

Using IB-ARM as a Strategy for Leveraging the Rational Unified Process (RUP)

Rational Unified Process - best practices



The Rational Unified Process (RUP) is a software engineering process with the primary goal of ensuring the production of high-quality software that meets the needs of its end users. The RUP has several key best practices at its core. These are:

- Develop software iteratively
- Manage requirements
- Use component-based architectures
- Visually model software
- Verify software quality
- Control changes to software

IB-ARM helps organizations to achieve these best practices in both the project development cycle and also into the maintenance cycle of existing software systems.

Populating the RUP Framework

The RUP framework requires many artifacts to be created for the various workflows within the process. These artifacts are created in various tools including those listed below:

Core Process Workflows	Artifact Types	Sample Tool Support
Business Modelling	UML models	Rational Rose
Requirements	Requirements	Requisite Pro
Analysis and Design	UML models	Rational Rose
Implementation	Source Code	Java, .Net, Eclipse, ClearCase
Testing	Test scripts	Rational Robot, WinRunner
Deployment	Documents, manuals	Document management

When developing the individual artifacts within the RUP, various development tool vendors provide supporting tools but none of their tools can produce an integrated view of the system. The tools provide an excellent method for specialists to create the original source artifacts. However, the tools are difficult for the casual user to utilize effectively and individually, they cannot provide an integrated view across the various workflows.

Consistent use of the IB-ARM Repository eliminates this shortcoming by ensuring that all the relevant information from several tools or sources is captured and centrally managed. The 'relationship mapping / linking' engine within IB-ARM maps the required relationships that allow the information to be viewed in context, sharply reducing the possibility for oversights in the analysis effort. During this process, any inconsistencies in the models loaded to the Repository will become apparent and can be addressed, resulting in a corrected and consistent integrated view.

In addition, IB-ARM can map components from existing legacy systems together with new / revised components to provide a consolidated view across all technologies and platforms.

Using and Maintaining the RUP Framework Artifacts

When the organization is looking for opportunities to leverage its IT assets, it needs to examine the current set of business models, architectures, policies and practices using an appropriate and effective approach. Most current RUP approaches require the organization to use several tools and then attempt to piece together the overall picture manually. By contrast, using an IB-ARM-inspired approach, this process can be automated, becoming rigorous, consistent, repeatable and efficient.

The IB-ARM approach and the central repository that it creates, provide opportunities for an automated process for maintaining the full set of current artifacts consistent with the most recent business directions and initiatives. Automating this process can be tailored to the specific requirements of the enterprise, but typically uses a combination of specialized information views, together with a unique template for each artifact to be created. Together these components can provide a dynamic publishing and dissemination capability for the artifacts.

Support for RUP Best Practices

IB-ARM fully supports the principles and best practices of RUP. IB-ARM actively supports a model-driven approach in which requirements are managed and solutions are component-based. The use of UML models is fully supported and the IB-ARM repository provides linkages between models and implemented components. XMI interfaces from tools such as Rational Rose are used to extract key model information and map it into the IB-ARM repository. In addition, component metadata from existing legacy systems can be imported into UML modelling tools via XMI import facilities.

Iterative software developments are well managed within the repository. Changes to software can be fully managed within the repository, to ensure that the repository is always up to date. Periodic refreshes of the IB-ARM repository can verify application consistency and can identify missing components to ensure all required components are developed within each iteration.

Software quality is improved by allowing a more complete, integrated analysis and design to be completed with less effort. IB-ARM is an active partner in successfully implementing and maintaining software systems based on the RUP approach.

The IB-ARM implementation can be tailored to best serve the business needs and intentions of the organization. In particular, the scope of implementation can be adjusted to whatever is optimal for the current situation. Further 'fine-tuning' of the approach can also be made by using a 'phased' IB-ARM implementation, based on clearly identified costs and benefits for each phase. The benefits experienced in each phase will then confirm, refine and inform the subsequent phases.

As described in detail above, using an enterprise-wide IB-ARM approach is consistent with and supportive of all aspects of the RUP approach to software development and maintenance and provides many benefits and opportunities to the organization. An integrated IB-ARM / RUP approach should be considered by any organization currently using RUP or actively considering adopting it

About Information Balance, Inc.



Information Balance, Inc. was founded in 1988 to provide consulting and training services to the IT industry. Over the years and through continuous growth, the company's field of expertise has significantly broadened and now includes all aspects of Systems Development and Integration, covering all platforms including mainframe, client/server and the Internet. Many of these areas are supported by formal training curricula.

Today, Information Balance, Inc. is a well-established firm with offices in Canada and Europe. Sustainable, controlled growth has been the mainstay of Information Balance's success, with over 30% growth year over year. Information Balance has been awarded the following accolades supporting its corporate excellence.

- Financial Post Fast 50 ('98, '99, '00)
- Profit Top 100 ('99, '00)
- Andersen 50 Best Privately Managed ('99, Regional Finalist)

Information Balance maintains on-going professional relationships with many large Fortune 500 corporations and government organizations.

For more information, please call 416-962-5235, e-mail infobal@infobal.com, or visit our website at www.infobal.com.