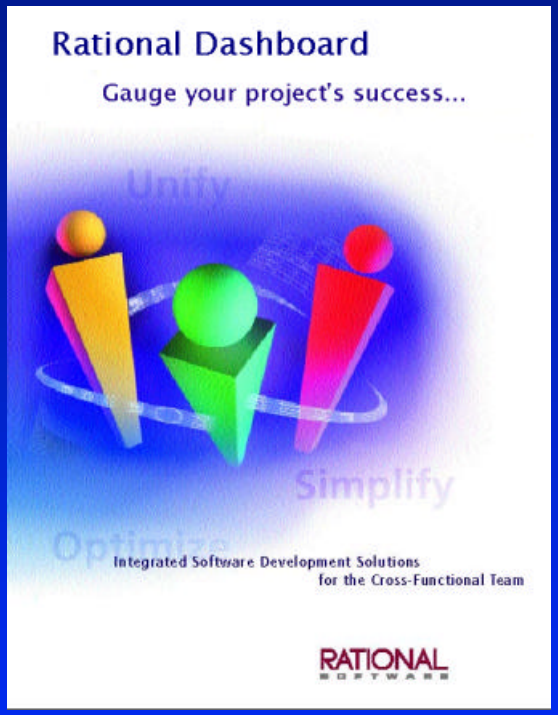
Dashboard Training



Course Objectives

- **Intended Audience**
  - Overview, Architecture, and Dashboard Client modules are intended for Dashboard users and Dashboard administrators
  - Installation, agent, API, and Administration modules are intended for Dashboard administrators
- **When you complete this course you should be able to**
  - Describe the Dashboard Architecture
  - Install all of the Dashboard components
  - Use and customize the Dashboard Client interface
  - Collect metrics using the SoDA Agent.
  - Import and export data using the CSV Tool
  - Write a custom Dashboard agent using the Dashboard API
  - Perform Dashboard database administration functions

Course Prerequisites

- **Some programming experience (writing custom agents)**
- **Some NT administrator background (database server installation)**

- **Nice to know:**
  - Some Java experience (writing custom agents)
  - SoDA Domains, Rose, ReqPro and ClearQuest experience (customizing the SoDA agent, defining metric primitives)
  - SQL experience

Agenda

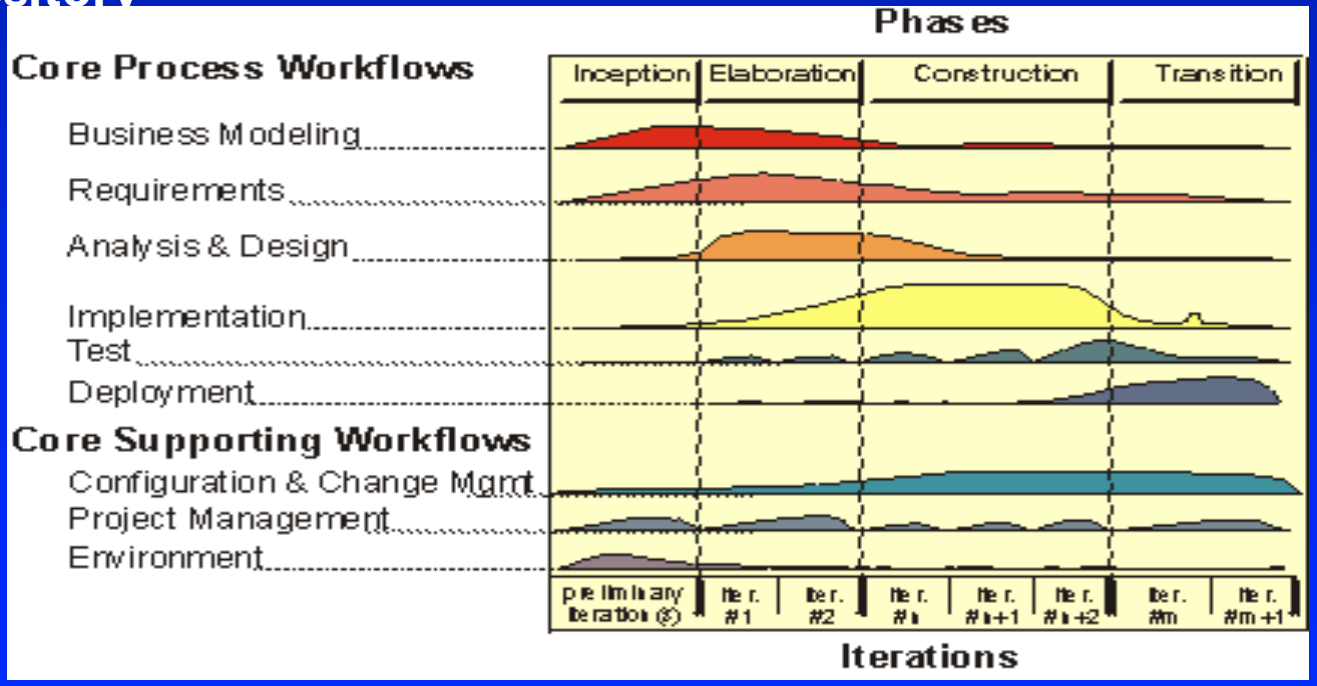
- Module 1: Dashboard Overview
- Module 2: Dashboard Architecture
- Module 3: Dashboard Installation
- Module 4: Dashboard Client Operation and Customizations
- Module 5: SoDA / File Agent Basics
- Module 6: SoDA Agent Customizations
- Module 7: CSV Tool Basics and Operations
- Module 8: Dashboard API
- Module 9: Dashboard Administration

Dashboard

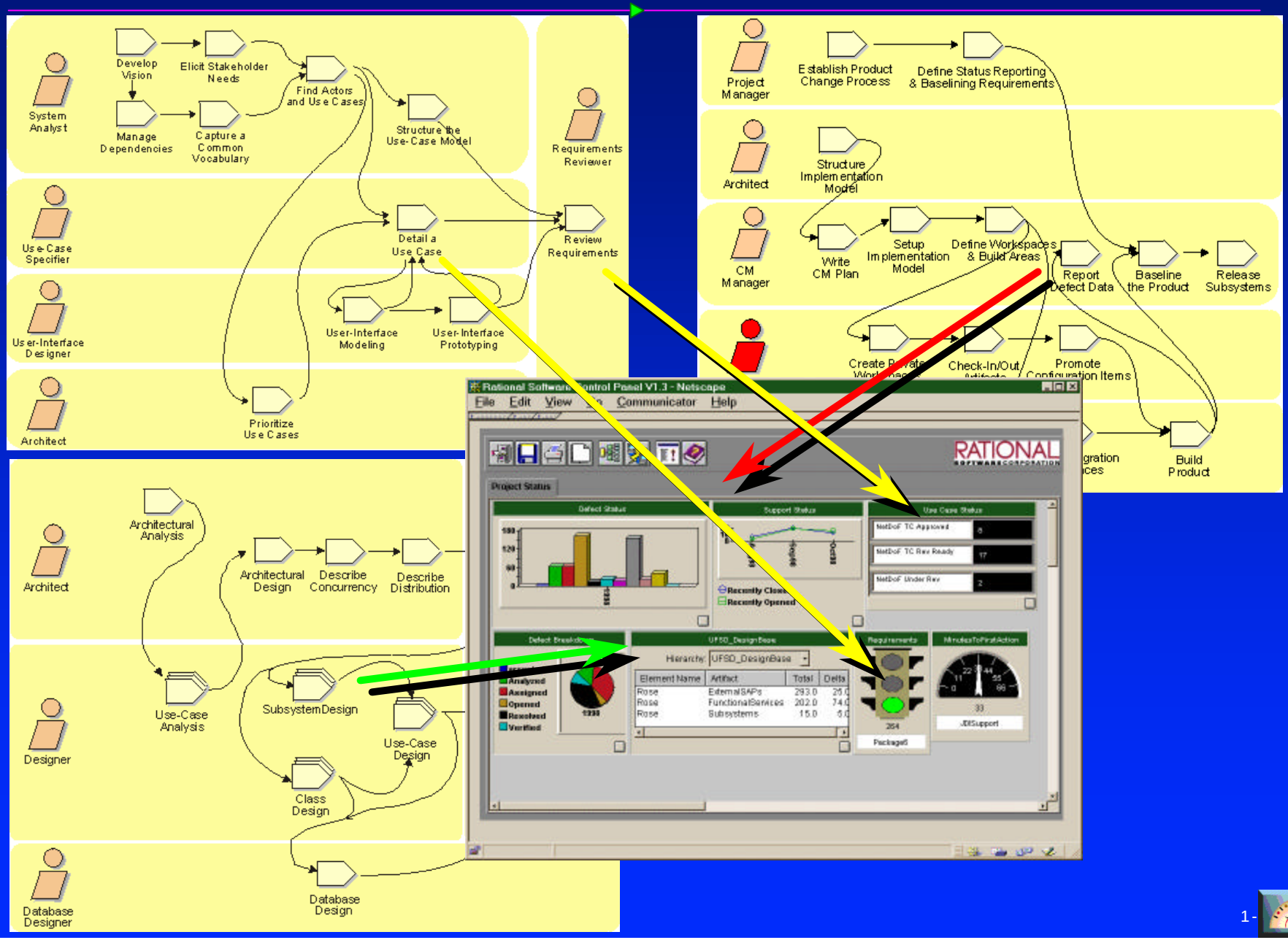
- Provides a graphical means to viewing large-scale software projects
- Provides critical information, i.e., metrics, regarding a project's status via automated, non-intrusive data collection
- Provides graphical indicators, gauges, dials, charts, counters, and raw data to help you identify potential risk areas, root causes, slowdowns, or breakdowns
- Facilitates timely and uniform communication of project status within the organization
- Reduces management overhead effort required to monitor project performance

Dashboard Overview

- **Iterative software development processes include multiple core process workflows, each spanning multiple phases**
- **Each workflow / phase is "realized" using multiple software products**
  - The output of each workflow / phase are one or more artifacts
- **The Dashboard provides the ability to measure these artifacts from multiple data sources / workflows / phases in a central repository**



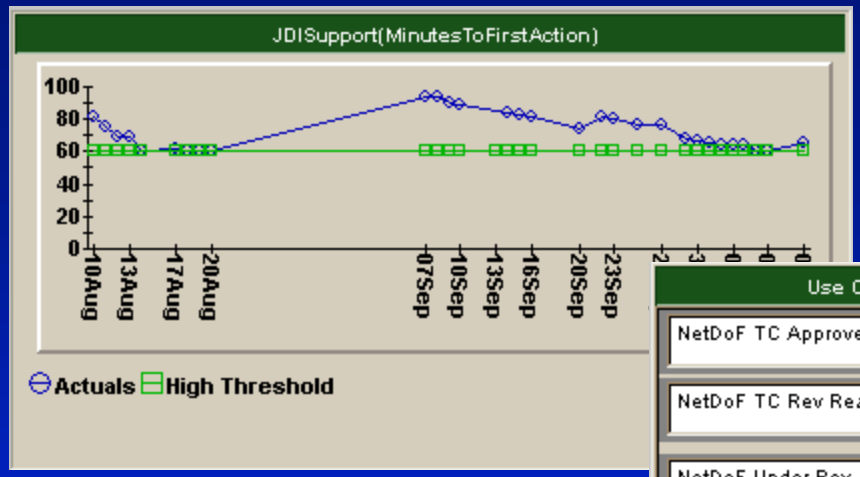
Measuring Development Process Workflow



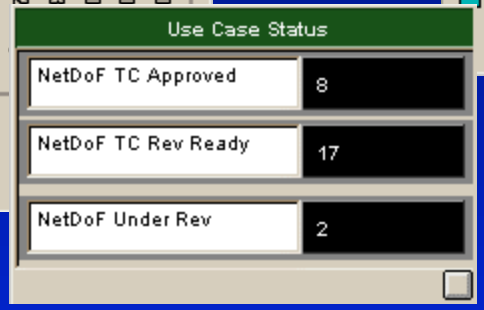
Dashboard - Core Principles

- ✓ Visibility & Insight
- ✓ Automated Metrics Collection
- ✓ Consistent Metrics Data
- ✓ Easy to Use

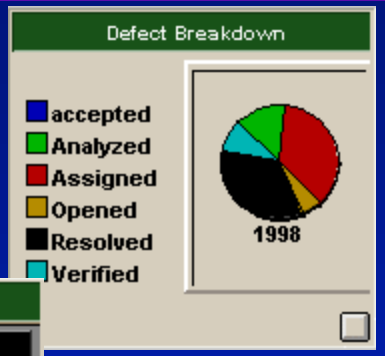
Dashboard - Visibility & Insight



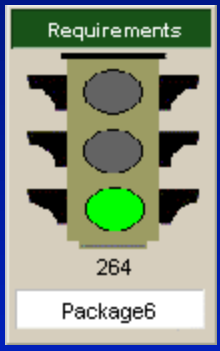
History & Trends



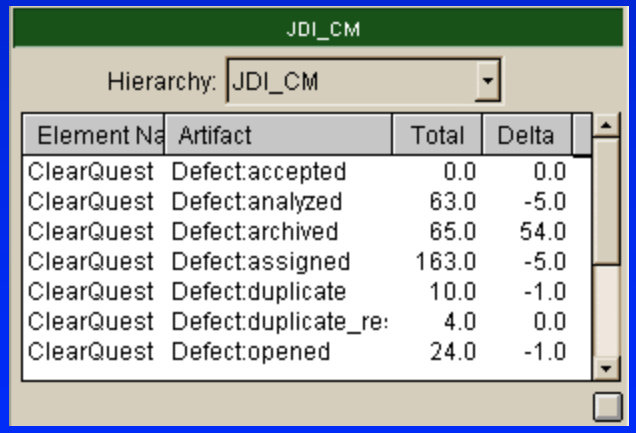
Measured Progress



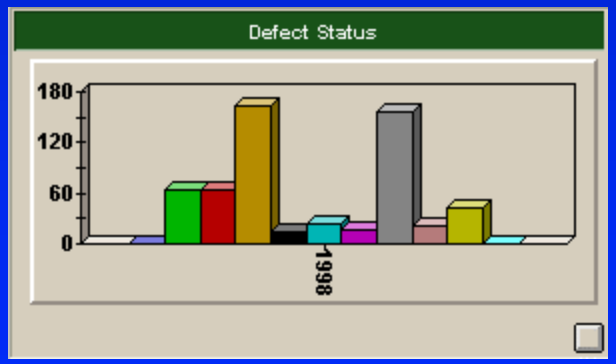
Breakdown



Status



Drilldown & Detail



Distribution & Comparison

Level & Threshold

Dashboard - Visibility & Insight

- Instant visibility and insight into a project
- Determine status with respect to plans
- See measurable progress
- Determine if projects are off track
- Gain insight to predict other values (e.g., cost, schedule, and quality)
- Identify roadblocks, root causes, inefficiencies
- Identify opportunities to improve quality and process performance
- Recognize symptoms early that can lead to failure
- Monitor quality and defect impacts
- Compare current & past performance

Dashboard - Automated Metrics Collection

- **Based on configurable metric aware agents**
  - Utilizes Rational Product Domains
- **Non-intrusive to software development activities**
  - Minimal human interaction
  - Flexible scheduling
- **Automation reduces costs of metric capture. Most metrics collection today are manually intensive.**
- **Increases the quantity & types of metrics that can be captured**
- **Ensures data is up to date**
  - Manually entered / gathered metrics can be out of date (add overhead)

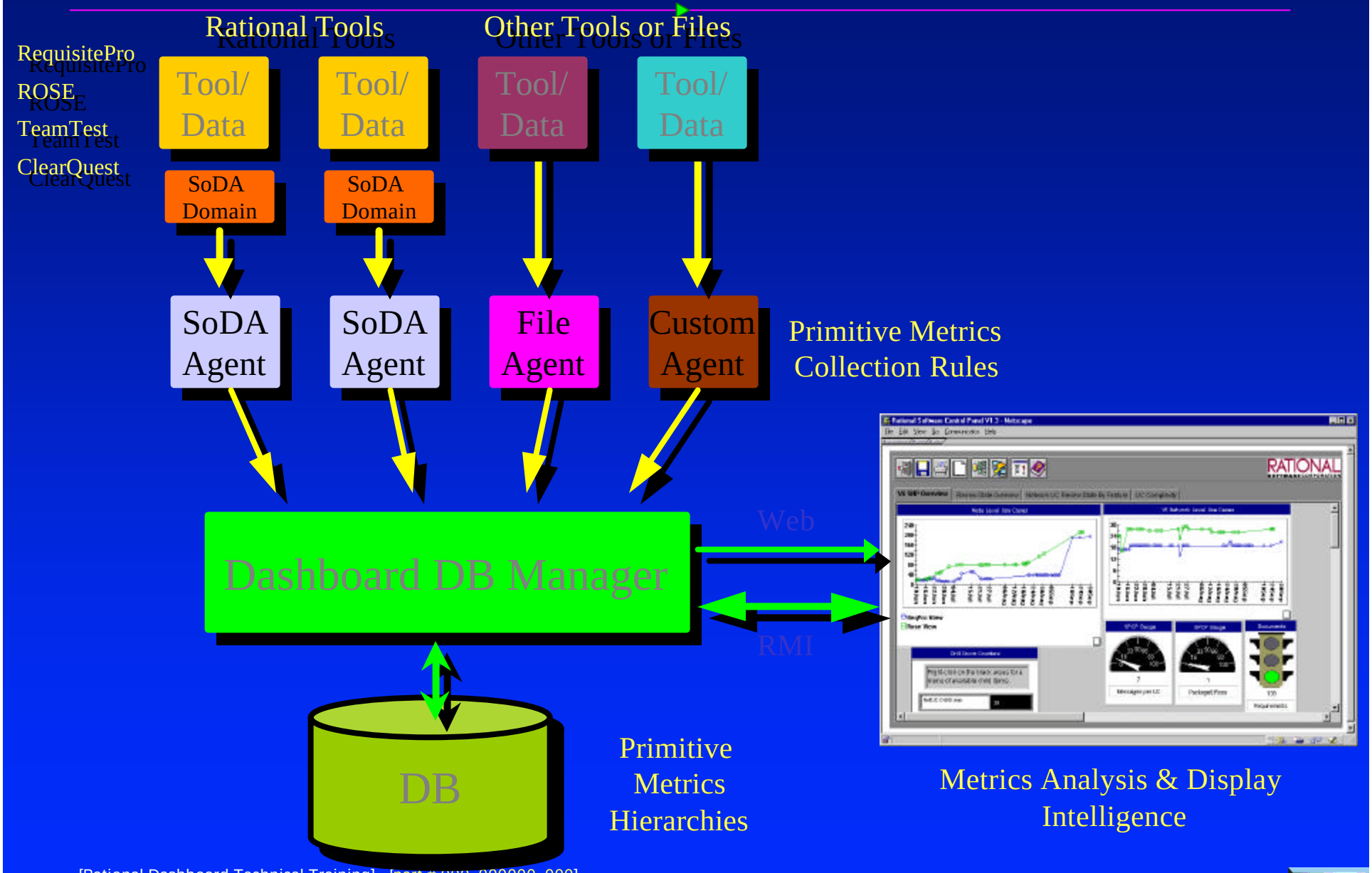
Dashboard - Consistent Metric Data

- Agents ensure metric data collection is performed in identical fashion for each measurement
- Agent definition requires unambiguous definition of metric measure
- Metric information is stored in database providing uniform access methods
- Agents can ensure measurements are made against consistent states of artifacts
- Measurement intervals are consistent

Dashboard - Easy to Use

- **Utilizes dashboard paradigm**
- **Web based**
  - Easy deployment access
  - Easy deployment maintenance
  - Desktop Independent
- **Customize displays based on different roles or management views**
  - Standard panels for consistent at-a-glance reference
    - Program Manager, Team Lead, Test Manager, QA Manager, Customer, or Executive Management etc.
  - User defined panels for specific views

Dashboard Architecture



Highly customizable

- **Default “panels” can be created for each user, role, and/or project**
  - Each panel can contain multiple tabs, each containing multiple metric widgets (gauge, indicator, table, chart, etc.)
- **SoDA Agent is highly customizable**
  - Installed as an interactive application or an NT service
  - Collects metric primitives from Requisite Pro, Rose, ClearQuest, TeamTest, etc.
  - Collection interval is tunable
- **Easy to create custom agents**
  - CSV Tool for importing and exporting data in CSV files
  - Dashboard API for writing applications to store metric primitives

Next