Chapter 12
People, Roles, and Responsibilities

This chapter discusses the major players involved with a process improvement (PI) task. Group and individual responsibilities are highlighted. However, your organization may require more—or fewer—groups. Also note that one person can fulfill many of these roles simultaneously or serially, depending on the size of your organization and the complexity of your process improvement effort.

Process Improvement Champions, Sponsors, and Groups

Process improvement efforts generally require the following individuals and groups:

* PI Sponsor—The person from the organization responsible for overseeing the entire PI effort. This person generally has the power to allocate funds and personnel. This person is usually at the directorate level or above.

* PI Champion—This is the public relations person for the PI effort. This personmay or may not also serve as the EPG Lead. This person markets the idea, approach, and results of PI.

* Engineering Process Group (EPG) Lead—This person leads the group thatreviews processes. This person assigns tasks to the EPG members, monitors their efforts, and plans the daily duties of the EPG.

- EPG Members—these individuals serve on the EPG as committee members. They are responsible for ensuring that process improvement documentation is written and followed. They are also responsible for generating metrics totrack the process improvement process. They lead the PATs.

- Process Action Teams (PATs)—These teams generate the process improvement documentation—policies, processes, procedures, charters, and Action Plans.

- Transition Partner—Usually one or two individuals who are outside consultants brought in to help set up, plan, lead, and monitor progress in organizational process improvement. These individuals bring experience doing process improvement from several other organizations and industries.

Engineering Process Group (EPG)

Previously, under the CMM, the group responsible for establishing the process improvement structure, directing, and monitoring its activities was called the SEPG (Software Engineering Process Group). Now, that group is referred to as the EPG (Engineering Process Group), as Engineering takes in more than just software efforts. Remember, CMMI no longer focuses only on software—it was designed to include many areas of your organization needed to produce a product. Figure 12.1
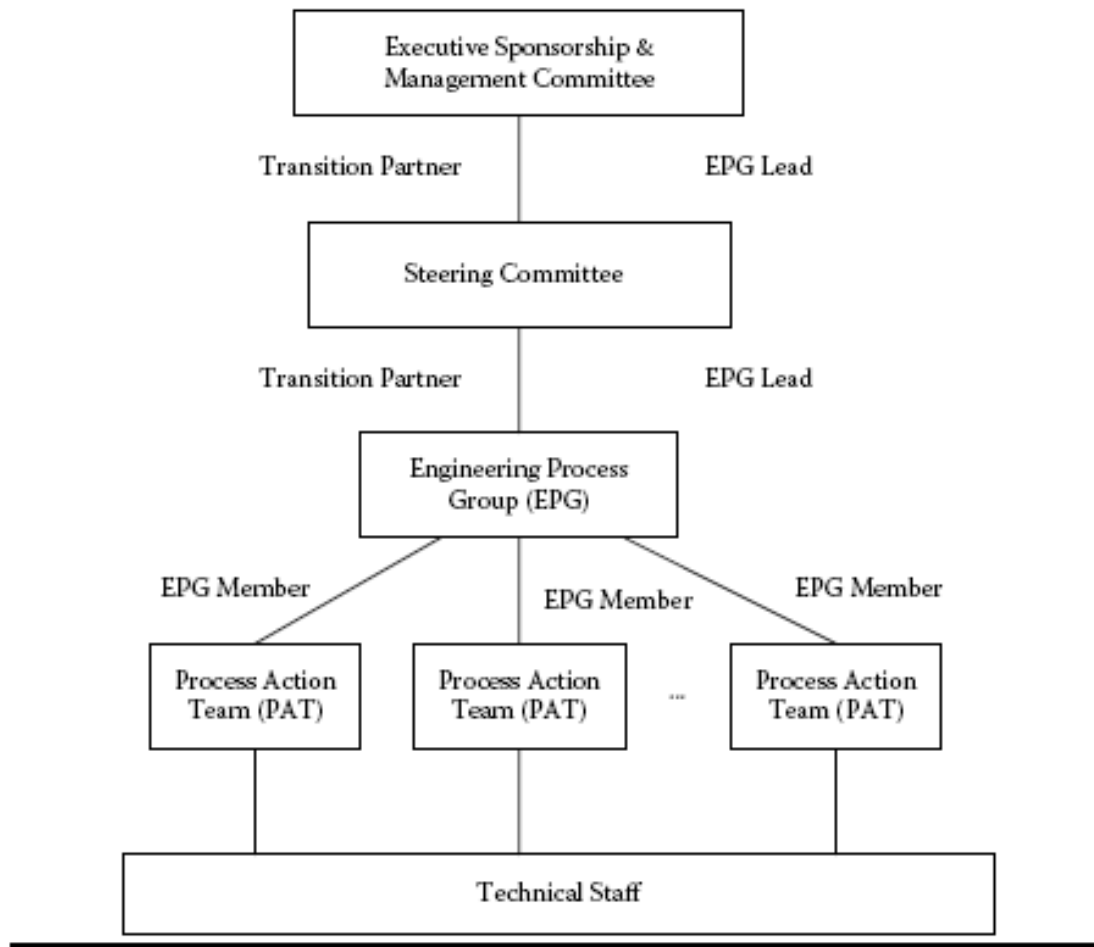
Figure 12.1 Implementing a virtual PI organization.

depicts a typical structure that has proven useful to us when we have instituted process improvement in other organizations. Notice that the Transition Partner and EPG Lead need to interact at multiple levels in the organization.

The EPG's primary role is to improve processes within the organization. This group needs to understand the current process (AS IS), develop a vision of thedesired process (TO BE), establish and prioritize process improvement actions, produce a plan to accomplish actions, and commit resources to execute the plan. The

EPG is formed from individuals within the organization. The head of the EPG—the EPG Lead—reports on process improvement activities to the Steering Committee.The Steering Committee is responsible for allocating resources, budget, and time to the EPG. The Executive Steering Committee is responsible for providing the initial funding, vision, and directives for process improvement. The PATs are individual teams that are created to address specific process improvement concerns or process areas. Generally speaking, they focus on the areas of weakness found during appraisals. The PATs are the "worker bees." They write the procedures, pilot them, and update them as needed. Members of the PATs are pulled from the technical staff from many projects throughout the organization. The technical staff may also include project managers, and we recommend that they also serve on PATs. Sometimes a Transition Partner is hired to help the organization structure, create, and track process improvement activities. This Transition Partner is usually an outside consultant with process improvement experience performed at several other organizations. An organization may have several EPGs in existence at the same time and several layers of EPGs. It all depends on size and complexity.

When establishing a PI organization, you need to identify a PI Champion. Usually, the champion will be responsible for gaining staff and resources to generate the PI program, and "push" the concept to all layers of the organization. The PI Champion may also serve as the EPG Lead or may appoint someone else for this duty. The EPG Lead is tasked with reporting to the Executive Steering Committee and with overseeing and directing the efforts of the EPG and the various PATs created to develop and implement change. The EPG Lead may also develop and maintain PI management plans. The plans need to document PI tasks, EPG schedules, resource utilization, and risks. Results are reported to senior management. The EPG Lead,

before establishing the rest of the EPG, may need to work with senior management in order to address fundamental infrastructure needs. Typical infrastructure needs that should be addressed by the EPG Lead include:

- Setting up or stabilizing communication mechanisms throughout the
- Organization

- Establishing and staffing the EPG, Steering Committee, and Executive Boards

- Establishing and maintaining a Configuration Control Board (CCB)
- Developing CCB control of PI documentation

- Creating mechanisms to present ideas and requests for improvement to the EPG and PATs

- Developing organizational policies for each process area

- Creating a measurement framework to assess success and progress made

- Providing appropriate training and support

- Evaluating and providing appropriate support tools

The EPG will be responsible for developing and implementing Action Plansthat address the deficiencies discovered during the appraisal process. Action Plans are written by the PATs and reviewed by the EPG to address the deficiencies found during the appraisal. Action Plans must be reviewed to determine their thoroughness, completeness, and ability to be effectively

implemented within the organization's environment. Action Plans are written and updated based on current appraisal results and in conjunction with site business objectives. While the EPG is responsible for these tasks, they may be performed by, or in conjunction with, other individuals within the organization.

One way to create Action Plans and to devise processes (and their associated procedures) is to institute process discovery and definition workshops. These workshops are where the steps necessary to document current AS IS processes and generate preliminary TO BE processes will occur. The participants of this effort generally include the EPG members, the members of the PATs, and any other respected subject-matter experts. The EPG monitor the results of the PATs' activities. If necessary, the Action Plans are updated to refine the approach taken, or to address new issues.

The organization should conduct an EPG-led process review that is performed at all project initiations (to get validation and buy-in of tailoring and process compliance), during major project reviews/milestones (to gather preplanned collection of process measurement data), and at project completion (for lessons learned collection and plan versus actual analyses). The EPG should also review current organizational methods in use for process and product measurement, determine if the right measurement data are being collected, and make necessary adjustments to the collection and analysis process. This step insures that metric reporting and follow-up actions are in place.

Every six months, we recommend that appraisals or mini-assessments be performed to determine the extent to which the deficiencies discovered during the baseline appraisal have been resolved. When it appears that most of the deficiencies

have been addressed, a new, formal appraisal of all the process areas in the desired maturity or capability levels should be performed to establish a new baseline and prioritize follow-on activities.

Sounds like the EPG has a lot to do. Yes, it does. Most organizations find that being a member of the EPG is a full-time job. Those organizations that allow an individual to only charge this effort as part-time has usually started the process improvement death march. This death march is well known. It is caused by a general misunderstanding of what process improvement is about and why it is beingundertaken. The death march usually begins by senior management announcing that a certain level of the CMMI will be achieved by a specific date. That date may be two years in advance but is generally only one year in advance. Unless you have
been doing process improvement using the CMMI for at least two years, we would not recommend setting this date so close. Generally speaking, it took organizations at least 18 to 24 months to achieve Level 2 using the CMM. And most organizations reported a much longer time frame. If management is browbeating its workers
into achieving a level in a shortened time frame, it is totally missing the boat. This sort of mentality shows that this organization does not understand process improvement, is not really dedicated to it, and will not reap lasting benefits from it. It just wants the rating. The death march approach has failed for many, many organizations. Even organizations that have successfully "passed" an appraisal have slipped back because of lack of a solid foundation and true institutionalization.

Process Action Teams (PATs)

How do the PATs work? An EPG member leads a specific PAT.
The PATs are conducted like the EPG (charters, agendas, behaviors, tracking action items, etc.). No one sits on a PAT without receiving training in the process area under development,

otherwise, the PAT member doesn't really know what is expected and what he is supposed to do, so he makes it up as he goes along, straying from the CMMI. PAT member qualifications are the same as for the EPG.

If the EPG has not developed templates, before beginning this effort, a PAT might be created to do just that so that all of the PATs follow the same structure, reducing the need to rewrite documentation. Search Web sites to get several examples of everything, including blank templates for procedures. It's OK to use a Department of Defense (DOD)-based Web site and examples, even if you are not working in a DOD-based organization. The CMMI brings structure to an organization. DOD thrives on structure. DOD has good stuff, their Web sites are free—take a look! Start with the Software Engineering Institute's (SEI's) two Web sites— www.sei.cmu.edu and seir.sei.cmu.edu. The latter Web site requires a password and logon ID. It contains a bulletin board and recent articles.

The PATs need to generate PAT Charters, PAT Plans, and a CMMI compliance matrix that tracks back to the practices for each process area they are developing. This matrix ties activities to practices and specific people and dates. The matrix is used for status tracking and to check on the extent of the documentation produced. PATs generally write the procedures and processes for the organization.

If I'm on a PAT, how do I determine where to start? The EPG will determine which process areas to focus on first, based on the results of the SCAMPI. The PAT Lead (an EPG member) will determine which practices and associated findings to attack in which sequence, by reviewing complexity, available staff, skill sets of staff, and so forth. The PAT Lead works with his group determining work assignments and sequence of the work. The PAT Lead, working with

the PAT members and the EPG will ask the following questions: Can a practice be combined with another practice or practices into one document instead of several? What are the dependencies between the other practices in that process area and with other process areas? How do these activities tie in with activities of other PATs? Do we need to write procedures for all of the practices in the process area? Are we going to have a separate Metrics PAT that focuses on the Directing Implementation common feature?

Here is an example: Each process area has some sort of requirement for "objectively evaluating adherence." Are you going to have each PAT write a procedure documenting how this will be done, or will you try to write one overall, generic procedure for how to perform this function for all of the process areas, and a checklist for those items to review per process area? You can do this in whatever way makes sense for your organization, as long as the practices for each process area are covered.

Consider having each PAT initially write procedures for evaluating adherence reviews and for Directing Implementation. Then stop, gather what has been written, and keep the best, discard the rest. Start writing a generic tailoring procedure that can be used when deciding which procedures and which part of the procedures to use for which parts of your organization. The approach helps sell the procedures to the organization. You might define a large, medium, and small project, and what tailoring can be done based on this definition. Include a tailoring section in each procedure. However, little tailoring will be necessary if you write your procedures for the most common business practices. For example, if you are a large company that writes automobile insurance polices for millions of customers, and the programs that support this effort were written in the 1970s in COBOL, don't try to write procedures for tracking customer complaints via your brand-new

intranet Web site. You are not in the Web site business—you are in the automobile insurance business. And the procedures you write must be specific enough to be followed. That means they must be detailed. You cannot write detailed procedures for Web site customer service that can be used by the rest of the automobile insurance departments. Another example: If you are building weapons systems using nuclear missiles, don't think you can use the procedures written for tracking financial accounts payable.

So, get the PATs working. After they get some experience with the CMMI, get all the PATs together. Discuss who is doing what. Draw a chart on how the work is fitting together. Draw a chart on what needs to be done and where the connections are. Don't get too detailed, and don't get too excited when you find duplication of effort or work deferred to other PATs. Whatever you choose will be wrong and you will have to backtrack. The PATs love deferring work to other PATs. It's not always fair or workable to have one PAT write documentation for all of the PATs to implement. Remember, you should just choose an approach, start out doing it one way or another, and then stop and see what you have and whether it is working.

Training for PI Members

Train the EPG using the SEI-authorized Introduction to CMMI course, in Process Improvement Planning, and in the SCAMPI method. Before starting each PAT, get training in the PA or area the PAT is to focus on. Initial training for the rest of the organization can consist of receiving an overview of the CMMI. Be prepared for questions. If there are no questions, either the audience members do not understand your presentation, they do not care about your presentation, or they care very much but feel that they are being dragged into this effort and have no voice.

In order to avoid this scenario, have a well-respected member of your EPG give an overview of why they have started doing PI, what the organization can expect the EPG to do, why it is important, and what the organization (each individual) needs to do to support this effort. And concentrate on WIFM—What's In It For Me? Make sure to relate the benefits to something relevant for the people in your organization. Setting up a common drive where the staff can view what is being written and sharing information as it is being written will also aid in making individuals feel that they are part of this process.

EPG and PAT Member Qualifications

The members of these groups need to be motivated. We don't want lazy, deadweight, individuals who are just waiting for retirement to come. Neither do we want "BSers." A BSer is a person full of himself who talks a good game but can't deliver on his promises. An EPG/PAT needs imaginative, self-starters with a wide range of experience. Experience can include working in different jobs within the organization (which shows how such things as roles, duties, and other organizational departments fit together) and also working at other companies. This diversity provides other perspectives that may prove useful in your organization. Because writing will be such a large part of this effort, people who are able to write and like to write should be approached. Another big selling point for implementing the procedures written is if they were written by respected members of the organization (technically respected, as well as movers and shakers).

How many people should be on an EPG? According to articles published by the SEI over the years, 1 percent to 3 percent of your organization.
If you are in a large organization, that may be too big. If you are in a small organization, that may be too small. We find that between five

to ten motivated people usually works well. However, they have to be prepared to write procedures and do work—not just review and comment on the work other people have produced.

Sometimes, in order to get buy-in, the director of this effort will recommend EPG and PAT members for political reasons. If you must, you must. But, buy-in does not come from politics. It comes from doing something good that makes life easier in the workplace. If forced to choose, choose quality over quantity, and talent over politics. Remember, you will never get total, 100 percent buy-in.

Conducting Meetings

This section holds true for both the PATs and the EPG. Hold meetings at least weekly, require attendance, and require timeliness. Take notes and publish the notes, but rotate who actually takes the notes; you don't need a secretary, and you want each person to contribute equally—not just have someone whose only role is to take notes. Send out an agenda at least one day before the meeting. Try to get the sponsor/executives to attend a meeting here and there. They are busy, but their attendance proves to the members that their efforts are being noticed. It also shows buy-in from the executives. The EPG meetings should consist primarily of reviewing the status of what is occurring on the PATs, and planning how to resolve issues that occur on the PATs. Discuss any problems, issues, or concerns. Allow for questions back and forth. Document and track action items. Store the meeting minutes in an online common drive (include dates of meetings).

There needs to be a simple and easy mechanism for the organization to present ideas and issues to the EPG. Whether this is done via your intranet, or whether you have Engineering Change Proposals or Process Improvement Proposals—it doesn't matter. What matters is that the people in your organizations feel that they are part of the

process of process improvement. They need to be able to introduce ideas, as well as to challenge the ideas produced by the EPG currently under development.

Also necessary is a mechanism to communicate to the organization what the EPG is doing. See the discussion elsewhere in this book concerning a communication plan for ideas. Remember you have to communicate things at least seven times and three ways just to be heard.

Quality Assurance (QA) and the EPG

What's the difference between Quality Assurance and the EPG? Can't we have QA do process improvement too? Can't we just structure the organization so that process improvement becomes another QA initiative? No, that is a recipe for disaster.If you set up your process improvement effort as part of QA's duties, process improvement will be seen as just another QA task. It will not receive the attention from management—and from the organization as a whole—that it requires. Can QA people serve as part of the EPG? Of course. But the EPG should be representative of your entire organization—not just the QA department.

Besides, QA and the EPG serve different functions. QA reviews both the products built and the activities that occur on a project. The EPG is responsible for reviewing processes that occur across the organization. Therefore, there is some overlap. However, QA's primary role focuses on the projects, while the EPG focuses on processes throughout the organization. The EPG does not concentrate on products— that is QA's job.

What about standards? Doesn't QA review products to see if they conform to standards? Yes. However, one of the flaws of both the CMM and the CMMI is that the authors of both models assumed

that organizations had standards in place and were using them. While some of the older, larger, more mature organizations did have standards, the smaller, younger ones did not. So before they could focus on process, they had to back up and devise some product standards. In their search for standards, they often just usurped the standards written for DOD (MIL-STD- 2167A, MIL-STD-498, IEEE, NIST, FipsPub) or they just copied standards from a previous workplace. This is also not a good idea. Standards must fit the type of work done and the culture of the organization.

Standards should be tailored to work for everybody mandated to use them. Otherwise, they will not be used.

Summary

The organization needs to devise a method to assign resources, schedule the work, decompose activities to manageable size, trace requirements and contractual obligations, and measure success. We suggest that individuals be given certain roles to play to carry out these assignments. We suggest that a sponsor designate a champion, and that an EPG Lead be appointed to work with personnel from the organization to establish the process improvement infrastructure. The CMMI is tremendously interconnected. Your organization will want to know how everything fits together.

Do not attempt to flowchart the CMMI. This exercise goes in one ear and out the other because people have little experience with the CMMI and can't equate it with anything relevant to them.

Try to do most of what the CMMI suggests. If it does not fit, document why and devise an alternative practice. Tailor your approach to your organization. For example, when writing

procedures, DOD likes books, commercial organizations don't. Keep it simple and to the point.

Process improvement is continuous. Once you start, you will uncover more and more areas to be improved and issues to be resolved.

Chapter 14
Planning and Tracking the Effort

This chapter discusses the various plans needed to guide the process improvement effort and a few approaches to tracking the tasks involved. While the CMMI considers process descriptions and procedures to be part of the "plan" needed for each process area, this chapter defines a plan as the strategy necessary to prepare the organization for process improvement. Processes and procedures are discussed in Chapter 15.

Defining Plans

CMMI requires a "plan" for every process area (PA). However, these plans incorporate not only what one would normally expect in a plan (activities, time frames, general approach and strategy, estimated resource expenditures), but also what used to be called "procedures" (see Chapter 13 for a discussion of procedures). In order to add greater value to your Process Improvement (PI) program, we have separated out these concepts. In reality it does not matter whether you call these documents plans, procedures, George, or Shirley, as long as you generate some documentation that covers these concepts.

A plan is not a schedule! It is the documented strategy necessary to perform work. It generally includes a definition of the scope of the work, the resources needed, why the work is to be done, how the work will be tracked, how it will be reviewed, schedules, and costs. It also includes an explanation of why the work was planned the way it was, so that if errors occur or project managers change, the plan can be understood and updated to promote project continuation.

There are three types of plans in process improvement that must be addressed in your Design phase. They are:

1. Process Improvement (PI) Plan—Overall Strategic Plan used for funding, resources, justifying the PI program, and defining goals.

2. Implementation/Operations Plan—Tactical Plan, or more detailed plan, that defines the effort for the entire organization into manageable tasks based on the results of the SCAMPI. Also called a PI Action Plan.

3. Action Plans—Very detailed plans created by the Process Action Teams (PATs) that focus on what their PAT is supposed to do and how and when it will be done. PATs focus on one process area (PA) or one problem area noted as a weakness from the SCAMPI appraisal.

A Communication Plan is also popular. We discuss that plan at the end of the section on plans.

The PI Plan

Executives need a PI Plan. Its purpose is to get executive buy-in, generate a written contract for PI, and get money allocated for PI. Sometimes the sponsor will generate the plan, sometimes the Engineering Process Group (EPG) Lead will generate the plan, and sometimes the Transition Partner (outside consultant) will generate the plan. Whoever creates the plan must remember that PI must be managed like any other well-managed project—do a schedule, track against the schedule, assign staff, identify and track deliverables, and so forth. Process Improvement must be planned and tracked just like any other project. The PI plan should address and schedule the following activities:

Using a SCAMPI to baseline current processes Establishing the EPG and PAT structure Providing training in the CMMI and Pas Measuring progress through mini-appraisals Designing–Piloting–Implementing processes Conducting full-blown SCAMPI for certification.

The PI Plan defines the problem, the purpose of PI for this organization, and the purpose of this plan. This plan is used to sell the CMMI and process improvement to the organization—its executives, its managers, and its lower-level staff. The PI Plan must document the benefits and costs and define the business goals and objectives linked to business issues confronting the enterprise.

The plan also defines the scope of the work and how to manage changes to scope. It documents project resources and other support needed. Assumptions and risks are also addressed (most common are pulling staff away from PI to do "real work," emergent work, production emergencies, etc.).

As for tracking and controlling the effort, the PI Plan documents how you will track, control, measure, and report the status of the work. In the plan, present your schedule with milestones included at the lowest level of detail that you feel you can realistically accomplish and that you feel are necessary in order to track at a
level that keeps the effort focused. Discuss rewards and include a "Miscellaneous" category for anything else that fits your organization or will politically motivate individuals who might prove to be obstacles in this effort.

We don't include an example PI Plan because these plans can be very different, depending on why an organization is undertaking process improvement, the culture of the organization, and the

different levels of planning required. The PI Plan is often written by a Transition Partner (outside consultant), in conjunction
with the proposed PI Champion and PI Sponsor. Because budgets and schedules are a large part of this plan, financial statistics for this program can be found on the Software Engineering Institute Web site, www.sei.cmu.edu. Also check with the budget/financial area of the enterprise for data on past improvement/quality/ measurement programs, as well as any major expenditures forecast for upcoming projects and organizational endeavors.

Implementation/Operations Plan

The Implementation/Operations Plan comes after the shock of the baseline SCAMPI has worn off. It is now time to get real. The PI Plan is a high-level, strategic vision type of plan. It makes a case for process improvement and calculates the initial, overall budget. The Implementation/Operations Plan is more detailed because it is based on the results of the SCAMPI appraisal that documented how close an organization is to a maturity or capability level, which process areas are satisfied or not satisfied or nowhere near to being satisfied, and the weaknesses found in how the organization implements the PAs. Therefore, this plan is based much more on reality and real issues. This plan may contradict the original PI Plan. Document any deviations from the original PI Plan.

The Implementation/Operations Plan discusses how to address and implement the results of the SCAMPI. Take those results, review and analyze them, and prioritize the PAs, issues, and concerns. Determine how to set up the EPG/PAT/Configuration Control Board (CCB) infrastructure, which individuals to assign to these activities, training required, and an initial pilot strategy.

The PAs should be prioritized based on complexity, difficulty implementing or performing within this organization, amount of

documentation needed, how close to attainment based on the SCAMPI, "bang for the buck," and where an early success may be achieved.

Format your plan based on the four phases of process improvement: Set Up, Design, Pilot, and Implementation (see Table 14.1).

The last section of the Implementation/Operations Plan discusses controlling the effort. Basic tracking mechanisms should initially focus on the following areas.

As learning and sophistication increase within the organization, more metrics may be added. Basic metrics to track include:

Actual size of deliverables.Actual effort (staff hours) expended for major activities Start and end dates for major activities Completion dates for identified milestones Number and type of changes to this plan.

Action Plans

Action Plans are usually produced by the PATs assigned to address the weaknesses found during the SCAMPI. Table 14.2 shows a sample Action Plan template. PATs are usually set up according to process areas (such as Requirements Management (REQM), Project Planning, Integrated Process Management). Action Plans should be based on the SCAMPI results. They also must be measurable. Tie them directly to the CMMI PAs and practices to maintain focus on the CMMI itself and to make tracking progress easier. Where the organization decides to deviate from the CMMI, build and document a strong case for why. Alternative practices may be substituted for the practices, when justified appropriately and strongly. Action Plans will focus on how to generate processes and procedures, and how to introduce them into the organization once produced. Tracking and measuring the effectiveness of the Action Plans and the processes and the procedures are usually functions of the EPG.

Communications Plans

Achieving success in process improvement programs requires more than good policies and procedures. The organization must "buy-in" to the effort, and support must be maintained throughout the implementation program, especially early on when costs are highly visible, but benefits are not. An effective Communications Plan may prove critical to PI program success. Whether your organization is small or large, whether your organization requires a formal or informal approach, you must determine a method for keeping everyone informed. A Communications Plan has four key objectives:

Table 14.1 Implementation/Operations Plan Template

1.0 Set Up
  1.1 SCAMPI Results
  1.2 Areas of Focus
  1.3 EPG Structure
  1.4 Process Action Team (PAT) Structure
  1.5 Configuration Control Boards
  1.6 Quality Assurance
  1.7 Schedule
  1.8 Tools
  1.9 Risks
  1.10 Reviews and Approvals
2.0 Design Phase
  2.1 Generate PAT Charter
  2.2 Review, modify, approve charter
  2.3 Generate Action Plan
  2.4 Review, modify, approve plan
  2.5 Assign work per Action plan
  2.6 Do the work (policies/procedures/standards)
  2.7 Develop metrics and measurement techniques
  2.8 Develop required training material
  2.9 Track status
  2.10 Review/recommend tools
  2.11 Facilitate/review/monitor work
  2.12 Update Action Plans
  2.13 Attend meetings/Support EPG

3.0 Pilot Phase
  3.1 Select pilot projects
  3.2 Document success criteria and measurement techniques
  3.3 Orient and train project members in CMMI concepts
  3.4 Orient and train members in processes and procedures
  3.5 Perform the pilots
  3.6 Monitor the pilots
  3.7 Analyze results from the pilots
  3.8 Measure success
  3.9 Provide lessons learned
  3.10 Update procedures and OSSP as needed
4.0 Implementation Phase
  4.1 Select one or more true projects
  4.2 Document success criteria and measurement techniques
  4.3 Orient and train project members in CMM concepts
  4.4 Orient and train members in procedures
  4.5 Assist in implementation as needed
  4.6 Monitor and measure success
  4.7 Provide lessons learned
  4.8 Update procedures and OSSP as needed
  4.9 Implement across more projects as needed
  4.10 Signoff completion of PATs
5.0 Control and Monitoring

- Achieve and maintain an enterprise awareness of the CMMI and the PI Program

- Maintain the PI Program focus and momentum

- Facilitate process implementation activities

- Provide a vehicle for rewards and recognition

There are numerous target audiences in any organization. Each audience is impacted differently and may have a different role to play. Communications need to be targeted to the various audiences. In addition, communications should utilize multiple vehicles for delivering the message to facilitate reaching a broader audience. Our experience shows that things need to be communicated at least seven times and three ways before people even hear the message. Communications mechanisms used include:

Articles in monthly newsletters
Articles by participants from the various divisions/departments, PAT members, Transition Partners, and EPG staff Intranet Web pages containing information on PI activities such as workshops and pilot projects, and which may include the Process Asset Library of procedures and best practices that may be of value to personnel
Briefing to senior management at yearly management retreats
Presentations at "all hands" meetings

Tracking the Documentation

Monitoring the process improvement effort is critical to stay focused and ensure progress is being made. To track the activities of the PATs, we provide a sample compliance matrix. This matrix is based on tracking the activities performed during the Design phase. Piles of documentation will be written. This table may help you track this effort. However, don't be fooled into thinking that once you have your procedures written, you are done. Remember, you still have to train the pilot participants, pilot the procedures, rewrite them based on the pilot results, train the organization in the procedures, roll out the procedures for implementation, and track adherence and changes. There is still a lot of work to be done. The Action Plans can track PAT efforts, and the PI Plan and Implementation/Operations Plan can be used to track EPG and organizational-level tasks.

Table 14.3 shows a sample CMMI compliance matrix for the Requirements Management process area. This matrix can be used as a checklist to track whether procedures have been written for a practice, what stage (or status) the documentation produced is in, and who is responsible. You can add more columns to insert comments, subpractice artifacts, or anything else you feel you need to help structure and track your efforts. It should be noted that in order to fully understand and implement the practice, the s*ubpractice* usually must be analyzed and incorporated into the procedure. This template can also be used for tracking infrastructure documentation,
such as plans, charters, and standards preparation, as well as any other activities performed throughout the PI effort. Appraisal Teams can also use the completed checklist to help determine goal satisfaction.

We feel that most practices should be covered in some way by documentation—either a single document per practice, or more likely, a single document that describes how to do several practices.

It is also necessary to track how the procedures are being used in the projects and to what extent they are being used. For this task, we suggest talking to people to find out. If people will not talk and do not voice their displeasure, it doesn't

Table 14.3   Sample CMMI Compliance Matrix

No.	Practice or Activity	Associated Procedure or Document	Assigned To	Date Due	Date Reviewed	Status
	Process Area: Requirements Management (ReqM)					
	GG2 Institutionalize a Managed Process					
1	GP 2.1 Establish an organizational policy	Policy			3/2/2007	Approved
2	GP 2.2 Plan the process	1. Plan 2. Process description 3. Schedule 4. Estimates			3/2/2007	Complete
3	GP 2.3 Provide resources	See Plan				"
4	GP 2.4 Assign responsiblity	See Plan				"
5	GP 2.5 Train people	See Plan and training materials				In progress
6	GP 2.6 Manage configurations	TBD; will integrate with CM PAT				In progress
7	GP 2.7 Identify and involve relevant stakeholders	See Implementation Plan				Complete
8	GP 2.8 Monitor and control the process	TBD				Deferred
9	GP 2.9 Objectively evaluate adherence	Procedure P15				Complete
10	GP 2.10 Review status with higher level Management	Procedure P16				Complete
	SG1: Manage Requirements					
11	SP 1.1 Obtain an understanding of requirements	Procedure RM1				EPG review
12	SP 1.2 Obtain commitment to requirements	Procedure RM2				EPG review
13	SP 1.3 Manage requirements changes	Procedure RM3, RM4				Pending
14	SP 1.4 Maintain bi-directional traceability of requirements	Procedure RM4				Rejected
15	SP 1.5 Identify inconsistencies between project work and requirements	Procedure RM5				Pending

mean they are happy campers. It means they have concerns but feel that voicing the concerns will be of no use. They feel they have not

been part of the process, and their opinions are worthless. So, *no news is not good news*. If people do not feel part of the process, they will not buy-in to it. And ultimately, they might sabotage the effort. So try to find out what is happening.

The opposite also holds true. People will complain ad nauseam about the procedures because:

- They have to read them. No one likes to read anymore—we wait for the movie or the video game to come out.

- They have to follow them.

- They have to change the way they work.

- Someone is monitoring how they do their jobs.

We won't go into changing the culture—there are already several books on the market about that. Suffice it to say, people do not like to change. So reward them for their efforts, and praise them.

Besides simply talking (and listening) to people, we suggest a report card. Simply create a checklist that can be e-mailed to each project manager and have him fill it out and return it to the EPG. It should track whether each project is using the procedures, which ones are used or not, and why or why not.

You may have to take a stand to stop the complaints. But before you do, you'd better check to see whether these folks are justified in their complaints. Are these procedures really a good fit for them or are they forced to use them just because the procedures took a long time to write and you need to get the maturity level to bid on contracts? Is the Appraisal Team on its way to conduct a SCAMPI

appraisal for a rating? Is that why you haven't changed the procedures? Or is it because it took blood to write the procedures, so there is no way they will ever be changed? Was the organization forced to cut the time it took to produce the procedures? Was the Pilot phase skipped? Were people pulled from the PATs to do "real work"?

That brings us to management commitment. We usually have to set up a special one- to three-hour executive briefing for management because they are not willing to take the time to attend the full-blown class. True management commitment is shown through providing adequate resources and funding. That means enough of the right people, enough time, and enough money to do the job. While management might send out memos promoting the greater glory of the organization and why the organization should adhere to process improvement, real management commitment doesn't really happen, especially at first. Management (and we mean very senior management—the executive levels that decide process improvement must be done to garner future business) doesn't understand what process improvement really means and what it takes. We have taught nearly 200 introduction classes, and in all that time we have had only a few executives in our class. The rest of the students were usually process improvement people or developers. Management will say they are committed. It's up to you to make them prove it by following the concepts expressed in this book.

Summary

The CMMI combines procedures, process descriptions, and approaches into a document called a "plan." Chapter 15 discusses processes and procedures. This chapter broke out the parts of the CMMI plan into three major documents, or strategies.

While there are many plans that can be written, the following plans are normally needed to promote a successful process improvement effort:

- A plan that documents why process improvement is being initiated and what it will cost

- A plan that specifies the areas of the organization and the issues to focus on and assigns personnel
- A plan to addresses each weakness found and builds a schedule with associated Deliverables