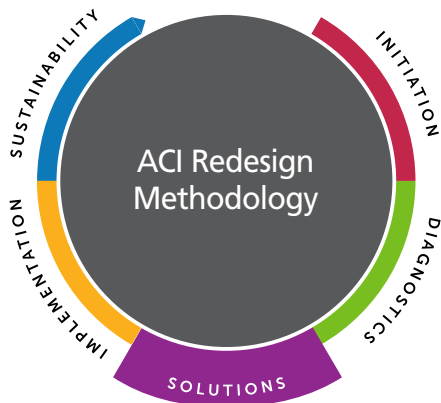


# PROTOTYPING AND TESTING

## Solutions



### Prototyping and testing

The purpose of testing a solution is to improve the effectiveness and usability of a change. It prevents introduction of a change that doesn't work, which is a potentially costly mistake. It is also a great way to build staff buy-in

### Solutions

The purpose of this phase is to develop and agree on solutions to your identified problems. Solutions are generated, designed, prioritised and then tested with key stakeholders, to make sure they are effective.

## Key points

### 1. Use Plan, Do, Study, Act (PDSA) cycles

Plan, Do, Study, Act (PDSA) cycles are a good way to test solutions because they are easily monitored, incremental and adaptable. Tests of small changes are designed (plan) then tested (do) against a prediction of what will happen. The outcome is measured and assessed (study) – was the hypothesis supported? It can then be adjusted according to results (act). PDSA cycles can gain team buy-in and create momentum.

### 2. Do prototyping

Prototyping means creating a representation of a solution that enables you to show or demonstrate it to others to get their feedback. Prototypes may be rough drawings or a cardboard model representation, or a more complex video or computer generated design. When testing prototypes, have some set questions to ask the audience. This will help you to gain important feedback that you can use to strengthen the solution.

### 3. Role play

A great way to get people to better understand the solution is to 'play it out' so they can experience or see it for themselves. Role playing a good way to test how something will run or interact with different parts of a system. It can be low level, with team or stakeholders taking specific roles, or more high-tech in a simulation lab or workplace. Feedback can then be given to build the solution.

### 4. Test the concepts

After you compose a clear description of each solution in a conceptual format (which may be enhanced with a drawing or photograph), you should test them. Ask your stakeholders to consider each concept and rate it in terms of how it would meet the project objectives. Record what they like about it and their suggestions on how to improve it. This can be done several times as you refine the concepts.

## Considerations and tips

Don't be afraid to be creative with this activity – but don't spend all your time making the prototype look amazing. After all, it's about making the change!

### Range of stakeholders

It's important to test your potential solutions with the people that will be impacted by them. Consider relevant staff, patient or carer groups, and other consumers. Seek the widest possible range to improve the quality and diversity in testing. Be clear that nothing is set in stone and be ready for honest feedback!

### When it doesn't pass the test

After testing, you may find that the solution you originally planned is not going to work. Although this may be frustrating, consider it a positive that it was discovered early. You can either adapt or abandon the solution based on the feedback, and you can re-test any amended solutions.

### Consider how you test

Consider using the 1:3:5 method. This means you start small and test your change with one person or place. You then modify it and test it with three, then modify it again and test with five. Live testing in pilot stages can be helpful; for example you can start testing with one patient or for one hour, and then take it wider.

### Don't test forever

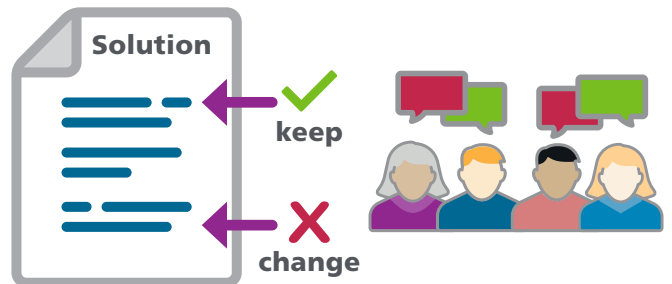
You need to determine how much testing is enough. If you have tested widely with key stakeholders and incorporated their feedback effectively, then you should have faith that the solution is ready for implementation and doesn't need further testing.

## Plan, Do, Study, Act - PDSA



## Solution prototyping and testing

Present solution to key stakeholders for feedback



Stakeholders vote on what they like or what they want to change

## Further information

[My Health Learning Log in Form](#) – Redesign Solution Design (202465315)

PDSA template – [www.aci.health.nsw.gov.au/search?q=PDSA](http://www.aci.health.nsw.gov.au/search?q=PDSA)

Science of improvement: Testing change – [www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx](http://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementTestingChanges.aspx)

Plan-Do-Study-Act Worksheet – [www.ihl.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx](http://www.ihl.org/resources/Pages/Tools/PlanDoStudyActWorksheet.aspx)

## Next steps

Once you have tested and agreed on the design, build the resources to apply the solution and move on to implementation. Involve champions who have been involved in testing to support implementation. Be honest about any ongoing challenges.