

# Enterprise strategy to enforce standard quality processes and workflows



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# Kaiser Permanente Background

- Founded in 1945, Kaiser Permanente (KP) is the nation's largest not-for-profit health plan serving 9.7 million members
- 8 regions across the nation provide support for:
  - 36 Medical Centers
  - 416 Office buildings
  - 156,853 Employees
  - 13,729 Physicians

# The Challenge

- Support an IT initiative to use standard testing processes, workflows and tools
- Streamline Quality Center support across 8 testing regions
- Provide comparable reporting across Quality Center projects
- Keep costs low

# Implement Standards

- Create a standard QC template
- Implement the standard template for all new QC projects
- Convert existing projects to standard

# Create a Standard Template

- Initiate a standards committee with representatives from testing, business, development and executive metrics groups
- Identify best practices
- Define standard & user defined fields
- Specify group roles and rights with a clear separation of function
- Create a set status workflow tied to function
- Maintain flexibility to meet client needs
- Develop standard defect forms

# New Defect

## Keep it simple

**Add Defect**

Clear Attach:

Defect Information:

\* Summary:

Details 1 | Details 2 | Workaround

* Project:	<input type="text" value="Project 1"/>	* Application:	<input type="text" value="FS"/>
* Severity:	<input type="text" value="2-High"/>	Retesting Effort:	<input type="text" value="&lt; Hour"/>
* Region:	<input type="text" value="National"/>	Assigned To:	<input type="text" value="raul f castro"/>
* Phase Detected:	<input type="text" value="System Test"/>	* Detected in Version:	<input type="text" value="1.1"/>
* Module:	<input type="text" value="Benefits"/>	* Environment:	<input type="text" value="QA"/>
* Defect Type:	<input type="text" value="Code"/>	Subject.:	<input type="text" value="Reporting"/>
* Detected by Group:	<input type="text" value="Test"/>	Defect Owner Group:	<input type="text"/>
* Vendor:	<input type="text" value="Kaiser"/>	Review Type:	<input type="text"/>

\* Description

SUMMARY:

STEPS TO REPRODUCE OR ACTION:

EXPECTED RESULTS:

ACTUAL RESULTS:

Submit Close

# Defect Details 1 Tab

Organize fields – No scrolling

Defect: 65 Benefit reports are not being created

Details 1 | Details 2 | Dates | Interfaces | DevNotes | DM Notes | Workaround

* Project:	Project 1	* Application:	FS
* Detected on Date:	5/7/2008	* Detected By:	admin243
* Severity:	2-High	* Status:	Open
Priority:	4-Low	* Assigned To:	raul f castro
* Region:	National	* Detected in Version:	1.1
* Phase Detected:	System Test	* Environment:	QA
* Module:	Benefits	Subject.:	Reporting
* Detected by Group:	Test	* Defect Owner Group:	Development
* Vendor:	Kaiser	* Defect Type:	Code
Root Cause:		Cause Type:	

Planned Closing Version: 1.1

Actual Closed in Version:

Actual Fix Time: (Days)

Closing Date:

OK Cancel

# Defect Details 2 Tab

## Less used & workflow related fields

Defect: 65 Benefit reports are not being created

Details 1 | **Details 2** | Dates | Interfaces | DevNotes | DM Notes | Workaround

Intermittent:	No	Associated Defect:	59
Existing in Prod?:	Yes	Remedy#:	12345
Deferred To:		Reason Withdrawn:	
Duplicate Defect#:		Reason Returned:	
Estimated Fix Date:	5/23/2008	Retesting Effort:	< Hour
Review Type:			

Details  
Description  
Attachments



# Defect Dates Tab

Available for reporting

Defect: 65 Benefit reports are not being created

Details 1 | Details 2 | **Dates** | Interfaces | DevNotes | DM Notes | Workaround

Date in-Progress:	5/7/2008	Date Deferred:	
Date Re-Opened:		Date Opened:	
Date Evaluated:	5/7/2008	Date Fixed:	
Date Withdrawn:		Re-Assigned Date:	5/7/2008
Date Returned:		Closed By:	
Last Modified:	5/7/2008 5:16:25 PM		

# Memo Tabs

Track notes that could be lost in comments

- Defect management tab
  - Used when running DM meetings
  - Overall synopsis of defect can be documented here
- Workaround tab
  - Used to document workarounds that can be used in training

# Auto-fill Rules

Keep assignment accurate

- We also looked into common functions that users would often forget and where possible automated the process
  - When a defect is marked fixed or returned to a tester the “Assigned To” field auto-fills with the “Detected By” name and the “Defect Owner Group” auto-fills with the value in the “Detected By Group” field
  - When a defect status is set to “Evaluation” or a defect type is = Requirement, then the Defect Owner Group field auto-fills with “Business”

# Convert Existing Projects to Standard

- Benefits of Conversion
  - A clean code base
  - Quicker turnaround on requests
  - Documented processes and workflow
  - Improved Usability
- Create conversion documents
  - Project plan
  - User account management form
  - Mapping template
  - “What’s New” guide for training
- Develop a method of performing conversions with full data integrity and minimal down time for clients
  - Allow 4 weeks for conversion planning
  - Agree upon a 4 day window for the actual conversion – no user access during this window

# Conversion Project Milestones

- Identify conversion project team
- Perform an analysis of the project to be converted comparing targeted project to standard
- Identify user defined field selections
- Identify data mapping rules
- Perform user account clean-up and define new roles
- Discover any special customizations needed
- Create “What’s New” guide for training
- Communicate planned conversion at key intervals

# Pre - Conversion Steps

- 2-3 weeks prior to the conversion the QC Project Admin team builds & adds approximately 20 standard user groups to the existing project, this task takes 1-2 days to complete
- No users are assigned to these groups at this time. Existing user groups remain in effect

# Conversion Process

- Back-up — A backup copy is made of the project targeted for conversion. Should a conversion fail, this copy is used to restore the original project.
- Lock General Users - Once the backup copy is made, a vbscript code is added to the QC workflow to prevent general users from logging into the existing project. This code is added to the “Project\_CanLogin” sub routine under the Common Script module.
- Only admins that work on conversions are given access to this project until the conversion is completed.

# Conversion Process - Mapping

- Defect data is extracted into Excel and delivered to Process Management for mapping purposes.
- During mapping non standard data is updated to meet standards.
- The mapping spreadsheet has defined column names and labels so that data from each column is moved into the appropriate fields in Quality Center using a script.



# Conversion Process - Field Set Up

- User defined fields are deleted and data removed from the database
- New user defined fields are added
- During the field set up, the “Verify Value” field is unchecked. This allows the script to run without interruption even if there is a minor data error in mapping.
- Look up values for system fields are matched according to standards.
- Workflow code from the standard template is copied and pasted into the QC project to be converted. Workflow code ensures that all fields appear in proper order and maintains dependencies between fields. Workflow code also controls default values and other standard rules.

# Conversion Process - Data Update

- Once the mapping spreadsheet is completed, the next step is to update Quality Center with the Excel data.
- Two scripts have been developed to do this job.
- Script 1 updates the first defect so we can verify data and ensure data is placed in the correct fields
- Script 2 updates all remaining defects. Defects are verified again after the second script runs

# Conversion Process - Final Steps

- Quality Center users are moved to their new standard user groups
- Non standard user groups are deleted
- The “Verify Value” checkbox is checked for all fields in order to ensure lookup lists accept only correct values
- The now standard project and data is reviewed by Process Management and final approval to go forward is received from the key client contacts
- Code to prevent users from logging on to the project is removed.

# Continuous Improvement

- Originally the QC conversion was done differently. The standard template was used as a shell, minor customizations were made to this template then defects were imported into this shell
- The problem with this method was that we could not retain test lab results or links between requirements, test cases and defects. In addition:
  - Test cases had to be copied to the new project and attachments had to be re-associated.
  - Reports were created to document test lab results & defect history
- With the current method no data is lost and time is saved
- Going forward we are planning to automate the user groups set up, and the field mapping process.

# Who Does This Work?

- **QC Process Management – 1**
  - Provides Quality Center engagement services, gathers requirements & recommends QC options
  - Manages Conversions
  - Documents processes and standards
- **QC Project Administration – 5**
  - Responsible for workflow development and support of QC projects
  - Creates utilities that work in conjunction with QC
  - Develops and Automates testing reports gathered from the QC database
- **QC Client Support Services – 6**
  - Liaison between the client & Project Administration team
  - First level support for requests, questions & training
  - Creates QC user accounts
  - Provides Defect Management services

# What Do We Support Today?

- Over 4000 Quality Center users
  - Concurrent licenses = 500
  - Average concurrent utilization = 300-350
- Number of active test projects = 81
- Number of standardized projects = 60
- Number of converted projects = 10
- Number of 2008 conversions = 8

# Environment Specifics

- Quality Center v8.2 SP1 Patch 20
  - 3 Application Servers
    - O/S: Microsoft Windows Server 2003, Standard Edition, SP1
  - 1 Database Server
    - O/S: Microsoft Windows Server 2003 Enterprise Edition SP1
    - Database version: Microsoft SQL Server 2000
    - Database size: 1.6 TB
  - Project Repository (type)
    - File system repository (not held at database)
    - Project repositories reside on the database server
    - Project repository size 186 GB
  - Load Balancing targeted for mid-year 2008
  - Failover – Application servers will have failover after load balancing is implemented
  - System Availability = 99.98%
  - Target upgrade version (June 2008) Quality Center v9.2 Patch 7

Q&A







Technology for better business outcomes

