target vs Clinical Quality**
    - The rules and narrative explicitly frame the **4-hour metric** as only one of several performance dimensions, and many decisions that boost performance do so at the expense of safety (e.g., corridor care, fast-track pathways, early discharge).
    - Debrief guidance explicitly calls out "target-chasing harms quality" as a core teaching point.

    Assessment: Strong direct alignment.

2. **Staff Wellbeing → Patient Safety**
    - Morale is a core metric, with rules in the Participant Guide linking low morale to staff loss, locum dependence, and downstream performance/safety collapse.
    - Event cards and decision options repeatedly trade capacity gains for morale damage, highlighting the cost of "just push through" strategies.
    - Debrief prompts emphasise "Staff wellbeing determines everything".

    Assessment: Very strong alignment; the morale–safety–capacity cascade is central to gameplay.

3. **ED Performance Depends on Whole-Hospital Flow (Bed Capacity)**
    - Bed capacity is an explicit external parameter by quarter and features prominently in events (e.g., exit block crises, no ward beds available).
    - Facilitator prompts repeatedly steer discussion toward system constraints and the futility of ED-only solutions when bed capacity fails.

    Assessment: Strong alignment – bed flow is consistently framed as the dominant constraint.

The **behavioural change target** ("ask about safety, staff, and systemic constraints — not just target compliance") is reinforced through:

- Repeated trade-off framing in facilitator scripts ("What are you giving up by choosing this option?").
- Debrief sections that explicitly tackle misconceptions like "We just needed to focus on the 4-hour target" and reframe them in terms of system and staff impacts.

Overall: The simulation demonstrates **high fidelity** to the learning objectives outlined in the PRB.

Core Business Mechanics & Trade-offs

The PRB lists four key decision domains. The implemented mechanics map closely:

1. **Staffing Investment**
    - Permanent hires, recruitment campaigns, agency/locum contracts, wellbeing programs, and training all exist as concrete decision cards with delayed effects and explicit morale, safety, and capacity trade-offs.
2. **Patient Flow Strategy**
    - Fast-track pathways, process improvement initiatives, and equipment upgrades alter throughput, performance and safety.
3. **Resource Allocation (Quality, Equipment, Innovation)**
    - Clinical training, wellbeing, and equipment upgrades form a small portfolio of "invest for quality and resilience" options, typically with delayed benefits and/or short-term pain.
4. **Crisis Response**
    - Monthly events simulate real ED crises (flu, exit block, major incidents, burnout). Each forces tactical choices under time pressure and constrained budgets, testing resilience of prior strategic investments.

Trade-offs emphasised in the PRB—4-hour vs quality, staff wellbeing vs coverage, short vs long term, ED vs whole hospital, investment vs budget—are all **embedded in the mechanics** and made highly visible through dashboard changes and cascade thresholds.

Assessment: The mechanical design strongly reflects the PRB's core business tensions.

Participant Profile & Dynamics

The PRB specifies:

- **12–16 participants**,
- **4 teams of 3–4**,
- Teams acting as **ED Leadership Teams** (no sub-roles),
- Mixed competition/co-operation (compete on performance, collaborate within teams),
- Basic arithmetic only.

The simulation documentation matches this exactly:

- Facilitator Manual and Client README specify 12–16 participants in 4 teams of 3–4.
- Teams operate as integrated ED leadership groups, with no imposed internal role specialisation.
- The rules require only arithmetic and percentages; calculators are provided.
- Teams work with full information and compete on comparative performance, in line with the "mixed interaction" brief.

Assessment: Direct and complete alignment with participant profile and dynamics.

Session Structure & Pacing

The PRB requests:

- **3-hour session**
- Gradual build of complexity
- **25–30 minute debrief**

The delivered simulation uses:

- **Core timed flow of 209 minutes (3.5 hours)**, including:
  - 30 minutes welcome + rules
  - 4 quarters totalling 124 minutes of gameplay
  - 10-minute break
  - 30-minute debrief
  - 10-minute wrap-up and actions

There is a small **variance on total duration** (3.5 hours vs 3), but:

- The **gameplay itself** (Q1–Q4 plus debrief) fits within roughly **3 hours** once setup and wrap-up are stripped out, and
- The debrief duration (30 minutes) matches PRB requirements.

Given the complexity of the mechanics and the emphasis on experiential reflection, this extension appears justified, though it may require explicit expectation-setting with stakeholders who are constrained to a strict 3-hour window.

Assessment: Generally aligned; **slight overrun on total time** that may require negotiation or optional compression.

Facilitation Design & Documentation

The PRB requires:

- Facilitation by **general trainers with moderate experience**, not necessarily ED experts.
- A **detailed, step-by-step manual** with NHS context explanations.

The **Facilitator Manual** delivers:

- A comprehensive, structured guide with:
  - Executive summary and learning objectives
  - Detailed turn sequence and timing
  - Quarter-by-quarter scripts and prompts

    - Event resolution procedures and example scripts
    - Debrief guidance, including key teaching points and common misconceptions
    - Troubleshooting guidance for both mechanical and learning issues
- Scripts and teaching points that explicitly translate mechanical outcomes into **NHS reality**, citing real scenarios like staffing crises, CQC intervention, and exit block.

Assessment: Exceeds the PRB requirement; documentation is rich enough for non-specialist facilitators to run the session confidently.

Physical Components & Production Design

The PRB asks for **moderate component complexity** (tokens, dashboards, cards) and **individual team boards**.

The Production Specifications and Client README define:

- **Components:**
    - 4 A3 Team Dashboards
    - 1 A2 Master Tracking Board
    - 10 Decision Cards
    - 12 Event Cards (3 per quarter) + 48 response option cards
    - Reference cards, decision sheets, position markers, calculators, timer
- **Markers:** 56 circular tokens across four colours, tracking budget, staff, locums, and metrics via positional tracks.
- **Card design:** Text-rich, with clearly specified costs, immediate and delayed effects, prerequisites, and durations.

The overall physical complexity is **squarely within the "moderate" band** envisaged by the PRB. The addition of the Master Tracking Board is a minor enhancement to support debrief and comparison rather than a core gameplay dependency.

Assessment: Fully aligned on complexity; slightly extended configuration (master board) that strengthens facilitator oversight.

Summary Specifications

Attribute	Detail
Title	NHS A&E: The First Year
Business Domain	NHS Emergency Department Operations
Duration	3.5 hours total (approx. 3 hours core play + 30-minute debrief)
Participants	12–16 (4 teams of 3–4)
Complexity	Intermediate–Advanced (ED leadership level)

Attribute	Detail
Core Mechanics	Triangle of Impossibility (Targets vs Safety vs Staff); quarterly planning with delayed effects; monthly crisis events; cascade thresholds; external bed capacity constraint
Physical Components	Team dashboards, master tracking board, decision cards, event cards, response cards, reference cards, markers, decision sheets, calculators, timer
Facilitator Profile	L&D professional with moderate experience; NHS expertise helpful but not mandatory
Failure Modes	Breaches, safety incidents, staff loss, CQC intervention, Special Measures elimination with observer role
Documentation Set	Facilitator Manual, Participant Guide, Production Specifications, Event Cards, Supplementary Observer Instructions, Client README

Overall Conclusion

NHS A&E: The First Year shows **strong alignment** with the Project Requirements Brief across all critical dimensions:

- The **core tension** (targets vs safety vs staff) is front-and-centre and mechanically unavoidable.
- **Staff wellbeing's impact on safety and performance** is modelled through meaningful cascades and thresholds.
- **Whole-hospital flow and bed capacity** are treated as dominant external constraints, not background colour.
- Participant numbers, team structure, interaction patterns, mechanical complexity, and failure modes all match the brief.
- Facilitation materials meet and arguably exceed the requested support for generalist trainers.

The simulation not only **meets** the PRB's requirements but, in several respects (facilitation guidance, depth of cascade modelling, and observer role for eliminated teams), **exceeds** the expectations for a minimal viable design.