

INTRODUCTION

The Buckingham Housing Repairs Game was created by John Bicheno, Director of the Buckingham Lean Enterprise Unit and played extensively at LERC

The version described in this preview has minor revisions on JB's original though is essentially the same.



GAME USE & LEARNER PROFILE

The game is suitable for introducing key lean/CI principles and concepts to those working in service organisations

Especially in operations, delivery, planning functions

It can be viewed as an alternative to games that tend to simulate manufacturing operations

Eg games using Lego or Stickle bricks that mimic building physical products

**No prior knowledge of lean thinking is required of players.
It can take between 3 and 6 hours to play**

Timing depends on how many rounds are played

It requires a minimum of 9 players, with a maximum of 18

For 18, roles are doubled up, plus discretionary roles can be used

GAME CONTEXT

Players simulate working in a housing repairs & maintenance (R&M) department

Eg in a council, housing association or linked to an insurance claims helpline.

Each player(s) performs a specific role in the R&M department

Eg call handler, scheduler, reconciler, operative etc

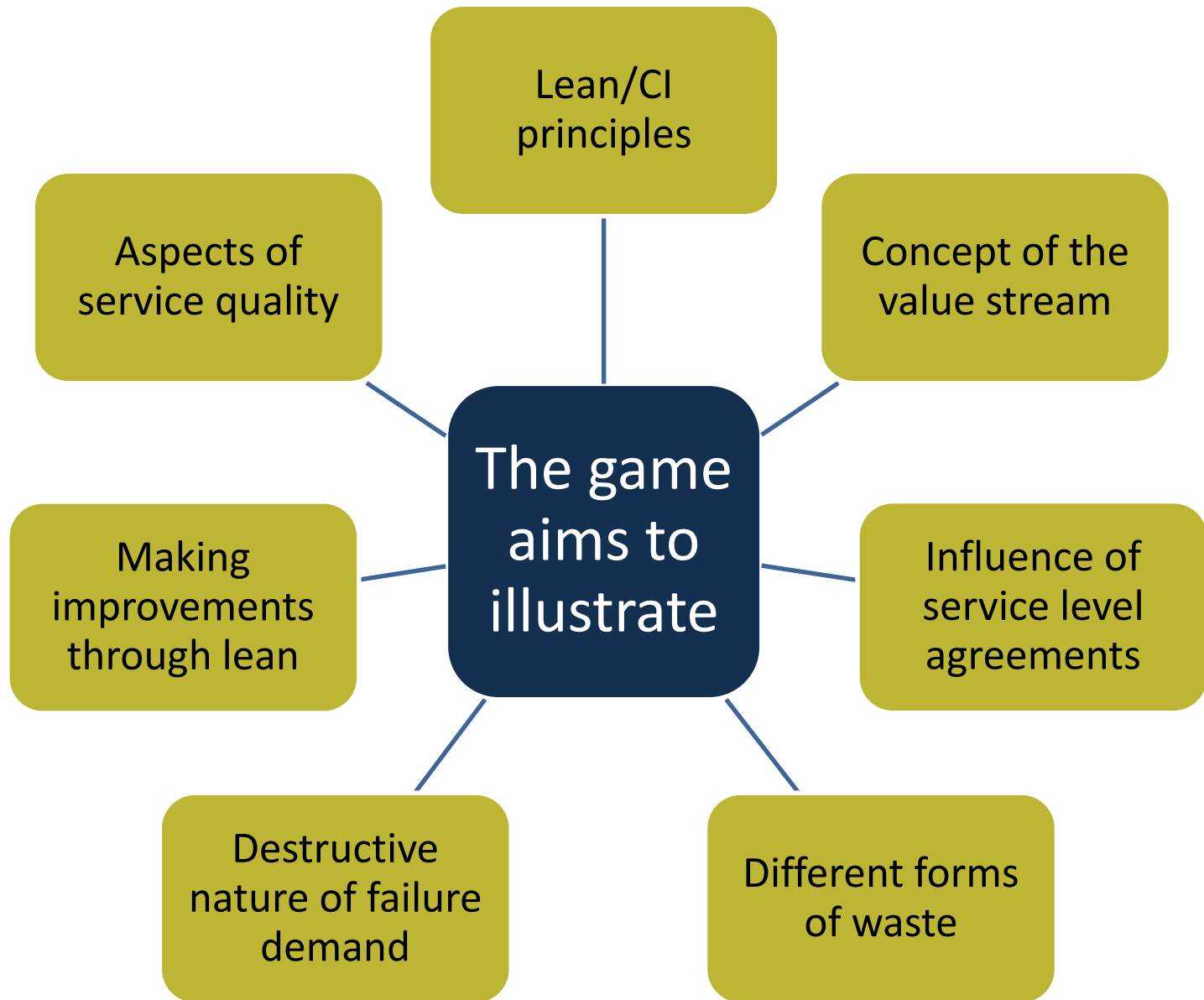
Their aim is to respond to requests for repair and maintenance from householders

They deploy resources to get the jobs done as efficiently as possible.

Requests for work from customers cover windows, plumbing, painting, heating, roofing and electrical.

Some jobs are classed as emergencies.

GAME LEARNING POINTS



GAME OPERATION (1)

The game consists of 2 or 3 rounds, each consisting of 15 minutes

A minute can be considered to represent a day



Each minute, requests for repairs are received by the call centre, which initiates the repair process



GAME OPERATION (2)



Service level agreements influence role behaviour

Dice simulate the innate variability of certain activities



Prioritisation rules & Standards adherence

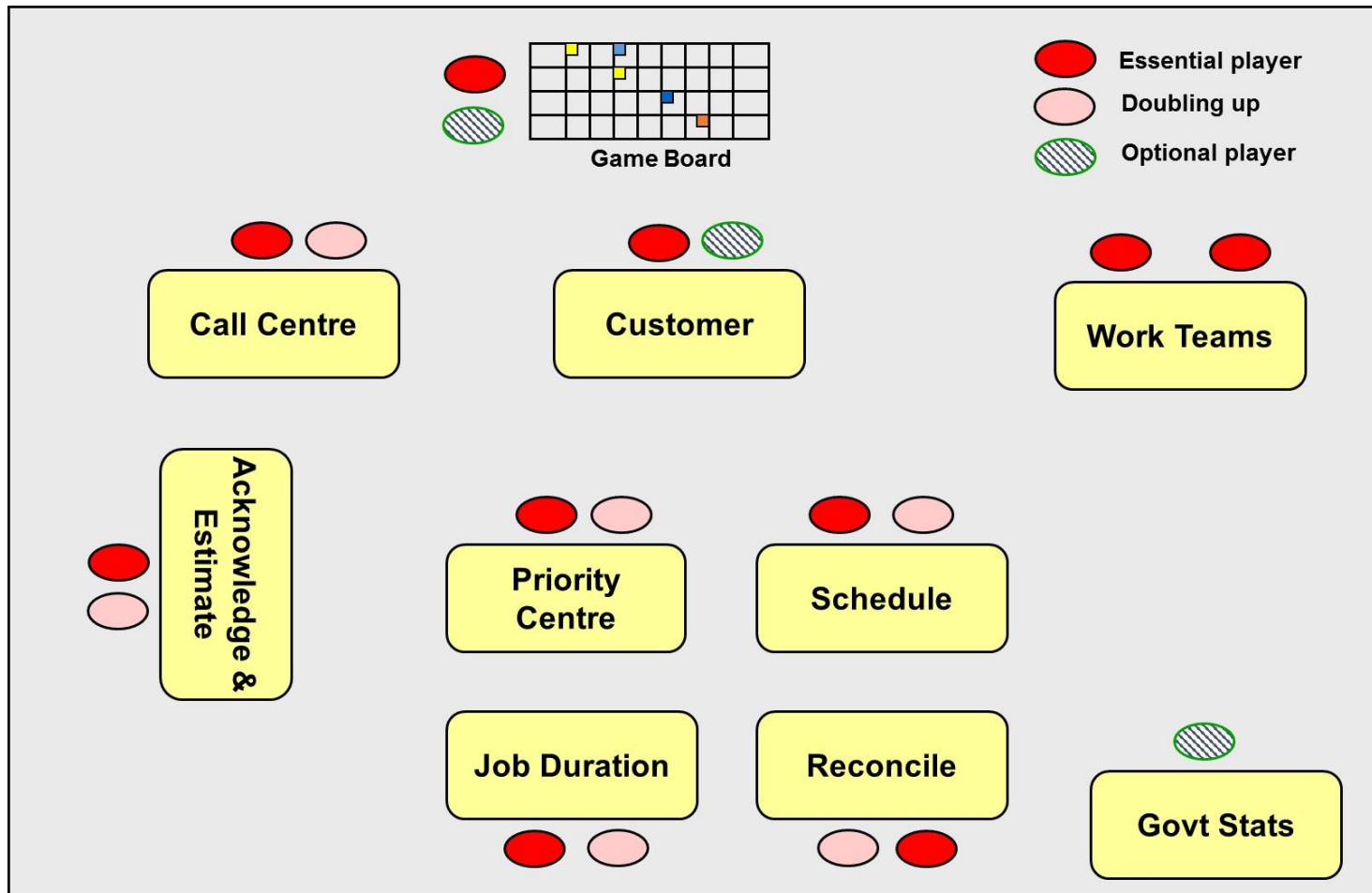
- Excellent
- Very good
- Good
- Average

PRIORITIES

- 1.
- 2.
- 3.



GAME ROLES & INITIAL ROOM LAYOUT



The R&M department roles are shown, along with customer roles and an optional Government Statistics role.

ROOM LAYOUT - ROLES

Housing Repairs Game

Call Centre

Clerk 1

Receive job requests & initiate the repair process



Housing Repairs Game

Priority Centre

Clerk 3

Receive job requests from call centre, prioritise job & pass on to reconciler



Housing Repairs Game

Work Operations

2 operatives

Take job card from scheduler, contact customer, complete work, record completion

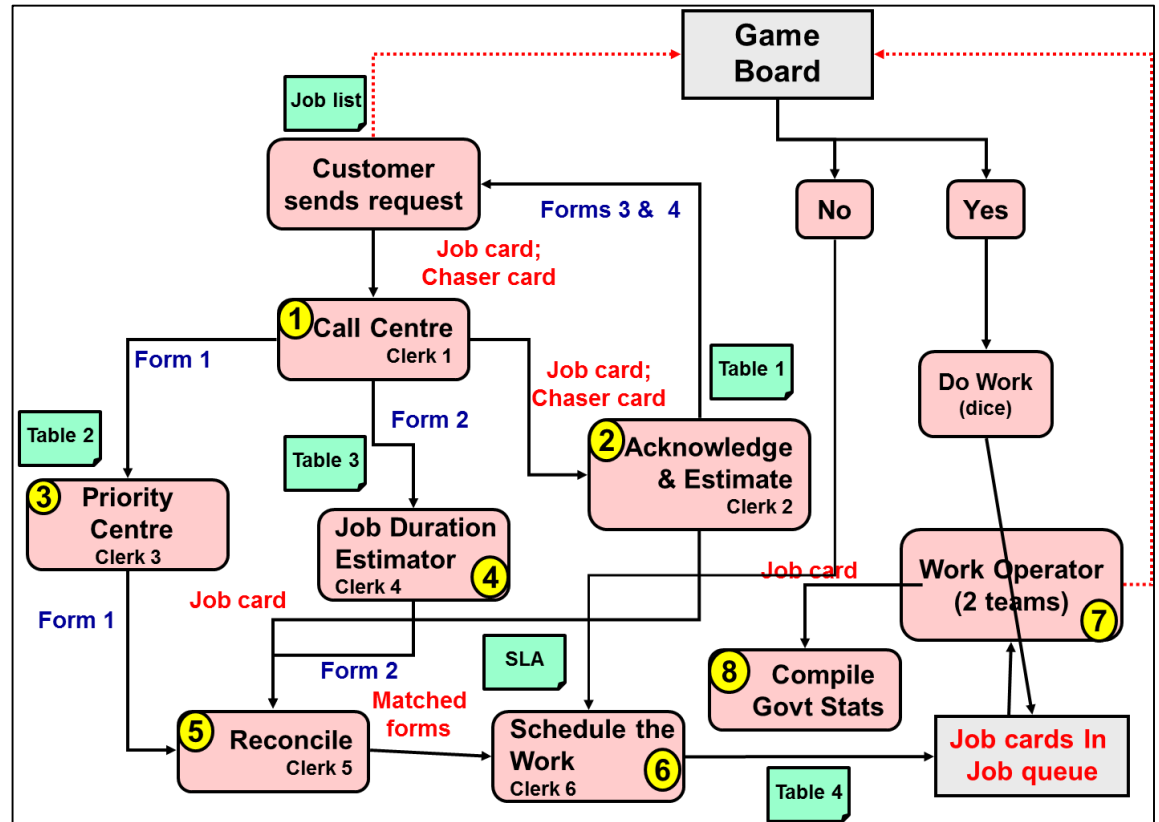


Each of the 8 roles have their own A3 sized placemats, which indicate where the players are located and summarises the roles' key tasks.

REPAIR PROCESS OVERVIEW

This chart illustrates the process flow of a job that is taken at the call centre.

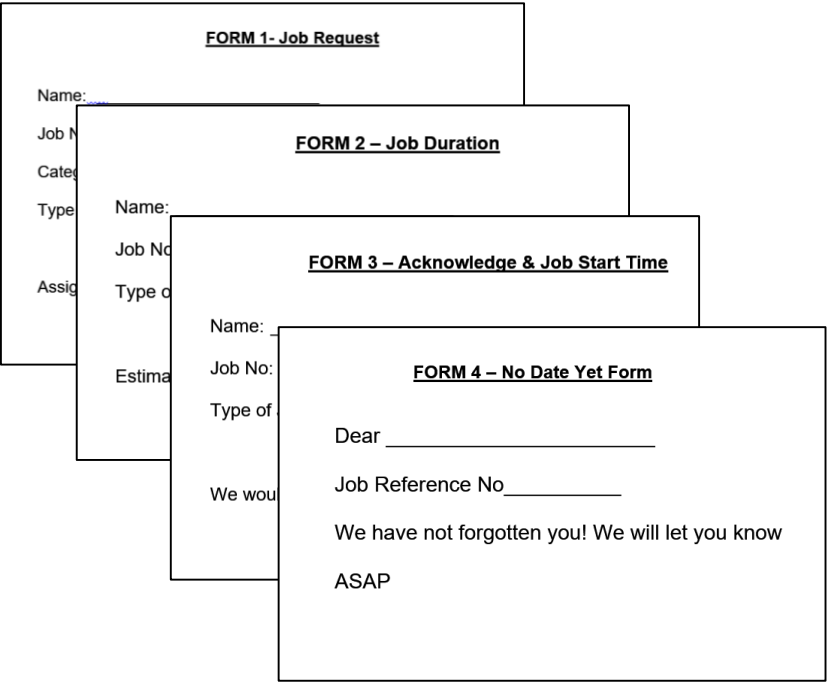
[this is not normally shown to the players until the post round 1 discussion]



FORMS & JOB CARDS

Several forms are used by the various roles.

The game has 80 different jobs – enough for 3 rounds.



Job requests, acknowledgement, job duration etc.

JOB REQUEST CARD Job: 1

Name: Boley

First Name:

Tenant Age:

Problem Type:

Emergency?

JOB REQUEST CARD Job: 12

Name: Kidson

First Name: Arthur

Tenant Age: 55

Problem Type: electrical

Emergency? emergency

Job Request Cards represent phone calls from customers to the call centre.

TRACKING GAME PERFORMANCE

	Minute 4	Minute 5	Minute 6	Minute 7	Minute 8	etc
Initiate	3					
Acknowledge			3			
Estimated Start				3		
Job Completion					3	

A **GAME BOARD** is used to track the progress jobs and measure performance.

Customer 2 operates the board, which is displayed on a wall in the room

In the example above, job 3's progress is shown, indicating it took 4 minutes in total to complete

PLAYER/ROLE INSTRUCTIONS

INSTRUCTIONS

Housing Call Centre (Housing Clerk 1)

1

Materials:

- Stack of Form 1
- Stack of Form 2

- You receive job request cards (yellow), job chaser cards (red), & may also receive rejected forms
- These are given to you by customer 1 at the start of each minute
- For (yellow) Job Request Cards
 - Complete Forms 1 & 2
 - Send the original job card in batches of 1 to the Acknowledge & Estimate work estimate (Housing Clerk 2)
 - Send Form 1 in batches of 2 to Job Priority (Housing Clerk 3)
 - Send Form 2 to the Job Duration Estimator (Housing Clerk 4)
- For (red) Job Chaser Cards
 - Send any job chaser cards on to Acknowledge & Estimate in batches of 2
- For all other forms, pass them onto Acknowledge & Estimate (Housing Clerk 2)

There are laminated instruction sheets for each role

These need to be studied carefully before the game begins

Some roles are optional and some roles can be doubled up

There are rules for job start, duration, priorities, service level agreements.

MEASURES & OBSERVATIONS

	Number of Job requests Sent out	Average Time - Initiated to completed	Average Time - Initiated to estimated	Average Time - Estimated to completed	Number of reminders	Pace of Work (a descriptive word.)	Problem visibility (ability to detect)	Number of operators
Round 1								
Round 2								
Round 3								

The average time from call received to job completed is a key measure

The number of reminders in the system is also important, as these represent 'failure demand'

At the end of each round key measures are calculated on a template provided

TYPICAL GAME TIMETABLE (1)

INDICATIVE TIMINGS SHOWN

Game introduction

• 30 mins

Covers aims, game description, timetable, allocation of roles, role briefing, test rounds.

Play round 1

• 15 minutes

“Current State” - no changes allowed to be made
Players mentally note problems within system & think about possible solutions

Review round 1 performance

• 20 mins

R&M performance data is discussed.
Key measures are calculated and discussed; the measures template is completed.
Players review R1 performance

TYPICAL GAME TIMETABLE (2)

Lean principles presentation
• 20 mins

Takes place during R1 review, before changes proposed
The content will depend of the player's knowledge/experience of lean.

Players discuss & select improvements
• 1 to 2 hours

The facilitator outlines the ground rules.
The facilitator should not intervene too much in the group discussion.

Players implement improvements
• 10 mins

TYPICAL GAME TIMETABLE (2)



Play round 2

- 15 minutes

**Review performance,
summary & key learning
points discussed**

- 30 mins

**Templates are used to capture players' learnings
A standard presentation is available for this**

CONTENTS OF THE PURCHASED GAME

PACKAGED IN A DURABLE PLASTIC BOX

- Laminated role place mats A3
- Laminated role instructions A4
- Laminated game board A3
- Laminated measures & observations chart
- Dice x 4
- Pack of paper clips
- Introductory presentation
- End of Round 1 & Game Summary presentation
- Lean principles presentation
- Game learnings template
- Minutes slides (timed) ppt
- Jobs by minute A4 laminated
- Job details
- 80 job requests x2 (one on yellow paper, the other on pink paper)
- Job forms – 4 types – 80 copies of each
- Marker pens, Bluetac
- Soft copies of all material on a USB stick
- Facilitator's Guide
- Spreadsheet for game data analysis

LEARNING TO USE THE GAME

It can be beneficial to run a train-the-trainer session prior to its first time use in a training programme

Contact the LCS to discuss this option

The game can be adapted according to preference after several iterations.



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