

CMM Definition

A description of the stages through which software organizations evolve as they define, implement, measure, control and improve their software processes

A guide for selecting process improvement strategies by facilitating:

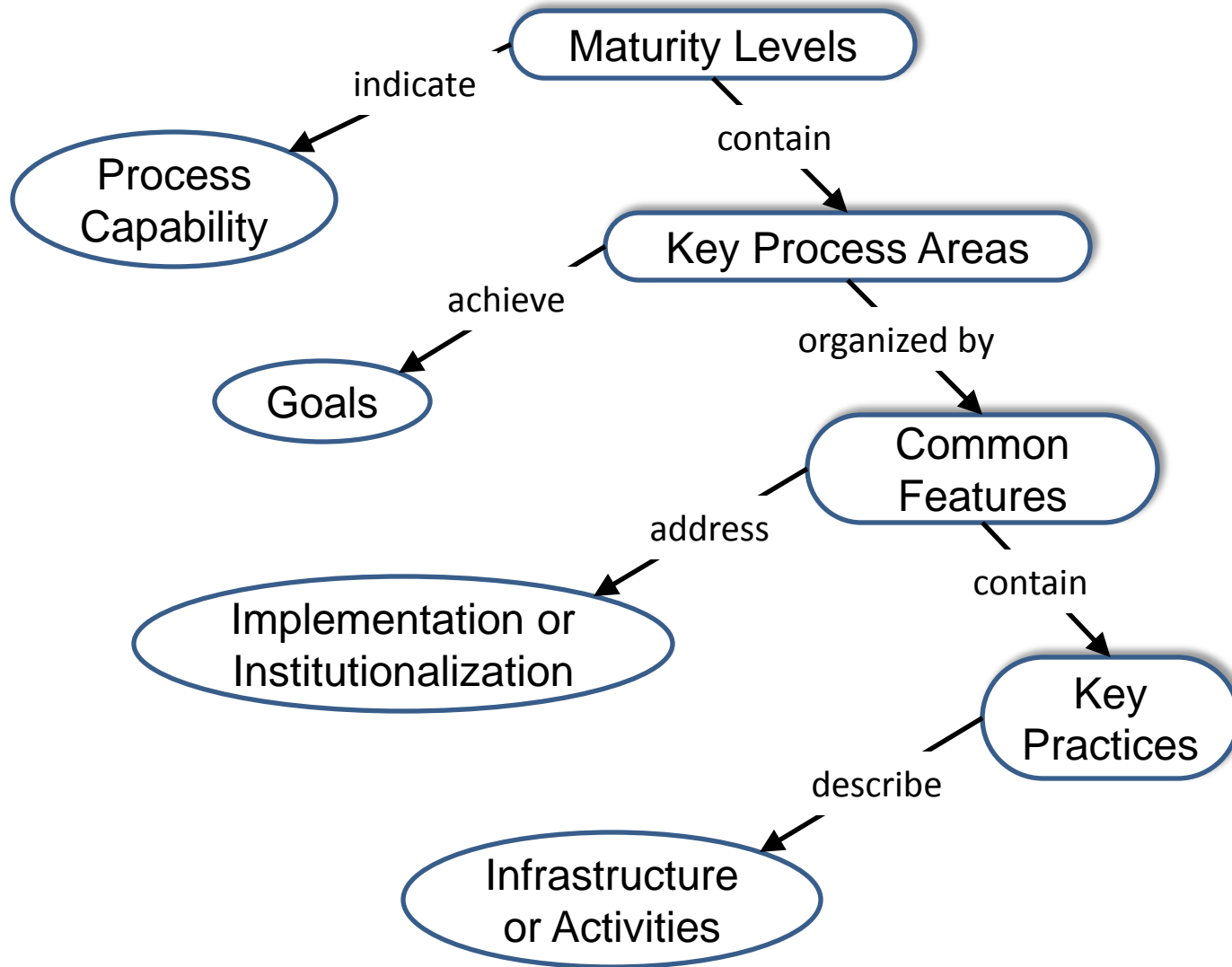
- determination of current process capabilities
- identification of the issues most critical to software quality and process improvement

CMM Supporting Role

The CMM should support:

- setting goals for senior management
- identifying priorities for process improvement
- identifying process capability of organizations
- predicting future process performance of projects
- industry-wide comparisons of the state of the practice

The CMM Structure



Key Process Areas to Achieve Level 2

Project
management

Ad hoc

Repeatable (2)

The diagram illustrates the progression of project management processes. It features a large, light-gray rounded rectangle with a dark-gray header labeled 'Repeatable (2)'. Inside this rectangle is a white rounded rectangle containing a list of six process areas. An arrow points from the left towards the white box, and another arrow points from the right side of the gray box towards the top right.

- Software configuration management
- Software quality assurance
- Software subcontract management
- Software project tracking and oversight
- Software project planning
- Requirements management

Key Process Areas to Achieve Level 3

Project
management

Integrated
engineering
process

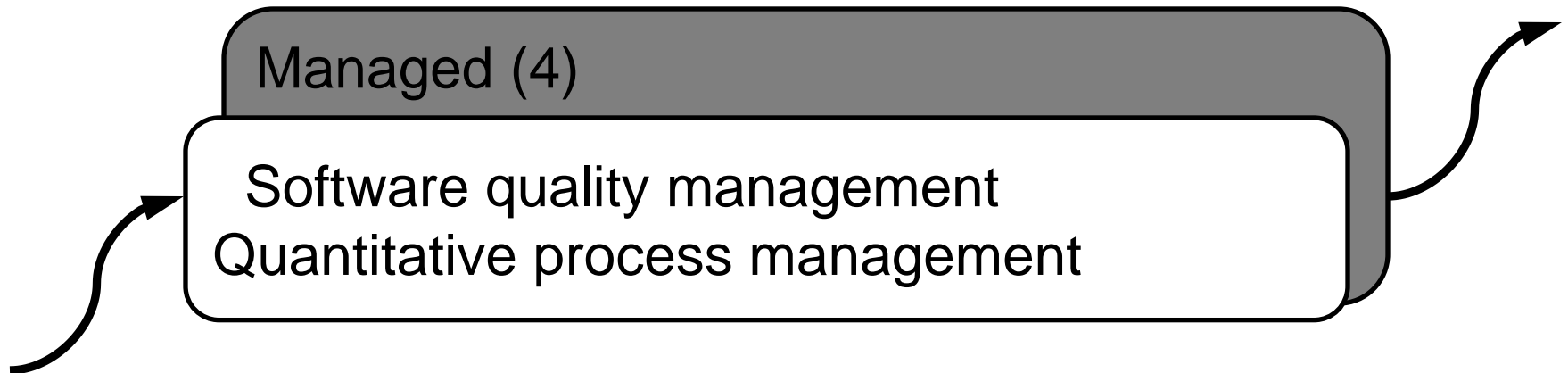
Defined (3)

Peer reviews
Intergroup coordination
Software product engineering
Integrated software management
Training program
Organization process definition
Organisation process focus

Key Process Areas to Achieve Level 4

Integrated
engineering
process

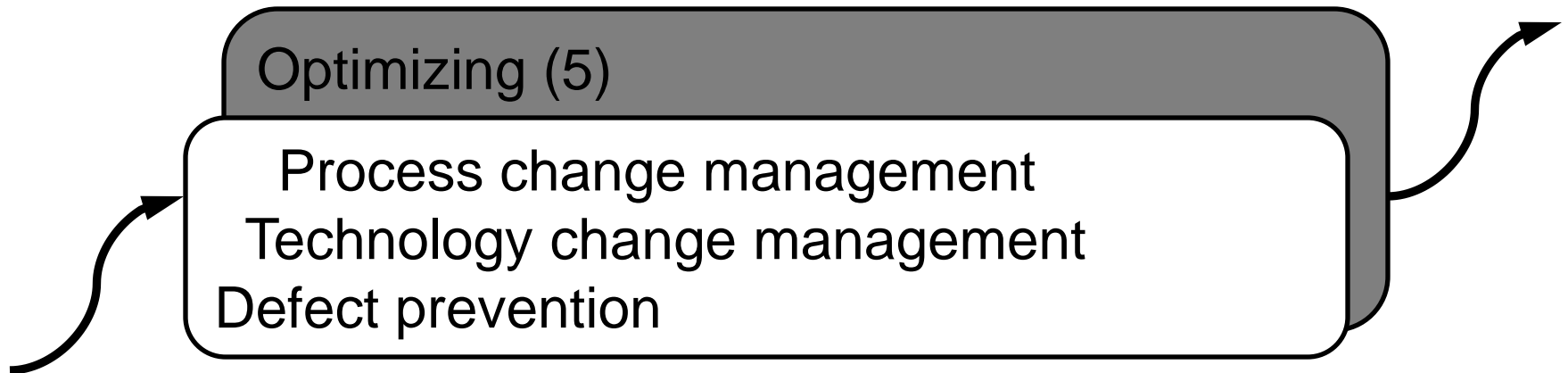
Product
and
process
quality



Key Process Areas to Achieve Level 5

Product
and
process
quality

Continuous
process
improvement



Responsibility for Implementing Key Process Areas

The project is primarily responsible for addressing many key process areas.

The organization is primarily responsible for addressing other key process areas.

There are both project and organizational responsibilities in all key process areas.

Project Responsibilities

The project will have primary responsibility for acting on:

- Requirements Management
- Software Project Planning
- Software Project Tracking and Oversight
- Software Subcontractor Management
- Software Configuration Management
- Integrated Software Management
- Software Product Engineering
- Inter-group Co-ordination
- Peer Reviews
- Quantitative Process Management
- Software Quality Management
- Defect Prevention

Organization Responsibilities

The organization will have primary responsibility for acting on:

- Software Quality Assurance
- Organization Process Focus
- Organization Process Definition
- Training Program
- Technology Change Management
- Process Change Management

An Example of Goals: Software Project Planning

1. Software estimates are documented for use in planning and tracking the software project.
2. Software project activities and commitments are planned and documented.
3. Affected groups and individuals agree to their commitments related to the software project.

An Example Key Practice: Size Estimating

Software Project Planning

Activity 9

Estimates for the size of the software work products (or changes to the size of software work products) are derived according to a documented procedure:

This procedure typically specifies that

An Example of Decomposing the CMM Structure

Maturity Level	Level 2 - Repeatable
Key Process Area	Software Project Planning
Goal	1. Software estimates are documented...
Common Feature	Activities Performed
Key Practice	9. Estimates for the size of the software work products