

Improvement programme

A successful process improvement programme will usually consist of the main activities depicted in the picture at the right.

A precondition for a successful improvement programme is management awareness about (potential) problems with development and an understanding of the avenues for solution. Management may become more aware if they understand the answers to questions like:

- How does the size of our developed products evolve over time (e.g. the software contents of our products double every 18 months)?
- How does the productivity of our developers evolve over time (e.g. the productivity increases by 8 % per year)?
- What is the quality of our products and is this quality increasing?
- How many of our development projects finish on time and within budget?
- ...

Alternatively, the score of an Interim Maturity Evaluation may also make management to understand that they have serious problems controlling their projects.

When management is sufficiently aware of (potential) problems they will want to improve the situation. It is a management responsibility to start up the improvement programme by:

- setting the objectives for the programme
Objectives should preferably be defined in measurable terms such that it can be verified objectively if the goals are achieved or not. Typical examples of objectives are:
 - increase predictability, i.e. decrease lead time slippage and/or budget overrun
 - reduce lead time
 - increase quality
 - increase productivity

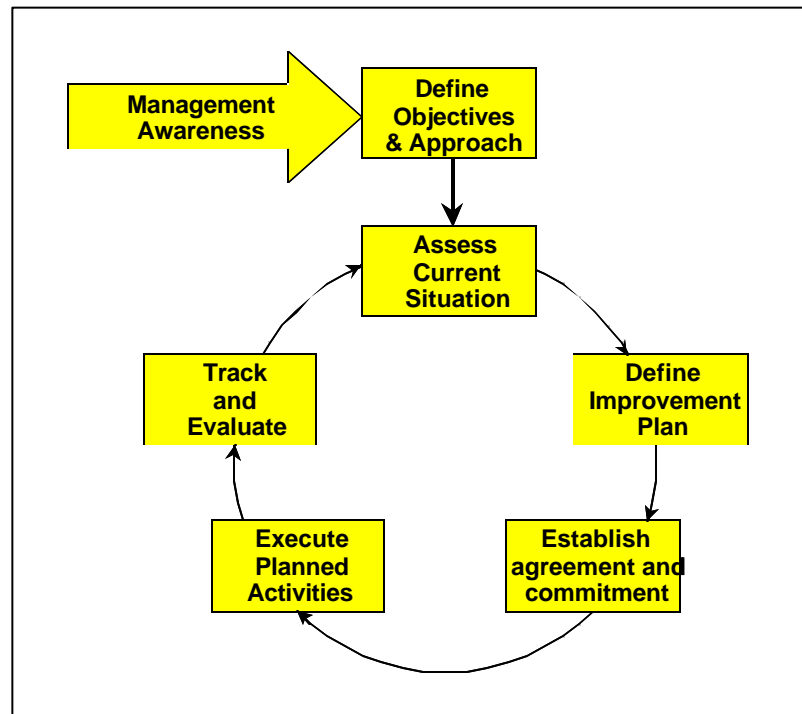
- defining the approach for the programme

The picture on this page shows an high-level overview of an improvement programme.

Management has to decide who is responsible, who has authority and who will actually carry out these activities.

When management has defined the objectives and the approach, the improvement loop can start. This loop typically consists of the following main activities:

- Asses the current situation.
It is difficult, if not impossible to achieve goals if one does not know the starting point. Using one of the possible assessment methods the department will fully understand:
 - Its current way of working.
 - The strong and weak points of the current way of working.



- The business risks involved with the weak points in the current way of working (e.g. problems in project management will lead to reduced predictability, problems with quality assurance will lead to quality problems in the products, ...).
- The necessary areas in the current way of working that need to be improved.

Different kinds of assessments exist: a complete assessments (covering process, technology, people, architecture and organizational issues, a process assessment, a quick scan (less accurate than a complete or process assessment, but also less expensive), or Interim Maturity Evaluation (which is the least expensive and the least accurate).

- Define the improvement plan.
Based on the identification of the areas that need improvement an improvement plan is developed. Such a plan is a project management plan for the improvement project. It identifies the deliverables of the improvement project, along with the activities that need to be carried out to produce those deliverables, the allocation of resources to these activities and a schedule of these activities.
- Agree and commit to the improvement plan.
It is only when the plan is finalized that the repercussions of the improvement project are clear. Its cost, its demand on the in-house and consulting resources, its timetable are clearly defined. It is imperative that management fully endorses the execution of this plan, accepting the short term investments that are needed to reach the long term benefits.
- Execute the planned activities.
Once the plan has been committed its execution can start. Typically this will involve engineers to work in small working groups on specific improvement areas. If the know-how to implement some of the recommendations is not sufficiently present, external consultants may be involved in these working groups, or may train people such that their knowledge and skill in those matters is increased. External consulting can speed up this process considerably.
- Track the improvement plan and evaluate the improvements.
During the execution of the improvement project the project leader of the project should regularly check:
 - Are we on track with the improvement plan, and if not, define and implement corrective action
 - Judge if the improvements are reached by executing the plan. If not, additional or different improvement activities may have to planned and carried out.

Senior management should do periodic follow-up of the implementation of the recommendations and the execution of the improvement programme. Consultants may also offer help in these follow-ups.

How can we help you?

- **Management Awareness**
We can help management to fully understand why process improvement is beneficial, help to understand what benefits they can expect, and what investment is needed to achieve those benefits. We can help management in defining the objectives of the process improvement programme.
- **Assess Current Situation**
We can do a complete assessment or process assessment (preferably by two assessors to have a very complete and accurate picture, or by one single assessors if that is deemed sufficient), quick scan (typical done by one assessor in a relatively short time span), or we can help you in performing an Interim Maturity Evaluation.
Note that we are willing to do an initial assessment, but when we are involved in the other activities described below, we strongly suggest that independent consultants do further assessments in order to guarantee objectivity.
- **Define Improvement Plan**
The improvement project plan has to be written by you. We can help by reviewing it, pointing out what is missing, suggesting how to organize the project, etc.
- **Establish Agreement and Commitment**
This is again an activity that has to be done by you. We may help by persuading management about the feasibility of the plan and by showing a cost-benefit analysis for the improvement project.
- **Execute Planned Activities**
The improvement activities are typically carried out in small working groups (Process Improvement Teams) whose team members are employees from your organization. We may help in:
 - Writing process definitions (procedures, forms, templates, checklists, ...)
 - Provide coaching and consulting to the Process Improvement Teams
 - Reviewing and giving feedback on what the Process Improvement Teams have defined
 - Planning the deployment of the new procedures and the feedback from their use
- **Track and Evaluate**
You will do the day-to-day tracking. We can check if tracking is done correctly and if appropriate corrective actions are being defined and followed-up. Regularly, you should evaluate the improvements, possibly by means of regular Interim Maturity Evaluations. We can assist in guiding the first few evaluations.

Finally, we can provide training to introduce the Capability Maturity Model, and more detailed training for most of the Key Process Areas of the Capability Maturity Model. We can provide these services in Dutch, French and English.