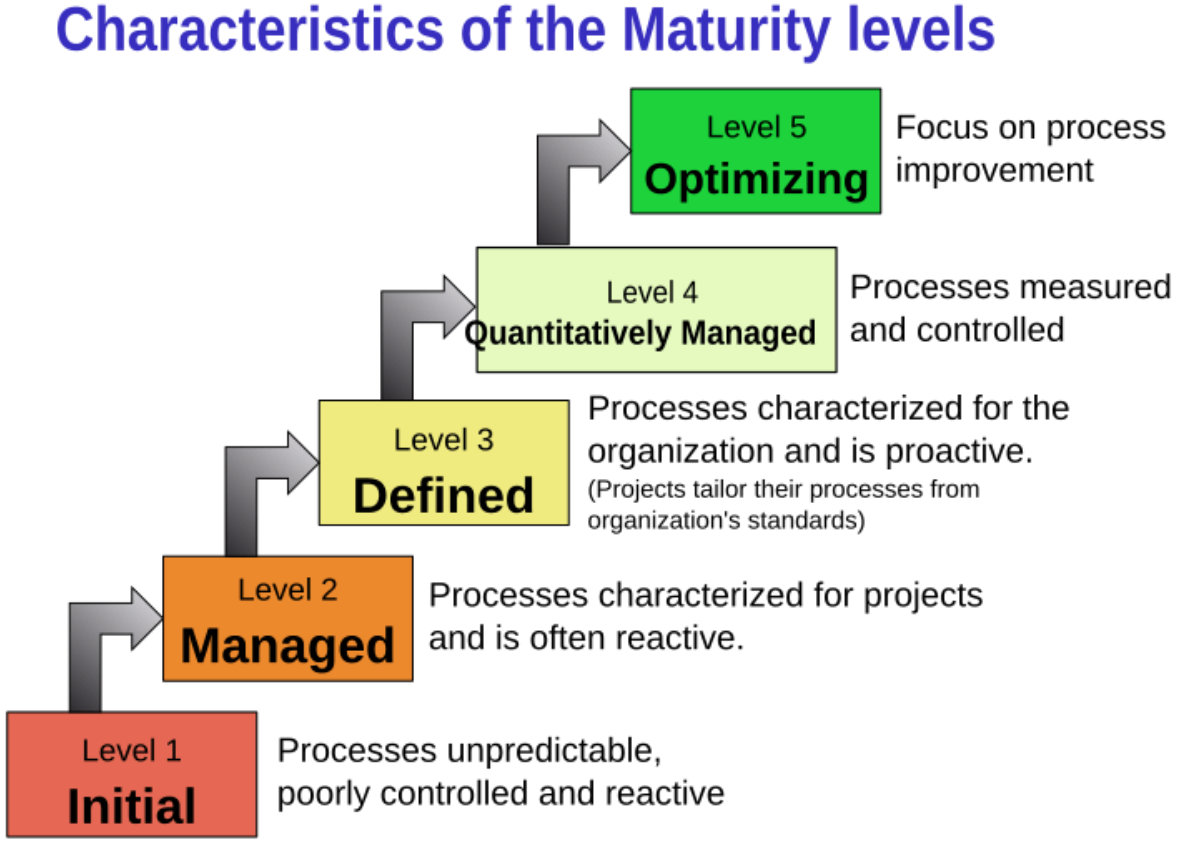


- **Level 1: Initial**
  i. **Characteristics**: Processes are unpredictable, reactive, and inefficient.
  ii. **Guidelines**:
    1. Start documenting processes, even if informal.
    2. Create a basic SRS to capture initial requirements.
- **Level 2: Managed**
  i. **Characteristics**: Processes are project-focused and often reactive.
  ii. **Guidelines**:
    1. Plan and track projects with basic management practices.
    2. Develop a detailed SRS with functional and non-functional requirements.
    3. Use version control to manage SRS changes.
- **Level 3: Defined**
  i. **Characteristics**: Processes are standardized and proactive, with organization-wide standards.
  ii. **Guidelines**:
    1. Standardize processes across projects.
    2. Use an SRS template with user stories, use cases, and acceptance criteria.

3. Train teams to follow the SRS guidelines.

- **Level 4: Quantitatively Managed**
  i. **Characteristics**: Processes are measured and controlled using quantitative data.
  ii. **Guidelines**:
    1. Use metrics to measure the quality of processes (e.g., requirement stability, defect rates).
    2. Implement a traceability matrix to track SRS implementation.
    3. Analyze SRS changes and their impact using data.
- **Level 5: Optimizing**
  i. **Characteristics**: Processes are stable, flexible, and continuously improving.
  ii. **Guidelines**:
    1. Use feedback and automation tools to improve processes.
    2. Refine the SRS template based on lessons learned.
    3. Use advanced tools (e.g., AI) to enhance SRS creation and tracking.

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## Simplified Tip for Exams

- **Initial**: Unpredictable, reactive → Write a basic SRS.
- **Managed**: Projects-focused, reactive → Track projects, use a detailed SRS.
- **Defined**: Standardized, proactive → Standardize processes, use templates for SRS.
- **Quantitatively Managed**: Measured, controlled → Use metrics and track SRS quality.
- **Optimizing**: Stable, improving → Refine and automate SRS processes.

**KPA (Key Process Areas):**
KPAs are key focus areas that help improve processes and achieve specific maturity levels.

Both the CMM and CMMI are divided into key process areas (KPAs) that define specific goals and practices. Each KPA addresses a specific area of software engineering.

The purpose of a Key Process Area (KPA) is to define goals and practices that focus on improving specific areas of software engineering (e.g., planning, monitoring, requirements). KPAs ensure that organizations achieve maturity levels by achieving goals, implementing practices, and improving project quality and efficiency.