

Cradle-PDM

The **Cradle-PDM** module provides the infrastructure for all other Cradle modules. Its scalability and flexibility create an industrial strength, proven, shared data environment for even the largest projects.

Cradle supports any number of databases, each with its own schema, CM system and users. Each database supports many projects. Use the Project Manager tool to organise this environment by user-defined criteria, for example as hierarchies.

Each database stores any number of items, of any number of types (requirements, risks, classes, user stories, functions) defined by a UI. Items have any number of attributes, each of a user-defined type, that manage up to 1 TByte of any type of data, held in Cradle, or referenced in external files, URLs or another tool or environment.

User-defined calculations are supported in all parts of Cradle and can be displayed as graphs, in views and user-defined reports. User-defined rules can be applied to automatically set attribute values or perform calculations, to maintain the integrity within and between items.

Items can be cross referenced, with optional user-defined link types and groups. Links have user-defined attributes to justify, parametrise, explain or characterise them. You control which links are used to navigate or report traceability, based on link type or group, direction and link attribute values. Links are both direct and indirect, for full lifecycle traceability, impact and coverage analyses.

You use start pages and a phase hierarchy to build an environment tailored to your process. End users only need to be trained in your interface, reducing

training time and costs:

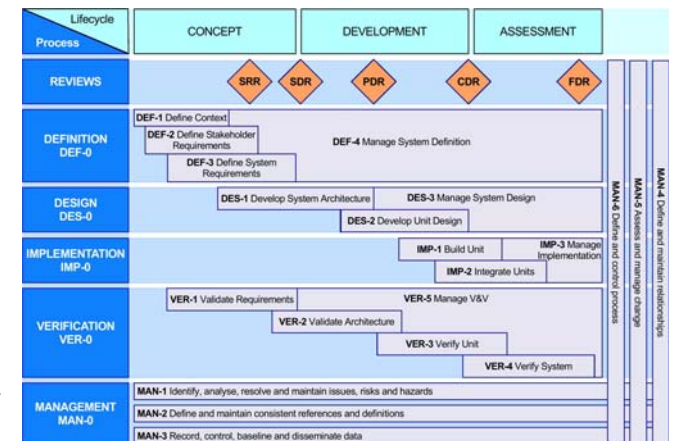
- Start pages are text and graphics controls that perform your choice of operations simply and easily
- The phase hierarchy shows the process as a hierarchy in which an agile or phase activity, task, sprint, report or document is run by a mouse click. Different parts of the phase hierarchy can be shown to each user or stakeholder group.

Traceability and coverage views are available as trees, nested and pivot tables, matrices and Hierarchy Diagrams. Unique transitive links give traceability across the full system lifecycle.

Items evolve through versions that are managed in baselines and controlled by a built-in CM system, with mechanisms for review, baseline and version control, full change control, and audit trails.

Cradle can track all changes. Edits can be reversed selectively or by group. Items can be compared across edits and in baselines. Edits can raise alerts to users, and mark related items as suspect. All edits are permanently available, for change logs.

Cradle provides adaptations to allow variants of items. This mechanism is ideal for databases that contain a library of standard items and projects



that use the library, and contribute to it.

Access controls apply to all items based on user roles, privileges, security clearances and skills. Users can be grouped in a hierarchy of teams, to create any access control scheme, such as for customers, subcontractors and IV&V. The creation and manipulation of links can be controlled, by item or user.

Cradle is multi-user. It locks information at item level, with automatic database commit





after an edit. This maximises users' interaction with the database and guarantees all data is up-to-date.

Cradle's alert mechanism sends messages by e-mail (SMTP or IMAP), Cradle or both. Alerts can be selectively enabled and disabled. Alerts track events on items, including edit, review and formal change.

The Cradle discussion mechanism allows even read-only users to add comments to items. Four other commenting mechanisms are provided.

Cradle can manage project plans and WBS. User task lists are maintained. WBS structures and progress data can be exchanged bidirectionally with external PM tools. Cradle can generate burn-down and earned-value graphs on any user-defined criterion to monitor progress.

Cradle is open and extensible. It provides multiple import/export formats, an API, a user-definable event-driven command interface, interfaces with other tools and bidirectional interfaces to Microsoft Office®.

Cradle provides uniquely powerful data query and visualisation facilities. Each user's environment can be tailored by defining custom queries, views, forms, navigations, matrices, reports and other facilities. All customisations have a scope, to be specific to the end user, or shared with other users of the same type (such as all customers or all managers), the user's team, the entire project, or all projects.

Any desired compliancy, coverage or traceability report can be created quickly/easily using Cradle's queries, multi-row views/nested table views, & saved for later use.

Cradle has floating, dynamic licensing and low cost read-only users. Open and named user licences are available. Everything described here is free of charge.

- Licences, databases and schemas are interchangeable across Linux and Windows 8.1, 10, 11, Server 2012 R2, 2016 and 2019
- Optional support for Oracle and MySQL.

Feature Summary

Feature	Benefits
User-defined process / phase hierarchy	Represent project's process or database views in the Cradle UI, to reduce or eliminate end user training and avoid the need for users to be Cradle experts
User-defined database schema	Any agile or phase-based process can be represented in your Cradle environment
Infinite capacity, distributable database	Cradle scales to accommodate the changing and growing needs of your projects, easily supporting projects with over 1,000,000 items and 8,192 concurrent users
User-defined item and attribute types	Store, manage and link any types of data so all aspects of the project are traceable and controlled
Fully multi-user	Maximum collaboration between multiple users, groups and sites. No complex access control problems.
Full range of basic data types	Accurately represent dates, integers, reals, single/multiple value pick-lists, and plain and rich text
Flexible data storage	Use Cradle to manage data held in Cradle, in external files, in external tools, or at URLs
Automated data integrity rules	Automates your process rules to set attributes based on other attributes' values, or perform calculations
User-defined link types and attributes	Record multiple types of relationship; all links have attributes to characterise and explain relationships
User-defined link rules	Control all operations on links, based on item and link types, and optionally users and groups, ability to set link cardinality
Cross reference Hierarchy Diagrams	Graphically view and manipulate cross references, from source documentation to requirements, analysis and design models, verifications, risks, interfaces and to all other information in your process
Nested tables, pivot tables, matrices	Comprehensive traceability and coverage analysis facilities
User-defined calculations, summaries and burn-down / earned-value graphs	Calculate any desired values from project data, such as level of effort, cost, time, weight or power consumption. Automatic sub-totals. Results can be reported and graphed. Ideal for management summary information and project reports.
User accounts, teams, skills and security levels	Represent any project organisation, including external groups, and define an access control scheme that provides the correct level of access by each user and group to each part of the database
Full change histories	Record of all changes made to information (who, what, why, when) with options to reverse or rewind
Configuration management and control	Control the development, review, baseline and formal change of all project data, with full audit records. All processes are controlled by user-defined workflows.
Integrates with project planning	Bidirectional exchange of WBS and actual progress data. Individual user task lists linked to project data.
Automated alert messaging	Automated notification and communication within the project team, by Cradle and through e-mail.
Discussions	One of five commenting mechanisms, particularly suited to read-only users, particularly for web access
Open and extensible	Variety of import/export, command-based, API and event-driven interface mechanisms. Support for Cradle, CSV, XML, ReqIF and other exchange formats. Specialist integrations with Office® and other tools. A Web Services Interface (WSI) REST-based HTTP API.
Data and platform interoperability	Deploy Cradle components on any Linux or Windows platform and have full interoperability and data compatibility with all other Cradle components on the same or any other platform
Floating and dynamic licences	Licences dynamically shared between users to maximise licence sharing and minimise licence costs



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