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Safe to fail experiments

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Safe to fail experiments

What is it?

In complex systems where there are no repeating relationships between cause and effect and therefore outcomes of making a change are not predictable, safe to fail experiments can help to probe what is happening in the system.

Safe to fail experiments are small scale experiments that approach an issue from a variety of angles in small and safe to fail ways to allow emerging possibilities to become observable. They are not just random stabs in the dark. Rather, safe to fail experiments must have a plausible rationale.

The emphasis is not on ensuring success or avoiding failure but rather on building your knowledge of the system and the applicability of change ideas by allowing those ideas that are not useful to fail in small, contained and tolerable ways. The ideas that do result in observable benefits meanwhile can be enhanced and amplified.

Safe to fail experiments have some similarities with **Plan, Do, Study, Act (PDSA)** cycles in that both are structured tools to help you learn about your system. PDSA cycles, however, are more suited to testing ideas for change where knowledge about the relationship between cause and effect within the system exists.

The key to learning from the use of PDSA cycles is making predictions about the answers to your test questions and comparing the results of your tests with your predictions to inform your next actions. For example, if you are interested in advanced care planning in care homes, you might use PDSA cycles to test how best to implement ideas for change from a successful project in another area of the country because you need to try them out in your local context and adjust them accordingly.

Safe to fail experiments, however, are about probing or testing the system using a portfolio of tests then observing the results and responding accordingly. You cannot predict what will happen so in planning your safe to fail experiments, you must identify what you will do if positive observable benefits result from your test (your amplification strategy) and what you will do if there are no observable benefits or negative observable results (your recovery strategy).

If you are familiar with Snowden's Cynefin model, you would use PDSA for simple and complicated systems and safe to fail experiments in complex systems.

When to use it

Safe to fail experiments should be developed collaboratively with stakeholders and run as a portfolio of tests/probes. Snowden (see additional resources at the end of this tool) offers some criteria for selecting safe to fail experiments:

1. Any experiment must be something you can do something about and that you believe stands a chance of having a positive effect.
2. Secondly, it has to be a change with an observable or measurable effect – so that you can see if the change was good or bad.
3. The experiment must be something you believe you can dampen down if it goes wrong (ie safe to fail) or amplify the effect if it goes well.

How to use it

As you are not able to predict what will happen when you make a particular change or take a particular action, the emphasis is on designing safe to fail experiments so that if an idea turns out not to be useful, it will only fail in small, contained and tolerable ways. Even if an experiment does fail, valuable learning can be gained.

Similarly, the ideas you test using safe to fail experiments that go on to produce **observable benefits** can then be adopted and amplified.

Snowden also offers suggestions for the type of experiments to try:

- **Oblique approaches:** taking an indirect approach or less than obvious route to the outcome. Part of the logic here is that things won't have changed in the past through direct attempts so let's try something a little more tangential. Often this might mean testing whether a solution designed for another purpose might work in a new context.
- **Naïve experiments:** looking at things through the eyes of a different discipline – people with deep expertise in a different subject trying something different to the way they would usually approach the issue.
- **Contradictory approaches:** in complex systems there is often more than one view of reality. So embrace this and try things that contradict each other to bottom out what might work and be useful.

When thinking about safe to fail experiments, ask yourself:

1. What do I think **needs changing** and what can I **actually change**?
2. Out of these, where can I **monitor the impact**?
3. From these, where would **failure lead to learning** (and I can dampen the change) and where would **success be easily amplified**?

What next?

Use the following framework and template to help you design your safe to fail experiments:

- Name the experiment.
- Describe the rationale.
- What are the indicators of success? What will we monitor to allow us to know whether the change or action we are testing has had a positive impact?
- What are the signs of failure?
- What is the 'amplification strategy' (assuming success)?
- What is the recovery strategy (in case of failure)?
- What are the actions that should take place assuming successful and who carries them out?
- Who is responsible for the various actions that need to be taken if not successful?

Additional resources

Snowden, D and Boone, M (2007) A leader's framework for decision making, *Harvard Business Review* pp. 68–76

Figure 1: Safe to fail experiments template

Planning your safe to fail experiments

What's the project/action?	**What are the signs of a successful outcome?**
How will we amplify the action if it is successful? Who will do what, when?	**How is this coherent? ie what's the evidence that this is a valid experiment? Does it take account of contradictory views?**
What are the expected signs of a negative outcome?	**Naïve?**
What are the dampening actions if there is a negative impact? Who will do what, when?	**Oblique?**