



British Geriatrics Society
Improving healthcare for older people

An Introduction to Quality Improvement Day 1

3rd October 2019

The logo for BGS, consisting of the letters 'BGS' in a white, serif font, centered within a solid purple square.

BGS

Welcome

- Tom Downes  @sheffielddoc
 - Clinical Lead for Quality Improvement, STH
- Steve Harrison
 - Deputy Director of Organisational Development



How far have you travelled?



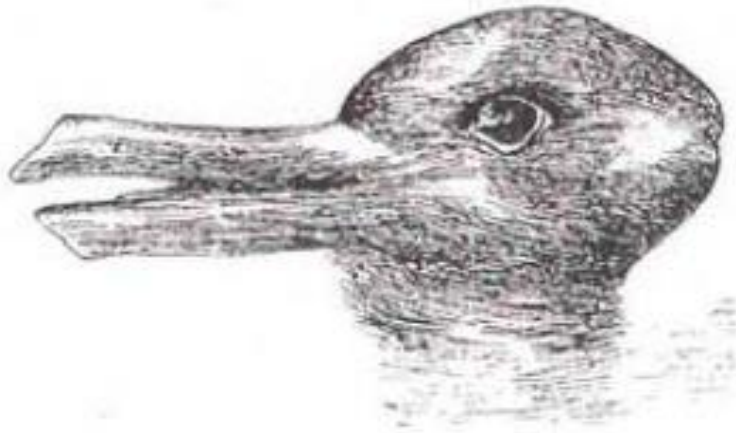
Aims / Objectives

To teach some of the basics
of Quality Improvement...



You do not see something until you have the
right metaphor to let you perceive it

Thomas Kuhn



Agenda – Day 1 - Morning

- 10.30 Welcome & Feedback on Self Assessment (20 mins)
- 10.50 Patient Story (10 mins)
- 11.00 Complexity (20 mins)
- 11.20 Patient Story Part 2 (10 mins)
- 11.30 The Structure of Improvement (20 mins)
- 11.50 Pull the Lever (10 mins)
- 12.00 Coffee (20 mins)
- 12.20 Systems Thinking & Activity (20 mins)
- 12.40 Improvement Methods (20mins)
- 13.00 The 5Ps (10 mins)
- 13.10 Themes and Global Aims (20 minutes)
- 13.30 Lunch



Agenda – Day 1 - Afternoon

- 14.10 Process mapping (60 mins)
- 15.10 Theory of Constraints (10 mins)
- 15.20 The Model for Improvement (10 mins)
- 15.30 Specific Aims Activity (10 mins)
- 15.40 Coffee
- 15.50 M & M Challenge (30 mins)
- 16.20 Measurement + activity (40 mins)
- 17.00 Evaluation
- 17.10 Close

Key Elements Required for Improvement

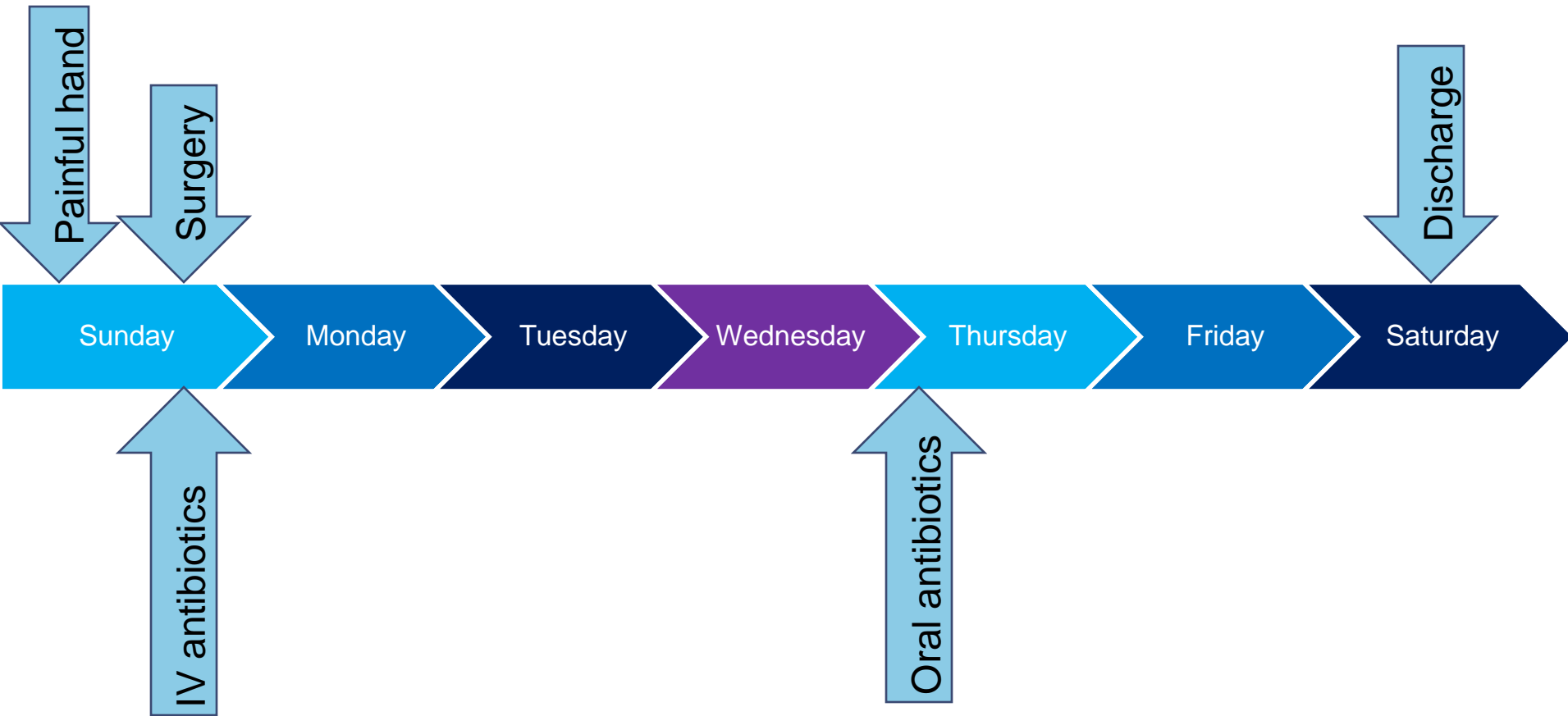
Will to do what it takes to change to a new system

Ideas on which to base the design of the new system

Execution of the ideas



A patient story



COMPLEXITY





1970s



Today



Royal Hallamshire Hospital



1970s

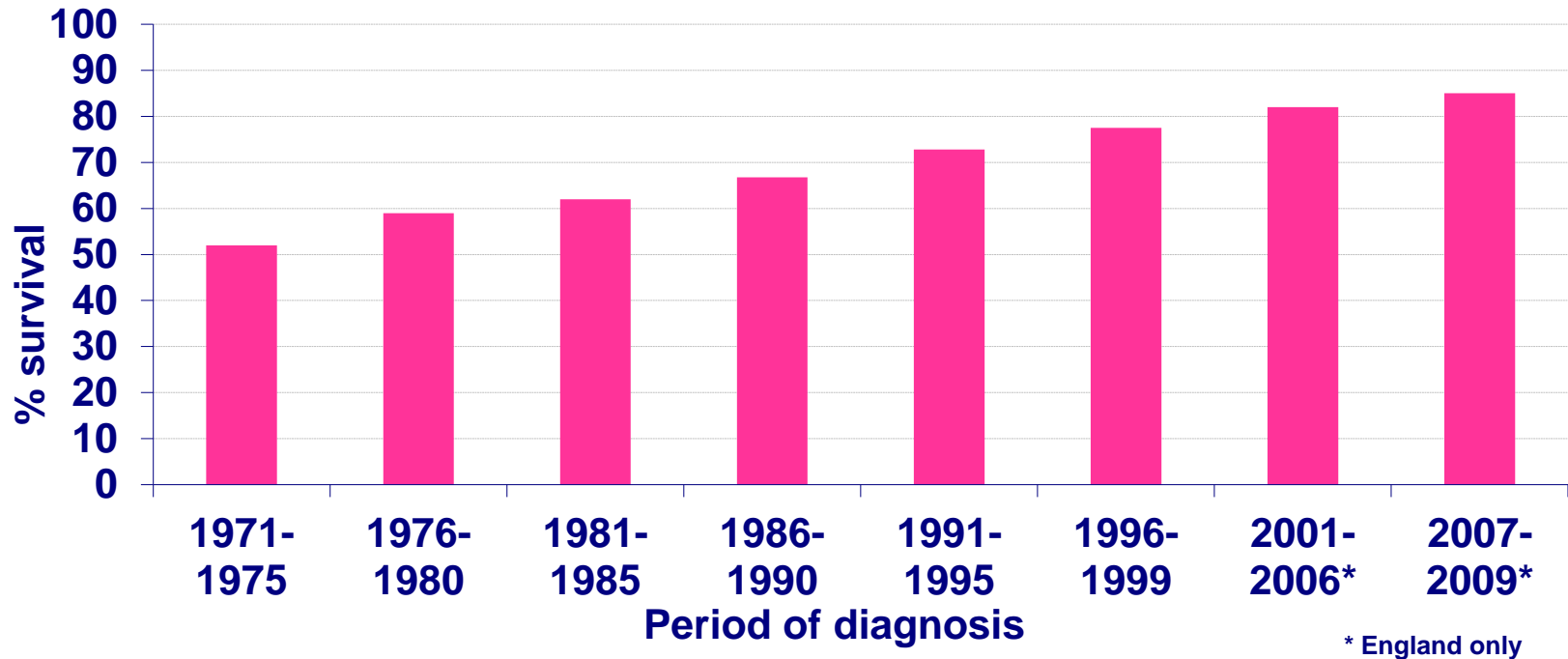


Today

Breast cancer

yesterday and today

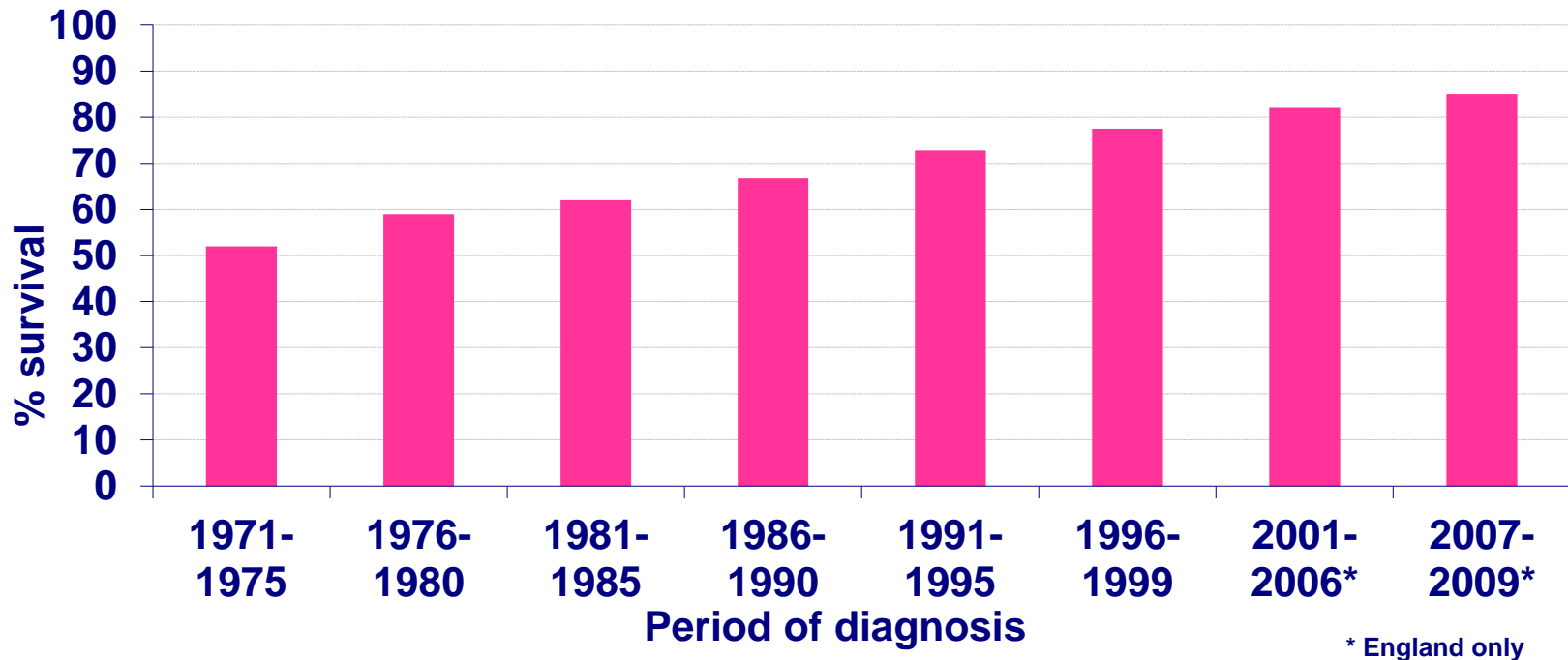
Age-standardised five-year relative survival rate, female breast cancer, England and Wales, 1971-2009



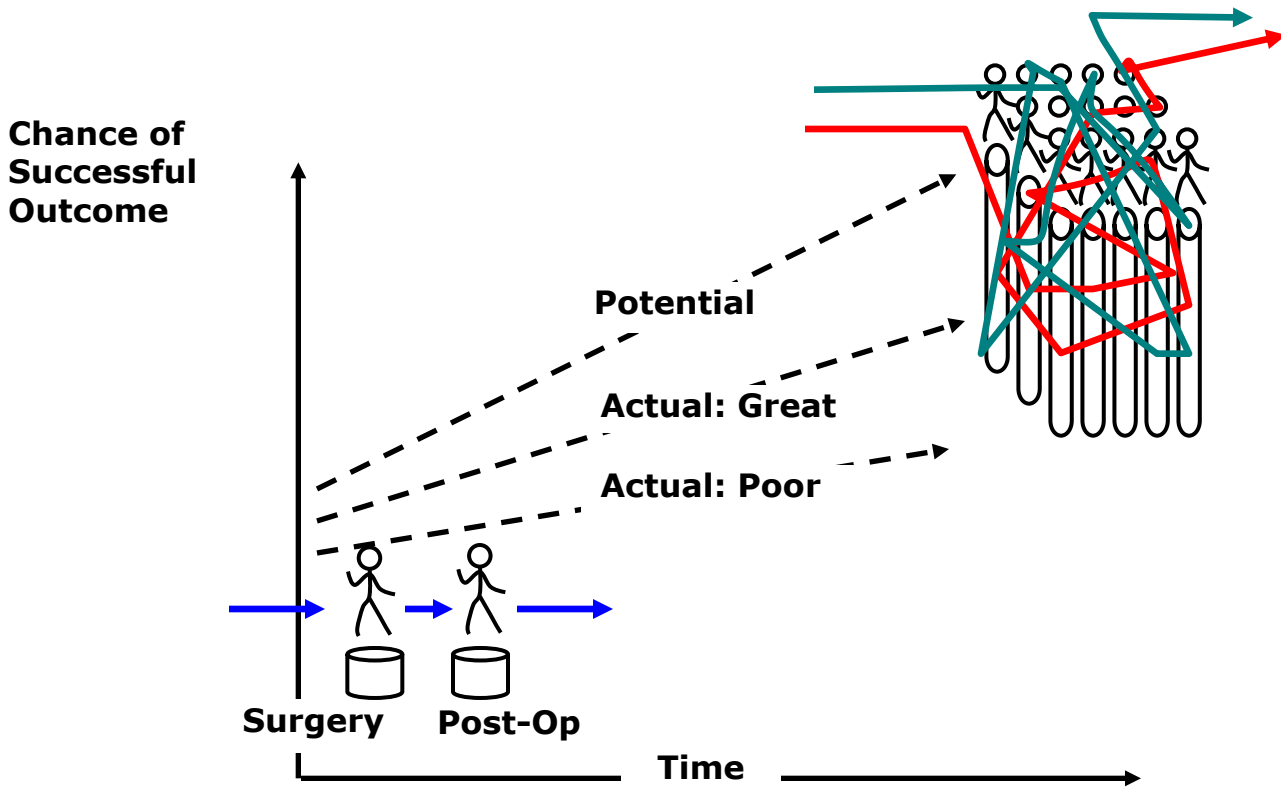
Millions invested in treatment components

How much have we invested in designing the production line of care?

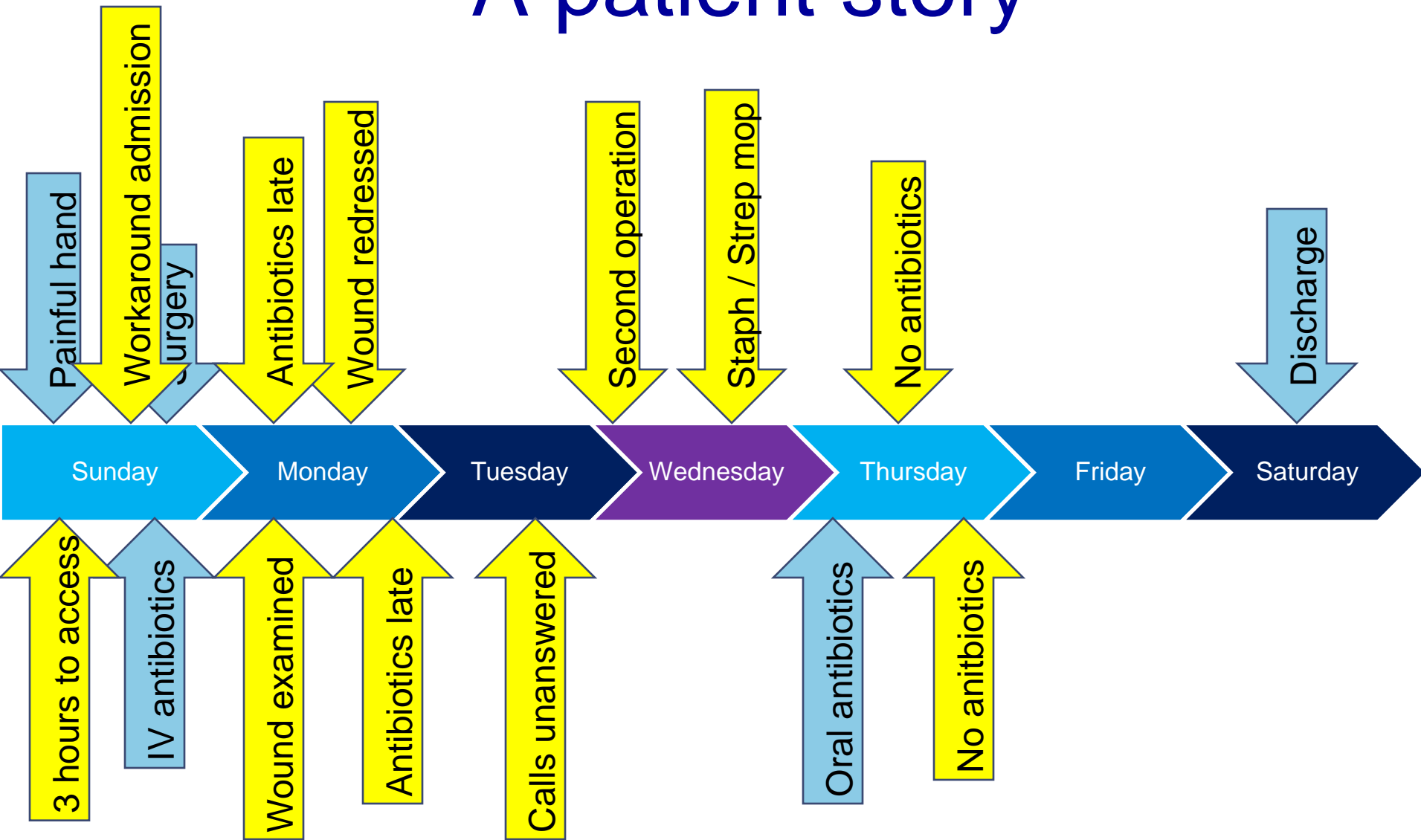
Age-standardised five-year relative survival rate, female breast cancer, England and Wales, 1971-2009



Health care: Good News / Bad News



A patient story



Successful outcome:

- due to fantastic individuals
- despite the system

If 'ideal' systematic had been care delivered:

- Would patient satisfaction have been higher?
- Would length of stay have been shorter?
- Would second operation have been necessary?
- Were the two deaths avoidable?



Discussion

- As a table, discuss your own place of work
- Is it complex?
- Can you think of similar issues?
- Prepare an example



What is

QUALITY IMPROVEMENT?



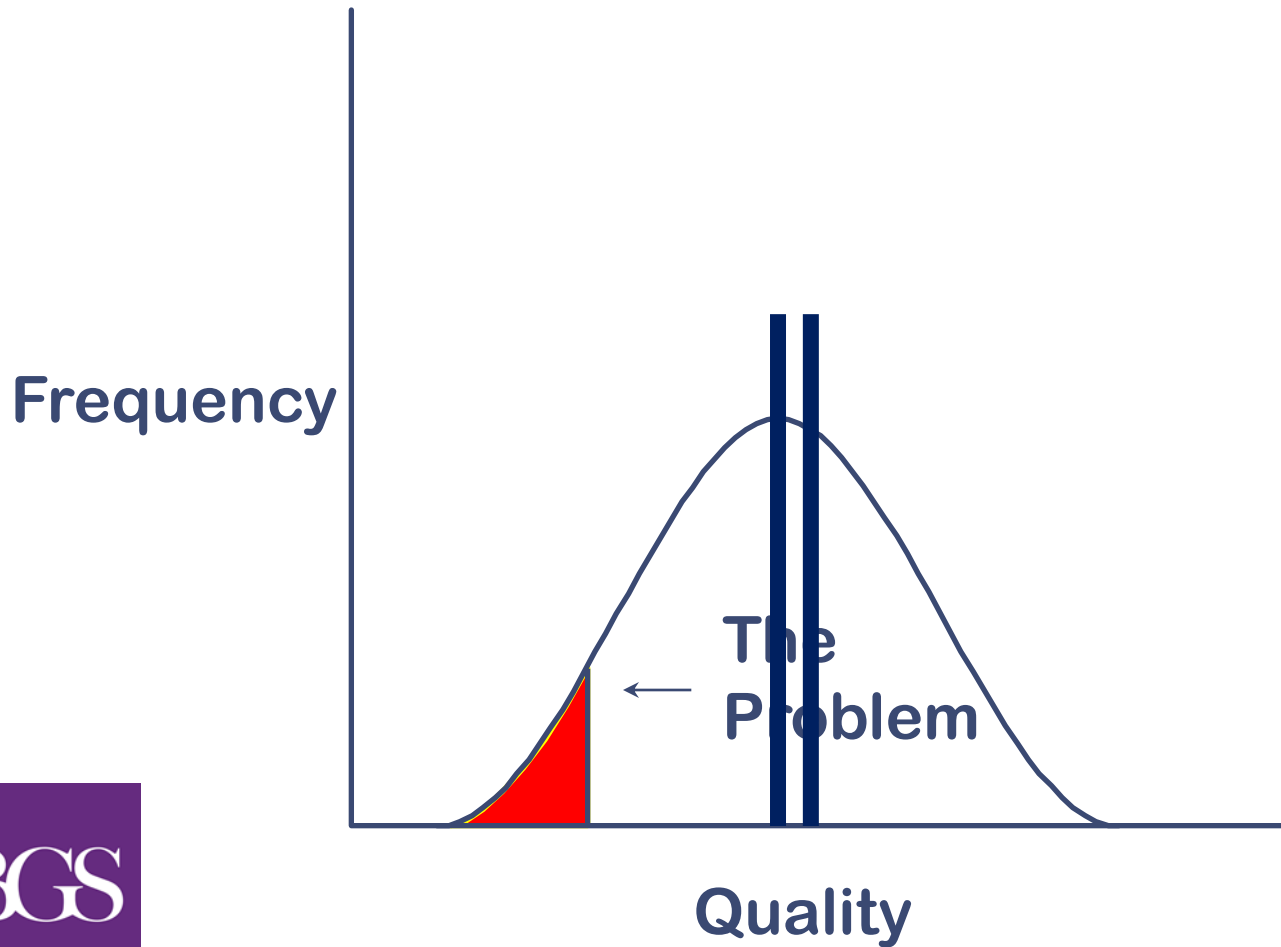
Quality: The IOM's Six Aims (2001)

High Quality care is care that is:

- Safe
- Effective
- Patient-Centered
- Timely
- Efficient
- Equitable



Model I: Bad Apples

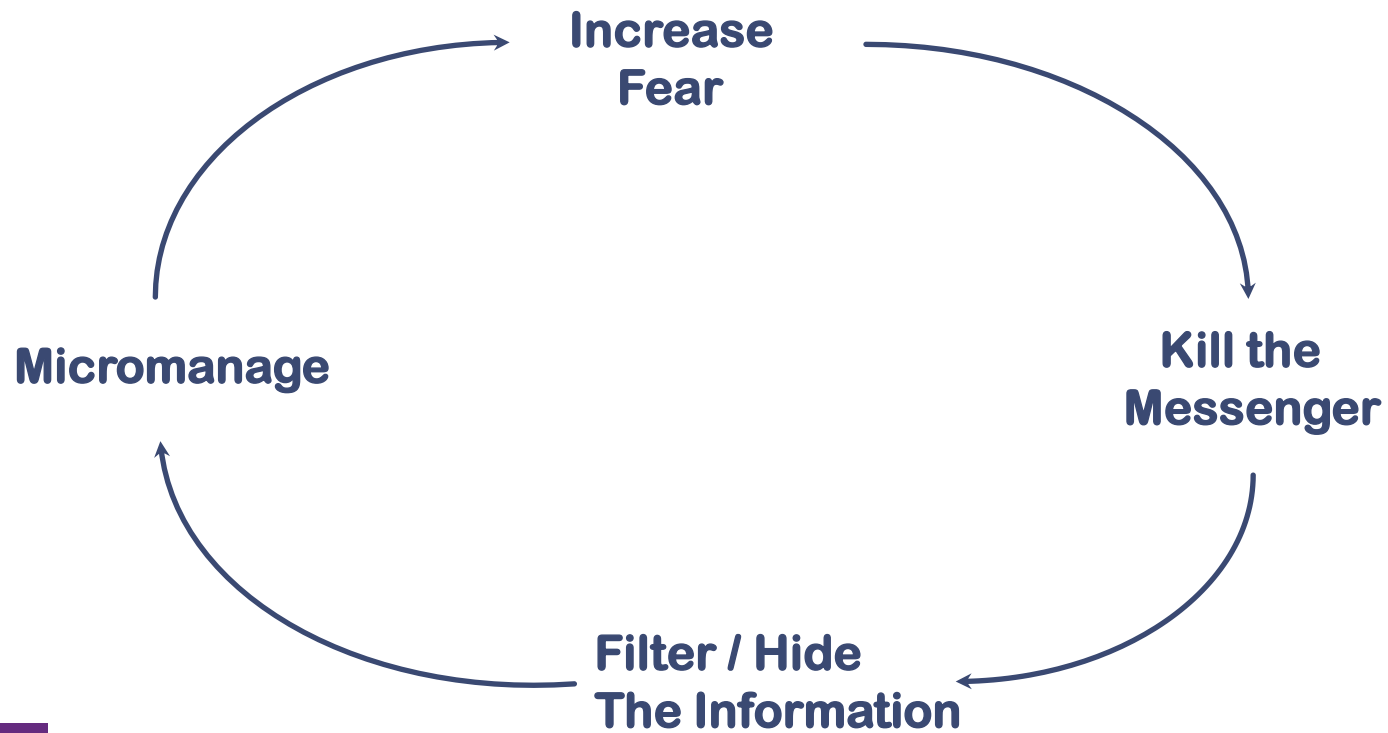


The Simple, Wrong Answer

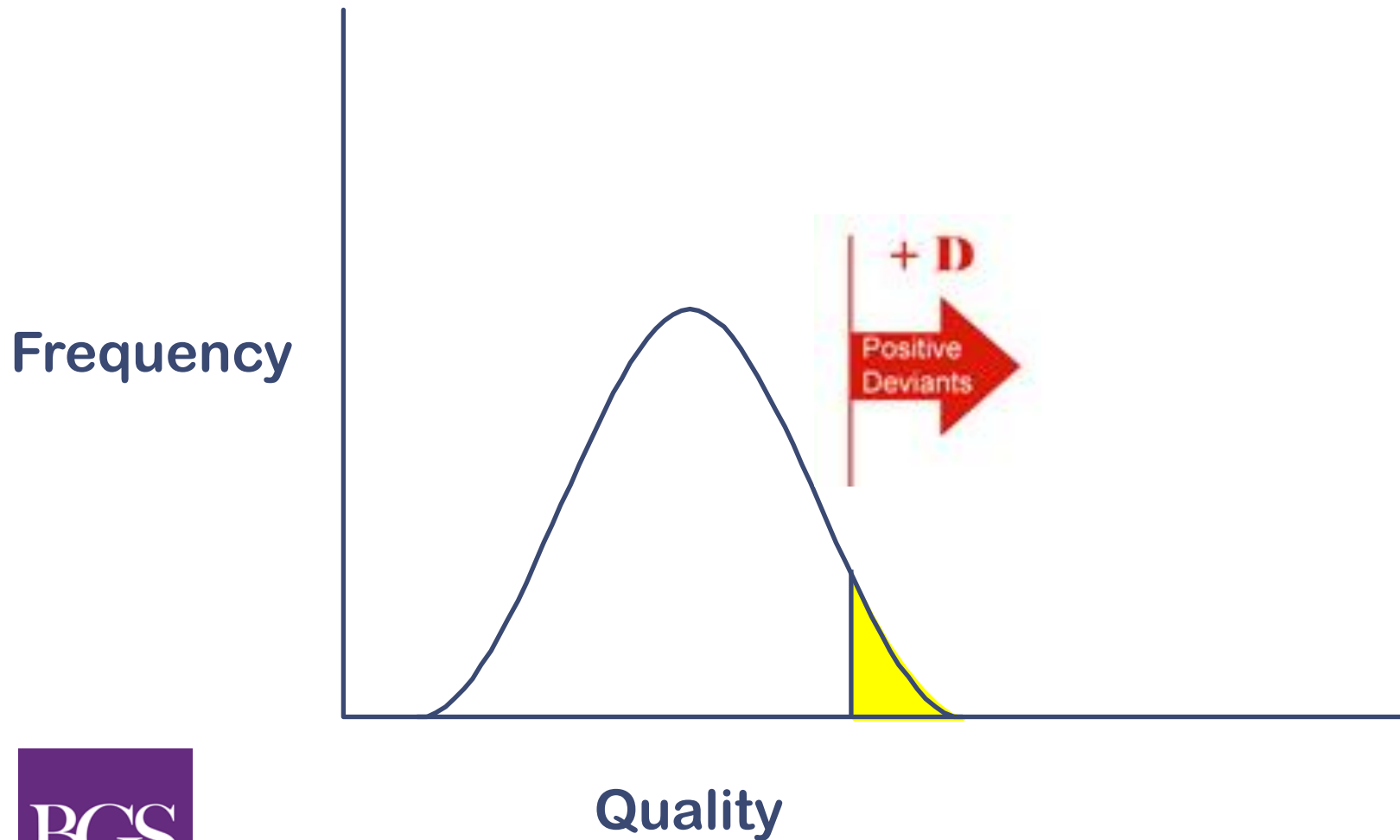
***BLAME
SOMEBODY***



The Cycle of Fear

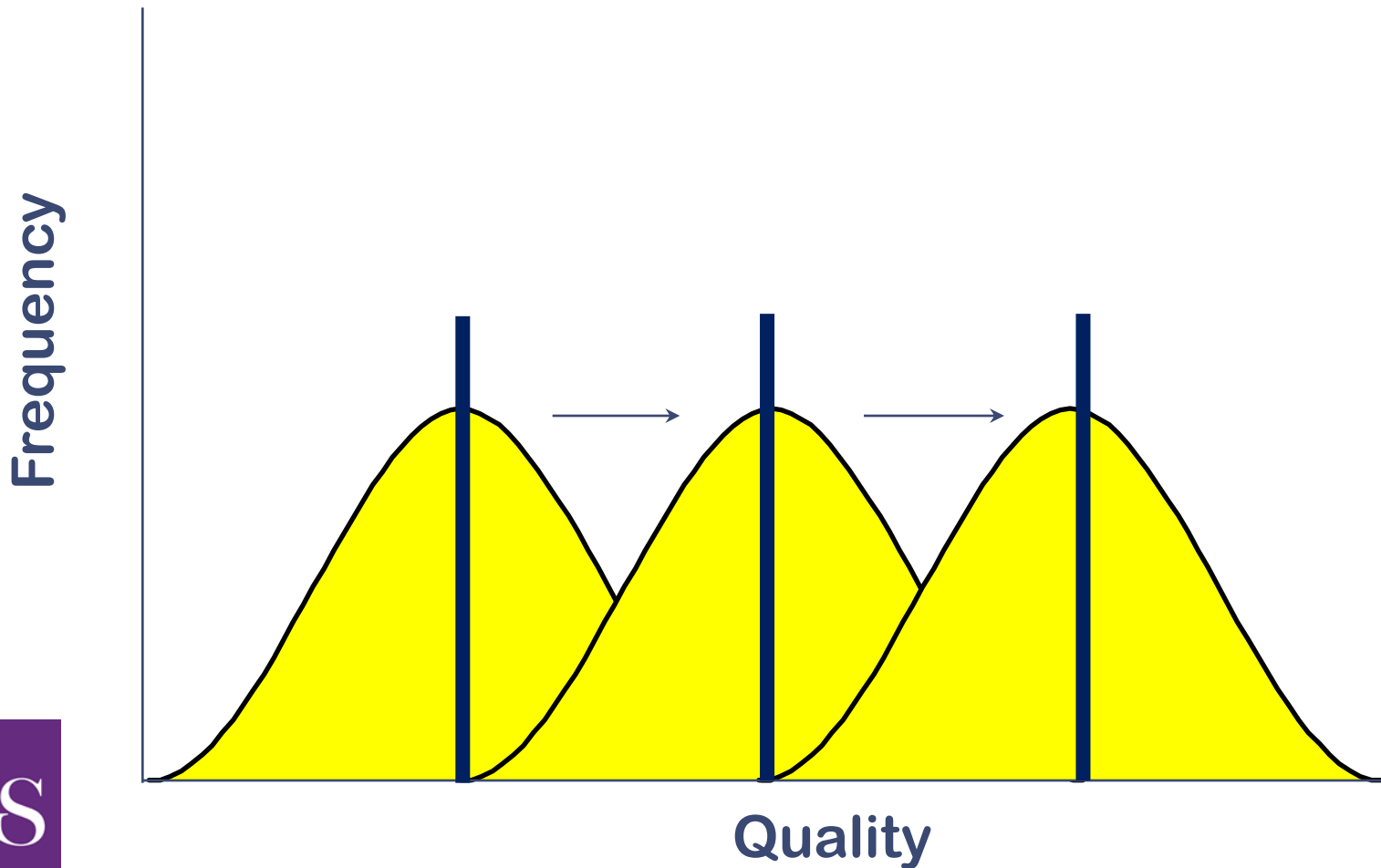


Model 2: Positive deviance

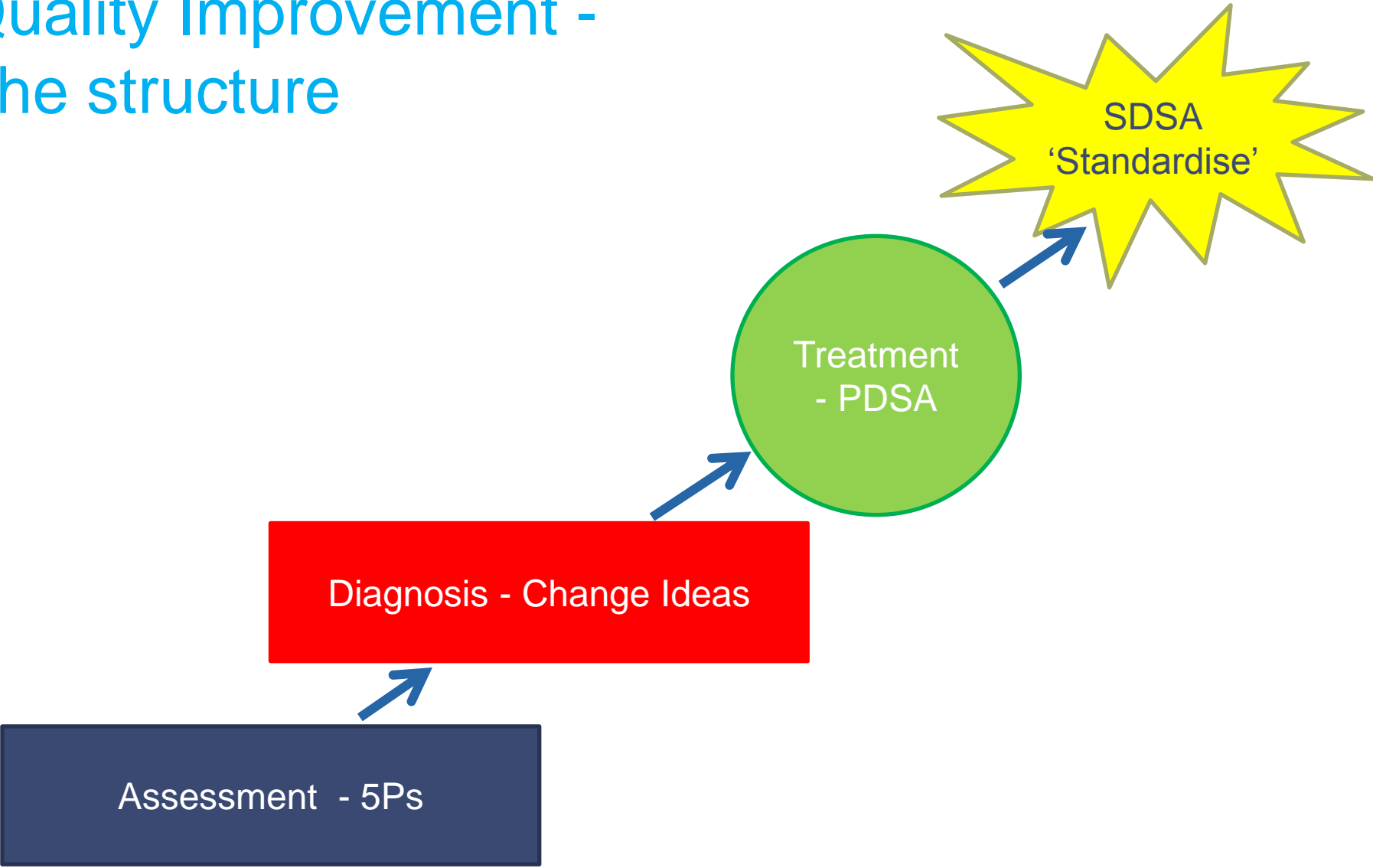


Model 2: Continuous Improvement

“Every Defect is a Treasure”



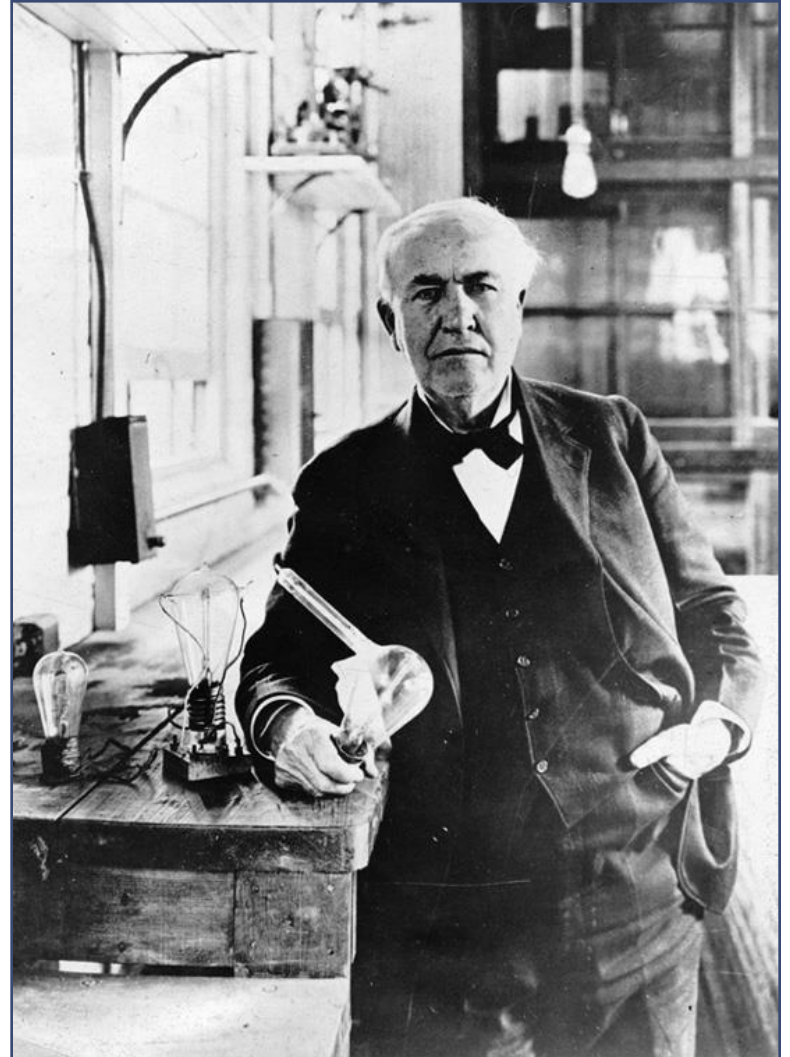
Quality Improvement - The structure



The Value of “Failed” Tests

“I did not fail one thousand times; I found one thousand ways how not to make a light bulb.”

Thomas Edison

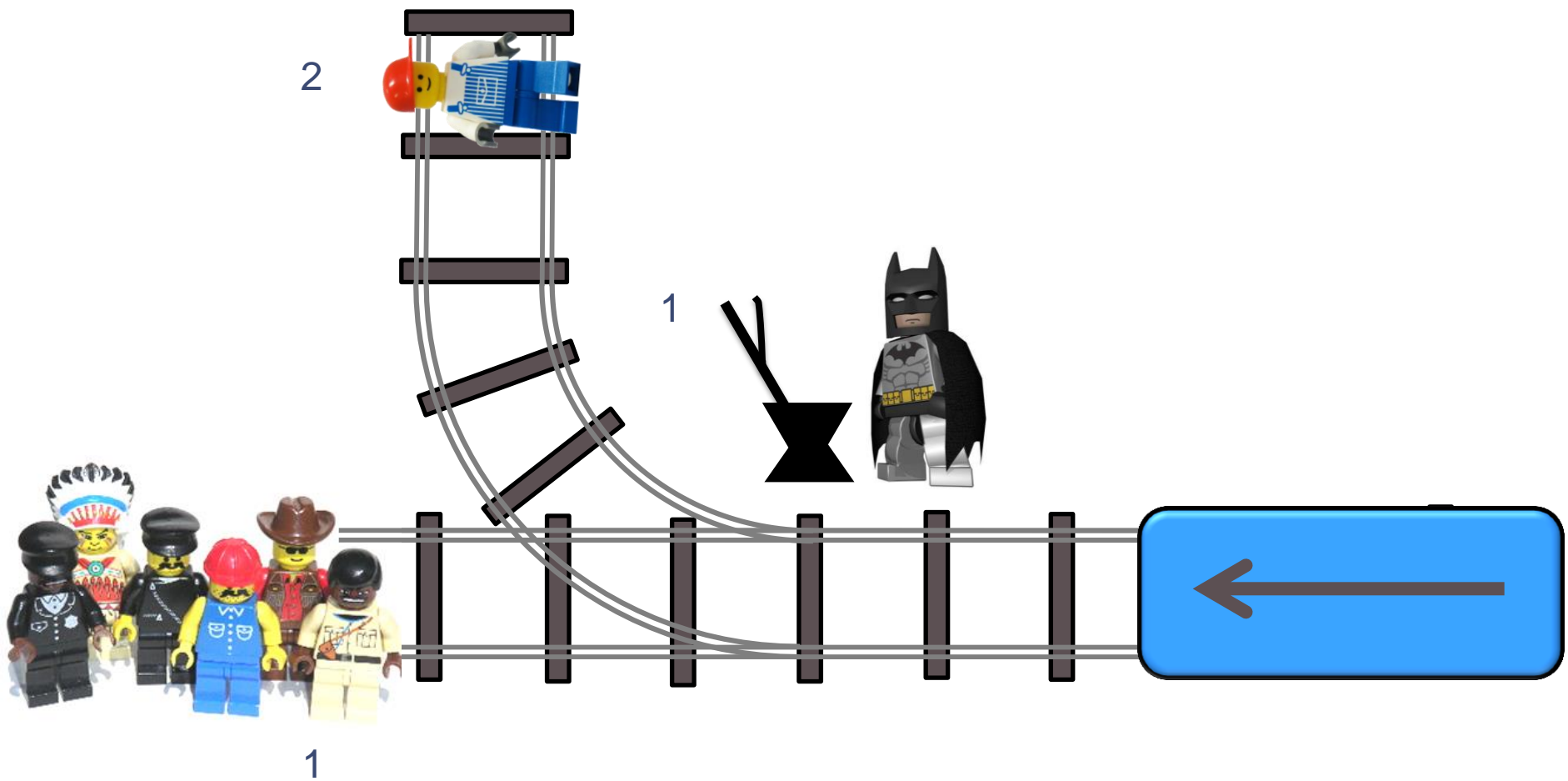


Honestly.....
go ahead

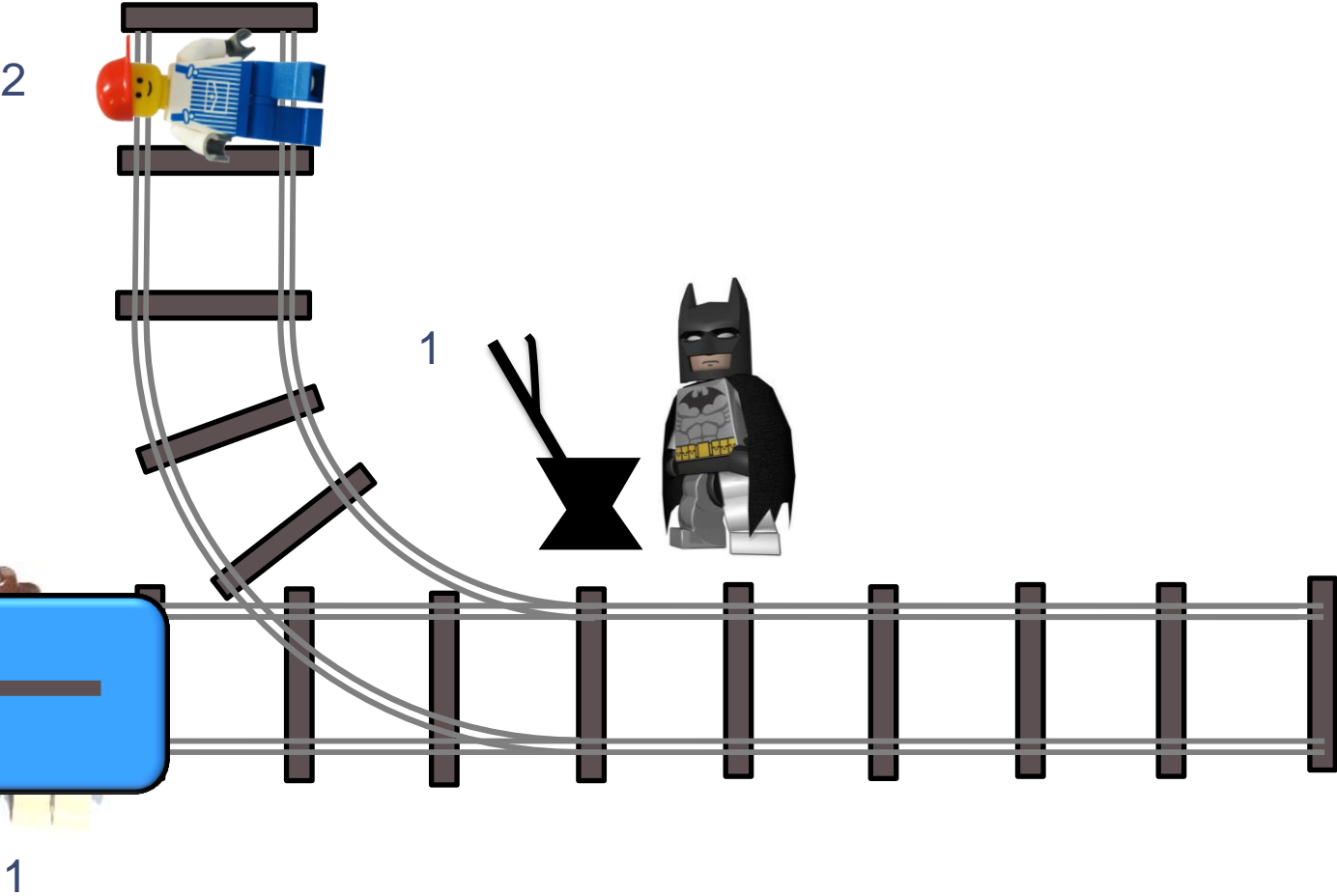
Do we really
have permission?



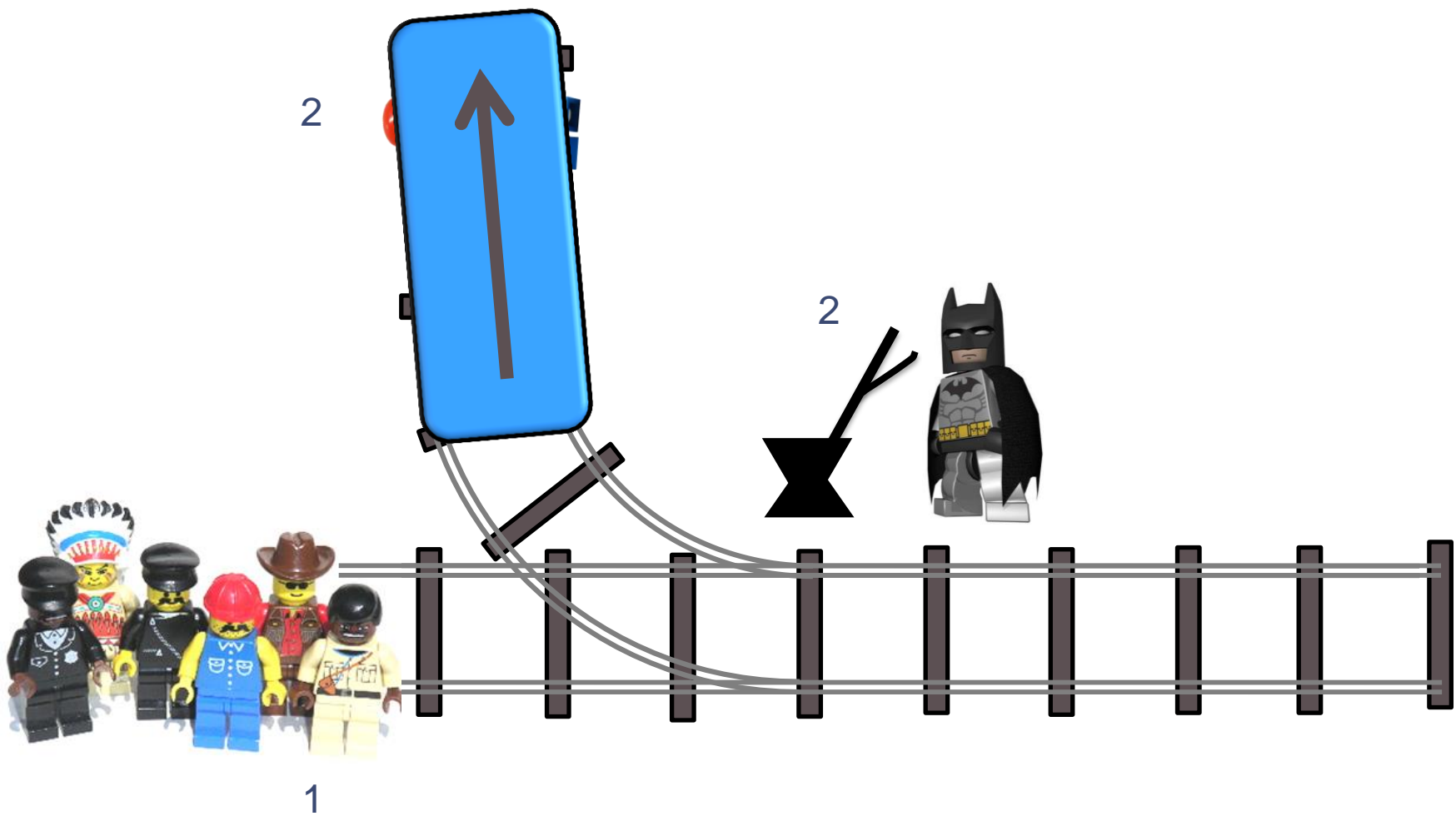
Pull the lever?



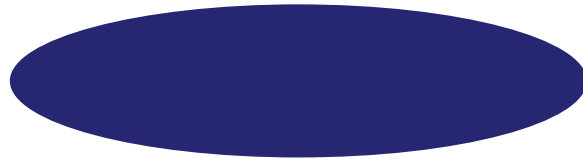
Pull the lever?

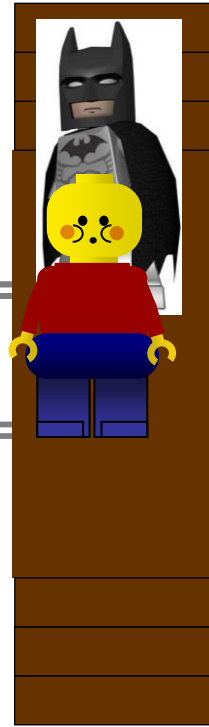


Pull the lever?

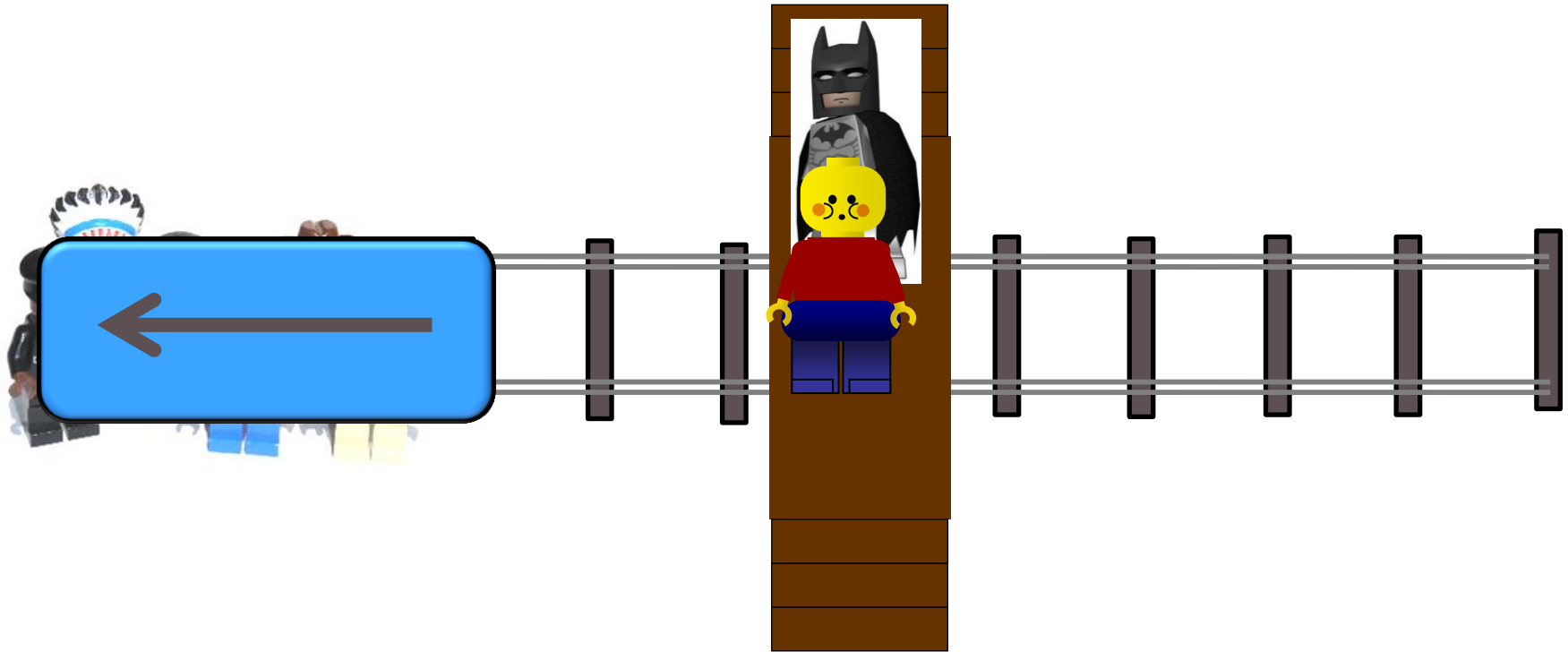


Another dilemma.....

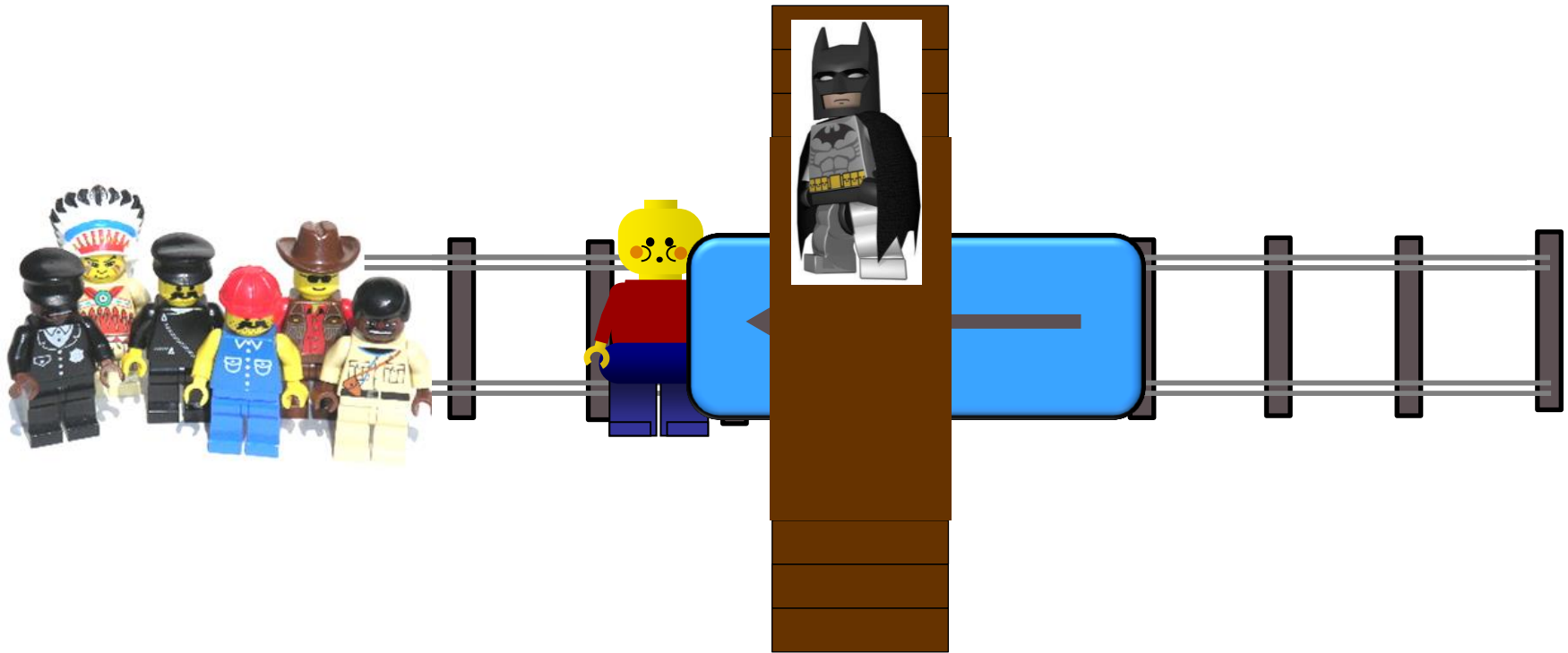




1. Do nothing?



2. Push the large person?



Coffee Break



SYSTEMS THINKING



- Step 1 – Everyone stand up
- Step 2 – Without speaking; pick two people but don't say who they are or point at them (Keep it a secret)
- Step 3 - Move to be equidistant between both of the people



Understanding Systems

- What is a “system”?
- How do we define a “system”?



Understanding Systems

- What is a “system”?



“Every system is perfectly designed to achieve the results it gets.” P Batalden

- How do we define a “system”?

A collection of parts and **processes** organised around a purpose.

Processes?

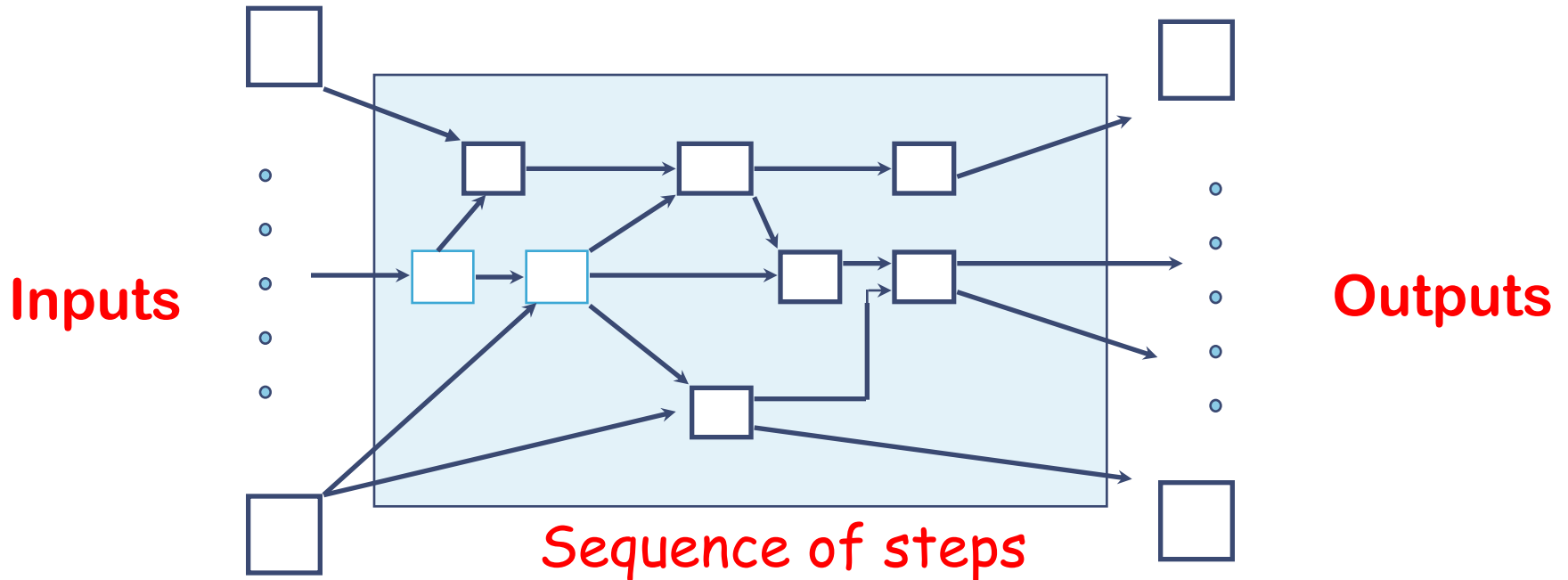
- How is a process different from a “system”?
- Can we brainstorm a series of processes which make up the “systems” we might encounter in our improvement work?



Elements of a Process

Suppliers

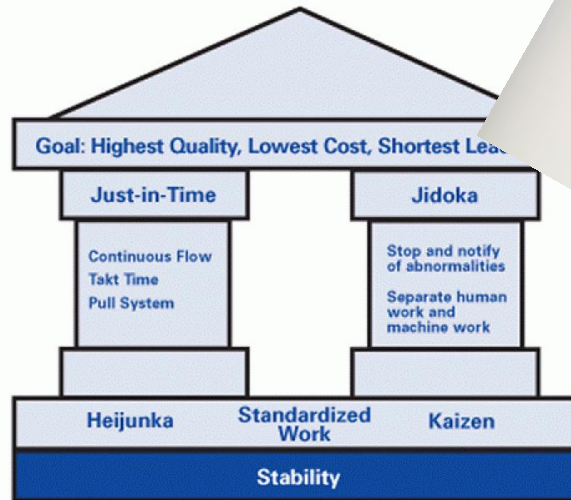
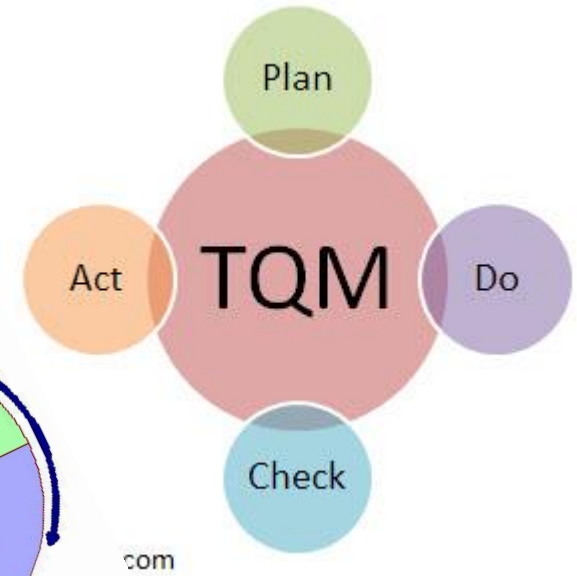
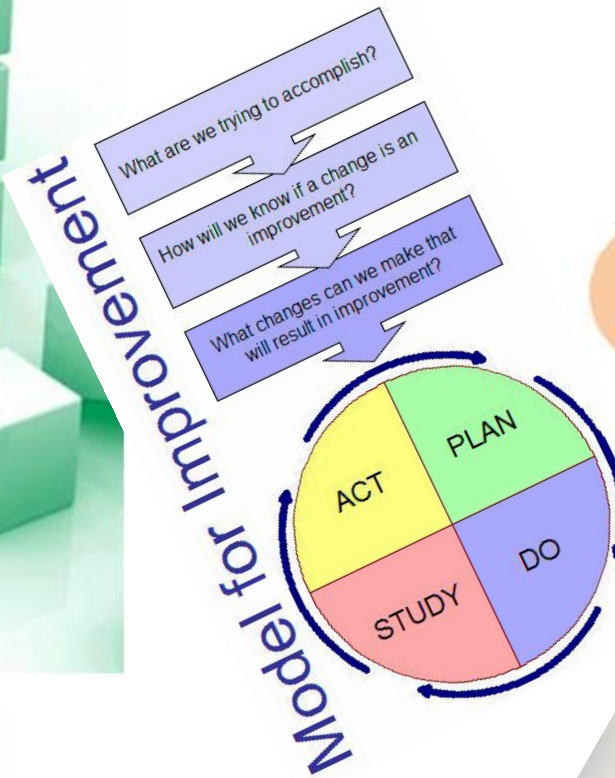
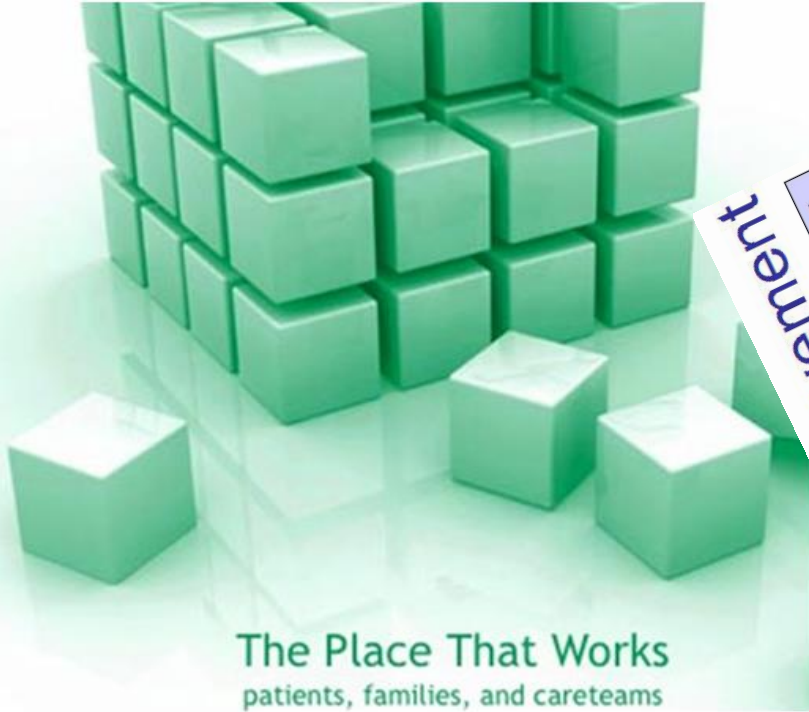
Outcomes



Thing being passed along

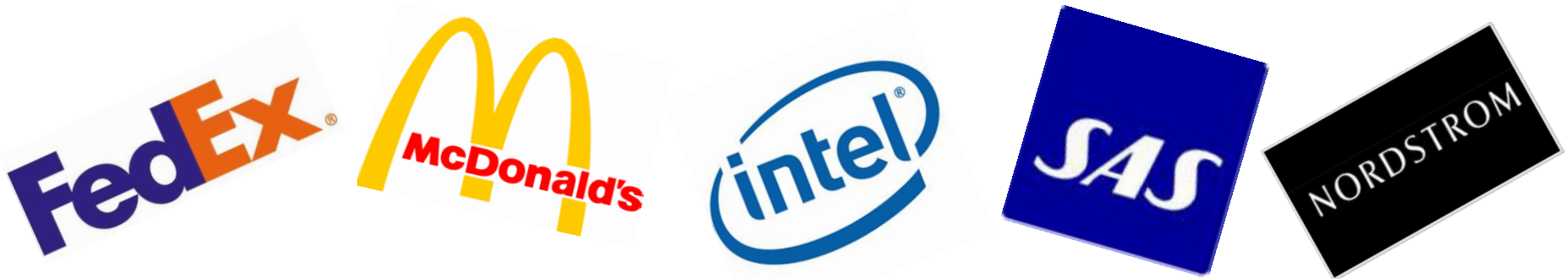
IMPROVEMENT METHODS





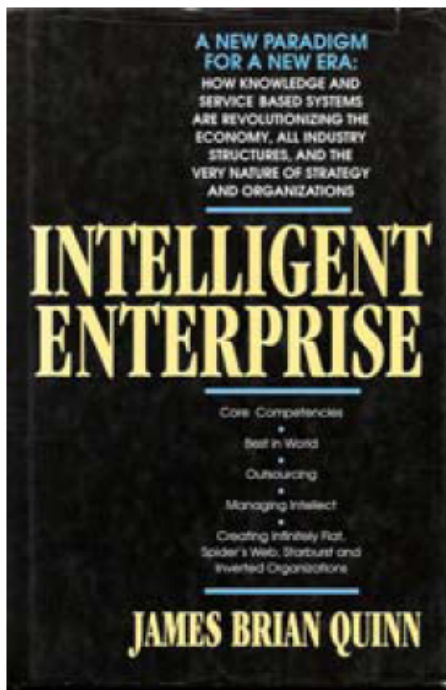
Microsystems

- 1992 – Quinn – *'Intelligent Enterprise'*
- Studied the 'best of the best'



- They are organised around the frontline interface with the customer
- *'Smallest replicable unit'*

“Why are some service organizations enjoying explosive growth and margins?”



He found that the “big” focus on the “smallest replicable units” AKA “microsystems”

- Front office fixated on front line perfection
- Quality, efficiency, timeliness, service excellence designed into front line
- Value and loyalty created at customer-provider interface

Microsystems

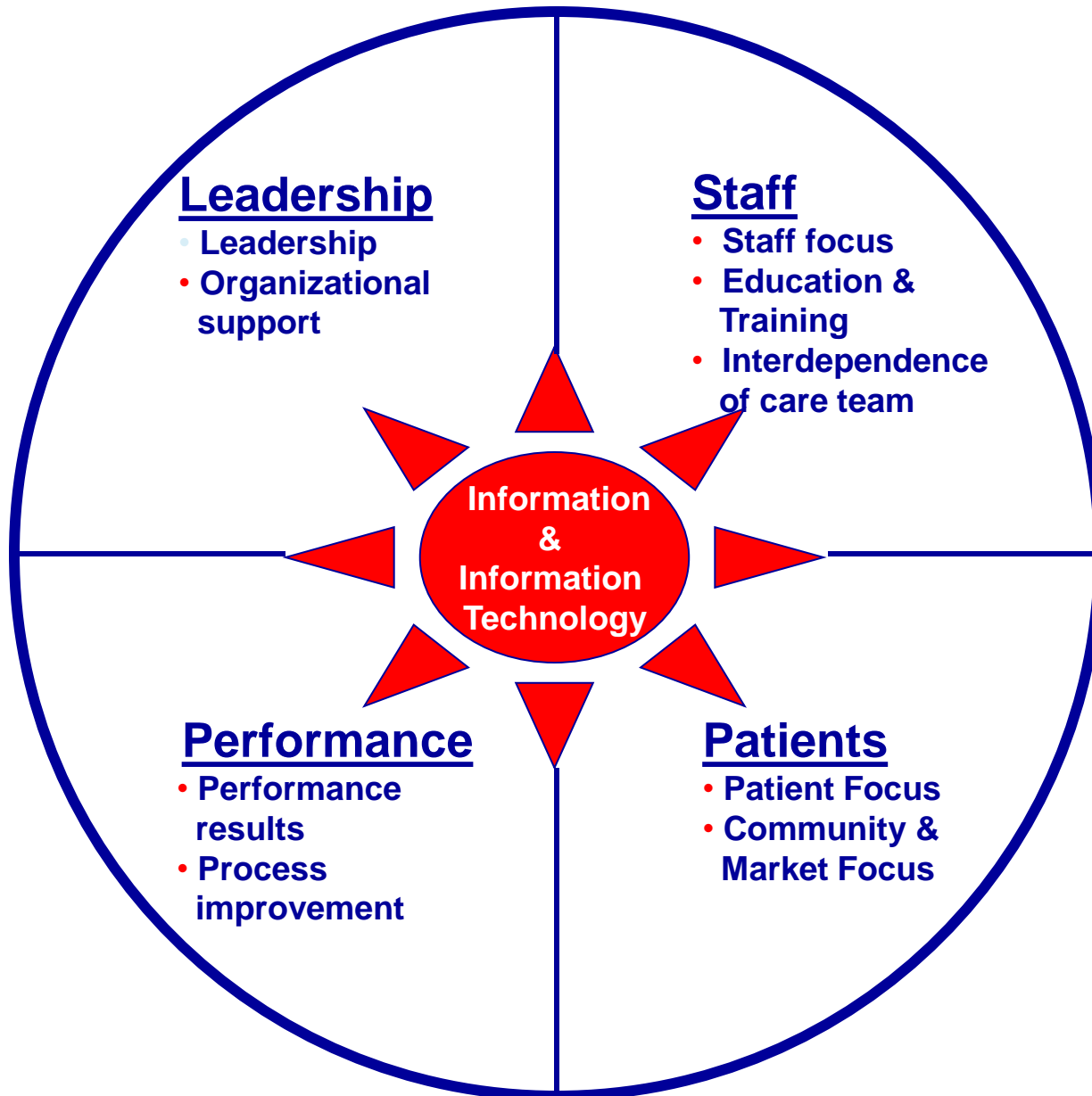
- Nelson, Batalden, Godfrey 2000 – 2007

THE DARTMOUTH INSTITUTE
FOR HEALTH POLICY & CLINICAL PRACTICE



- Looked at the characteristics of high performing clinical microsystems
- Formulated a curriculum to *develop* high performing microsystems

High Performing Clinical Microsystems



What is a Clinical Microsystem?

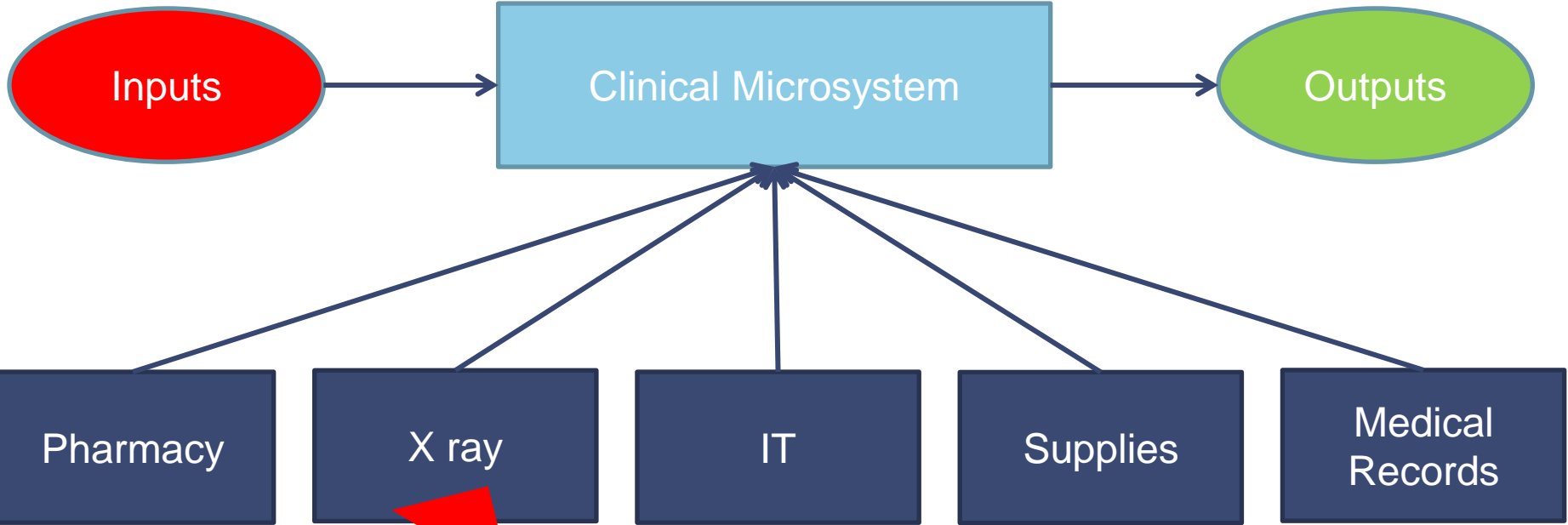
- ‘The Place where Patients, Families and Clinical Teams meet’
- The essential frontline building blocks of any healthcare system. **It is where the quality is delivered.**

It's where everything happens with, for and to the patient and family

Supporting Microsystems

**People with
Healthcare
Needs**

**People with
Healthcare
Needs Met**



Supporting Microsystems

Have Many Roles:

Within their **own** microsystem
and as ***members of other***
microsystems



Microsystems are the *building blocks* that come together to form Macro-organizations

System Levels

Example

Macrosystem

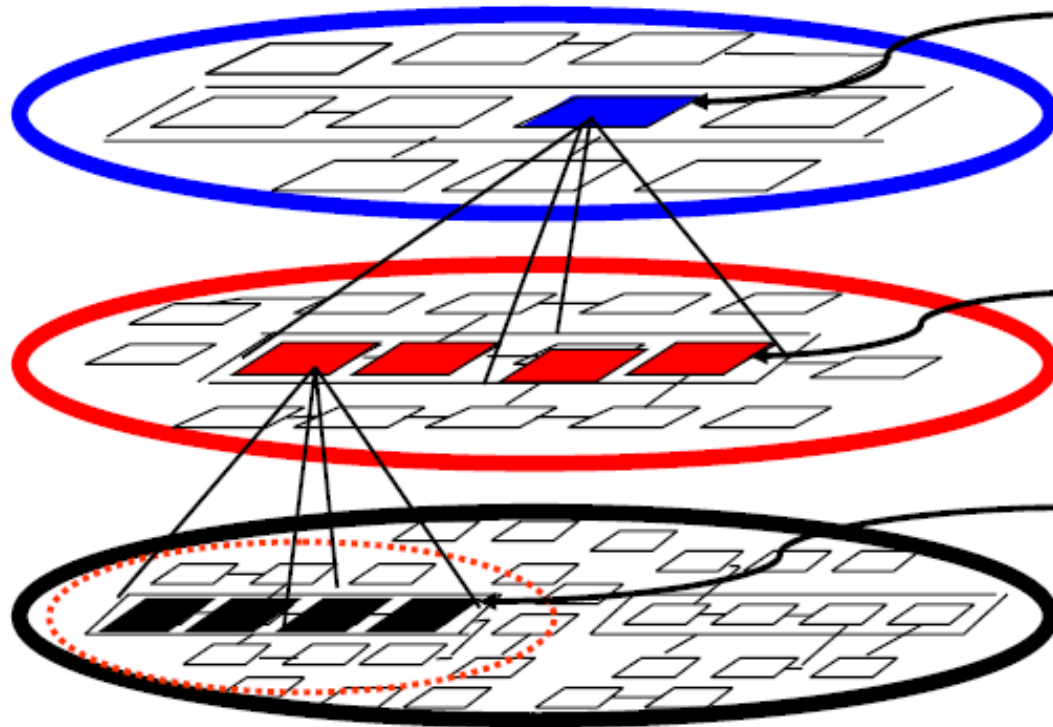
STH

Mesosystem

Chest
Medicine

Microsystem

Cystic
Fibrosis
Outpatient
Clinic



The health system can be no better than the small systems ...





Is this a Microsystem?

- Some of you have a red card
- Read out in turn
- Is this a Microsystem?

“The principal task of the mesosystem is to enable the work of the microsystems for the population(s) of patients served.”

Paul Batalden



THE MICROSYSTEMS APPROACH TO IMPROVEMENT - 'OWNERSHIP' VS. 'BUY IN'

These are not the same thing

Why?



‘Ownership’

- Is where you share the ownership of an idea, a decision, an action plan.
- You have participated in it’s development, you have chosen it of your own accord and you endorse it.
- You understand it and believe in it and are willing to implement it

'Buy In'

'Buy – In' is the opposite

- Someone else has done the development, the thinking
- They are now telling you or convincing you to implement their ideas

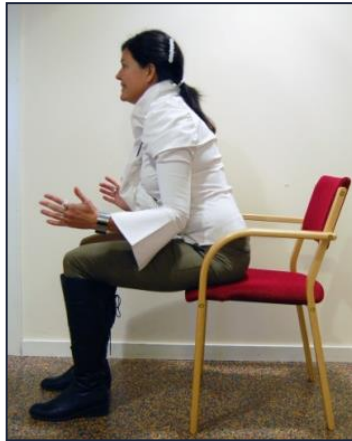


Microsystems is about
ownership

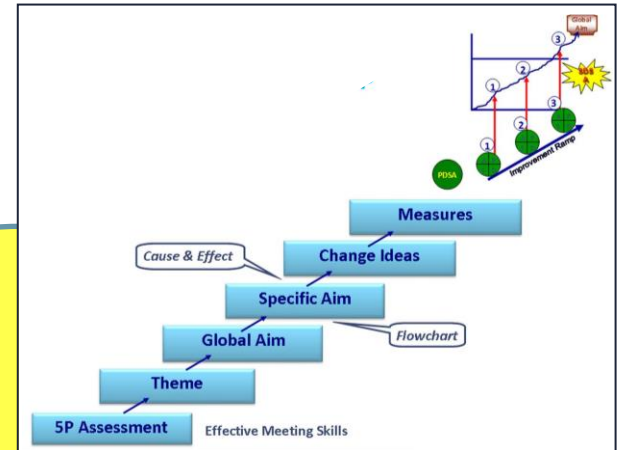
**REDESIGN FROM
THE INSIDE - OUT**



Improving Microsystems - Elements

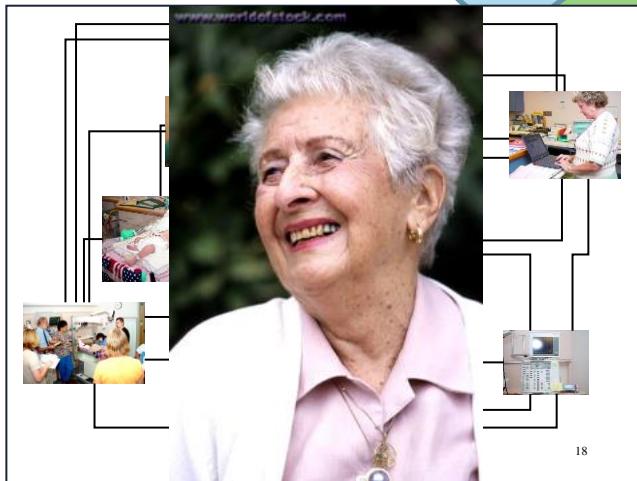


Team Coaching



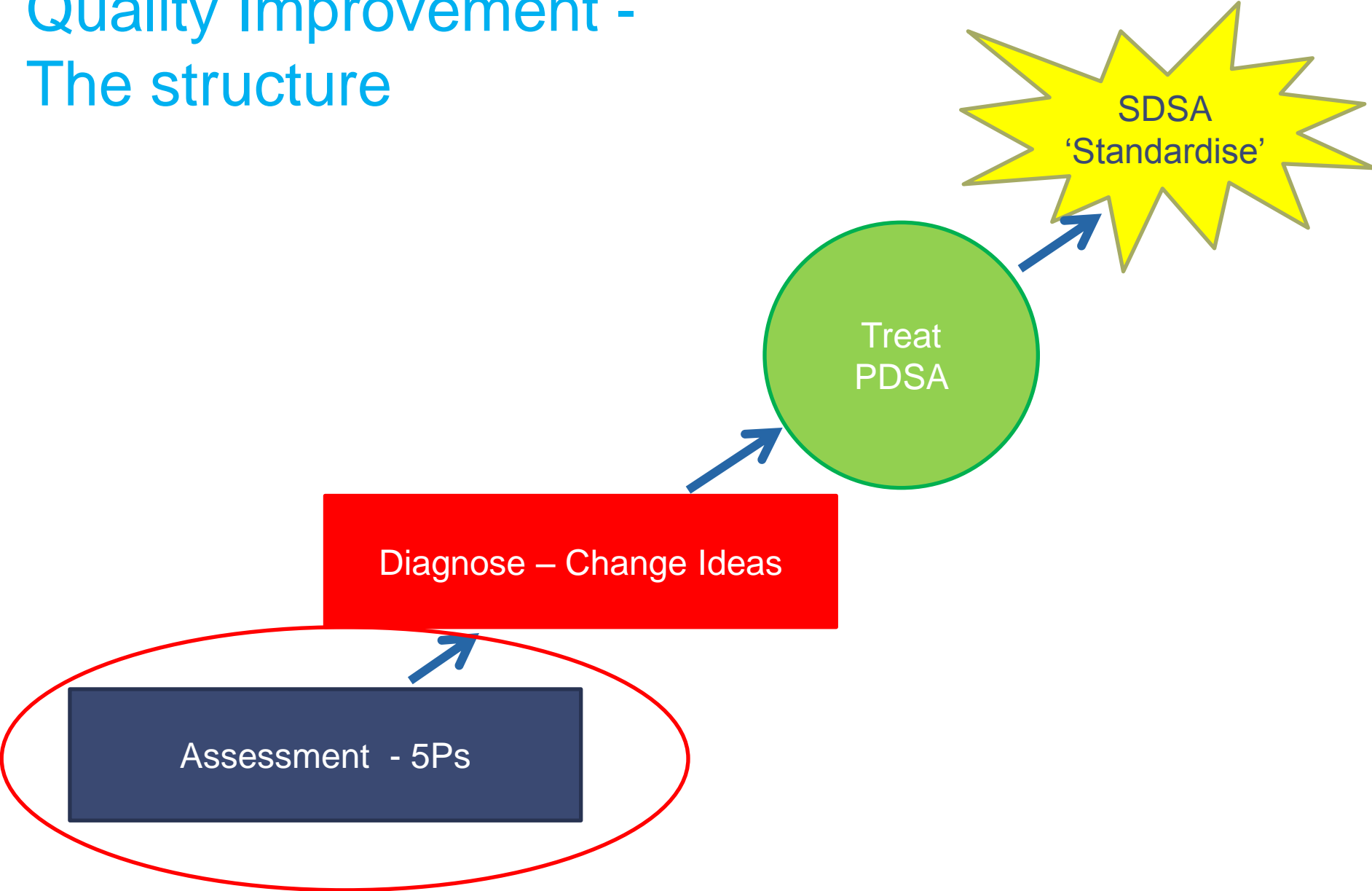
QI

Improvement Science



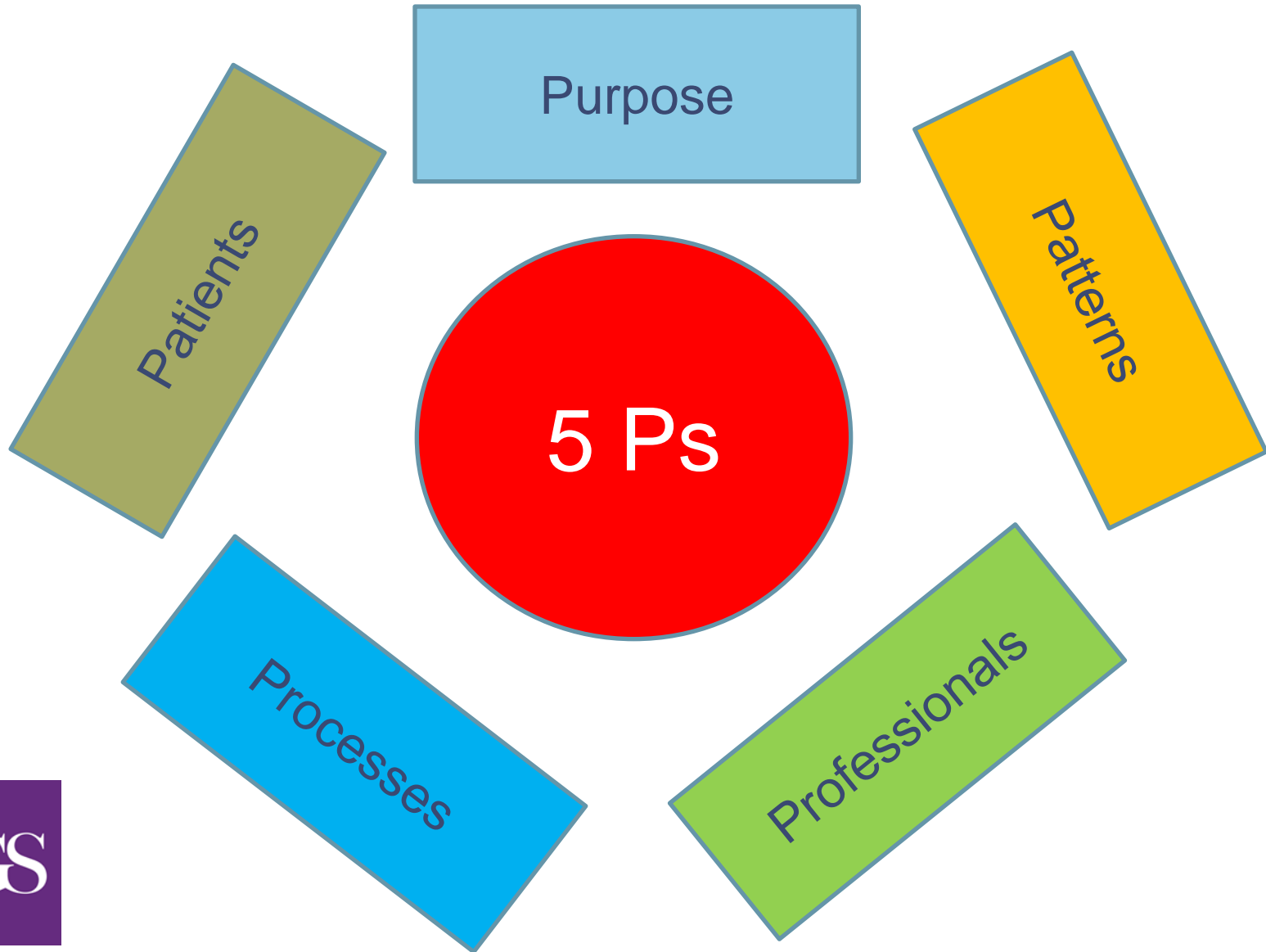
Microsystem

Quality Improvement - The structure



Assessing the system

- We need data to understand the system



Purpose -

- Why does your microsystem exist?
- What is the purpose of your efforts and work?

‘To enable people with CF to live as normal a life as possible’

To provide high quality care in an environment that promotes patient and employee satisfaction.



Patients

- What is the patient age distribution?
- Where do your patients come from?
- Where do they go after interacting with your microsystem?
- How satisfied are they?
- Do you notice patterns based on seasons in your patient volumes and acuity?
- What are the top diagnoses?

Patients - Who is Evie?

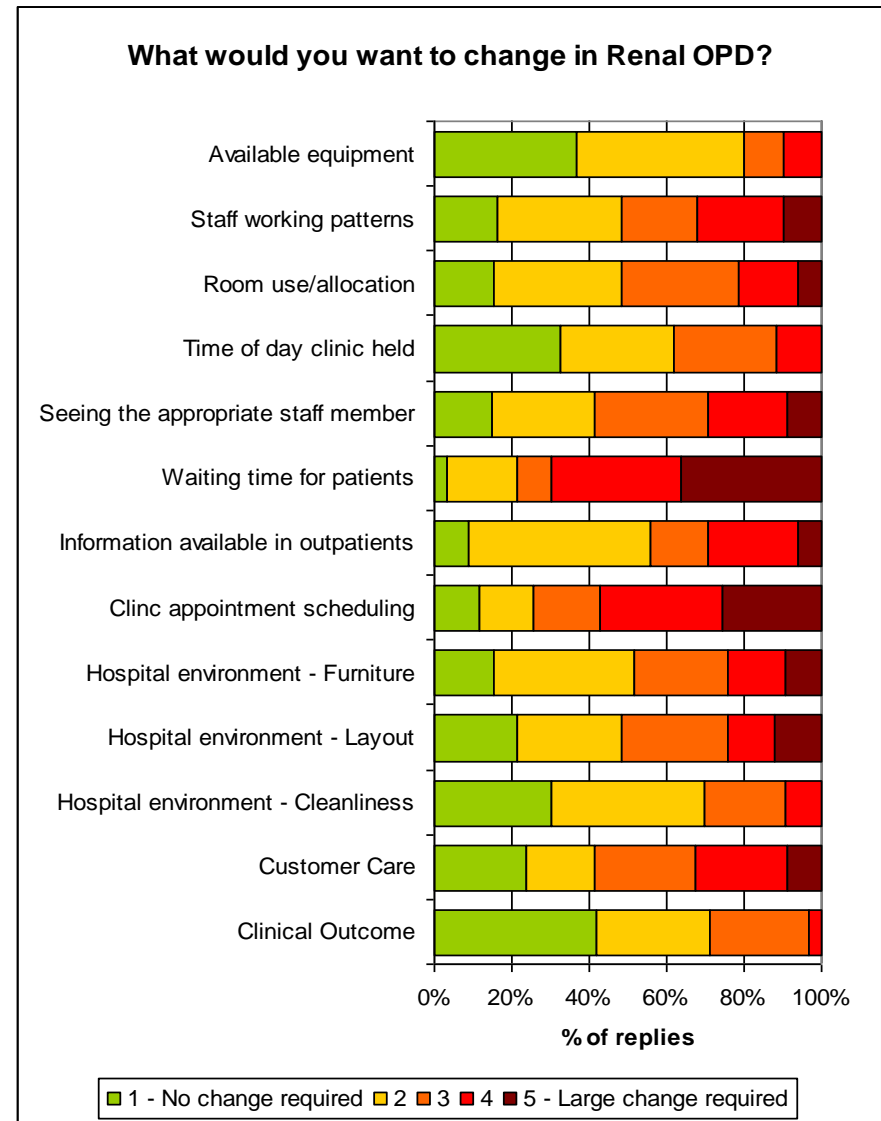
A fictional typical falls patient who is

- 83 years old
- Lives on her own
- Widowed 5 years ago
- Broke her wrist in a fall 6 years ago
- This year has started to have dizzy episodes and has fallen 5 times
- Her GP has referred her to the Falls clinic



Professionals

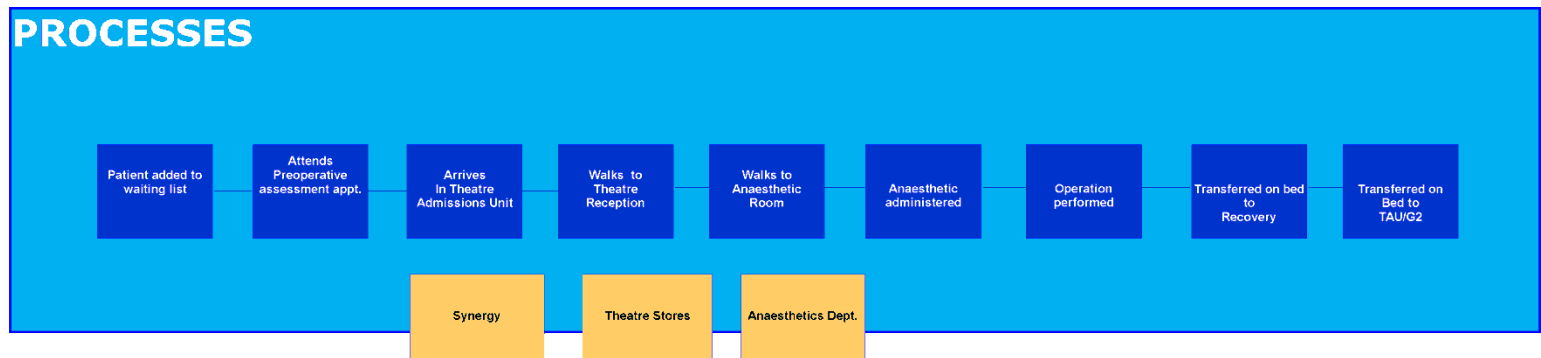
- Who does what and when in your microsystem?
- Is the right person doing the right activity at the right time?
- What do staff think could be improved?
- What is the level of staff satisfaction?



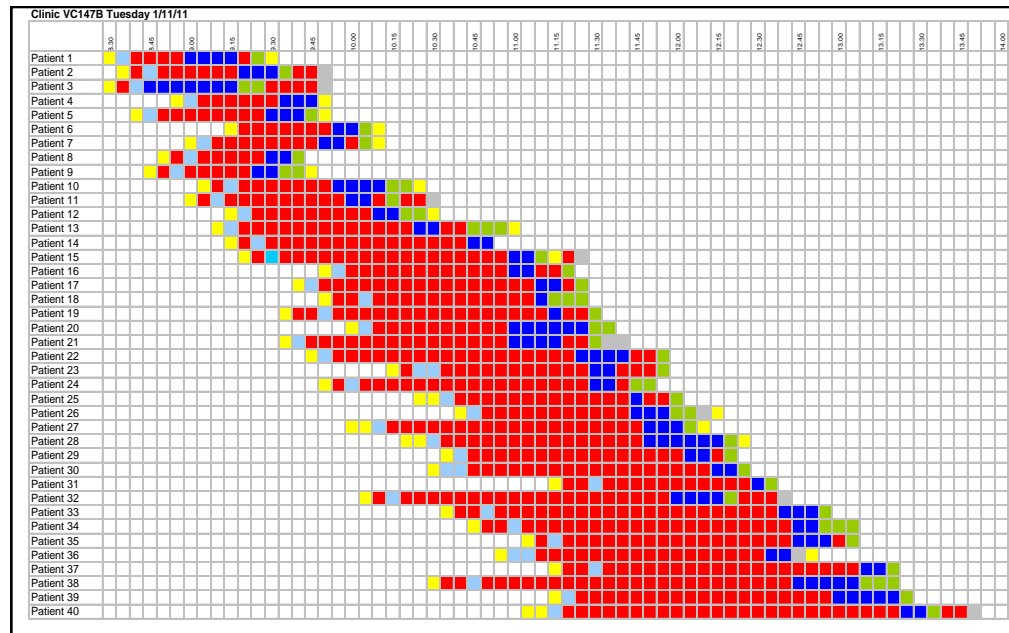
Processes

- What are our key processes that patients go through?
- What help do they depend on from other support/clinical microsystems?

Create a high level process map at the 5Ps stage
(7-10 boxes)



Patterns



- What patterns exist in your microsystem?
- What is the variation across the day, week,
- How often do you meet to discuss patient care, safety and quality?
- What are your results and health outcomes?

Example 5Ps - Pulmonary Vascular Disease Unit - RHH



PATIENTS

Patients' assessment and management in relation to PQA:

- Height & weight
- ECG
- ECG observation
- ECG review
- ECG audit

ECG Patients for Review 2012

Value of assessment and management in relation to PQA

PURPOSE

The purpose of PQA is to prepare and make the home of the patient for anaesthesia and surgery, working with patients to ensure appropriate anaesthesia and use of resources.

PROCESSES

PQA Flowchart

ECG 2012

ECG 2012

PROFESSIONALS

Professionals involved in PQA

Professionals involved in PQA

PATTERNS

Patterns of PQA

Patterns of PQA

Patterns of PQA

staff

How to create the 5Ps - tips

- Don't spend too long in this phase!
- Some Ps can be done in weekly meetings (Purpose, Processes)
- MCA has useful templates
- Doesn't have to be pretty
- Use as much existing data, resources and information support as is available (ecat, surveys, reports, datix, information services etc.)

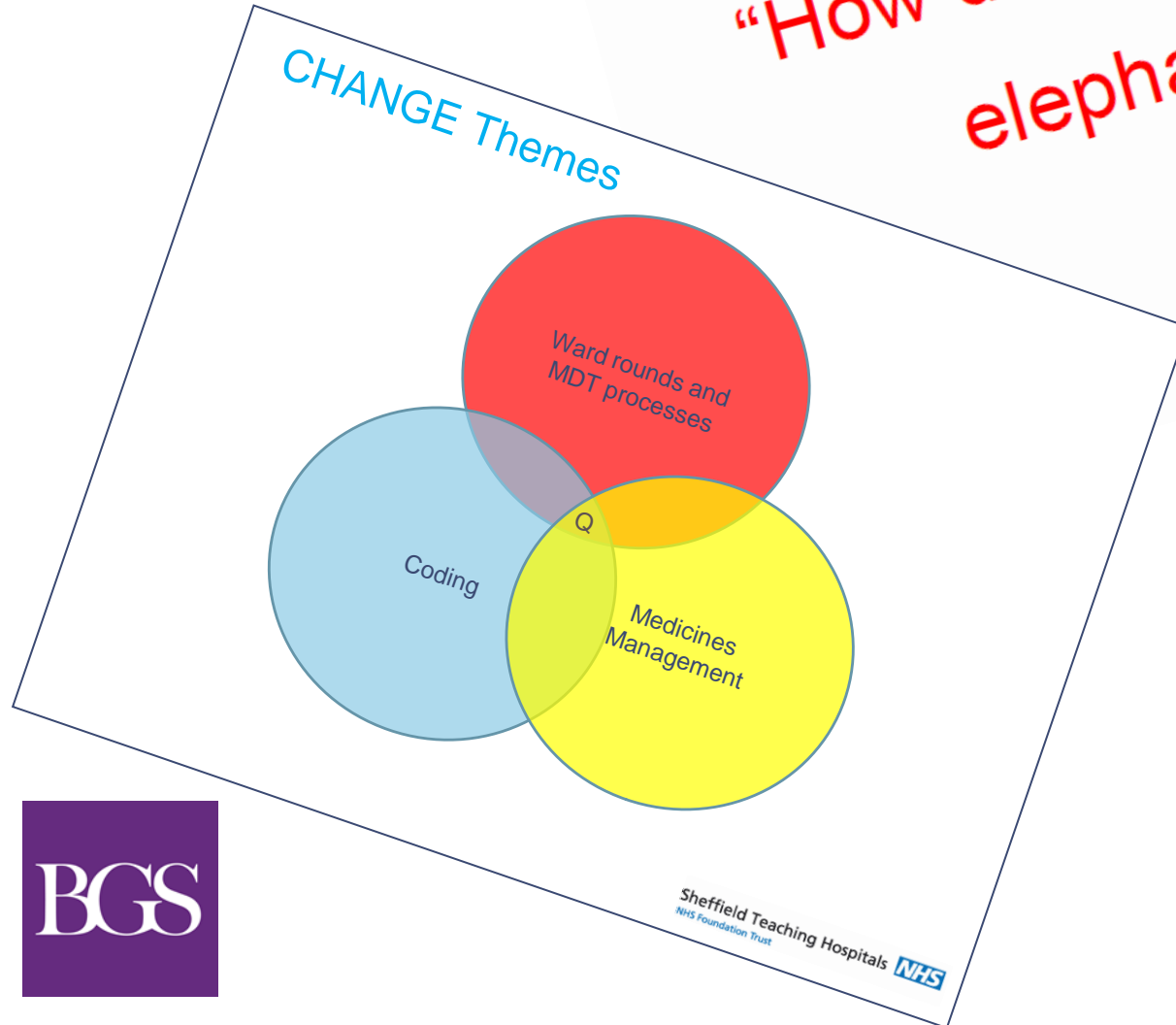
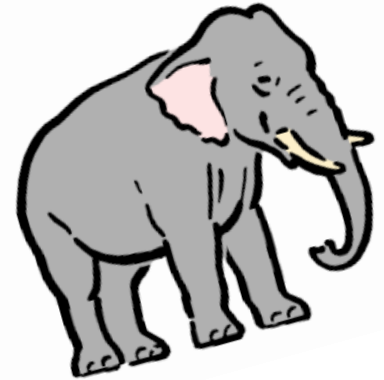
How to create the 5Ps - tips

Remember that the aim of the 5Ps is.....

To understand the system well enough to generate your first
‘Theme’ for improvement

Themes For Improvement

“How do you eat an elephant?”



Global Aim Statement

- Clarifies and connects the improvement theme to your work
- The starting point
- Sets the scope
- Increasing clarity of focus



Global Aim

We aim to improve the discharge process for all patients who are discharged from Ward 3 in the Spinal Injuries Unit.

The process between with the first MDT meeting where a patient is discussed following admission (usually from Ward 1) and ends with the patient arriving at their discharge destination

By working on this process, we expect to :

- Improve communication between the MDT
- Reduce stress for patients, carers and staff
 - Improve transfer of care
 - Reduce staff time to achieve discharge

It is important to work on this now because:

- It is a logical step for improvement
 - It can't carry on as it is
 - It is important for patients
 - We will see big benefits
- It involves lots of members from the MDT
- Discharge is often the last involvement with the ward (lasting memory)

Global Aim

We aim to improve the ward round on the Wards 2 + 3 +4

The process begins after the board round and ends when all patients have been seen.

By working on this process, we expect to :

- To improve patient experience/satisfaction/outcome
 - Improve consistency of medical review
 - Improve efficiency of ward round
- Improve communication of decisions made at ward round
 - Improve VTE compliance
 - Reduce the length of ward round
- Reduce time taken for TTOs to be completed
 - Reduce length of stay

It is important to work on this now because:

- VTE compliance is currently not meeting the required standard
 - The ward round needs refreshing
- There is an opportunity with new medical staff joining the team
- Patients are waiting too long for TTOs and to be able to go home
 - Ward I opening June 2020

Template for writing a global aim

Global Aim Statement

Create an aim statement that will help keep your focus clear and your work productive:

We aim to improve: _____
(Name the process)

In: _____
(Clinical location in which process is embedded)

The process begins with: _____
(Name where the process begins)

The process ends with: _____
(Name the ending point of the process)

By working on the process, we expect: _____
(List benefits)

It is important to work on this now because: _____
(List imperatives)

Aim Statements

- **Global** aim statement ... a great place to start
- **Specific** aim statement ... a great place to get to

Lunch Break

Be back at 14.10 please



Paper Airplane Factory

- 4 people per production line
- Customers' orders for 18 airplanes
- Build as many as you can in 5 minutes
- Must be delivered in the same sequence as ordered

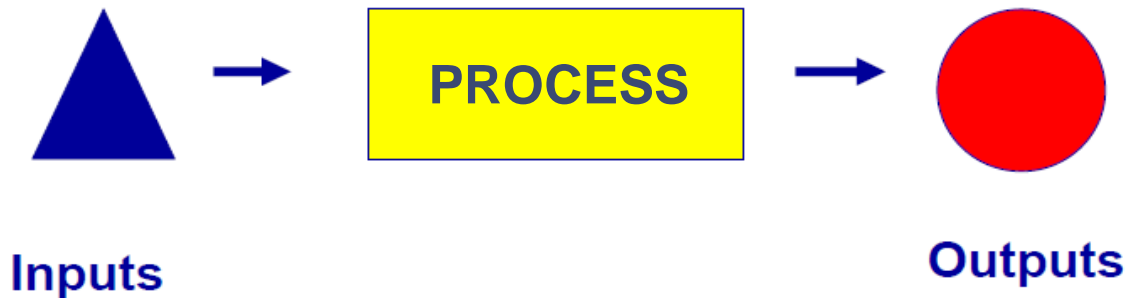


PROCESS MAPPING



Definition of a Process:

A series of work activities which transform inputs into outputs for the benefit of someone.



Processes

“Every system is perfectly designed to get the results it gets”

Paul B. Batalden

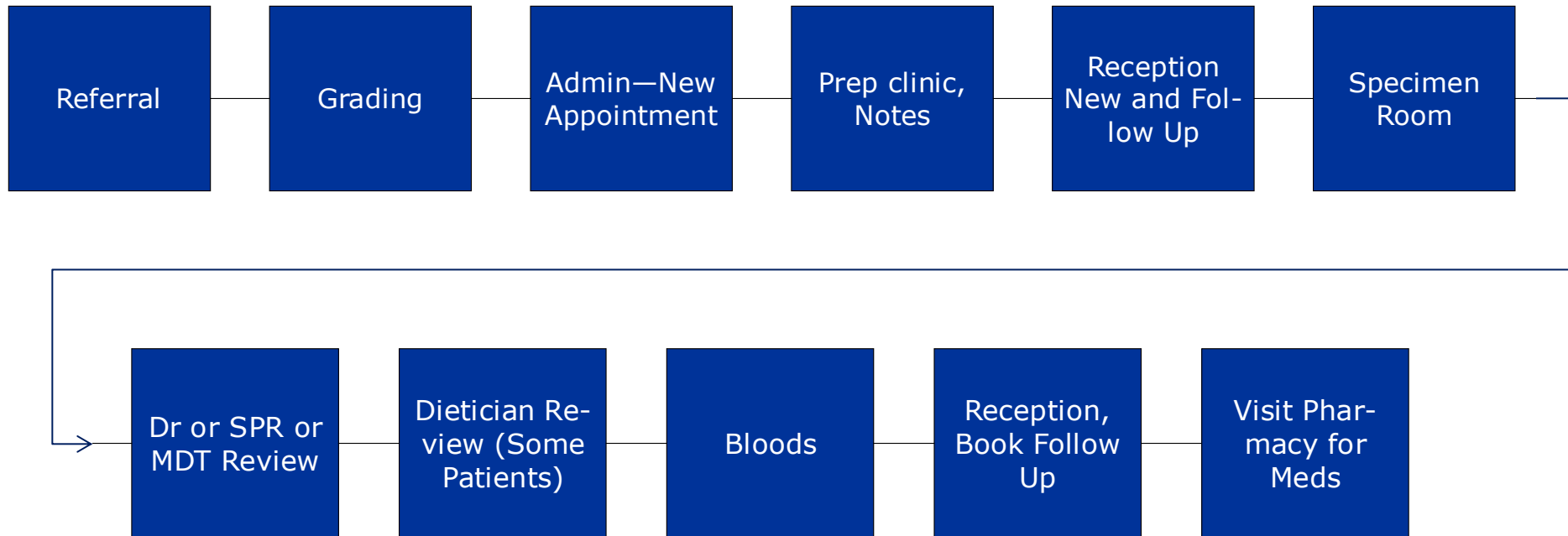


Process Mapping



- Simple exercise.
- Picture of the sequence of steps in the process.
- Opportunity to bring multidisciplinary teams together.
- Identify what actually happens now in a process.
- Overview of how complicated the process can be for patients.

High Level Example – Renal OPD



Analyse the process

- Number of steps
- Order
- Transfer of 'object' from one person to another (loss and probability of error)
- Delays
- Added Value
- Bottlenecks

Added 'value'

At the workshop we reviewed our current process...

For each step we considered....

- Would Evie experience it?
- Would Evie want it to happen?
- Would Evie care if we changed it?

Yes - Process step meets these 3 criteria

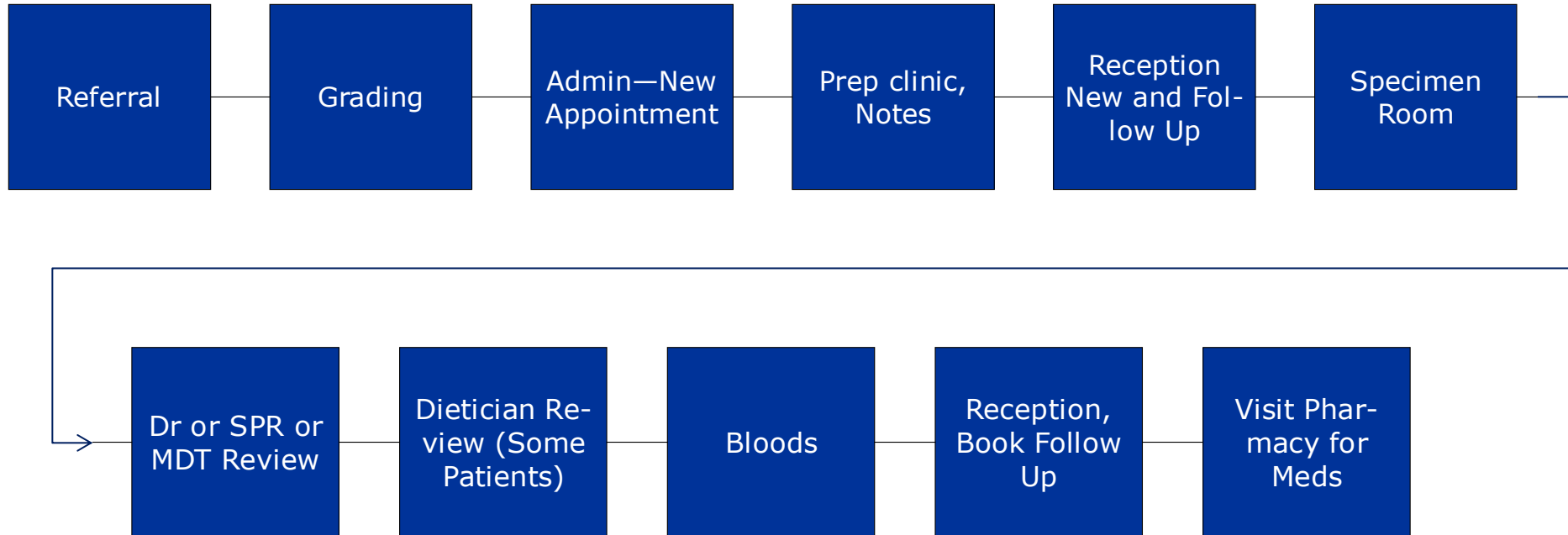
No - The Process step doesn't meet these criteria and could be improved



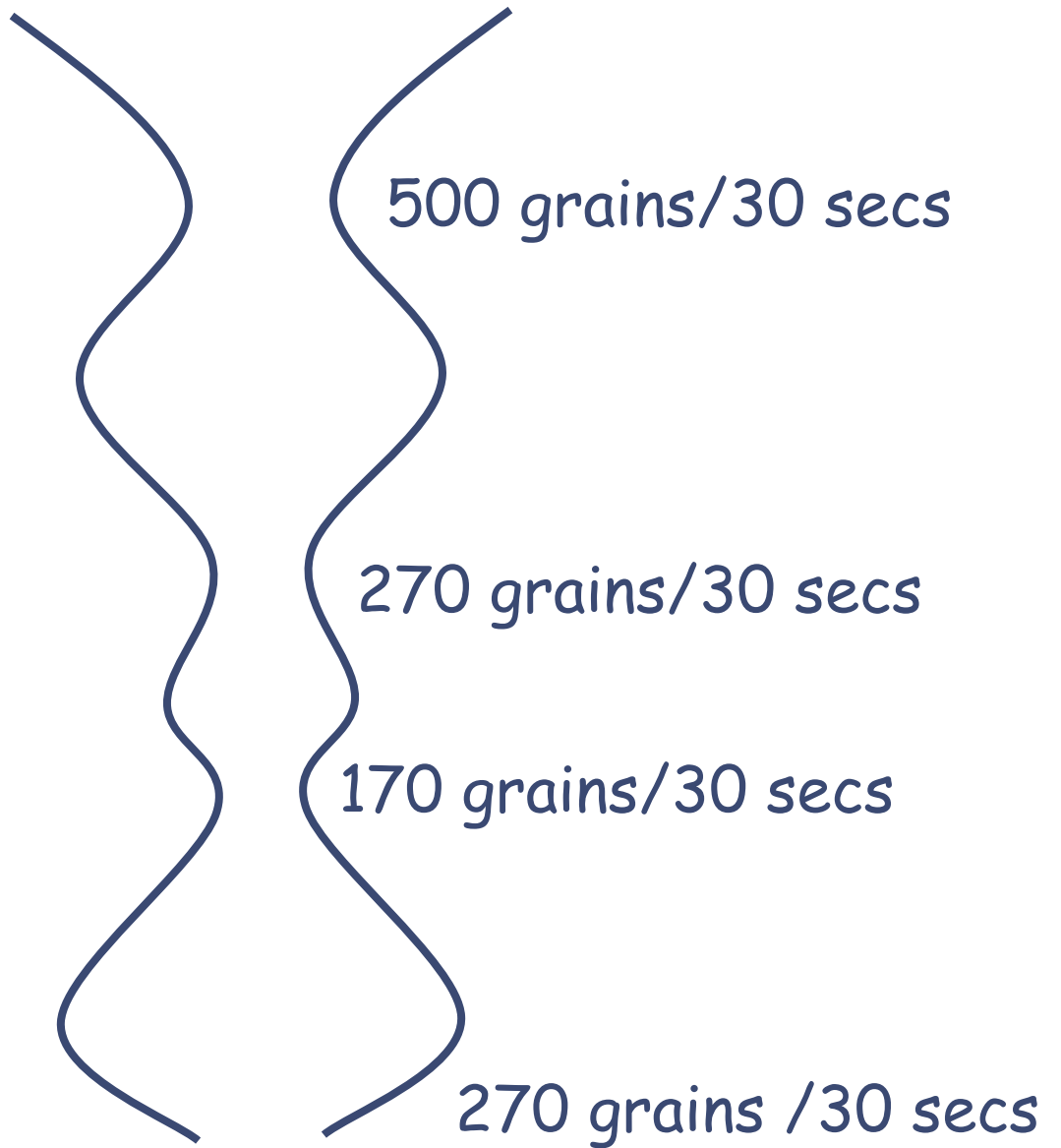
So the steps in the current process that Evie wants to happen are : -



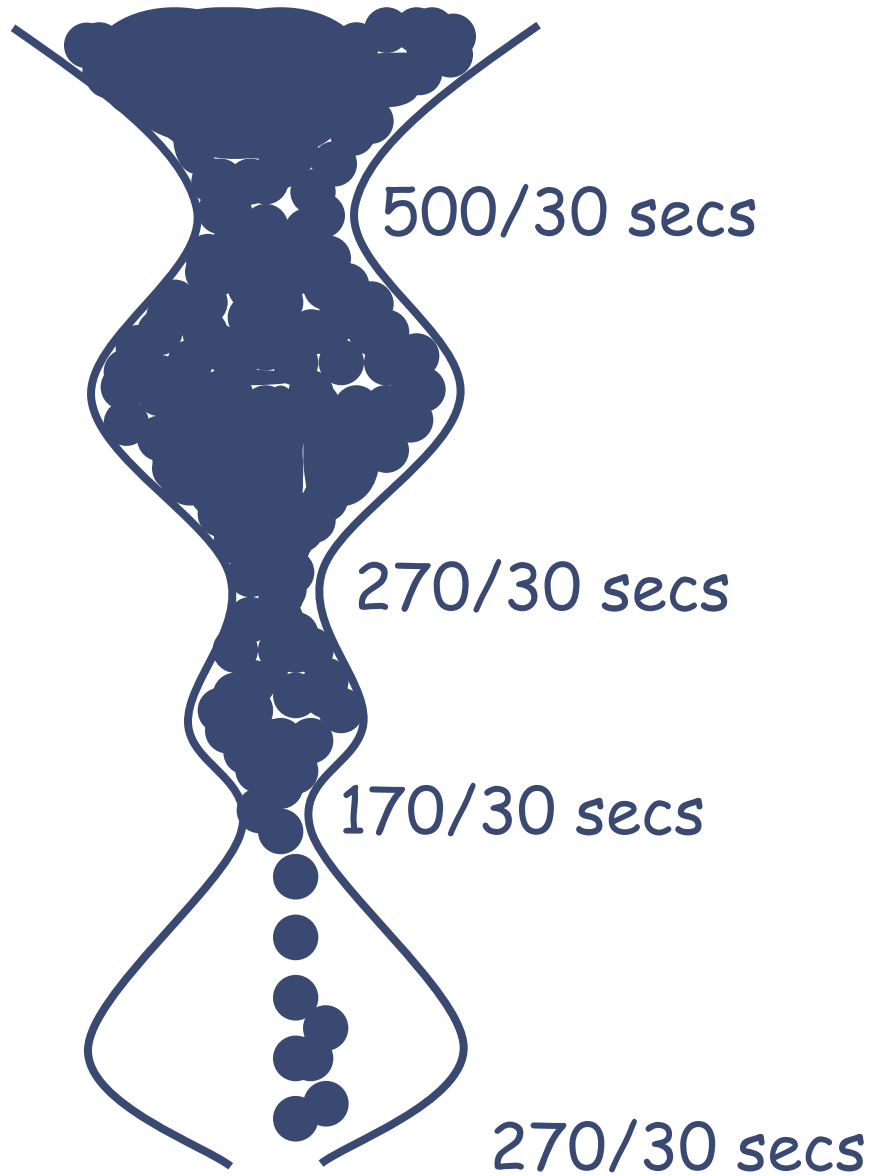
Produce a process map for making a paper airplane



Bottlenecks

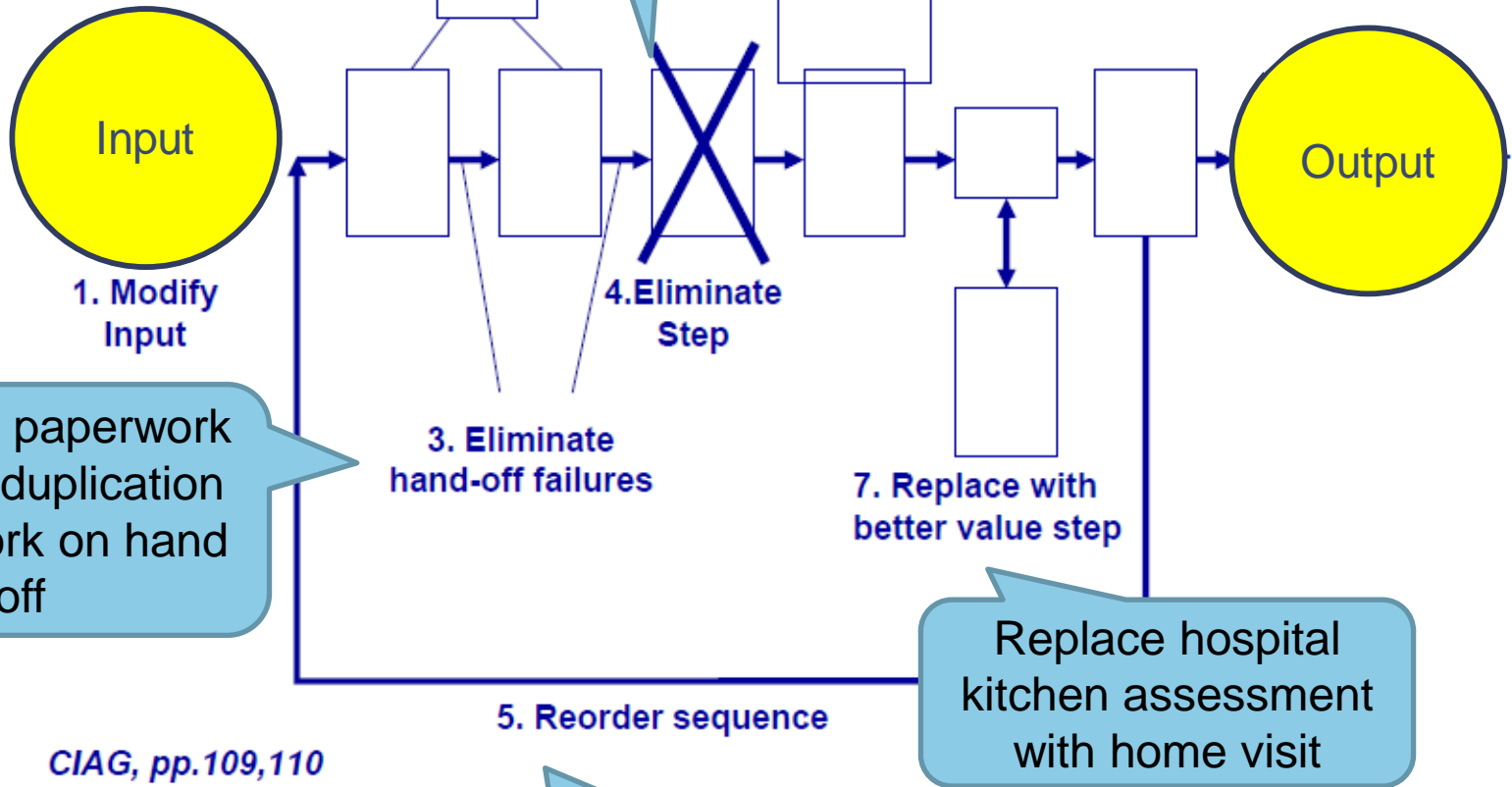


The 'theory of constraints'



Clinic redesign – patient stays in one room – combines all motion into 1 step

Home visit screened out unnecessary hospital visits



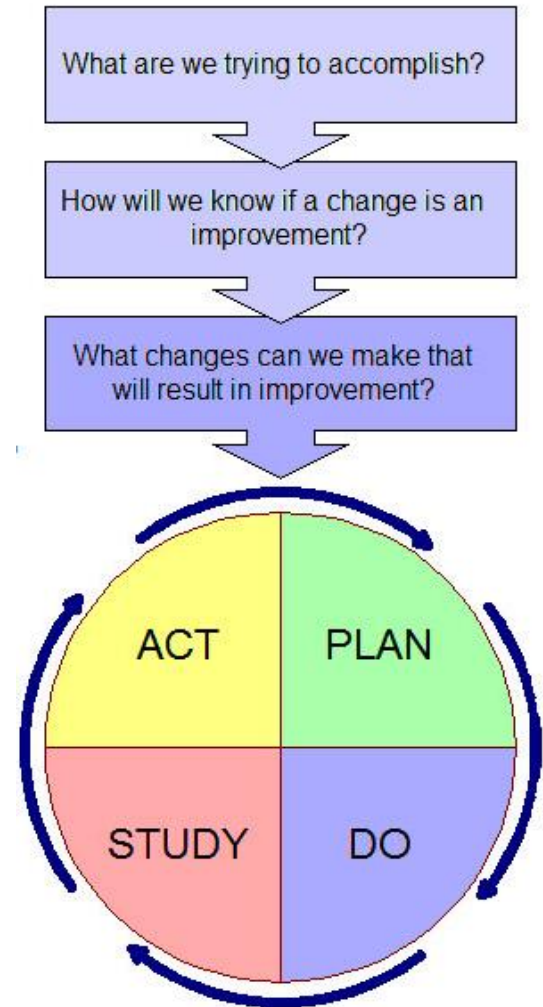
Standard paperwork reduced duplication and rework on hand off

CIAG, pp.109,110

Home visit first step after referral

Replace hospital kitchen assessment with home visit

THE MODEL FOR IMPROVEMENT



The Model for Improvement

- A framework for testing ideas
- Fundamental questions come first –

Aim – What are we trying to accomplish?

Measures – How will we know the change is an improvement

Changes – What changes can we make that will result in an improvement?

Model for Improvement

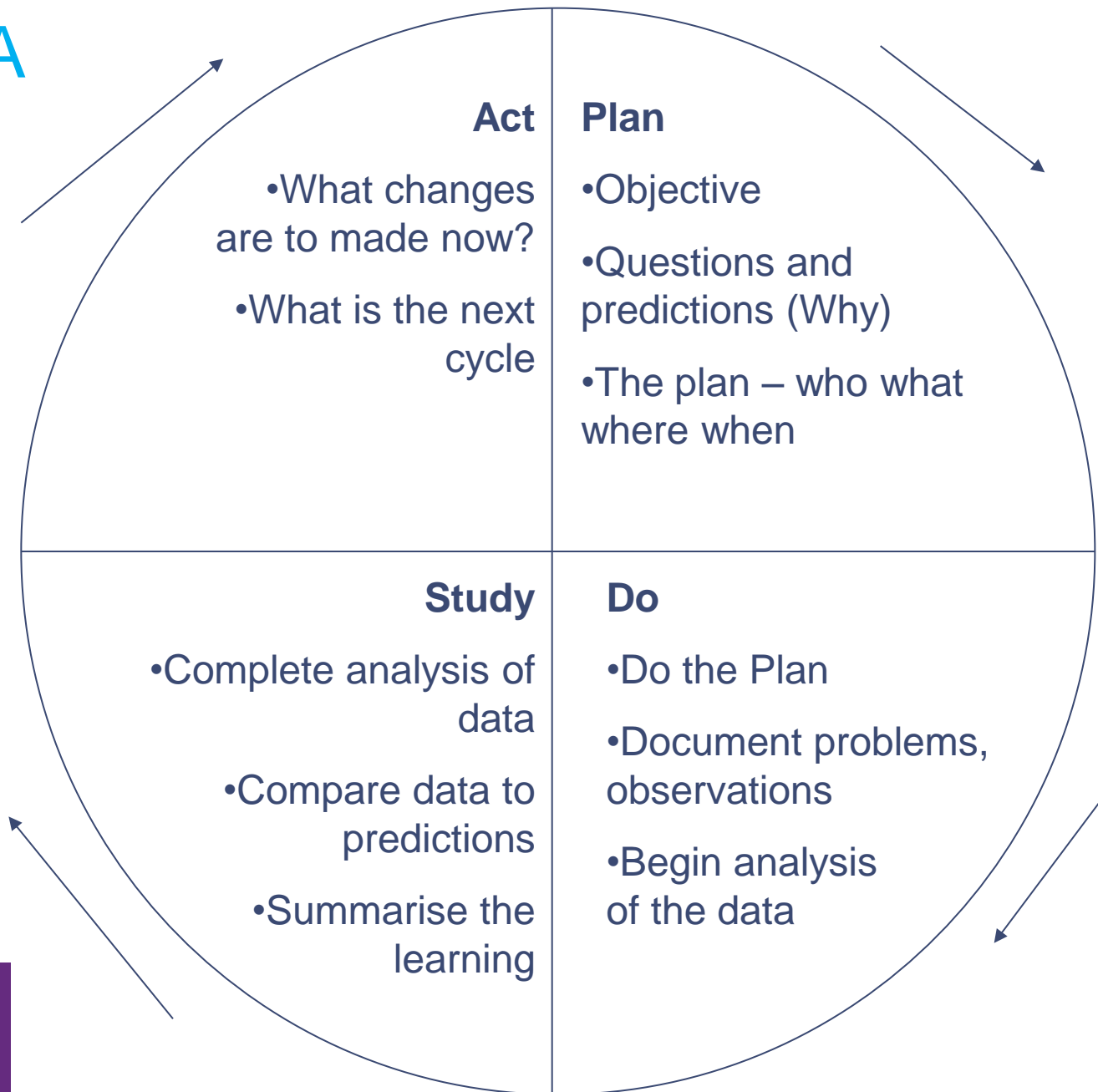
What are we trying to accomplish?

How will we know if a change is an improvement?

What changes can we make that will result in improvement?



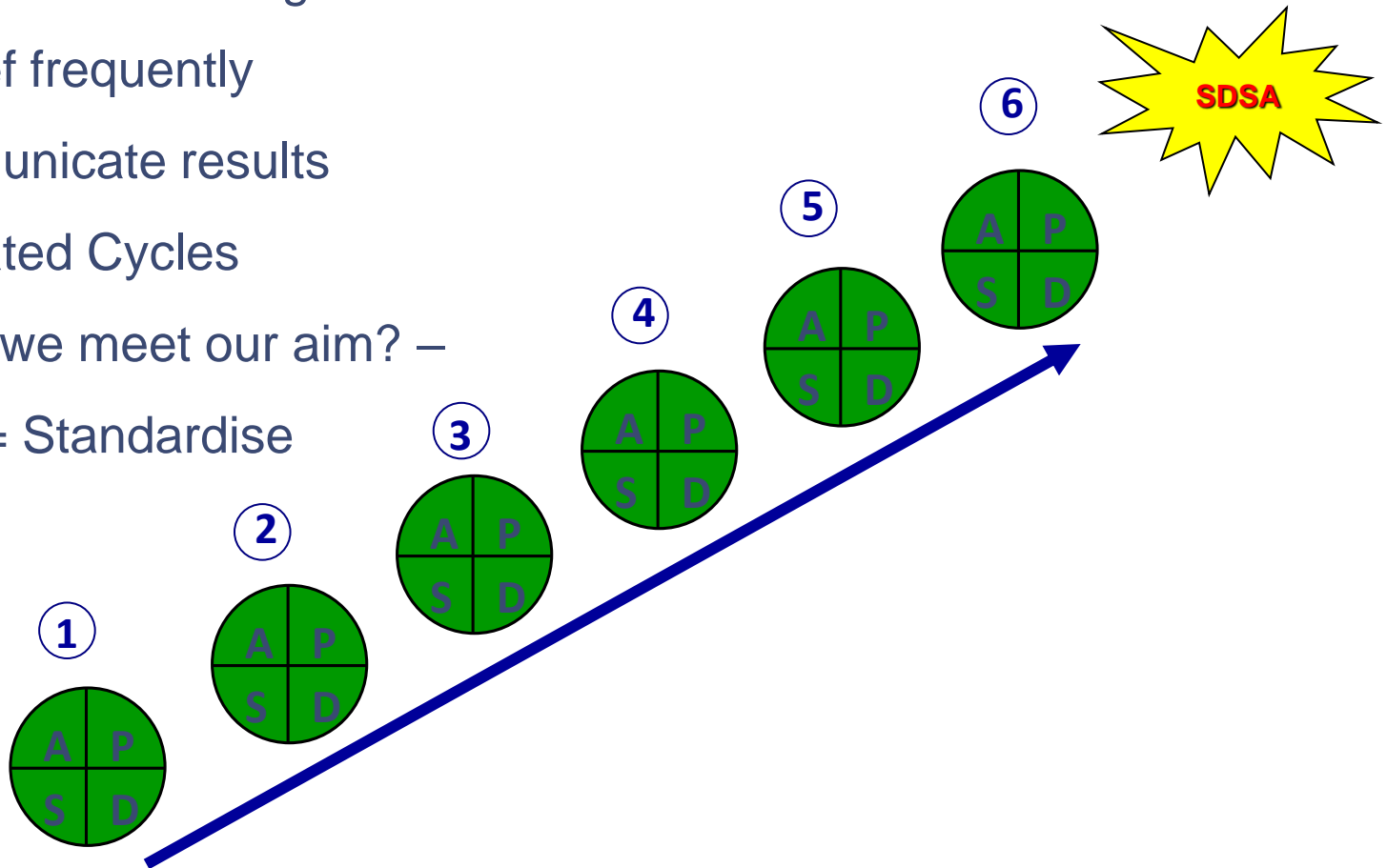
PDSA



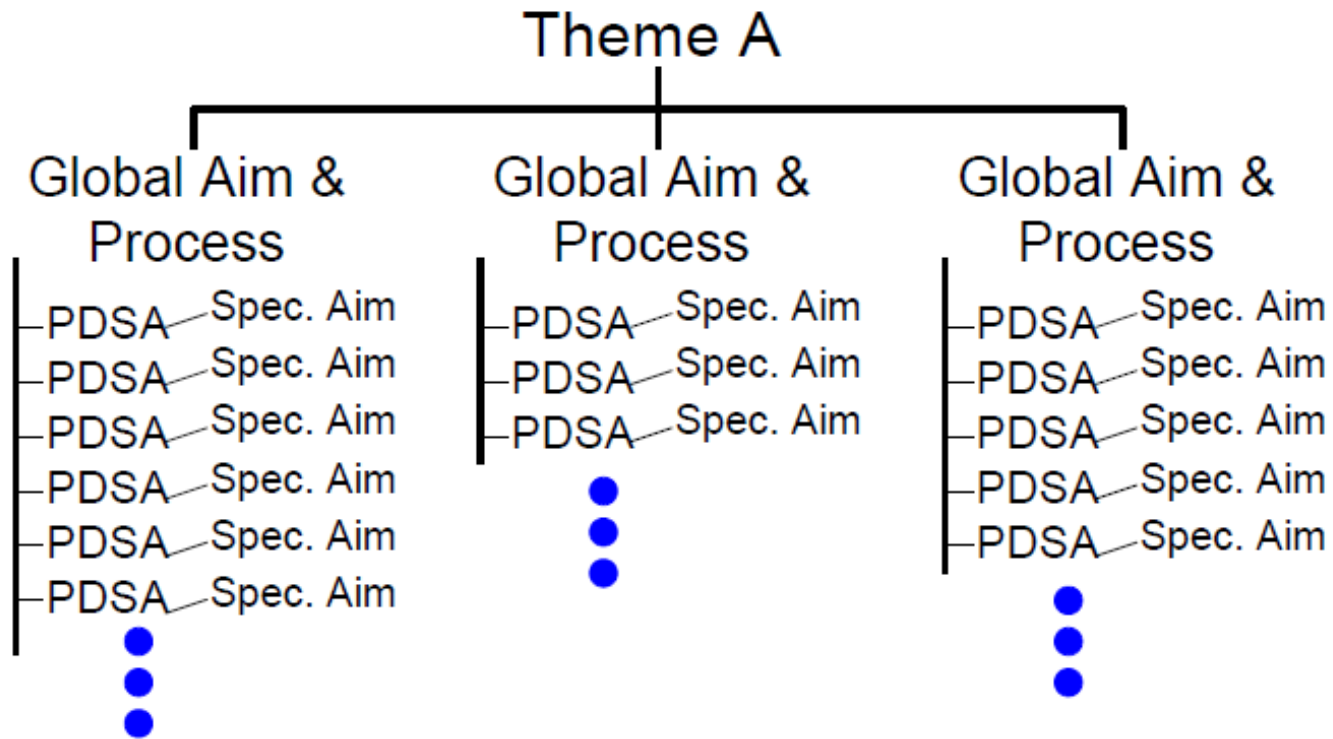
PDSA - experimentation

- Always start with a specific aim - What are we trying to accomplish?
- How will know if this is an improvement? – Data.
- Small tests of change over a short time
- Debrief frequently
- Communicate results
- Repeated Cycles
- When we meet our aim? –

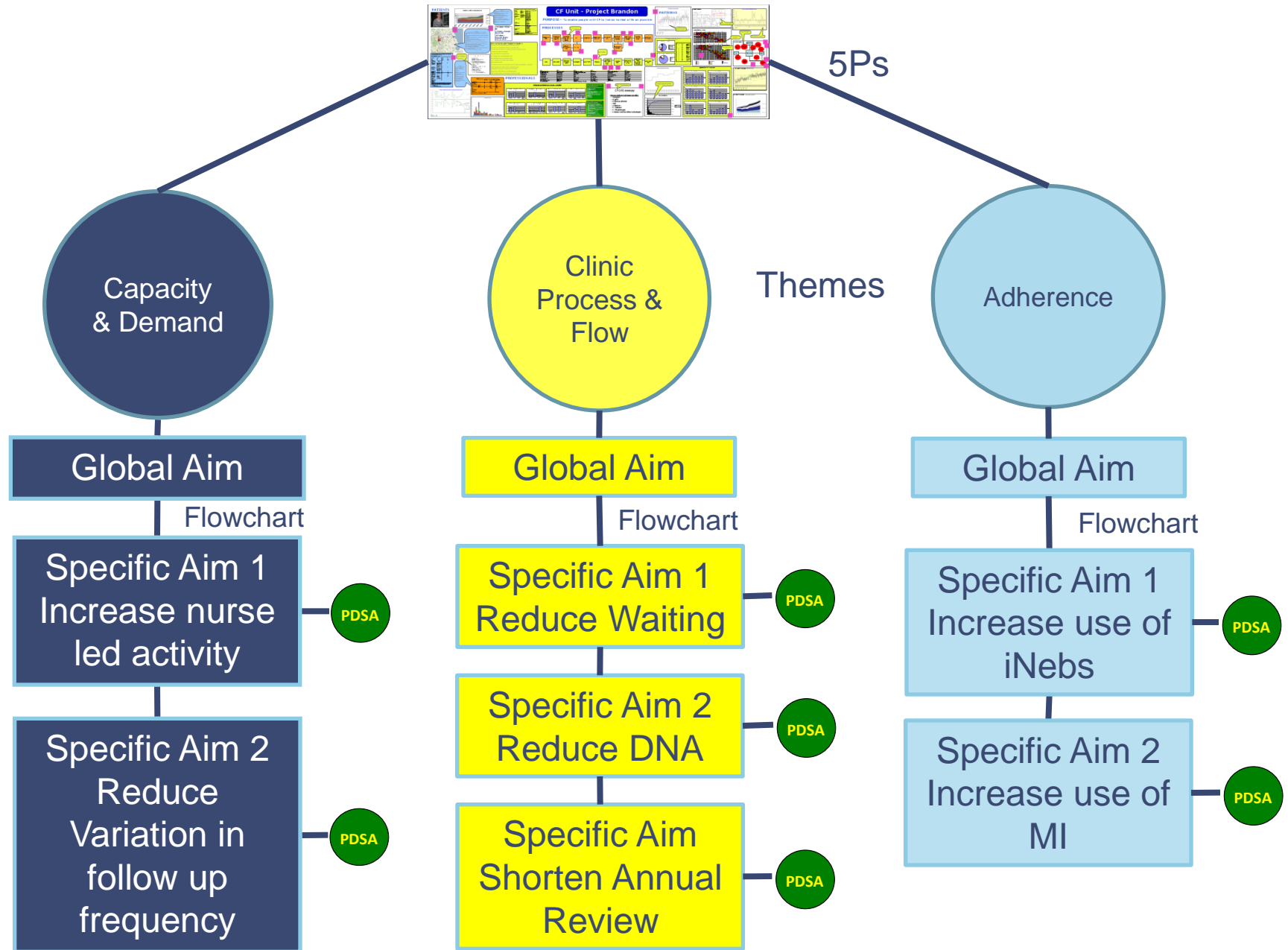
SDSA = Standardise



Themes, Processes, Aims, and PDSA Cycles



CF – Themes, Aims and PDSA Cycles



Key Components of an AIM

- ambitious
- measurable
- operationally specific
- time-limited

Transformative



Setting an Aim

- What are we trying to accomplish?
- Having a clear understanding of your Aim is critical

Key points: **How Much?**

By When?

AIM STATEMENT

- Less is not a number, soon is not a time
- We aim to increase the number of completed Discharge Checklists

for patients discharged from Ward 3

to 100% from a baseline of 20%

by October 2020



Being operationally specific

What is a completed Discharge Checklist?

Is it completed 24 hours prior to discharge?

If it gets completed after discharge? A week later?

All boxes complete?

Boxes empty but n/a stated?



Example Specific Aims

- We aim to achieve 50% of all daily TTOs are written, checked and delivered to Pharmacy by 10am from the four Respiratory wards by 1st September 2019. Our current baseline measure is 15% by 10am.
- We will decrease waiting times in Parkinson's Disease Clinic by 75% compared to our baseline measure by March 2020

What is a specific aim from your global aim?



Coffee Break

10 minutes

Back at 15.40 please



THE M&M CHALLENGE



The M&M Challenge

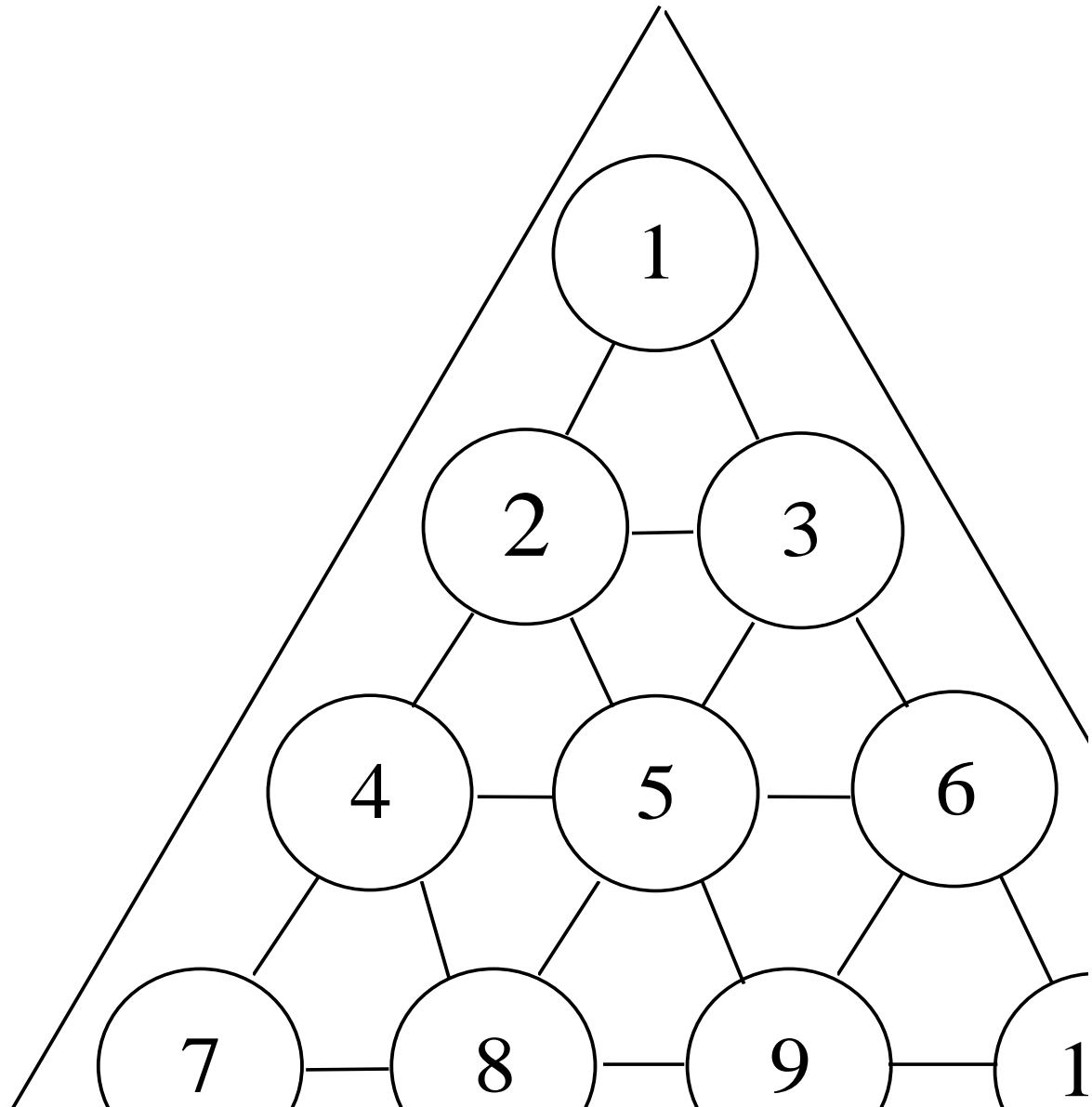
- Aim – to be left with one M&M at the end
- Measure – number of M&Ms left

Operational definitions:

- DO NOT EAT THE M&Ms
- Remove one to start
- Jump over one at a time and remove it



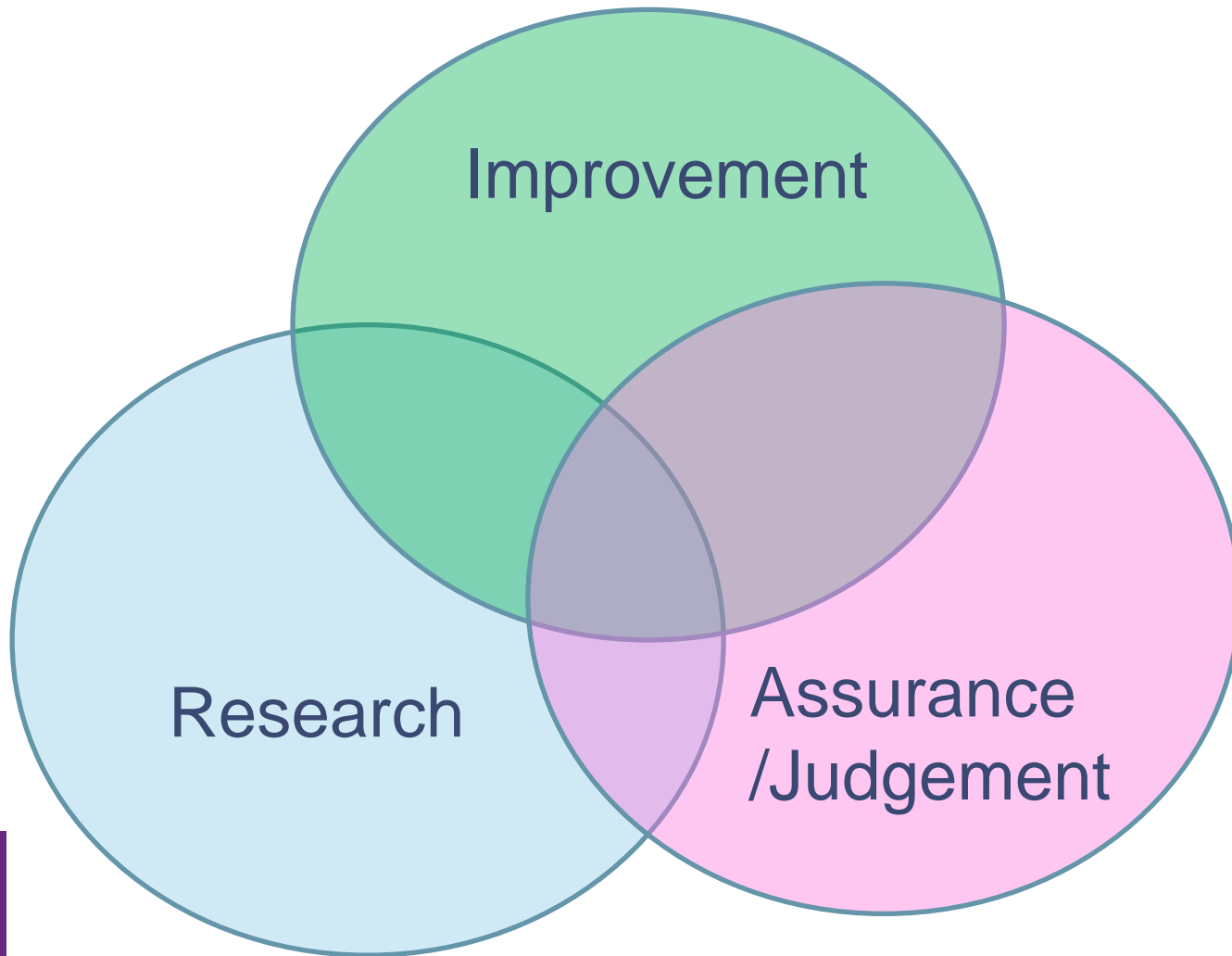
The Peg Exercise



MEASUREMENT FOR IMPROVEMENT



Measurement for Improvement



Three Types of Measures for Improvement

- Outcome Measures
- Process Measures
- Balance Measures



Outcome Measures

- Outcome Measures:
 - What is the outcome or result?

- What might some examples of outcome measures be?



Process Measures

- Process Measures:
 - What is the system telling you about how well it is working?

- What might some examples of process measures be?



Balance Measures

- Balance Measures:
 - Unrelated Processes which might be affected by the changes we make
- What might some examples of balance measures be?



Weight loss and developing measures exercise

Background: A friend has come to you and asked you to help develop a set of measures for a group project.

Aim: The aim of the improvement project is for the adult participants to individually lose weight by 12 weeks' time.

They need regular feedback to keep them on task.

Develop a set of measures for the project:

- Outcome Measures – 1-2 measures
- Process Measures – 2 measures
- Balance Measures – 1 or 2 measures

