THE BOEING COMPANY

INFOSYS - GLOBAL ENGINEERING

ACE 2012 – Project & Portfolio Management at Boeing

1st May 2012

Infosys®

Agenda

- The Boeing Company
- Challenges / Complexity in the business process
- Solution
- Demo video
- Progress / Results to date
- Where headed in future

The Boeing Company

- World's largest aerospace company and leading manufacturer of commercial jetliners and defense aircrafts, space and security systems.
- Headquartered in Chicago with commercial manufacturing and engineering operations in Seattle area
- Employs more than 170,000 people across the United States and in 70 countries.
- Products and tailored services include commercial and military aircraft, satellites, weapons, electronic and defense systems, launch systems, advanced information and communication systems, and performance-based logistics and training.

Boeing Research and Technology group - What does it do?

- Preferred provider of technologies across the entire Boeing enterprise
- Provides innovative support for current products, innovation for future products and services, global scouts for innovative technologies, and solving customers' technology challenges
- Drives efficiency into the enterprise product and process standards and bring new capabilities across programs

- Develop and maintain multiple projects that include engineering proof of concepts (POC).
- Projects include individual statements of work (SOW) with specific budget, resources, schedules, and key milestones as part of their deliverables.

Business Process Challenges & Complexities

Program Management and Audit (Internal/External) Activities challenges & complexities:

- Large Number of Projects
- Diverse Nature of Projects/Products
- Geographically Distributed Team
- Heterogeneous Systems used for Managing Projects
- Non-standard ways of Managing Projects

Difficult and Time Consuming to get an accurate Project Status

Solution

System that enables a standard and common method to manage and configure the entire lifecycle of all projects within its organization including the ability to support external audits required by customers

Manage projects

- Create, modify, and access project information including:
- Budgets, Resources, Risks, Schedules, Statements of Work, Policies & Procedures, Product Specifications, and Requirements
- Manage multi-project programs

Business workflow

- Stage-Gate Reviews
- Configuration & Change Management

Project Dashboard

- Track, Manage & Report on the Configuration Status of each individual Project
- Report generated based on Status of all Project Objects
- Rollup Results into a Single View for Senior Management Review and Decision Making
- Role-based and Customizable by the End User

Solution using ARAS

The Service Oriented Architecture (SOA) approach to facilitate the federation and integration of all of the systems necessary to create a common project management environment. ARAS Innovator was at the heart of this approach and formed the Service Manager for the Software System

- A collection of standardized reusable services using service-orientation design principles to build a service inventory
- Orchestrating services into Project Dashboard and Business Processes

ARAS Innovator for managing Process (definition, execution and monitoring; Gate Reviews).

Separation of "stable" services from "changeable" business processes using ARAS to enable quick changes in the Software System

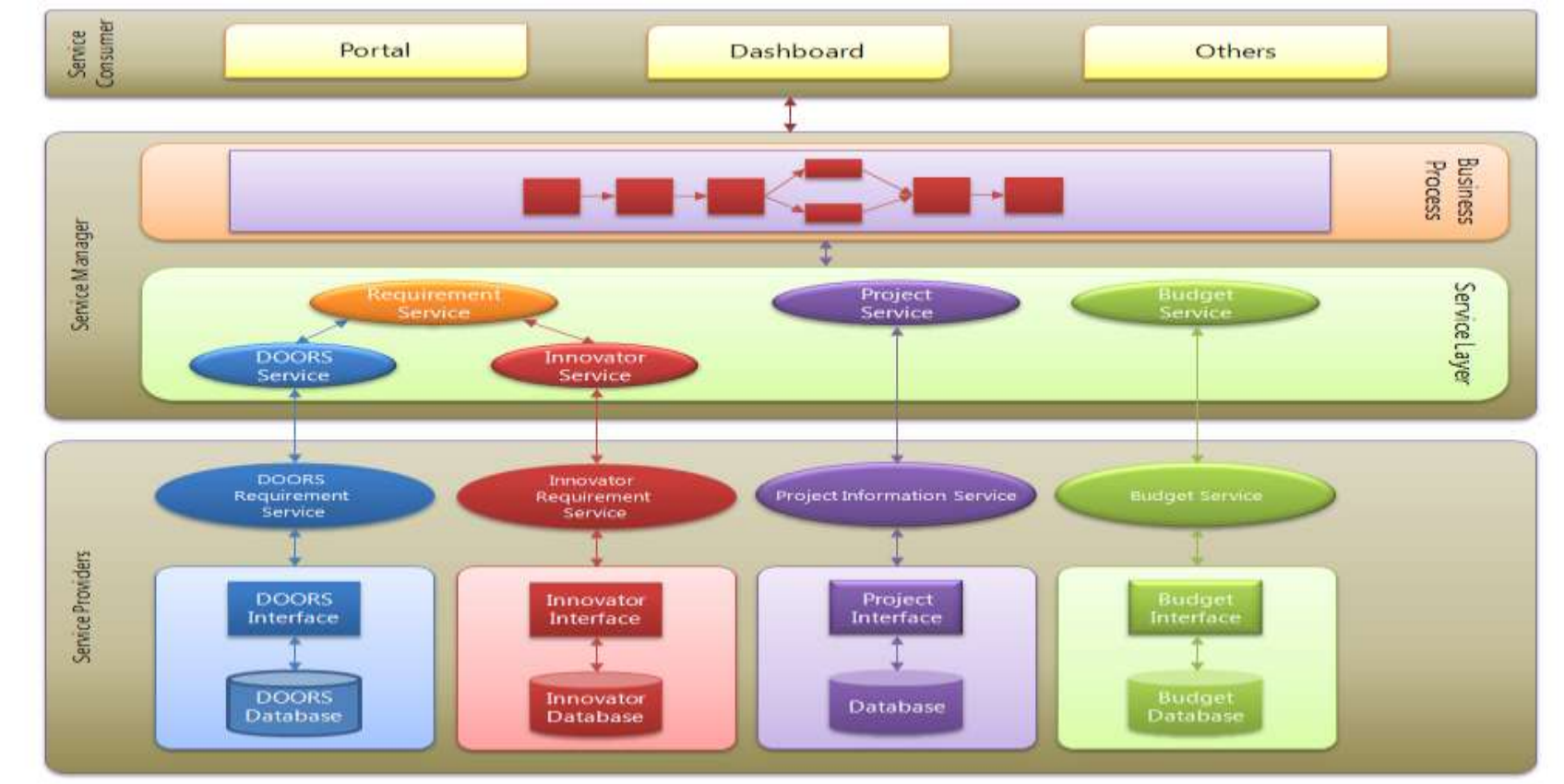
ARAS Innovator for WBS (Project Template)

ARAS Innovator and IBM Doors for Requirements Management

ARAS Innovator for Budget

Microsoft SharePoint for Project Dashboard

Solution Landscape



Project Dashboard

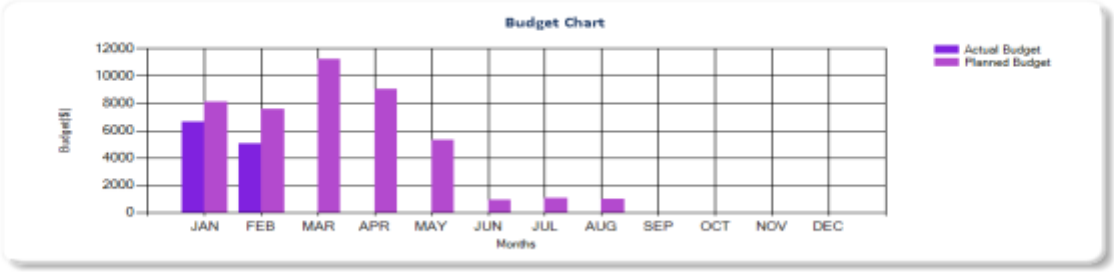
ECR Name :
Use Template : Yes No
ECR Template : R&T Template1
Target Start :
Target Finish :
Create ECR | Cancel

ECR Information

ECR Name	Description	DateStart Scheduled	DateEnd Scheduled	Manager	PercentCompleted
Project System Integration and Data Services	Project to showcase reusable services for project and portfolio management	11/01/2011	02/15/2012	Ajay Singh	
Ply Wrinkles at outer flange	Three ply wrinkles found on bag side of outer flange (inner surface of outer chord)	01/03/2012	01/31/2012	Matthew Symmonds	
Floor Beam Deviation	Sec 41 floor beam at STA 500 too high	02/07/2012	04/13/2012	Matthew Symmonds	
Stringer thickness	Stringer thickness adding to additional weight	02/06/2012	03/22/2012	Gerald Hartman	
Landing gear buckling	Latest design leading to landing gear buckling issue	01/13/2012	01/16/2012	Gerald Hartman	
PW-ISP_TradeStudy	This is just a simple way of managing all of the Artifacts required for a Trade-Study. All object will be under Configuration Control at all times	01/13/2012	01/16/2012	Jaime Ramirez	
Jaime_Project_Test99		01/30/2012	02/02/2012	Jaime Ramirez	
Determination of wing skin	Determination of wing skin	02/01/2012	08/31/2012	Matthew Symmonds	
Demo Project 1		02/09/2012	02/29/2012	Innovator Admin	
Demo Project2		02/21/2012	03/30/2012	Innovator Admin	

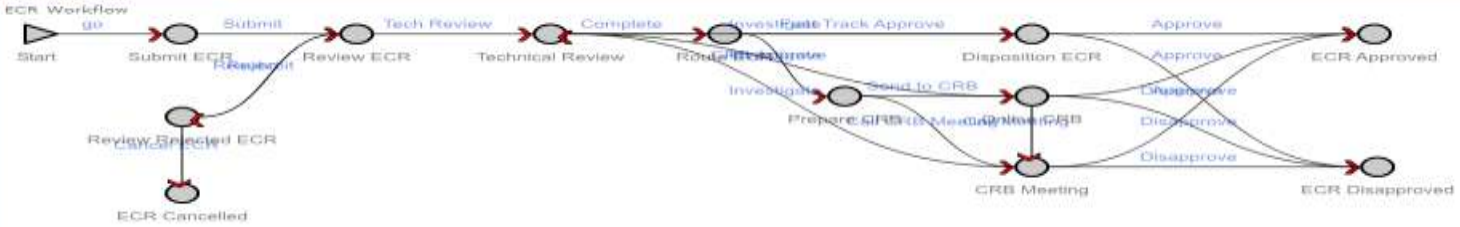
Legend	Description
	Target Finish date is > 5 days from todays date
	Target Finish date is within 5 days from todays date
	Target Finish date is today or elapsed.

Budget Information



Project Dashboard

Workflow Details



ECR Information

ECR Number	ECR Name	Description	Date start Scheduled	Date due Scheduled	Scheduling type	Percent Completed	Manager
1328	Stringer thickness	Stringer thickness adding to additional weight	02/06/2012	05/22/2012	Forward	80	Gerald Hartman

Legend	Description
	Target Finish date is > 5 days from todays date
	Target Finish date is within 3 days from todays date
	Target Finish date is today or elapsed.

ECR Schedule

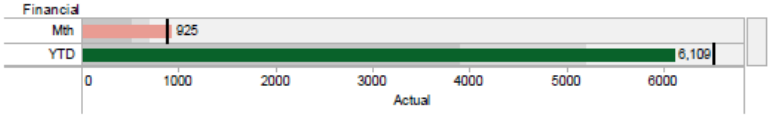
Phase Name	Activity Name	Expected Duration Hrs	Actual Start Date	Actual Finish Date	Scheduled Start Date	Scheduled End Date	Percent Completed	
Requirement	ML1	0			04/13/2012	04/13/2012	0	Edit
	Act1	10	01/09/2012		04/16/2012	04/27/2012	100	Edit
Design	ML2	0			04/13/2012	04/13/2012	0	Edit
	Act2	1			04/16/2012	04/16/2012	60	Edit
Build	ACT3	1			04/16/2012	04/16/2012	80	Edit
	ML3	0			04/13/2012	04/13/2012	0	Edit
Test	ML4	0			04/13/2012	04/13/2012	0	Edit
	ACT4	1			04/16/2012	04/16/2012	40	Edit
Deploy	ACT5	1			04/16/2012	04/16/2012	90	Edit
	ML5	0			04/13/2012	04/13/2012	0	Edit

Project Dashboard

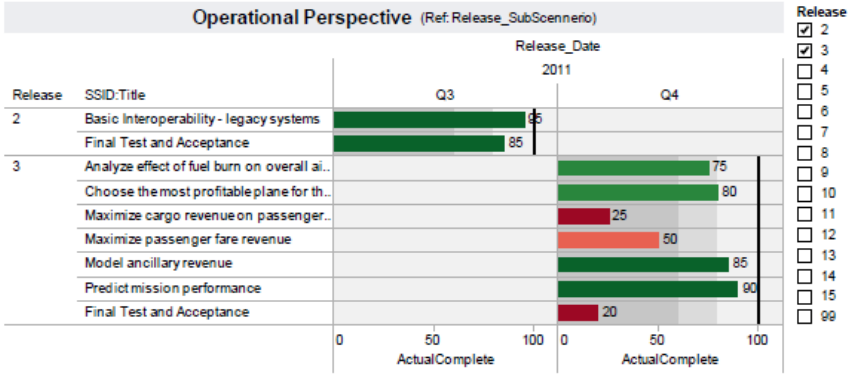
Financial Perspective (Ref: Budget_Table)

Budget Line Item	Date 2011 Actual	Planned	Variance
Capital Estimate - Hardware - BCA EO&T RAA	10.00	12.00	0.00
Capital Estimate - Hardware - BCA Sales_Marketing RAA	10.00	12.00	0.00
Capital Estimate - Labor - IT - Infosys	10.00	12.00	0.00
Capital Estimate - Labor - IT - Seattle	10.00	12.00	0.00
Capital Estimate - Labor -SME - Boeing	10.00	12.00	0.00
Expense Estimate - Labor - SME - Boeing	10.00	12.00	0.00
Expense Estimate - Labor - SME - Marketing	10.00	12.00	0.00
Grand Total	70.00	84.00	0.00

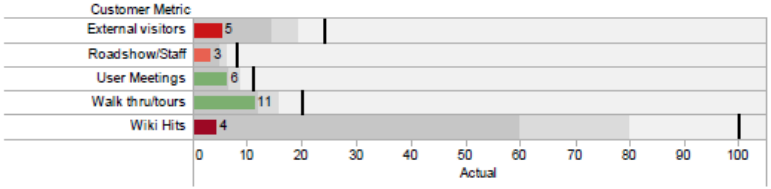
Month Spend



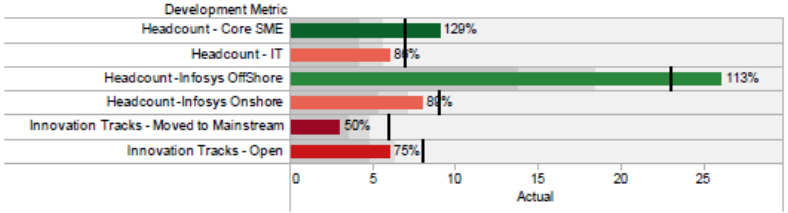
Operational Perspective (Ref: Release_SubScennerio)



Customer Perspective



Development Perspective



Progress / Results to date

- Service Manager
- Integration with SharePoint
- Service Inventory
  (Project Information, Requirement, Budget, Schedule, Workflow and Login)
- Basic Requirements Management in ARAS
- Basic Budget Management in ARAS

Where headed in future

- Expand the Service Inventory
- Enhance the Requirement Management features in ARAS
- Enhance the Budget Management features in ARAS
- Customization of Dashboard by Users
- Develop an independent non .NET client to use Aras

Non .NET Client Interfacing with ARAS

- Applications developed using .NET can interact with ARAS using IOM.dll
- ARAS functionalities can be exposed through web services.
- Web services can be generated easily using ARAS “Web Service Configuration” and ARAS web service code generator
- Any .NET or Non .NET application can interface with ARAS through published web services

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