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<p>CUST-DEV2</p> <p>[REMOVED]</p>		

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DOCUMENT HISTORY	

DOCUMENT HISTORY

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(*) Action: I = Insert R = Replace

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INTRODUCTION	

1 INTRODUCTION

1.1 Scope

In this section is described which tools can be implemented by the CUST-DEV2 Team.

Some of the tools are already decided, e.g. ClearCase, ClearQuest, Functional Tester and Performance Tester. The implementation of the other tools listed here are to be discussed at a later point in time with DG TAXUD.

1.2 References

RD#	Title	Originator	Version	Date
[RD1]	Framework Quality Plan	CUST-DEV2	00.01.00	

Table 1-1: Reference documents

1.3 Acronyms and Abbreviations

A table with the used Acronyms and Abbreviations can be found in Annex 19 of the FQP.

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2 SHORT DESCRIPTION OF CUST-DEV2 TOOLING

The foundation of our development services is the use of the Accenture Delivery Suite (ADS). ADS captures key components of Accenture's delivery experiences, easy-to-use delivery methods, tools, metrics and architectures.

Collectively, the suite:

- Provides a common language and standard approach for delivering and operating solutions globally;
- Targets increases in the reliability and predictability of systems delivery by providing tested methods, tools and architectures;
- Promotes the implementation of our Global Delivery Model through a disciplined approach to managing application development and application management with work distributed across multiple sites, multiple workforces and multiple cultures.

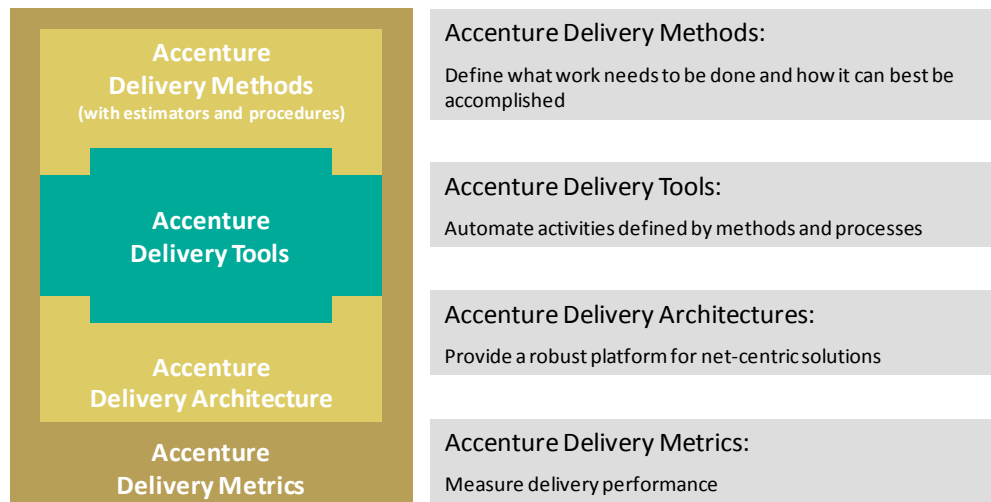


Figure 1 Accenture Delivery Suite

Accenture Delivery Tools (ADT), part of the Accenture Delivery Suite, contain knowledge assets and software programs designed and tested through years of complex project execution. Based on industry-standard configuration, these tools address program and project management, communication, and collaboration, and include templates and workflows for the tasks in our methodology. These tools save hundreds of days of effort in complex projects and are recognised by third-party analysts and clients as leading applications. ADT is comprised of vendor-provided tools and internally-developed Accenture tools, designed to address key points across the development life cycle and support end-to-end solutions delivery.

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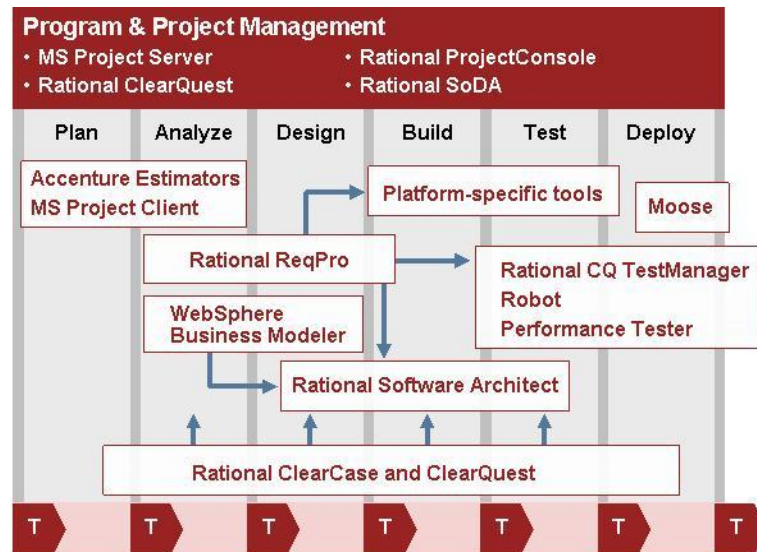


Figure 2 Program and Project Management

ADT is powered by our Accenture Delivery Methods (ADM) and automation of ADM Procedures. We have customised ADT targeted for custom (Java, .NET) and package software (Oracle, SAP, etc.) development projects. The set of tools that are deployed as a part of ADT, in the different phases of the application lifecycle are outlined below:

Lifecycle Phase	Tools Used	Description
Requirements Specification	IBM Rational RequisitePro	<ul style="list-style-type: none"> Requirements versioning and baselining Linkages to deliverables and test cases Traceability analysis
	IBM WebSphere Business Modeler	<ul style="list-style-type: none"> Business process modelling and simulation
Design and Prototyping	IBM Rational Software Architect	<ul style="list-style-type: none"> UML modelling Data modelling: IE, IDEF diagrams
	IBM Rational ClearQuest	<ul style="list-style-type: none"> Change and defect tracking Workflow to manage activities and monitor status
Build and Test Service	IBM Rational ClearCase	<ul style="list-style-type: none"> Deliverable repository with document version control and baselining Software configuration management
	IBM Rational ClearQuest	<ul style="list-style-type: none"> Change and defect tracking Workflow to manage activities and monitor status
	IBM Rational Test Manager	<ul style="list-style-type: none"> Test activity management, execution and reporting
	IBM Rational Performance Tester	<ul style="list-style-type: none"> Performance testing
	IBM Rational Functional Tester	<ul style="list-style-type: none"> Functional Regression Testing
	IBM Rational PurifyPlus	<ul style="list-style-type: none"> Automated runtime analysis

Table 2-1: Toolset

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REQUIREMENT MANAGEMENT TOOLS	

3 REQUIREMENT MANAGEMENT TOOLS

3.1 Rational RequisitePro

CUST-DEV2 business analysts, business users, and developers will use Rational RequisitePro to understand requirements and track their changes, to model user interactions in order to validate the requirements, and also to define test cases for the requirements.

Rational RequisitePro is an easy to use requirements management tool. It allows an effective documentation and maintenance of requirements using familiar document-based methods while leveraging database-enabled capabilities such as requirements traceability and impact analysis. The result is better communication and management of requirements.

Some of the features of Rational RequisitePro are:

- Word-Database integration: support of MS Word for requirement authoring and a database for organisation, tracking and management;
- Requirements traceability: that allows tracking of relationship between requirements;
- Web-based Access: anyone with Web Access can view, author and manage requirements without having Rational RequisitePro loaded on their machine;
- Integrated requirements management: Rational RequisitePro can be easily Integrated with Rational Software Architect, Rational Software Modeller, Rational ClearQuest, Rational Application Developer, Rational Data Architect, Rational Systems Developer, Rational SoDA, Rational Unified Process and Rational TestManager.

3.2 Rational Software modeller

This successor of Rational Rose is a robust collaborative platform for visual modelling and design using UML industry standard. It will be used primary to specify and communicate software project information from several perspectives to various stakeholders. Some of the features are:

- **Comprehensive UML2.0 and Domain Specific Modelling:** UML 2.0 allows the capture and communication of all aspects of an application architecture using a standard notation that is recognised across all of IT;
- **Simplified diagramming:** by using free-form diagrams, topic diagrams and browse diagrams;
- Visual modelling with content assistance.

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4 INCIDENT, PROBLEM, CHANGE AND CONFIGURATION MANAGEMENT TOOLS

4.1 Rational ClearQuest

CUST-DEV2 project managers and service manager will use **Rational ClearQuest** to provide activity-based management, such as workflow processes to define team procedures such as issues handling, or management of defects or enhancements. The product is shipped with templates for some common processes, and incorporates notification of team members with task-related or other information. Some of the features of Rational ClearQuest are:

- Ability to create flexible, customisable and automated workflows;
- Accessibility via a Web version, which alleviate the heavy requirement of the full client version;
- A Design that allow its use with other Rational software testing tools, such as Rational Performance Tester, Rational Functional Tester and Rational Manual Tester;
- ClearQuest also integrates well with Rational ClearCase, allowing to correlate source code change sets with ClearQuest records (i.e. bugs) simplifying some aspects of bug tracking and source code management;
- ClearQuest provides as well a robust environment for software quality assurance.

IBM Rational will be used as the incident and problem management tool.

DG TAXUD will be offered a web access to the service and incident repositories.

4.2 Rational ClearCase

Rational ClearCase will be used to provide life cycle management and control of software assets, with facilities such as integrated version control, parallel development support, baseline management, and build and release management. All changes to artifacts will be under software control via Rational ClearCase, and traceable via activities through Rational ClearQuest. Some of the features of ClearCase are:

- Wide range of supported environments including Windows, Linux, Unix and z/OS;
- Local and remote client access providing access to project assets from anywhere;
- Flexible usage models; Unified Change Management (UCM) or base Rational ClearCase offering the flexibility to implement virtually any process model solution;
- Parallel development support including automatic branching and advanced merging and differencing technology, allowing teams to work on the same code or release at the same time with the ability to easily resolve conflicts and reduce confusion;

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- Integration with design, development, build, test and deployment tools. Integration with ClearQuest for change management, IBM Rational Asset Manager for asset reuse and IBM Rational Build Forge for software assembly and builds.

DG TAXUD will be offered a web access to the accepted branch of the ClearCase repositories.

CUST-DEV2	REF: [REMOVED]
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TESTING TOOLS	

5 TESTING TOOLS

To support the testing phase, a number of IBM Rational tools are proposed for successive levels of software testing. The reason to prefer the IBM Rational toolset in this area is based on the fact that this toolsets integrates with ClearQuest. This integration allows the testing incidents to be automatically integrated in the ClearQuest repository for future follow-up.

5.1 IBM Rational Functional Tester

This tool provides an advanced, automated functional and regression testing tool for testers and GUI developers in Java, Microsoft and Web based technologies. The product includes IBM Rational Manual Tester and IBM Rational TestManager and integrates seamless in the ClearQuest environment which can store the testing results and incidents.

5.2 IBM Rational PurifyPlus

This is a set of automated runtime analysis tools for improving Windows, Linux and UNIX-based application reliability and performance. This toolset provides tools to pinpoint memory leaks, profiles application performance and analyse code coverage both on the Windows as the UNIX/Linux environment.

5.3 IBM Rational Performance Tester

This is a load testing tool which automates the simulation of a given load generated by developer scenario. This tool will mainly be used to perform robustness testing during the development and testing phase. This is performed by means of the execution of the developed scenarios during a long duration.