THE

Spread & Scale

TOOLKIT

This publication is produced by the Institute of Healthcare Quality (IHQ), Group Quality.

If you have any suggestions or feedback, please email ihq@nhg.com.sg.

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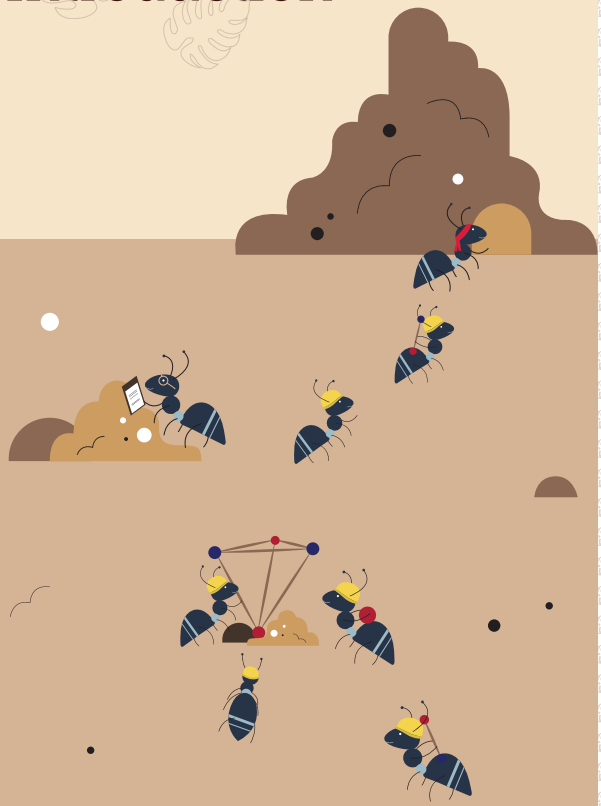
Contents

Introduction



Introduction

As we present this handbook, I am reminded of the enduring wisdom in Albert Einstein's words: “We cannot solve our problems with the same thinking we used when we created them”.

In the ever-evolving landscape of healthcare, our commitment to quality and safety remains unwavering.

Despite the remarkable advancements in medical science and technology, we continue to face challenges in the form of errors and adverse events. It is precisely these challenges that underscore the critical importance of quality improvement tools to redesign our systems, enhance reliability and ultimately, improve patient outcomes.

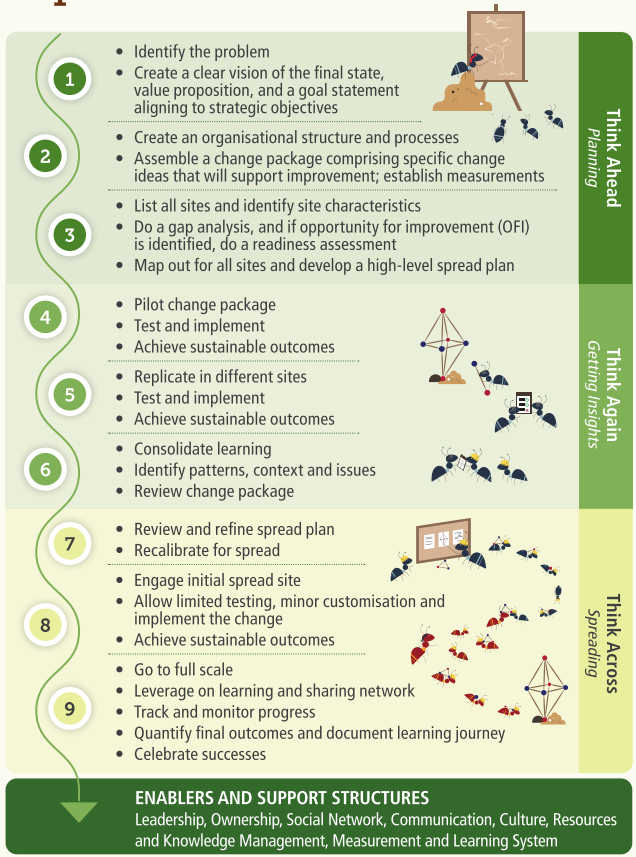
I encourage all members of our healthcare community to embrace the principles and practices outlined in this handbook. By doing so, we not only address current challenges but also proactively work towards preventing future adverse events.

Together, we can create a healthcare system that is not only responsive to problems but also resilient in preventing them.

Dr Tung Yew Cheong
Group Chief Quality Officer
National Healthcare Group

Framework

The Three Stages of Spread and Scale



Think Ahead

This stage is the responsibility of the project sponsor team and institution's Quality Director.

1

- Identify the problem and why there is a need to change
- Create a clear vision of the final state, value proposition, and a goal statement aligning to strategic objectives

2

- Create an organisational structure and processes
- Assemble a change package comprising specific change ideas that will support improvement; establish measurements

3

- List all sites within your organisation and identify site characteristics that match with your Improvement Goal
- Do a gap analysis; if opportunity for improvement exists, identify characteristics of that particular site that will support/ hinder improvement (readiness assessment)
- Map out for all sites and define a high-level spread plan based on your work

Think Again

This stage is the responsibility of the institutions' Improvement teams.

4

- Pilot change package in one or two sites
- Test, followed by implementation* at pilot sites
- Achieve sustainable outcomes

5

- Replicate in different sites/ segments and contexts, depending on necessary infrastructure, human capacity and capability
- Test, followed by implementation*
- Achieve sustainable outcomes

6

- Consolidate learning from all pilot sites (how to improve and sustain)
- Identify patterns, contexts, sequencing, ownership issues
- Review change package

* Refer to Definitions table

Think Across

This stage is the responsibility of the institutions' Quality Directors, Project Sponsors and Improvement teams.

7

- Review and refine spread plan in greater detail
- Recalibrate structure, processes resources and capabilities for spread

8

- Engage initial spread sites
- Allow limited testing, minor customisation and implement change based on degree of certainty and agreement
- Achieve sustainable outcomes and consolidate learning

9

- Go to full scale
- Leverage on learning and sharing network across sites
- Track and monitor progress of spread
- Quantify final outcomes and document learning journey
- Celebrate successes

Enablers and Support Structures

Enablers

The key elements for creating the environment for change and the psychology of change which will facilitate spread and scale are:

- **Leadership** (formal/informal)
- **Ownership**
- **Social networks**
- **Communication**
- **Culture**

Enablers and Support Structures

Support structures

The elements that enhance the success of spread and scale are:

- Availability of required resources
- Improvement capability of teams
- Measurement systems that capture data and feedback
- IT systems that enable communication and learning
- Knowledge management systems that capture lessons, technical knowledge, new knowledge and insights

Step 1

Key points

1. Identify the problem and why there is a need to change
2. Create a clear vision of the final state, value proposition, and a goal statement aligning to strategic objectives

Identify the problem and why there is a need to change

- What is the basic need? What is the desired outcome?
- Is there a gap between what exists and what is desired?
- How significant is the gap? (e.g. in terms of clinical impact to the patient — 0.1% versus 20% gap)
- How far are we from the desired outcome and benchmarked performance?
- Who will benefit and why?
- Can we get buy-in and support? (e.g. staff, colleagues)

Create a clear vision of the final state, value proposition, and a goal statement aligning to strategic objectives

Describe what the final desired outcome would be in terms of the Triple Aim* and identify the value created for the patient/population, staff, organisation and system.

It is important to craft a goal statement for communication and direction. The goal should be S.M.A.R.T**.

Specific | **M**easurable | **A**ttainable | **R**ealistic | **T**ime-based

* *The Triple Aim's three areas of focus are: 1) improving patient experience, 2) reducing the per capita costs of healthcare and 3) improving the health of populations overall.*

** *S.M.A.R.T, which stands for "specific", "measurable", "attainable", "realistic" and "time-based", reveals the characteristics of clear and realistic goals.*

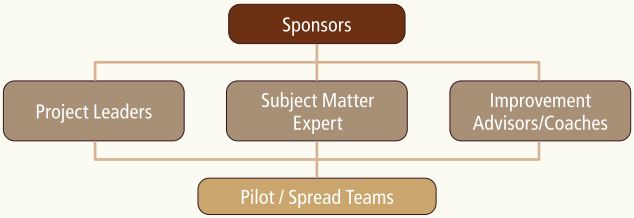
Step 2

Key points
1. Create an organisational structure and processes
2. Assemble a change package comprising specific change ideas that will support improvement; establish measurements

Create an organisational structure and processes

Define the structure before the recruitment of the first site.

Define the different roles required within the organisational structure that will support the work in piloting*, implementation* and replication*, sustainability*, as well as spreading* and scaling*.



Processes define the series of steps and decisions made by different parts of the structure and how they work together to achieve the desired outcome.

* Refer to Definitions table

Step 2

Roles and responsibilities within the organisational structure

Sponsors
Set goals, scope, pace of work and ensure that the project's direction is aligned to the goal set. Accountable for final outcomes, resources and timelines. Note: This could be a team rather than an individual.

Project Leaders
Ensure effective information flow among all the groups within the structure. Manage activities (e.g. meetings, workshops, orientations and learning sessions), documentation, collation and aggregation of data, tracking budgets and direct improvement work.

Subject Matter Expert
Directly responsible for the outcomes for the steps in a process. Possesses fundamental knowledge of the evidence, best practices, local context, resources required and results achieved.

Improvement Advisors/Coaches
Provide professional, technical, soft skills and quality improvement methodology expertise and advice. Function as coaches, mentors, facilitators and guides. Such resources are usually found within the quality department or its equivalent.

Pilot Team(s)
Responsible for local gap analysis, identification of change priorities, testing and analysis, change process and implementation, measurement, tracking and reporting of results, documentation and sharing of learnings.

Spread Team
Responsible for establishing scale and pace of spread plan, collating and analysis of changes from pilot teams, implementation of spread plan, monitoring and analysis of spread, reporting and documentation of spread outcomes.

Step 2

What is a driver diagram?

The development of driver diagram requires the improvement advisors/ facilitators to work on

- Literature review
- Local project review
- Synthesising and integrating information, best practices, resources
- Identifying and validating drivers and measures

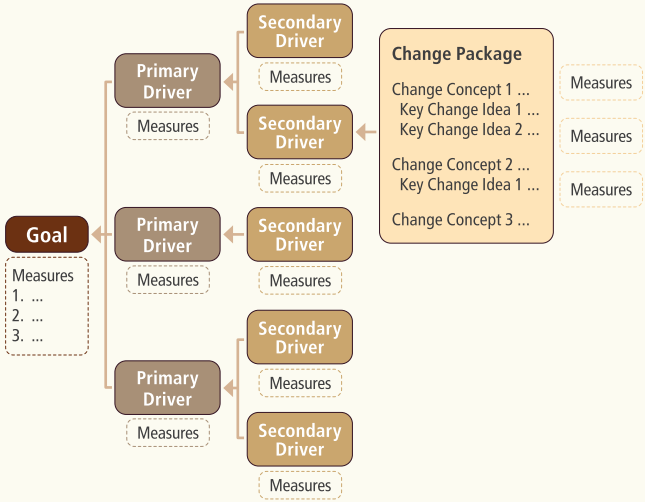
How to develop the driver diagram

1. Define the goals of this project
2. Identify its primary and secondary drivers
3. Identify the change concepts and key change ideas
4. Establish measures for the goals, primary and secondary drivers and change ideas
5. Aggregate information from 1-4 into a change package
6. Review the readiness of change package for testing*
7. Review and modify in response to new knowledge obtained from piloting*

* Refer to Definitions table

Step 2

Develop a driver diagram to identify drivers and key change concepts; establish measurements; aggregate this information into a change package



Primary Drivers are system components which will contribute towards achieving the goal.

Secondary Drivers are used to identify key process steps that drive system performance (primary drivers).

Change package comprises change concepts and detailed instructions on execution (e.g. reduce waste) that can be translated into change ideas (e.g. where and by how much) to be carried out through change projects. They include references for the changes.

Step 2

How to identify key change concepts

1. Uncover opportunities for improvement (OFIs) through a gap analysis
2. Brainstorm to generate ideas to address the OFIs
3. Find supporting evidence that a particular change concept will contribute to improvement

How to review readiness of change ideas

Does It Work?	How Does It Work?	Will It Work Elsewhere?	Will It Spread?
• Improvement attributable to the change • Strength of evidence	• Key components • Specific steps in the process that will be changed • Organisational enablers • Barriers and risks	• Potential for transferability • Ability to sustain • Adaptability • Unintended consequences	• Simplicity • Cultural fit • Any tools (IT tools) and implementation support available (e.g. detailed change package, staffing)

Step 2

How to develop the change package and its measurements

The change package is a detailed 'how to' guide. It is developed from the key change concepts and ideas, and describes

- the key evidence-based components and its processes
- the organisational enablers for improvement
- the barriers to the improvement
- the process to test and implement these interventions
- the roles and responsibilities of the team – 'who is doing what?'
- the measures to gauge improvement
- the essential tools needed (e.g. checklist)

The pilot team will

- test key change ideas (from the initial change package) through PDSA* cycles at the pilot site (in Step 4)
- review the results of the tested change ideas
- integrate or bundle successful key change ideas that demonstrated improvement and sustainability, and new knowledge acquired from the testing cycle into a revised change package

The finalised change package is a scalable unit* which is ready to be locally tested and proven in a broader range of settings (in Step 5).

* Refer to Definitions table

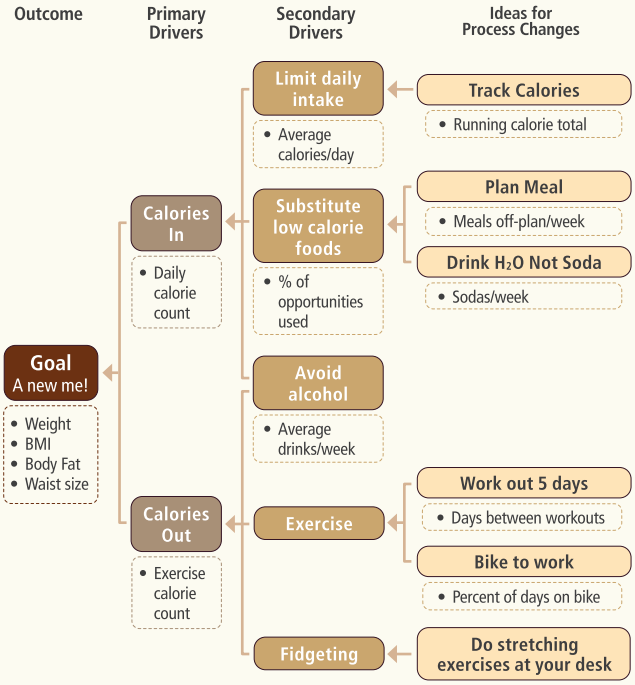
Step 2

Examples of Change Concept and its corresponding Change Ideas

Change Concepts	Testable Idea (actionable)
Standardise	1. Use standard kits or packs that contain all requisites. 2. Use as small a catheter as possible that is consistent with proper drainage, to minimise urethral trauma. Standardise bore size for male and female catheters.
Improve Communication	1. Create a locally-specific hand hygiene curriculum and checklist for use in staff education, based on CDC Guideline for Hand Hygiene in Health-Care Settings. 2. Provide education just in time — at or near the point of care — with posters or video displays. 3. Provide computer video presentations of proper technique — embed in Intranet, email distributions, or electronic medical record (EMR).
Use Protocols and Checklists Wisely	1. Develop or adopt a nurse-led protocol to remove urinary catheter.

Step 2

Driver Diagram for Weight Loss



Step 3

Key points

1. List all sites within your organisation and identify site characteristics that match with your Improvement Goal
2. Do a gap analysis to see if improvement is needed; if opportunity for improvement is seen for a site, identify characteristics of that particular site that will support/hinder improvement (readiness assessment)
3. Map out for all sites and define a high-level spread plan based on your work

List all sites within your organisation

Allow an estimation on the number of sites. The team should identify the available sites in the organisation where change may be possible.

Step 3

Identify site characteristics that match with your Improvement Goal

The team should identify where the change needs to be implemented

- Identify the targeted population (e.g. patients, staff etc.) in each site
- Analyse the characteristics of each site
- Assess the potential success in piloting or spreading of changes or improvement — the table below lists key considerations

Leadership Alignment	Implementation Infrastructure	Organisational Culture	Operational Resources
• Strategic Alignment with Goals and Priorities • Sponsorship and Leadership • Oversight of Infrastructure	• Project Management and Championship • Training • Measurement and Monitoring	• Cultural Readiness for Change	• Staff Capacity and Competency • Space • Technology

Do a gap analysis to see if improvement is needed

Analyse the following:

- Are there demonstrable gaps in the care that the patients receive?
- Can patient outcomes/patient experience/cost of care be improved through implementation of the change package?
- Are the change ideas applicable to that site?
- How feasible are the change ideas to be tested and implemented at that site (factors for consideration include timing, resources, buy-in, likelihood of success)

Step 3

If opportunity for improvement (OFI) exists, identify characteristics of that particular site that will support/hinder improvement

Analyse the readiness of the sites to carry out testing on the elements in the change package

- Defined Need
  1. Have you clearly defined the needs?
  2. Is building a stronger teamwork and safety culture an appropriate strategy to address your institution's need?

- Readiness for Change in Culture
  3. Is now the right time for implementing a culture change (i.e. it will not compete with other major changes currently being made at your institution)?
  4. Is a culture change that emphasises the importance of teamwork and safety feasible and acceptable?
  5. Will your institution's leaders support culture change and the effort required to implement and sustain the initiative?

- Time, Resources, Personnel
  6. Will your institution provide sufficient staff with the suitable characteristics and attitudes to serve as instructors? Coaches?
  7. Will your institution allow time to prepare the instructors and coaches for their role? For personnel to attend training?
  8. Will your institution allow time for instructors to customise the course, if required?

- Sustainability of the Change
  9. Will your institution be prepared to measure and assess progress and continuously improve processes?
  10. Will your institution be able to reinforce and reward positive teamwork behaviours and improvements in processes?

Step 3

Map out for all sites and define a high-level spread plan based on your work

a. Prioritise and plan the sequence of pilot and spread sites. The table below shows how to plan the sequence of spread.

b. Develop a high-level project management plan – pilot sites, communication plans, learning strategies, resource management plan and tracking mechanism. This plan should include:

1. Pilot sites
   - Determine the sequence and scope (what are the changes and how many sites).

2. Communication plans/Network development
   - Provide evidence-based data and technical knowledge.
   - Create improvement stories (early successes).
   - Target key influential audiences or early adopters.

3. Learning strategies
   - Create an opportunity for learning among sites through review sessions and other sharing platforms (e.g. just-in-time learning, site visits, formal and informal sessions).

4. Resource management plan
   - Identify the resources and infrastructure system required to support the needs and sustain gains of the spread plan.

5. Tracking mechanism
   - Monitor the progress of testing of pilot sites, performance of the measures, rate of spread and its impact on system performance.
   - Measure through database creation and built-in analytics.
   - Capture learning, new knowledge and insights acquired from the pilot, implementation and replication, sustain, spread and scale phase.

Step 3

6. Leadership support
   - Develop a leadership engagement plan.

7. Detailed spread plan for testing of change package for each pilot and spread site. This will include:
   - An overview of "Why?" and resources
   - Its aim and timeline
   - Team composition: its roles and responsibility
   - Measurement plan
   - Training plans to address learning needs
   - Necessary tools

Step 3

The table below shows how to plan the sequence of spread.

Site	Sub-Loc	Jan/ Feb	Mar/ Apr	May/ Jun	Jul/ Aug	Sept/ Oct	Nov/ Dec	Jan/ Feb	Mar/ Apr
Pilot 1	Ward 3A	T	T	I/S	S	S	S	S	S
Pilot 2	Ward 1A			T	T	I/S	S	S	S
	Ward 3B			T	T	I/S	S	S	S
Spread 1	Ward 1B					T	I	S	S
	Ward 5B					T	I	S	S
Spread 2	Ward 4A						T/I	S	S
	Ward 2A						T/I	S	S
	Ward 4B						T/I	S	S
	Ward 5A						T/I	S	S
	Ward 2B						T/I	S	S

T – Test I – Implement S – Sustain

Step 3

Good documentation is an essential part of improvement projects. It is useful for teams to consider ways to enable these activities in site-specific documentation:

- How to document gap analysis of the specific site.
- How to document and track changes on the change package.
- How the team monitors and tracks the progress of project.
- How the team plans to capture learning and knowledge (e.g. PDSA form, data collection form).

Final check:

Have you considered the following for your spread plan?

- Scope
- Requirement
- Schedule
- Cost
- Human resource
- Communication and IT System
- Risk management
- Procurement
- Stakeholders

Step 4

Key points

1. Pilot change package in one or two sites
2. Test, followed by implementation* at pilot sites
3. Achieve sustainable outcomes

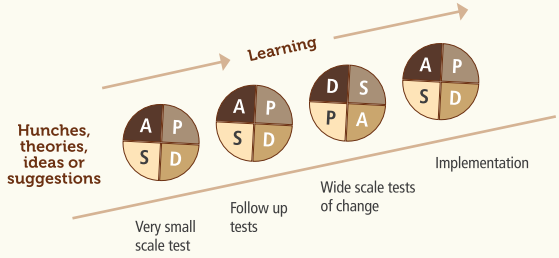
Pilot change package in one or two sites

The purpose of this step is to test the selected change ideas (from the change package) at this first pilot site. This is to learn and understand the interactions between the interventions and the system it aims to improve.

At the end of this step, we have a Scalable Unit. A Scalable Unit intensively tests local ideas for best-practice implementation, so that the interaction among all parts of this representative sub-system can be understood. These sets of context-sensitive strategies and interventions can be further tested and refined in a broader range of settings.

Test, followed by implementation* at pilot sites

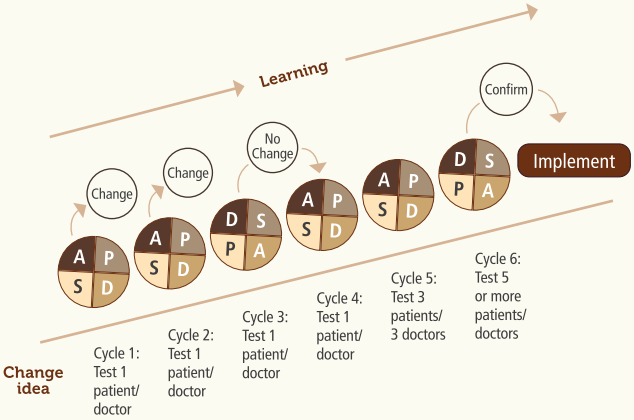
These diagrams illustrate the improvement process through the PDSA* Cycles.



* Refer to Definitions table

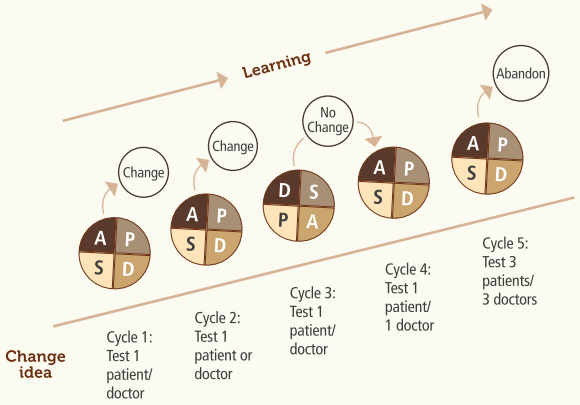
Step 4

Testing one element (change idea) of the change package before implementation.



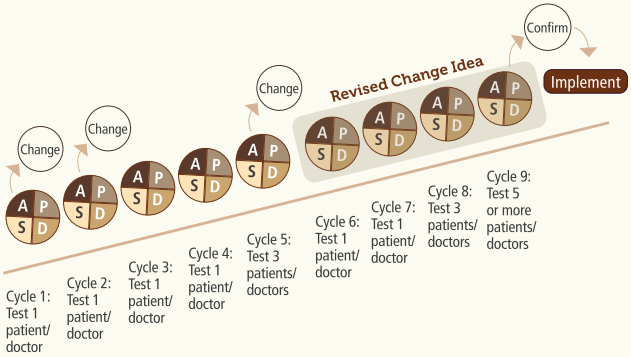
Step 4

Abandoning the change idea after testing it.



Step 4

Run multiple test cycles for one element (change idea) of the change package before implementation.

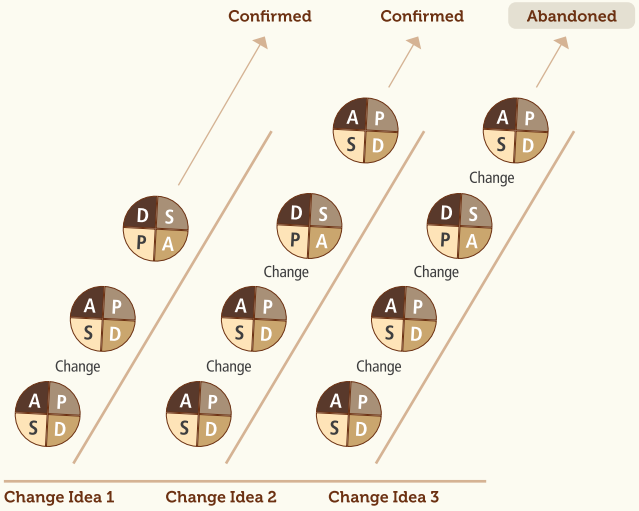


Implementation* happens when the team has completed all necessary testing, confirmed all the required changes that demonstrated outcomes, and integrated these changes into a standardised work process for all.

* Refer to Definitions table

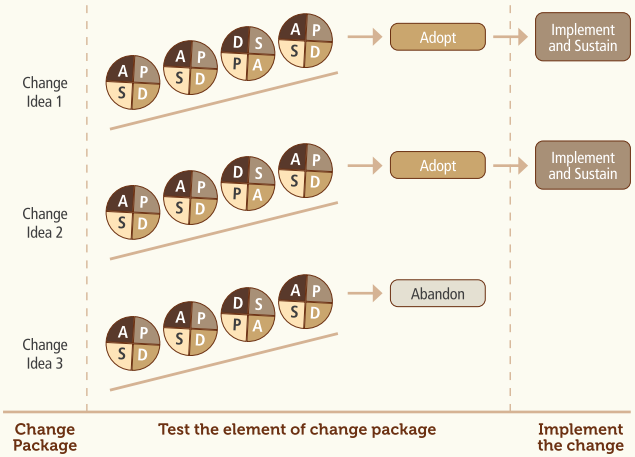
Step 4

Different test cycles for different elements (change ideas).



Step 4

Results from testing the elements (change idea) of change package.



When do you decide to implement?

- When you believe that the change will result in the improvement you seek.
- When you have data that demonstrates sustained reliability and the effect or effectiveness of the change.
- When you have tested the change over a wide variety of conditions (days/nights/weekends) and with different staff and patients involved.

Step 4

What is the scale to test?

The table below helps you decide on the scale of test under various circumstances.

Scenario One

If you have a low degree of belief that a change idea will lead to improvement in your current situation, and the cost of failure is small, do a "small scale test" if the site is "ready" for the change or a "very small scale test" if the site is "resistant" to the change.

Scenario Two

If you have a high degree of belief that a change idea will lead to improvement in your current situation, and the cost of failure is small, you can adopt different scale of testing depending on the readiness of the organisation or site. The scale of testing you adopt will depend on the readiness for change. If the site is "ready", you can proceed to implement the change.

Current Situation		Resistant	Indifferent	Ready
Low Degree of Belief	Cost of failure large	Very Small Scale Test	Very Small Scale Test	Very Small Scale Test
	Cost of failure small	Very Small Scale Test	Very Small Scale Test	Small Scale Test
High Degree of Belief (Pilot reliability >90%)	Cost of failure large	Very Small Scale Test	Small Scale Test	Large Scale Test
	Cost of failure small	Small Scale Test	Large Scale Test	Implement

Langley, G.J. et al. (2009). *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*, Institute for Healthcare Improvement.

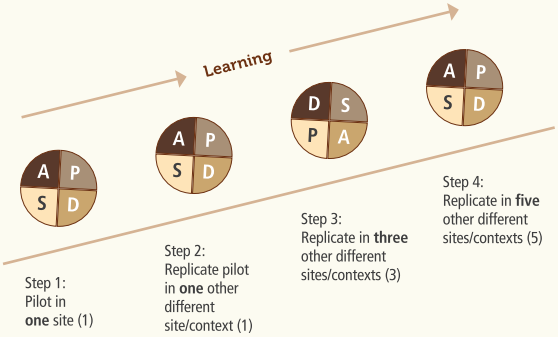
Step 5

Key points

1. Replicate in different sites/segments and contexts, depending on necessary infrastructure, human capacity and capability
2. Test, followed by implementation*
3. Achieve sustainable outcomes

Replicate in different sites/segments and contexts, depending on necessary infrastructure, human capacity and capability

Test the scalable unit in a variety of settings, conditions and population segments that likely represent the different contexts that will be encountered at full scale.



* Refer to Definitions table

Step 5

We need to:

- Test the underlying theory of change and scalable unit.
- Test the necessary infrastructure (e.g. data systems and supply chain) required to support a full scale implementation.
- Build the human capacity and capability (e.g. leadership, managerial, and frontline team). This will help the team to identify requirements for scale-up.

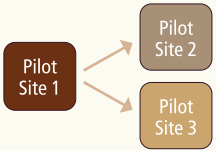
It is important for the team to continue to:

- Ensure leadership and management support, adequate time for testing and implementation.
- Communicate the need and urgency for change.
- Share the learning from the testing and implementation phase.
- Monitor the process, outcome measures and rate of adoption.
- Provide the necessary technical support or training for the frontline team.
- Capture the necessary adjustments to the scalable units.

Step 5

An effective learning strategy and strong leadership support can help the adoption of new ideas and generate a robust scalable unit for spread and scale-up across a range of contexts.

Building knowledge from the testing cycles is fundamental to achieving improvement. Teams should develop an effective way to share their results, new knowledge and learning between pilot sites that are undertaking similar work.



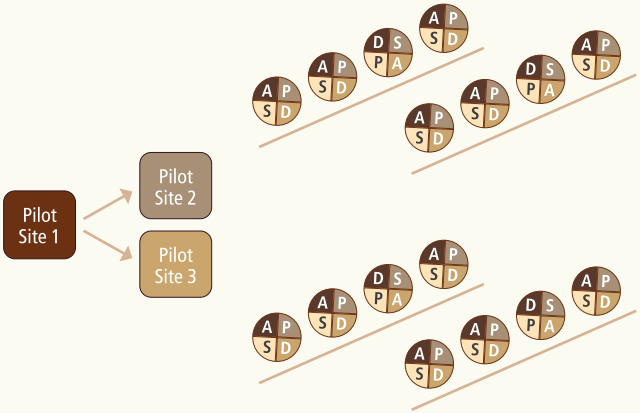
During this phase

- The team (site 1) can share their learning and experience with teams in sites 2 and 3.
- The teams from sites 2 and 3 can visit site 1 for an in-depth discussion.
- Members from site 1 may be involved as advisors for the Improvement teams in sites 2 and 3.

Step 5

Test, followed by implementation

The teams in subsequent pilot sites (sites 2 and 3) should begin with testing of elements in the scalable unit in their specific settings, and make required modifications to the scalable unit.



Some of the change ideas (elements of change package) may require a shorter testing period as these change ideas have been successfully tested at the pilot sites.

The team in replicated sites may take a shorter time to test or even abandon the change ideas that are not working in the first pilot site.

All the proven change ideas, which have been tested in a variety of settings and context, are assembled into the final change package or scalable unit for implementation at spread sites.

Step 5

The table below shows how to tailor change ideas in different sites.

Have the change ideas worked?	Ward 1A	Ward 1B	Ward 2A	Ward 2B	Ward 3A	Ward 3B
Change idea 1	Y	X	Y	Y	Y	Y
Change idea 2	Y	Y	X	X	X	X
Change idea 3	Y (A)	Y (A)	Y	Y	Y	Y

X – No Y – Yes Y (A) – Yes (with adjustment)

Step 6

Key points

1. Consolidate learning from all pilot sites (how to improve and sustain)
2. Identify patterns, contexts, sequencing, ownership issues
3. Review change package

Consolidate learning from all pilot sites (how to improve and sustain)

New knowledge about the scalable units and insights gained from the testing of these scalable units under different settings and context, as well as success factors (e.g. culture and leadership) that promote effective implementation should be captured, analysed and shared with all stakeholders across the sites.

Other key elements of the enablers and support structures that promote the adoption of spread (e.g. communication strategy, measurement plans) should be identified, and necessary plans must be considered for the design of spread and scale-up.

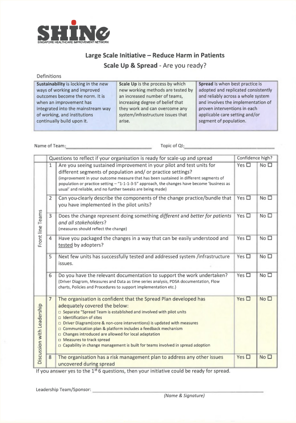
Enablers	Support Structure
• Formal / Informal leadership • Ownership • Social network • Communication • Culture	• Resource management • Improvement capability • Measurement system • Information technology system • Learning system • Knowledge management

Step 6

Review the change package

- Readiness of the scalable unit for spread and scale-up
- Readiness of the sites for spread and scale-up and prioritisation
- Organisational structure and processes
- Measurement plan (at system level)
- High-level spread plan

"Are You Ready to Spread?" Checklist



SHINe
SINGAPORE HEALTHCARE IMPROVEMENT NETWORK

Large Scale Initiative – Reduce Harm in Patients

Scale Up & Spread - Are you ready?

Definitions

Sustainability is locking in the new ways of working and improved outcomes become the norm. It is when an improvement has integrated into the mainstream way of working, and institutions continually build upon it.	**Scale Up** is the process by which new working methods are tested by an increased number of teams, increasing degree of belief that they work and can overcome any system/infrastructure issues that arise.	**Spread** is when best practice is adopted and replicated consistently and reliably across a whole system and involves the implementation of proven interventions in each applicable care setting and/or segment of population.

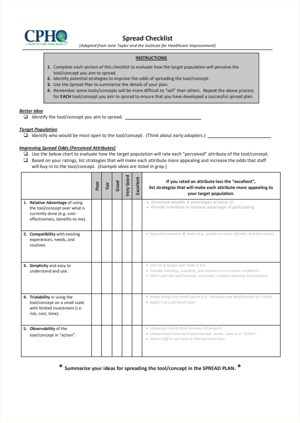
Name of Team:____________ Topic of QI:____________

		Questions to reflect if your organisation is ready for scale-up and spread	Confidence high?	
Front line Teams	1	Are you seeing sustained improvement in your pilot and test units for different segments of population and/ or practice settings? (improvement in your outcome measure that has been sustained in different segments of population or practice setting – "1-1-1-3-5" approach, the changes have become 'business as usual' and reliable, and no further tweaks are being made)	Yes ☐	No ☐
	2	Can you-clearly describe the components of the change practice/bundle that you have implemented in the pilot units?	Yes ☐	No ☐
	3	Does the change represent doing something *different* and *better for patients and all stakeholders*? (measures should reflect the change)	Yes ☐	No ☐
	4	Have you packaged the changes in a way that can be easily understood and tested by adopters?	Yes ☐	No ☐
	5	Next few units has successfully tested and addressed system /infrastructure issues.	Yes ☐	No ☐
	6	Do you have the relevant documentation to support the work undertaken? (Driver Diagram, Measures and Data as time series analysis, PDSA documentation, Flow charts, Policies and Procedures to support implementation etc.)	Yes ☐	No ☐
Discussion with Leadership	7	The organisation is confident that the Spread Plan developed has adequately covered the below: ☐ Separate "Spread Team is established and involved with pilot units ☐ Identification of sites ☐ Driver Diagram(core & non-core interventions) is updated with measures ☐ Communication plan & platform includes a feedback mechanism ☐ Changes introduced are allowed for local adaptation ☐ Measures to track spread ☐ Capability in change management is built for teams involved in spread adoption	Yes ☐	No ☐
	8	The organisation has a risk management plan to address any other issues uncovered during spread	Yes ☐	No ☐

If you answer yes to the 1st 6 questions, then your initiative could be ready for spread.

Leadership Team/Sponsor: ____________________
(Name & Signature)

Spread Checklist ("Characteristic of Spread Idea")



CPHQ

Spread Checklist

(Adapted from Jane Taylor and the Institute for Healthcare Improvement)

INSTRUCTIONS

1. Complete each section of this checklist to evaluate how the target population will perceive the tool/concept you aim to spread.
2. Identify potential strategies to improve the odds of spreading the tool/concept.
3. Use the *Spread Plan* to summarize the details of your plan.
4. Remember some tools/concepts will be more difficult to "sell" than others. Repeat the above process for **EACH** tool/concept you aim to spread to ensure that you have developed a successful spread plan.

Better Idea
❑ Identify the tool/concept you aim to spread. ____________

Target Population
❑ Identify who would be most open to the tool/concept. (Think about early adopters.) ____________

Improving Spread Odds (Perceived Attributes)
❑ Use the below chart to evaluate how the target population will rate each "perceived" attribute of the tool/concept.
❑ Based on your ratings, list strategies that will make each attribute more appealing and increase the odds that staff will buy-in to the tool/concept. (*Example ideas are listed in gray.*)

	Poor	Fair	Good	Very Good	Excellent	If you rated an attribute less the "excellent", list strategies that will make each attribute more appealing to your target population.
1. **Relative Advantage** of using the tool/concept over what is currently done (e.g. cost-effectiveness, benefits to me).						• *Showcase benefits & advantages of doing QI* • *Provide incentives to increase advantage of participating*
2. **Compatibility** with existing experiences, needs, and routines.						• *Appeal to passions & needs (e.g. quality services, efficient, and less stress)*
3. **Simplicity** and easy to understand and use.						• *Get rid of jargon and make it fun* • *Provide trainings, coaching, and resources to increase confidence* • *Work with the tool/concept as a team; create a learning environment*
4. **Trialability** in using the tool/concept on a small scale with limited investment (i.e. risk, cost, time).						• *Break things into small pieces (e.g. introduce one tool/concept at a time)* • *Apply it to a personal issue*
5. **Observability** of the tool/concept in "action".						• *Showcase results from previous QI projects* • *Demonstrate how each tool/concept works; show it in "action"* • *Allow staff to use tools in their personal lives*

*** Summarize your ideas for spreading the tool/concept in the SPREAD PLAN. ***

Step 6

Infrastructure

Issues will arise during the spread. In order to enhance the prospects of spread and sustainability, it is critical to plan ahead for changes to the infrastructure within the organisation. These may include

	Examples
Machines	• IT software or hardware • Medical equipment such as BP monitoring device, computer on wheel (COW), infusion pump, etc.
Method	• New SOP, clinical protocol or policy
Materials	• Consumables such as IV tubings, medications, dressing sets, etc. • Budgets
Mother Nature	• Physical facility or space changes, buildings
Manpower	• Changes in headcount, job description or roles • Changes in organisational chart

Think Across

Step 7

Key points

1. Review and refine spread plan in greater detail
2. Recalibrate structure, processes resources and capabilities for spread

Review and refine spread plan in greater detail

The purpose of this step is to review and refine the initial spread plan based on the results and learning (e.g. culture factors and ability to measure) from all the pilot sites.

Example – Initial and full scale spread sites

Site	Sub-Loc	Jan/ Feb	Mar/ Apr	May/ Jun	Jul/ Aug	Sept/ Oct	Nov/ Dec	Jan/ Feb	Mar/ Apr
Pilot 1	Ward 3A	T	T	I/S	S	S	S	S	S
Pilot 2	Ward 1A			T	T	I/S	S	S	S
	Ward 3B			T	T	I/S	S	S	S
Spread 1 (Initial)	Ward 1B					T	I	S	S
	Ward 5B					T	I	S	S
Spread 2 (Full Scale)	Ward 4A						T/I	S	S
	Ward 2A						T/I	S	S
	Ward 4B						T/I	S	S
	Ward 5A						T/I	S	S
	Ward 2B						T/I	S	S

T – Test I – Implement S – Sustain

Step 7

Recalibrate structure, processes, resources and capabilities for spread

Leadership team, together with improvement advisors/facilitators and core spread team will:

- Assess and strengthen the necessary capacity of the spread team to support the spread activities.
- Review, assess and strengthen the current organisational structure and its processes to address structural issues for initial and full scale spread sites.
- Identify change agents across multiple sites and ensure available capabilities and capacity for change.
- Determine and obtain necessary resources and additional technical assistance to support the spread, the communication strategy (e.g. feedback channel and engagement plan) and data management. This may include training the frontline team to collect and chart the process and outcome measures.
- Refine the support system to track outcomes and spread goals, and knowledge management system to capture learning.

Step 7

Example – Conducting a structural review on the spread plan

Key Change Areas	Pilot (Step 4)	Replicate (Step 5)	Spread (Step 7)
	5 Cases or 1 ward/ clinic	25 Cases or 2 wards/ clinics	200-300 Cases or 25 wards/ clinics
(Change idea 1) Establish a process for identification and enrolment	Use existing resources	Need a dedicated personnel	Need a program in health plan design
(Change idea 2) Provide education and counselling services	Use existing resources and tap on the duties regularly carried out by the medical team	• Need dedicated personnel • Need scheduled time to perform the services	Need a team of full time employees with support staff

Step 7

Additional Information on Spread Team

The spread team, which is different from the initial project team in the pilot sites, is established by the organisation's leadership to perform the scale and spread activities and monitor its progress.

The spread team will include:

- The designated senior leader.
- A leader to oversee the day-to-day spread activities.
- Other key individuals such as:
    - Line- or department-level leadership from the spread sites.
    - Representatives with relevant clinical expertise.
    - Representatives from the successful pilot sites.
    - Representatives from support services (e.g. Information Technology, Human Resource).
    - Representatives with technical skills or quality improvement expertise.

Step 8

Key points

1. Engage initial spread sites
2. Allow limited testing, minor customisation and implement change based on degree of certainty and agreement
3. Achieve sustainable outcomes and consolidate learning

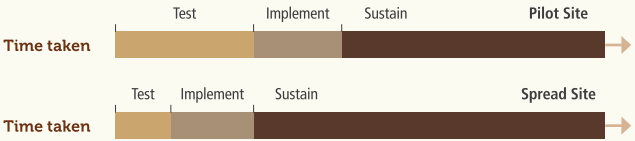
Engage initial spread sites

Identify relevant evidence-based data and technical knowledge for engagement and communication (for buy-in).

Allow limited testing, minor customisation and implement change based on degree of certainty and agreement

Begin with testing and minor customisation in order to create a stronger buy-in. Subsequently, a shorter testing period can be expected as these scalable units have successfully been tested and implemented at the pilot sites.

Different testing period



Overview on testing and implementation

- Abandon the change (of the scalable unit) that is not applicable.
- Test the scalable unit with minor customisation.
- Implement scalable unit without any change.

Step 8

Achieve sustainable outcomes and consolidate learning

- Embed the change into the system to reduce the reliance on human effort.
- Use culture change for sustainability.
- Monitor and offer feedback processes.
- Generate stories and rewards.

Step 9

Key points

1. Go to full scale
2. Leverage on learning and sharing network across sites
3. Track and monitor progress of spread
4. Quantify final outcomes and document learning journey
5. Celebrate successes

This is a rapid deployment phase in which a well-tested scalable unit or the set of intervention is deployed on a larger scale. The focus is on the rapid uptake of the scalable unit or interventions.

Develop different learning strategies for different purposes. Some considerations could include:

- Different levels (leadership, faculty, project teams)
- Different class sizes
- Different formats (formal, informal, JIT, peer-to-peer)
- Different channels (site visits, emails, online chat groups, intranet).

This will build an active learning network across all sites.

Track and monitor progress of spread

Develop a reliable system to track and monitor the performance of key processes and outcomes; essential to the scale and spread initiative.

A potential indicator of the spread may be when the outcome of the change package or interventions becomes institutionalised, commercialised or adapted.

Quantify final outcomes and document learning journey

- Formal project reports, presentation slides, etc.
- Formal documentation on the progress of the project.

Step 9

Celebrate successes

Celebration takes place at different levels, junctures, and in different forms for the purpose of motivating the team and perpetuating the culture for spread.

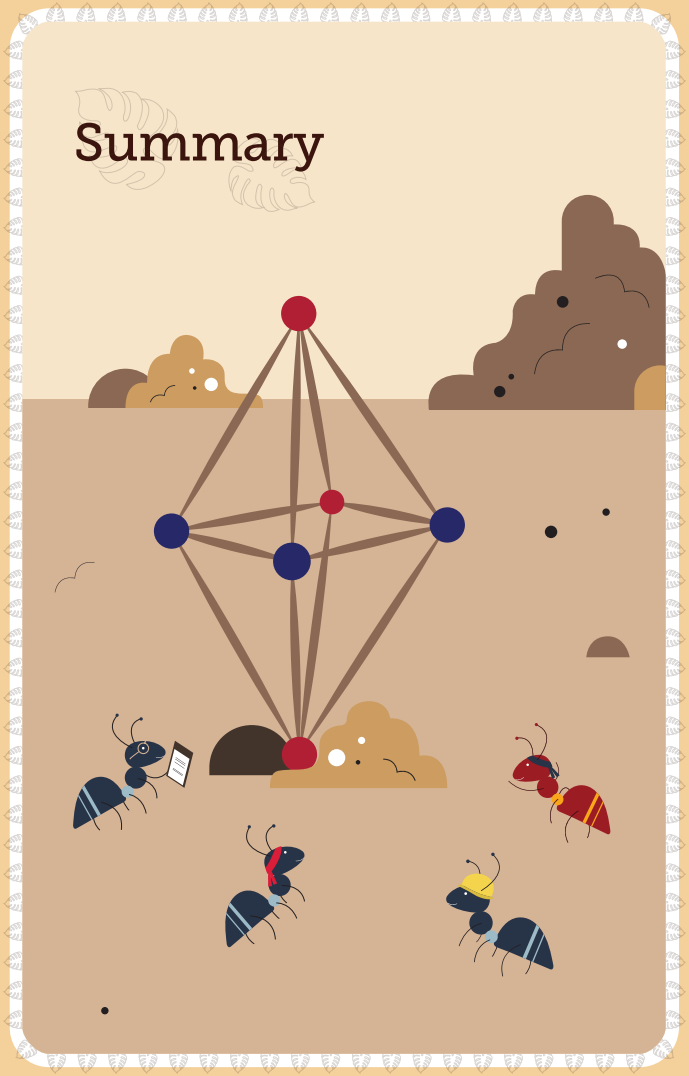
Some examples are:

- Acknowledgement of the teams' efforts and projects' outcomes achieved during CEO's Townhall.
- Site visits by CEO or Senior Management.
  Test wins during pilot's site testing.

Example – Tracking and monitoring the progress

Tracking the spread of scalable unit across multiple sites

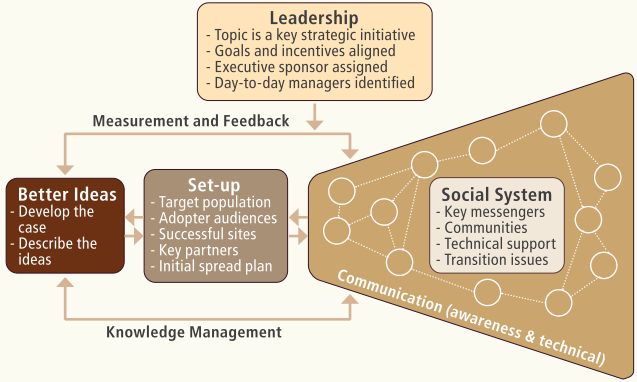
Site	Pilot 1				Pilot 2				Spread 1				Spread 2				Spread 3			
Scalable Unit	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
Standardise inpatient Diabetes Insulin Protocol and apply it across all specialties (Change idea 1)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		Y	Y	Y	
Training for new doctors and nurses on the use insulin protocol during orientation (Change idea 2)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			Y	Y		
(Change idea 3)																				



Summary

In a nutshell

For those who like to picture the entire process discussed earlier in a single map, the Institute for Healthcare Improvement (IHI) has just what you are looking for. The IHI's Framework for Spread identifies strategies and methods that have been proven effective in the spread of new ideas within and across organisations.



Massoud, M.R. et al. (2006). *A Framework for Spread: From Local Improvements to System-Wide Change.* Institute for Healthcare Improvement.

Note

The 3-Stage framework of Think Ahead, Think Again and Think Across, together with the Enablers and Support Structures, are meant as a quick and basic reference to assist participants to "spread and scale" impactful programmes, as well as minimise pitfalls along their journey.

The usage of this toolkit is best incorporated with evidence-based literature and reference tools, current findings, and factors that can foster and promote the adoption of changes to support scale-ups.

Definitions

Term	Description
Change Package‡	A group or bundle of change concepts and ideas useful for effecting improvement in a particular setting.
Implementation (of Scalable Unit)	Making definitive changes/hard wiring to process steps, staffing, work instructions, protocols, guidelines, IT software, equipment, and structure.
PDSA Cycle‡ (Plan-Do-Study-Act)	A tool or methodology used to trial and build knowledge about the changes you are testing or implementing. It may be used in different phases – in pilot and/or replication phase.
Piloting	A small scale preliminary change conducted in order to evaluate feasibility, time, cost, adverse events, and effect in an attempt to improve and confirm the scalable unit prior to embarking on a full-scale implementation.
Replication∞ (a test of Spread and Scale-up)	Tests the scalable unit in a variety of settings, conditions and population segments that likely to represent different context that will be encountered at full scale. **Settings:** refer to wards, clinics, ICU, OT, delivery suites, A&E, labs, offices **Conditions:** Different shifts, admission of patient, discharge of patients, emergency resuscitation, dispensing medication, infectious outbreak **Population segments:** staff (permanent and contract/part-time), students (medical, nursing or allied health), patients (inpatient and outpatient), caregivers, vendors/supplier, HOD **Context:** Medical ward, Surgical ICU, Orthopaedic SOC, Community hospital, long stay psychiatric ward

Definitions

Term	Description
Scalable Unit∞	Intensively tests local ideas for best-practice implementation, so that the interaction among all parts of this representative sub-system can be understood. These sets of context-sensitive strategies and interventions can be further tested and refined in a broader range of settings*. * One of the aims for the testing and piloting phases is to help the team improve and confirm the change design for spread and scale-up. "Scalable Unit" is used to refer to the finalised change design or change package.
Scale or Scale-up	Creates organisational enablers and support structures to spread innovations successfully on long-term basis.
Sustainability◊	When an improvement has become an integrated and a mainstream way of working, it should be able to withstand challenge and variation over time*, through a process of continuous improvement. *Usually for a period of 6-12 months
Testing‡	A way of trying different elements of the change package on a temporary basis and learning about its potential impact.

Sources of definitions:

∞ Barker, P. M. et al. (2016). *A framework for scaling up health interventions: lessons from large-scale improvement initiatives in Africa.* Open Success. Implementation Science.

‡ Bass, J. (1996). *The Improvement Guide:* San Francisco.

◊ NHS Scotland Quality Improvement Hub (2014). *The Spread and Sustainability of Quality Improvement in Healthcare.*

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- World Health Organization. Expand Net. (2010). *Nine Steps for Developing a Scaling-up Strategy.*

Resources

To access the full list of tools and references online, scan to the QR Code below.

NHG Health
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