RCPsych Leadership and Management Fellowship scheme

Module 3: Project Toolkit

Project Toolkit

Projects differ from day-to-day activities in that they have a start and a completion date. A successful project outcome would be then built-in day-to day processes. Project management tools and approach provide a systematic framework to managing your project. There are various approaches and tools which can be used. This toolkit describes the NHS Improvement Quality, Service Improvement and Redesign (QSIR) six stage approach to project management (ACT academy, n.d.).

Figure 1. The six-step approach to project management

Stage 1: Start out and Stage 2: Define and Scope

The first two stages of your project involve identifying a problem and understanding the problem and the system or the process. This can be approached by using the following four steps:

1.1 Identifying the problem

1.2. Understanding the problem

1.3. Understanding the process

1.4. Developing a SMART aim

This section describes a few tools and techniques used for each step.

1.1 Identifying the problem

The first step to starting your project is by identifying an area or service or process that needs improvement. It is not unusual for projects to often start with an idea or

solution in mind. However, its important to take a step back and have a problem-focused rather than a solution-focused approach. Often solving complex or wicked problems doesn't involve one clear solution.

You may be able to identify problems through local or national initiatives, incidents, complaints, targets, data or through patient, individual or team experiences. At this stage, discussing the area of focus with key stakeholders including patients, frontline staff and those at senior level will help refine your problem. Gather ideas and views from patients through friends and family test, experience questionnaires etc. Qualitative feedback from patients or carers often provide a good starting point for some change ideas. You may want to do a stakeholder mapping and analysis once you have identified and refined your problem. 6S tool can be used identify some areas for change.

TOOLS

Stakeholder analysis

Stakeholder analysis should begin at the very first stage of your project planning and stakeholder engagement is important throughout all the stages of your project. This can avoid any conflicts or resistance to change later in the project.

Identifying your stakeholders

List all the people and groups who may be affected by your change. You can then repeat this exercise in a small group/project team from your initial stakeholder list. Grouping all your stakeholders will maximise the chance of including all the stakeholders. You can use a 9Cs approach to grouping your stakeholders:

Commissioners	Those responsible for payments/finances
Customers	Internal/external-e.g.- other organisations/people outside your organisation
Collaborators	Other teams or departments with whom you work

Contributors	Those from whom the organisation acquires content for products
Channels	Those who provide the organisation with a route to a market
Commentators	Those whose opinions of the organisation are heard by customers and others
Consumers	Patients, carers, family members
Champions	Your project team members
Competitors	Those working in the same area who offer similar or alternative services

Table 1- Stakeholder analysis (ACT academy, n.d.)

Stakeholder mapping

Once you have listed all your stakeholders, map them in terms of their influence on your project. This will help you to devise a communication strategy.

Figure 2: Four sector table to map your stakeholders (ACT academy, n.d.)

Engaging stakeholders (ACT Academy, n.d.)

- Understand your stakeholders
- Think of ways to engage different stakeholder groups- data, patient stories.
- Collaborate and Communicate
- Give credit and value others contribution in the team

Stakeholder analysis without action is not helpful. There are three key areas to think about whilst engaging your stakeholders.

1. What are the motivators?

The main motivators at work are meaning, results, learning opportunities, respect and recognition, control over their work and being part of a bigger team (Maurer, 1996).

2. Is the vision clear and well communicated?

3. Is the project aim aligned with organisational objectives?

Devise a communications plan

Communication	Purpose	How will you contact them	Frequency	Who will be present	Who chairs/coordinates

Table 2: Example communication plan

Adoption of Change

Diffusion of innovations theory (Rogers, 2010) is helpful in the early stages of the project in understanding how, why and at what rate change is adopted. This is helping in identifying project champions, supporters and those who may be less supportive. This group may be helpful in highlighting any risks or issues in the

project design and plan. Different engagement strategies need to be developed for different groups.

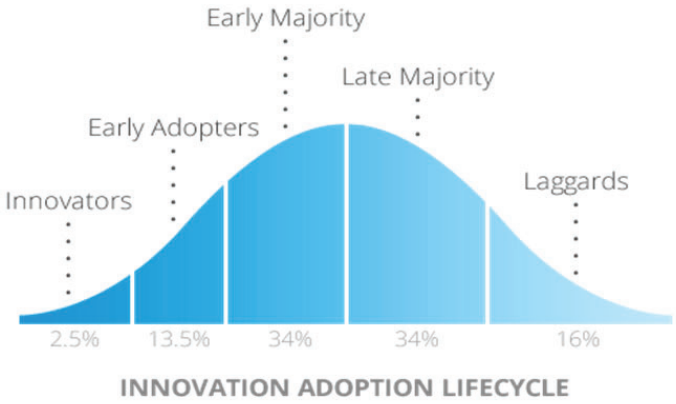


Figure 3: Diffusion of innovation curve (Rogers, 2010)

Working with resistance

Resistance to change itself does not necessarily lead to project failure, often the response to this affects the outcome.

Working in partnership with service users/carers (ACT Academy, n.d.)

Patient or carer involvement is the key to developing patient-centered services. Qualitative feedback is valuable. This can be obtained through observation and feedback, surveys, patient stories, semi-structured interviews, and co-design techniques. There are links to further resources in relation to patient engagement and co-design techniques.

6S tool

The original 5S is the foundation of Lean methodology. It originates from Japan where the five steps are called seiri, seiton, seiso, seiketsu and shitsuke (ACT academy, n.d.). 6S tool is an adaptation of 5S tool with an extra S for safety. This tool can be used to improve the working environments.

The 6S stands for (ACT academy, n.d):

1. Sort: remove what is not needed
2. Set in order: agree what goes where for easy access.

You can use a Spaghetti diagram discussed later at this stage.

3. Shine: keep the environment clean
4. Safety: identify and prevent unsafe conditions
5. Standardise: a consistent process agreed by all
6. Sustain: continually improve

Figure 4: Sort and Shine- before and after (ACT academy, n.d.)

Additional reading:

ACT academy (n.d.). Quality, service improvement and redesign (QSIR) tools. Retrieved from October 10, 2021 from https://www.england.nhs.uk/sustainableimprovement/qsir-programme/qsir-tools/

Further reading:

Maurer, R. (n.d.) The Magic List. Retrieved on October 10, 2021 from https://www.rickmaurer.com

NHS Institute of Innovation and Improvement (2005). *Improvement Leaders' guide: Leading improvement.* Retrieved October 10, 2021 from https://www.england.nhs.uk/improvement-hub/wp-content/uploads/sites/44/2017/11/ILG-3.4-Leading-Improvement.pdf

NHS Institute of Innovation and Improvement (2005). *Improvement Leaders' guide: Involving patients and carers.* Retrieved October 10, 2021 from https://www.england.nhs.uk/improvement-hub/wp-content/uploads/sites/44/2017/11/ILG-1.4-Involving-Patients-and-Carers.pdf

https://www.pointofcarefoundation.org.uk/resource/experience-based-co-design-ebcd-toolkit/step-by-step-guide/1-experience-based-co-design/

1.2 Understanding the problem

Using tools to understand the problems provides a more systematic and evidence-based approach. Avoid jumping to conclusion and assess whether further data is needed to verify the cause. There are various tools that can be used to analyse and understand the problem.

TOOLS:

Five Whys to understand simple problems

Five whys was devised by Toyota as an important part of problem solving. It is used in the 'analyse' phase of Six Sigma (define, measure, analyse, improve, control) (ACT academy, n.d.). Asking why repeatedly five times. An example would be why is this a problem for me, my patients, my team, other teams involved and the organisation

Fish bone or Cause- Effect analysis

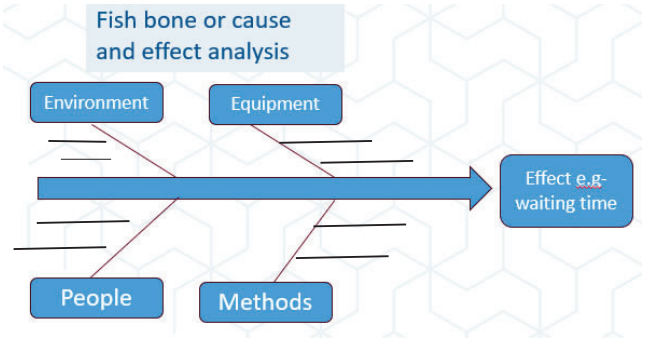


Figure 5: Cause and Effect diagram

The cause -Effect analysis was adopted by W.E. Deming. Tips to use this tool:

· Complete the tool with the stakeholders involved in the problem.

· This can be updated as and when you collect more data, or to test changes

· Have a paper/electronic copy of the diagram

· List causes under each category

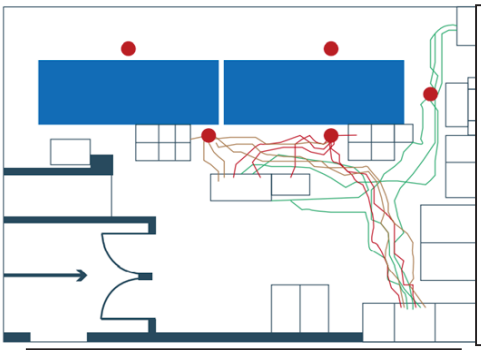
· Driver diagram can be used as a follow up tool to plan changes

A pareto chart (80/20 chart) can be completed to assess which factors are more likely to cause the effect (ACT academy, n.d)

Spaghetti diagram

Spaghetti diagram is used to visualise/assess time wasted through unnecessary movement/processes on a ward/clinic.

Observe the process and note the time, date, and trace the actual steps taken. Work out the best way to change the process with the team.



Example Spaghetti diagram to redesign a department. Red lines show wasted movement

Figure 6: ACT Academy (n.d.)

Other useful tools- Affinity diagram, Pareto chart

Further reading:

ACT academy (n.d.). Quality, service improvement and redesign (QSIR) tools. Retrieved from October 10, 2021 from https://www.england.nhs.uk/sustainableimprovement/qsir-programme/qsir-tools/

NHS Improving quality (2014). First Steps Towards Quality Improvement: A Simple Guide to Improving Services. Retrieved on October 10, 2021 from https://www.england.nhs.uk/improvement-hub/wp-content/uploads/sites/44/2011/06/service_improvement_guide_2014.pdf

Bicheno, J., Holweg, M. (2016). The Lean Toolbox, 5th edition. A handbook for lean transformation.

1.3 Understanding the process

Process mapping helps us to create a visual map of patient's journey. The tool helps us to take a step back and look at the big picture to identify gaps, bottlenecks, inefficiency, and other opportunities for improvement (Act Academy, n.d.). It is important to complete this with the team involving key stakeholders. Remember to always map the current state not what you expect to happen.

TOOLS: Process mapping

You can use flip charts and sticky notes or create a virtual process map. Key components

Box	Shows the activities of the process.
Diamond	Stage where decisions are made e.g- accepting or rejecting a referral
Oval	Start or end of the process
Arrows	Show the direction or flow of the process.

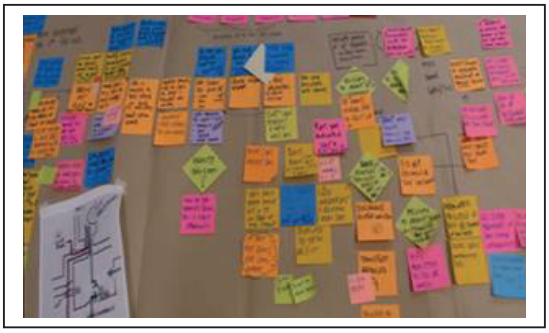


Table 3: Symbols in process mapping. Reference: https://qi.elft.nhs.uk/resource/flow-diagrams/

1.4 Developing a SMART aim

Specific
Measurable
Achievable
Relevant
Time-bound

Example- To reduce waiting time to <2 weeks for a new referral assessment in 'x' community team in 'y' months

Top tips to set a SMART aim (ACT academy, n.d.)

- Be specific- avoid phrases like' will improve patient safety'
- Doesn't need to be written as SMART
- Include stakeholders in developing aim
- Link your aim to benefits for patients/patient outcomes
- Don't put your solution in the aim
- Its ok to aim high
- Ensure that the outcome measure 'M' is clear in the aim
- Be prepared to modify your aim

Link your project's aim to organisational objectives- 'R' of your SMART aim

Project charter

At this stage complete a project charter. You may be able to get a copy of the project planning document from your organisation. Key points to note (Act Academy, n.d.):

- Background – was this based on a business case/case of need?
- Aims/objectives – link your project aims to your organisational strategic aims
- Scope- what is included and excluded
- Measurement for improvement and driver diagrams
- Action plan – timescales
- Issues and risks – initial thoughts of what these might be.
- Project team
- Finances
- Stakeholders
- Roll out plan- embedding change into the system

Stage 3: Measurement

3.1 Why collect data?

- Data collection is central to any improvement. Without measurement, how would we know if change is an improvement. In this section we focus on quantitative data.
- It is the 'M' in your SMART aim
- Baseline data helps us understand the current state
- Data tells us whether we have achieved our aim
- To monitor if change has sustained
- Measurement for improvement is different to measurement in research (IHI, n.d.)

	Measurement for research	**Measurement for improvement**
Purpose	To discover new knowledge	To implement new knowledge in daily practice
Tests	One large test	Many iterative tests
Data	Gather as much data as possible	Gather "just enough" data to learn and complete another cycle
Duration	Can take long periods of time often months to years	"Small tests of significant changes" can vary from days, weeks to months

Table 4: Differences in measurement for research and improvement (IHI, n.d.)

3.2 Identifying measures

Donabedian (2005) describes structure, process, and outcomes as the key indicators of quality. Based on these principles there are three types of measures (IHI, n.d., Act academy, n.d.):

- Outcome Measures- these reflect the impact on the patient and demonstrate the end result of your project whether the aim was achieved e.g- length of stay
- Process measures- these reflect the way our systems work e.g- waiting time.
- Balancing measures: these reflect unintended consequences (positive/negative) of the changes introduced. e.g.

Watch this video to understand the types of measure in improvement
https://youtu.be/oCuaROuvetE

3.3 Defining your measure

Once a measure is identified, this needs to be defined clearly to include a description of what to measure and the procedures to follow to collect the data consistently. This is to ensure that measurement is repeatable and reproducible.

Steps in measurement:

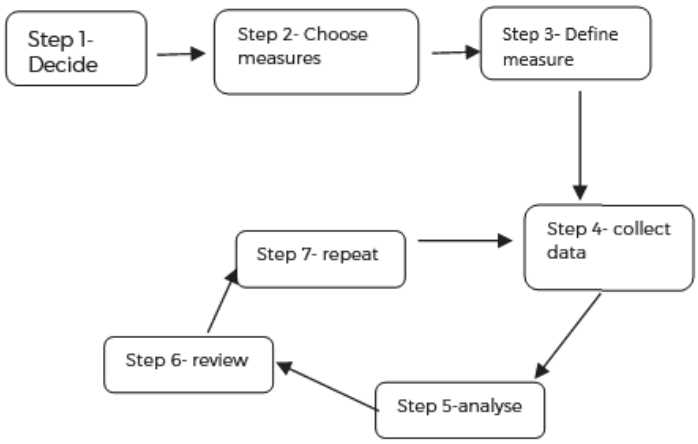


Figure 7- Steps in measurement (ACT Academy, n.d.)

Watch this 10 minute video to understand the seven steps in measurement- https://youtu.be/Za1o77jAnbw

Understanding variation

The principle of looking at and managing variation comes from the work of W E Deming. Variation is inherent to all processes in the system.

Common cause describes variation that is predictable, expected, part of daily normal work, built into the system, random and affects everyone (ACT academy, n.d.)

Special cause variation- non-random and due to a single cause that is not part of the process (ACT academy, n.d.).

TOOLS

Run charts (IHI, n.d., Act Academy, n.d.)

Run charts are representation of data over time with time on X axis and the measure on the Y axis. The median is the point at which half of the data points will be above and half will be below the central line. The mean can be skewed by extreme values whereas the median is not influenced by such variation in data. Analysing the run chart indicates certain changes. For most projects, displaying data on run charts is sufficient to measure improvement.

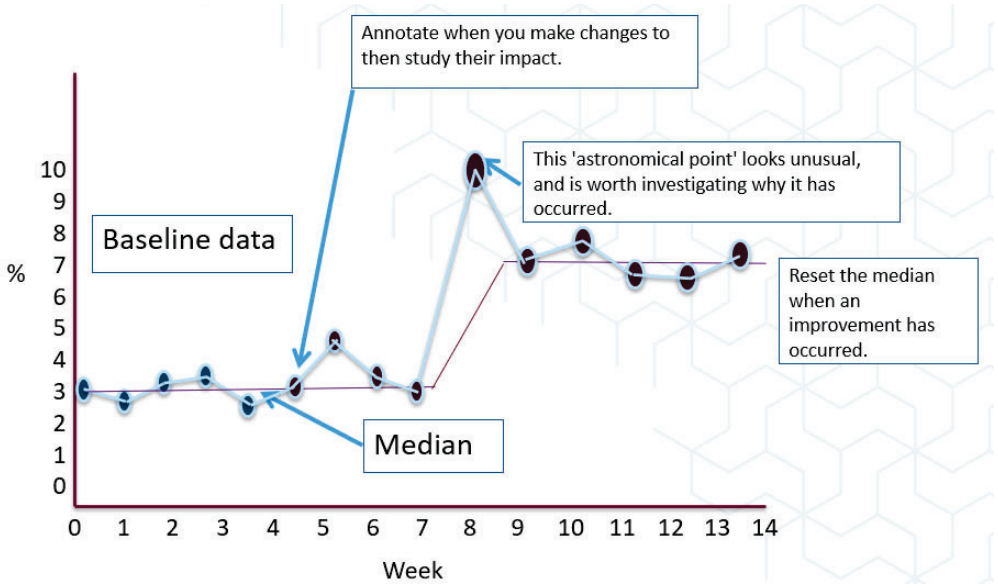


Figure 8- Run charts (IHI, n.d; ACT Academy, n.d.)

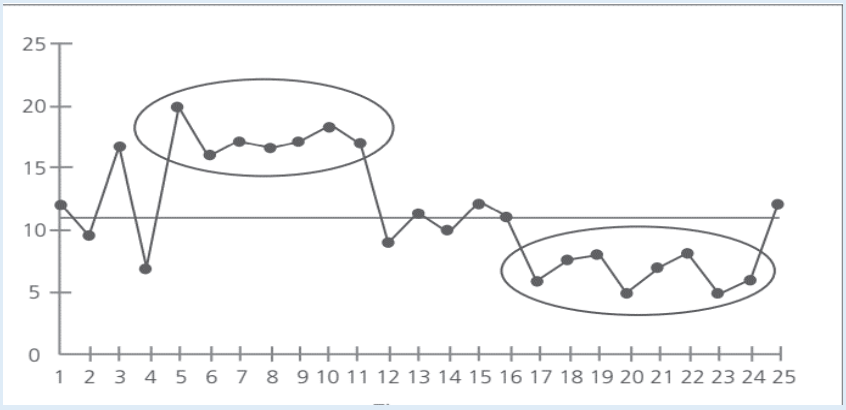
Watch this video on run charts: https://youtu.be/Q85h-59R2SQ

Run charts help us to (ELFT QI, n.d.):

1. Understand the process before any changes are implemented.
2. Compare outcome measures before and after change implementation
3. Check if the change has led to meaningful improvement
4. Assess if change has remained sustained.

There are four key rules to interpret run charts- shifts, trends, runs and astronomical point. These indicate the response to change.

Shifts-Seven or more consecutive points either all above or all below the median.



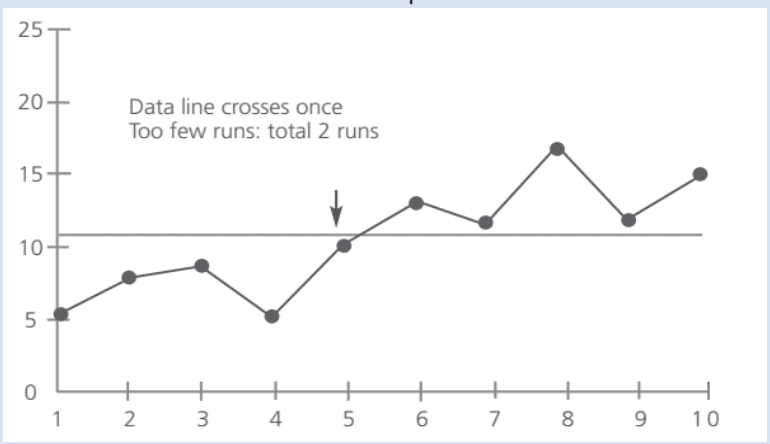
Astronomical point- an extreme value either above or below the median as shown in figure 8

Trends- Seven or more consecutive points all going up or all going down

Outcome
measure

Time

Runs- A run is a series of points in a row on one side of the median. Too many or too few runs indicate special cause variation



Outcome
measure

Time

Control charts or Statistical Process Control (SPC)

SPC includes an upper control limit (UCL) and a lower control limit (LCL) to help distinguish between common and special causes of variation. Usually works when you have more than 15 data points and want to understand a special cause variation.

Additional reading about run charts:

ELFT (resources- run charts and SPC)- https://qi.elft.nhs.uk/resource/run-charts/

https://qi.elft.nhs.uk/wp-content/uploads/2020/03/how-to-use-statistical-process-control-spc-charts.pdf

Perla RJ, Provost LP, Murray SK. The run chart: a simple analytical tool for learning from variation in healthcare processes. BMJ Quality & Safety 2011;20:46-51.

Further reading:

Institute of healthcare improvement (n.d.). Quality Improvement Essentials toolkit. Retrieved on October 10, 2021 from http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

Donabedian, A (2005) Evaluating the Quality of Medical Care, The Milbank Quarterly, 83(4):691-729

ACT academy (n.d.). Quality, service improvement and redesign (QSIR) tools. Retrieved from October 10, 2021 from https://www.england.nhs.uk/sustainableimprovement/qsir-programme/qsir-tools/

Stage 4: Design and Plan

After understanding the problem and the process, next step is to use tools to plan and design your change ideas.

TOOLS

Driver diagram

Your driver diagram is a visual representation of your project. There is no right or wrong driver diagram. It represents your team's understanding of the system you are trying to improve. This can change over time.

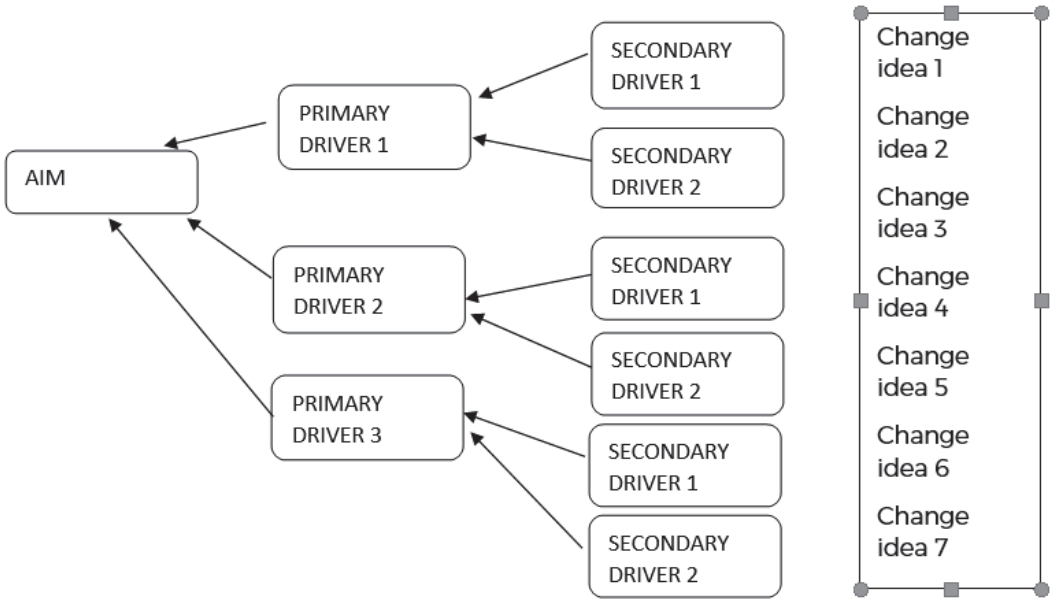


Figure 9: Driver diagram

SMART AIM- Identifies your outcome measure.

Primary drivers- These are the key areas of the system or process that you need to influence to achieve your aim. Usually there is one that is linked to people and some drivers linked to the process. This helps identify process measures

Secondary drivers- These are areas that influence the primary driver and lead to change ideas.

Six Thinking Hats

Six Thinking Hats was created by Edward De Bono. Six Thinking Hats is useful during or after gathering ideas to decide whether to implement that idea.

Stage 5: Implement

Start with change ideas that you think are easy to implement and may have high impact. Test your hypothesis using iterative PDSA cycles.

TOOLS

PDSA

PDSA stands for plan, do, study, act cycles. Its precursor PDCA- plan, do, check, act cycles were introduced by Walter Shewart in 1920s. This was modified for use in organizational improvement to PDSA by W E Deming (ACT Academy, n.d.).

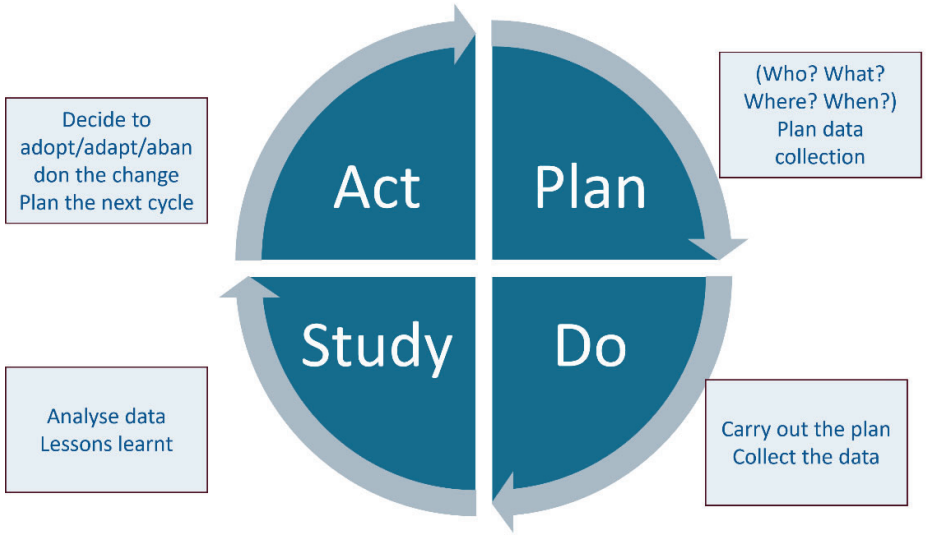


Figure 10: PDSA cycles and Model for improvement (ACT Academy, n.d.)

Model for improvement

The framework includes three key questions to answer before testing change ideas.

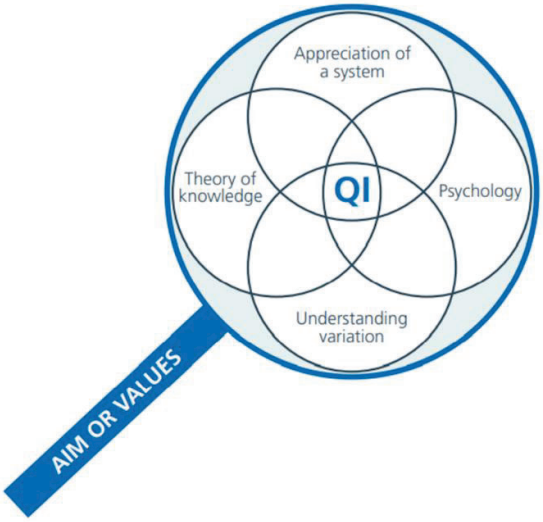
1. What are we trying to accomplish? (The aims statement).

2. How will we know if the change is an improvement?

3. What changes can we make that will result in improvement?

Stage 6: Handover and sustain

Next step is to reinforce and embed the change in the system. Plan early to engage stakeholders and shift mindsets rather than just changing processes. When the project appears stalled, its worth looking at the reasons for resistance through the lens of profound knowledge (ACT academy, n.d.)



Demings lens of Profound knowledge (ACT academy, n.d.)

Watch this video explaining the four lenses of profound knowledge

https://youtu.be/XfyKZaTiDvk

Additional reading:

Kotter, John P. (1996). Leading change. Boston, Mass: Harvard Business School Press

REVIEW, H. B., KOTTER, J. P., KIM, W. C. & MAUBORGNE, R. A. 2011. **HBR's 10 Must Reads on Change Management** (including featured article "Leading Change," by John P. Kotter), Harvard Business Review Press.

Further resources:

- Royal College of Psychiatrists: Introductory Quality Improvement guide for trainees and trainers Layout 1 (rcpsych.ac.uk)
- Trainee Improving Patient Safety through Quality Improvement (TIPSQI) guide to QI developed by and for junior doctors: https://tipsqi.co.uk/
- Quality Improvement Made Simple guide: http://reader.health.org.uk/QualityImprovementMadeSimple
- Health and social care QI platform built to support and manage QI work: https://www.lifeqisystem.com/
- More examples of QI projects in mental health:

  - Fab NHS Stuff
- Website with guidance and examples of QI projects from East London Foundation Trust who have an established base in QI in mental healthcare: https://qi.elft.nhs.uk/
- Tools and templates:

  Institute of healthcare improvement (n.d.). Quality Improvement Essentials toolkit. Retrieved on October 10, 2021 from http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

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- ROGERS, E. M. 2010. *Diffusion of Innovations, 4th Edition*, Free Press.
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- Kotter J (2014) Accelerate. Harvard Business Review Press: Boston, Massachusetts
- The King's Fund (2012) Leadership and Engagement for Improvement in the NHS: Together we can. The King's Fund, London
- Hilton K, Anderson A. IHI Psychology of Change Framework to Advance and Sustain Improvement. IHI White Paper. Boston, Massachusetts: Institute for Healthcare Improvement; 2018. (Available at ihi.org)
- Kotter, J., & Rathgeber, H. (2013). *Our Iceberg is Melting: Changing and Succeeding Under Any Conditions*: Pan Macmillan.

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ELFT QI. (n.d.). Driver diagrams. Retrieved on October 10, 2021 from https://qi.elft.nhs.uk/resource/driver-diagrams/

Institute of healthcare improvement (n.d.). Quality Improvement Essentials toolkit. Retrieved on October 10, 2021 from http://www.ihi.org/resources/Pages/Tools/Quality-Improvement-Essentials-Toolkit.aspx

Kotter, John P. (1996). Leading change. Boston, Mass: Harvard Business School Press

ROGERS, E. M. 2010. *Diffusion of Innovations, 4th Edition*, Free Press.