

Just the Facts

Change packages are summative knowledge artifacts that can be developed by systems, organizations or teams deliberately pursuing the improvement of outcomes relevant to them and their stakeholders.

A package details the outcome of interest, a successful theory for achievement, a system of measurement, evidence of accomplishment, a description of how achievement happened, narrative examples and experiences, as well as examples of tools, processes, pathways and methods used to arrive at a better outcome.

A change package can be a powerful starting place for others seeking to achieve the outcome of interest in a different location, system or environment.



Special Delivery

***Change packages are a powerful starting point
for sharing ideas that work*** | by **Brandon Bennett**

Solutions that deliver results at scale must be simple and sound.¹ For those pursuing organizational improvement, questions remain: How do we codify our solutions? How do we spread knowledge of our solutions to others? A change package is a practical tool articulating a set of ideas, proven in practice to deliver desired results.

Change packages develop from the work of quality improvement teams, often in the context of collaborative efforts (network improvement communities [NIC], breakthrough series collaboratives [BTSC], collaborative improvement and innovation networks, and collaborative learning networks).^{2,3}

A typical improvement journey involves setting an aim, developing a theory of practice improvement and enacting learning cycles. Teams gather evidence of what works, eliminate ideas that don't and document their learning on how to achieve improved outcomes.⁴

The culmination of a successful improvement journey can result in a summative document—a change package. This includes empirical evidence showing which change ideas are effective and how they have worked in practice to deliver desired outcomes. Change packages also serve as a starting place for individuals and organizations pursuing improvement at scale. They are useful during the planning and execution phases of scaling work. As the ideas of a package are tried under a variety of conditions and across different locations, further learning occurs, and the change packages themselves might evolve.

History

In 1994, the Institute for Healthcare Improvement (IHI) created the BTSC. Integral to this network approach was the codification of a current best practice, known as the change package. Change packages adopted by a purposeful network using practical methods for adaptation and adoption, such as the Model for Improvement, emerged as the core components of the BTSC method popularized by the IHI.⁵

Despite the widespread use of BTSCs, and now NICs in the field of education, there is still a lack of practical guidance on the core elements of change packages. In this article, we'll describe change packages, including:

- + The elements of change packages.
- + The process of producing change packages.
- + The artifacts included in change packages.
- + Why and how change packages are useful to those seeking to generate change at scale.

Elements of a change package

Introduction: This is a brief statement used to generate interest. The introduction communicates to readers/users what

“If I have seen farther, it is because I have stood on the shoulders of giants.”

—Sir Isaac Newton, 1676

Source: *H.W. Turnbull, ed., The Correspondence of Isaac Newton. Vol. 1, 1661–1675. New York: Cambridge University Press for the Royal Society of London. 1959, p. 416.*

the change package will detail and why it might be valuable to them.

Background information: A short but important section, the background information describes the starting conditions of the improvement journey. Starting conditions will vary from place to place, and any context provided can inform subsequent users of the change package of how much local adaptation may be needed to their environment.

Problem statement: This section describes why the work was undertaken. It is the first place that readers will get a sense of measurement because the problem is almost always qualified or quantified in some way. The problem statement also bounds the improvement effort and the aspects of the system under consideration, which informs the theory of improvement presented later in the document.

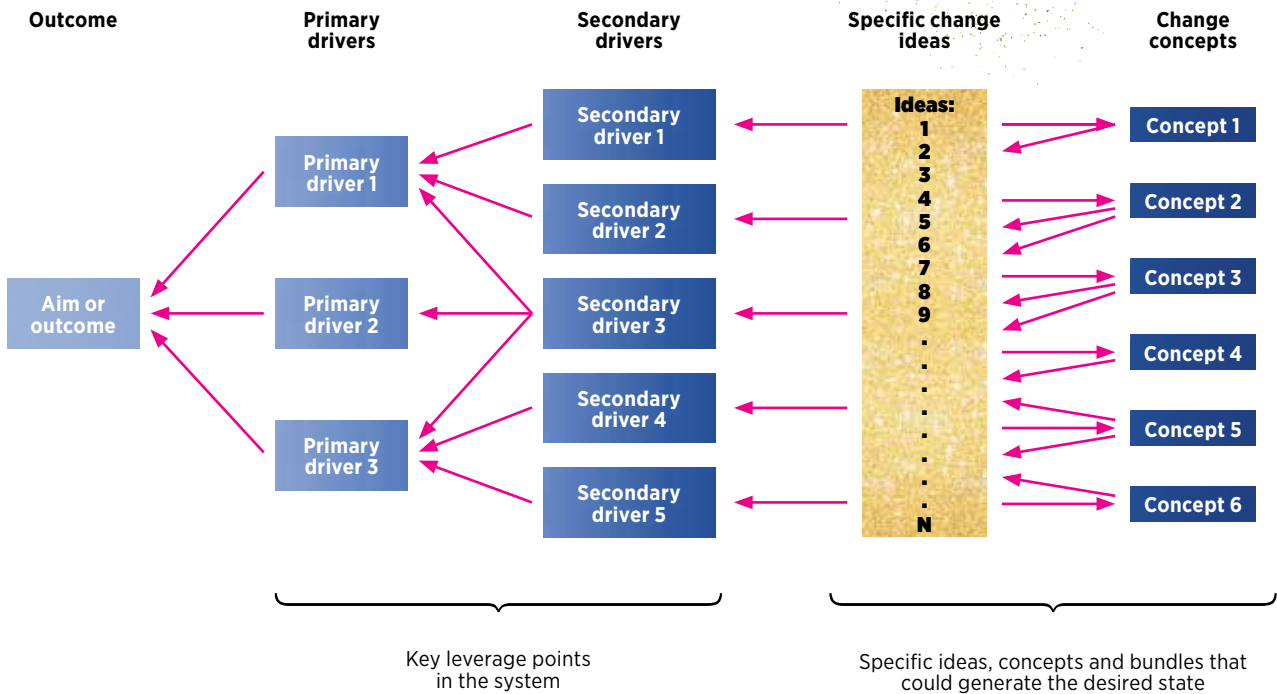
Aim (the outcome of interest): The aim statement defines the destination of the improvement effort. It is a single statement describing the specific outcome of interest, how much improvement is desired, where and for whom improvement will or did occur, and by when improvement is or was expected.

Measurement system: Access to the specific measures used is critical in replicating the successes presented in a change package. Clear descriptions of the outcome, process, process step and balance measures help subsequent teams answer the question, “How will we or how did we know a change was an improvement?”^{6,7} If the team was part of a network, measures of network health can be included here. Measures of engagement demonstrating how the improvement journey was managed also might be described. Examples could include: the frequency of meetings, number of learning cycles and frequency of interactions with leadership.

Theory of improvement (driver diagram): This section is reserved for the consolidated knowledge gained during the improvement journey. It should represent the most complete and updated theory of improvement a team has for how to change a system to achieve an outcome of interest. In health-care and education, this is frequently accomplished using a driver diagram representing what has worked in practice. The tool highlights for subsequent teams what was changed in the system, where changes were made and which change

FIGURE 1

Conceptual view of a driver diagram



Source: Brandon Bennett and Lloyd P. Provost, "What's Your Theory?" Quality Progress, July 2015.

ideas were used to accomplish the outcome.⁸ See Figure 1 for an example of a driver diagram.

Ideas to change the system (detailed): While the driver diagram is a good visual depiction of the overall theory of improvement, it may lack the detail needed by scaling teams to replicate the changes implemented in practice. Teams want to know the "how." This section provides a place to describe each change idea in detail: what was done, what was learned and what evidence was generated. In some instances, a change idea was proven universally applicable. In other instances, however, it is useful to highlight when and where an idea was fruitful and when and where it was not, noting specific conditions across a variety of circumstances or locations.

Evidence for ideas: The evidence for ideas demonstrates the empirical research behind the change ideas, either gathered from the literature or generated in practice. Included here are a family of measures, using a dashboard display, or in the case of collaborative efforts in which all participating organizations

share a common set of measures, the use of small multiple displays with annotation to highlight changes in performance over time or across locations linked to the implementation of ideas.⁹⁻¹¹ This section focuses on the process and process step portions of the measurement system.¹² In some instances, teams find it helpful to classify ideas into four categories of the degree of belief for potential readers:¹³

- 1. Very strong degree of belief**—evidence generated by the authoring team (a shift or trend on a run or control chart), presence in research literature or in practice elsewhere (with reference).
- 2. Strong degree of belief**—locally generated evidence by the authoring team only. Often, this level of evidence is very good, but ideas may require adaptation elsewhere as the context shifts in a scaling effort.
- 3. Weak degree of belief**—present in the literature, but either untried locally by the authoring team or without demonstrable quantitative evidence of improvement in the local setting.

4. Very weak degree of belief—belief and anecdote, often a good starting place, based in clinical knowledge/experience but with a word of caution that is yet to be proven at all in practice (either locally or in the literature).

Teams also will want to include links to relevant research literature on the utility, efficacy and impact of ideas they have gathered. In many instances, the research literature is a key starting place for the gathering of change ideas that will be trialed in a local setting and will have strong evidence to support their use.

Outcomes achieved: A change package is only as good as the results it achieves. Its relevance in being propagated at scale depends entirely on whether the change in practice has delivered change in outcome. This section is an opportunity for the change package to highlight the evidence of improvement from the innovation phase of the work. This entails the visual display of data in the form of annotated charts (run, control or other) that clearly communicate improved performance at the outcome level, moving beyond changes at the process level alone.¹⁴⁻¹⁶

User story (narrative experience): The experience of change leading to improvement is not purely quantitative. Generating the will to engage in an improvement journey is a critical factor in determining whether ideas are adopted at scale. This section represents an opportunity to tell the story of change, often from multiple perspectives (leadership, frontline worker, end user, community member and support service personnel).

The improvement team can relay what it was like to take on the work. End users can describe their experience of the process or system before and after the change. Seeing the improvement journey through the eyes of multiple stakeholders can explain why the effort expended was necessary to achieve the outcome.

Team: It costs nothing to give credit to the team and the users who did the work of innovation. By highlighting their names and roles in the improvement journey, a change package provides insight to future users what human resources are necessary to achieve improved outcomes. These are also people with valuable tacit knowledge whom subsequent teams may wish to contact for more information about the change process.

References: References are powerful sources for more information. They provide value in directing scaling teams to original research and practice-based knowledge connected to the ideas for change presented in the document.

Appendixes: Appendixes allow the inclusion of specific tools (knowledge artifacts, which are described later)

produced by a team, which others can adapt and adopt. They also provide an opportunity for extra guidance the innovation team thinks might be valuable.

Process to create and update

Change packages are a group of summative documents that capture the knowledge of how to improve outcomes. They ultimately serve in scaling efforts as a starting place for deciding what ideas are simple and sound. Their creation is iterative and rarely complete.

Teams may empirically improve outcomes in their local setting, but the final theory they arrive at through their efforts cannot be referenced as definitive or true.

As all theory is fallible, a change package is only practically applicable in the setting in which it was generated. It is important to highlight this because change packages that are applied in scaling efforts are likely to encounter circumstances in which they do not perform as expected. They will need continued iteration to reflect the new learnings generated from the new places in which the ideas described are trialed.

Quality improvement journeys frequently start with a problem of practice—an outcome that leadership deems in need of change. An improvement team is created, an aim written and a project to improve chartered. Key to this effort is the development of a starting theory.

Often, this is articulated in the form of a driver diagram. An individual team—or a group of teams within a structured network—may work for months or years to refine their shared theory of practice improvement: running small tests of change (plan-do-study-act cycles) and generating local evidence that the ideas they implement lead to the outcomes they desire.

Throughout, they are documenting their learning as updates to their shared theory, annotating performance changes on the process and outcome measures. Documenting as they go, these teams build up the components that will comprise their change package.

When improvement in outcome is achieved, either wholly or partially, teams may document this learning journey using the structure of the change package described here. Subsequent teams and scaling efforts can use this artifact as a starting point for their endeavors. A change package may evolve as it is taken to scale.

Learning is never fully completed, and the decision to update a change package will be based on several factors: the complexity of the outcome of interest, the evidence depicting improvement, resource and contextual constraints at scale, and the application of subject matter expertise.



“Attribution is infinitely divisible.”

—Don Berwick, former president and CEO,
Institute for Healthcare Improvement

Source: *Institute for Healthcare Improvement (IHI), The Breakthrough Series: IHI's Collaborative Model for Achieving Breakthrough Improvement, IHI Innovation Series white paper, IHI, 2003, www.ihl.org.*

Developing knowledge artifacts

The change package is itself a knowledge artifact: a product, referenced and used in practice that guides, documents, and captures data, assists decision making, guides the work and codifies a practice. It is a document that provides guidance and evidence of how to achieve improvement. It is also the sum of many knowledge artifacts.

A change package may contain several documented change ideas. Change ideas can be changes in the steps of a process (the daily work done to accomplish a particular outcome in a system), changes to structural resources, or even changes to behaviors enacted within the system. What scaling teams need is specific guidance on how these actions, when enacted, produce improvement. Knowledge artifacts capture—in a replicable way—the details implementing teams need for understanding how and what specific changes accomplish in the system.

Examples of knowledge artifacts that might be contained in a change package can include:

- + **Process maps** used before the change and after the change—depicting how the steps in the process look and function differently to achieve a different result (for example, describing the steps of transitional moments in a classroom—that is, when an instructor transitions a class of students from one activity to another).
- + **Documented conversation protocols** used to improve relationships or provide feedback (that is, the use of situation-background-assessment-recommendation, or SBAR) when handing over information and responsibility for a patient in a healthcare setting.
- + **Checklists** to assist teams to remember all the critical clinical steps necessary to maintain safety or ensure reliability in a process (for example, a surgical safety checklist).¹⁷
- + **Pictures or diagrams** of the physical arrangement of things in space (for example, where to place lab equipment to facilitate flow in a hospital, or where to place books in a classroom to facilitate child-book interactions to build oral literacy skills during early childhood development).

Importance of access to clinical knowledge

The improvement journey and creation of a change package is predicated on access to and contribution from subject matter experts (SME). The need for clinical knowledge to inform any improvement journey cannot be overstated.

At times, the creation of change packages will be a next step forward in knowledge. It may not have the deep level of empirically based evidence for every change that leaders and

practitioners desire, but with the guidance of SMEs, it can still be useful as a starting place for improvement at scale.

Used in different ways

In *Scaling Up Excellence*, Hayagreeva Rao and Robert I. Sutton argue solutions spread in two ways:

1. Change ideas evolve to the local context, taking on a life of their own to deliver impact under a variety of different conditions. This often occurs when the outcome is complex, and the systems involved in creating the outcome vary deeply. Trying ideas in practice produces ongoing learning and adaptation to the local context.
2. The application of change ideas requires rigidity and reliability when moving to scale. The specific application of change ideas maintains integrity, being implemented in a more exacting way despite the local context they are entering. Such occurrences are not uncommon, especially when basic science is at work (for example, surgical safety, the treatment of cholera or the prevention of certain infections). Local adaptation is discouraged because the evidence clearly suggests adaptation would weaken the impact toward the desired outcome.¹⁸

When using a change package, governments, systems, networks, collaboratives and individual teams must decide prior to implementation which of these mechanisms makes the most sense for what they are trying to accomplish. The focus from the start is always on the successful integration of change ideas into a local context.

Pursuing local adaptation of evidenced ideas requires partnership with a method for ongoing learning—for example, the Model for Improvement.¹⁹ It also requires a structure, or a learning system, that can manage the evolution of the theory as new learning is achieved. A more rigid approach might require additional methods—such as changes in policy or law, or a focus on the reliability of implementation.

Powerful starting point

Change packages are summative knowledge artifacts that can be developed by systems, organizations or teams deliberately pursuing the improvement of outcomes relevant to them and their stakeholders.

They capture in detail: the outcome of interest, a successful theory for achievement, a system of measurement, evidence of accomplishment, a description of how achievement happened, narrative examples and experiences, as well as examples of tools, processes, pathways and methods used to arrive at a better outcome.

As such, they are a powerful starting place for others seeking to achieve the outcome of interest in a different location, system or environment. [QP](#)

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Brandon Bennett is the principal improvement advisor at ISC LLC in San Francisco, a senior improvement advisor for the Institute for Healthcare Improvement and a senior fellow at the Carnegie Foundation for the Advancement of Teaching. He earned a master's degree in public health from Loma Linda University in California. Bennett is an ASQ member.