15.5. Lean Six Sigma Deployment Roadmap

Any deployment of quality improvement methods, whether it is called Lean Six Sigma, Performance Excellence, Lean or by some other nomenclature, requires a methodical approach to be successful. A phased approach that starts small and then expands has been shown to be the most effective. See Fig. 15.5 for a description of such an approach using the Juran Transformation Roadmap.

Figure 15.5 *The Juran transformation roadmap. (Juran Institute, Inc.)*

Decide	Prepare	Launch	Expand	Sustain
Learn about Lean and Six Sigma.	Organize the steering team to manage the process.	Support and mentor black and Green Belts.	Support infrastructure and review progress.	Integrate process measures and move toward process owners.
Assess organization status-identify strategies, goals, and projects.	Nominate and appoint champions.	Support pilot project teams.	Support expansion of all types and number of teams to other business units.	Fully Integrate Lean Six Sigma goals into next year's business plan.
Determine if Lean Six Sigma is to become part of the strategy.	Nominate and select pilot projects.	Allow time to work on projects.	Mandate improvement to all levels: other Belts.	Deploy Lean Six Sigma to all business units.
Decide on a "roadmap" to follow.	Train the Champions and Black Belts.	Develop a project nomination process.	Begin product development and design teams.	Enable employee participation with training and resources.
Select external training/consulting partner.	Decide on the use of Green Belts and train them.	Develop on-going cost of poor quality metric.	Create key macro-business process teams.	Act on audits of business systems to drive new projects.
Attend an executive briefing.	Develop first wave plan.	Integrate participation reward and recognition.	Identify benchmarking opportunities.	Continue to assess culture and act on gaps.
Discuss other initiatives and their impact on resources.	Select projects for first wave.	Establish assessments/measurements for on-going project selection.		Sustain breakthrough performance.

15.5.1. Decide

During the decide phase of deployment, upper management is becoming familiar with the Six Sigma methodology (or whatever methodology is being considered) and evaluating how well the approach fits with their organization's strategies and goals, particularly those related to performance excellence. A decision must be made whether Six Sigma, or some other approach, best fits the organization's needs.

The upper managers must then decide what roadmap to follow. The one recommended here is an option, but variations on this could work as well. The important thing is that the managers have a roadmap to follow so that the deployment will be done in a methodical way.

A decision must be made at this point whom to select as a training partner. It would be quite rare for an organization to have qualified internal resources to train, consult with, and mentor the resources being developed during the deployment, so it is almost always necessary to contract outside resources. It's important to select a partner that fits well with the organization's culture, business style, and desires for implementation flexibility. The first training delivered by the partner selected should be an executive briefing, which is attended by the entire upper management team. For more on the importance of leading change from the highest levels of the organization.

Finally and very importantly, management must decide what they will stop doing. Resources in any organization are finite, and laying a Six Sigma deployment over lots of other projects that are underway is a recipe for failure. The current initiatives should be evaluated and prioritized, and only the vital few continued. For the organization to successfully weave Six Sigma into its culture, it must become the method of choice for creating breakthrough improvement. Launching Six Sigma projects that mirror others already underway will lead to confusion over ownership of the problem and, likely, failure to effectively solve it.

Consider the following case in point: A Juran client that has undertaken a Lean Six Sigma (LSS) deployment failed to do this "stop doing" exercise as fully as they should have. As a result, a couple of the first-wave projects devolved into turf battles over whose solution to or analysis of the problem was best. Since the other "non–Six Sigma" projects were initiated by the process owners before the LSS deployment, the Six Sigma teams ultimately had to abandon their projects for lack of implementation support and be assigned another project to complete their training requirements. These events led to tarnishing the reputation of the LSS deployment and reduced its chances for ultimate success. One key factor leading to this outcome was lack of involvement and buy-in at the highest levels of the organization.

15.5.2. Prepare

During this second phase of the deployment, upper management begins to define the support infrastructure. The steering team or teams are established. A team should be designated at the corporate level to oversee the wide deployment, and ultimately at divisional and even unit levels to oversee the deployment regionally and locally. For a graphic depiction of this arrangement, see Fig. 15.6.

Figure 15.6 *Linking steering teams together. (Juran Institute, Inc.)*
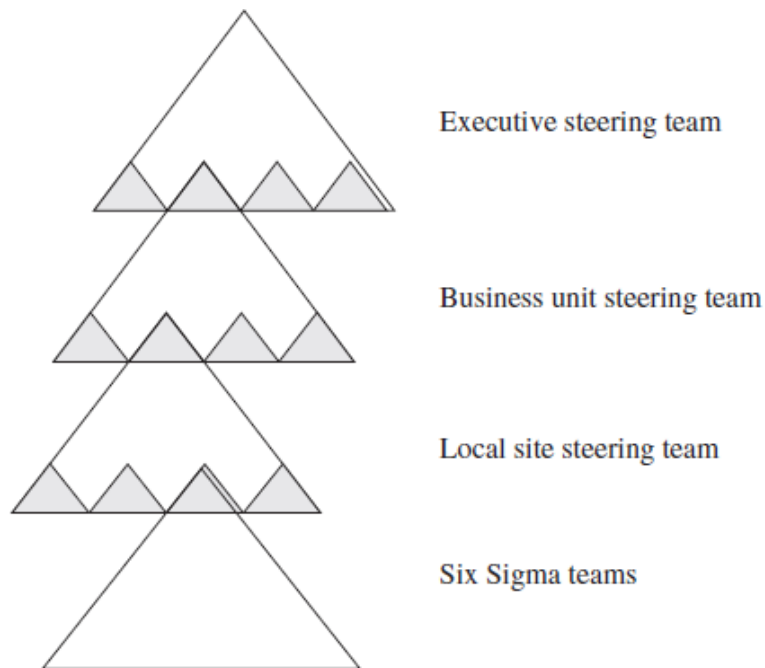
In addition to the steering teams being developed, this is the time to select and train the initial group of project Champions. These people then can participate with the steering team in nominating the initial projects to be undertaken (see the discussion on nominating projects in the "Select the Problem" section later in the chapter).

The next step in this phase is very important: training the initial wave of Belts. There are a number of ways to approach this, including

- Only a Green Belt workshop at this phase and then Black Belt training during the expand phase.

- A combined Green Belt and Black Belt workshop with the whole class attending 10 days of training over a 4-week period and the Black Belt participants attending the full 20 days over that period. See Fig. 15.7 for a sample schedule for this method.

- Two workshops: a 10-day Green Belt and a 20-day Black Belt. This method is preferable if there are sufficient candidates to fill both workshops.

Figure 15.7 *Combined GB/BB training schedule. (Juran Institute, Inc.)*

	Week 1 define and team skills	Week 2 measure	Week 3 analyze	Week 4 improve/ control
Day 1	GB/BB	GB/BB	GB/BB	GB/BB
Day 2	GB/BB	GB/BB	GB/BB	GB/BB
Day 3	BB Only	GB/BB	GB/BB	BB Only
Day 4	BB Only	BB Only	BB Only	BB Only
Day 5	BB Only	BB Only	BB Only	BB Only

In any case, there should be 4 to 5 weeks between training weeks for the students to complete project work. By using this approach, within 1 month or 2 months of the completion of training, the first projects should be complete.

15.5.3. Launch

Due to the practicum period between weeks of training noted above, the launch phase overlaps the prepare phase in some aspects. The primary effort during this phase is the execution of the first wave of projects, including mentoring of the Green Belts and Black Belts by the designated coaches. Those coaches should ideally come from the designated training partner identified during the decide phase.

Also during this phase, the ongoing project selection method should be institutionalized and the ongoing COPQ metric should be developed as a data source to help with future project selections.

A reward and recognition program should be established at this time as well. Monetary rewards, sometimes a share of the savings from a project, are often but not universally used. Intangible rewards, such as desirable career pathing, recognition, and pride in a job well done, can be effective instead of or in addition to any monetary rewards.

This is the time the organization should also decide how the improvement projects would be tracked and measured. There are a number of commercially available products, such as Power Steering, Minitab's Quality Companion, and i-nexus, which are widely used to track Six Sigma deployments. Internally developed solutions based on Microsoft Access or SharePoint are also widely used. Effective applications include a project "hopper" or "pipeline" for nominating future projects to be considered by the steering teams for execution.

15.5.4. Expand

This phase includes what the name implies: expansion of the methodology to other divisions, additional (often deeper) levels of the organization, and additional project methodologies (e.g., value stream improvement, DFSS). Expansion to different types of processes that may not have been considered during the initial wave of projects will also begin during this phase. This would include key macro business processes, for example, order processing, strategic planning, and price setting (see Fig. 15.8).

Figure 15.8 **Areas of expansion. (Juran Institute, Inc.)**
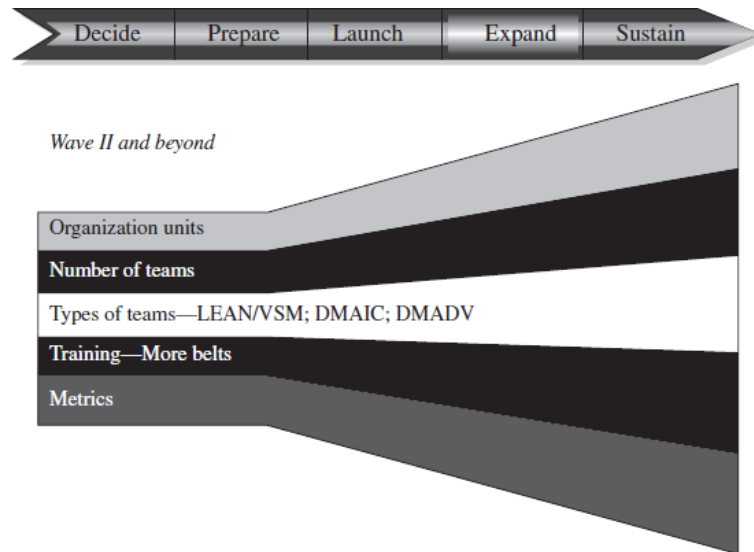
Benchmarking other divisions, companies, and industries for best practices in Six Sigma implementation is also a key activity of this deployment phase. This is aimed at bringing your deployment to a world-class level.

During this phase, companies will often decide to begin developing their own internal resources to conduct the workshops and coach projects going forward. The same training partner the organization has employed thus far usually facilitates the development of Master Black Belts and Lean Masters during this phase.

15.5.5. Sustain

The sustain phase is intended to solidify the results and methods implemented during the prior phases of deployment. This is the time when the deployment becomes ingrained in the corporate culture. The Six Sigma goals are integral to the organization's yearly strategy deployment and are widely deployed to all business units.

All employees should now have access to training in at least basic Six Sigma principles and tools and be empowered to improve quality in the workplace every day. Six Sigma should be a way of corporate life.

A key sustaining feature is the conducting of audits on a regular basis. Management should review the audit results and take action on any gaps identified. Often, these gaps will point to additional projects that should be undertaken. The audits may also point to gaps in adoption of the process by the corporate culture. The best way to address these remaining gaps is to up the level of involvement and extend it to all levels (if it hasn't already been) from the top of the organization to the bottom. Ultimately, there may be some who just refuse to get on board. In these cases, the ultimate decision may be that they should find employment elsewhere.