

Strategy 6

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Introduction

Strategy 5 covered how to build and manage talent pipelines with designated preferred providers. But that is not the end of the Talent Pipeline Management® (TPM) process.

At this stage of TPM®, employer collaboratives should have the information they need to improve performance on pain point metrics, increase ROI, and create additional shared value for all partners.

Strategy 6 shows how employer collaboratives can manage their talent pipelines using data and a process of continuous improvement in cooperation with their talent providers. This helps keep employers engaged and dedicated to the collaborative and committed to working with their talent providers, especially those designated as preferred providers. These improvement efforts may—and likely will—involve changes in the practices of both employers and providers. That is why a cooperative continuous improvement process is necessary.

Strategy 6 first provides an overview of the role of continuous improvement in TPM and its five-step process. We then describe how to use performance scorecards (first presented in Strategy 5) and related information to identify where large gaps exist between expected and actual performance and where performance levels are moving in the wrong direction. From there, you will learn how to evaluate improvement opportunities and assign **continuous improvement teams** to manage a project of your choosing.

We conclude this strategy by revisiting employer ROI. We provide examples of different approaches and methodologies for how to calculate ROI in ways that go beyond the performance scorecard and show value to the employer collaborative members.



Strategy 6 Learning Objectives

- 1 Define the role of continuous improvement in TPM.
- 2 Apply the five-step approach to continuous improvement.
- 3 Determine improvement priorities and organize improvement teams.
- 4 Identify the key issues to be addressed in each step of the improvement process.
- 5 Calculate and manage ROI.



Strategy 6 Action Plan

	6.2 Identifying Improvement Opportunities	6.3 Analyzing Root Causes	6.4 Developing Solutions	6.5 Testing Solutions	6.6 Implementing Proven Solutions	6.7 Calculating Return on Investment
ACTIVITIES Actions taken to achieve desired outcomes	<ul style="list-style-type: none"> Analyze aggregate data from performance scorecard Identify improvement opportunities Establish improvement team and project 	<ul style="list-style-type: none"> Identify potential root causes, review available evidence Rate each root cause's level of impact Analyze root causes with greatest level of impact Consider employer control over problem 	<ul style="list-style-type: none"> Identify potential solutions Review evidence of potential impact, employer control over problem, and timing Analyze and evaluate potential solutions Determine which solutions to test 	<ul style="list-style-type: none"> Design pilot tests Implement pilot tests Analyze results of pilot tests Refine and implement proven solutions 	<ul style="list-style-type: none"> Provide an implementation guide and resources Continue to evaluate and improve 	<ul style="list-style-type: none"> Determine baseline cost Calculate cost of engaging in a collaborative Determine updated costs Define benefits achieved by calculating ROI
MILESTONES Progress points marking significant development	<ul style="list-style-type: none"> Improvement plan Designated improvement team and project 	<ul style="list-style-type: none"> Prioritized list of root causes 	<ul style="list-style-type: none"> Proposal for pilot test 	<ul style="list-style-type: none"> Pilot test implementation Issues, impact, context identified Retest or recommend scaling 	<ul style="list-style-type: none"> Consensus on scaling the solution Implementation guide for scaling solution Training completed Solution implementation 	<ul style="list-style-type: none"> ROI calculation Employer assessment of ROI
OUTPUTS Achievements resulting from actions	<ul style="list-style-type: none"> Number and percentage of collaborative members/providers participating Types of leading and lagging measures targeted for improvement 	<ul style="list-style-type: none"> Number and percentage of prioritized root causes advanced to develop solutions 	<ul style="list-style-type: none"> Types of solutions proposed for testing 	<ul style="list-style-type: none"> Solutions tested and ready to implement Solutions ready to scale 	Number and percentage of: <ul style="list-style-type: none"> Collaborative members/providers scaling the solution Members/providers trained on scaling the solution 	<ul style="list-style-type: none"> Dollar value of ROI per collaborative member

*Unit 6.1: Why Continuous Improvement is Critical for TPM covers educational information and therefore is not included in the Strategy 6 Action Plan. However, this resource is meant to serve as a guide and not an exhaustive list of all the activities, milestones, and outputs your collaborative can achieve.

**The TPM Web Tool includes an Improvement Plan tool to define, measure, analyze, improve, and control performance on measures identified in the Performance Dashboard. Log in to the TPM Web Tool to access the Improvement Plan.



Key TPM Terms and Definitions

The following concepts are most critical for understanding and executing Strategy 6. These terms appear in the order in which they are listed below and are highlighted in yellow throughout the chapter.

Continuous Improvement Team

A team established by the employer collaborative or an individual employer to carry out an improvement project and report results for a specific period of time based on the agreed scope and goals.

DMAIC

A widely accepted data-driven continuous improvement process that includes five major steps: (1) define, (2) measure, (3) analyze, (4) improve, and (5) control.

Lean Six Sigma

An improvement methodology used to identify and eliminate waste and optimize performance.

Root Cause

Those conditions or factors that directly cause a performance problem.

Root Cause Analysis

A process to identify factors that directly cause a performance problem and can be addressed in a continuous improvement process.

Baseline Cost

The total cost incurred by employers measured in dollars relative to their starting position prior to undergoing the TPM process. An example of a baseline cost is the cost of a hire prior to engaging in a talent supply chain solution.

Benefits Achieved

The value derived by employers over and above the cost of implementing a solution, which can be measured, for example, in dollars, such as reduced cost in filling a position, or in time, such as a shorter onboarding process.

Cost of Engaging in a Collaborative

The total cost in terms of time spent and resources committed when working as a member of an employer collaborative. This calculation is useful to compare total cost versus total benefit to calculate an employer ROI.



Unit 6.1

Why Continuous Improvement Is Critical for TPM

Let's summarize the TPM process thus far. In Strategy 1, we addressed how employers are more likely to join employer collaboratives when (1) they have a major "pain point" that needs to be addressed in sourcing talent for critical jobs and (2) they see value in working with other employers in addressing that pain point. Strategies 2 and 3 help clarify the specific talent needs of collaborative members. Strategy 4 shows how to establish baseline information on actual and potential sources of talent. Strategy 5 establishes how to build and manage talent pipelines using value stream maps, performance measures, and incentives.

And now, Strategy 6 demonstrates how employers and their talent sourcing providers can work together to improve performance on these measures, especially those bottom-line pain point measures that led to the employer collaborative forming in the first place. It also provides an opportunity to calculate and demonstrate an employer ROI.

To guide the continuous improvement process, TPM encourages the use of a systematic and data-driven approach that has proved effective across all aspects of the business enterprise as well as in the nonprofit and public sectors. The TPM continuous improvement process is based on the widely used **DMAIC** (pronounced "duh-may-ik") approach consisting of five improvement steps: (1) define, (2) measure, (3) analyze, (4) improve, and (5) control.

These improvement steps underlie many leading improvement processes, such as **Lean Six Sigma**. They also involve the applications of many useful improvement techniques and tools that are widely known and used across industries and professions.

Systematic improvement approaches like DMAIC are essential to prevent taking action based on "data-free observations" and "conventional wisdom" and to avoid pursuing "solutions in search of problems." They also reduce the chances of taking action based on priorities set by outside parties, such as government-led initiatives that might not directly address a collaborative's shared pain point(s) and performance challenges. Such actions are clearly seen in states and regions pursuing grant opportunities that do not tackle their most critical challenges but require substantial time commitments and potentially carry significant costs.

Without a systematic approach to continuous improvement, employer collaboratives run the risk of wasting time and resources that will not produce the results and shared value needed to be self-sustaining and demonstrate the positive ROI that employers value.

The TPM approach to continuous improvement is based on the DMAIC approach (see Figure 6.1: TPM Continuous Improvement Process). The TPM approach involves the following steps:

Step 1 — Identify Improvement Opportunities: Define the focus and goals of a continuous improvement project based on information gathered from the analysis of performance presented in the performance scorecard (Strategy 5).

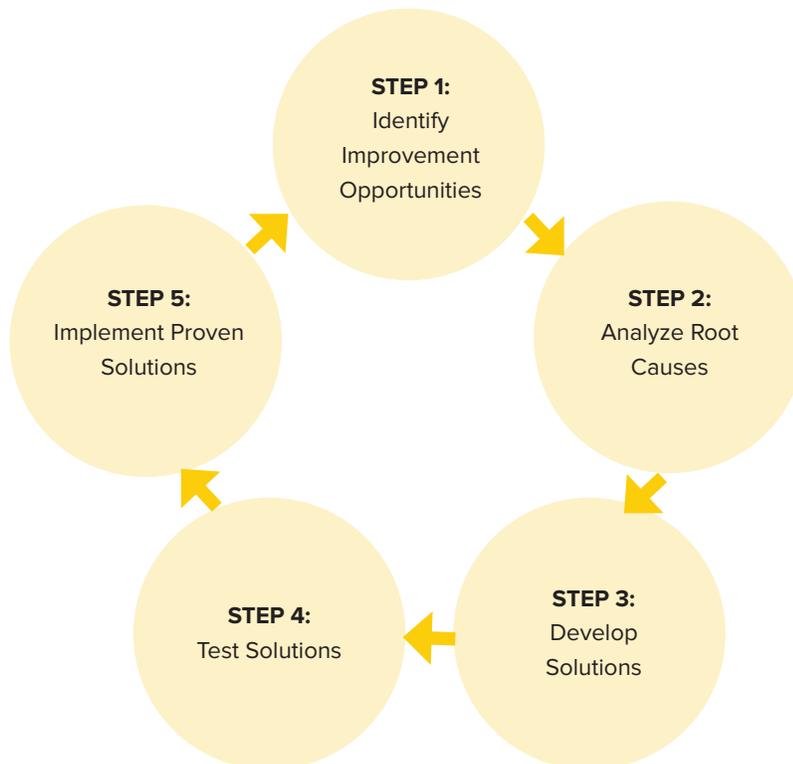
Step 2 — Analyze Root Causes: Explore and analyze additional data to determine major **root causes** of performance problems and what is needed to improve performance for the selected opportunity.

Step 3 — Develop Solutions: Develop possible solutions for the performance problem, including new approaches, methods, and processes, along with new types of incentives.

Step 4 — Test Solutions: Conduct a pilot test of one or more solutions and evaluate their effectiveness.

Step 5 — Implement Proven Solutions: Fully implement those solutions that deliver the most promising results and take steps to ensure they can be sustained, and then start again in exploring the next improvement opportunity.

Figure 6.1: TPM Continuous Improvement Process



Unit 6.2

STEP 1: Identifying Improvement Opportunities

The first step in the TPM continuous improvement process is to identify the highest-priority improvement opportunities to address based on a review of the data made available through your collaborative's performance scorecard.

Using Performance Scorecards to Identify Improvement Opportunities

As discussed in Strategy 5, performance scorecards present current performance in useful ways to highlight problems that may present continuous improvement opportunities. In particular, they present (1) performance relative to goals and (2) performance trends and whether performance is moving upward or downward.

Using the sample scorecard introduced in Strategy 5, Table 6.1: Example Aggregate Performance Scorecard shows an aggregate scorecard for an employer collaborative that has decided to focus on improving both their internal and external talent pipelines. They have decided to focus on five major pain points: (1) the quality of new hires, (2) unfilled job openings, (3) retention of new hires over the first year, (4) new hire diversity, and (5) diversity in internal career advancement. The collaborative also decided to address whether sufficient numbers of learners were entering and completing education and training programs to meet projected demand so that all employers would be able to meet their hiring needs in the future.

Table 6.1: Example Aggregate Performance Scorecard

Shared Pain Point Measures	Performance	Relative to Goal	Trend
Percentage of applicants from talent providers that meet requirements	55%	●	↓
Average number of days to fill open positions	128 days	●	↓
Percentage of hires retained in first year of employment	75%	●	↑
Percentage of recent hires and qualified applicants from targeted under-sourced populations	35%	●	↓
Percentage of employees advancing in careers from targeted under-sourced populations	30%	●	↓
Driver/Transition Measures	Performance	Relative to Goal	Trend
Number of learners that complete education and training programs	75	●	—
Number of learners enrolled in education and training programs	95	●	—

In reviewing performance scorecards, employer collaboratives should consider identifying improvement opportunities based on the following considerations:

- **Level of Impact:** The degree of direct or indirect impact on employer ROI, with priority given to direct pain point measures
- **Immediacy of Impact:** How fast the impact will be realized to generate employer ROI, with priority given to performance measures for which improvement initiatives have the potential to achieve quick wins for the collaborative
- **Performance Gaps:** The size of the gap between actual performance and performance goal, with priority given to measures with the largest gaps
- **Performance Trends:** The trend in performance, with priority given to measures that are trending downward

Improving the Internal Talent Pipeline

As an example, an employer collaborative using the performance scorecard in Table 6.2 could identify two opportunities for improving their internal talent pipelines:

- **Internal Opportunity 1: Improve the Percentage of Recent Hires and Qualified Applicants from Targeted Under-Sourced Populations.** This opportunity would immediately affect the major pain points identified by employers in improving the diversity of their workforce. It also has the possibility to increase the total number of qualified applicants and reduce the days required to fill job openings.
- **Internal Opportunity 2: Improve the Percentage of Employees Advancing in Careers from Targeted Under-Sourced Populations.** This opportunity could reduce gaps in career advancement rates as well as increase the total number of employees advancing in careers. It also may improve the ability to recruit and retain workers from under-sourced populations because employers can promote career advancement opportunities.

Table 6.2: Scoring the Internal Opportunities

Selection Criteria	Internal Opportunity 1	Internal Opportunity 2
1. Level of Impact	H	H
2. Immediacy of Impact	M	H
3. Performance Gaps	H	H
4. Performance Trend	H	H

H = High; M = Medium; L = Low

After identifying and ranking improvement opportunities, the employer collaborative should then identify the opportunity that would be most effective and most feasible. In this case, it may want to prioritize Opportunity 2 first and then move to Opportunity 1 once it has satisfactorily resolved the problem of career advancement for current employees.

Improving the External Talent Pipeline

An employer collaborative also could identify two potential improvement opportunities for their external talent pipelines and decide which one to prioritize. As shown in Table 6.3: Scoring the External Opportunities, the collaborative could evaluate and score these two opportunities as follows:

- External Opportunity 1: Improve the Percentage of Applicants Meeting Requirements.** This opportunity would immediately affect the major pain points identified by employers and address major performance gaps that are trending in the wrong direction. It might also have an additional impact of reducing the number of days required to fill open positions and could reduce the number of unqualified candidates who need to be screened, resulting in increased cost savings.
- External Opportunity 2: Increase the Number of Learners Enrolled in Education and Training Programs.** This opportunity would provide a moderate level of impact by generating more applicants, however it would not address the problem of too few applicants meeting employer requirements. It might also have the unintended consequence of driving up hiring costs, with more learners needing to be screened. A larger cohort does not necessarily equate to more learners meeting employer requirements. Employers might not see a reasonable ROI in the near term since they would need to wait considerably longer for learners to complete an education or training program.

Table 6.3: Scoring the External Opportunities

Selection Criteria	External Opportunity 1	External Opportunity 2
1. Level of Impact	H	M
2. Immediacy of Impact	H	L
3. Performance Gaps	H	M
4. Performance Trend	H	L

H = High; M = Medium; L = Low

Again, after identifying and ranking improvement opportunities, the employer collaborative should then identify the opportunity that would be most effective and most feasible. In this case, it may want to prioritize Opportunity 1 and then move to Opportunity 2 once it has satisfactorily resolved the problem of learners not meeting employer requirements.

Establishing the Improvement Team and Project

After selecting an improvement opportunity, the employer collaborative should then establish a continuous improvement team to carry out a project that develops and tests solutions for addressing this performance problem over a specified time period.

In exploring this further, the team may want to determine the scope of the effort and whether this problem can be addressed by working with one or more talent providers or whether this problem is shared across all or most partners. This could be done by reviewing education and training provider-level scorecards, as shown in Strategy 5.

The improvement team should include people who are best positioned to analyze the problem, as well as develop and test the most promising solutions. In most cases, this will involve front-line professionals from employers and talent-sourcing providers. The improvement team also should include continuous improvement experts from employers and talent provider partners, including Lean Six Sigma experts if available.

For example, in addressing the first improvement opportunity for external talent pipelines, the employer collaborative might determine that this problem exists across all partners. As a result, the collaborative may want to establish an improvement team made up of hiring managers and human resource professionals who have been involved with improving the communication of hiring requirements (Strategy 3), in addition to front-line program administrators and instructors from all major education and training providers that are responsible for preparing their learners to meet these requirements. This improvement team should be supported by those staffing the collaborative, who can provide the necessary data and help coordinate the meetings, as well as continuous improvement experts.

Exercise 1



Comparing Talent Supplier Performance Exercise

This exercise demonstrates the need for collaboratives to use data to determine next steps.

The manufacturing collaborative discussed in Strategy 5 (see Exercises 1–4) has been collaborating with their preferred providers for over a year. They are working with a community-based nonprofit to upskill current production workers for CNC machinist positions and with a community college and high school to backfill new entry-level production workers.

The collaborative’s goal was to promote at least 30 production workers to CNC machinist positions within a year to meet projected demand. They also had to backfill those positions and increase the supply of production workers to meet growing demand. Prior to implementing TPM, the collaborative had an average six-month retention rate of 70% for CNC machinists and 50% for production workers.

After a year of implementation, the host organization aggregated relevant performance information to see if their efforts have been successful. In particular, the collaborative began to review its HR data to track how many people successfully advanced in their careers or were hired from Tier 1 providers. They also wanted to track the quality of new hires from external talent sourcing partners, retention, and how many workers—from both internal and external partners—reached full productivity.

Below is the report the host organization generated for the collaborative to review.

Talent Pipeline	Type of Provider	Number Hired or Advanced in their Career	Percentage of Qualified New Hires	Percentage Retained After Six Months	Percentage Reaching Full Productivity Within Six Months
Internal	Community-based nonprofit	40	N/A	85%	60%
External	Community college	30	70%	50%	60%
External	High school	20	90%	60%	80%

After reviewing the exercise, discuss the following:

- 1 Has the collaborative been successful in improving its internal and external talent pipelines? Explain your answer.
- 2 Identify one or more potential improvement opportunities the collaborative should pursue.

Unit 6.3

STEP 2: Analyzing Root Causes

Step 2 is for the improvement team to identify the most critical direct causes of the performance problem—what are often referred to as root causes. Root causes are those factors that directly cause a performance gap to occur.

Root cause analysis is a critical step because it forces collaboratives to agree on what is causing the problem first and not rush to a solution too quickly or develop a solution in search of a problem.

Just as in business and everyday life, we often want a quick fix to a problem and don't want to take the time to examine what is really going on. We then run the risk of quickly accepting conventional wisdom about a problem instead of seriously asking "why." As a result, teams should never stop asking "why" when searching for root causes, and they should challenge conventional wisdom whenever possible throughout the process and always ask "What is the evidence that leads us to this conclusion?"

In addition, improvement teams should focus on those root causes that are within their control and for which they can take action within a reasonable time frame. Sometimes, root causes can be directly addressed by employers and their partners because they are the result of existing policies, practices, and processes that can be changed within the scope and time frames of the improvement initiative. But root causes also can reflect larger environmental factors that cannot be directly addressed, such as economic and population factors.

A systematic process for conducting a root cause analysis should use well-established methods, tools, and practices of proven improvement approaches whenever possible. At a minimum, the process should include the following steps:

- **Brainstorm Potential Root Causes:** Team members should first brainstorm about potential causes they can explore. This is particularly important for those employers and partners that are most directly involved in producing results for the chosen performance measure. These causes may be reflected in more than one performance measure. Teams should avoid assigning blame or responsibility to others, and should instead focus on making lists of potential causes that are balanced and comprehensive and emphasize that most causes are complex and involve changes from all partners.
- **Review Available Evidence:** Improvement team members should then review available evidence about each of these causes from their performance data and from follow-up discussions with employers and their partners. Teams should also consult experts and explore any research on related performance problems that have developed compelling evidence of root causes.

- **Analyze and Evaluate Potential Root Causes:** Next, improvement teams should conduct a systematic evaluation of these potential causes and rate them based on several important factors, such as the following:
 - **Root Cause:** Degree to which a cause is a direct cause
 - **Level of Impact:** Cause's degree of direct or indirect impact on performance
 - **Evidence:** Degree of evidence that the cause has an impact on performance
 - **Control:** Level of control the employer collaborative and its designated preferred providers have in affecting the cause within the scope and timing of the initiative

Improvement teams should identify the root causes for the improvement opportunities that are rated the highest based on these four criteria and agree on which ones to address.

For example, the team addressing Opportunity 2 internal talent pipelines (see Table 6.2) could conduct further research into the major gaps in career advancement rates. They could have identified three major root causes:

- **Awareness of Career Advancement Opportunities:** Employers did not sufficiently communicate career advancement opportunities, especially with employees at the lowest-level feeder jobs from under-sourced populations.
- **Opportunities for Career Advancement:** Employers did not provide sufficient opportunities for career advancement, especially for employees at the lowest-level feeder jobs from under-sourced populations.
- **Distribution of Career Advancement Opportunities:** Career advancement opportunities were in facilities with the lowest concentration of employees from under-sourced populations in lower-level feeder jobs.

The improvement team could agree that the first two root causes must be addressed first so that all employees have better awareness and opportunities. The third root cause would take more time to address by recruiting more new hires into these facilities through external pipelines strategies.

As the team moved to external pipeline strategies, they could decide to focus on Opportunity 1 (see Table 6.3). They then could conduct further research into the major gaps between hiring requirements and the applicants who did not meet those requirements, and identified two major root causes:

- **Employer Communication of Hiring Requirements:** Employer members did not sufficiently communicate to all education and training providers on critical technical and employability skills.
- **Education and Training Provider Curriculum and Assessments:** Some education and training providers did not correctly address these skills or did not provide the necessary evidence that these technical and employability skills were attained.

The improvement team could agree that both causes must be addressed in developing comprehensive solutions to address the performance problem.

In conducting this root cause analysis, employer collaborative teams should try to avoid three common mistakes: (1) relying on conventional wisdom and easy answers without looking at available data, (2) focusing on symptoms rather than their underlying causes, and (3) focusing on causes that are outside their control or that require coordination with partners that might not share the same objectives and sense of urgency.

Employer collaborative improvement teams should also avoid the common mistake of assuming that causes of performance problems can be found only on the talent provider side without giving equal attention to the employer side. This is usually the case when analyzing problems in retaining newly hired employees.

For example, a healthcare employer collaborative identified its highest-priority improvement opportunity to be increasing the retention rate of newly onboarded nurses in hospitals. The team assumed the causes of retention problems were in preparing the nurses. But some assumptions could also include more realistic expectations on working in acute healthcare settings and the technical preparation and clinical experiences provided. In this example, the employer collaborative might not give equal attention to employer practices, including the impact of nursing supervisors, onboarding systems, and nursing scheduling and compensation.



Analyzing Root Causes Exercise

This exercise demonstrates the various considerations collaboratives need to weigh when analyzing root causes and the role of evidence.

The same manufacturing collaborative from Exercise 1 has decided to pursue two continuous improvement opportunities for their external talent pipeline partners based on the performance data they collected for new production workers.

The first opportunity is focused on investigating the differences between the two providers in qualified hires and the time it takes new hires to reach full productivity. The second is focused on exploring the retention problems they are experiencing with both.

After reviewing the exercise, discuss the following:

- 1** For both continuous improvement opportunities, what are potential root causes the collaborative should consider? Which have the most direct impact on performance?
- 2** Are these root causes within the control of employers, talent sourcing partners, or neither? Can the collaborative take action on them?
- 3** What evidence should you seek out to validate that you have identified the right root causes?

Unit 6.4

STEP 3: Developing Solutions

Once teams have identified, evaluated, and prioritized the root causes of performance problems, the next step is to do the same for solutions that address these causes.

Developing a range of potential solutions is very important in preventing teams from quickly adopting widely recommended practices, popular homegrown solutions promoted by partners, or solutions that are being pushed by government initiatives or other outside efforts. Most commonly, this occurs without a systematic review of whether these solutions directly address the root causes and whether there is any evidence they will work within the context and time frames of the team's improvement initiatives.

As with root cause analysis, improvement teams should not be too quick to adopt a ready-made, silver-bullet solution without getting the facts straight. And they should consider only solutions that are within their control to implement within the time frame available to test and implement them.

Finally, teams should take the time necessary to get broad consensus within the team and within the larger employer collaborative that they have properly and systemically identified and reviewed all possible solutions, so that they can get the necessary commitment and support for testing and evaluating one or more of these potential solutions.

To do this, the team should follow a systematic process in developing solutions:

- **Identify Potential Solutions:** First, the team should ask all employer members and their partners to brainstorm on potential solutions. This should include those employers and partners that are most directly involved in producing results for the chosen performance measure.
- **Review Available Evidence:** Team members should then review available evidence about each of these solutions. Also, teams should consult experts and consider any research that has explored related performance problems and developed compelling evidence of the solutions.
- **Analyze and Evaluate Potential Solutions:** Next, the team should conduct a systematic evaluation of potential solutions and rate them on factors that include the following:
 - **Root Cause Impact:** The degree to which the solution has a direct impact on one or more root causes
 - **Level of Impact:** The degree or amount of impact the solution is expected to have on the targeted root cause
 - **Evidence:** The degree of evidence that the solution will have an impact on the targeted root cause
 - **Control:** The level of control the employer collaborative has in addressing the cause within the scope and timing of the initiative

As with analyzing root causes, the improvement team should then identify potential solutions that are rated highest based on these four criteria and agree which ones to address. For example, the team addressing Opportunity 1 for external talent pipelines based on the two root causes could explore two potential solutions:

- **Improve the Competency Detail on Employer Surveys:** The team could explore how to improve the level of detail in the specification of competency requirements in the hiring requirements survey used in Strategy 3.
- **Curriculum Review and Alignment:** The team could also explore a curriculum review process that the employer collaborative could execute with all partners to improve the alignment between employer requirements and curriculum and assessment systems.

Solutions should always address root causes, be evidence based, and have the support of key partners. Common mistakes that occur while developing solutions include (1) designing solutions that do not address root causes, (2) reinventing the wheel by implementing solutions that have already been tested in similar contexts with limited success, and (3) adopting what are considered to be best practices without fully exploring whether there is any evidence that they work.

Unit 6.5

STEP 4: Testing Solutions

Once improvement teams have identified a potential solution, the fourth step is to pilot test this solution to evaluate its effectiveness before implementing it for the entire talent pipeline.

One common mistake in continuous improvement initiatives is not putting the solution to the test in the context in which it is expected to work. The solution must be confirmed to work in at least one setting before committing to the expense and time of implementing it everywhere. This requires a pilot test and evaluation.

Pilot testing is essential to your improvement process because it can help you refine the solution and it saves considerable resources if the solution does not work. The pilot testing should also be conducted in the context of where the solution will be implemented so that it can be evaluated where it will be expected to get results without changing other conditions.

In most cases, improvement teams can use a pre-post design that compares performance before and after the pilot testing. In other cases, they could test the solution while maintaining a control group for comparison purposes (see Table 6.4: Common Questions When Testing Solutions Depending on the Design of the Pilot).

For example, the team addressing Opportunity 1 for external talent pipelines (i.e., improving percentage of applicants meeting requirements) with the two root causes and two potential solutions could decide to conduct a limited pilot test. The team could test a revised employer survey to determine whether companies can provide the additional detail and whether the team is satisfied that it would address the gaps between requirements and applicants. The team also could decide to pilot test the curriculum review and alignment solution with one volunteer education and training provider to see if it is effective in closing the gaps for the provider's learners.

A common mistake during this step is fully implementing a solution without properly testing and evaluating it first through a pilot that yields comparable data through either pre- and post-evaluations or comparison groups.

The evaluation should involve both direct data collected on changes in performance and data gathered from interviews and focus groups with participants to gain further insights on what worked and what did not work.

Table 6.4: Common Questions When Testing Solutions Depending on the Design of the Pilot

Pre-Post Pilot Test Design	Comparison Pilot Test Design
1. Was the solution implemented as intended?	1. Was the solution implemented as intended at the test site?
2. Did the solution have the desired impact?	2. Did the solution have the desired impact?
3. Were other contributing factors controlled?	3. Were other contributing factors controlled at the test site?
	4. Did the control site experience produce different results?
	5. Were most other factors controlled for at the control site?
4. Does the solution need to be tested again?	6. Does the solution need to be tested again?
5. Do you recommend this solution be scaled?	7. Do you recommend this solution be scaled?

Unit 6.6

STEP 5: Implementing Proven Solutions

Successfully piloting a solution in one setting does not guarantee it will work everywhere.

After the improvement team has successfully piloted the solution and shown promising results, it must address how it would scale the solution within the larger talent pipeline. This means considering what would be needed to ensure that the solution is successfully implemented in a much broader context.

Replicating small successes on a larger scale can be complicated by the addition of new factors and challenges that can reduce effectiveness. However, the chances of success are greater when teams fully specify how the solution should be implemented in other settings and teams have a plan to continually evaluate and adjust the solution during the scaling process. Here are two essential elements in this final step:

- Provide an Implementation Guide and Resources:** Develop a detailed description of the solution and guidance on how to fully implement it to get the best results.
- Continue to Evaluate and Improve:** Collect data on an ongoing basis to evaluate the implementation of the solution and whether it is getting the desired results and make adjustments as needed. In addition to making changes or adjustments to make it more effective as it is being scaled.

Common mistakes made during this step include (1) not communicating the results and securing the buy-in of all critical stakeholders in implementing the solution correctly at scale, (2) not fully specifying the solution in ways that can be easily implemented in the talent pipeline, and (3) not providing sufficient resources and support to fully train key personnel involved in implementing the solution. See Table 6.5: Common Questions When Implementing and Scaling Proven Solutions to help avoid these frequently made slip-ups.

Table 6.5: Common Questions When Implementing and Scaling Proven Solutions

1. Have all stakeholders been informed of the pilot results, and is there consensus on scaling the solution?
2. Have implementation guidance and other resources been provided to all necessary partners?
3. Has training been provided to key stakeholders involved in scaling the solution?
4. Are there any barriers to scaling the solution that need to be addressed?
5. Have steps been taken to collect data and validate that the desired impact has been achieved at scale?

Unit 6.7

Calculating Return on Investment

Continuous improvement can drive better performance and lays the foundation for calculating and reporting ROI back to employer members. Calculating ROI is a leading practice in the business community and in TPM. It makes transparent the success of your talent pipeline and continuous improvement activities.

As discussed in Strategy 1, host organizations must communicate a clear value proposition to employers that they will better address their key pain points and achieve greater ROI by supporting the collaborative's work. Employers should be strongly encouraged to calculate their ROI in working with the collaborative by considering at least two types of costs:

- **Employer Collaborative Participation:** Time and resources spent working with the collaborative to develop and implement solutions
- **Employer Incentives:** Costs associated with any direct investments made by employer partners to support and reward provider networks

In addition, host organizations should encourage their employer members to calculate their own ROI using their preferred methodologies. Host organizations can assist members by providing benchmarks from their industries, such as measures for cost of hire and cost of turnover in manufacturing and information technology.

The simplest form of calculating ROI is by comparing the **baseline cost (BC)** to **benefits achieved**. To do this, take the baseline cost and subtract the updated cost (UC), and divide by the baseline cost. Take the total and multiply by 100 to get an ROI percentage. Some collaboratives will decide to include the **cost of engaging in a collaborative** (e.g., membership fees, staff time) as an add-on to their total costs.

Formula: $(BC - UC) / BC \times 100$

For example, if the measure most important to a collaborative was to calculate the ROI achieved in reducing the cost of a hire, then you can take the baseline cost of a hire over a specified baseline time period before participating in the collaborative (BCH) and subtract the updated cost of a hire after participating in the collaborative (UCH), and divide the total by the baseline cost, then multiply by 100.

Example Formula: $(BCH - UCH) / BCH \times 100$

Cost reduction metrics, like reduced cost of a hire, can be used for both external and internal pipelines. For example, employers can reduce cost of a hire by using TPM to attract and onboard qualified new hires and/or it can be used to promote upskilling pathways from within that reduce the need to source externally for critical positions.

Cost reduction, however, is only one form of calculating ROI. Collaboratives can also calculate ROI based on benefits achieved, such as productivity gained, new business taken on, or profits increased. We encourage you to work with your employer members to determine the right type of ROI metrics for them, but be sure to focus your attention on ROI that you can measure and where there is an agreed-on methodology for calculating it.

Another way of approaching ROI is to have a common set of ROI metrics for the collaborative, such as cost reduction, but provide guidance to individual company members on how they can calculate benefits achieved for their firm. As with all things TPM, there is no right answer or approach when it comes to calculating ROI, only the approach that works best for your collaborative's membership.

Exercise 3



Calculating Return on Investment Exercise

The exercise demonstrates how an employer collaborative can estimate ROI and determine if collaborative members are benefiting from their participation in the collaborative.

An IT collaborative has come together to solve a critical shortage of network administrators across its members' companies. The companies' pain point challenge is not finding enough highly qualified workers to meet the needs of many of their new defense contractor clients. The host organization has convinced its members to participate in an ROI calculation that will show whether the collaborative is adding value and, if so, by how much.

To start, the collaborative members decided to focus on the total cost of a hire to see if they have achieved any savings by working together. They also decided to provide ROI data to the collaborative in ways that can be aggregated annually to show the average level of returns to collaborative members and benchmark progress.

Having agreed on how success would be measured, the members determined their baseline costs. The collaborative used an industry methodology for measuring hiring costs, along with some standard benchmarks for costs. This methodology includes advertising, candidate screening and selection, and onboarding. The average hiring cost reported by employers using this methodology and related benchmarks was \$8,000 per hire. The companies then added in the expense of staff time and related expenses incurred in serving on education and workforce advisory groups and attending related meetings and events, averaging about \$30,000 per hire.

After a year of working together and sourcing new network administrators with a set of preferred providers, the collaborative increased the number of highly qualified job candidates and new hires. After sharing their data with the host organization, members found that they reduced their advertising, candidate screening and selection, and onboarding costs by 50% to \$4,000 per hire.

The collaborative members continued to provide staff to engage directly with providers. They also focused staff time on essential meetings and events with preferred providers, resulting in a 50% reduction in employer costs to \$15,000 per hire. The collaborative estimated that time spent in meetings plus new incentive offerings—paid internships and covering the cost of taking an industry certification—averaged \$10,500 per hire.

Last, the host organization convening the collaborative would like the work to continue. However, up to this point the collaborative has been supported by a small grant that is coming to an end. For the host organization to continue staffing the collaborative, it will require participating members to contribute dues, estimated to be \$2,000 annually per company.

In all, members concluded that they received a positive ROI that could be further increased by cooperating on new initiatives to improve talent pipeline performance.

After reviewing the exercise, discuss the following:

- 1** What is the cost of a new hire before and after participating in the collaborative?
- 2** What is the ROI for collaborative members?
- 3** Is this ROI sufficiently positive for the collaborative to continue? Explain your answer.
- 4** If you were representing a company in this collaborative, would you continue your participation with the additional dues requirement? Explain your answer.

Ready for Next Steps?

Have you achieved the learning objectives in Strategy 6 necessary to move forward? When you go back to your community, verify you will be able to execute the following activities:

- Explain the role of continuous improvement opportunities in TPM.
- Explain the five-step continuous improvement process.
- Explain major decisions, actions, and common mistakes in each step.
- Calculate ROI for employer collaborative members.
- Use the Strategy 6 Action Plan at the beginning of the chapter to determine your next steps and track your progress.
- For those using the TPM web tool, use the tool to create and manage your selected improvement opportunity.

If you can do all of the above, you have the skills and tools needed to be successful in implementing continuous improvement.

NOTES

