**Supply-Chain Improvement Project Primer**

The objective of the Global Health Supply Chain Maturity Model is to enable meaningful improvements to supply-chain processes and improve the lives of those that rely on them. This primer is intended to introduce Maturity Model assessment teams to the basics of managing an improvement project. The primer covers five steps:

1. Improvement Project Identification
2. Improvement Project Planning and Scope
3. Improvement Project Execution
4. Improvement Project Review
5. Sustaining Improvements

**1. Improvement Project Identification**

Once an assessment team completes a Maturity Model assessment, team members identify where they want to establish an improvement project — i.e., where they will invest time, energy, and resources to strengthen the weakest area(s) of the supply chain or eliminate constraints that block better performance. The following Maturity Model process is recommended to identify the most impactful projects:

1. *Contribute improvement ideas:* Each team member should come up with (five) 5 to 10 improvement ideas/actions to boost supply-chain performance in categories with low maturity levels and/or constraints.
2. *Group ideas:* The team then groups similar improvement ideas together. For example, “Prevent stockouts at the health facility level” and “Ensure sufficient supply of medicines at health facilities” could be grouped together.
3. *Prioritize ideas:* Finally*,* the team plots the grouped ideas on a 2X2 matrix of difficulty (x axis) by performance impact (y axis) (*see 2X2 Matrix*). The matrix will help to prioritize actions (e.g., high impact/low difficulty are likely to be pursued immediately). Other actions, such as those with high impact but greater difficulty, may be addressed because of their importance.

**2X2 Matrix**

The work identifying projects will lead the team to begin planning the projects.

**2. Improvement Project Planning and Scope**

Completing an Improvement Plan will contribute to planning a project, specifically:

* *Defining the project:* The team clearly identifies the improvement actions to be implemented and the objective. If possible, define the objective as a SMART goal (Specific, Measurable, Achievable, Realistic, and Timely). The project should be defined so that everyone can recognize if objectives have been met. For example: “Define the max/min inventory counts for all Essential Medicines in the designated warehouse.”
* *Resources required:* Identify materials and/or tools required to accomplish an action plan. For example: “Need training, additional staffing, and a software application to record and track inventory; training materials for how to establish min/max; and funding to support training and implementation activities.”
* *Person responsible/Project leader:* Identify the individual(s) responsible for monitoring, documenting, and completing the plan. This person will be responsible for managing the project going forward, especially primer steps 3-5.
* *Person or group to contact for help:* Frequently the project leader and his or her team will come upon circumstances or challenges that they cannot address. Identifying an individual(s) or entity(ies) who can provide support and/or provide resources to overcome these issues is critical. The individual(s) or entity(ies) should be willing to assume this role, and may include those who initiated the Maturity Model assessment or established the assessment team.
* *Target Date Completion:* Indicate a date, month, and year when the action plan will be completed.

In addition to the elements on the Improvement Plan, the project leader should work with team members to develop a project budget, establish team roles (and those to fill them), and set a detailed schedule/timeline for the project to meet the completion date. Scheduling is often done with a Gantt chart (see below).

**Gantt Chart**



The project leader and team should, when possible, go to the location where the problem exists to observe conditions; there is no substitute for seeing a process in action, and talking with those who work or manage it. These “gemba walks” will help shape the actions the team needs to address the problem, and may cause the team to revise its perceptions.

With the problem well-defined through observation, the team begins the “Plan” stage of the PDCA (Plan, Do, Check, Act/Adjust) cycle. This will consist of using problem-solving techniques to identify root causes of the problem(s) and designing specific actions and changes to address root causes, fix supply-chain problems, and/or eliminate constraints.

**3. Improvement Project Execution**

Alongside those who work in the process, the team will apply changes according to plan. This becomes the “Do” stage of the PDCA cycle.

Changes should be standardized so that they are repeatable by *all* who work in the process. Although one individual may be able to perform at a certain level or in a certain way, others may not be able to do the same. One way to ensure standardization is to conduct small experiments or trials of the changes with different individuals and at different times (different shifts may face different challenges). Ask for feedback during the trials from those doing the work, and redesign practices as necessary.

In addition to implementing standard practices, the team should incorporate visual management so that workers and managers can see that a practice is being followed. Establish metrics that show what is occurring, and post these daily or more frequently where every team member can see them. A simple green (good), yellow (fair), and poor (red) rating system can bring attention to successes and problems. This begins the “Check” stage of PDCA, which carries over into the fourth step of the primer.

Lastly, incorporate routines for reviewing the process and the changes to it. These should not be elaborate meetings, but daily standup discussions or “huddles” at the area or board where performance results are recorded. The visual management board can also include actions required in response to old or new problems (“Act” of the PDCA cycle).

**4. Improvement Project Review**

At predetermined milestones prior to the Target Completion Date, the team reviews progress with those working in the process as well as with other stakeholders. The team determines if the changes are working and, if not, why: the solution was flawed, or was the solution not implemented well?

These formal sessions may extend the duration of the project, lead to additional improvement projects (e.g., issues are uncovered unrelated to the initial project), and/or make stakeholders aware of larger issues that require their involvement (e.g., funding for staff, infrastructure, etc.). The outcomes from these “Check” sessions lead to a larger scale “Act/Adjust” stage of the PDCA cycle.

**5. Sustaining Improvements**

When solutions have been implemented and objectives for the project achieved, the improvement project is over — in one sense. But in another, larger sense, it *isn’t* over. The new techniques (visual management) and routines (daily huddles) will keep individuals working in the process aware of both the original problems (that may recur) or new problems. These old or new problems may warrant reconvening the original improvement project team, or possibly the formation of a new team to tackle the issue. Continuous improvement means the PDCA cycle never ends, with those working in the process regularly implementing changes and best practices, moving closer to perfection.