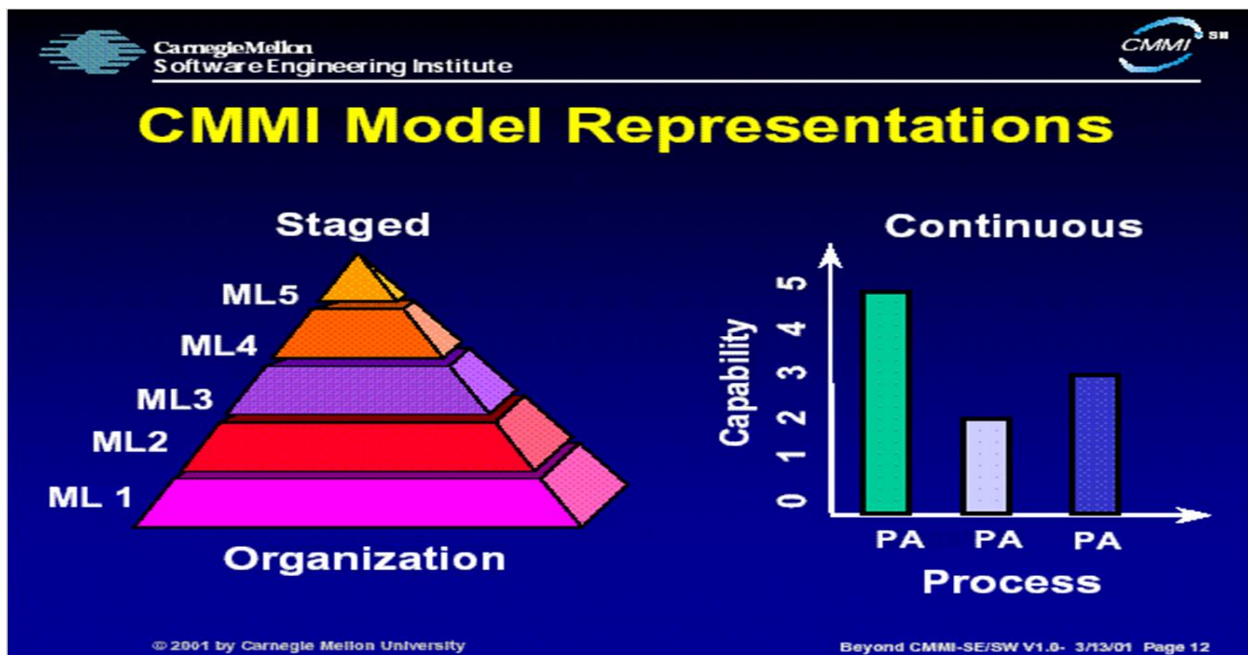# CMMI V 1.3
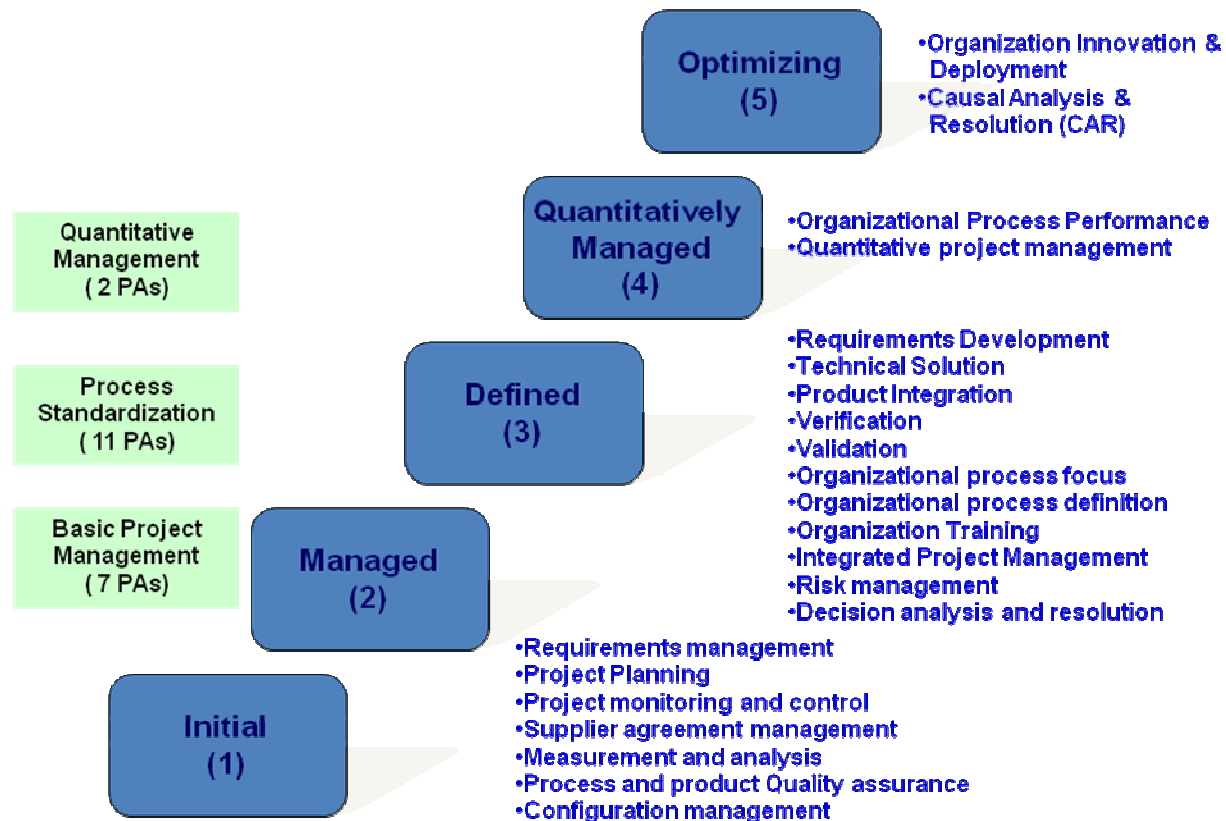# (Capability Maturity Model Integration)

## History of CMMI

- The CMMI is the successor of the CMM

- The CMM was developed from 1987 until 1997 by SEI which captured organizational best practices for software development.

- It was first decided to apply the underlying principles of the CMM to software development practices of a single developer.

- The result of this effort was the Personal Software Process (PSP), designed to be CMM level 5 process for individual software developers.

- Then SEI went in for the development of developed the Team Software Process (TSP).
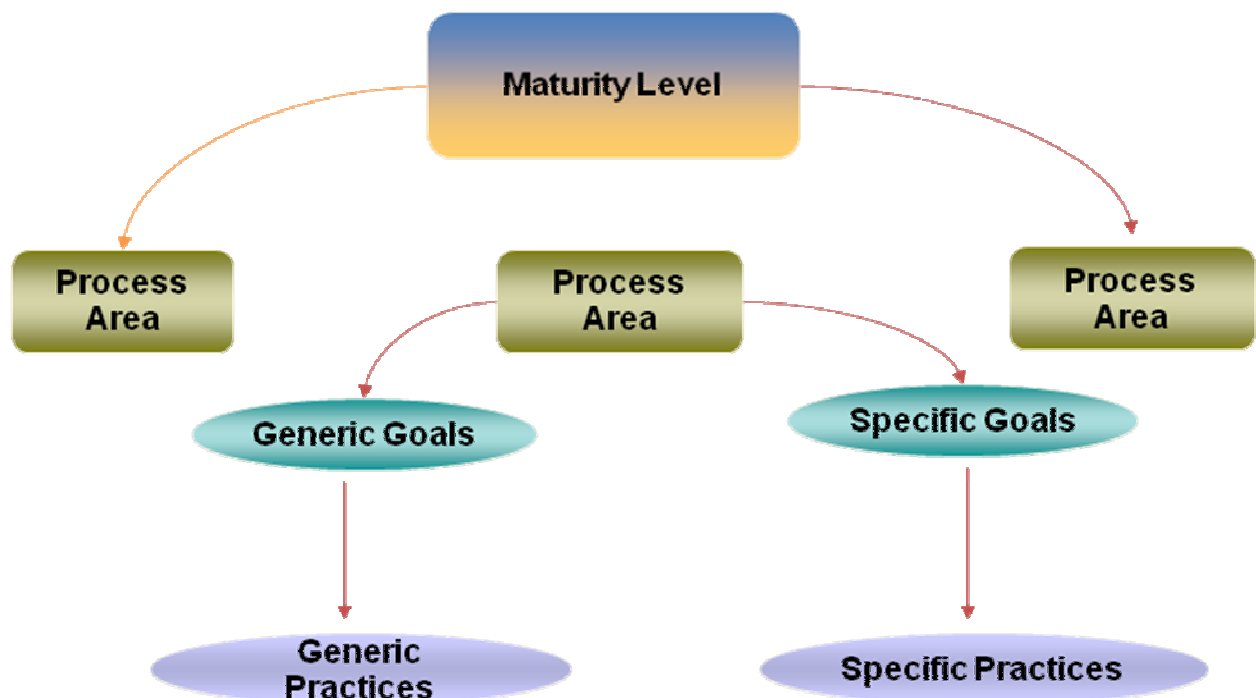
## CMMI Model Representation:

# CMMI V 1.3
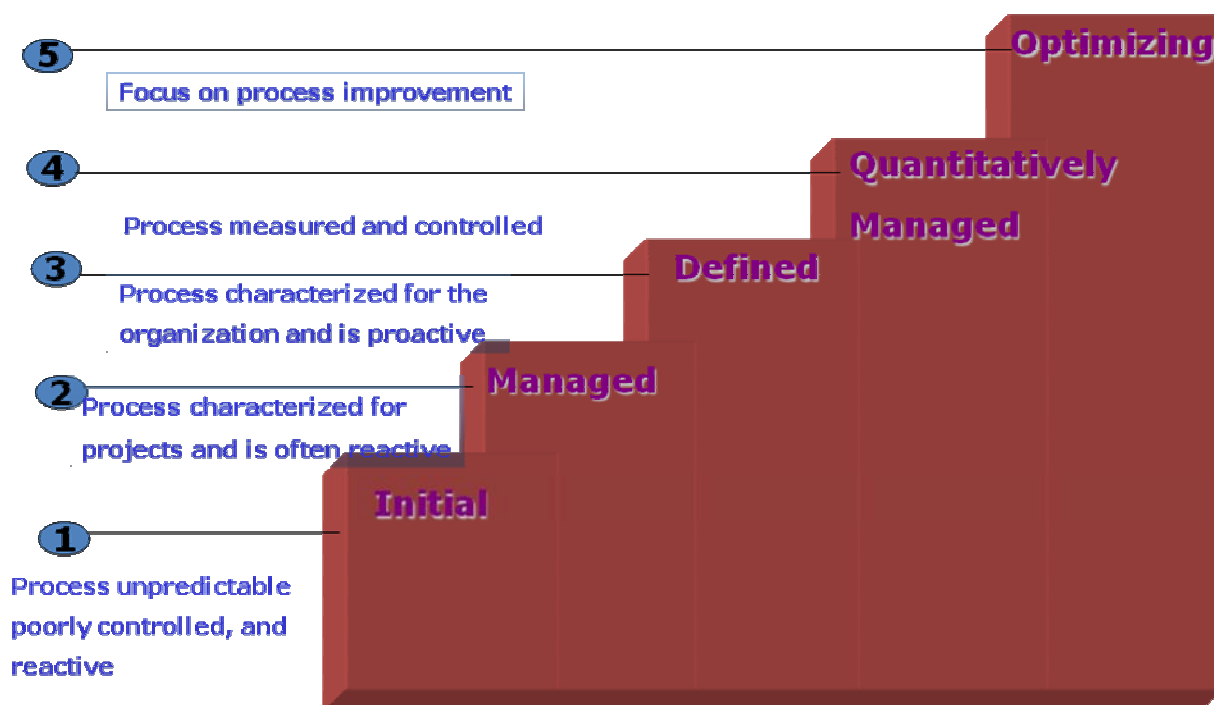## (Capability Maturity Model Integration)

## Process Areas:

**Optimizing (5)**
- Organization Innovation & Deployment
- Causal Analysis & Resolution (CAR)

**Quantitatively Managed (4)**
- Organizational Process Performance
- Quantitative project management

Quantitative Management ( 2 PAs)

**Defined (3)**
- Requirements Development
- Technical Solution
- Product Integration
- Verification
- Validation
- Organizational process focus
- Organizational process definition
- Organization Training
- Integrated Project Management
- Risk management
- Decision analysis and resolution

Process Standardization ( 11 PAs)

**Managed (2)**

Basic Project Management ( 7 PAs)

**Initial (1)**
- Requirements management
- Project Planning
- Project monitoring and control
- Supplier agreement management
- Measurement and analysis
- Process and product Quality assurance
- Configuration management

## CMMI Staged Representation: Structure

Maturity Level

Process Area | Process Area | Process Area

Generic Goals | Specific Goals

Generic Practices | Specific Practices

**CMMI V 1.3
(Capability Maturity Model Integration)**

**CMMI Maturity Levels:**



## Maturity Level 1: "Initial"

- Processes are performed but often in an ad hoc and occasionally chaotic manner.

- Performance is dependent on the competence and heroics of the people.

- High quality and exceptional performance is possible, as long as the best people can be assigned to the task.

## CMMI V 1.3
## (Capability Maturity Model Integration)

- Performance is difficult to predict.

## Maturity Level 2: "Managed"

- Project management is more disciplined.

- Organizational policies are established and followed.

- Project plans and process descriptions are documented and followed.

- Resources are adequate.

- Responsibility and authority are assigned over the life cycle.

## Maturity Level 3: "Defined"

- Clarify Customer Requirement

- Ensure products meet requirement

- Analyze Decisions Systematically

- Follow integrated ,defined processes

- Identify and control potential Problems

- Establish Organizational responsibility for Process improvement

- Define Organizational Best Practices

- Develop Skills and Knowledge

**CMMI V 1.3
(Capability Maturity Model Integration)**

## Maturity Level 4: "Quantitatively managed"

- Statistical and other quantitative methods are used, at the organizational and project levels, to ~

- Understand past process performance, past product quality, and past service quality

- Predict future process performance, future product quality, and future service quality

## Maturity Level 5: "Optimizing"

- Both the project's defined processes and the organization's set of standard processes are target of the improvement activities.

- Quantitative process improvement objectives for the organization are established and continually revised to reflect changing business objectives.

- Incremental and innovative improvements that measurably increase process capabilities are identified, evaluated, and deployed.

**CMMI V 1.3**
**(Capability Maturity Model Integration)**

**Cost Impacts & Benefits of CMMI:**
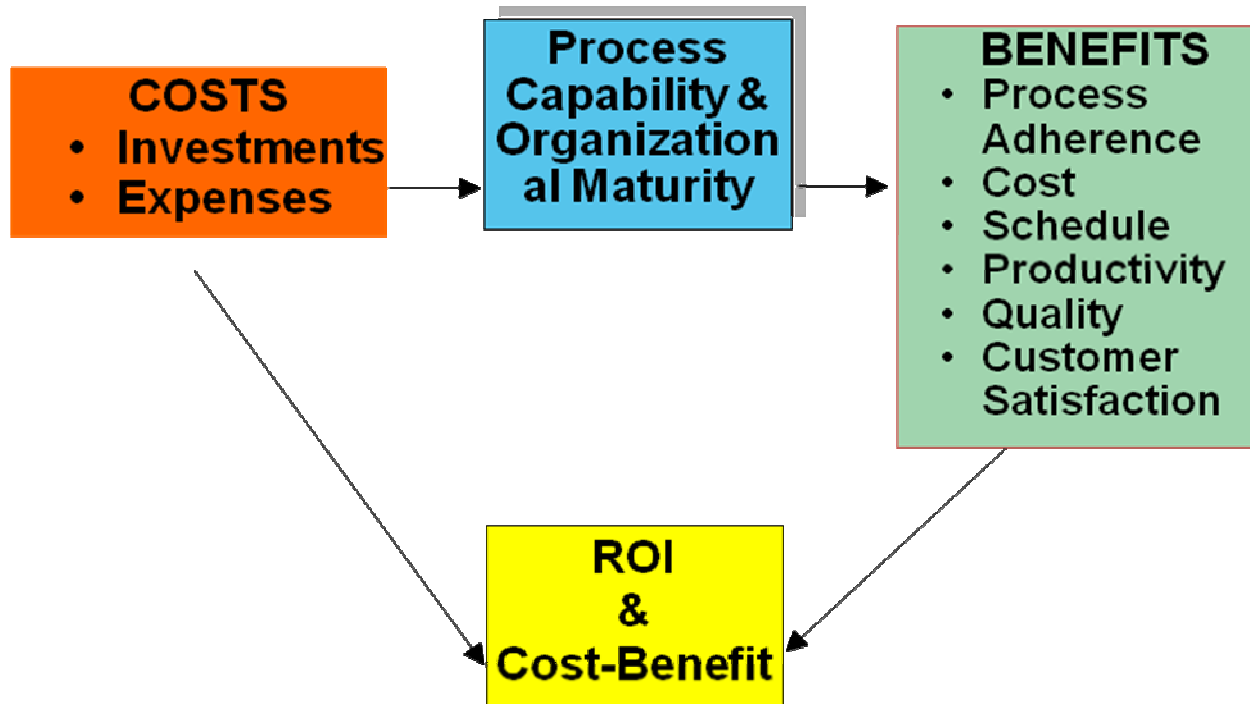


**Benefits of CMMI:**

The CMMI Product Suite provides the latest best practices for product and service development and maintenance. CMMI is designed for other disciplines as well, thereby supporting enterprise-wide process improvement.
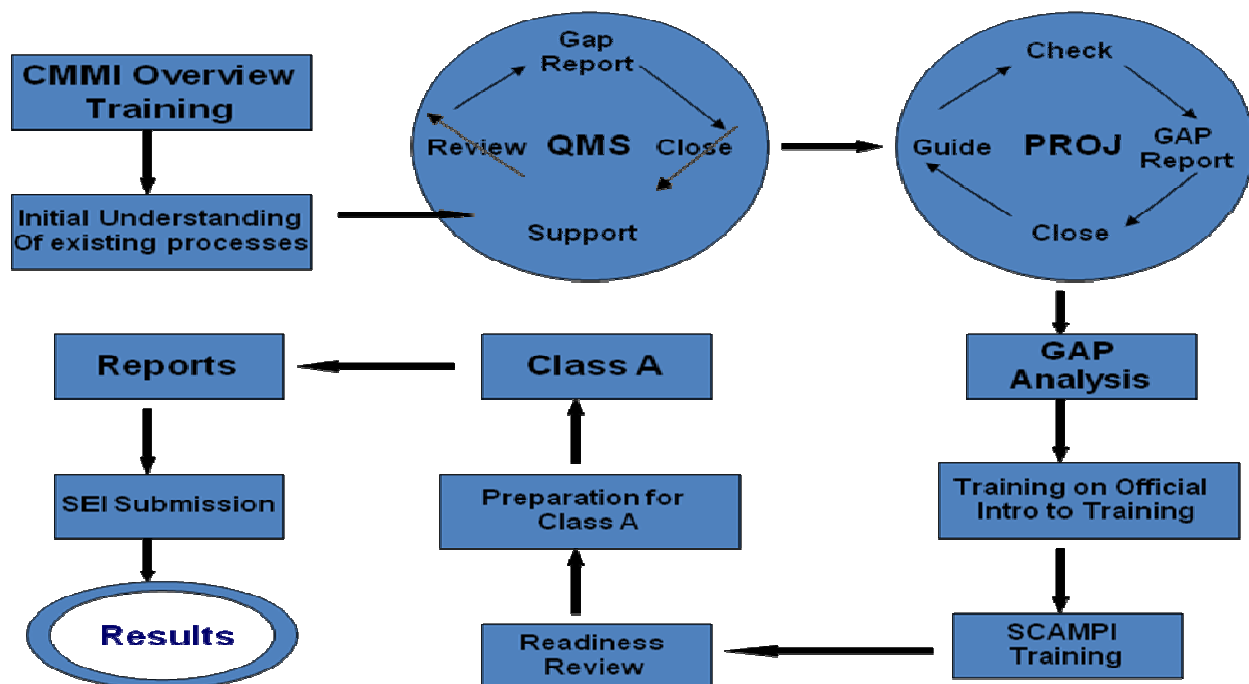
CMMI best practices enable organizations to do the following:

- More explicitly link management and engineering activities to their business objectives.

- incorporate lessons learned from additional areas of best practice (e.g., measurement, risk management, and supplier management)

- address additional organizational functions critical to their products and services.

# CMMI V 1.3
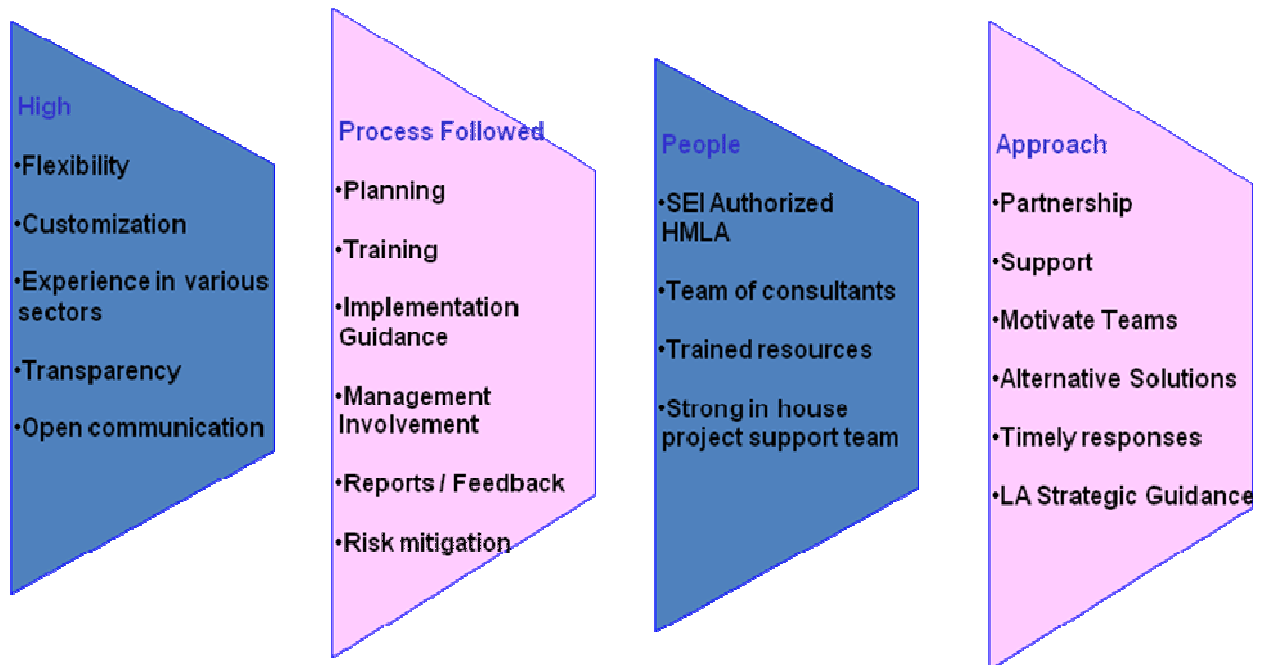## (Capability Maturity Model Integration)

- implement more robust high-maturity practices.

- provides more detailed coverage of the product life cycle .

- incorporate many lessons that were learned during the  development, maintenance.

- address the needs of organizations at higher maturity levels.

- The combination of product engineering and proved practices for managing processes results in a well-integrated project

- management and improved processes-and the end products.

**Typical Phases of CMMI activities**

**CMMI V 1.3**
**(Capability Maturity Model Integration)**

## TUV India Service Differentiators

**High**
- Flexibility
- Customization
- Experience in various sectors
- Transparency
- Open communication

**Process Followed**
- Planning
- Training
- Implementation Guidance
- Management Involvement
- Reports / Feedback
- Risk mitigation

**People**
- SEI Authorized HMLA
- Team of consultants
- Trained resources
- Strong in house project support team

**Approach**
- Partnership
- Support
- Motivate Teams
- Alternative Solutions
- Timely responses
- LA Strategic Guidance

## How TUV India Can help you?

- SEI official Introduction Training

- CMMI Overview Training

- SCAMPI Appraisal Training
- Process implementation guidance (Optional)

- SCAMPI Class A, Class B, Class C Appraisal

- Metrics Training (Optional)

- Documentation Review/ Implementation Review (Optional)