The innovative concept of Custom Code Management from SAP provides comprehensive insight on how companies can efficiently and effectively manage their home grown Custom Code. From conception to retirement, it delivers transparency on Custom Code objects, automates the analysis of every change and clearly identifies their usage, utilization and business impact of the customer objects. It also supports optimization cycles with a project based approach to reduce the Custom Code footprint.
Agenda

- **Custom Code Management Methodology**
- Custom Code Lifecycle Management (CCLM - Library)
- Custom Development Management Cockpit (CDMC)
- Custom Code Optimization
Innovation on Top of Stability
Enhancement Packages reduce conflict between stability and innovation

**INNOVATION**
- Fast and easy introduction of business innovation at any time when needed

**STABILITY**
- Stable and robust business processes for maximum efficiency and low TCO
- Routine deployment of support packages to sustain compliance

**ENHANCEMENT PACKAGES = INNOVATION + STABILITY**
- Enable IT to continuously provide new functionality: Installation of enhancement packages as part of routine maintenance
- Selective, non-disruptive activation of innovation at any time - driven by business needs
Customer Driven Innovation
Standard versus Customization

Value Promise based on

Built-in
- Standards & Best Practices
- Maintenance & Operability
- Compliance & Security
- Integrity & Flexibility

Enhanced by Custom Code
- Customer individual requirements
- Completion of functionality

‘‘ Having Custom Code is “ok” – as long as it is based on an educated decision

‘‘ Implications regarding the loss in “built-in” capabilities need to be properly addressed

‘‘ Doing it “right” helps to minimize the incremental effort to develop and operate your code

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SAP Standard Software Enhanced by Custom Code
Competitive Business Benefit versus Operational Effort & Risk

Inhomogeneous customer solution portfolio increases the TCO

Code objects

SAP License Fee 3rd party costs Unknown maintenance efforts

Custom Code

Custom Code use cases

- Competitive advantage
- Closing functional gaps
- Created easily

And ... Custom Code increases the “Long tail” efforts of your solution

- Increase of overall TCO
- Higher maintenance and corrections efforts for unknown amount of custom code
- Increased potential risk of daily operation
- Inhibitor for business transitions and upgrades
Creating and Managing Custom Code adds to your Bill. How much? That is not entirely clear. We can reduce it *Today*.  

*Figures from typical customer systems*  
- 8000 objects in the customer namespace and 1500 modifications or enhancements  
- 65% of them have not been used within the last 4 weeks  
- up-to 15% are identical or very similar to each other (Clones)  
- some more became obsolete through recent SAP standard functionality  
- 30-50% of them need to be adjusted on the occasion of a SAP standard upgrade  
- 20% of the system resources are attributed to the execution of custom code  
- Code inspection returns several hundred severe messages per development package  
- These inefficiencies alone can equate to an overspend on system support of between €250,000 - €2 million per annum depending upon the size of the SAP system and extent of custom code.
Custom Code Management: ALM - Process
The “City Model” Methodology
Choosing the Right Path for Continuous Improvement

Governance Model
Guidance for Decision-making and Execution

Quality
- Appropriate
- To be improved
- Inappropriate

Quantity

Business Criticality
1: Non Mission Critical
5: Mission Critical

Technical Severity

Custom Code Lifecycle Management
Custom Code Dimension: Quantity

How many custom code objects exist along the software lifecycle?
Custom Code Dimension: Technical Severity

What is the **technical severity** of my implemented custom code? (Deviation from SAP standard)

- **SAP Standard Configuration**
  - Customizing (e.g. IMG table entry)
  - Personalization (e.g. default values for user)

- **Enhancement** (SAP interface technology)
  - With interfaces
  - Without interfaces

- **Modification** (Changes to SAP Repository objects)
  - Assisted
  - Without any tools (freestyle)

- **Custom Code**
  - With reference to SAP Objects
  - Standalone and Composite Application
Custom Code Dimension: Quality

"How good is my individual custom code object?"

Quality characteristics
- Performance (Resource consumption and runtime)
- Reliability (durable, robust, repeatable)
- Maintainability
- Functional correctness
- Troubleshooting
- Ergonomic
- Security
- Documentation
- Re-Justification (transparency, pursuable decisions)
- Reusability
Custom Code Dimension: Business Criticality

**Missing information about mission critical business processes and use of custom code is a top issue**

**Questions out of information deficit:**
- Which of my business processes use custom code?
- Which business processes are currently in use?
- How can I better take advantage of the current capabilities?
- How can I ensure the support?
- How can I consolidate or standardize my business processes?

**This is essential for an efficient and successful management process!**
Optimization with Custom Code Management

- Analysis of custom code situation is fact based (holistic approach, anamnesis).
- The ‘Single source of Truth’ is established.
- Optimization follows the minimal-maximal principle.
- Lowering the TCO by selection of the right optimizations.
- Sustainable optimization along the life cycle.
- Optimizes existing custom code environments.
- The Library as monitoring tool to determine custom code healthy level.

Generate city model after optimization
Custom Code Management
Clear Evolution Path

“Best-Run Customization“
Avoid Legacy and adopt Innovations
- Centralization & Governance of Custom Code (‘Cockpit, Library and Guidelines’)
- Proactive Business Contingency (‘RCA and Maintenance’)
- Identification & retirement of unused custom code (‘AIE’ and ‘MJC’)

⇒ Efficient & Effective Custom Code Lifecycle Management

“Take Ownership and Control of the City“
Optimization of Custom Code
- Enablement of tools, e.g. SAP Custom Development Management Cockpit, Code Inspector, Similarity Analysis
- Provide information to stakeholders for decision making & planning of Custom Code Lifecycle Management
- Reengineering of Custom Developed Solution: “Let SAP do the Maintenance”

⇒ Standardize by moving closer to Standard

“Awareness and Prioritization“
“City Model” to visualize Key Dimensions of Custom Code
- Quantity
- Quality
- Business Criticality
- Technical Severity

⇒ Solution Transition Assessment
Agenda

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Custom Code Lifecycle Management
Central Repository of all Custom Code Objects

- Get full transparency of all custom code objects across systems
- Monitor and track changes of key figures for the complete SAP Solution
- Derive proactive operations and optimizations projects
Custom Code Lifecycle Management
Available with Solution Manager 7.1

Running out of the box

Easy to configure –
Just select the systems to be observed
Solution Manager 7.1
Custom Code Lifecycle Management

Drill down all aspects of your custom code
Agenda

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Custom Development Management Cockpit
Promotion of Innovation & Protection of Investment

**Business Benefits**
- Transparency on custom code and its usage along with the business context information.
- Big saving potential by clearing based on identified obsolete customer objects.
- Accelerated Upgrade.

**Solution: CDMC - „Usage / Clearing“**
- Helps in identifying unused custom code as a basis for custom code effective retirement as part of Custom Code Lifecycle Management.
- Leverage upgradeability of custom code based on transparency of used custom code.

**Solution: CDMC - Custom Code Change Impact**
- Helps in identifying impacts of Lifecycle Change event such upgrade or SPs / EhPs implementation on custom code.
- Leverage better planning & control of custom code adjustment activities.

**Solution: CDMC – Change and Transport Analysis**
- Helps in identifying the usage information of testcase objects as part of test scope identification and test coverage analysis activities. Also helps in performing the remote comparison of the objects that are part of the transport request between the systems.
- Leverage quality checks for the transport request across systems.
Agenda

- Custom Code Management Methodology
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- **Custom Code Optimization**
SAP Solution Manager
Clone Finder, Modification and Dynamic References

SAP Clone Finder with Modification view and Dynamic Usage Detector

- Find clones in your own system landscape, across systems
- Determine the similarity degree of your clones against SAP originals and also inherited clone versions
- Fast and impressive overview in an easy to use UI to manage clones
- Direct split screen editor feature to merge clone differences
- Enhanced attributes to support the clone retirement process
- Easy to use real Modification overview
- Comprehensive overview of integrated customer & enhancement techniques (User Exit, Custom Functions, BAdI Implementation, Class inheritance, …)
Custom Code Optimization
Transaction /SDF/CD_CCA

- **SAP Clone Finder**: Find clones of SAP objects in your namespace
- **SAP Interface Analysis**: Detect dynamic links between SAP and custom code
- **SAP Modification Overview**: Get an overview of your SAP modifications
- **Custom Code Remote Compare**: Compare your code within a system landscape
- **Top20 Customer Object Analysis**: Similarity/Modification of the top 20 reports/transactions
SAP Clone Finder

Restrict the search area

Determine the level of similarity analyses
SAP Clonefinder (patent pending)

Custom Code Similarity Analysis (to SAP)

### Findings

- **Weighted Similarity in %**
- **Split screen editor**
- **Finds clones also if naming is different**

**Screenshots**
Smart City Development
„For a green, bright and small city“

Transparency is the first step to reduce the “TCO Effect” of custom code