Enhancing Project Spread and Sustainability

A Companion to the 'Easy Guide to Clinical Practice Improvement'

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Introduction

Purpose

Enhancing Project Spread and Sustainability aims to provide helpful tips and practical advice to clinicians and health managers on how to improve and assess the spread and sustainability of clinical practice improvement (CPI) projects in a systematic way.

The Guide complements the following NSW Health documents: *Easy Guide to Clinical Practice Improvement, The Clinician's Toolkit for Improving Patient Care* and the *Framework for Managing the Quality of Health Services in NSW[1]*.

The document has been compiled by the Clinical Excellence Commission (CEC), which was established in 2004 as part of the NSW Patient Safety and Clinical Quality Program. Publication of the document aligns with the CEC's mission, "to build confidence in the NSW health system by making it demonstrably better and safer for patients and more rewarding workplace", and with the CEC's functions relating to addressing system-related issues by building capacity, sharing lessons and implementing standardised best practice.

Target Audience

The document is considered to be of relevance to clinicians, managers, project staff, and quality coordinators involved in teaching clinical practice improvement (CPI) methodology or conducting CPI projects and associated performance improvement initiatives within the health setting.

Background

The *Framework for Managing the Quality of Health Services in NSW* was published by NSW Health in 1999. It outlined structures and processes for area health services and clinicians to effectively govern the quality of care and to ensure that clinical care and services met the key dimensions of quality, in being safe, effective, appropriate, consumer focused, accessible and efficient.

The Framework was rolled out across NSW health services in the late 1990s, followed by associated documents such as *The Clinician's Toolkit* (2001) and *Easy Guide to Clinical Practice Improvement* (2002). Both documents provided information and practical tools to assist clinicians and managers in improving clinical practice.

The initiatives were enhanced in 2004, by establishment of the NSW Patient Safety and Clinical Quality Program (PSCQP). The role of the CEC is to identify vulnerabilities in the NSW health system and to opportunities for improving patient safety and clinical quality.

As part of the role, the CEC has developed and implemented a number of CPI programs across the state, in conjunction with the NSW Department of Health, area health services and other partners. Lessons from this vast experience have been incorporated in the following document, which has been developed as an educational and capacity-building resource, to help ensure benefits and lessons of improvement initiatives are fully realised and maintained beyond the life of a time-based clinical practice improvement program or project.

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[1] References in bibliography

Spread and Sustainability within the CPI Framework
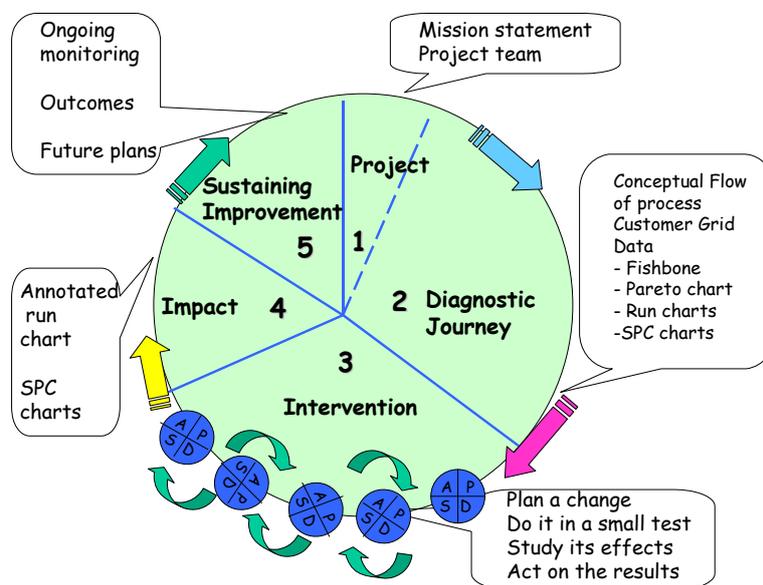
This section provides a brief overview of the clinical practice improvement (CPI) process. Fuller details are available in the *Easy Guide to Clinical Practice Improvement*[2].

While spread and sustainability are generally considered as the final stage of the CPI process, planning for these elements should be built into all stages of the CPI cycle.

Planning for a successful end stage requires a strong set-up. The first step in conducting a CPI project is to identify a problem that is worth solving. It should be one that:
- Is important to the organisation and its customers
- Someone other than you thinks is a problem worth solving
- There is supporting qualitative or quantitative evidence that it is a problem.
- There is evidence relating to best practice

Choosing the right topic helps ensure it will be well-received and adopted. In health, the 'right' project is likely to be one that:
- Is clinically focused

- Involves a process in health care delivery
- Has supporting data that there is a problem
- Has a high cost usually measured as variation in utilisation within DRGs
- Results in high levels of complications or adverse events
- There is documented patient dissatisfaction
- There is dissonance between the evidence and clinical practice

The 'plan, do, study, act' or PDSA cycle, acts at various stages throughout the CPI process, as a learning and improvement tool.

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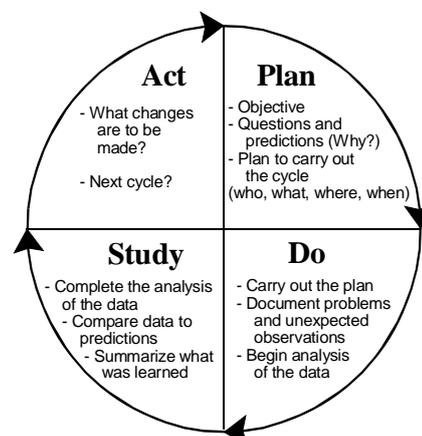
[2] Published by NSW Health, 2002

Strategies relating to stages 1-4 of the CPI cycle (project development; diagnosis; intervention and impact) are outlined in the *Easy Guide to Clinical Practice Improvement.* This document focuses on stage 5 (sustaining improvement) and assumes that all previous stages have been adequately completed.

Sustaining Improvement Phase

Sustain the gains	←	• Standardisation
		• Documentation
		• Measurement
		• Training
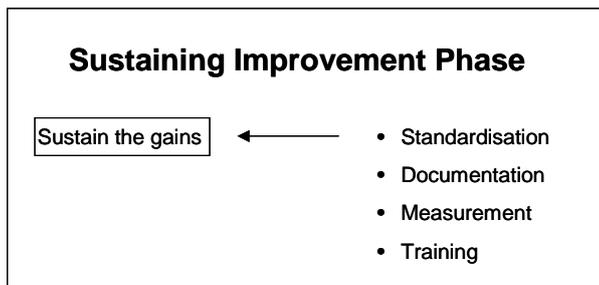
Within the CPI model, sustaining change typically involves:

1. **Standardisation** of existing systems and processes for performing work activities.

2. **Documentation** of associated policies, procedures, protocols and guidelines.

3. **Measurement and review** to ensure that the change becomes part of the routine practice.

4. **Training and education** of staff.

1.   Standardisation

Standardisation helps ensure that new work methods or processes are implemented consistently over time. Recommendations for improvement are communicated to management so that changes become part of policy and day-to-day practice.

Management in turn needs to incorporate the recommended changes as appropriate into 'standards' or 'best practice guidelines' and to spread them to all who need to know. They may take the form of clinical pathways or decision-making trees, narrative policies and procedures, or a mixture of both.

2.   Documentation

Organisations depend on documentation for education and training of staff during implementation of a change, consistency from one group to another, understanding of a method or process and for developing a common definition of the change.

Documentation forms the basis for reviewing progress and achievements, helps the team keep track of developments over time and provides information to brief new members who join the team at a later stage.

3.   Measurement and Review
Measurement ensures that implemented changes are being carried out, and provides the basis for continuous review and improvement. Displaying process and outcome measurements prominently helps ensure a continuous focus on the process.

Some measurements developed and used in the testing and implementation stages should be considered for permanent use after implementation. Viewing measurements over time allows a team to determine whether it is continuing to achieve the desired results and whether it can expect these results to be achieved in the future.

Measurement tools likely to prove useful here are statistical process control (SPC) charts, which portray activity and results over time.

4.   Training and Education
Some form of training and education is always required to implement a change. When considering how much training is required, take into account:
• the type of change being proposed
• who will implement the change
• the skill level and work experience of the target group.

If the change is a simple extension of work currently being performed, a one-off discussion of the change with those affected may be all the training required.
If the change is more complex and extensive (such as involving new technology), formal classroom training may be required to support implementation of the change, including interactive workshops or seminars. On-the-job training, coaching or some other form of staff education may also be needed.

This includes tertiary institutes, professional Colleges or Associations, and other training and educational entities.

Associated Elements
Spread and sustainability of initiatives is enhanced by effective communication and promotion strategies, and by linking in with relevant partners such as educational, research, training, knowledge management and quality improvement agencies.

Within the NSW health setting, useful resources for sharing information include the NSW Health Quality and Safety website (lessons learned) and ARCHI health awards (see bibliography)

Spread and Sustainability: An Overview

The *Easy Guide to Clinical Practice Improvement* and related resources are valuable tools for introducing the concepts and processes of effective improvement projects within the health setting. While achievement of benefits and improvements is important, equally important, and often more challenging, is ensuring that benefits of improvement initiatives are not short-lived or isolated, and that options for ensuring spread and sustainability considerations are adequately built into the project cycle.

'Spread' and 'sustainability' can be described in general terms as ensuring that recognised improvements are maintained beyond the life of the project, and are extended to other areas of health care that would also benefit from them.

> **Spread***:* Actively disseminating best practice and knowledge, and implementing each intervention in every available care setting.
>
> **Sustainability***:* Ensuring gains are maintained beyond the life of the project.

The two terms are often linked together, but do also stand alone. Related terms include 'diffusion' or 'dissemination' [3] or adoption[4] of innovation. Within this document, the terms 'spread and sustainability' will be used as a broad reference to cover all these terms.

> **Change is not static,** but unfolds over time, in a manner unique to a particular organisation and set of circumstances.

Spread and sustainability occur across a continuum, involving change that occurs through conscious and deliberate attempts of dissemination, as well as more random means of diffusion.

The following graph shows how effective spread and sustainability processes help ensure that after the project formally ceases (vertical dotted line), the performance trend continues upwards.[5]
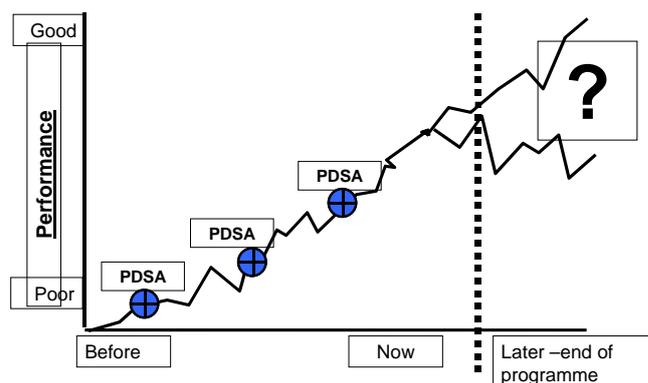
A change or initiative that is not, or cannot, be disseminated to similar areas is referred to as *'islands of improvement'* effect.

A project that has good spread, but is short-term in its impact, is indicative of an *'improvement evaporation'* effect.

Experience shows there is no one, easy or accepted way for ensuring the spread and sustainability of projects. Various factors such as organisational culture, personnel, timing, size of organisation, previous experience with implementing projects, level of executive support, and how change is implemented, all affect the impact of various approaches. Also, what works for one organisation at one point in time may not work at another. A flexible and creative approach is therefore needed.

Lessons from areas such as change management, quality improvement and clinical practice improvement projects, have highlighted factors to increase the likelihood

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[3] Greenhalgh et al , 2004
[4] Plsek, 2003

[5] Maher 2006, NHS presentation

of projects becoming more widely adopted and sustainable over time.

Extending a project and ensuring initiatives are sustainable over time requires an investment of time, resources and commitment at all levels of the organisation, and at all stages of implementation.

Elements known to enhance spread and sustainability include:
- ✓ Adequate resources – financial, staffing, infrastructure
- ✓ Building and sharing a clear vision
- ✓ Strong executive commitment and day-to-day leadership
- ✓ Embedding change via policy, standard practice, clinical pathways, functions
- ✓ Identification and training of key messengers who communicate to others
- ✓ Formally assigning people to clear roles
- ✓ Providing adequate training and support
- ✓ Using data to highlight benefits of change
- ✓ Rewarding good practice
- ✓ Developing the organisation's capacity
- ✓ Creating a learning organisation
- ✓ Anchoring change, so it becomes standard and accepted practice.

Teams and organisations hoping to spread and sustaining improvement initiatives are advised to ensure all the above items are in place, preferably at the start of the project or improvement initiative.

Tools for teams and organisations to use, to assess how well the above elements are met in their particular situation, are provided in a subsequent section of this document.

The following section highlights some key lessons and themes from change management and project improvement. Knowledge of these key aspects is helpful in building spread and sustainability of initiatives into improvement processes.

Lessons from Change Management

In considering how spread and sustainability can be enhanced, a quick overview of some of the key findings emerging from the similar field of change management is worthwhile.

This section outlines the concepts of 'tipping point' (Gladwell, 2000), stages of adoption (Greenhalgh, Robert & Bate, 2002), the 8-change phases model (Kotter, 1995), and common aspects related to human resistance and scepticism.

Tipping Point

> Tipping point is a sociological term that refers to the moment when something unique becomes common.

The term 'tipping point' is generally attributed to Malcolm Gladwell, who coined the term with regard to epidemics. The model has expanded to sociology and change management, to demonstrate that change evolves over a period of time, and is influenced by a number of factors that either strengthen or reduce its impact.

Gladwell (2000) identifies three types of people as having power to produce social epidemics:

o **Connectors** – have wide social circles and are "hubs" of human social networks.

o **Mavens** - knowledgeable people who question and challenge.

o **Salesmen** - charismatic people with powerful negotiation skills who exert "soft" influence vs forceful power.

Recognising and utilising these various people in your organisation can help lead to a tipping point of adoption, where the change eventually becomes accepted practice.

Within Health, '**champions'** is often used to describe those individuals who will help promote a cause. Clinical leaders, executive team members and managers with broad networks make valuable champions.

Kotter's 8 Change Phases

John Kotter reinforces the importance of structuring change over the continuum. His model lists eight key phases in introducing change successfully:

1. Establish a sense of urgency
2. Create a coalition
3. Develop a clear vision
4. Share the vision
5. Empower people to clear obstacles
6. Secure short-term wins
7. Consolidate and keep moving
8. Anchor the change.

The model can be utilised with short-term change initiatives as well as large-scale projects. While it depicts a linear progression, some stages may need to be repeated or reviewed, depending on progress.

Diffusion of Innovations

The 'diffusion of innovations' theory was formalised by Everett Rogers in 1962. He stated that adoption of any new innovation or idea follows a bell-curve of development, with innovators, early adopters, early majority, late majority, and laggards. Willingness and ability to adopt an innovation would depend on the adopter's awareness, interest, evaluation, trial, and adoption.

Rogers described characteristics of each category as follows:

Rogers Adoption / Innovation Curve
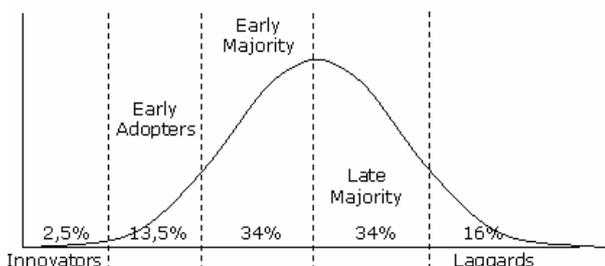
- **Innovators** - venturesome, educated, multiple info sources, greater propensity to take risk
- **Early adopters** - social leaders, popular, educated

- **Early majority** - deliberate, many informal social contacts
- **Late majority** - skeptical, traditional, lower socio-economic status
- **Laggards** - neighbours and friends are main info sources, fear of debt

Rogers also proposed a five-stage model for the diffusion of innovation, involving:

- **Knowledge** - learning about the existence and function of the innovation
- **Persuasion** - becoming convinced of the value of the innovation
- **Decision** - committing to the adoption of the innovation
- **Implementation** - putting it to use
- **Confirmation** - the ultimate acceptance (or rejection) of the innovation

The stages are influenced by a range of personal and contextual factors, such as personality traits, prior knowledge, motivation, goals, cultural practices and values, skills and learning styles.

Key attributes of innovations that explain much of the variance in the adoption rate of innovations are:

- **Relative advantage** – a clear, unambiguous advantage in effectiveness or cost.
- **Compatibility** – with intended adopters' values, norms and perceived needs
- **Complexity** – key players must perceive the innovation as being simple to use
- **Trialability** – users can experiment on innovation on a limited basis
- **Observability** – benefits are visible
- **Reinvention** – innovation can be adapted, refined or modified to suit users' needs.
- **Fuzzy Boundaries** – organisational structures and systems influencing implementation of the innovation
- **Risk** – the innovation should not be perceived as being personally risky
- **Task Issues** – relevant to the user's work and improves task performance
- **Knowledge required to use it** can be codified and transferred to other settings

- *Augmentation* / *support* – assimilation is aided by customisation, training and support.

Greenhalgh et al (2002), in conducting an extensive review of the literature regarding diffusion of innovations in service organisations, supported many of Rogers' conclusions regarding stages and attributes related to spread. The authors found, however, that the 'early adopters to laggards' model was restrictive in not considering the adopter as someone who purposefully and creatively interacts with the complexity of an idea or proposed change, rather than passive recipients. They concluded that that the manner and rate of adoption by individuals is influenced by a number of factors, including:

1. *Social networks* – the structure and quality of people's personal and professional networks are a powerful influence.

2. *Homophily* – adoption is more likely where there is a high degree of similarity in terms of education, professional, socioeconomic and cultural backgrounds

3. *Opinion leaders* influence through authority, status/representativeness and credibility in positive or negative way.

4. *Champions* – those with good personal relationships within and across social networks who harness support and modify systems, processes and rules to facilitate creative solutions.

5. *Boundary Spanners* – individuals who have strong external networks and are in a position to identify and capture ideas to become organisational innovations.

6. *Formal dissemination programs* – effectiveness is increased via:
   - Strategies tailored to particular demographic, structural and cultural features of target groups.
   - Messages with appropriate style, imagery and metaphor

- Identification and use of appropriate communication channels
- Incorporation of rigorous evaluation and monitoring against defined goals and milestones.

Managing Scepticism and Resistance

Managing scepticism and resistance in positive ways is an essential part of the process of gaining support for change. Understanding how people are influenced to change, and stages they pass through during this process, is important (Gollop, 2004).

Organisational change that requires people to think and behave in different ways is far from straightforward. Kanter et al (1996) observed that organisations cannot simply be "ordered" to change, and that not all staff will be convinced of the value of large-scale national improvement programs.

Reasons for scepticism and resistance of organisational change are multifactorial, and include contextual, promotional, and personal factors. There is no simple formula for managing these, but those trying to spread and sustain improvements will need to be aware of the prevalence of scepticism and resistance, understand its impact and value, and to promote change in ways that appeal to the individual if they are to succeed in moving the improvement agenda forwards.

Recommendations for managing scepticism and resistance, include:
- Giving staff time away from normal duties to consider proposed change
- Facilitation and support for the change.
- Providing ongoing evidence that the new way of working is a better one.
- Using targeted mechanisms, formal and informal, to share positive aspects.
- Active engagement, and leadership at senior levels.
- Experiencing how the improvement helps the attainment of performance targets.

Spread and Sustainability Tools

A number of tools for enhancing a project's spread and sustainability are available. The following listing is not prescriptive, and consideration should be given to using a variety of the tools, adapting them to local needs and circumstances, and exploring other models emerging via local and international literature.

The following is designed to highlight some of the more prevalent tools that are available and relevant to the health setting. It is not exhaustive, and readers are encouraged to undertake a literature search for other, more specialised or updated tools where applicable.

The document does not advocate use of one tool over another, as aspects such as nature of the project, context, scope and size need to be considered. The document is considered to add value to quality improvement initiatives, however, by collating a variety of tools in one location for selection and comparison.

Spread and Sustainability Wheel

The New Improvement Wheel, from the NHS Institute for Innovation and Improvement (UK), provides a useful overview of key elements known to facilitate spread and sustainability of service improvements.

The wheel can be used at various stages of the project's planning and implementation, and can be adapted to add other local factors that may be applicable. It can be used to stimulate discussion and ensure key elements are addressed. It may also be completed by teams and placed in a prominent position to guide developments, or assess progress.

Having a wheel indicates:
- An inextricable link between spread and sustainability
- The factors cannot be ranked
- The relative importance of each factor varies from one initiative to another.

Aspects of the wheel in the diagram are:
- Ownership of initiative
- Effective relationships
- People who influence
- Leadership
- Dedicated resources
- Process of implementation
- Incentives
- Integration into practice
- Readiness for improvement
- Nature of initiative
- Local context
- Support and senior level
- Staff engagement

Ownership of initiative
- Clear sense of ownership facilitated by widespread staff involvement at all stages (particularly when moving beyond wave or project phase)
- Initiatives created locally or adapted to fit specific organisational needs

Effective relationships
- Multi-professional teams that develop relationships to work across conventional boundaries and towards common goals
- Effective team working based on values of trust, respect, support and inclusion
- Clarity of roles and responsibilities, especially team leader or co-ordinator

People who influence
- Existence of influencers at all levels and in all staff groups (RP report 10)
- Effective use of combined resources / expertise (e.g. modernisation teams)

Leadership
- Credible leadership (at an appropriate level for initiative) to provide a steer, focus and maintain momentum

Dedicated resources
- Sufficient and appropriate staff to initiate, deliver and support new initiative
- Availability of ongoing appropriate levels of funding
- Dedicated time for all staff involved to meet, plan, develop and undertake improvement activities
- Adequate infrastructure (e.g. IT systems) to support new processes

Process of implementation
- Pace of implementation*
- Phased implementation of large scale change**
- Effective promotion and marketing

Incentives
- Staff incentives e.g. personal gains; additional resources; benefits to patients; quality and safety issues
- Awareness and avoidance of disincentives

Integration into practice
- Sufficient time and resources for integration with existing practices
- Fit and coherence of initiative with other modernisation programmes
- Incorporation of new practices into organisation's 'core' business and priorities

Evidence of improvements
- Collection and sharing of evidence of benefits / effectiveness of initiative
- Proof of effectiveness through ongoing monitoring of process and outcomes

Readiness for improvement
- Staff recognition of need to improve
- Awareness and use of diagnostic tools & techniques
- Use of current performance data to identify need

Nature of initiative
- Compatibility with organisational needs, priorities and culture
- Awareness that the source of initiative (i.e. top-down, target driven or locally created) is influential
- Less complex change (RP report 11)

Local context
- Positive organisational characteristics (participative management style, history of successful change, commitment to find better ways of working & clear corporate vision)
- Recognition, reward and inclusion of all staff

Support at senior level
- Endorsement and support from key senior individuals
- Support and involvement of consultant medical staff

Staff engagement
- Early engagement of all staff affected by the change (RP paper, June '04)
- Positive management of scepticism and resistance

SPREAD AND SUSTAINABILITY

Wheel segments: Ownership of initiative · Integration into practice · Evidence of improvements · Readiness for improvement · Nature of initiative · Local context · Support at senior level · Staff engagement · Incentives · Process of implementation · Dedicated resources · Leadership · People who influence · Effective relationships

References are made to individual reports only when they are regarded as the primary source of information.

Footnotes:
* Fast pace of implementation may increase spread but limit sustainability
** Phased implementation of large scale change can aid spread; time-limited implementation of initiatives (e.g. perceived as a project) can hamper sustainability

Spread Planner

The Spread Planner, from the Institute for Healthcare Improvement (USA) provides guidance for developing a spread plan, and moving effort forward.

The planner is based on work by Don Berwick, and seeks to address the gap often present between available knowledge and use of that knowledge in practice. It builds on lessons from experience as well as from broader research and literature.

The planner contains questions to consider in the initial stages of planning for spread, as well as when spread works unfolds.

The planner considers the key areas of: leadership; set-up; the social system; communication; and measurement and feedback.

1: Leadership for Spread

(a) Is improvement in this area a key strategic initiative within the organisation?

Yes / No / Unsure

- If 'no', establish top-level commitment before proceeding.
- If 'unsure', how can this be clarified?

Actions: ....
....
....

(b) Is executive(s) responsible for the spread?

Who: ....

Are they passionate about the change?

Yes / No / Unsure

Is success in spreading this improvement part of their goals / performance evaluation?

Yes / No / Unsure

Actions: ....
....
....

(c) Is there a person or team who will manage the day-to-day spread activities?

Who: ....

Do they or team have sufficient time specifically dedicated to spreading this improvement?

Yes / No / Unsure

Actions:...
....
....

(d) Do organisational goals align with new system?

Organisational goals relate to: ....
....

Do goals sufficiently align with organisational goals to motivate leaders and new adopters?

Yes / No / Unsure

Actions:...
....
....

2: Set-Up for Spread

(a) What is the target population (particular facilities, units, etc)

Target population:...
....
....

(b) Has successful pilot site(s) implemented the new system?

Successful site(s): ....
....

How do you know they are successful? (review results)...
....

Are elements of new system packaged in a way that facilitates adoption in other sites? If not, what needs to be done?:...
....
....

Potential role of pilot site(s) in spreading to new sites: ....
....
....

(c) Who are the key groups in the target population who make the adoption decision (eg surgeons, nurse managers, directors)?

Target groups: ....
....
....
....
....

(d) What is your initial strategy to reach all sites? (brief statement of 1-3 concise sentences). Considerations include:
- will certain components of the change be spread to all sites or all components to certain sites?
- what is relationship of unit to pilot site(s)?
- where do champions exist or can be readily developed at leadership and grassroots levels?

Initial strategy: ....
....
....
....
....
....
....

(e) What are your plans to establish two-way communication between those leading spread and the pilot site(s)?
- Are there existing avenues you can use?
- What new avenues need to be created?
- Who is responsible for monitoring the effectiveness of two-way communication?

Initial strategy: ....
....
....
....
....
....
....

(f) What is the initial strategy for reward and recognition of participation and progress?

Initial strategy: ....
....
....
....

(g) Where are resources available?

Initial strategy: ....
....
....
....

3: Strengthening the Social System

(a) Who are key messengers to help explain the new system to the target population?

- How will you identify them?

- What will you do to help them?

- What technology will you use to help them?

- How will you continue your relationship with them?

- How will you provide feedback?

Initial strategy: ....
....
....
....

(b) Can 'communities of practice' (people with similar positions and responsibilities) be established to facilitate discussions among peers? Are these communities needed for your spread work?

- How will you provide a time and place for people to interact?

- What will motivate them to form communities?

- How will you encourage communication and feedback among the group?

- How can you support them?

- What technology will you use to help them?

Initial strategy: ....
....
....
....

(c) What tools or methods did the successful pilot sites use that can make it easier for the new teams to make changes?

- How will you transfer those tools, methods and knowledge to other teams?
  - How will you share documents?
- How will you encourage new teams to hear from pilot site teams?
- How will you enable an "all teach, all learn" environment?
- How will you encourage pilot site teams to learn from new teams?

Initial strategy:..
....
....
....

(d) How will the leadership stay involved and connected to the front-line teams?

Initial strategy:..
....
....
....

4: Developing a Communication Plan

(a) How will awareness of the initiative be communicated?

- Have the benefits been documented?

- Is comparative data available?

- What channels will be used to raise awareness in the target population?

- How will technical knowledge be communicated?
  - Have potential changes and ongoing learning been documented in a succinct format?
  - What face-to-face interactions are planned?
  - How will successful sites be involved to supply technical support?

- How will key measures be communicated to leadership?

- How will assessment of progress and results be communicated back to the pilot units?

Initial strategy:..
....
....
....
....

5: Developing the Measurement and Feedback System

- How will outcomes be measured?

- How will the rate of spread be monitored?

- Who will be responsible for collecting, plotting and sharing the data?

- What information / reports will be used to monitor and refine the spread strategy?

- How will measures and analyses be fed back to the pilot units to support and encourage further progress?

- How will pilot units be rewarded and recognised for participation and progress?

Initial strategy: ....
....
....
....
....

Assessing Readiness for Spread

Anthony Amofah, Director of the Helen B Bentley Family Health Centre in Miami, USA, created the following tool. The tool helps organisations think through key issues, to help improve the current work plan (project planning), and develop an action plan. The model has been developed for teams and organisations undertaking Collaboratives, but can be adapted for use with other projects and improvement initiatives.

Using the tool

The tool consists of 10 steps, that need to be assessed by the team, using this scale:
1 = 'no, not at all'
2 = 'no, but thinking about it'
3 = 'yes, somewhat'
4 = 'yes, mostly'
5 = 'yes, completely'

The team should discuss each issue, and develop action plan items for items rated 1-3.

ASSESSING READINESS FOR SPREAD

STEP 1: Has the organisation defined a goal for spread?	Score:

Defining a goal is necessary for selection of a spread team, identifying action steps and helping to ensure accountability.

Consider:
- Where is the organisation now?
- Where does it want to be, by when?
- How will it get there?

STEP 2: Has the organisation selected a spread team?	Score:

A spread team serves as coach, coordinator and facilitator of activities.

An effective team helps to reduce distractions, provide ongoing education of staff, and identify and share tools and resources.

STEP 3: Was the pilot team successful?	Score:

Success of a pilot team is motivating to the team, staff and senior management, and lends credibility to changes made and increases chances of buy-in from new staff.

STEP 4: Is the planned change (spread goal) in the organisation's strategic plan?	Score:

Inclusion of the planned change in the strategic plan increases the likelihood of senior management support, and indicates to line management its importance to the organisation.

STEP 5: Are measures (spread action plan) in the organisation's performance improvement plan / agreement?	Score:

Inclusion of the initiative in the organisation's performance plan / agreement provides an opportunity to keep staff actively informed, allows input from line staff, and can assist with assessment / accreditation activities.

STEP 6: Can staff maintain the data registry?	Score:

The most common reasons for inability to maintain a data registry:
- no-one has been assigned primary responsibility for data entry
- lack of a delivery system design
- not estimating data registry requirements adequately

STEP 7:	Score:
Is someone in leadership responsible for spread?	

A senior manager responsible for spread will help the team to overcome barriers, facilitate the acquisition of necessary resources, ensure that team members have time off-line for planning and monitoring meetings, etc.

The spread leader should be someone who:
- Is influential
- Understands and believes in Care and Improvement models
- Has or will attend a learning session or summit
- Understands the principles of performance improvement
- Is willing to assume responsibility for failure but give credit to team for success.

Lack of visible management support and / or lack of effective team leadership is a key reason for spread failure.

STEP 8:	Score:
Are there potential major distractions affecting spread? (rate item 5 if no distractions; 1 if many distractions)	

Consider if there is:
- An upcoming audit / accreditation
- Organisational restructure planned
- The capacity in the organisation to hand multiple programs, projects, changes at the same time.

If major distractions are evident, consider holding off implementation of spread until the distraction has passed, or continue to use the spread plan and use a different team to coordinate the other activity.

STEP 9:	Score:
Does the executive director really believe in the proposed model, and the need to implement it within the health centre system of care?	

This factor is possibly the most important one for a successful spread effort. The executive director's buy-in to the need to spread increases the chances that necessary resources (time, money, personnel, etc) will be provided.

Buy-in can be enhanced by:
- receiving ongoing feedback
- being involved in the decision making
- participation in meetings
- sharing success stories as they occur
- talking about the effect on patient safety and care
- sharing results of PDSA cycles, and seeking their advice on new tests
- demonstrating commitment to the project

STEP 10:	Score:
Did you answer 'yes' comfortably to all of the questions above?	

If assessments to a number of the questions were 1-3, more preparation is required before proceeding to spread.

Sustainability Model

The following model is from the UK's NHS Institute for Innovation and Improvement[6], and provides a useful checklist and measure of elements related to sustainability.

> Sustainability, under this model, is defined as *'when new ways of working and improved outcomes become the norm'*.

The model can help predict the likelihood of sustainability, and identify aspects that will help increase the chances of improvement in service delivery being sustained.

Using an action research approach, the model addresses 10 factors that are known to play an important role in sustaining change in health care delivery.

The model has been tested by the NHS and found to perform well statistically, and to be helpful in identifying areas that would adversely affect the likelihood of improvement sustainability.

Benefits of the approach

The model has a number of benefits in planning and measuring sustainability, such as helping:
o Teams identify & correct barriers
o Monitor progress of change effect
o Select changes to address
o Allocate implementation resources
o Identify positive and negative implementation patterns in organisations.

When to use the model

The model can be used at any or all stages of the change management process, including:
o During the design or selection of the improvement initiative, to identify areas that require strengthening
o Around the time of initial pilot testing, so that the implementation phase can be entered with confidence
o After project implementation, to ensure an optimal position for sustainability and continual improvement.

NHS Sustainability Model:
10 key factors that increase the likelihood of sustainability and continuous improvement
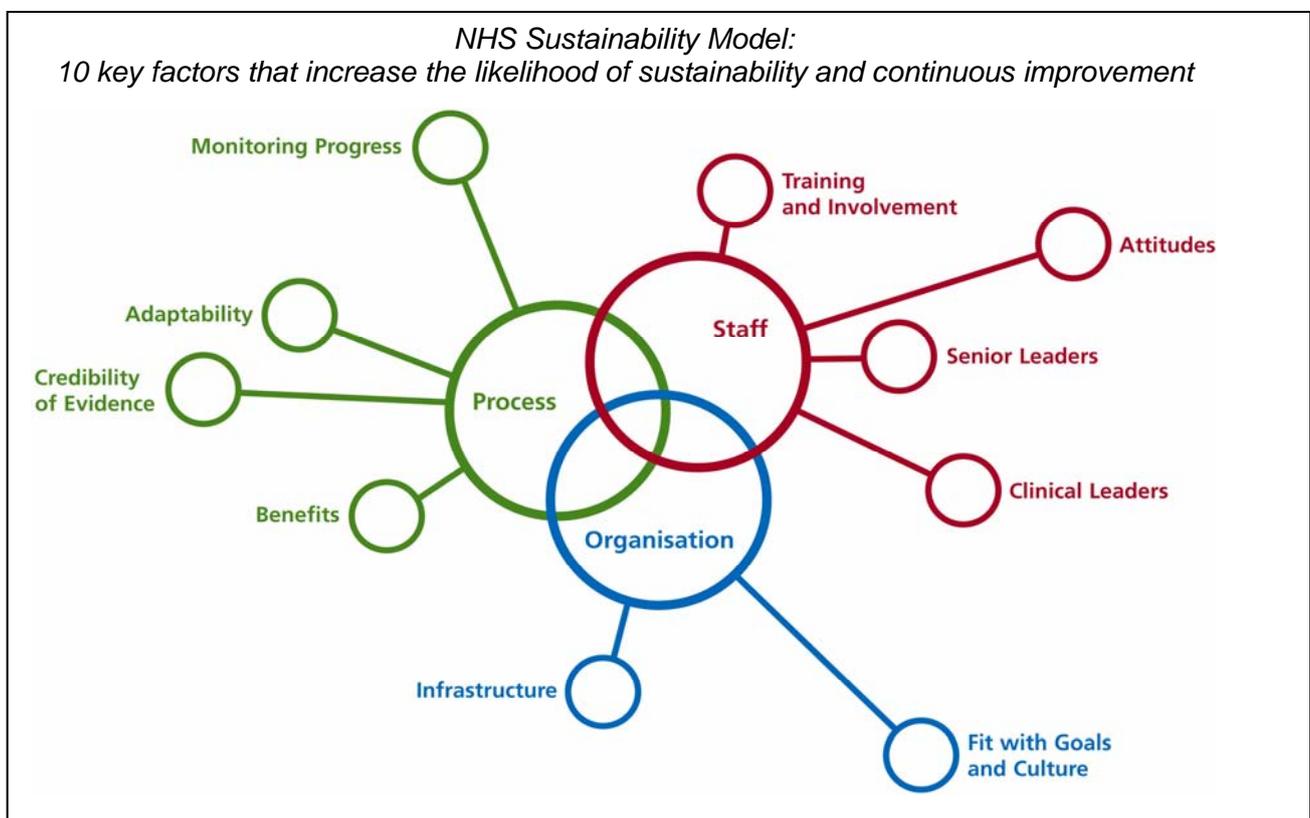
Stages of the Sustainability Model

The stages of the model (process, staff and organisation) are outlined below.

Process

Benefits beyond helping patients
o Do benefits extend beyond helping patients?
o Does the change reduce waste, duplication and added effort?
o Will it make things run more smoothly?
o Will staff notice a difference in their daily working lives?

Credibility of the benefits
o Are benefits to patients, staff and the organisation visible?
o Do staff believe in the benefits?
o Can all staff describe benefits clearly?
o Is there evidence this type of change has been achieved elsewhere?

Adaptability of improved process
o Can the process overcome internal pressures and continually improve?
o Does the change continue to meet ongoing needs effectively?
o Does the change rely on an individual or group of people, technology, finance etc to keep it going?
o Can it keep going if these are removed?

Effectiveness of system to monitor progress
o Does the change require special monitoring systems to identify improvement?
o Is this data collected and easily accessible?
o Is there a feedback system to reinforce benefits and progress and initiate action?
o Are results communicated to patients, staff, the organisation and wider health system?

Staff

Staff involvement and training to sustain the process
o Do staff play a part in innovation, design and implementation of change?
o Have they used their ideas to inform the change process from the very beginning?
o Is there a training and development infrastructure to identify gaps in skills and knowledge and are staff educated and trained to take change forward?

Staff attitudes towards sustaining the change
o Are staff encouraged to express their ideas and is their input taken on board?
o Are staff able to run small-scale tests (PDSA) based on their ideas, to see if additional improvements should be recommended?
o Do staff think the change is a better way of doing things they want to preserve?

Senior leadership engagement
o Are the senior leaders trustworthy, influential, respected and believable?
o Are they involved in the initiative, do they understand it and do they promote it?
o Are they respected by their peers and can influence others to get on board?
o Are they taking personal responsibility and giving time to help ensure the change is sustained?

Clinical leadership engagement
o Are the clinical leaders trustworthy, influential, respected and believable?
o Are they involved in the initiative, do they understand it and do they promote it?
o Are they respected by their peers and can influence others to get on board?
o Are they taking personal responsibility and giving time to help ensure the change is sustained?

Organisation

Fit with organisation's strategic aims and culture
o Has the organisation successfully sustained improvement in the past?
o Are goals of the change clear and shared?
o Does it contribute to overall organisational aims?
o Is change important to the organisation and its leadership?
o Does the organisation have a 'can do' culture?

Infrastructure for sustainability
o Is there enough good quality, trained staff to carry forward the change?
o Are there enough facilities and equipment to support the new process?
o Are new requirements built into job descriptions?
o Are there policies and procedures supporting the new way of working?
o Is there a communication system in place?

Sustainability Scoring System

The scoring system is as follows.

Teams or individuals should choose the factor level that comes closest to their situation, and circle the score to the left.

Scores are added together, with scores closest to 100 indicating a higher chance of successful sustainability. A total score of 45 or less indicates reason for concern and remedial action.

PROCESS

Benefits beyond helping patients		
Score	8.7	The change improves efficiency and makes jobs easier
	4.7	The change improves efficiency but does not make jobs easier
	4.0	The change does not improve efficiency but does make jobs easier
	0.0	The change neither improves efficiency nor makes jobs easier

Credibility of the results		
Score	9.1	Benefits of the change are immediately obvious, supported by evidence and believed by stakeholders
	6.3	Benefits of change not immediately obvious, even though supported by evidence and believed by stakeholders
	3.1	Benefits of change not immediately obvious, even though supported by evidence. Not believed by stakeholders
	0.0	Benefits of change neither immediately obvious, supported by evidence nor believed by stakeholders

Adaptability of improved process		
Score	7.0	Process can be adapted to other organisational changes and there is a system for continually improving process
	3.4	Process can be adapted to other organisational changes but there is no system for continually improving process
	2.4	Process unable to adapt to other organisational changes, but there is a system for continually improving process
	0.0	Process unable to be adapted to other organisational changes, and no system for continually improving process

Effectiveness of system to monitor progress		
Score	6.7	System in place to identify evidence of progress, monitor progress, act on it and communicate results
	3.3	System in place to identify evidence of progress and act on it, but results are not communicated
	2.4	System in place to identify evidence and monitor progress. Results communicated but no one acts on them
	0.0	No system in place to identify evidence of progress, monitor progress, nor act on or communicate it

PROCESS TOTAL SCORE	

STAFF

Staff involvement and training to sustain process

Score		
	11.0	Staff involved from beginning of the change and adequately trained to sustain the improved process
	4.9	Staff involved from beginning of the change but not adequately trained to sustain the improved process
	6.3	Staff not involved from beginning of the change but are adequately trained to sustain the improved process
	0.0	Staff neither involved from beginning of the change nor adequately trained to sustain the improved process

Staff attitudes towards sustaining change

Score		
	11.0	Staff feel empowered as part of the change process and believe the improvement will be sustained
	5.1	Staff feel empowered as part of the change process but don't believe the improvement will be sustained
	5.1	Staff don't feel empowered as part of the change process but believe the improvement will be sustained
	0.0	Staff neither feel empowered as part of the change process nor believe the improvement will be sustained

Senior leadership engagement

Score		
	15.0	Organisational leaders take responsibility for efforts to sustain the change process, and staff generally share information with and actively seek advice from the leader
	6.2	Organisational leaders don't take responsibility for efforts to sustain the change process, but staff generally share information with and seek advice from leader
	5.7	Organisational leaders take responsibility for efforts to sustain the change process, but staff typically don't share information with or seek advice from the leader
	0.0	Organisational leaders don't take responsibility for efforts to sustain change process, and staff typically do not share information with and seek advice from the leader

Clinical leadership engagement

Score		
	15.0	Clinical leaders take responsibility for efforts to sustain change process, and staff generally share information with and actively seek advice from the leader
	6.7	Clinical leaders don't take responsibility for efforts to sustain change process, but staff generally share information with and seek advice from leader
	5.5	Clinical leaders take responsibility for efforts to sustain the change process, but staff typically don't share information with or seek advice from the leader
	0.0	Clinical leaders don't take responsibility for efforts to sustain change process; staff typically don't share information with and seek advice from the leader

STAFF TOTAL SCORE

STAFF TOTAL SCORE	

ORGANISATION

Fit with organisation's strategic aims and culture

Score		
	7.2	A history of successful sustainability and improvement goals are consistent with organisation's strategic aims
	3.3	A history of successful sustainability but improvement and organisation's strategic aims are inconsistent
	3.5	No history of successful sustainability but improvement goals are consistent with organisation's strategic aims
	0.0	No history of successful sustainability; improvement goals and organisation's strategic aims are inconsistent

Infrastructure for sustainability

Score		
	9.7	Staff, facilities and equipment, job descriptions, policies, procedures and communication systems are appropriate for sustaining the improved process
	4.4	Appropriate level of staff, facilities and equipment but inadequate job descriptions, policies, procedures and communication systems for sustaining the improved process
	3.3	Levels of staff, facilities and equipment not appropriate although job descriptions, policies, procedures and communication systems are adequate
	0.0	Staff, facilities and equipment, job descriptions, policies, procedures and communication systems are all not appropriate for sustaining the process

ORGANISATION TOTAL SCORE	

Process score	
+ Staff Score	
+ Organisation Score	
SUSTAINABILITY TOTAL SCORE	

Analysing the data

o Look at patterns of scores - find areas to work on
o Predict chance of success by adding scores
o Monitor scores over time
   - Chance of success scores
   - Individual predictors

Change Achievement Success Indicator (CASI)

The CASI uses a similar scoring method to the sustainability model in assessing whether an organisation has taken the necessary steps to carry out a change successfully.

The model is based on research by John Ovretveit, drawing on the work and models of people such as Stephen Eccles, John Kotter and Everett Rogers.

The model is adaptable, with items able to be added or removed to make the assessment more relevant to the organisation in which it change is being considered. A 'weighting index' may be added to each score, to denote that some elements are more important than others.

Assessment items are conditions which either make change easier, or have been found necessary for an organisation to make a successful change. The assessment not only considers the type of change, or how well it is planned or managed, but also 'context factors' that can help or hinder the most carefully planned and competently managed local change.

Using the tool

Highlight which factors or conditions are weak or missing and work to strengthen them, either before or during a change, and help increase the chances of success.

Give each item a score of '0' if no elements items are met; '5' if all elements are met; or a score between 1-4 depending on how well the elements appear to be addressed.

After all factors have been assessed, assign a weighting score for each factor, scoring 0.5 for 'not very', 1 for 'quite important' and 1.5 for 'very important'.

A score over 60 indicates a likelihood the change will be achieved. A score below 30 indicates low chances of achievement.

Re-testing 3-monthly helps assess whether factors have weakened and need attention.

1: Local Change Management[7]

1.1 Formal change leadership	Score
• Is responsibility / authority for making change assigned to one person, who reports to senior management? • Do they have the time and the technical, people and political skills to plan and carry through the change and adapt to surrounding changes?	
Relative importance weighting	

1.2 Formal change team	Score
• Do the right mix of people make up a "change team"? • Do they have sufficient time and skills to help carry through the change? • Is it likely that over 60% of the team will remain in the team until change is completed?	
Relative importance weighting	

1.3 Planning	Score
• Is there a plan for the change, with flexibility to adjust to a changing situation? • Does this have measurable objectives and a timetable of actions with responsibilities? • Is there an agreed process for reviewing and replanning at regular intervals, including input and assistance from senior management?	
Relative importance weighting	

1.4 Progress measurement, reviews and reporting	Score
• Have progress indicators been designed to give feedback about the change? • Is this data regularly reported and used in reviews, adjusted to the changing situation? • Are there regular meetings and ways to communicate with management and "key others" about the change?	
Relative importance weighting	

1.5 Other resources	Score
• For change and change team, is there sufficient finance, access to expertise, training as needed, data support and other resources necessary?	
Relative importance weighting	

2: The Nature of the Change

These are features of the change, which increase or decrease the chances of successful change being made.

2.1 Complexity	Score
A complex change that takes several years to achieve is less likely to be successful than a 'one off' change that demands little of employees.	
• Does the change require little new learning or skills? • Does it involve people from similar occupational groups? • Does it affect or concern few different "interest groups" or stakeholders? • Is it a single, short change? • Is success independent of sub-changes being completed and is there flexibility?	
Relative importance weighting	

2.2 Compatibility, advantage, tested and trialability	Score
• Is change compatible with our values and operating procedures, and has a clear advantage over the current situation? • Have similar changes been made elsewhere, and is this knowledge and evidence used to make the change? • Has the change been tested in the organisation on a small scale and lessons used to help the full change?	
Relative importance weighting	

2.3 Cost benefit	Score
• Are there credible numbers showing the change will lower recurrent operating costs, and require few "investment" resources to carry through, relative to savings (including little extra personnel time), as calculated, and perceived?	
Relative importance weighting	

3: Organisational context

This outlines conditions and factors within the organisation that set the local context for the change.

3.1 Link between the change and the environment	Score
• Is there a process for "linking" the change to critical environmental pressures, or people responsible for planning and adjusting the change to relate to the environmental pressures?	
Relative importance weighting	

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[7] Some questions from the original CASI have been edited for space / Australian context.

3.2 Harnessing to other changes	Score
• Has an assessment been made of other changes in the organisation, and linked to the change to strengthen it? • Is the change related to what "wants to happen in the organisation" and emergent movements?	
Relative importance weighting	

3.3 Senior Management	Score
• Do top management authorise the change and provide resources? • Have they set measurable objectives and time targets for the change? • Will one top manager formally supervise the change and receive reports of progress and problems?	
Relative importance weighting	

3.4 Middle Management	Score
• Are some middle managers required to support the change? • Are these middle managers genuinely convinced that the change is needed and accountable for helping the change to be achieved? • Will the change help them meet objectives and do they spend time and resources to remove obstacles? • Is there a mechanism for keeping them regularly informed about the progress and consequences of the change?	
Relative importance weighting	

3.5 Other leaders	Score
• Is it known which other formal / informal leader's opinion is needed to progress change? • Has action been taken to influence their opinion, and do they have a positive attitude to the change? • Is there one or more respected professional who actively advocates for the change and is involved in the change (a "change champion")?	
Relative importance weighting	

3.6 Rationale and tension for the change	Score
• Are those affected by the change dissatisfied with the current situation and believe the change will improve things? • Has evidence or good reasons been provided that the change will improve the situation of concern to them? • Has a vision of intended future been presented and believed possible?	
Relative importance weighting	

3.7 Change culture and attitudes	Score
This factor is the most difficult to try to strengthen positively	
• Is the organisation "change friendly"? • Are changes like the one in question normally welcomed? • Are personnel comfortable with change like this one?	
Relative importance weighting	

3.8 Change saturation	Score
Assess this factor by considering the number and depth of current and recent changes relative to the current workload, staffing and morale	
• Personnel are not exhausted from and currently responding to many other changes • The change does not add another burden to people's already over-stretched "change coping capability	
Relative importance weighting	

4: External Context

These are conditions and factors external to the organisation, which make the change easier. Some are necessary preconditions for a successful change.

4.1 Customer Pressure	Score
• Are there pressures from customers for a change, and how much will or does the change respond to these?	
Relative importance weighting	

4.2 Political Pressure	Score
• Is there pressure from local or national politicians for the change, and how much do they support it?	
Relative importance weighting	

4.3 Economic Pressure	Score
• Does the change respond positively to current economic or market pressures on the organisation?	
Relative importance weighting	

4.4 Other external pressures	Score
• Is there other very strong pressure, to which the organisation must respond if it is to survive? *Assess whether the change will help the organisation respond to this pressure or not.*	
Relative importance weighting	

TOTAL SCORE	

New Idea Scorecard

This scorecard has been developed by Sarah W. Fraser Associates (UK), based on attributes identified by Everett Rogers

- **Relative Advantage** –degree to which an innovation is perceived as better than the idea it supersedes

- **Simplicity** – degree to which innovation is perceived as being simple to understand and use

- *Compatibility* – the degree to which an innovation is perceived as being consistent with the existing values, experiences, beliefs, and needs of potential adopters

- *Trialability* – degree to which an innovation can be tested on a small scale

- *Observability* –degree to which use of an innovation and results it produces are visible to those who should consider it.

The Scorecard is designed for several people to independently evaluate how easy it will be to spread a specific change. Group discussion is then used to identify barriers to adopting the innovation and developing an action plan to address the barriers.

How to Use the Scorecard

- The exercise is done as a table exercise with people sitting at tables.

- Each person independently rates the change from the "spread target" point of view, using a 1–5 scale:
  1: change very weak relative to attribute
  3: change okay relative to attribute
  5: change very strong relative to attribute

- After each table has had a chance to evaluate the change, report back to the group and discuss how the changes were rated in relation to each of the attributes.

- Pay particular attention to: (1) any item where there are significant differences in scoring among the group (e.g., 2s and 5s on the same item); and (2) scores of 1 or 2 for any of the items.

- Use these discussions to plan how to overcome barriers that are identified, and develop an action plan for addressing these barriers.

- Change differs on how easily it is likely to spread. Some changes may require specific communication messages or specific actions that a team can take to make it more likely to spread (e.g., make sure the test is visible and testable by others, simplify the instructions on how to do the change).

New Idea Scorecard

Name of innovation:	Score
Relative advantage	
Simplicity	
Compatibility	
Trialability	
Observability	
Total	

Further Information

Tips for enhancing spread and sustainability can be found in a search of publications, conference presentations and through the initiatives of organisations such as the websites of the Institute for Healthcare Improvement in Boston (USA), the NHS Institute for Innovation and Improvement (UK) and the Australian Resource Centre for Healthcare Innovation.

The NSW Department of Health and Clinical Excellence Commission websites also provide information on collaboratives, clinical redesign projects and knowledge management that shares lessons learned and enhances best practice.

Clinical Excellence Commission
Business Hours: 8.30AM to 5.00PM

Tel: 61 2 9382 7600
Fax: 61 2 9382 7615

Postal address
GPO Box 1614
SYDNEY NSW 2001

Web: www.cec.health.nsw.gov.au

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Online Resources

- NSW Department of Health Quality and Safety website: www.heatlh.nsw.gov.au/quality/
- ARCHI Health awards website: www.archi.net.au/e-library/health_administration/awards06
- CEC website: www.cec.health.nsw.gov.au
- NHS Modernisation Agency toolkits: www.modern.nhs.uk/improvementguides