

# An introduction to quality improvement

Applying improvement methods to support staff wellbeing

Session W10 Monday 15<sup>th</sup> May 2023 1.30pm – 4.15pm

# Presenting Team

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# Disclosures

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This session's presenters are all employees of The Institute for Healthcare Improvement (IHI) and have nothing to disclose.



# After this session, participants will be able to:

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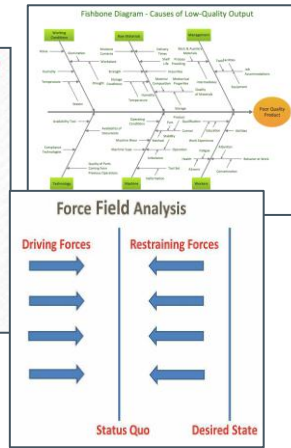
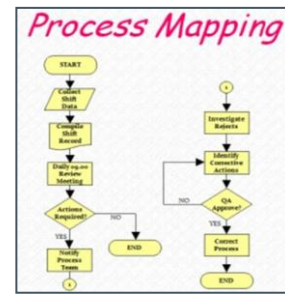
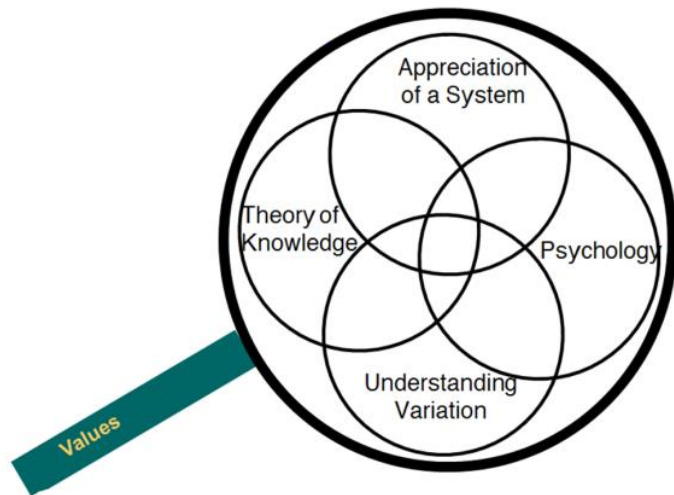
Describe the basics of improvement science and understand how the method is helpful for sustainable change

Understand the variety of ways that people can learn and use improvement science tools in their practice

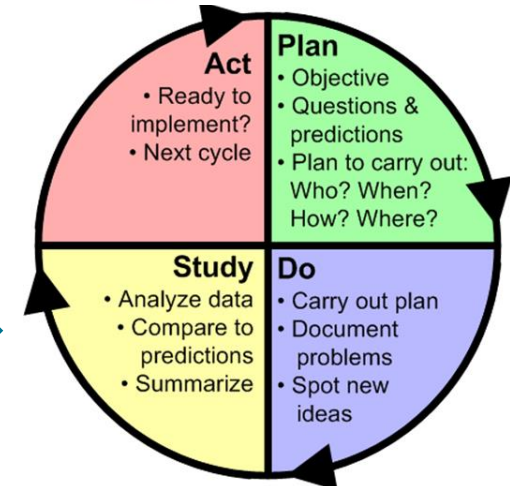
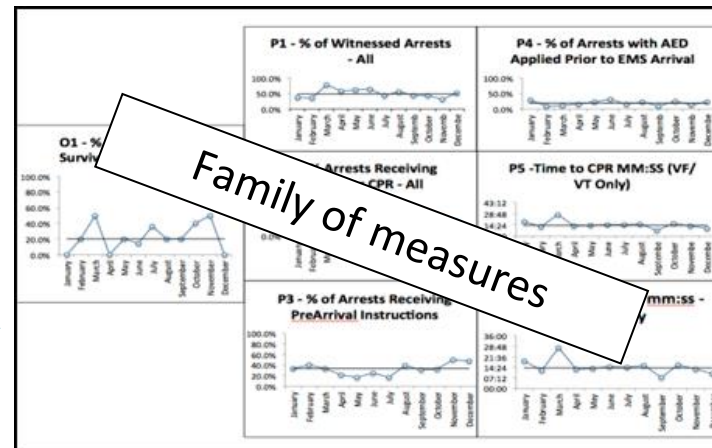
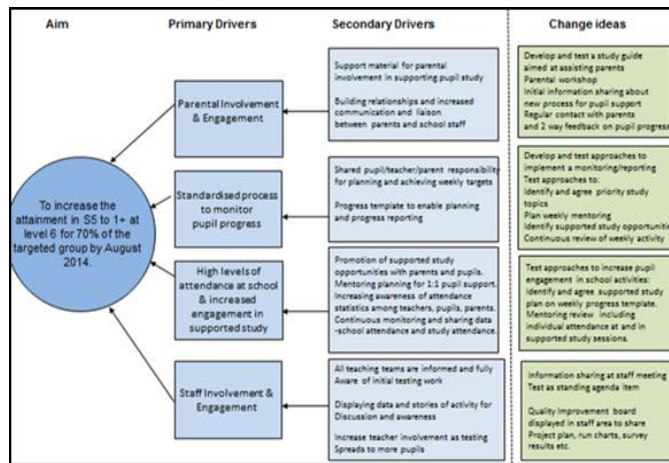
Take away ideas to support your own improvement work



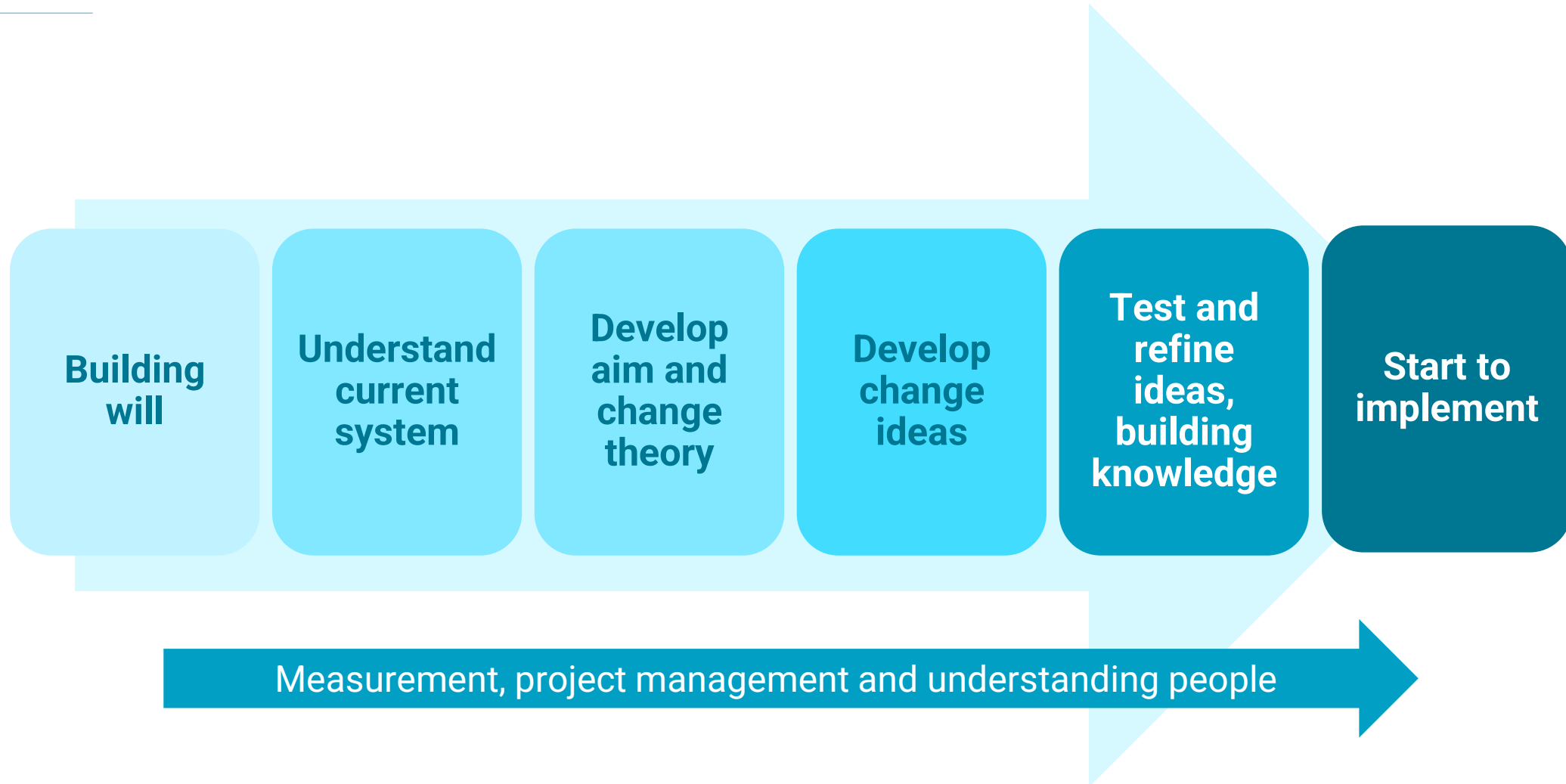
# Our journey for this session



## Model for Improvement



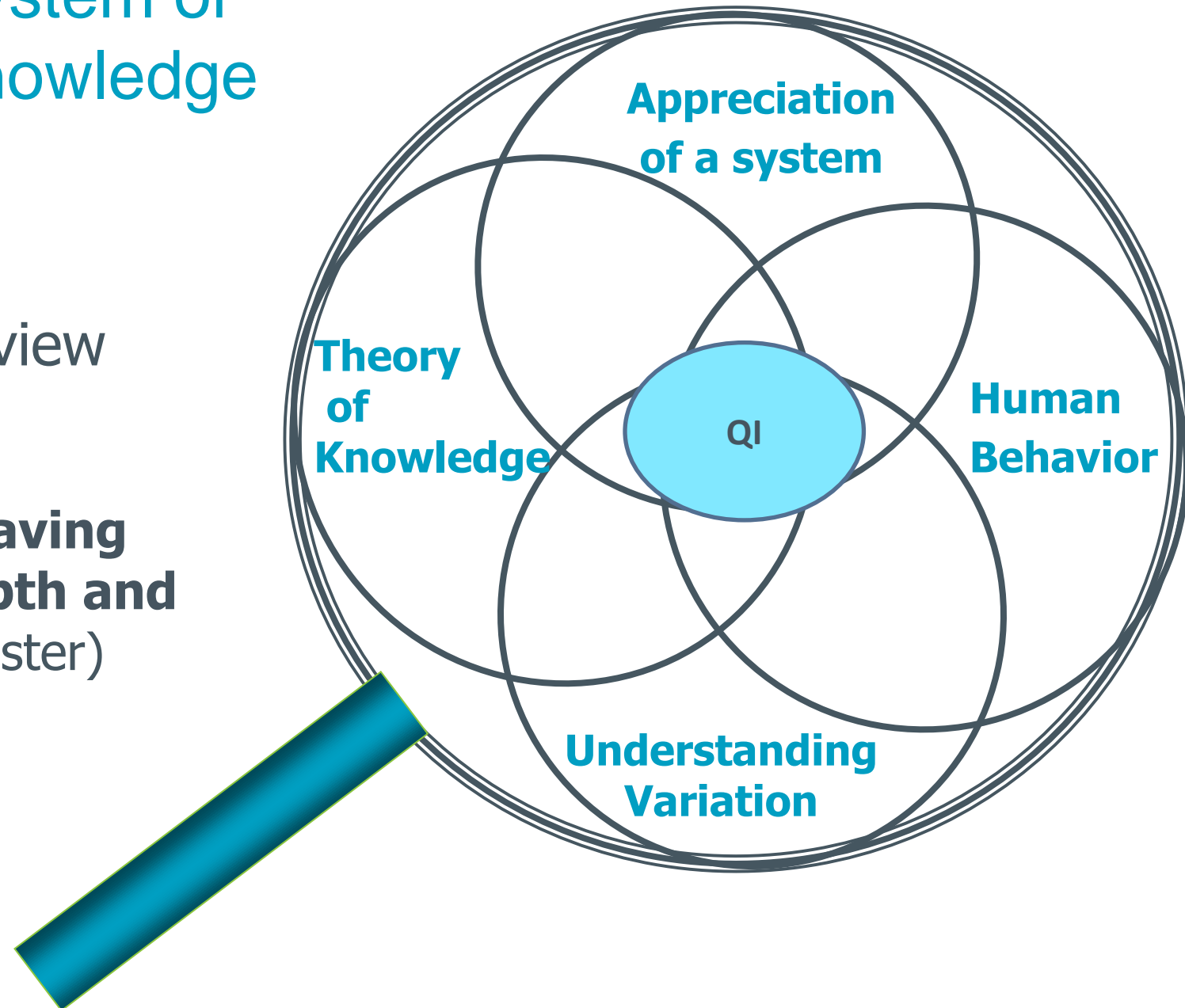
# Improvement Journey



# Deming's System of Profound Knowledge

An outside view

**Profound - having intellectual depth and insight** (Webster)



***“An interdependent group of items, people, or processes working together toward a common aim”***







## Appreciation for a System

- Interdependence
- Dynamic
- Interactions
- System must have an aim
- Whole is greater than sum of the parts



## Theory of Knowledge

- Learning from theory, experience
- Operational definitions
- Expert prediction
- PDSA for learning and improvement



## Psychology

- Interaction between people
- Intrinsic motivation
- Beliefs, assumptions
- Will to change

## Understanding Variation

- Variation is to be expected
- Common or special causes
- Potential mistakes
- Knowledge of baseline

DATA  
COLLECTION



## Exercise:

In healthcare systems many interdependencies exist – depending upon one another to deliver seamless high quality care experiences.

Imagine you are attending a visit to either:

A clinic for a check up or

A surgical unit for a procedure

List the various interdependencies at play in each environment

How many can you come up with?



## Clinic:

**People** – clerical staff /welcome desk, consultant, nurse, allied health colleagues, laboratory staff, porter, domestic services staff

**Equipment** – medical records, lab results, electronic systems for radiology images, examination or procedure clinical sets, examination bench, wheel chairs for patient transport

**Environment** – clean examination rooms, water fountains, call system for patients to attend rooms

and so on...

## In-patient surgical setting:

**People** – nurses, doctors, allied health professionals, porter, theatre staff, surgeon, anesthetist, lab staff, appointments team,

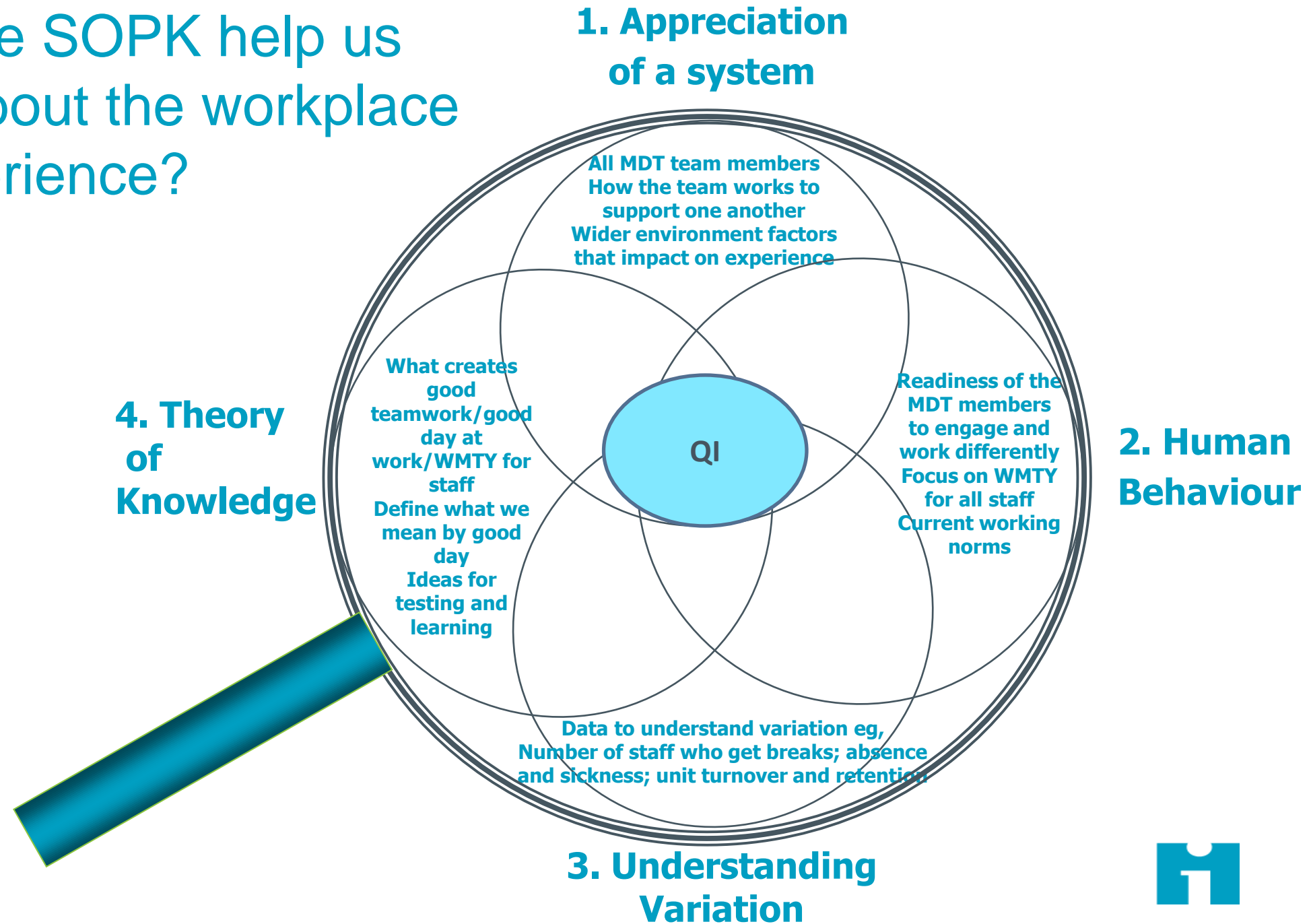
**Equipment** – medical records, lab results, electronic systems for radiology images, examination or procedure clinical sets, examination bench, wheel chairs for patient transport

**Environment** – clean examination rooms, water fountains, call system for patients to attend rooms

and so on...

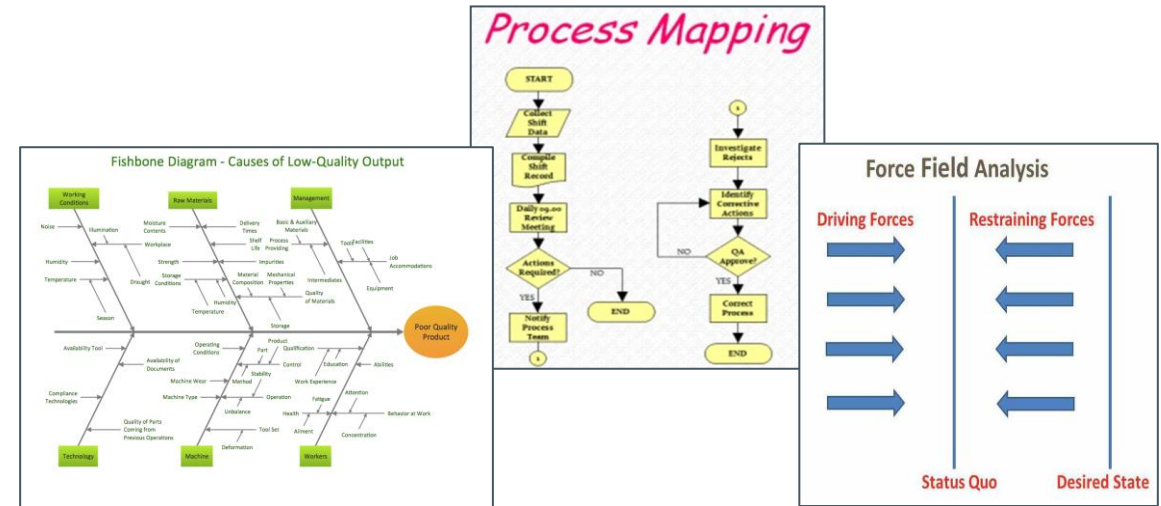


What could the SOPK help us understand about the workplace and staff experience?





# Technical Tools to help you understanding a System



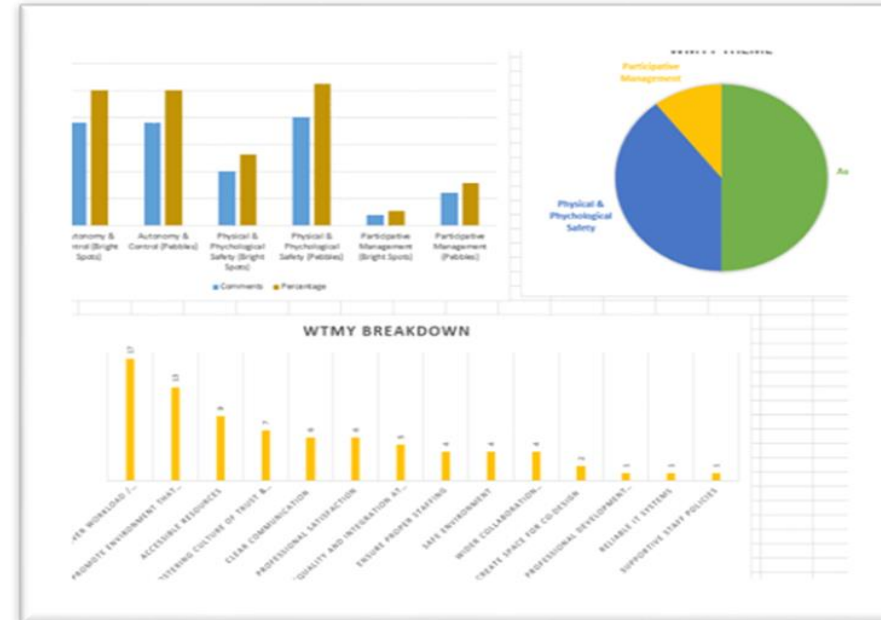
IHI.org  
Quality Improvement Essentials Toolkit

<http://www.ihl.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx>

IHI Open School course: [QI 102: How to Improve with the Model for Improvement](#)



# Meet the WMTY team in Dental Radiology in Newcastle



| Issues   | Public   | Changes  |
|--|--|--|
| <ul style="list-style-type: none"> <li>2 things continue to ask for help and they do their best</li> <li>the great experience to produce good quality radiograph even without circumstances</li> <li>knowing the colleagues and making them smile (laugh, strong removal patients in reception)</li> <li>friendly with everyone</li> <li>interaction</li> <li>the staff are encouraged the workload for that day</li> <li>g with people who are very good at their jobs with lots of experience</li> <li>g with people from other departments</li> <li>first about his staff - make in the department when we have a lot of support on the day/for</li> <li>second</li> <li>1 hearing - seeing improvement</li> <li>also from having a difficult patient</li> <li>also</li> <li>the things every day</li> <li>enhancing the unexpected (images)</li> <li>a happy - good people to work with</li> <li>working with all the patients, and accepting good images on going patients</li> <li>then: things in the department</li> <li>for there may be genuine interest in the department - thank a staff</li> <li>laughing and before then</li> <li>the positive outcome of sharing knowledge and technique</li> <li>knowledgeable consultant radiologist on clinical matters</li> <li>needed to get on with the job</li> <li>ing best for the patient and making them feel welcome</li> <li>for the flexibility shown when waiting for time to go to lunch in good time</li> <li>at which times (get more done (getting out room)</li> <li>keep that there for the lunch afterwards</li> <li>patients</li> <li>helping the when I ask for help</li> </ul> | <ul style="list-style-type: none"> <li>2 things fridge</li> <li>the second (non-instrumental) studies in the 4 Tiers is used properly</li> <li>workflow management</li> <li>taking it to work</li> <li>being able to 'get on' with work</li> <li>taking room out for (CCTV) which could be done elsewhere</li> <li>being in control of all things (people need to be responsible as well)</li> <li>of assistance</li> <li>innovations at lunchtime about work</li> <li>don't like it when there are too many patients in the waiting room</li> <li>consistently being given new instructions about how to manage staff</li> <li>clearer could prep patients about radiology waiting times</li> <li>No equality</li> <li>Not knowing what the day is going to be like</li> <li>Eligible - we are a team</li> <li>"Have you got a minute?"</li> <li>Being told to do something then later being overruled - make a note to ask</li> <li>Need more organisation / managing</li> <li>The department looks lovely I think I do!</li> <li>Would like more structure for student information</li> <li>when second stage of work is not structured</li> <li>Better storage of x-ray - office cupboard etc in room</li> <li>No opportunities to progress in career role</li> <li>Patients not following the numerous signs in the department</li> <li>Would love the department to be more 'open' - look a bit more</li> <li>Exclusion during decision making</li> <li>First chair on (CCTV) - need another one!</li> <li>Designated student hub - not room 8</li> <li>Would love a dedicated children's room</li> <li>Managed! Especially after time</li> <li>People on phones in work time - especially when there are patients</li> <li>Make to level it if you sit down - even if still working up. Blocking out</li> <li>Instruments etc</li> <li>Lack of communication when people are struggling physically and mentally</li> <li>if there is a different workflow manager each day I think it would change</li> <li>workload is not</li> <li>Room 8 is not in use - how many guests?</li> <li>Consistent with staff will be engaged in reception office and take up the</li> <li>IPC where operational work is done</li> <li>Understand - no voice</li> <li>Decision between roles I think more apparent</li> <li>Good things overlooked but not a lead to which hour (hospital as a whole)</li> <li>Waiting for patients to arrive, getting frustrated when aggression / angry</li> <li>about waiting, is there a policy?</li> <li>Please check in to staff room eg bring dishes</li> <li>Provision in office to be secure, non-essential, partial booking all at the same time</li> </ul> | <ul style="list-style-type: none"> <li>match on advice to stop patients wandering in office</li> <li>Could help to be a champion for staff?</li> </ul> |

# A method for improving

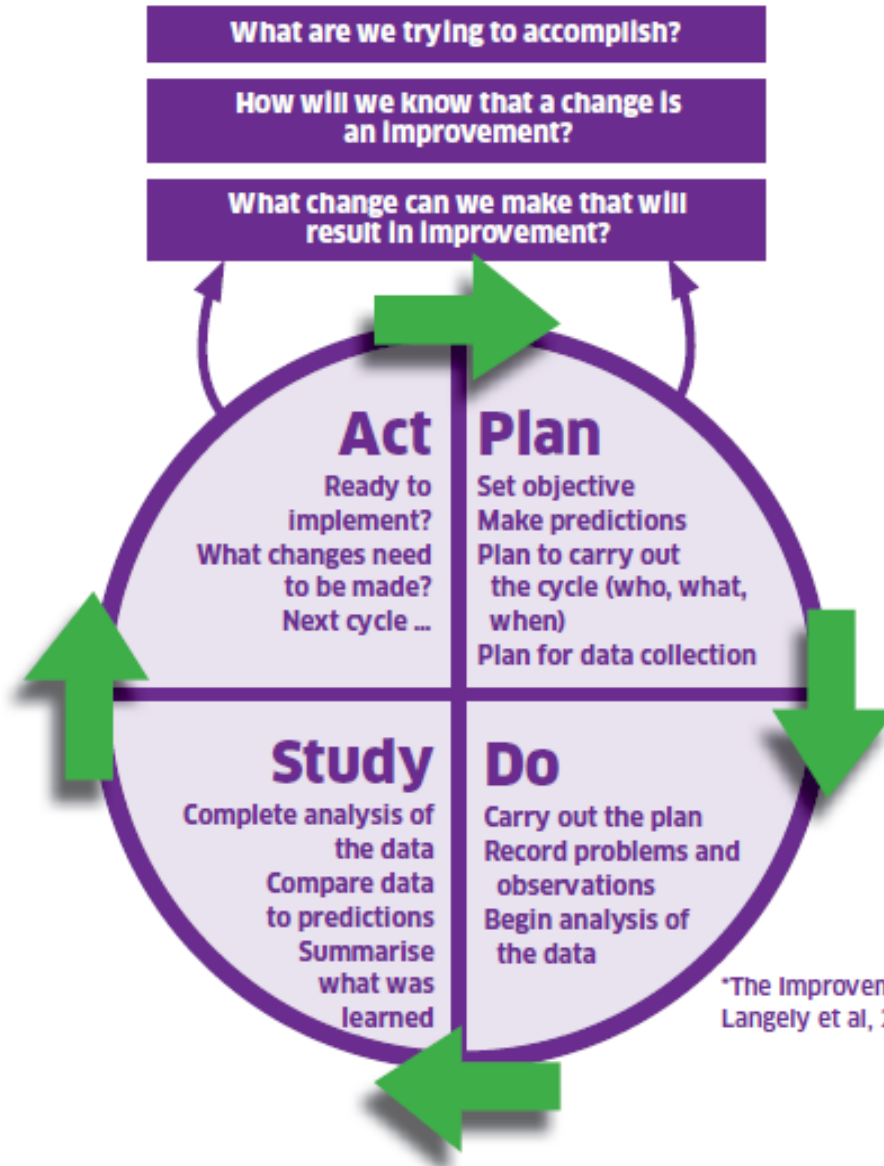


# The Model For Improvement

Three questions

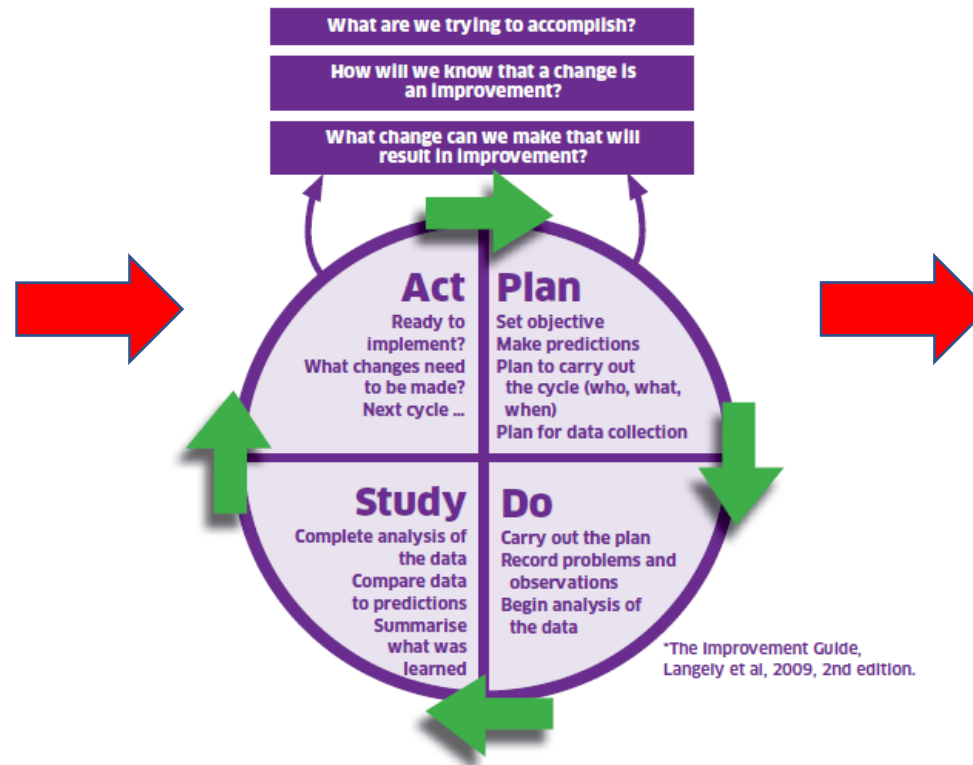


Practical application



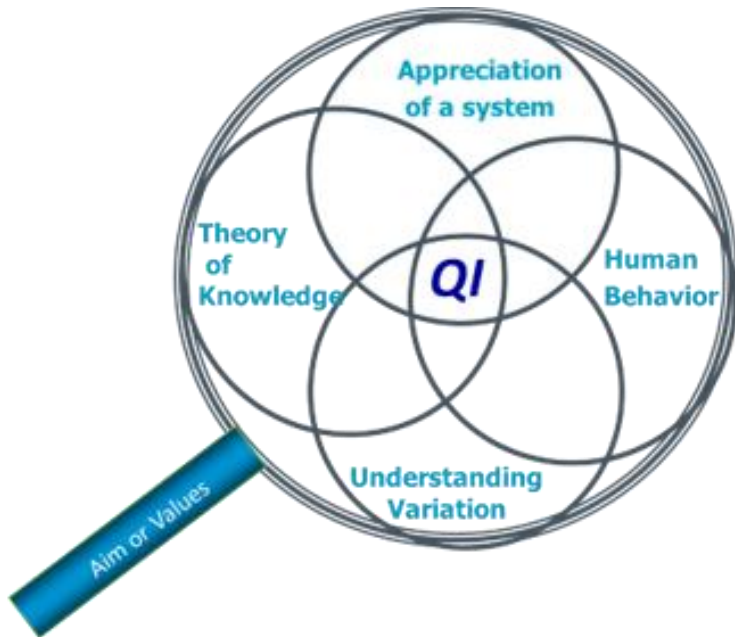


# The Model for Improvement supports implementation of evidence into practice, while enabling innovation and exploration of new ways of working



# Aims

Deming's System of  
Profound Knowledge



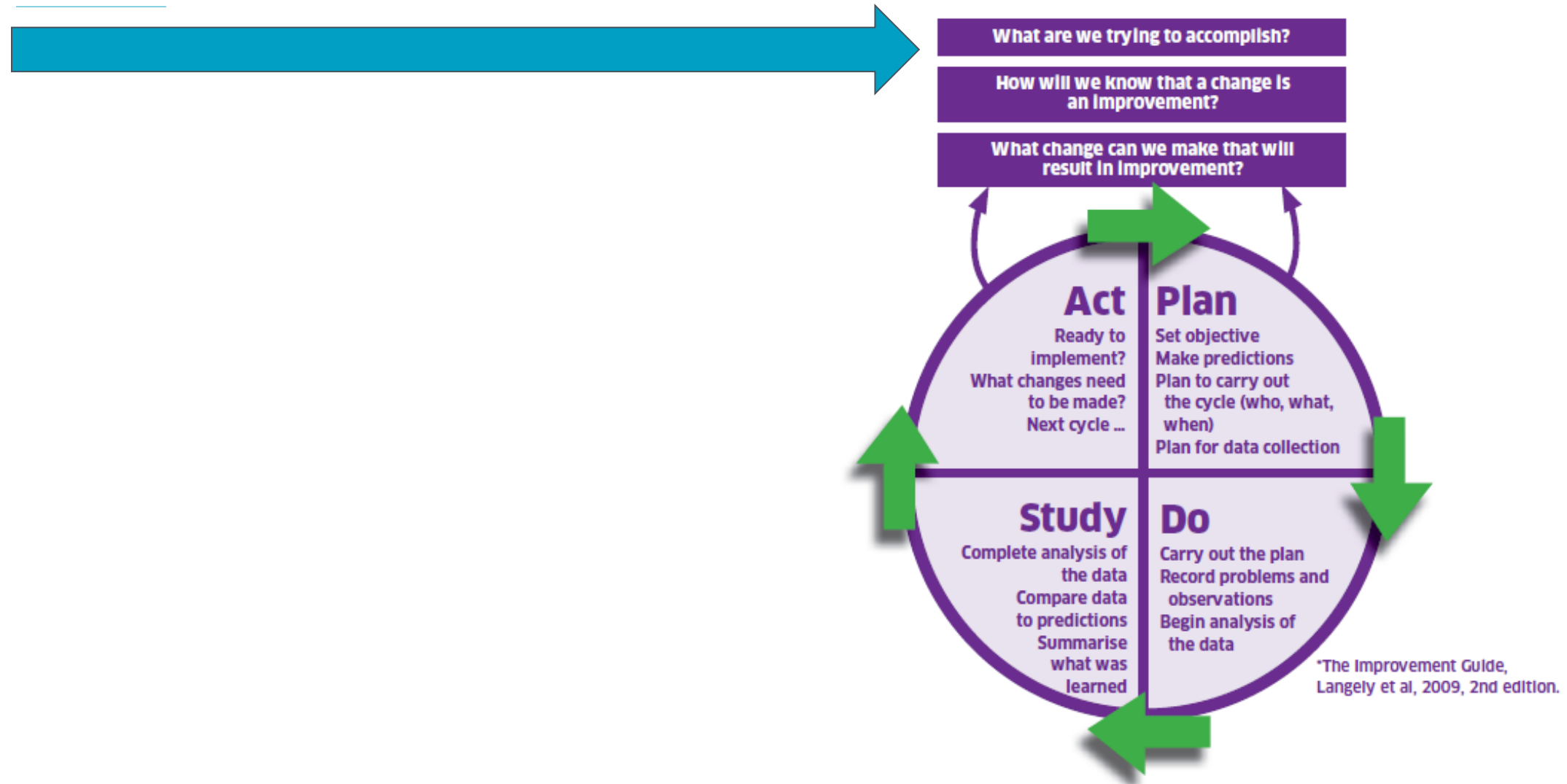
+

Model for Improvement



Langley, et al, *The Improvement Guide*, 2009

# Developing an Aim Statement: What are we trying to accomplish?



# A Project's Aim is:

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Not just a vague desire to do better

A commitment to achieve measured improvement

In a specific **system**

With a definite **timeline**

And numeric **goals**

***What we want to achieve, where we will do this, how good we want to be, and by when***



# Using SMART Aims

**Specific** – identify the part of the system to be improved

**Measurable** – how can measurement and data to track progress

**Achievable** – is it possible and reasonable in the time period

**Relevant** – person centered approach – does it make sense to the team and for service users?

**Time-limited** – what is the start and end date for achieving a level of Impact?



# Scenario

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## Joy in Work

You have data from a recent staff survey that staff on Cranberry Ward have been experiencing less joy in their work.

Speaking with staff, issues have been raised regarding:

- Many changes and struggling to keep up
- Missing out on team meetings as the times and dates change at short notice
- Unclear about the process to log broken equipment
- Too busy to take breaks

You are the QI team, equipped with the Model for Improvement to help the staff on Cranberry Ward make changes that will impact on their joy

First thing to do... create an Aim Statement



Photo by [Jonathan Borba](#) on [Unsplash](#)

**Exercise:**

**What is your aim to achieve improved staff wellbeing**

**Remember:**

**What do we want to achieve, How good do we want to be, What is the timeline?**

***What, How much, By when***

**(example:** We want to ensure that 80% of staff in the Cranberry unit reliably experience a good day at work 90% of the time by 31/12/23)





# An Aim for the WMTY team in Dental Radiology in Newcastle

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In the Dental Radiology team – Aim to achieve an increase in positive staff responses to the statement *“I feel I have the tools, support and systems necessary to do my work to the best of my ability”* from 55% to 75% by the end of May 2022.



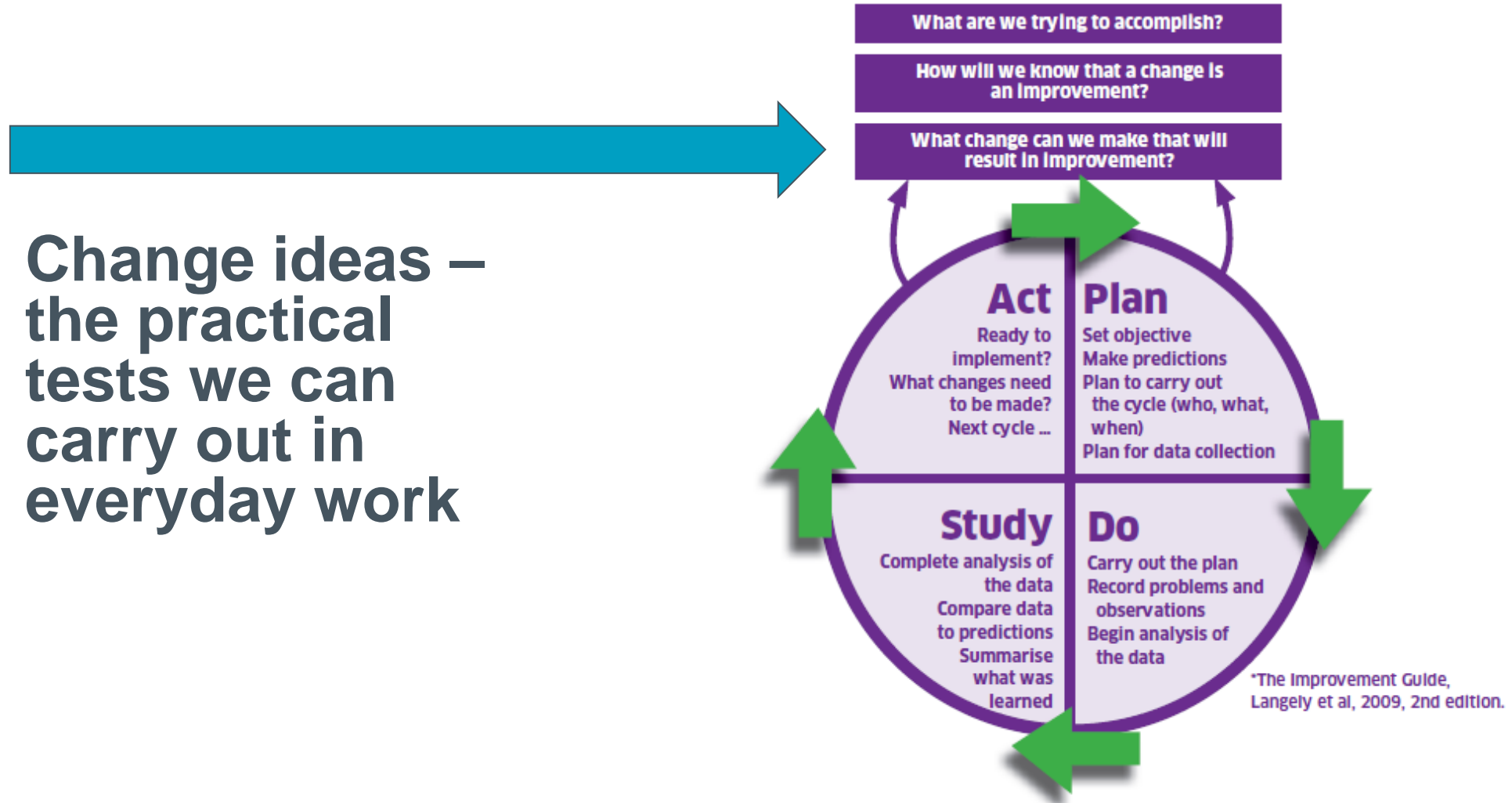


# Aim statement top tips from the IHI team

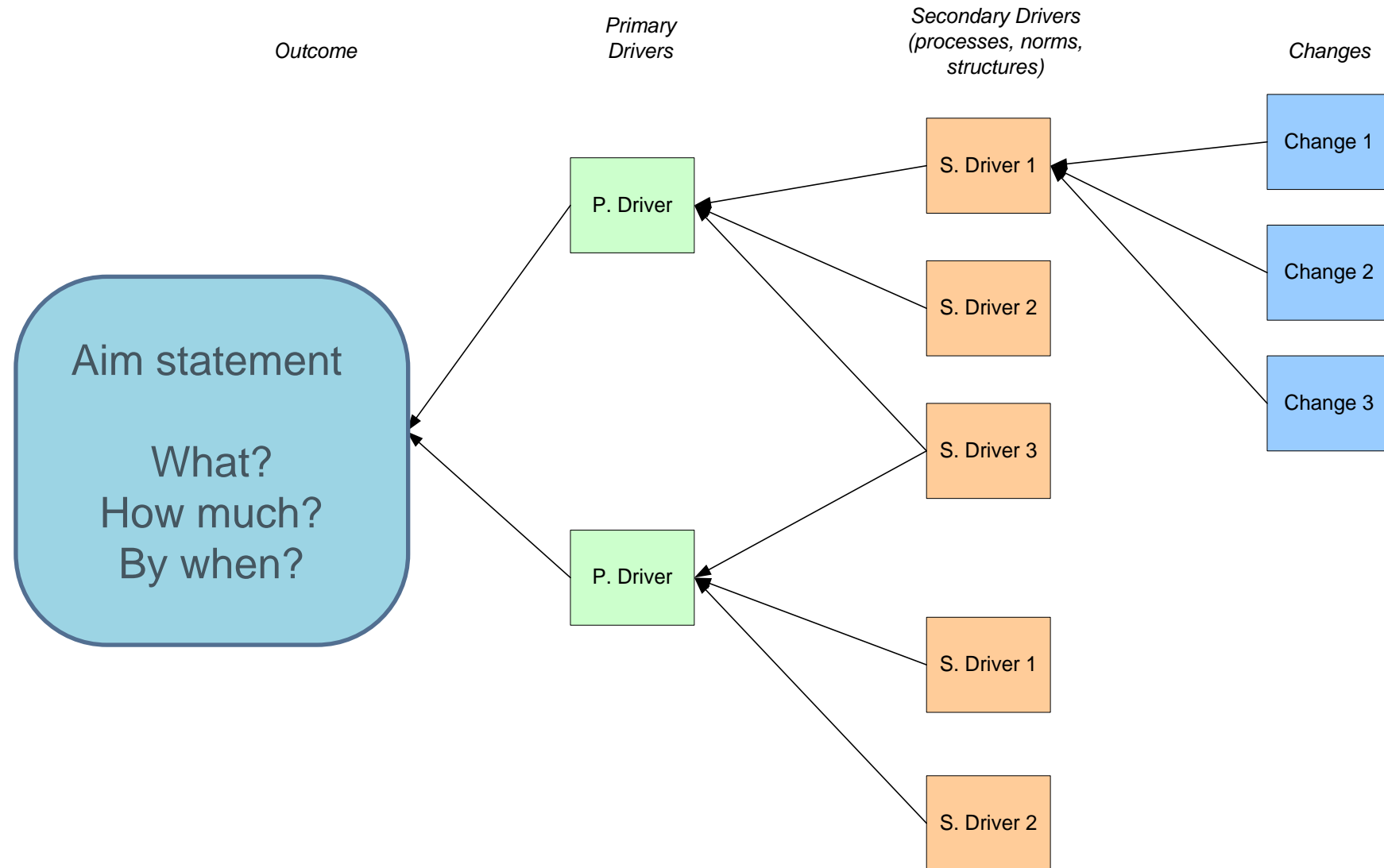
- You will sink or swim based on the clarity, and commitment to your aim...
- However, do not get stuck in perfection(ism)
- Focus on outcome (customer) versus process
- Pull on heart as well as head
- Beware of MBF (Management By Fear), numerical goals can backfire in a fear driven culture
- Stretch versus realistic goal (overwhelmed or energised)
- Prevent scope creep and focus energies > identify clear boundaries



# The Model For Improvement Question #3



# Developing a Theory for Change with a Driver Diagram



# Components of a Driver Diagram

Primary Drivers



Secondary Drivers

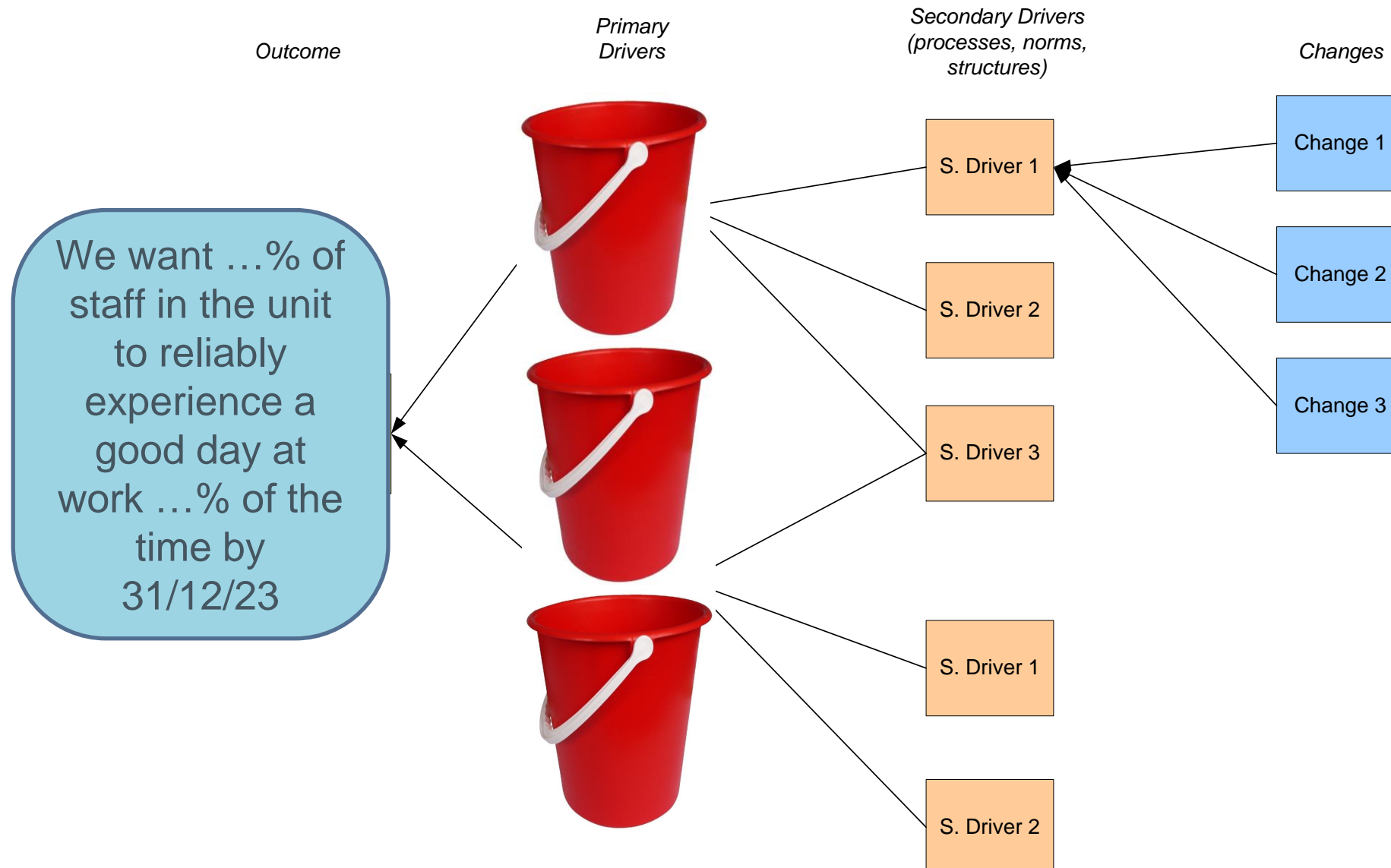


Change ideas



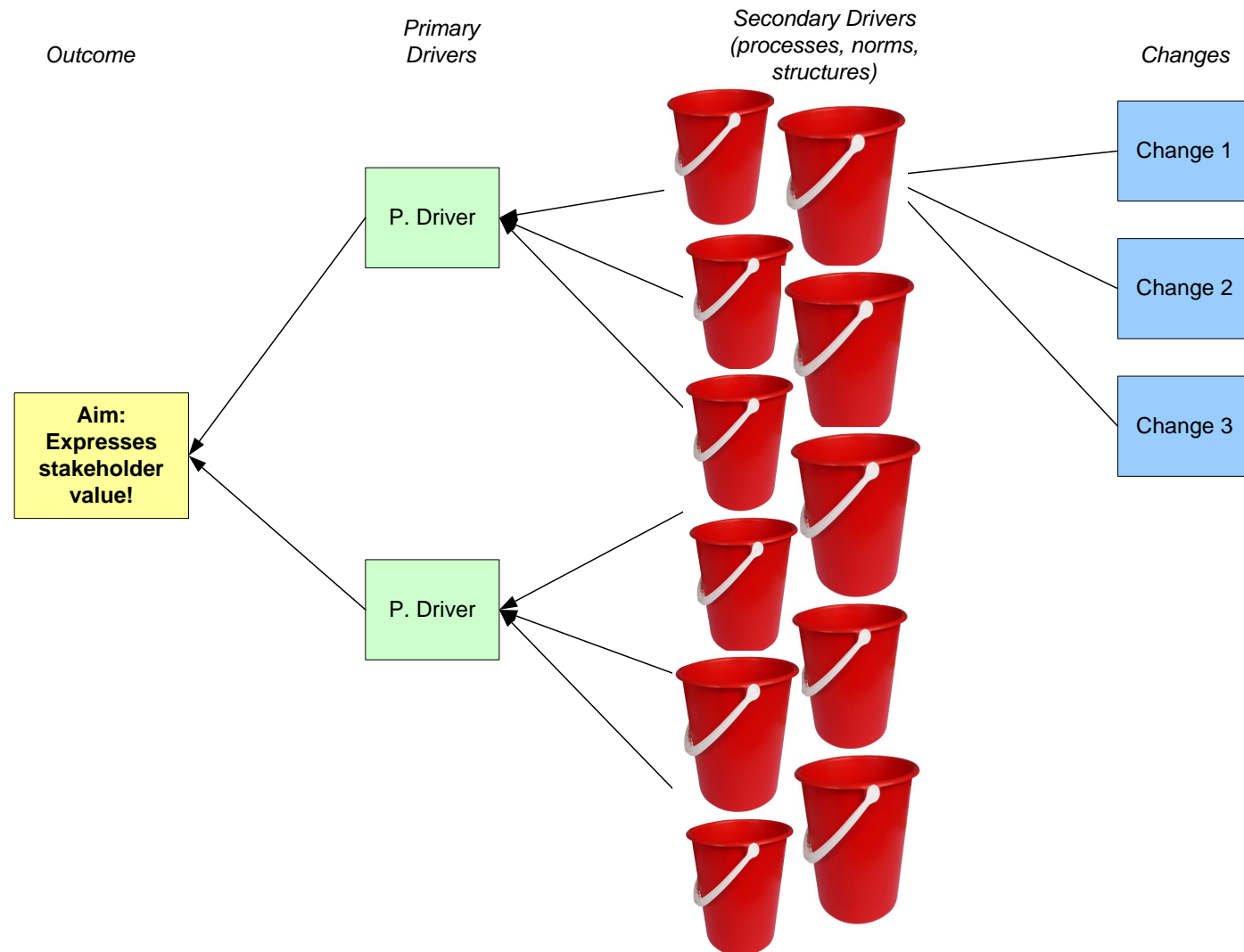
# What primary drivers do we need in order to achieve the aim?

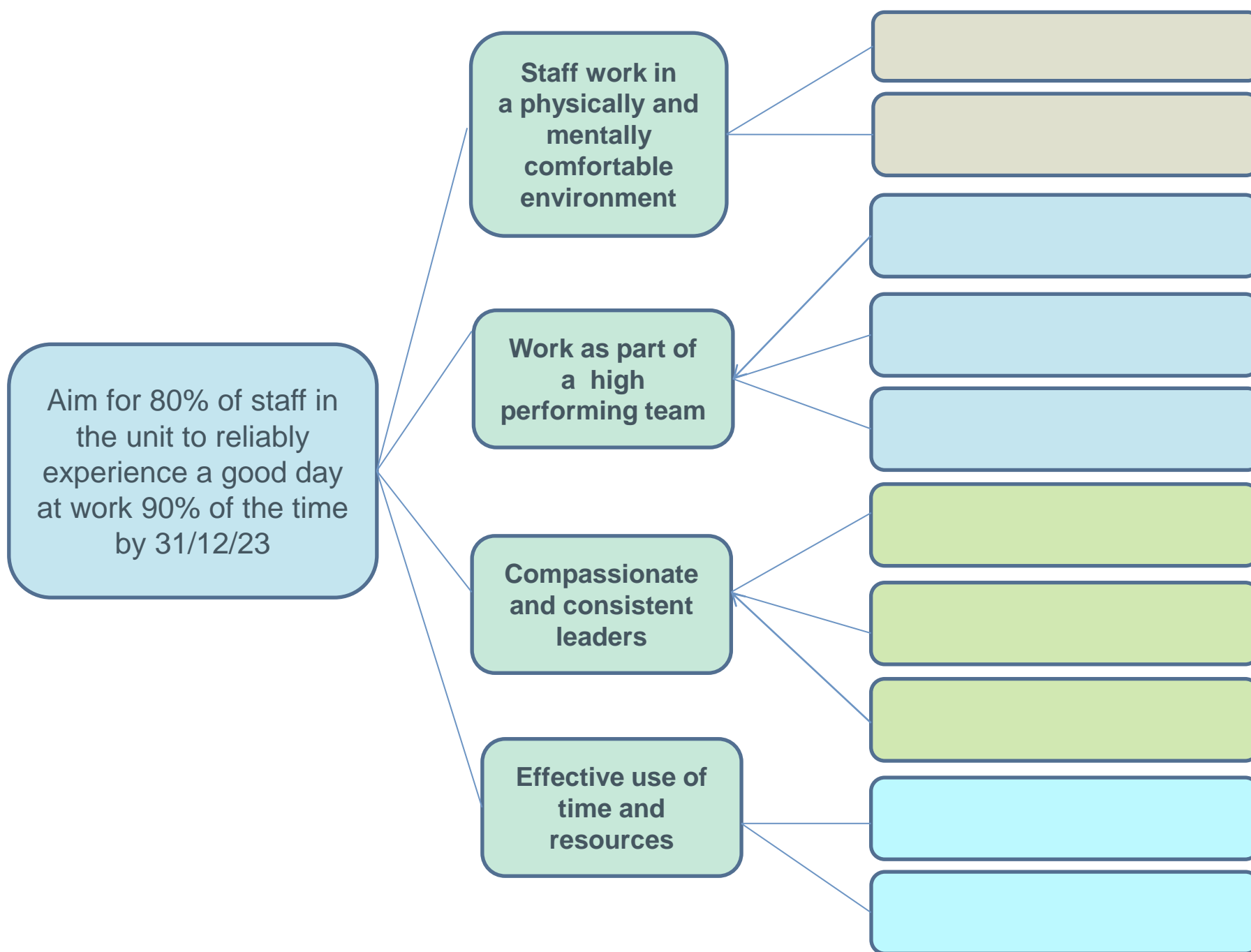
## These are fundamental to achieve the aim



# What factors will contribute to delivering the primary drivers?

What **secondary** drivers will take forward activities to deliver the primary drivers?





# Exercise

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**Identify a number of secondary drivers that could help to deliver the primary drivers?**

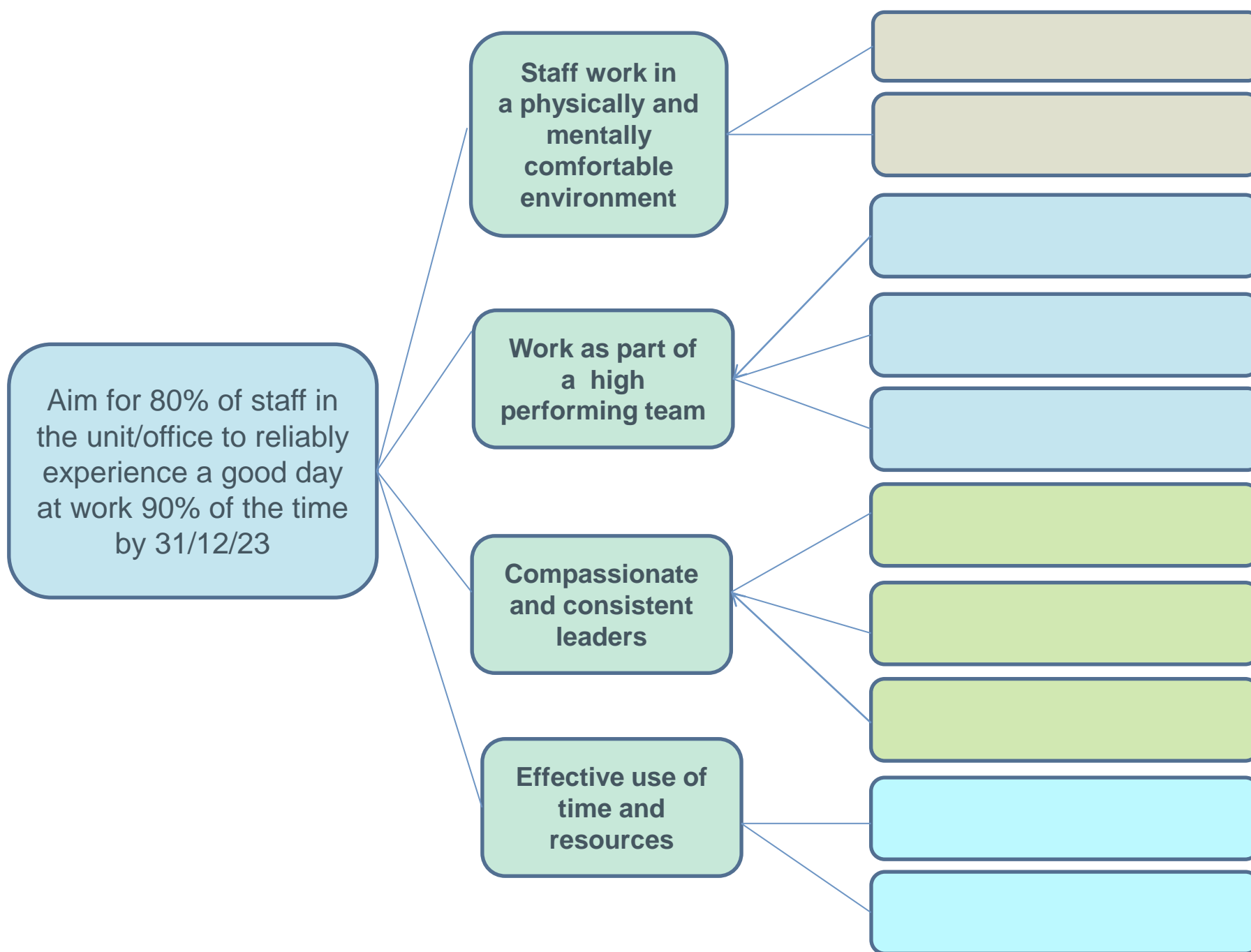
**Remember these are the structures and processes that will help deliver the primary drivers**

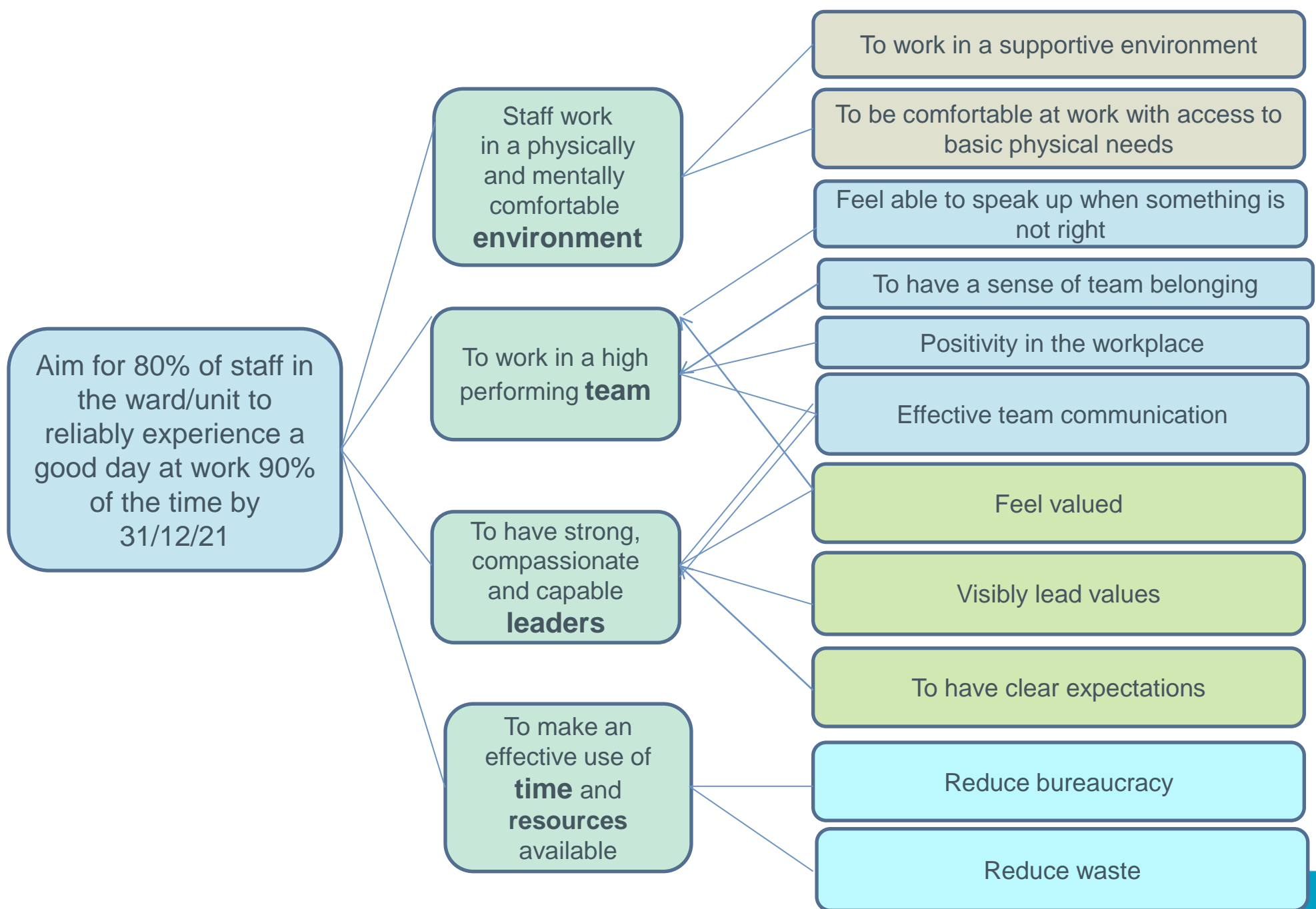
What needs to be in place to achieve the delivery of the primary drivers as it relates to:

- Environment
- Team
- Leaders
- Time

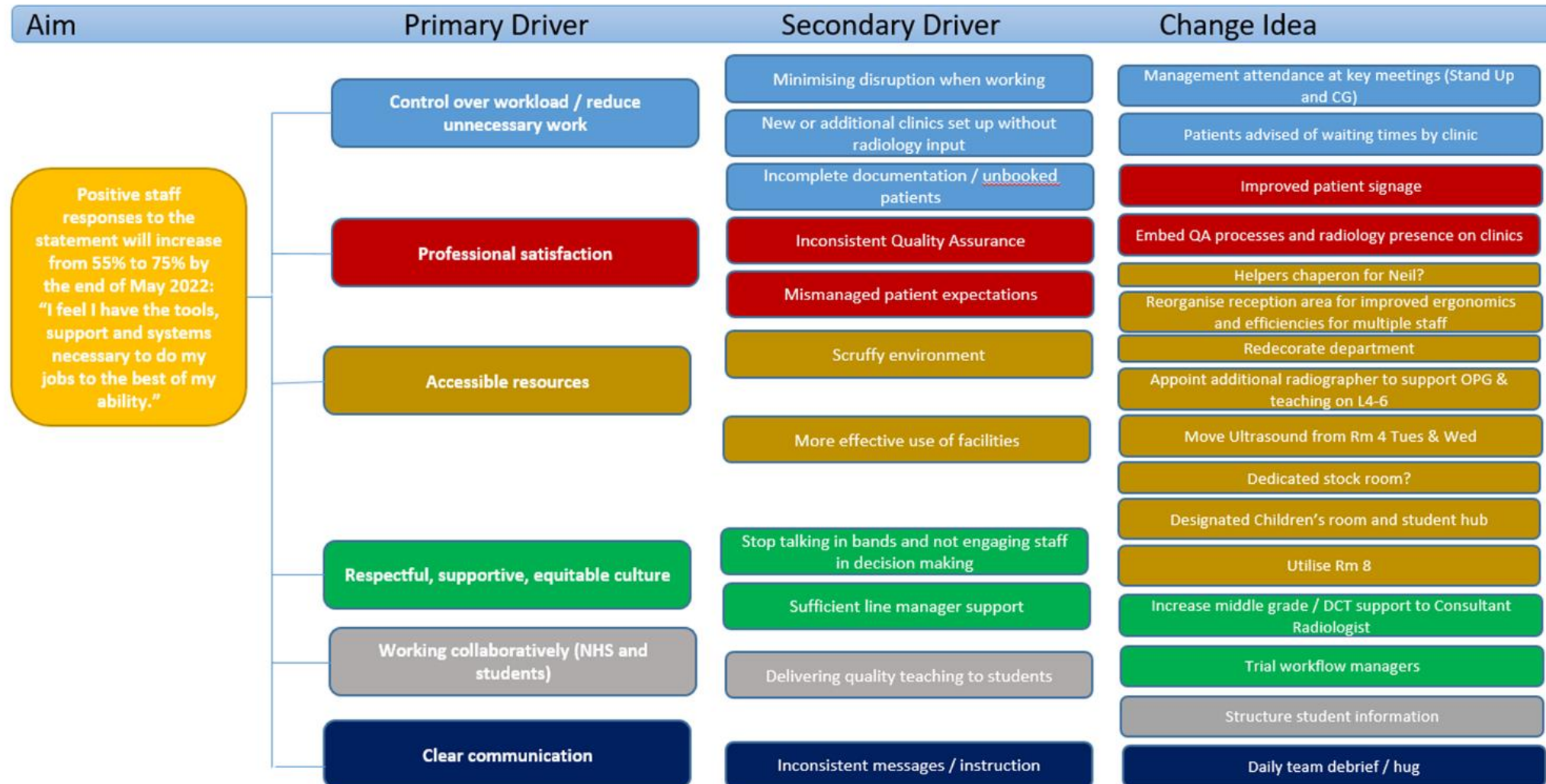








# Developing the theory for WMTY - Dental Radiology in Newcastle



# How will we know?

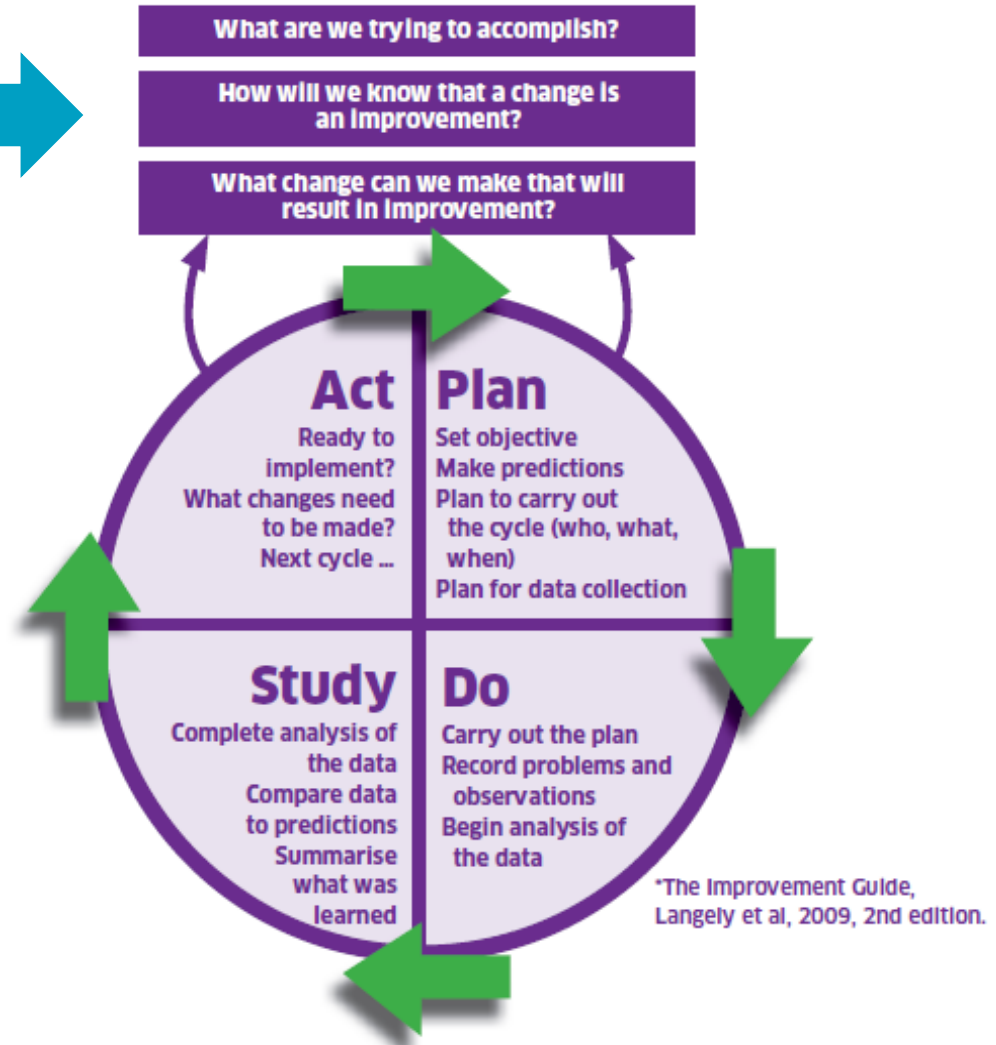


# The Model For Improvement – Question #2



Measures:

What data will guide  
our improvement  
work?



Is the project  
getting the right  
outcome?




## **Outcome Measures**

Are we making  
things better?

Are we on track to  
achieve our Aim?

Is the system  
working as  
planned?




## **Process Measures**

Are we doing the  
right things at  
the right time,  
every time?

Is the process  
reliable?

What about the  
bigger picture?



## **Balancing Measures**

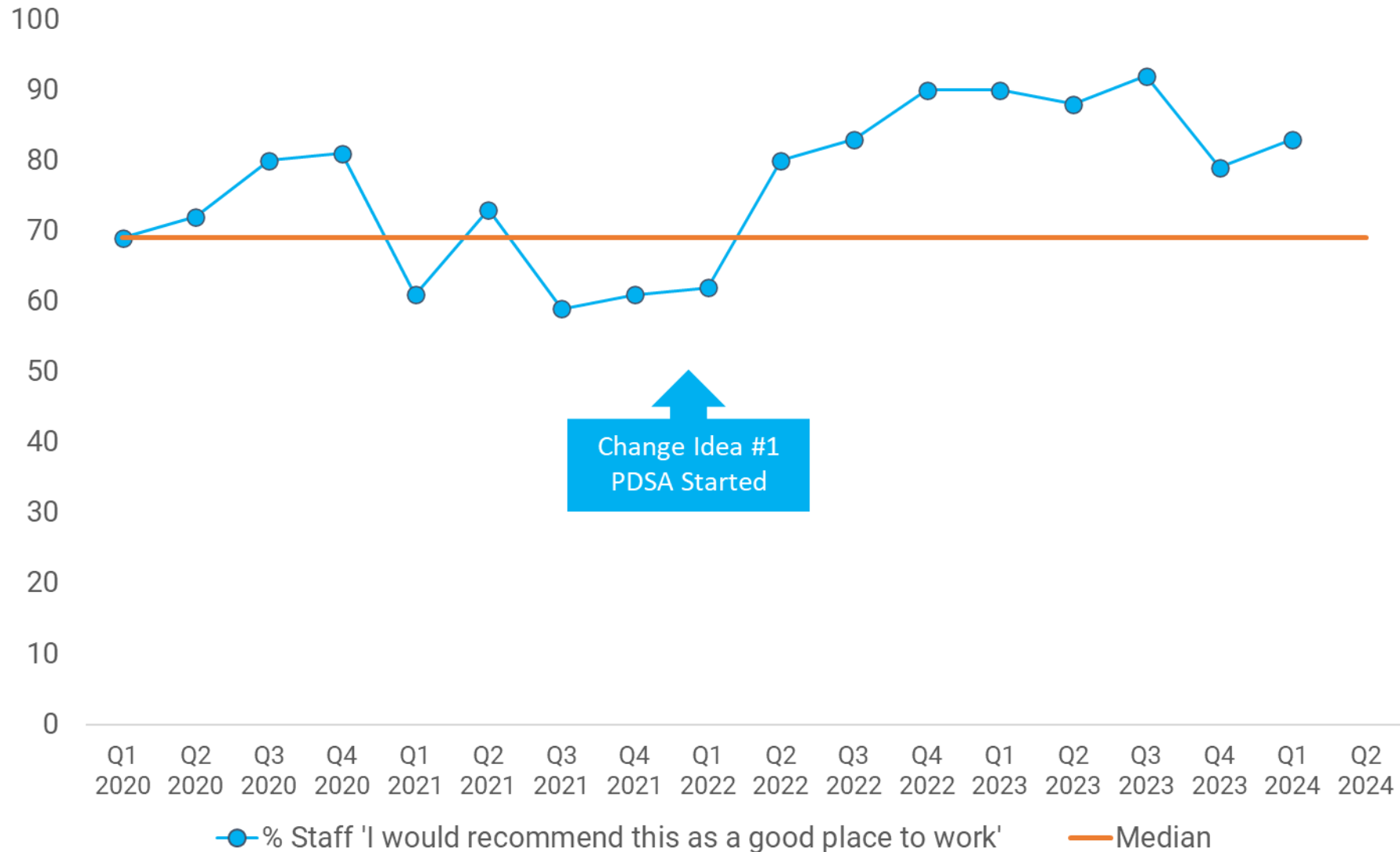
Looking at the  
system from  
different  
dimensions.

Does improving one  
thing cause  
problems or impact  
elsewhere?



# Outcome Measure: % Staff recording "Yes" to "I would recommend this as a good place to work"

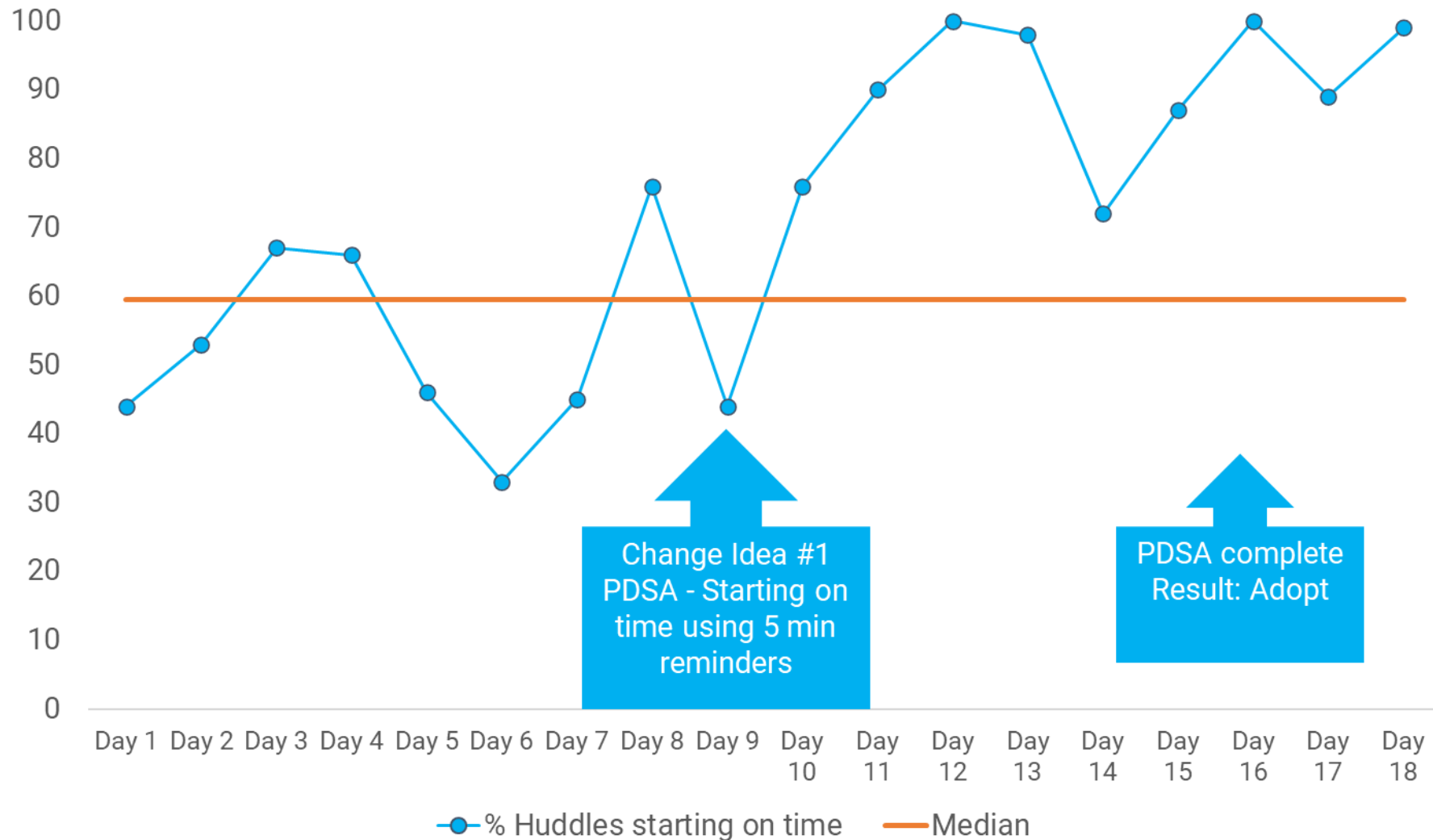
Source: Quarterly Staff Survey



# Change Idea #1 - Process Measure #1

## % of Huddles starting on time on Cranberry Ward

Operation definition: Starting on time means 3 mins before/after Huddle start time agreed





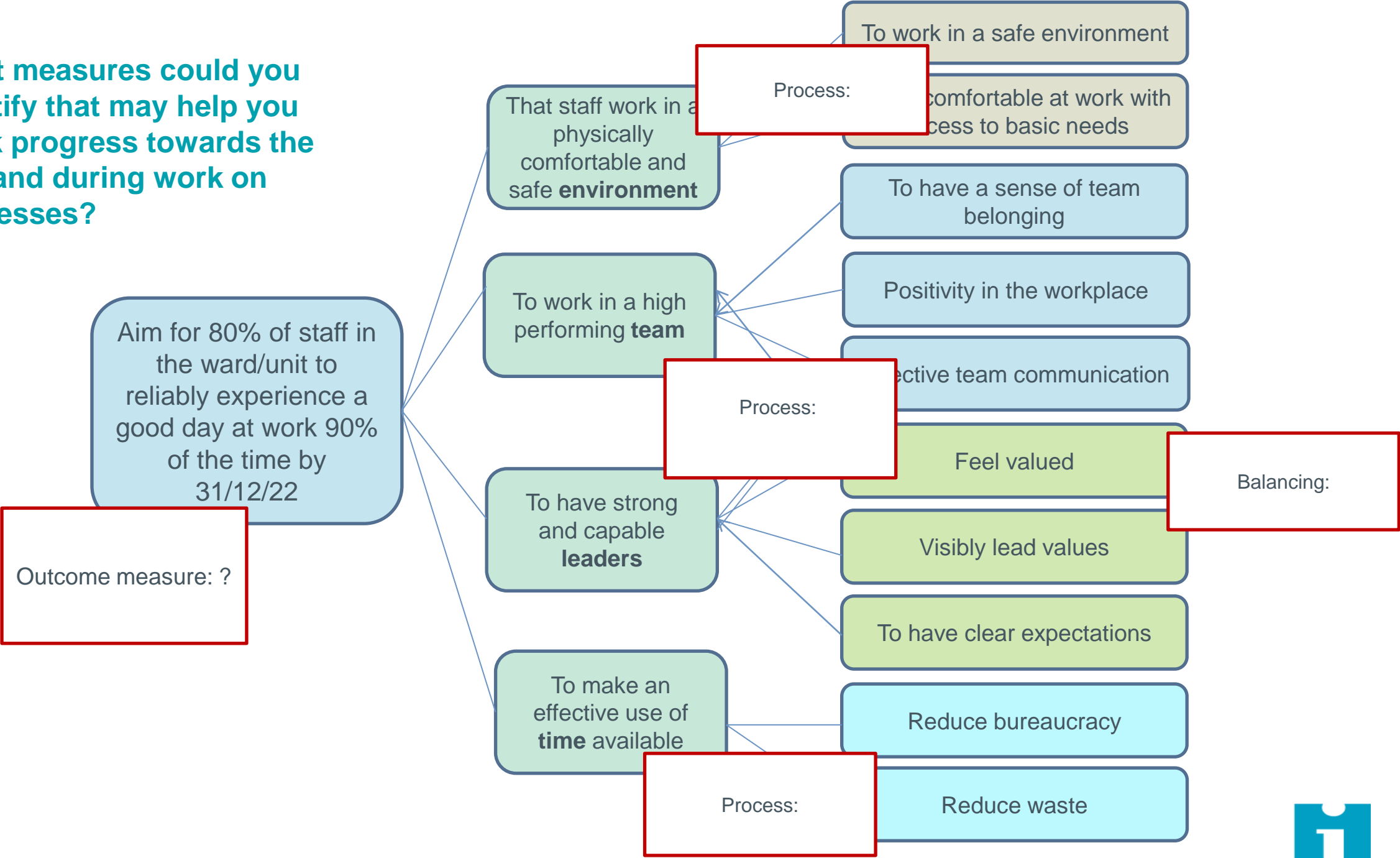
# Balancing Measure #1

## Staff overtime on Cranberry Ward in Hours

Operational Definition: # of hours past planned shift finish time  
Source: Staff Timesheets



What measures could you identify that may help you track progress towards the aim and during work on processes?



Measures for tracking progress and results

Outcome measure:  
The % of staff reporting a good day at work 90% of the time

Aim for 80% of staff in the ward/unit to reliably experience a good day at work 90% of the time by 31/12/22

That staff work in a physically comfortable and safe environment

Process: Number of safety huddles completed weekly

To work in a safe environment

To be comfortable at work with access to basic needs

To work in a high performing team

Process: Attendance at team meetings, Updates on QI board weekly

To have a sense of team belonging

Positivity in the workplace

Effective team communication

To have strong and capable leaders

Process: Number of staff who had all expected coffee and lunch breaks

Feel valued

Balancing: Patient and relative feedback on information flow

Visibly lead values

To make an effective use of time available

Process: MDT planning huddle documented daily for each ward/room team

To have clear expectations

Balancing: Number of times patient's have to use call buzzer on each shift

Reduce bureaucracy

Process: Prep room stock checked daily, Top up completed daily

Reduce waste

Balancing: Time taken to check and re-stock prep room

# Exercise

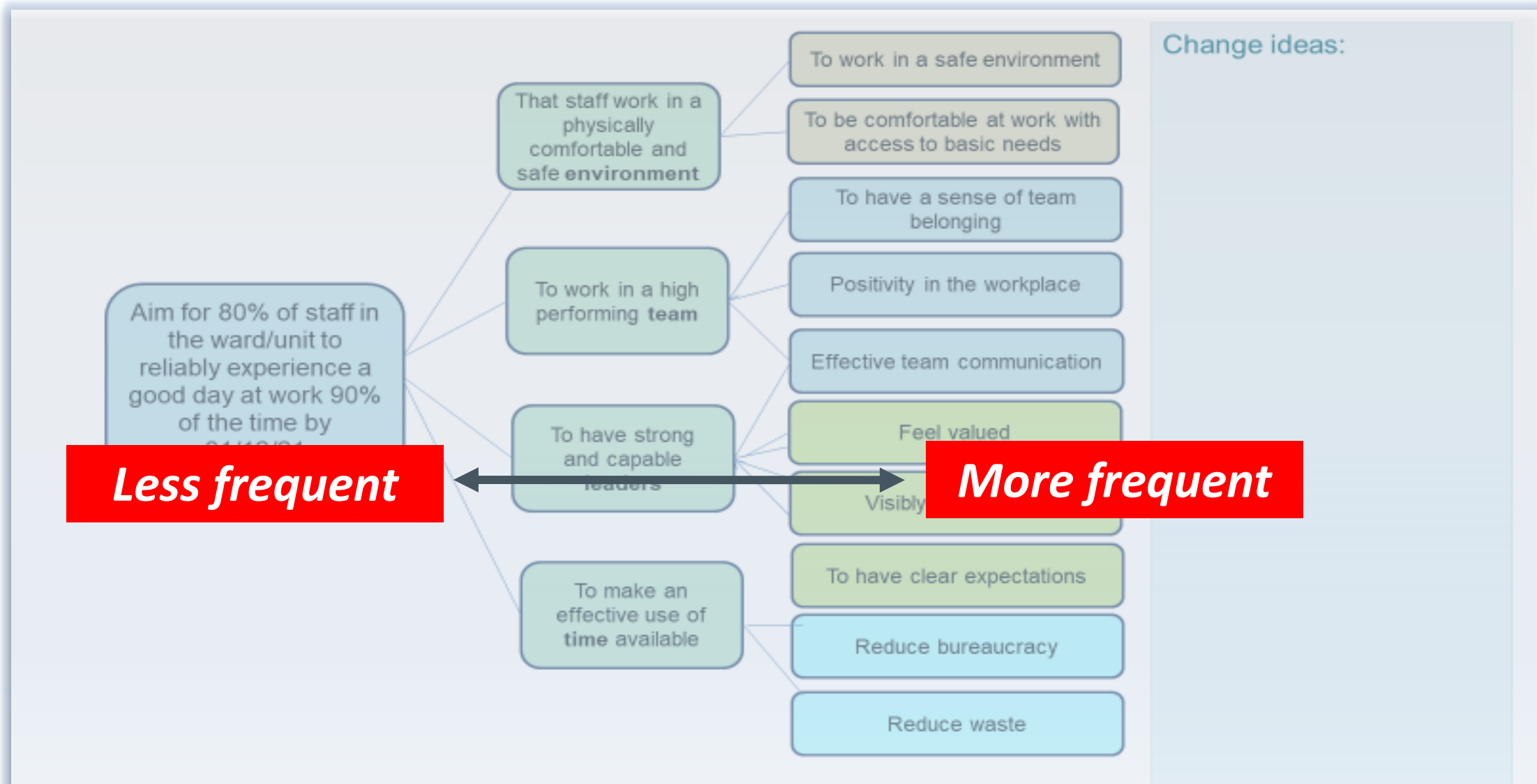
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**What measures could you adopt to support your improvement plan activities?**

***Think about 'what do we want to know, then, how can we gather data to inform us'***



# What to expect of your data



# Data collection planning

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**Who:** is responsible and what are contingency plans

**What:** operational definitions, numbers, words, pictures. Whole population or a sample

**Where:** in ward setting, during sessions, in corridors, clinical prep room, patient bedside

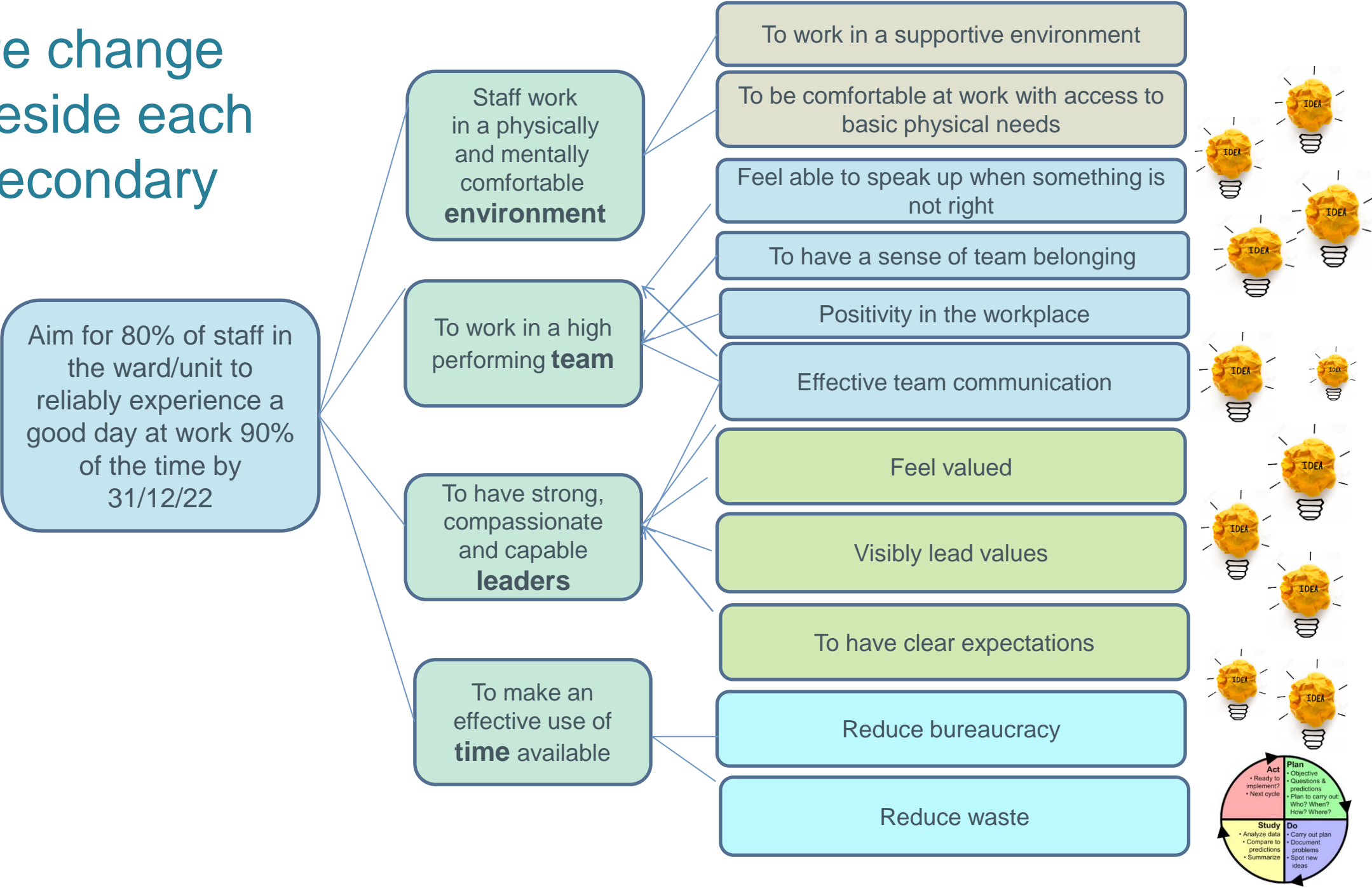
**When:** are you going to collect data... everyday, once a week, at each session, on a specific day.



# From theory to practice



# Populate change ideas beside each of the secondary drivers





# Exercise - Identifying change ideas

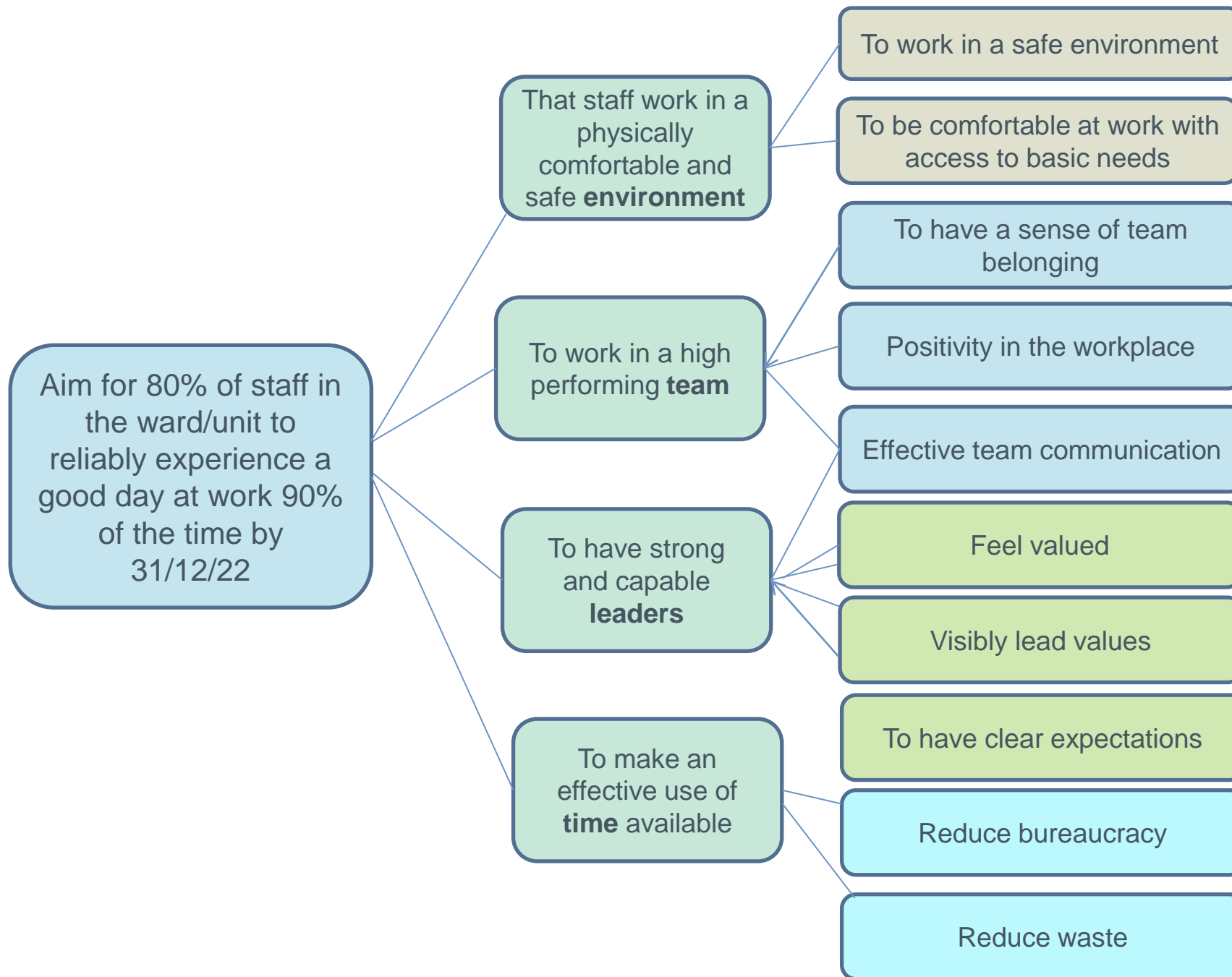
Taking forward the theory for change to help the team test out how to deliver the theory

Review your Driver Diagram

What changes could you try out to support the secondary drivers you identified

- practical tests in practice
- moving from theory to practical steps

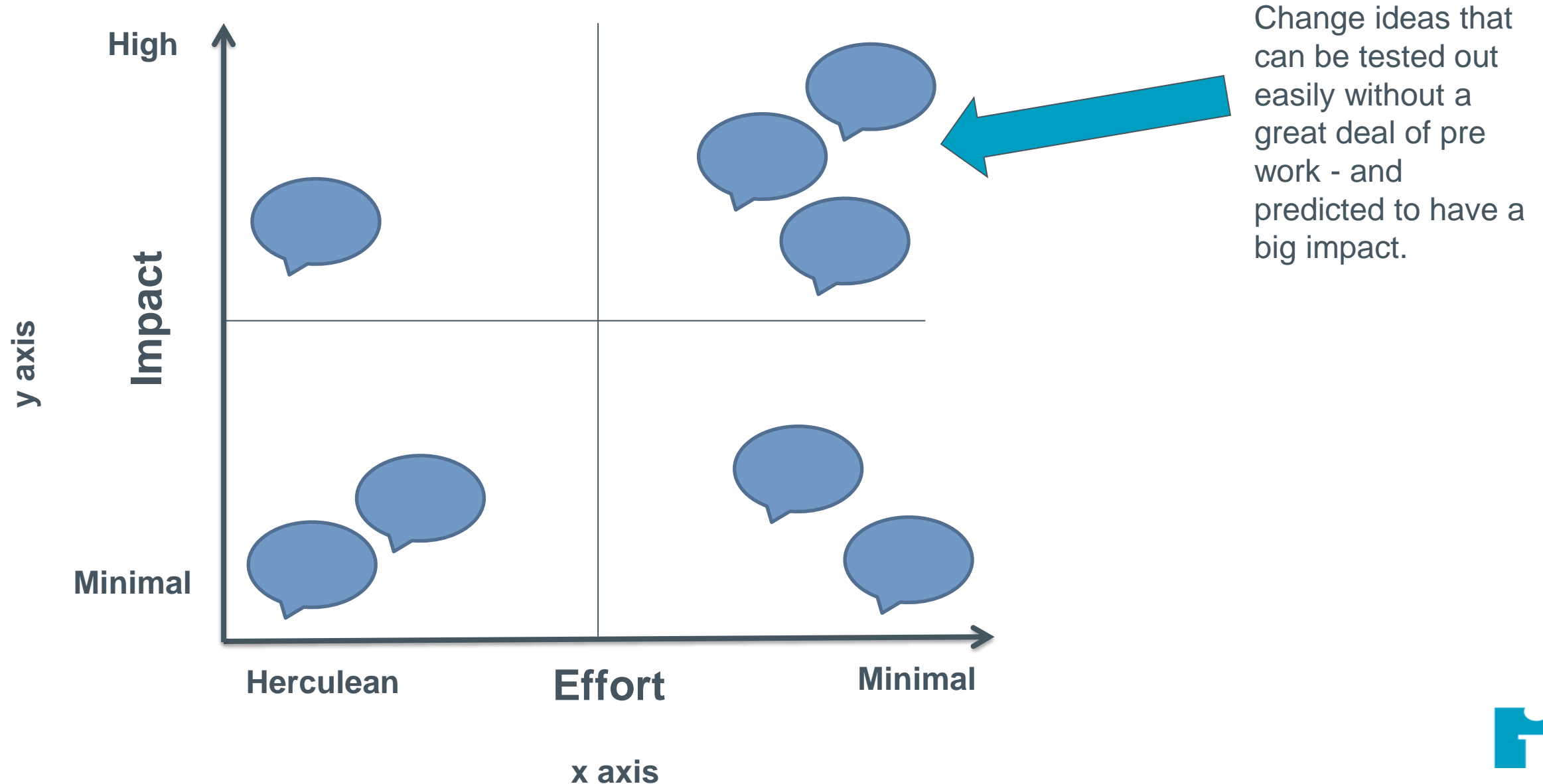




### Change ideas:

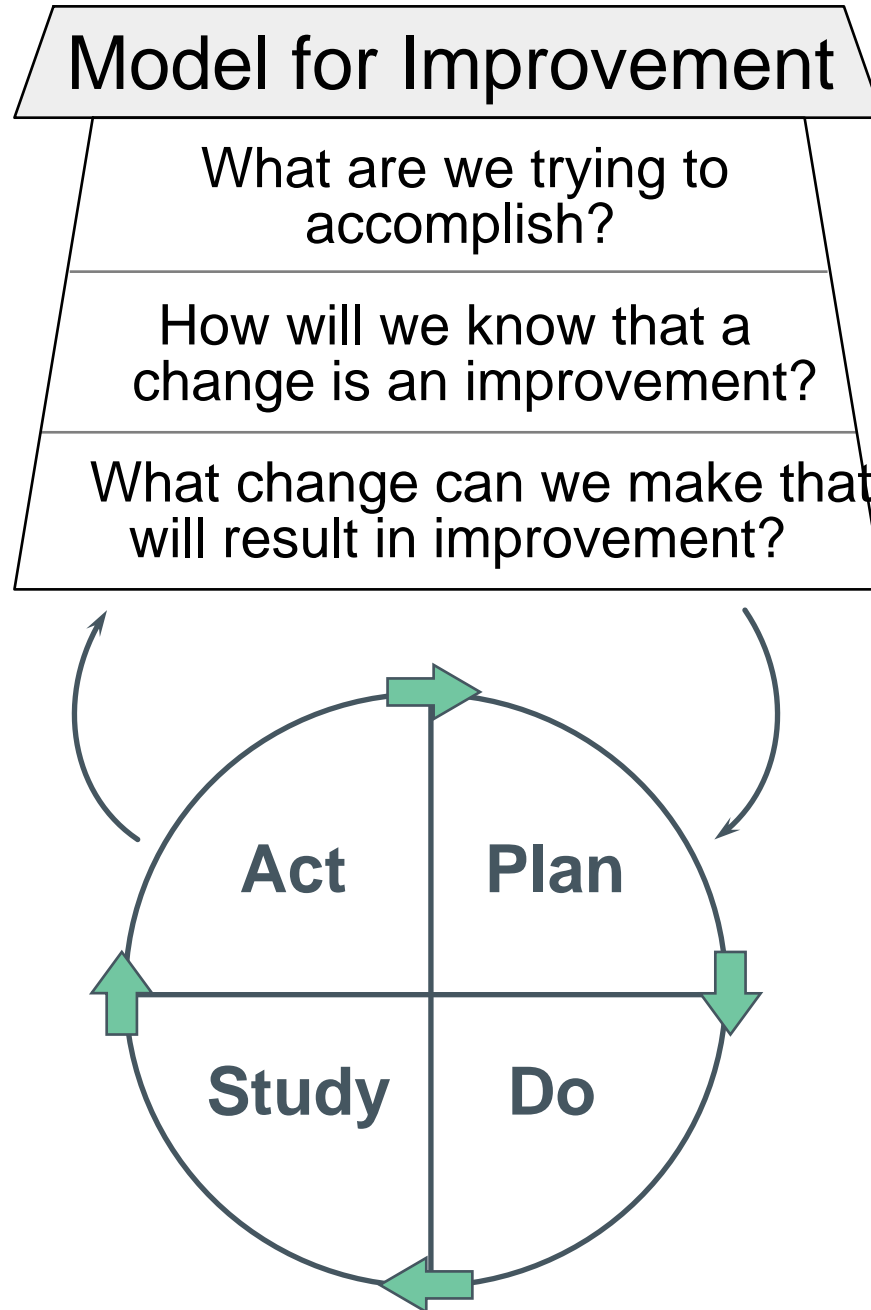
- Water jug for staff at nurse stations
- Rota agreed at start of every shift to cover breaks
- QI board to celebrate staff and initiatives
- Safety briefs/huddles every shift
- Team meetings for updates monthly/emails & folder for notes
- Pro-active calls with relatives
- Nurse desk and chair in each patient room

# Prioritising change ideas and getting started



# Testing changes





**PDSA used for:**

Q1, Aim

Q2, Measures

Q3, Change Ideas

**Testing...**

Implementing

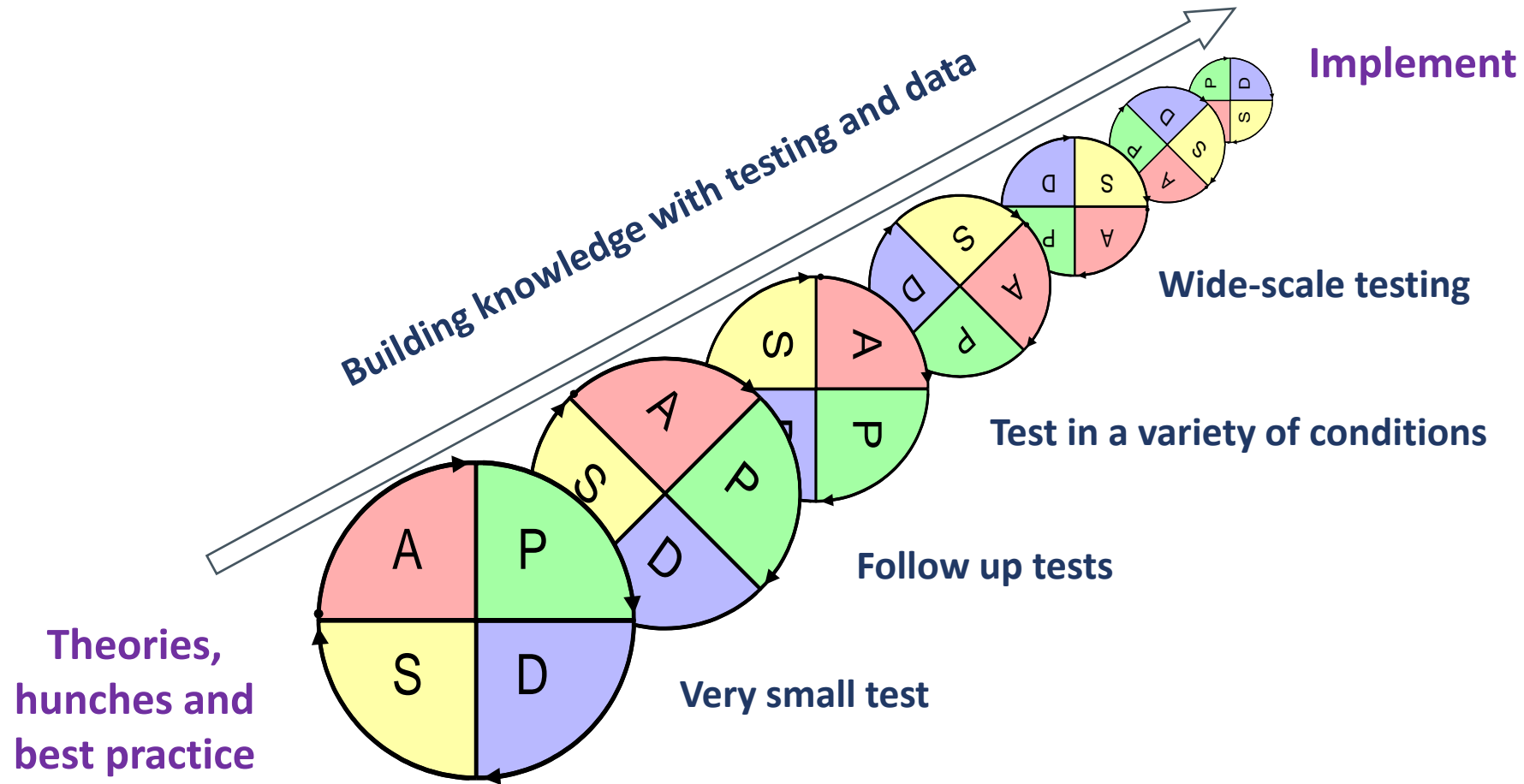


# PDSA Cycle for Sequence





# Test on a small scale and build knowledge sequentially



# Study learning from each cycle and decide what to do next:

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- Drop (abandon)
- Modify (adapt)
- Increase scope (expand)
- Tested under other conditions
- Implement as is (adopt)



# Let's have a go



## Your challenge today

Aim: To create a plane that flies more than 20 feet in 20 mins

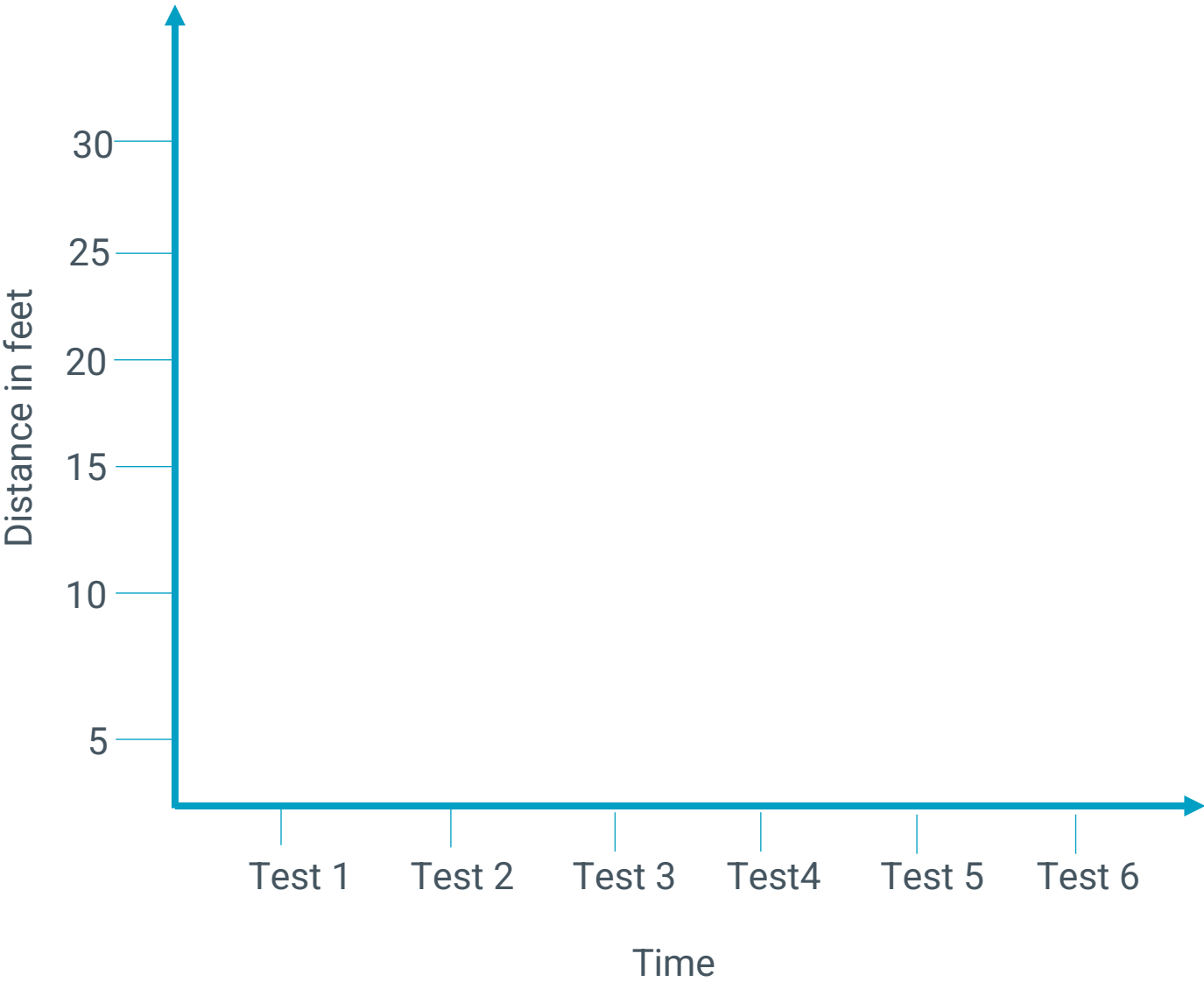
Measure: Distance flown

Changes: testing prototypes to achieve a 20 ft flight

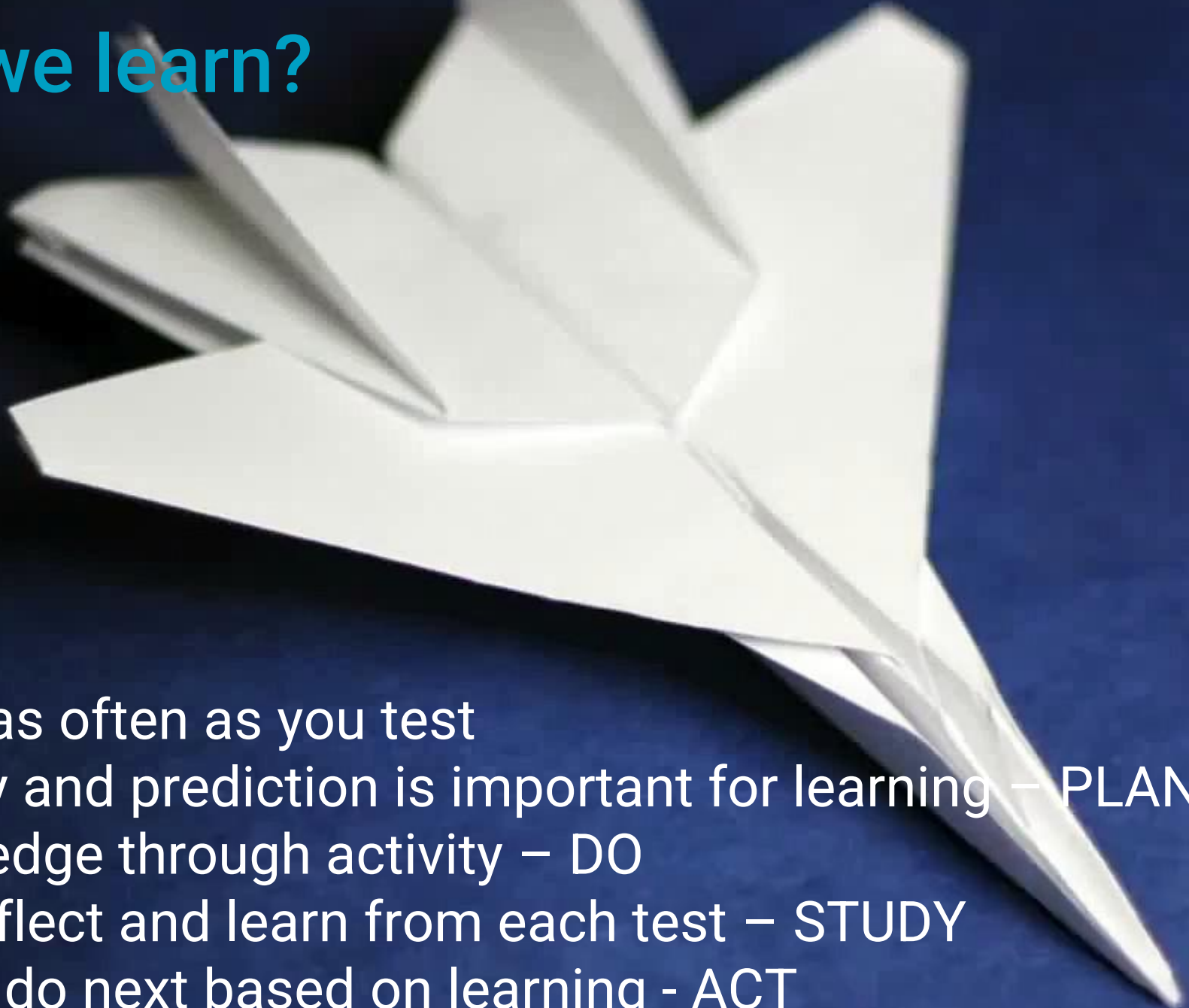
Up to 5 prototypes

Capture your theory, prediction and output from each cycle

| Test # | Theory (what we will test) | Prediction (what we think will happen) |
|--------|----------------------------|--|
| 1      |                            |  |
| 2      |                            |  |
| 3      |                            |  |
| 4      |                            |  |
| 5      |                            |  |
| 6      |                            |  |



# What did we learn?

A white paper airplane is shown from a side-on perspective, angled towards the bottom right. It has a simple design with a single wing, a tail fin, and a pointed nose. The background is a solid, deep blue color.

You only learn as often as you test  
Having a theory and prediction is important for learning – PLAN the test  
Building knowledge through activity – DO  
Take time to reflect and learn from each test – STUDY  
Decide what to do next based on learning - ACT

# What Matter to You and Staff Wellbeing at Newcastle Upon Tyne NHS Trust

## Insights & Reflections

**NHS**  
The Newcastle upon Tyne Hospitals  
NHS Foundation Trust



Prepare for the meeting, protect time & recruit

Discussion is QI in itself – don't be afraid to fail

Adapt the process

Be non-defensive & Inquisitive

Team ownership & design

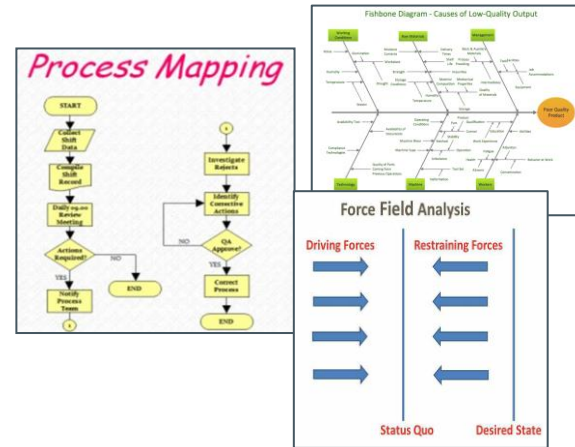
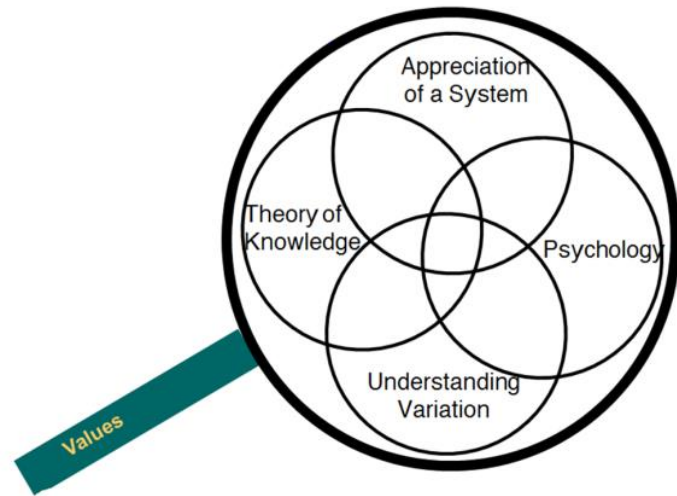
Visible sponsorship

Be realistic about engagement & timescales

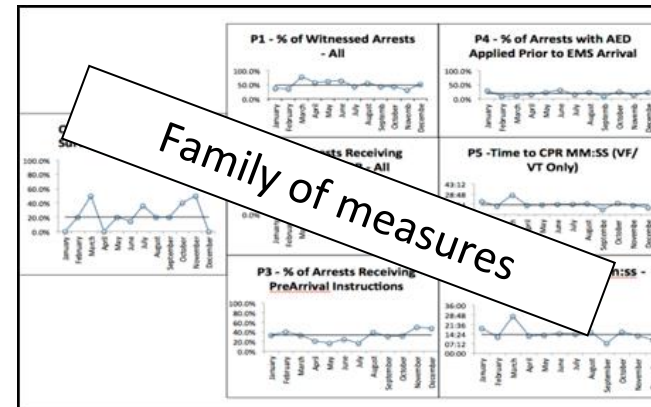
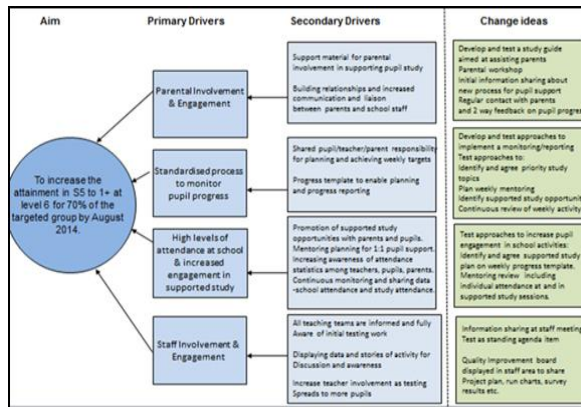
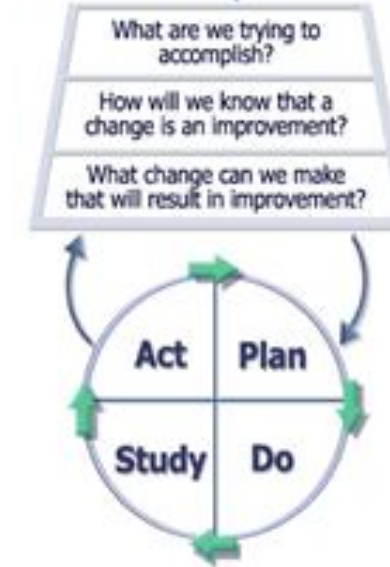
Celebrate successes & persevere



# Summary of what we have covered today



## Model for Improvement



IHI.org

Quality Improvement Essentials Toolkit

<http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx>

IHI Open School course: [QI 102: How to Improve with the Model for Improvement](#)





# Thank you

Learn more about our work

[www.IHI.org](http://www.IHI.org)

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