

## Implementation Strategies and Resource Grid: A Companion Tool to *Wins and Hiccups*

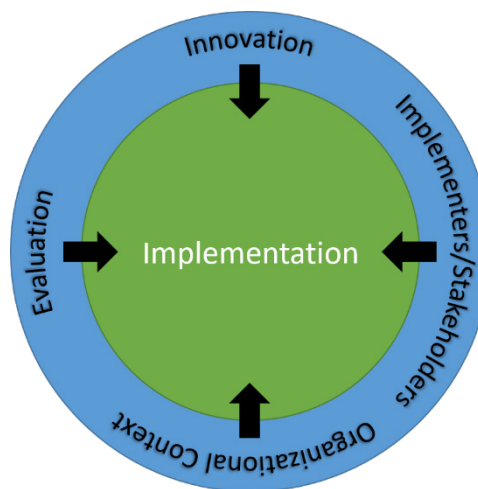
### Purpose and Introduction

The implementation of any improvement effort, like the State Systemic Improvement Plan (SSIP), is a long-term, complex process. It requires individuals and groups at all levels of the system to make significant changes to their daily work. To achieve the intended outcomes of the SSIP, it is critical to continually monitor the progress of implementation and then apply strategies to mitigate barriers.

This tool summarizes common implementation barriers (referred to as “hiccups”) and suggests strategies (Powell et al., 2015) and resources that may be used to offset hiccups (e.g., Cashman et al., 2014). Teams responsible for guiding implementation of their SSIP should plan to use this tool in conjunction with another tool: the National Center for Systemic Improvement's (NCSI's) *Wins and Hiccups: A Collaborative Implementation Problem-Solving Guide for SSIP Teams* (Hayes et al., 2017).

Both tools reference four key elements<sup>1</sup> that influence the implementation of the SSIP.

- **The *innovation* that is being implemented**  
 (“innovation” refers to any improvement strategies in a state, including selected evidence-based practices and frameworks, such as a multitiered system of support, which are implemented as a part of the SSIP)
- **The *implementers and stakeholders* who are implementing the innovation** (e.g., teachers or providers, leaders, families, coaches, community members, state agency staff, and advocates)
- **The *organizational context* that supports implementation of the innovation**  
 (e.g., infrastructure, values and beliefs, leadership, and policies and regulations)



<sup>1</sup>These elements are drawn from research on effective implementation that cuts across several fields (e.g., global health, education, business, agriculture). This research refers to the process of implementation using a variety of terms, including Implementation Science (Damschroder et al., 2009; Decker, 1992; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004; Rogers, 2010).

- **The *evaluation of implementation efforts*** (e.g., processes for collecting, analyzing, and using data to assess the progress of implementation and inform revisions, next steps, and decision making)

### Directions for Using This Guide

This guide is intended for use by an SSIP implementation team at the state level. It also may be adapted for use at the local level. It will be most effective when used by a team that

- has responsibility for leading SSIP implementation efforts;
- has knowledge of the implementation process and insights into successes and challenges that have occurred at multiple levels of the system (state, district or region, and/or school or program);
- includes stakeholders with a diverse range of perspectives on the implementation process; and
- has the decision-making authority to adjust implementation activities, as needed, to address hiccups.

In addition, this tool is most useful when used in conjunction with *Wins and Hiccups: A Collaborative Implementation Problem-Solving Guide for SSIP Teams* (Hayes et al., 2017).

- First, refer to the items that were designated as hiccups in that document. We encourage teams to consider the interrelated impact of the hiccups across the four implementation elements (innovation, implementers/stakeholders, organizational context, and evaluation) to define the range of factors that influence implementation and possible strategies that could be applied to support refining the implementation process. Teams may also want to reflect on their SSIP Theory of Action and intended short- and long-term outcomes to support decision making around the hiccups on which to focus and address initially. Then, using the tables below, locate those hiccups in each implementation element in the column titled “Implementation Hiccups.”
- Once hiccups have been located, refer to the column titled “Implementation Strategies to Offset Hiccups,” which contains strategies that can be used to mitigate hiccups.
- Lastly, refer to the final column for resources and tools that teams may find helpful in their efforts to offset hiccups.

For example, if a team designated “low adaptability” as a hiccup in the Innovation table of *Wins and Hiccups* (Hayes et al., 2017), then the team could find “perceived low adaptability” in the Innovation table. In the next column, the team could identify one or more strategies that could be used to offset the hiccup. Finally, the last column contains resources that may help the team apply the strategy.

### Support for Use

NCSI provides technical assistance to states in using this guide, including SSIP team facilitation as well as adaptations needed of this tool for use at the local level.

## References

- Cashman, J., Linehan, P., Purcell, L., Rosser, M., Schultz, S., & Skalski, S. (2014). *Leading by convening: A blueprint for authentic engagement*. Alexandria, VA: National Association of State Directors of Special Education.
- Damschroder, L. J., Aron, D. C., Keith, R. E., Kirsh, S. R., Alexander, J. A., & Lowery, J. C. (2009). Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science. *Implementation Science*, 4, 50. doi: 10.1186/1748-5908-4-50
- Decker, M. D. (1992). Continuous quality improvement. *Infection Control & Hospital Epidemiology*, 13(03), 165–169.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231).
- Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *Milbank Quarterly*, 82(4), 581–629.
- Hayes, S., Pierce, J., Kuchle, L., Derrington, T., Arden, S., DeRuvo, S., & Ruedel, K. (2017, July). *Wins and hiccups: A collaborative implementation problem-solving guide for SSIP teams*. San Francisco, CA: WestEd.
- Powell, B. J., Waltz, T. J., Chinman, M. J., Damschroder, L. J., Smith, J. L., Matthieu, M. M., ... & Kirchner, J. E. (2015). A refined compilation of implementation strategies: Results from the Expert Recommendations for Implementing Change (ERIC) project. *Implementation Science*, 10(1), 21.
- Rogers, E. M. (2010). *Diffusion of innovations*. New York, NY: Simon and Schuster.

## Innovation

This section addresses the innovation being implemented through the SSIP.

*Implementation principle: Aspects of the innovation itself may influence implementation.*

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
<ol style="list-style-type: none"> <li>1. Perceived low adaptability of innovation</li> <li>2. Difficulty of use</li> <li>3. Minimal clear advantage over other innovations</li> <li>4. High costs of innovation</li> <li>5. Lack of resources and information about the innovation</li> </ol>	<ul style="list-style-type: none"> <li>• Identify and communicate how the innovation can be adapted to the needs of the local context, particularly the needs of the innovation recipient (e.g., English language learners, students in a target population).</li> <li>• Train and coach implementers on the innovation, including who will use or receive the innovation and why, potential challenges in practice, and strategies to mitigate challenges.</li> <li>• Use validated tools to measure fidelity of implementation, and use data to refine implementation and enhance the use of the innovation.</li> <li>• Provide evidence (data) that shows how the innovation has readily identifiable advantages over current practices (e.g., stronger evidence of effectiveness, more feasible to implement at scale).</li> <li>• Facilitate discussions across levels of the system to determine if the chosen innovation addresses a current need.</li> </ul>	<p><b>Leading by Convening:</b></p> <p><a href="#">How People Are</a>. Change is hard for most people. This activity will help you prepare for some of the most predictable challenges.</p> <p><a href="#">Four Simple Questions</a>. Despite complexities with any new innovation, we can make it less complicated. This activity will help create an inclusive path to shared work.</p> <p><a href="#">Seeds of Trust</a>. Stakeholders will take in messages about your sincerity in working as true partners in direct and indirect ways. Little things mean a lot. Use this activity to identify small changes that build trust.</p> <p><a href="#">Meet the Stakeholders</a>. Any number of groups have deep and durable connections to every innovation at the practice level. Use this activity to reach out and identify potential partners.</p> <p><b>Active Implementation Hub:</b></p> <p><a href="#">Handout 10: Usable Innovations</a>. Innovations must be clearly defined so that stakeholders know what they are supposed to implement. This module helps teams clearly define innovations so that they can be widely implemented with fidelity.</p> <p><a href="#">Lesson 1: The Hexagon Tool—Exploring Context</a>. Stakeholders often hold views about innovations that shape their decisions to implement. Use this tool and the associated video to reflect on contextual factors, including views and influences on implementation.</p>

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
	<ul style="list-style-type: none"> <li>• Pinpoint the costs associated with the use of the innovation, and determine if costs are reasonable and comparable to other innovations that target the same outcomes.</li> <li>• Locate easily digestible and clear information and resources about the innovation, make them available to implementers, and facilitate discussions about the content.</li> </ul>	<p><u><a href="#">NCSI Resource Library:</a></u></p> <p>This website provides resources about leading and participating in systemic change efforts to improve outcomes among infants, toddlers, children, and youth with disabilities.</p>

## Implementers and Stakeholders

This section addresses the role of implementers and stakeholders in the implementation process.

*Implementation principle: All implementers and stakeholders play an important role in the successful implementation of any innovation.*

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
<ol style="list-style-type: none"> <li>1. Expertise</li> <li>2. Self-efficacy</li> <li>3. Implementer's and stakeholder's beliefs about the innovation</li> <li>4. Tension for change</li> <li>5. Implementation teams</li> <li>6. Champions and opinion leader</li> </ol>	<ul style="list-style-type: none"> <li>• Develop and provide a coherent system of high-quality professional development.</li> <li>• Communicate small wins that show implementers have the capacity to successfully use the innovation.</li> <li>• Provide evidence that shows implementers the benefits of changing their day-to-day practices.</li> <li>• Conduct visits to similar contexts successfully using the innovation.</li> <li>• Establish learning collaboratives that provide implementers and stakeholders with opportunities to learn about the innovation, celebrate successes, discuss implementation challenges, and identify strategies for continued improvement.</li> <li>• Offer valued incentives for incremental changes and improvement.</li> <li>• Create a team that is dedicated to moving the use of the innovation forward, ensuring the team               <ul style="list-style-type: none"> <li>– consists of key decision makers,</li> <li>– represents different groups of stakeholders,</li> <li>– collaborates with other staff members and teams to align goals and avoid duplication of effort,</li> <li>– convenes regularly to keep the work moving forward,</li> <li>– has the requisite expertise to lead implementation efforts,</li> <li>– reviews data for the purposes of decision making, and</li> <li>– has the time necessary to support the implementation of the innovation.</li> </ul> </li> </ul>	<p><b>Leading by Convening:</b></p> <p><a href="#">Problems Come Bundled</a>. Few problems have just a technical aspect of implementation that can be handled through training alone. Use this activity to more fully examine the potential technical and adaptive issues when working with others to implement an innovation.</p> <p><a href="#">A Quick Chronology of Engagement</a>. It is helpful for groups to look back at their work together and tell the story of their engagement over time. Use this activity to develop and reflect on the chronology of the group's engagement and describe the value of its work together.</p> <p><a href="#">The Web of Connections</a>. Why does your team identify certain groups as potential partners? Why would they want to become a partner? Use this activity to articulate the various perspectives around the innovation and shared goals across groups.</p> <p><a href="#">What's in It for Me?</a> Participation is not the same as engagement. Use this activity to identify the difference and begin to really engage partners.</p>

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
	<ul style="list-style-type: none"> <li>• Ensure that leaders with decision-making authority and respected stakeholders are actively involved in decisions related to implementing the innovation, and that they publicly support a system to use the innovation.</li> <li>• Identify implementers who have successfully used the innovation, and ensure that champions and opinion leaders are respected among their peers.</li> <li>• Offer reoccurring opportunities for champions, implementers, and stakeholders to discuss marketing the innovation and overcoming indifferences or resistance.</li> </ul>	<p><b><u><a href="#">The National Center for Intensive Intervention:</a></u></b> This website summarizes research on various academic and behavioral interventions and assessment tools. This information can help users to select interventions and assessments that best meet the needs of students.</p> <p><b><u><a href="#">NCSI Resource Library:</a></u></b> This website provides resources about leading and participating in systemic change efforts to improve outcomes among infants, toddlers, children, and youth with disabilities.</p>

## Organizational Context

This section addresses the context of the organization that will implement the innovation—including infrastructure, values and beliefs, leadership, and policies—and the regulations of that context. Consider both the broader organization (e.g., state educational agency, district or school, or program) and the departments or teams in the organization that are most directly involved with the innovation.

*Implementation principle: The context of the organization (e.g., infrastructure, communication processes, beliefs, and methods of engaging stakeholders) influences implementation.*

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
<ol style="list-style-type: none"> <li>1. Organizational norms, values, and beliefs do not support the use of the innovation</li> <li>2. Policies and regulations are not aligned to what is required for systemwide use of the innovation</li> <li>3. Innovation does not align clearly with existing initiatives</li> <li>4. Staff turnover is high</li> <li>5. Low collaboration and trust within the school culture</li> <li>6. Low leadership commitment to the innovation</li> </ol>	<p>Leaders with decision-making authority:</p> <ul style="list-style-type: none"> <li>• Actively challenge the status quo of the school by communicating the need for change to school staff and those in higher leadership positions;</li> <li>• Communicate how existing policies and regulations relate to or directly intersect with the use of the innovation;</li> <li>• Identify and align implementation of the new innovation with other organizational initiatives (e.g., shared goals, opportunities for shared messaging and dissemination activities, shared implementation activities, shared resources, shared staff, etc.);</li> <li>• Describe clearly how the innovation aligns to existing organizational initiatives and priorities and articulate this information to staff;</li> <li>• Identify why staff stability is low (e.g., using root-cause analysis), and develop a plan to retain effective staff and bring on new staff;</li> <li>• Create a climate that is psychologically safe by encouraging incremental growth, celebrating small wins, and obtaining open feedback from implementers about their use of the innovation;</li> <li>• Explicitly voice support for the use of the innovation;</li> </ul>	<p><b>Leading by Convening:</b>  <a href="#">Grounding Assumptions</a>. This activity helps groups understand the importance of developing statements that all stakeholders can agree to support throughout the process of implementing the innovation. Leaders can learn where perspectives begin to diverge. Use this activity to identify where there is agreement to begin the work.</p> <p><a href="#">Learn the Language: Make the Connection</a> (pp. 76–78). Unique vocabulary, program names, and funding streams contribute to the lack of clarity around shared interests. Use this activity with stakeholders to find common grounds among groups with expertise or interests in the innovation.</p> <p><a href="#">Defining Our Core</a>. Work must be described in straightforward ways that are understandable to potential partners and the public. Use this activity to express the group’s driving purpose for implementing the innovation and to share the core purpose in simple ways with others.</p>



Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
<p>7. Minimal availability of resources (including time, money, physical space, resources, and personnel)</p> <p>8. Incoherent or infrequent opportunities for high-quality professional development</p> <p>9. Lack of protocols for engaging stakeholders, including in decision making</p> <p>10. Minimal access to external change agents (e.g., technical assistance providers, experts, and other sources of support)</p>	<ul style="list-style-type: none"> <li>• Collect and use feedback from stakeholders and implementers to continuously improve implementation (e.g., feedback from implementers on successes, challenges, and progress toward meeting implementation goals);</li> <li>• Develop a realistic, long-term plan to allocate sufficient resources to the innovation;</li> <li>• Offer ongoing trainings and job-embedded coaching that are evaluated for quality and impact;</li> <li>• Use structured protocols to communicate across levels of the system and facilitate a bidirectional flow of information (e.g., not just top-down communication);</li> <li>• Engage implementers in meaningful ways to collaboratively influence the use of the innovation (i.e., do not just inform implementers about the innovation); and</li> <li>• Leverage external change agents (e.g., technical assistance providers, national experts, etc.) to guide the use of the innovation and support the implementation process.</li> </ul>	<p><b>Active Implementation Hub:</b></p> <p><a href="#">Lesson 9: Communication Protocol—Linking Teams.</a></p> <p>This module provides an overview on the communication protocol, which is a type of a Plan-Do-Study-Act cycle. Use this module to establish the protocol and use it to solve implementation problems across levels of the system.</p> <p><b><a href="#">NCSI Resource Library:</a></b></p> <p>This website provides resources about leading and participating in systemic change efforts to improve outcomes among infants, toddlers, children, and youth with disabilities.</p>

## Evaluation

This section addresses the evaluation of implementation efforts, including processes for collecting, analyzing, and using data on implementation progress and impact to inform decision-making.

*Implementation principle: Ongoing monitoring of progress toward implementation and outcomes is needed to make necessary adjustments to the implementation effort.*

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
<ol style="list-style-type: none"> <li>1. Collection and use of fidelity data are minimal or do not occur</li> <li>2. Collection and use of data on system changes are minimal or do not occur</li> <li>3. Collection and use of data on child or student outcomes are minimal or do not occur</li> <li>4. Continuous improvement cycles are not used to drive improvement</li> <li>5. Stakeholder engagement in the evaluation plan and process is minimal or does not occur</li> </ol>	<ul style="list-style-type: none"> <li>• Collect, analyze, and use innovation fidelity data, ensuring that data               <ul style="list-style-type: none"> <li>– are collected regularly,</li> <li>– are accurate (considering tool reliability, data collection, and data entry),</li> <li>– are collected on all key components of the innovation,</li> <li>– include amount of child-/student-level dosage,</li> <li>– address whether the target population of children or students participates in various components of the innovation,</li> <li>– address quality of implementation,</li> <li>– are collected from sites that are implementing the innovation, and</li> <li>– reflect a representative sample of implementers and stakeholders and children or students who are participating in the innovation.</li> </ul> </li> </ul>	<p><b>Leading by Convening:</b></p> <p><a href="#">Building Engagement</a>. Use this activity to generate learning activities; track the diversity of roles, settings, and levels of the system participating in the innovation or systems change efforts; and keep a record of the changes in engagement over time.</p> <p><a href="#">A Quick Chronology of Engagement</a>. It is helpful for groups to review their work together and tell the story of their engagement over time. Use this activity to develop and reflect on the chronology of the group's engagement and describe the value of its work together.</p> <p><a href="#">Measuring Progress</a>. The value of relationships is hard to describe and even more difficult to measure. Use this tool to identify and quantify the value of relationships as a strategy for implementing an innovation to achieve identified outcomes.</p> <p><a href="#">The 90-Day Cycle Handbook</a>. This handbook can be used to conduct Plan-Do-Study-Act (PDSA) cycles and includes resources for users.</p> <p><b>Active Implementation Hub:</b></p> <p><a href="#">Lesson 6: The PDSA Cycle</a>. This lesson explains the PDSA cycle and provides resources for conducting the cycles.</p> <p><b>NCSI Resource Library:</b></p> <p>This website provides resources about leading and participating in systemic change efforts to improve outcomes among infants, toddlers, children, and youth with disabilities.</p>

Implementation Hiccups	Implementation Strategies to Offset Hiccups	Resources
	<ul style="list-style-type: none"> <li>Conduct a PDSA cycle to collect, analyze, and use data on changes to the organization (e.g., practices of teachers, staff teaming, documentation of how the innovation aligns with other efforts, the impact of professional development efforts, etc.).</li> <li>Collect, analyze, and use student-level data (including all relevant subgroups) with sufficient frequency to inform timely decision making, ensuring: <ul style="list-style-type: none"> <li>outcome measures are valid and reliable, and detect small changes expected as a result of implementing the innovation;</li> <li>outcome data are accurate (considering measure administration and data entry and transfer);</li> <li>outcome data can be linked to other student-level datasets (e.g., demographics and intervention history, including programs and dosage), allowing for disaggregated analyses; and</li> <li>outcome data are longitudinal to allow for analyses of student data over time and can account for changes in status (e.g., participation in an intervention or special education status).</li> </ul> </li> </ul>	<p><a href="#">Assessment Toolbox: Demonstrating Growth for Low-Achieving Students With Disabilities</a>. This presentation addresses (a) the need for ongoing, sensitive assessment to inform intervention and (b) the importance of progress monitoring, selecting assessments, aggregating data for program evaluation, and monitoring implementation.</p> <p><a href="#">Avoiding Evaluation Pitfalls Through Periodic Assessments</a>. The goal of this webinar is to help states avoid common pitfalls associated with relying solely on state assessment data to evaluate and gauge attainment of their state-identified measurable results.</p> <p><a href="#">Implementation Evaluation Matrix</a>. This resource provides states with a sample approach and tool to plan and track measures of its implementation of the SSIP.</p> <p><a href="#">Refining Your Evaluation: Data Pathway—From Source to Use</a>. This document is designed for states that are planning for or engaged in data collection to evaluate implementation and outcomes for the SSIP.</p>

© 2017 by WestEd—National Center for Systemic Improvement. All rights reserved. The contents of this document were developed by a team from the National Center for Systemic Improvement (NCSI), a grant from the U.S. Department of Education, #H326R14006, under leadership of the Data Use Service Team (K. Ruedel). The contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the federal government. Project Officers: Perry Williams and ShedeH Hajhgassemail (November 2014). Suggested citation: Pierce, J., Ruedel, K., & Linehan, P. (2017, October). *Implementation strategies and resource grid: A companion tool to Wins and Hiccups*. San Francisco, CA: WestEd.