

Update:
CERES Production Kaizen &
CERES Production Oversight
Board Kaizen

March 2, 2011 CPOB meeting

August 24th CERES DMT/ASDC kaizen Key Findings

New process needs an “owner” with authority

- Working Group Leads need to adhere to an SCCR freeze date
 - DMT must operate from a cohesive and complete set of requirements
- Culture of “no blame” must exist for “mistake proofing” and defect identification to result in best practices
 - Present to proper audience at level that identifies classes of defects, fosters collaboration and communicated fixes/Lessons Learned
 - Metrics are required to quantify benefits of improvements
- Environments must be configured to support full lifecycle
 - PPE is equivalent to production
 - SCF is precursor to PPE
- Clear communication required for new collaborative paradigm and end-to-end visibility
 - CERES Data Process Board (CDPB), dash board
 - Integrated schedule and priorities
 - Error handling

Who	What	When
ASDC/With input from DMT	AMI PPE, Production and SCF environments identical	When AMI in production

- Problems:
 - Differences discovered in code behavior in SCF vs Production
 - ValRx requires code to promote and overwrite operations before validation
- Solution: Implement Parallel Production Environment where ValRx and select operational testing can be conducted
- PPE implementation process currently in discussion

Who	What	When
DMT and ASDC	Create robust suite of test cases for each PGE eg: sunny day, rainy day, boundaries, new functionality and fixes to known defects	Start September 1, 2010

- Problems:
 - Kaizen identified SSIT testing that can be done before delivery
 - Sometimes ancillary files etc not delivered with code resulting in rework
- Solution: Develop per PGE check lists for test cases and pre-delivery requirements
- Starting with ERBELike; CERES CM building standard test cases and delivery check lists for each PGE
 - Subsystem input
 - SSIT input

Who	What	When
SIT/ Ops, CERES CM, SS Representation	Defect collection analysis, reporting and learning kaizen	Week of September 20, 2010

- Problem: Need for improved process to manage and learn from software and process defects
- Solution: Hold dedicated kaizen
- Kaizen status pending
- Implementing SVN/TRAC for CERES. Process under development to use TRAC for formal error reporting.

Who	What	When
PI, SS Representation, Science Representation	Software Change/Requirements definition Kaizen	Week of September 20, 2010

- Problem: Concern that science requirements change frequently and cause rework in software development and production process
- Solution: Discuss initial kaizen results with PI and determine if “Science kaizen” viable
- Rolled out to PI and solicited discussion from Tisa WG Lead on how to address problem.
- Identified that tradeoff decision between process/schedule required by PI on individual case by case basis

Who	What	When
PR Coordination, SIT, SS Representation	Production Request Kaizen	Week of September 20, 2010
SS Lead, DMT Lead, Ops, SIT	Code deliveries not released until PR approved	Starting with SCCR 716 and continuous

- Problem: SSIT requires complete PR to conduct operational testing and all PR input not always available prior to delivery
- Solutions:
 - Hold dedicated kaizen
 - Require posting PR prior to SCCR delivery (inconsistently implemented since 716)
- Discussion pending

Who	What	When
DMT Lead, SIT, Ops, User Services, DMT Production, SS Representation	Create/charter Oversight Board	September 20, 2010

- Problem: Concern expressed that existing DMTM not providing corrective oversight
- Solution: Hold dedicated kaizen to determine board implementation
- Production Oversight Board kaizen held September 23, 2010 to determine
 - Agenda/format of meetings
 - Frequency of meetings
 - Charter for Board
 - Design and metrics to track in dashboard tool

CERES Processing Oversight Board

Input

- PRs
- Processing priorities
- Promotion priorities
- SIT status report
- Subsystem status reports
- Problem reports
- System report
- CERES CM status report
- Delivery schedule
- MS Project Schedule
- SCCRs
- Risk Matrix
- User services

Decisions/Actions

- Accept/Approve SCCRs
- Revise Schedule
- Revise promotion priorities
- Revise production priorities
- Monitor perturbations in SCCR progress
- Revise problem action plan
- Conceive strategic planning
- Review/Revise risk

CPOB Status Tracking Items

- Subsystem process on SCCR
- Brief SCCR description
- SCCR creation date
- SCCR status
- SCCR “Science Finalize” date
- Planned delivery date
- Actual delivery date
- Number of deliveries in SIT

Who	What	When
DMT Lead	Review Dashboard COTS Products	September 10, 2010
DMT Lead	Submit Purchase Order for Dashboard Software	Ready October 1, 2010

- Problem: DMTM documentation and format comprehensive but disjoint
- Solution: Develop dashboard tracking tool to monitor status and key statistics for each SCCR
- Implementing SCCR tracking database to monitor code deliveries through data public release. Currently using prototype in CPOB meetings.
- Production version to be online and updated by developers, CERES CM and SSIT

Who	What	When
Each DMT Developer	Review CERES Coding Guidelines	September 30, 2010

- Problem: Concern that DMT code implemented inconsistently across subsystems
- Solution: Require formal review of coding guidelines
- Status pending

Who	What	When
CERES Documentation, SS Leads	Modify Ops Manuals Expected Output Tables to ID Ordering tool available products	September 30, 2010

- Problem: Not always clear which output products should be made available on ASDC ordering tool
- Solution: Add “Available Through Ordering Tool” column to Expected Output File Listing tables in Operator’s Manuals and File Management Policy with Yes/No value
- File Management Policy and Operator’s Manuals updated, reviewed by subsystems, and made available October 2010
- Review of Operator’s Manuals for complete listing of products underway

Who	What	When
CPOB	Document future state plan for CERES Processing	October 1, 2010

- 1) Create SCCR
- 2) WG Lead finalize SCCR
- 3) Update Code & unit test
- 4) Integrate into SS & unit test
- 5) Create (accurate) PR
- 6) Prepare delivery package
- 7) Deliver to CERES CM
- 8) CERES CM Test
- 9) Release to SSIT & send notification
- 10) Configure PPE
- 11) Perform ops testing
- 12) Validate PPE output
- 13) Promote to ops
- 14) Close SCCR
- 15) Produce & archive data products
- 16) Release to public

Who	What	When
DMT	Update and Publish CERES Data Management Process Plans	April 30, 2010
DMT Lead, ASDC Lead	Create working documentation of future state	September 15, 2010

- Problem: Data Management Process plans need updates to reflect implementation of kaizen recommendations
- Solution: In depth analysis of existing process plans complete. Modifications currently underway
- Completion expected on schedule