

RUP

Stands for "Rational Unified Process." RUP is a software development process from Rational, a division of IBM. It divides the development process into four distinct phases that each involve business modeling, analysis and design, implementation, testing, and deployment. The four phases are:

1. **Inception** - The idea for the project is stated. The development team determines if the project is worth pursuing and what resources will be needed.
2. **Elaboration** - The project's architecture and required resources are further evaluated. Developers consider possible applications of the software and costs associated with the development.
3. **Construction** - The project is developed and completed. The software is designed, written, and tested.
4. **Transition** - The software is released to the public. Final adjustments or updates are made based on feedback from end users.

The RUP development methodology provides a structured way for companies to envision create software programs. Since it provides a specific plan for each step of the development process, it helps prevent resources from being wasted and reduces unexpected development costs.

Visit the Agile Modeling website for a detailed and graphical explanation of RUP.

<https://techterms.com/definition/rup>



Agile Modeling and the Rational Unified Process (RUP)

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Agile Modeling (AM) is a practices-based software process whose scope is to describe how to model and document in an effective and agile manner. The practices of AM should be used, ideally in whole, to enhance other, more complete software process such as **eXtreme Programming (XP)**, the **Rational Unified Process (RUP)**, **Disciplined Agile Delivery (DAD)**, and the **Enterprise Unified Process (EUP)** to name a few. These processes cover a wider scope than AM, in the first three cases the development process and in the fourth the full software process including both development and production. Although these processes all include modeling and documentation activities, in one form or the other, there is definitely room for improvement. With DAD the practices of AM are built right into the framework, with XP the modeling processes should be better defined, and with RUP modeling processes could definitely stand to be made more agile.

In this article I explore in detail how AM can be used in conjunction with the various instantiations of the Unified Process (UP), including but not limited to the RUP and the EUP. To do so, I discuss

- How modeling works in the Unified Process
- How good is the fit between AM and RUP?
- Case study
- Adopting AM on an UP project
- How does this work?
- References and Suggested Reading

How Modeling Works in the Unified Process

All efforts, including modeling, is organized into disciplines (formerly called workflows) in the UP and is performed in an iterative and incremental manner. The lifecycles of the **AUP** and **EUP** are presented in **Figure 1** and **Figure 2** respectively. The AUP is a subset of the RUP and the EUP a superset of the it. I like to say that the UP is serial in the large and iterative in the small. The six phases of the EUP clearly occur in a serial manner over time, at the beginning of an UP project your focus is on project initiation activities during the Inception phase, once your **initial scope** is understood your major focus becomes requirements analysis and architecture evolution during the Elaboration phase, then your focus shifts to building your system during the Construction phase, then you deliver your software during the Transition phase, you operate and support your software in the Production phase, and finally you remove it from production during the Retirement phase. However, on a day-to-day basis you are working in an iterative manner, perhaps doing some modeling, some implementation, some **testing**, and some management activities.

In the RUP there are three disciplines[2] that encompass modeling activities for a single project - Business Modeling, Requirements, and Analysis & Design - and the EUP adds **Enterprise Business Modeling** and **Enterprise Architecture**. The AUP on the other hand, being a subset of the RUP, combines the three modeling disciplines into a single Model discipline. All six disciplines are described in **Table 1**. For a description of potential artifacts to create during these disciplines visit **Agile Models Distilled**.

Figure 1. The lifecycle of the Agile Unified Process (AUP).

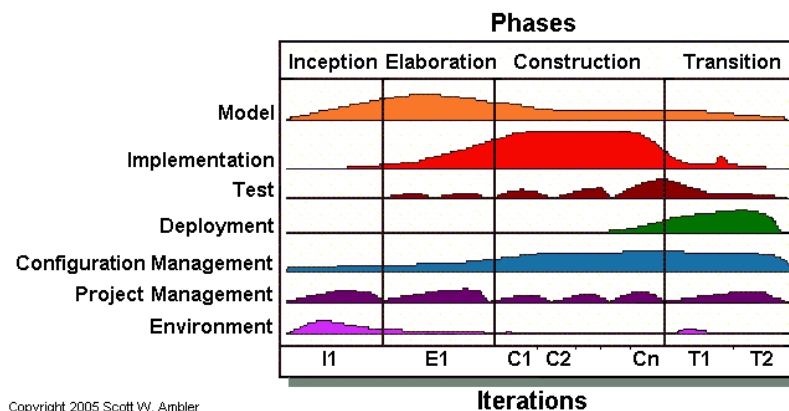


Figure 2. The lifecycle for the Enterprise Unified Process (EUP).



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