

# Software Development Processes

## Basic Terminology

### Artifact

An ARTIFACT is any kind object created in software development, including all documents (specifications, spreadsheets, presentations), models (UML, ...), public displays (kanban, posters), code, and (formal) communication (e.g., email).

### Activity

An ACTIVITY is and distinct unit of work. It is usually associated to smaller tasks. Larger tasks are often referred to as sub-processes. Activities tie together the artifacts needed and created, the roles responsible/involved, and the tools supporting the execution.

### Component

A COMPONENT is any part of the solution, on all levels of aggregation: From subsystems via modules (e.g. class, OSGI bundles), down to individual methods or procedures. It also includes artifacts like test data, configuration files, and manuals.

### Role

A ROLE in a software process is a function, not a person. It could be an individual as well as a team or a whole department, e.g., Quality Assurance. Roles typically come with descriptions of responsibilities as well as required qualifications or certifications.

### Tool & Technique

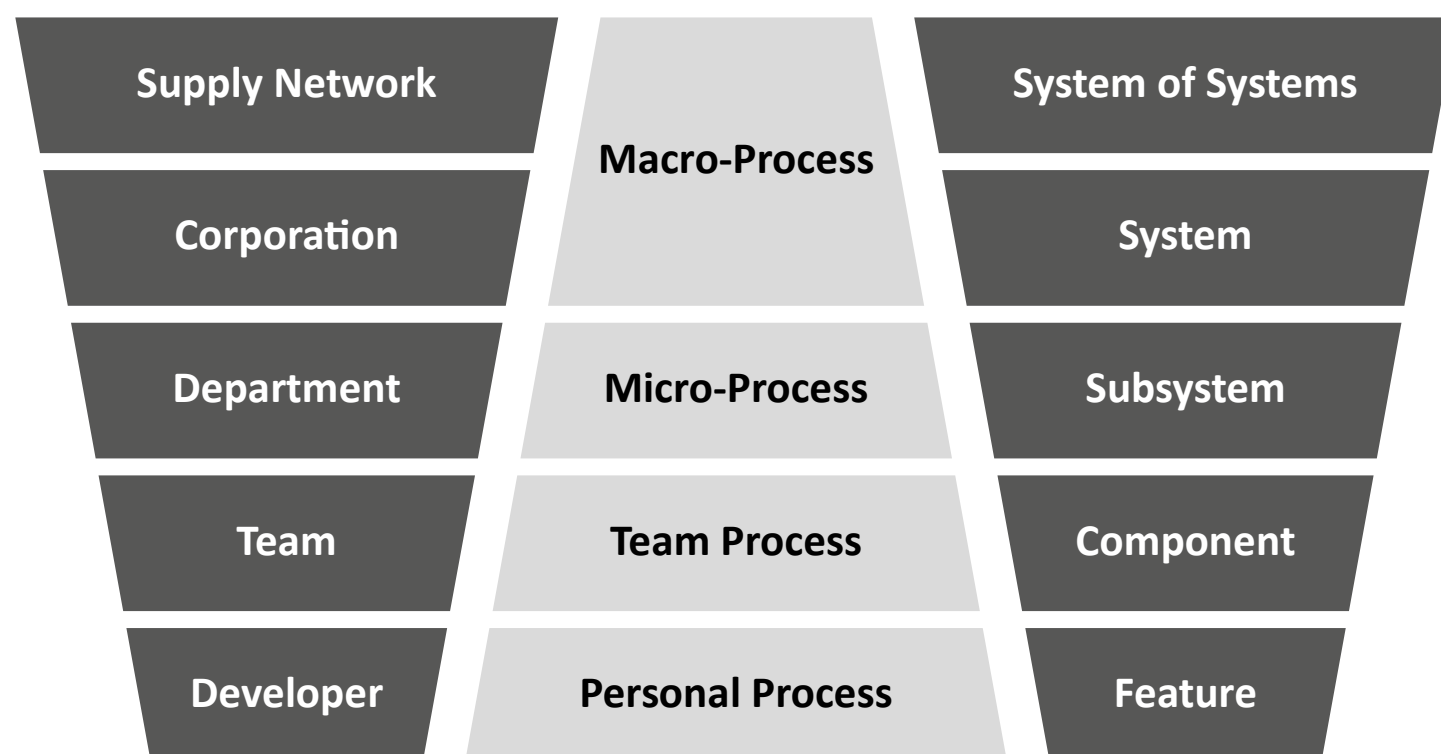
The notion of TOOL includes software applications (e.g., IDEs, frameworks) as well as conceptual tools (e.g., ER-diagrams, UML). A particular procedure, on the other hand, is referred to as a TECHNIQUE (e.g., IxD, unit testing) which one might also call conceptual tool.

### Iteration

One instance of passing through the phases of the logical software life cycle is called an iteration. Depending on the underlying process paradigm, iterations may last from decades to minutes, and may involve a complete supply network or an individual developer.

### Increment

The result of one iteration is called an increment. Large increments, or groups of small increments may be bundled as a release, i.e., a set of features intended for deployment to end users. Small iterations correspond to small increments ("minimum viable product").



### Process Levels

The laws of software development change with the order of magnitude of the development effort. Techniques and procedures that work at one level are often in adequate at another level.