IBM Innovate 2012
The Many Faces of IBM® Rational® Rhapsody®

Prasad Bhat
Technical Consultant (Systems), IBM Rational
prasad.bhat@in.ibm.com

IBM Software

Innovate2012

The Premier Event for Software and Systems Innovation

Next NOW!

What does it take to build smarter products?

Connect multiple products and services into a *"system of systems"* to deliver unique value

Leverage *systems engineering* to accelerate time to market, improve quality and reduce costs
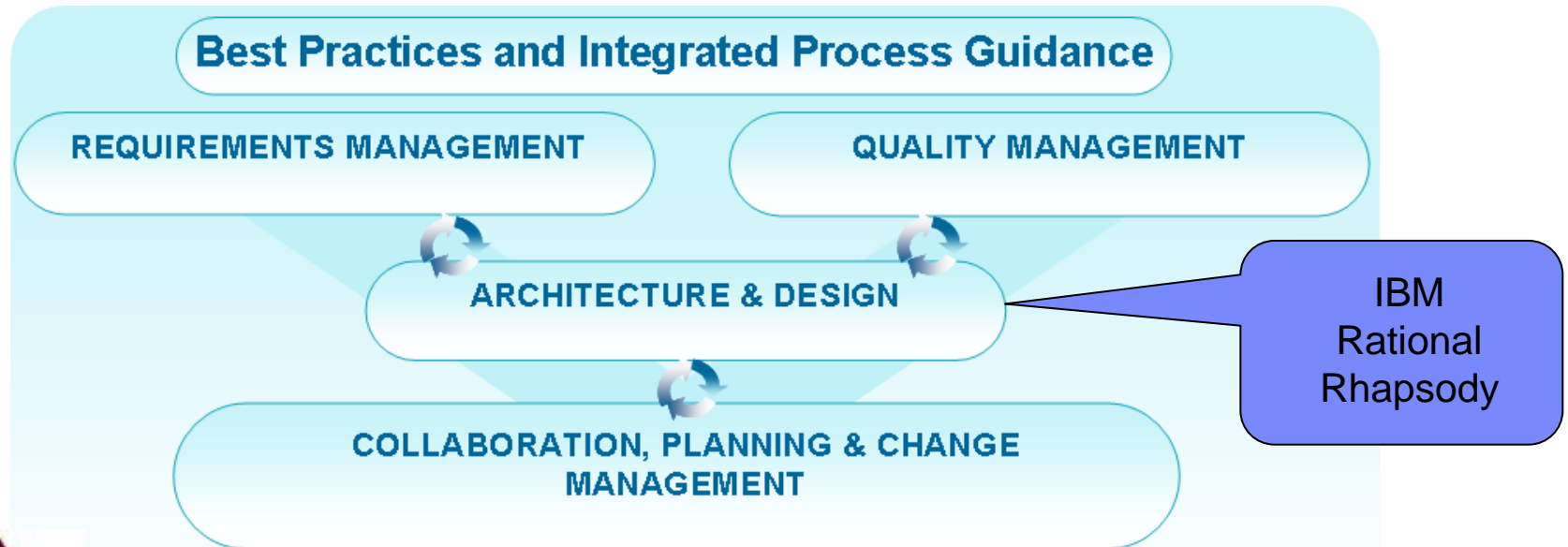
Develop a core competency in *software delivery* to produce products that are differentiated

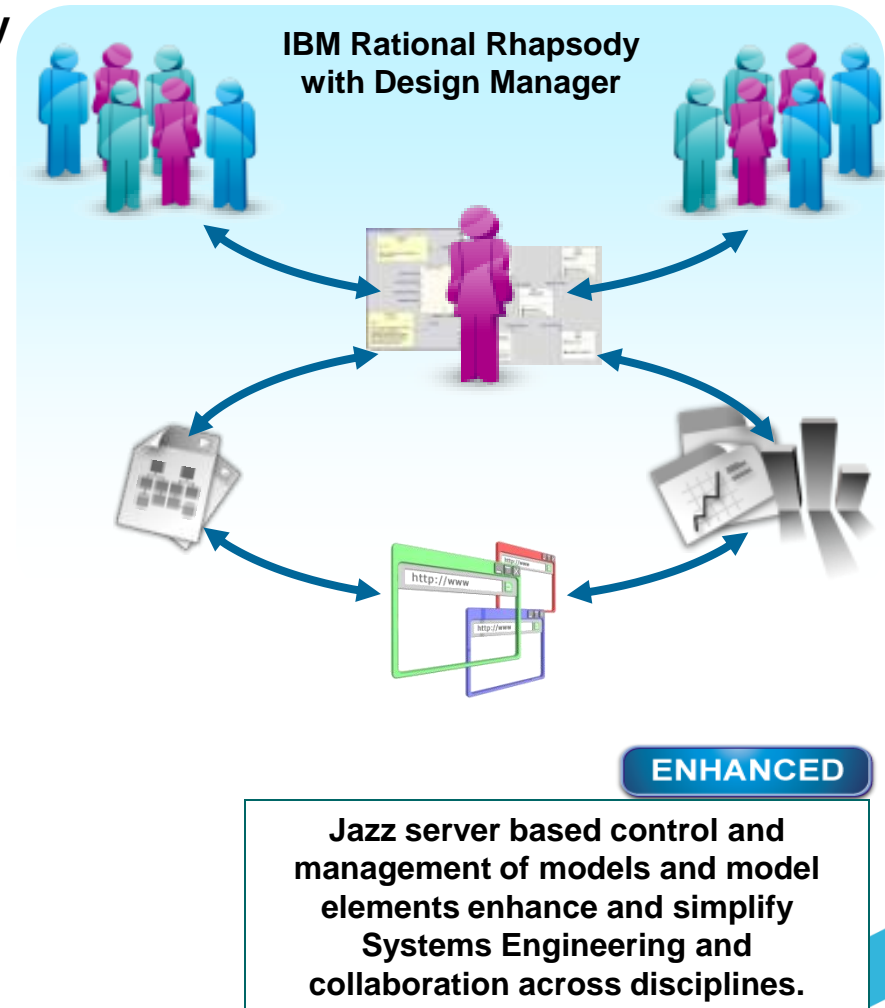# Unify Lifecycle Disciplines across Systems and Software Engineering

Best Practices, Tools and Services on an open platform

Best Practices and Integrated Process Guidance

REQUIREMENTS MANAGEMENT

QUALITY MANAGEMENT

ARCHITECTURE & DESIGN

IBM Rational Rhapsody

COLLABORATION, PLANNING & CHANGE MANAGEMENT

Open Services for Lifecycle Collaboration

modaf

DODAF

SysML

RTCA DO-178B

jazz

android

AUTOSAR

ISO 26262

GENIVI

Next NOW!

3

A look ahead – Rhapsody with Design Manager
## The future of design is collaborative

- **Enhanced user experience and productivity** with solution focused guidance

- **Simplified design collaboration** with Jazz-based model management

- **Improved Systems Engineering workflows** based on single source of truth across requirements and designs utilizing OSLC

- **Streamlined safety-critical certification** with back to back testing

- **Rapid automotive development and integration support** with AUTOSAR 3.2 and 4.0

- **Updated DoDAF 2.0 / MODAF 1.2 architecture support** with UPDM 2

IBM Rational Rhapsody with Design Manager

ENHANCED

Jazz server based control and management of models and model elements enhance and simplify Systems Engineering and collaboration across disciplines.

Next NOW!

4

Where we're going with Rhapsody and
Engineering Lifecycle Management
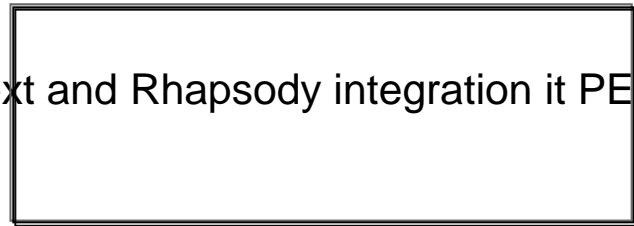
- **DOORS Next Generation**

  – Shared Jazz server and database

  – More flexible requirements organization

  – Familiar to DOORS users

  – Works with DOORS 9

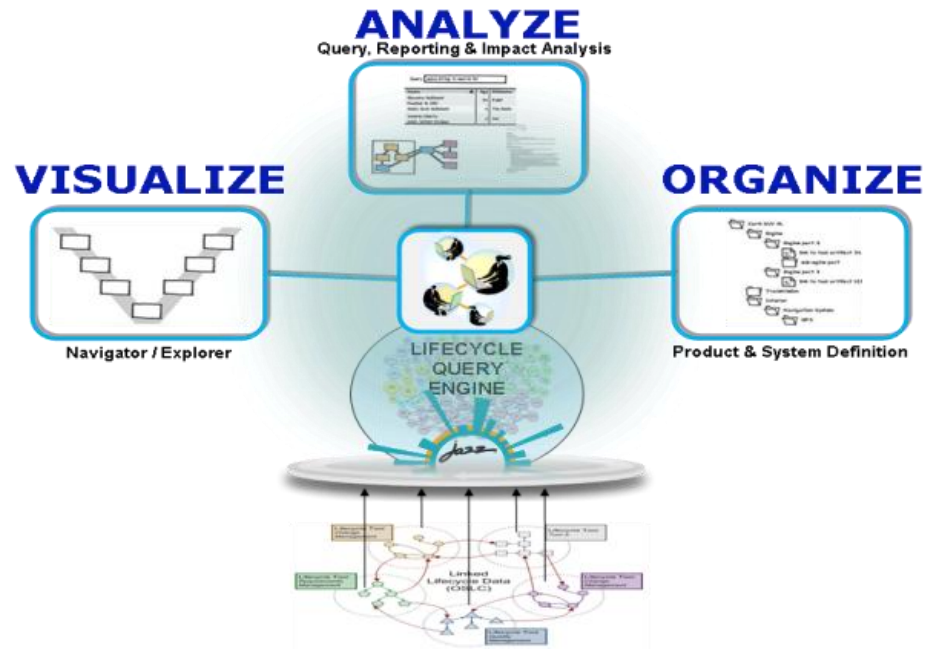 – Beta available now at Jazz.net
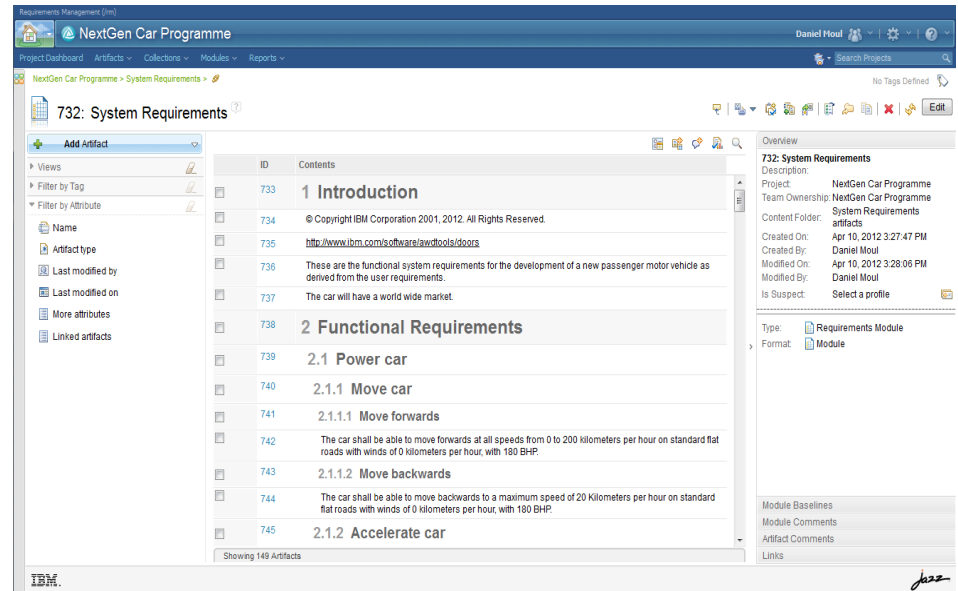
- **Integrated with Rhapsody**

  – Single source of truth between requirements and design via OSLC

  – Coverage and Impact analysis

See DOORS Next and Rhapsody integration it PED

Where we're going with Rhapsody and
Engineering Lifecycle Management

- **Increase your innovative capacity**
  - Access your product intelligence

- **Improve efficiency and productivity**
  - Manage complexity of data and relationships

    - **Reduce costs**
  - Understand impact of change across engineering domains

- **Enhance collaboration and visibility**
  - Understand interaction and dependencies between development disciplines

  - **Protect your investments**
   - Federated, Linked Data architecture

ANALYZE
Query, Reporting & Impact Analysis

VISUALIZE
Navigator / Explorer

ORGANIZE
Product & System Definition

LIFECYCLE QUERY ENGINE

"[Cross-domain] impact analysis is the holy grail that we have been chasing"
-- Beta participant

Next NOW!

Did you know there are many different types of Rhapsody users

- Systems of Systems Engineering – DoDAF, MODAF, NAF, etc

- Systems Engineering – design trades, systems specifications, ICD definitions

- Software Engineering – embedded, real-time, agile
  - Safety Critical – IEC 61508, ISO 26262, DO-178B/C, MISRA C/C++, etc

- Testing – unit, integration, systems

- AUTOSAR – systems and software architecture definition, behavioral modeling

- Extended Team – managers, lead engineers, customers, marketing, suppliers, etc

Embedded Market Leadership

- VDC data shows IBM/Rational as the market leader of standard language-based, embedded software / system modeling tools for the 2009 calendar year*.

IBM/Rational   75%

Others   25%

0%   20%   40%   60%   80%

percent of dollars 2009
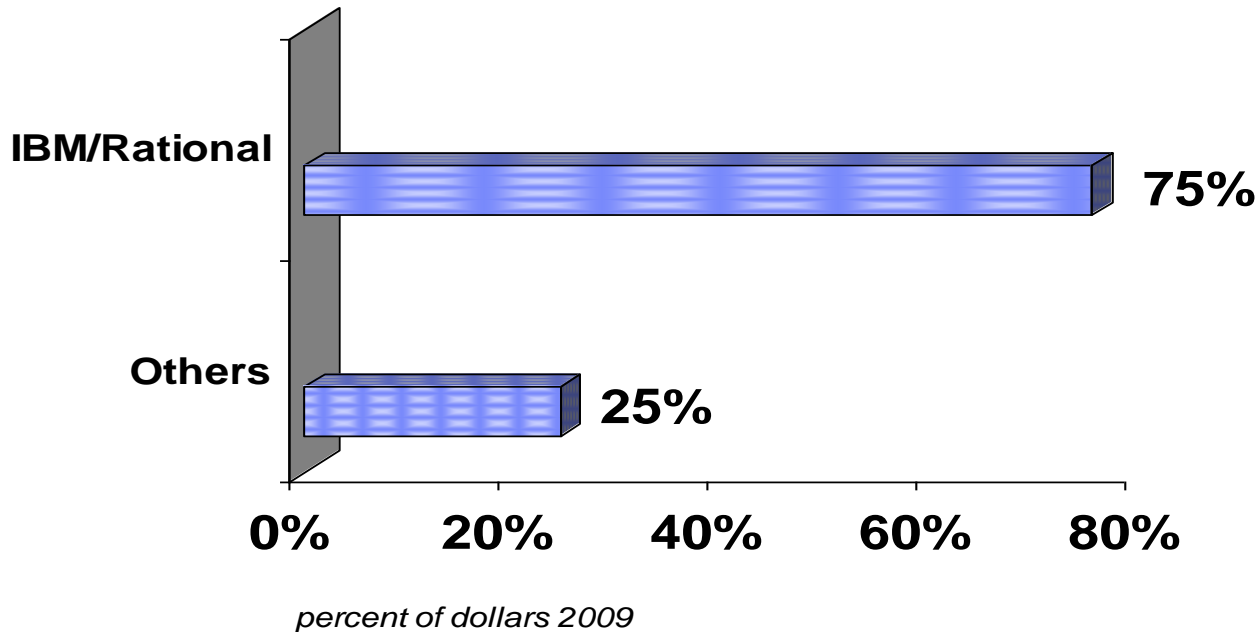
Source: 2010 Software & System Lifecycle Management Tools Market Intelligence Service, Volume 1: Software & System Modeling Tools – Dec 2010, VDC Research

Rational Rhapsody Roadmap Themes

Rhapsody

Enhance model driven systems engineering, embedded and real-time software development and testing

Continue evolution of vertical market solutions
Aerospace & Defense, Automotive, Electronics (Medical Devices, Consumer, Mobile Devices, Communications Infrastructure) & Energy (Smart Grid)

Add specific solutions for
Distributed Systems, Multi-core/Multi-Processor & Strategic Reuse

Common

Offer Collaborative Design Management on Jazz to provide team collaboration, automation, integration and reporting across Systems Development Lifecycle

Support Systems Engineering and Software Engineering tools "in" the Cloud

2012   **2013**   **2014+**

9

Next NOW!

www.ibm.com/software/rational

www.ibm.com/software/rational

Rhapsody has been successfully used by different types of users in different industries