

# Improving the way we work: Webinar Series

**Please note there is no sound at present**



# Improving the way we work:

## Setting Up and Measuring CI Projects

*REMINDER: You will need a piece of paper and a pen for this session!*



# **hello** my name is...



Iain Smith



Michael  
Anderson



Rachel Gray



Phil Thomas





# Doodle Page



## So far we've looked at ...

- The foundations of Lean methodology and the PDSA model that underpins our CI approach and the potential benefits
- The concept of visual management and a five step approach (5S) to help take control of, and organise, the workplace
- Creating standard operations to reduce variation and increase reliability of our work processes



Recordings of previous webinars available at:

<https://www.networks.nhs.uk/nhs-networks/continuous-improvement>

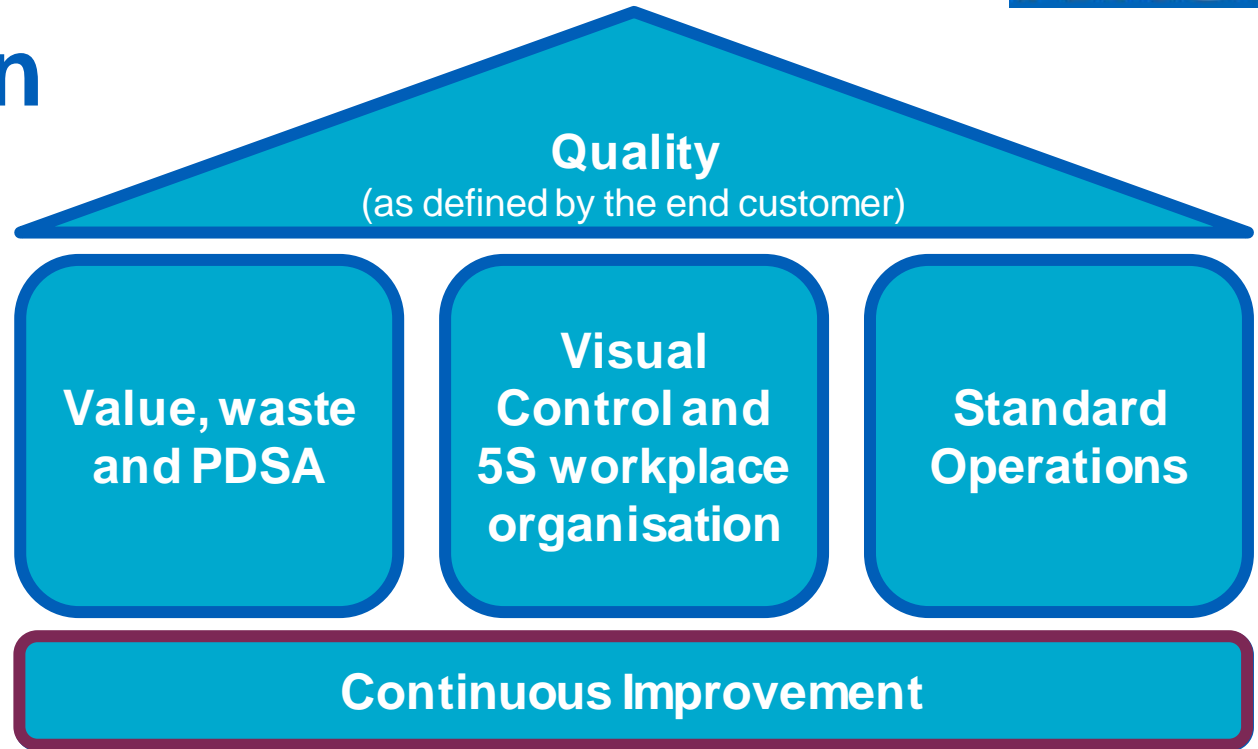


# **Module Four: Setting Up and Measuring CI Projects**



## CI and Lean

- Foundation of Lean
- The components work together as a system to drive continuous improvement





## Objectives for today

By the end of the session we will have:

- Discussed how to set up and document a CI project
- Discussed the need for clear aims in improvement activities and defined the core elements of an aim statement
- Introduced the concept of measurement for improvement and defined outcome, process and balancing metrics
- Introduced driver diagrams and how they can be useful at the start of a CI project
- Identified where to document aims and metrics using standard CI forms



## Five steps to a CI project

Project Form

Metric

Action

Preparation

Aim statement and baseline data



Launch

CI team formation / Communication plan

Diagnosis

Document current state / identify problems



Implementation

PDSA/ standard work / future state

Evaluation

Measure change / share learning



The image shows a 'CI Project Form' template. It includes fields for Project Title, Sponsor / SRO Name, Project Lead Name, Process Owner Name, Coach Name, Team Member Name, Department, Current Situation, Problem to be addressed (Defines WHO'S PROBLEMS), and Reason for... (will not HOW: 3-4 sentences). A colorful NHS 'Improving Quality' guide is overlaid on the form, with the text: 'First steps towards quality improvement: A simple guide to improving services'. The form also has a table at the bottom with columns for Sponsor Name, Project Lead Name, Project Sub-Lead Name, Process Owner Name, and Coach Name.





## A good aim statement ...

- Should be aspirational, measurable and consistent with local or national delivery priorities
- Should include:
  - **For whom?** the **system**, patient population, processes to address, providers etc that set the project scope
  - **How good?** a brief description of what we are trying to achieve with specific numerical **goals**
  - **By when?** **timeframes** for project delivery



# Aim statement example

- For patients on our practice list with a confirmed COPD diagnosis, we will increase the proportion with an individualised care plan to 75% within 6 months and 100% within 9 months

**System:** *patients on practice list with COPD diagnosis*

**Goal:** *increase proportion with individual care plan to 100%*

**Timeframe:** *6 to 9 months*



# What do we think of these aims?

- We will improve services

**Bad**

**Better**

**Good**



# What do we think of these aims?

- We will achieve a 20% reduction in emergency admissions for heart failure patients

**Bad**

**Better**

**Good**



# What do we think of these aims?

- For clients contacting the IT helpdesk, we will increase the percentage of help requests resolved on first call to 75% within 6 months

**Bad**

**Better**

**Good**





## Project form - Example

<b>Project Title:</b> Get Fit 2018/19	<b>Sponsor / SRO</b> Mrs Smith	<b>Project Lead</b> Iain Smith	<b>Process Owner</b>	<b>Coach</b>
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Team Member	Department
Name	Department
—Me	Home
—Mrs Smith	Home

**Aim Statement**

I aim to improve my fitness level by increasing my daily number of steps to at least 10,000 per day within six weeks

**Current Situation**

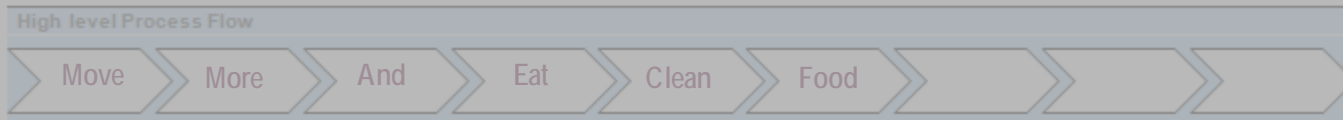
**Problem to be addressed (Defines WHAT)**  
 Much of my work is office based and sedentary. I have, until recently, been studying part time with a local university which requires a great deal of reading and writing in my own time outside of work. Therefore my activity levels are lower than I would like.

**Reason for the effort (Defines WHY)**  
 There is evidence that a sedentary lifestyle can increase the risk of poor health and, in the UK, adults are recommended to be active for at least 150 minutes each week.

**Expected outcomes/benefits (Defines WHAT specifically, still not HOW)**  
 Through increasing my activity, I expect to feel more energetic and see improvement in my overall level of fitness.

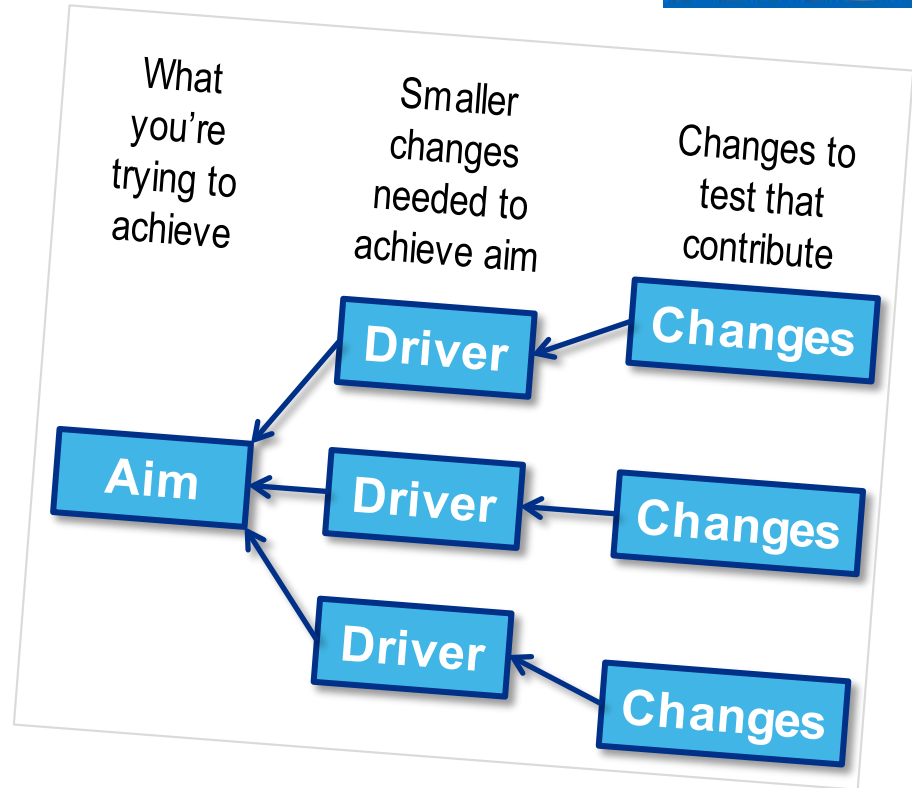
**Targets / Boundaries**

I will measure progress using a fitness band to record 'resting heart rate' as a proxy outcome of fitness and 'daily number of steps' and 'daily active minutes' as process metrics. I will also measure 'study time' as a balancing metric to ensure that I maintain progress and that this time is not reduced significantly.



## Driver diagrams

- A **Schematic** view of a system. The driver diagram represents our **theory** about how to **modify** the **system** to **change** the **outcome**

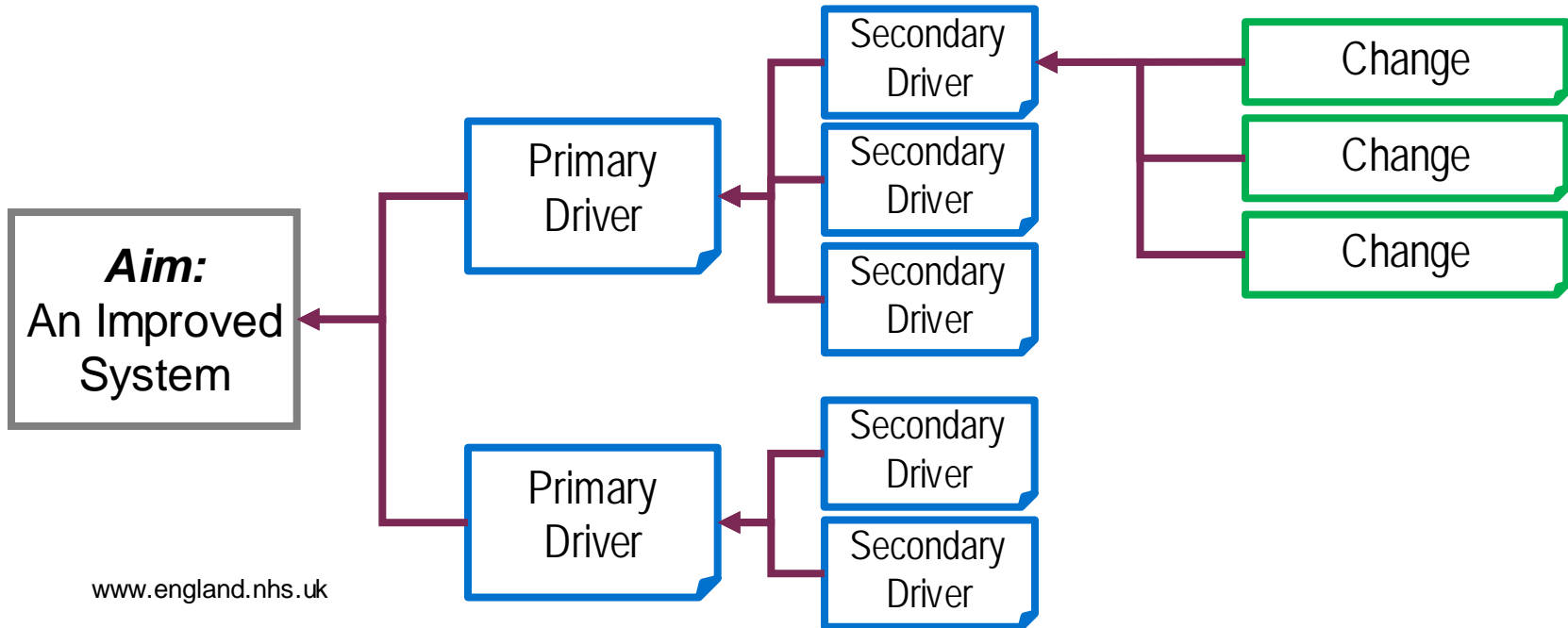


# Driver Diagrams

## Outcome

## Drivers

## Improvement Opportunities



## Driver Diagram – Get Fit Example

### Outcome

**Aim:**  
I aim to improve my fitness level by increasing my daily number of steps to at least 10,000 per day within six weeks

### Drivers

Reduce Sedentary Time

Building walking into daily routine throughout working week

Increase Ambulatory Time

Increase activity outside work

### Improvement Opportunities

Stand and walk for telephone calls

Hold meetings out of office

Start running with couch to 5K

Walk to shops at weekend



## Action Planning

- **30 day** actions plans
- **Simple Measureable Achievable Realistic** and **Timely** actions
- Dedicated **responsible person** for each actions
- **Clear timescales** for each action
- Actions can be **small** and can be building blocks to bigger pieces of work
- Every action plan should be **reviewed after 30 days**

**CI Action Plan**

Project Title:  
Name of project

No.	Action	By who?	By When?	Completion
1				
2				
3				
4				
5				
6				
7				
8				

Sponsor Name    Project Lead Name

Project Sub-Lead Name    Process Owner Name    Coach Name



# CI Action Plan




Project Title:  
Name of project

No.	Action	By who?	By When?	Completion
1	Description of the action ensuring it is SMART	Identify a leader for the action	Clear date within 30 days	
2				
3				
4				
5				
6				

**Once the action is started a section is filled in, throughout completion each section is filled to track progress**

Sponsor	Project Lead	Project Sub-Lead	Process Owner	Coach
Name	Name	Name	Name	Name




No.	Action	By who?	By When?	Completion
1.	Develop a culture of Continuous Improvement across our team	MA	TBC	

**Bad**

**Better**

**Good**



No.	Action	By who?	By When?	Completion
1.	Design and test a new standard form and test the new process with the team for 20 days to then review against baseline data	MA	22/05/2019	

**Bad**

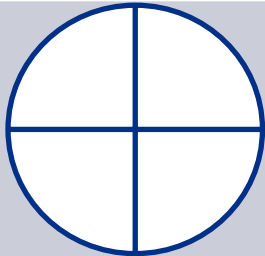
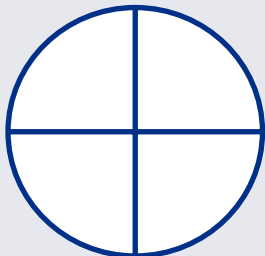
**Better**

**Good**





# Get Fit Example

No.	Action	By who?	By When?	Completion
1.	Add running two to three times per week into my routine outside work (using NHS couch to 5K app)	IMS	01 Nov 2018	
2.	Stand and walk for telephone calls at work	IMS	01 Nov 2018	

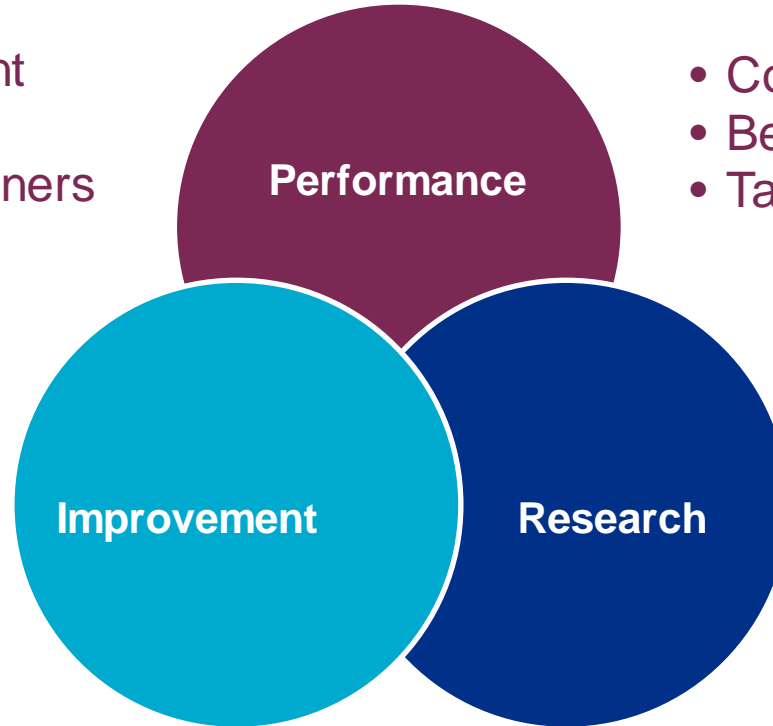


## Why measure?

- Government
- Regulators
- Commissioners

- Comparison
- Benchmarking
- Targets

- Staff & CI Teams
- Understanding processes
- Specific to CI project / just enough data



- Scientific Community
- New Knowledge
- Clinical Trials



## Three types of measures



### Outcome measure

*Voice of the customer or patient.*

What is the result, has the activity had the desired impact?



### Process measure

*Voice of the working of the system.*

Are the parts or steps of the system working as planned?



### Balancing measure

Checking for unintended outcomes or external influences



# Types of measure

Number of hospital beds available in your local hospital



**Outcome measure**



**Process measure**



**Balancing measure**



## Types of measure

Friends and family test – Would you recommend this service to a friend or family member?



**Outcome measure**



**Process measure**



**Balancing measure**



# Types of measure

% of A&E patients who could have been treated at home or in primary care setting



**Outcome measure**



**Process measure**



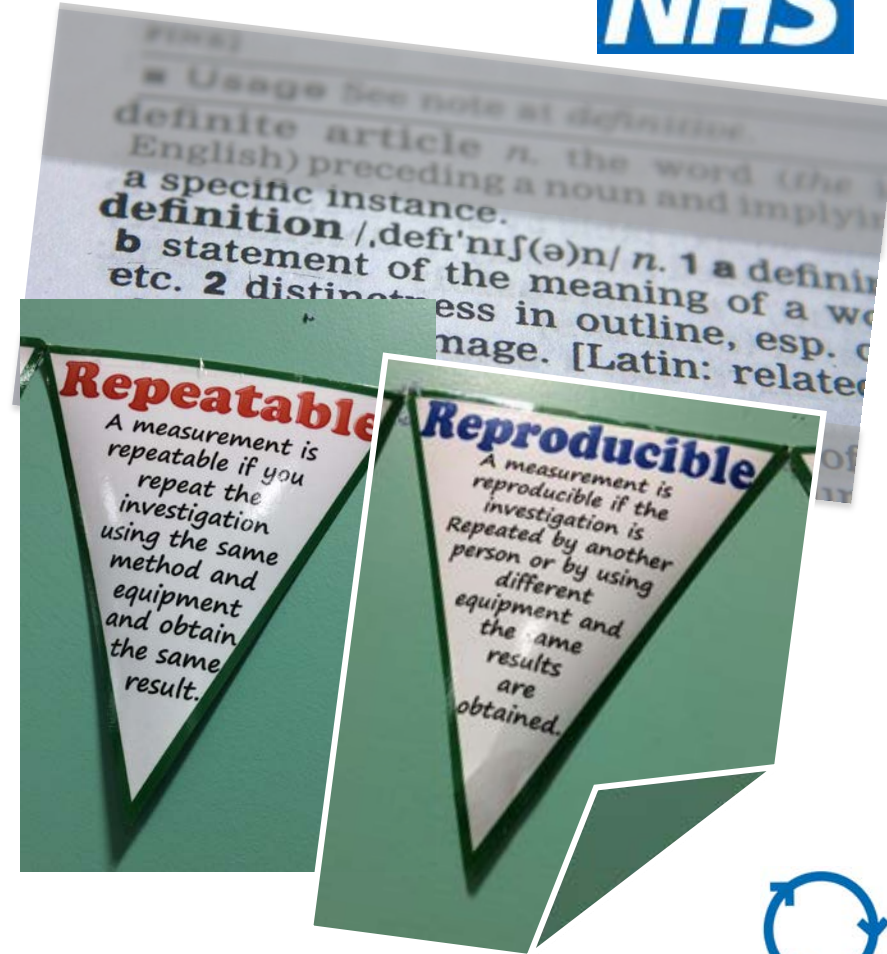
**Balancing measure**





## Definitions

- Define the data to be collected and used.
- Describe **what to measure** and the **steps to follow to measure it** consistently.
- Should be both **repeatable** and **reproducible**.
- Should describe where the data comes from.



## Target sheet

Project Title:  
Name of project

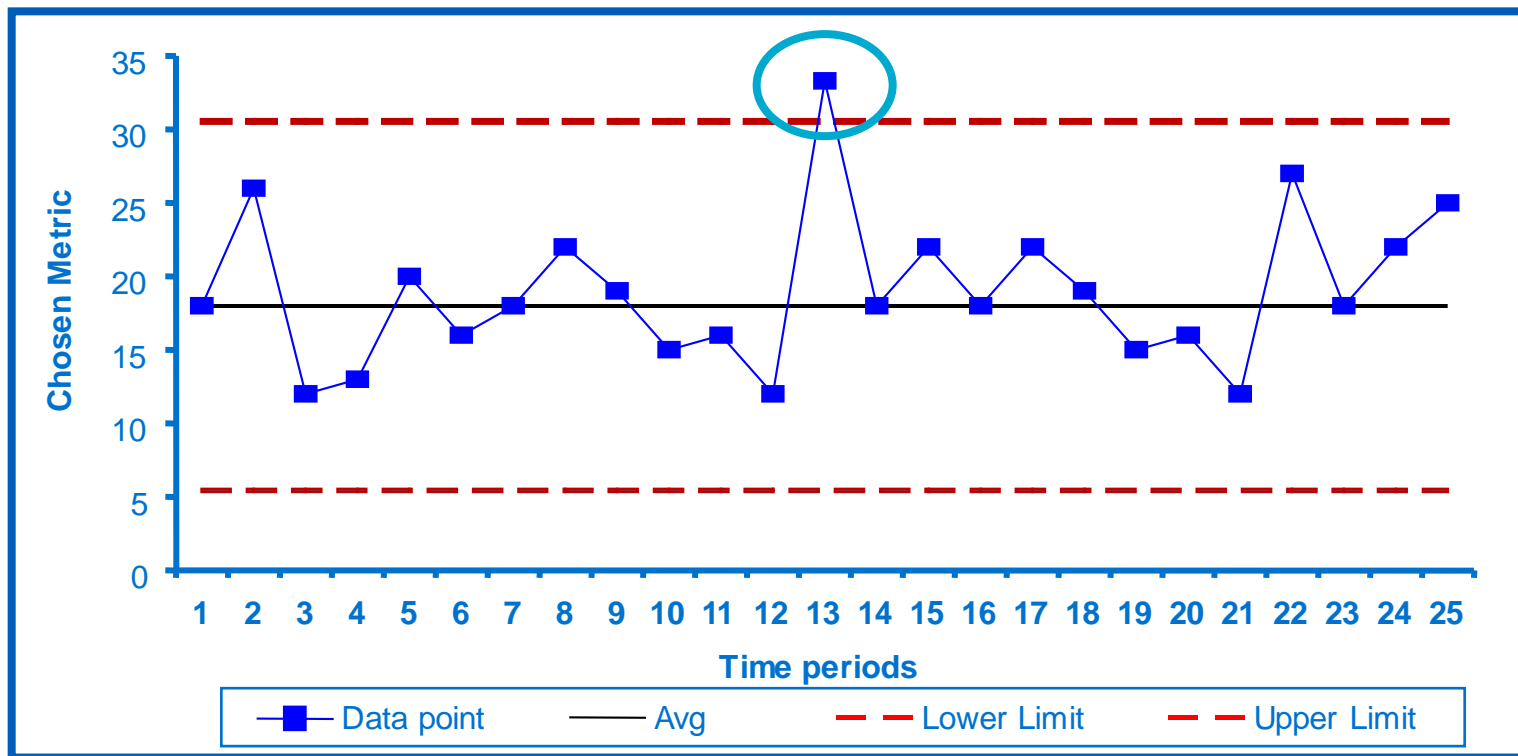
Metric Type	Metric Title	Baseline (Before Average) a	Target	Result (After Average) b	% Change $100*(b-a)/a$
<b>Metric Type</b> <ul style="list-style-type: none"> <li>• <b>Outcome</b> - Voice of the customer or patient. Has the activity had the desired impact?</li> <li>• <b>Process</b> - voice of the system. Are the parts or steps working as planned?</li> <li>• <b>Balancing</b> - Checking for unintended outcomes or external influences</li> </ul>	<b>Metric Title</b> <ul style="list-style-type: none"> <li>• Name of metric to make it identifiable For example, process lead time (the end-to-end time to complete the entire process)</li> </ul>	<b>Baseline</b> <ul style="list-style-type: none"> <li>• Average of metric data observed over time</li> </ul>	<b>Target</b> <ul style="list-style-type: none"> <li>• The target condition that the CI project is aiming to achieve</li> <li>• Should be realistic and achievable</li> </ul>	<b>Results</b> <ul style="list-style-type: none"> <li>• Average of metric data observed over time</li> </ul>	<b>Change</b> <ul style="list-style-type: none"> <li>• High level summary of change in % terms based on average before and average after data</li> </ul>

Sponsor Name	Project Lead Name	Project Sub-Lead Name	Process Owner Name	Coach Name
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## Plotting data over time



# Pen and paper needed!



## Understanding variation with the letter “ a ”

- Write a line of 10 ‘a’s using the ‘wrong’ hand, i.e. not the one you normally write with.



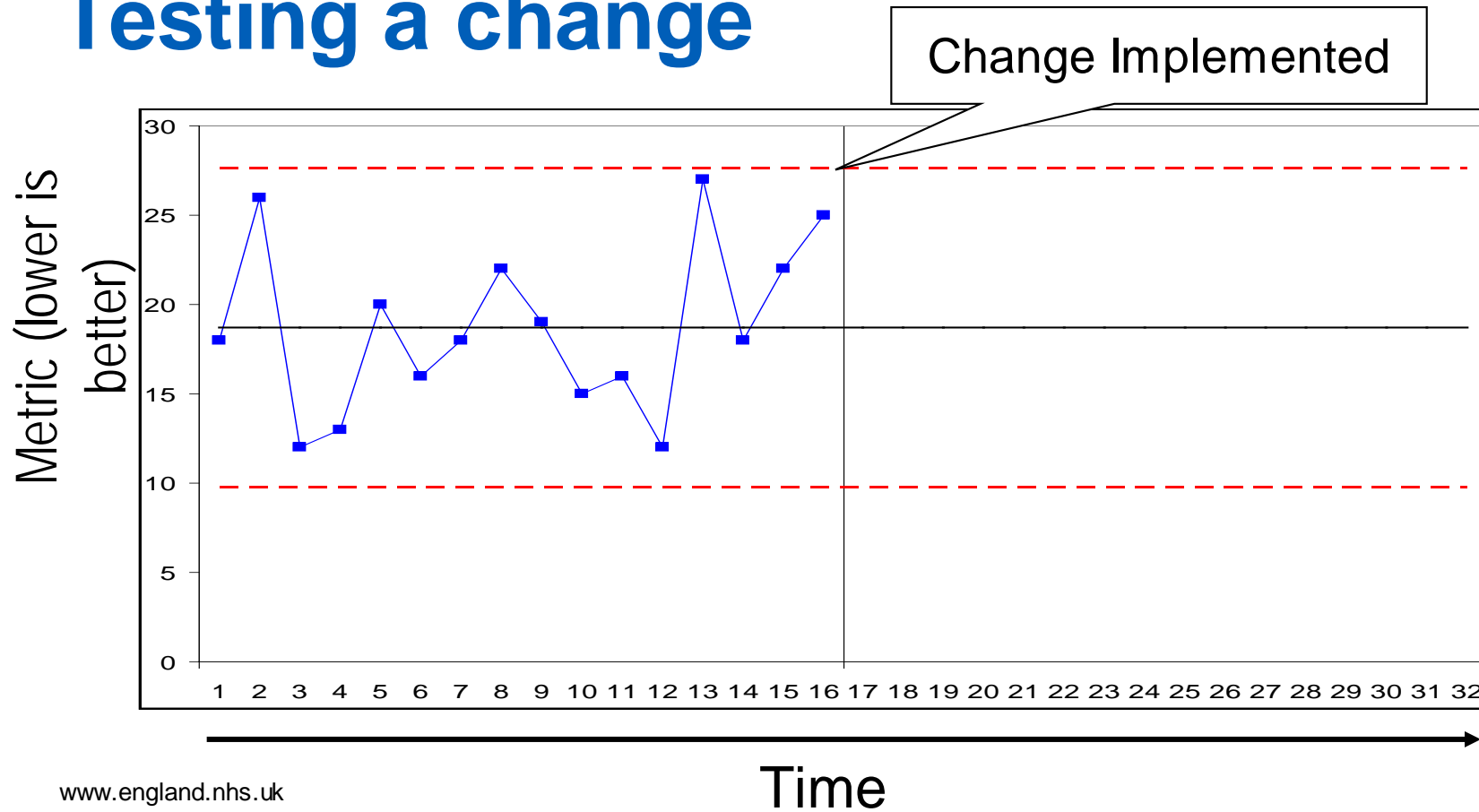
- Now draw a row of ‘a’s with your ‘correct’ hand.



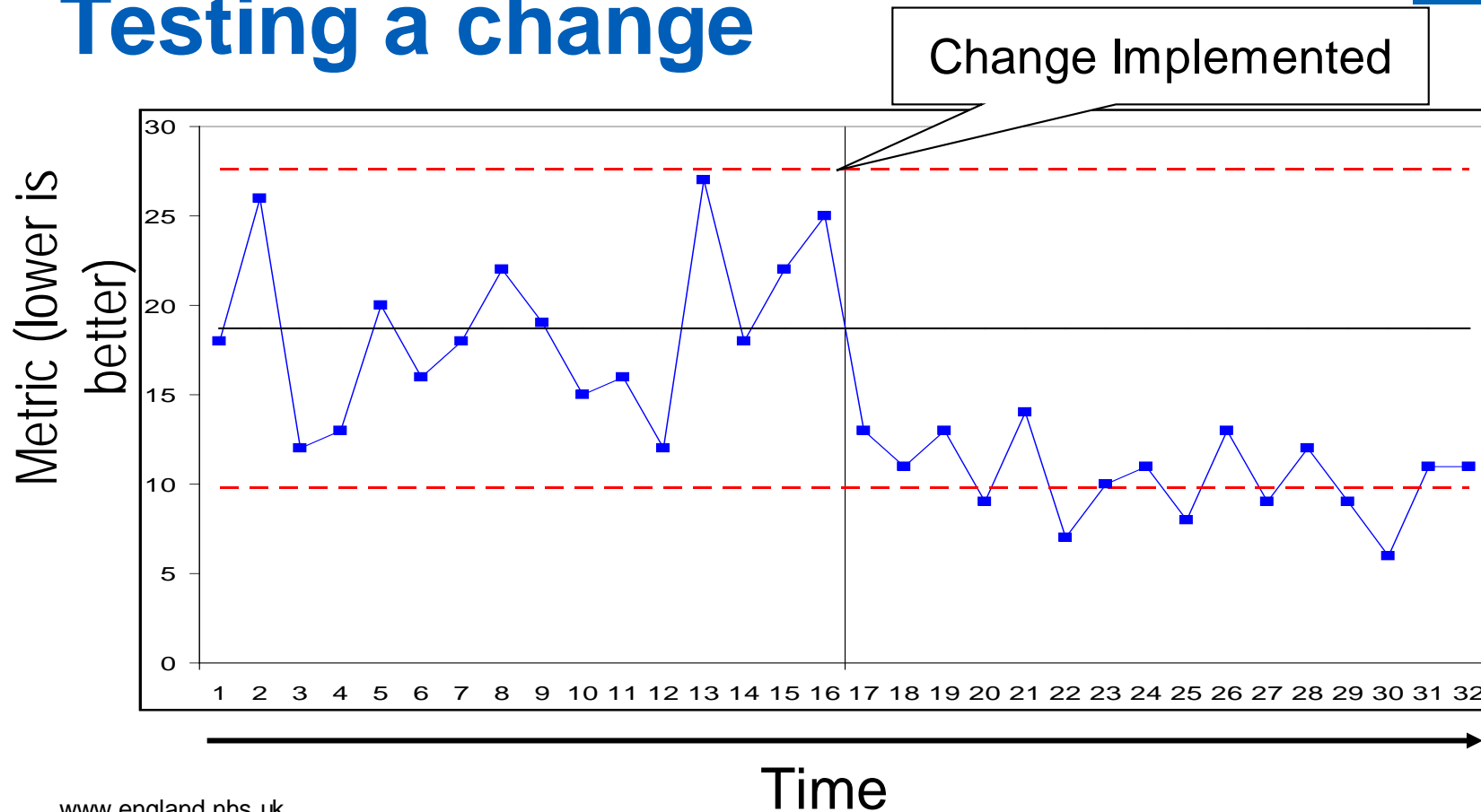
- Now draw a row of ‘a’s with your ‘correct’ hand, but somewhere along the row, do one ‘a’ with the ‘wrong’ hand.



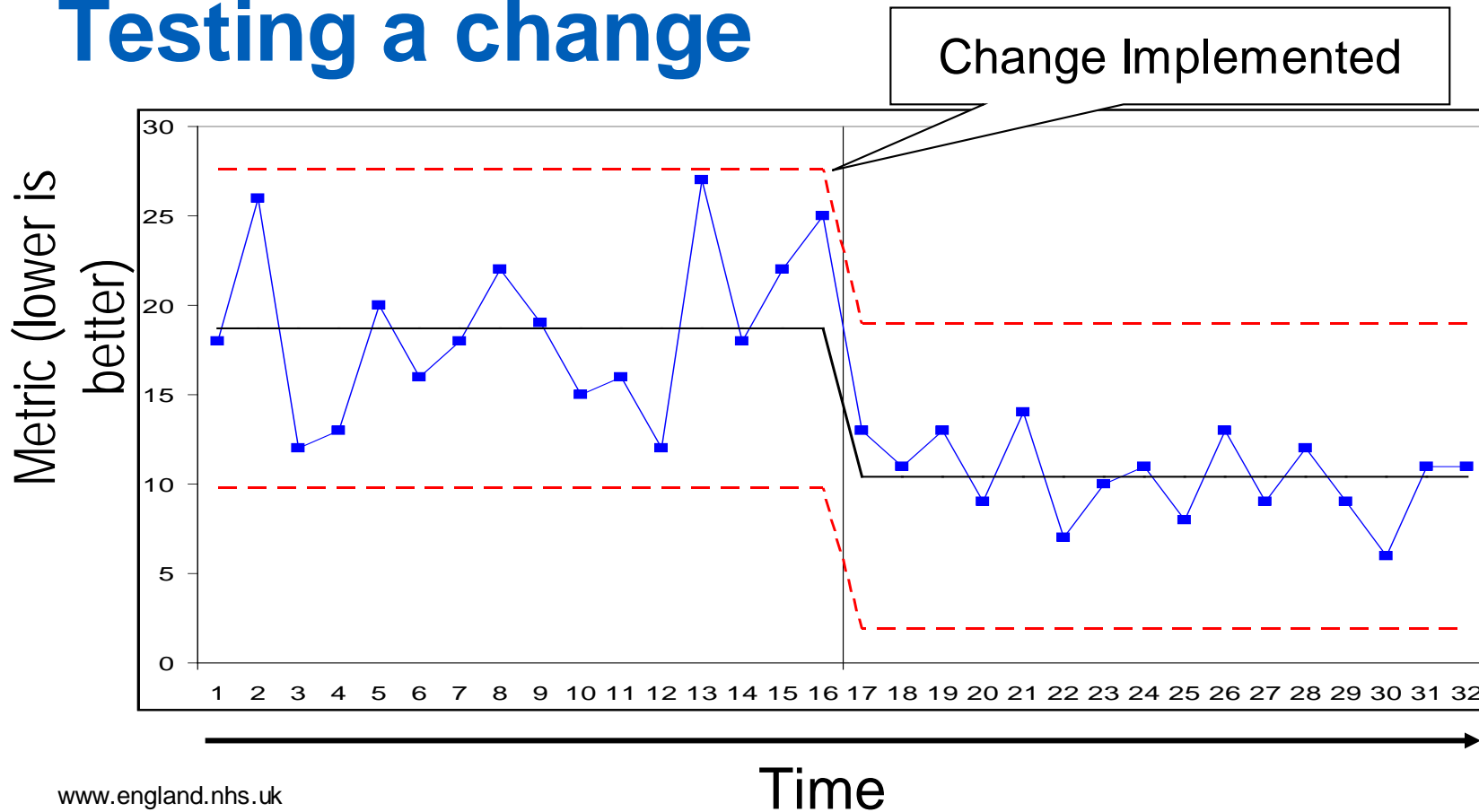
## Testing a change



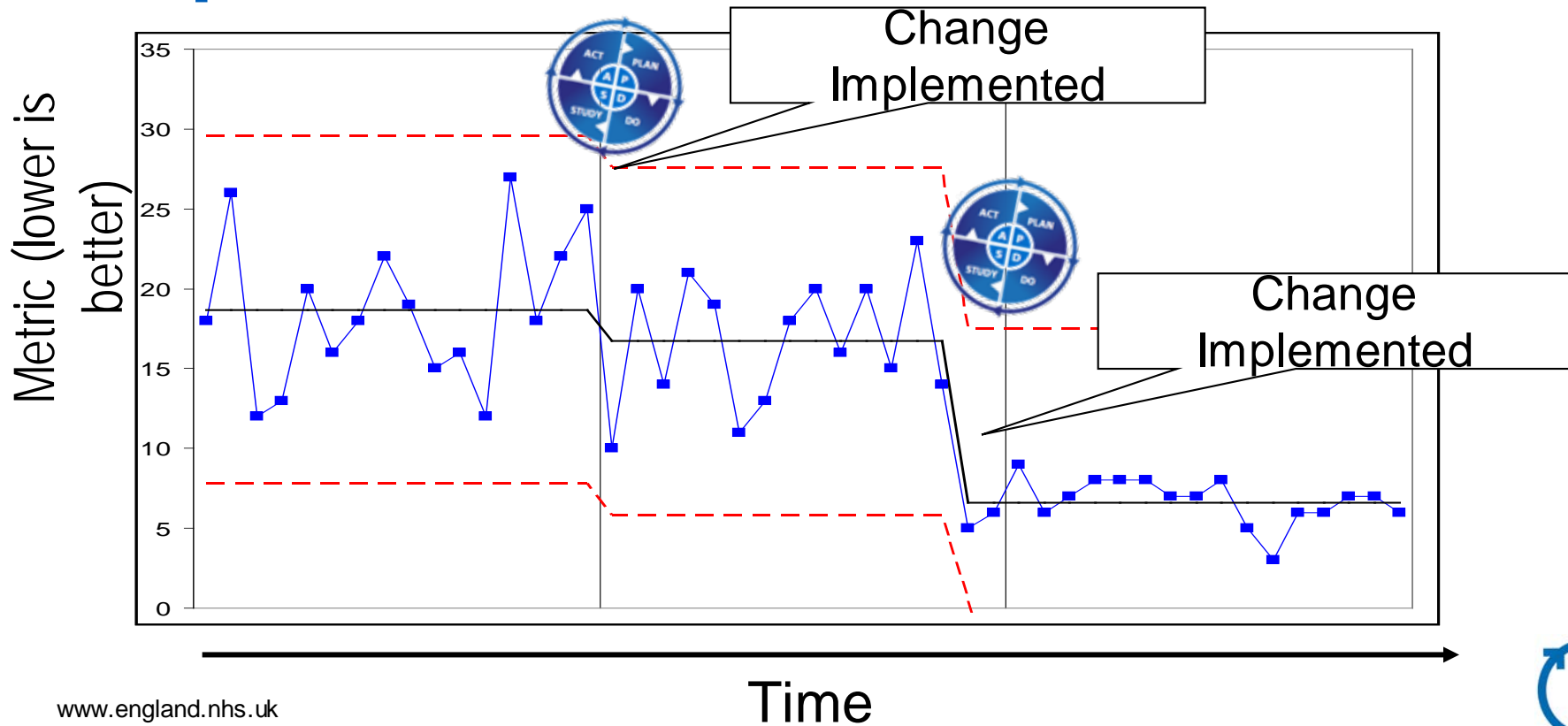
## Testing a change



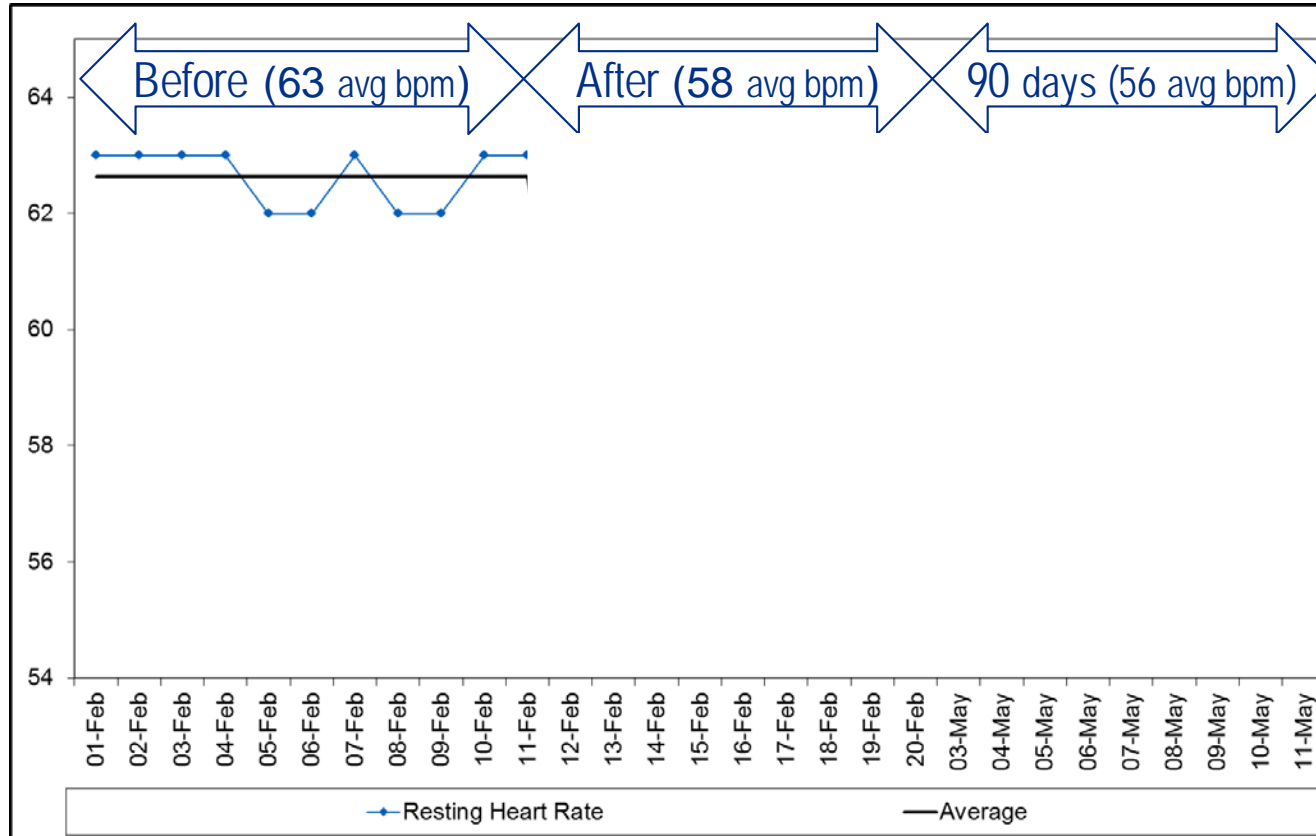
## Testing a change



## Sequential Tests

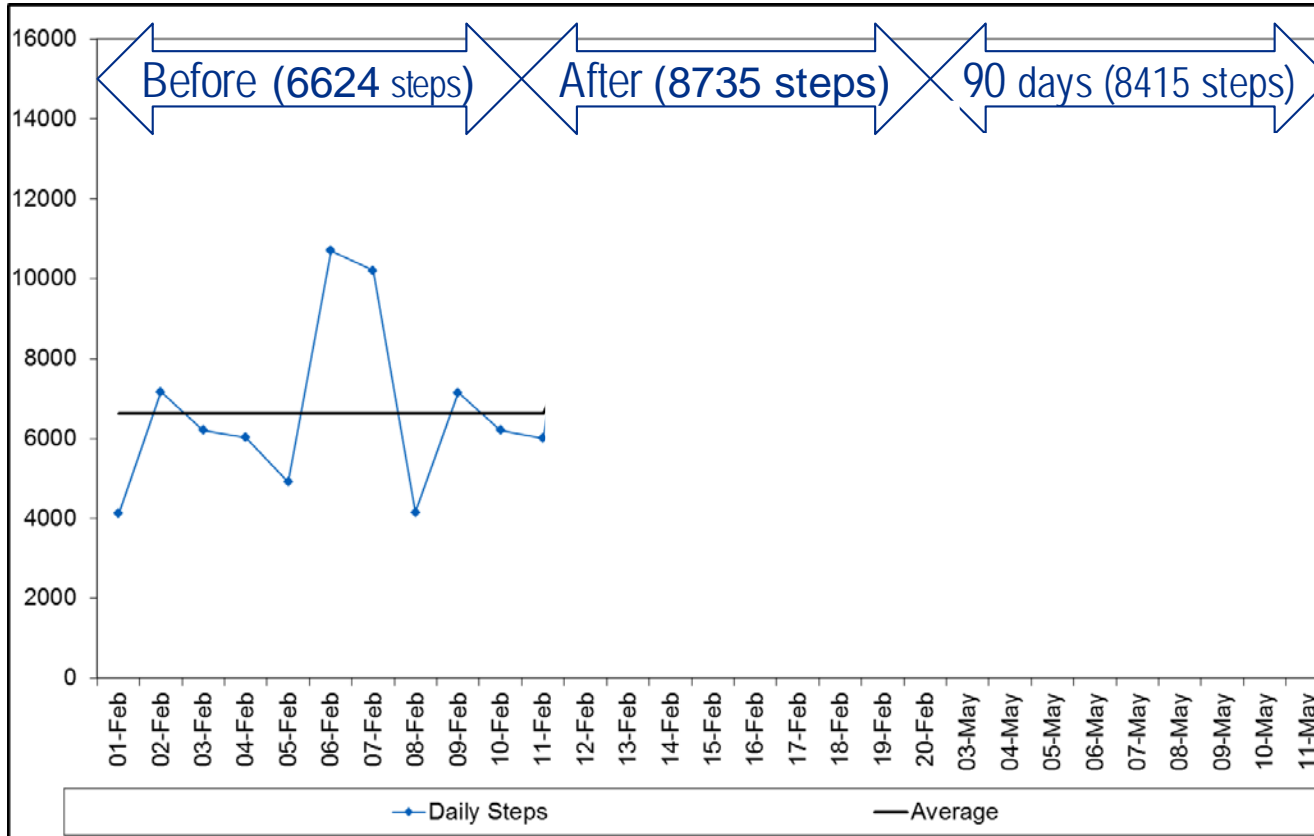


## Get Fit Example





## Get Fit Example



## Target sheet – Get Fit Example

Project Title:  
Name of project

Metric Type	Metric Title	Baseline (Before Average) a	Target	Result (After Average) b	% Change $100*(b-a)/a$
<b>Metric Type</b> <ul style="list-style-type: none"> <li>• <b>Process</b> - voice of the system. Are the parts or steps working as planned?</li> <li>• <b>Outcome</b> - Voice of the customer or patient. Has the activity had the desired impact?</li> </ul>	<b>Metric Title</b> <ul style="list-style-type: none"> <li>• <b>Daily number of steps</b> (measured using a fitness wrist band)</li> <li>• <b>Resting heart rate</b> (measured using a fitness wrist band in beats per minute (BPM) as a proxy outcome of fitness)</li> </ul>	<b>Baseline</b> <ul style="list-style-type: none"> <li>• 6624</li> <li>• 63 BPM</li> </ul>	<b>Target</b> <ul style="list-style-type: none"> <li>• 10,000</li> <li>• &lt;=60 BPM</li> </ul>	<b>Results</b> <ul style="list-style-type: none"> <li>• 8735</li> <li>• 58 BPM</li> </ul>	<b>Change</b> <ul style="list-style-type: none"> <li>• 32%</li> <li>• 6.5%</li> </ul>

Sponsor  
Name

Project Lead  
Name

Project Sub-Lead  
Name

Process Owner  
Name

Coach  
Name



## Five steps to a CI project

### Preparation

Aim statement and baseline data

### Launch

CI team formation / Communication plan

### Diagnosis

Document current state / identify problems

### Implementation

PDSA/ standard work / future state

### Evaluation

Measure change / share learning

CI Project Form					
Project Title: Name of project		Sponsor / SRO Name	Project Lead Name	Process Owner Name	Coach Name
Team Member Name	Department	Current Situation			
Name		Department			
Problem to be addressed (Defines WHAT: 2-3 sentences)					
Reason for the effort (Defines WHY: 3-4 sentences)					
Expected outcomes/benefits (Defines what specifically, still not HOW: 3-4 sentences)					

CI Project Metric Report					
Project Title: Name of project					
Metric Type	Metric Title	Baseline (Before Average) s	Target	Result (After Average) b	% Change 100*(b-a)/a
Outcome, Process or Balancing	Metric Name	Average of before observations		Average of after observations	Average % change

CI Action Plan				
Project Title: Name of project				
No.	Action	By who?	By When?	Completion
1				
2				
3				
4				
5				
6				
7				
8				
Sponsor Name	Project Lead Name	Project Sub-Lead Name	Process Owner Name	Coach Name



# Recap

What are the three type of measures?

- A. Outcome / Process / Balance
- B. Output / Finance / Performance
- C. Benefits / Time / Cost
- D. Measures? What measures?



## Recap

What are the 5 stage of an improvement project?

- A. Launch, diagnosis, preparation, implementation, evaluation
- B. Preparation, launch, diagnosis, implementation, evaluation
- C. Evaluation, implementation, diagnosis, launch, preparation



## Recap

What are the three components of a good aim statement?

- A. Vague, dull and boring
- B. Complex, visionary, high level
- C. System, goal and timeframe



## Summary – key points

- A good aim provides clarity on what we're trying to achieve by specifying how good, by when and for whom (or for what system)
- We need to measure to verify if any changes made have had the desired effect
- Effective measurement requires good definitions
- Definitions should specify what, how, when and who will measure
- Good definitions are repeatable and reproducible

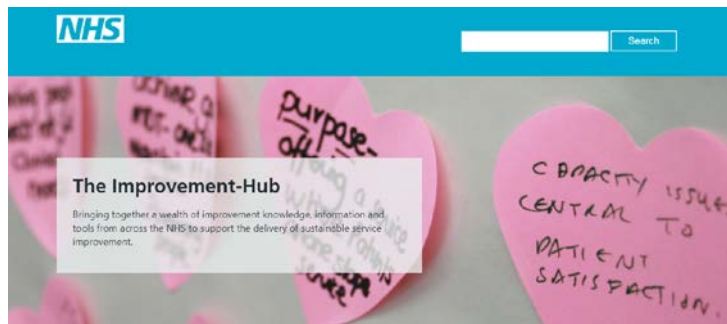


## Further Resources



### A Simple Guide to Improving Services

<https://www.england.nhs.uk/improvement-hub/wp-content/uploads/sites/44/2011/06/service-improvement-guide-2014.pdf>



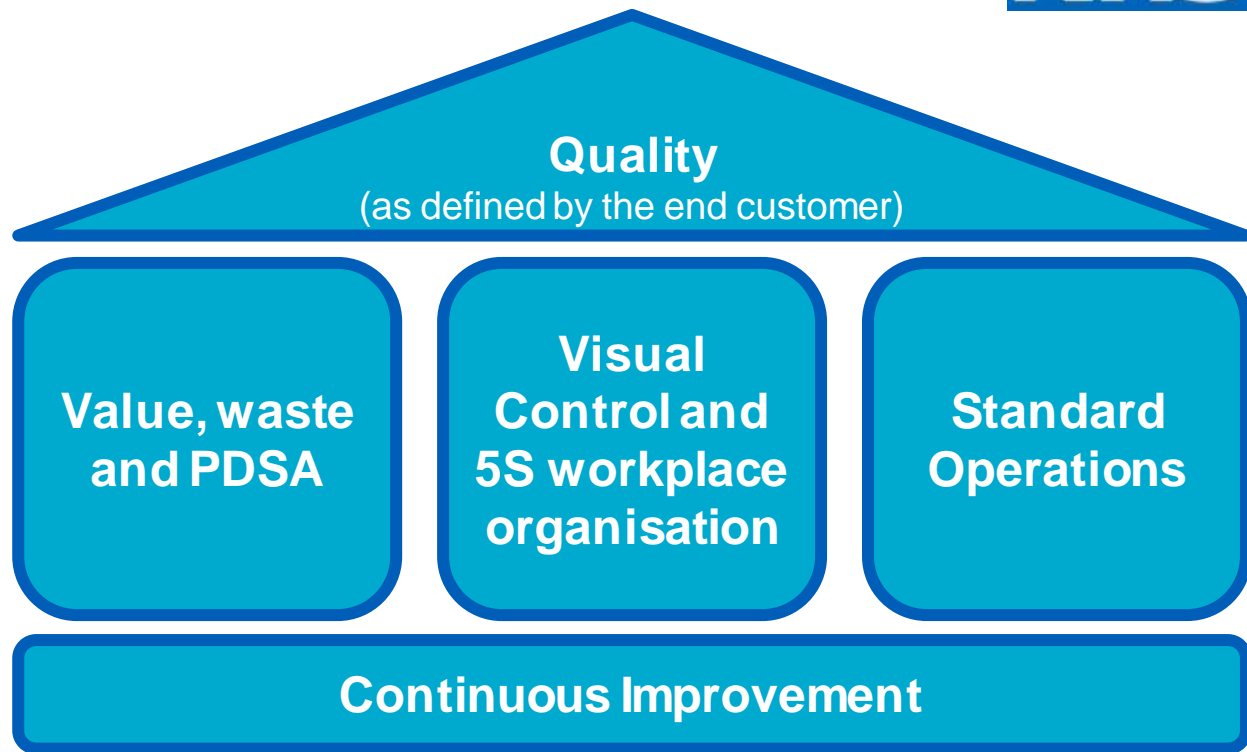
### The Improvement Hub

<https://www.england.nhs.uk/improvement-hub/>





**How it all  
fits  
together...**



## Your Mission (should you choose to accept it!)

- **Build** on the work you have already started during these webinars
- **Process map** an area of your work which causes you issues
- Run **PDSA improvement cycles** on your work
- **Capture** your improvements and **share** them with others

