

Creative Data Decisions Inc.

methodology

Rational Unified Process

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CDD applies a disciplined approach to software development, using the Rational Unified Process™ (RUP) as our standard development methodology for component-based software development.

RUP is an innovative software engineering process that enhances team productivity and delivers software best practices. In doing so, RUP ensures the timely delivery of component-based solutions such as e-business and e-commerce to our clients.

RUP makes process practical by providing prescriptive guidelines, templates and examples for all critical e-development activities. It is a customisable framework, which can easily be adapted to work the way you work. RUP is tightly integrated with Rational tools, allowing development teams to gain the full benefits of software automation, industry best practices and the Unified Modeling Language (UML), a widely adopted industry standard.

CDD focuses on 6 best practice areas, chosen and designed to develop high quality enterprise applications:

1. Develop iteratively to mitigate risk early in the project
2. Effectively manage requirements
3. Model visually to manage complexity
4. Use component architectures to build resilient architecture
5. Verify quality throughout the lifecycle
6. Control changes to software

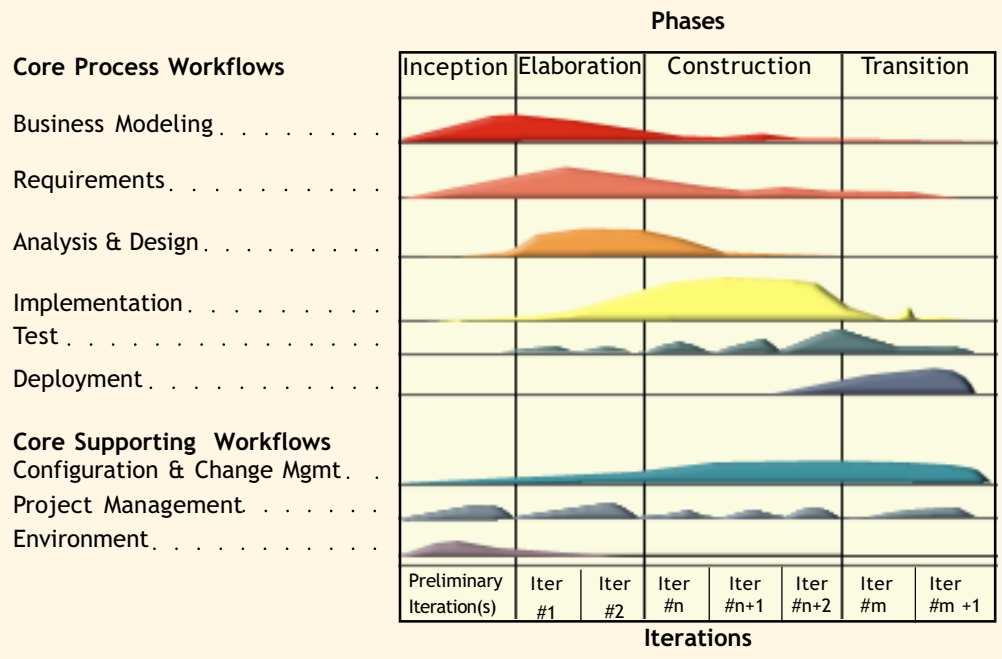
An Iterative Process

The Rational Unified Process is an Iterative Life Cycle Methodology developed at Rational University by the founders of object-oriented technology - Ivar Jacobson, Rumbaugh, Grady Booch.

RUP splits a project into a number of mini-projects called iterations. Each iteration delivers a mini internal release which is assessed by the stakeholders, providing valuable feedback, until the final iteration or external release is delivered to the customer. This approach delivers tangible and measurable results at each iteration and builds functionality incrementally rather than all at once near the end, when change becomes expensive. The end result is a scalable, distributed and multi-tiered application.

Within each iteration, CDD follows 4 distinct phases:

1. Inception
2. Elaboration
3. Construction
4. Transition



Inception

The objective at the **inception** stage is to achieve concurrence among all stakeholders on the life-cycle objectives for the project (for instance, project scope, boundaries, associated conditions and acceptance criteria) and to determine project schedule, resources and cost. A Risk Management Plan is also developed at this stage using risk assessment techniques.

Elaboration

The **elaboration** stage focuses on the engineering process and involves analysis of the software design architecture, baselining of the project vision and construction plan and rationalization of the project plan. The artifacts at this stage include the system use case model, refined non-functional specifications, class diagrams, software architecture documentation, revised risk list and a development plan.

Construction

In the third phase, **construction**, the actual implementation and development begins. Objectives at this stage are to optimize resources and process activity to produce a complete and fully functional software product.

Transitional

In the final **transitional** stage, the software product is deployed. Objectives of the transitional stage are to ensure that users are self-supporting and the project is completed on time and budget and to the client's vision and specifications. Beta testing, acceptance testing, training, fine tuning, project assessment and sign-off all occur at this stage.

Applying RUP for Business Benefit

RUP effectively eliminates risk early in the project and works to ensure that the client's business requirements are totally satisfied by the end system/application produced. Using the power of the WWW, RUP provides an online mentor on each desktop plus presentation in HTML format for universal, platform-independent access across a corporate intranet. RUP provides a team of Software Engineers with easy access to the guidelines they need and the information they want, thus providing better support for the development lifecycle.

For development involving parties situated in different locations, RUP's disciplined methodology supports a collaborative development environment.

CDD's use of RUP provides the clear, repeatable process needed for the on-time, on-budget development of quality software that meets current business requirements; minimizes costs, defects and time-to-market *and* is scalable to future business needs.